

# MFJ 2017 Ham Catalog

... the World Leader in  
Amateur Radio Accessories!

## Ameritron 600 Watt solid state 160-6M!

**New!** 600 Watt solid state 160-6 Meters Amp ... Radio automatically switches bands ...  
ALS-606S is only 4 dB below 1500 Watts full legal limit -- less than an S-unit!



Call your favorite dealer for your best price!



ALS-606S  
**\$2275**  
with switching  
power supply

Suggested  
Retail

ALS-606  
**\$2375**  
Transformer  
Power Supply

**New!** Ameritron ALS-606S/ALS-606 Solid State FET 600 Watt amplifier covers 160-6 Meters with automatic bandswitching from your transceiver.

**Fits on desktop.** 9<sup>3</sup>/<sub>4</sub>Wx7Hx14<sup>1</sup>/<sub>2</sub>D inches and weighs 14.2 lbs., but is only 4 dB below 1500 Watts -- less than an S-unit! *Nobody can hear the difference!*

**600 Watts** PEP/500W CW -- be heard, talk to anybody! No tubes, no tuning, solid state rugged -- just turn on, select band on transceiver and operate.

**SWR/thermal protected**, extremely quiet, lighted peak reading Cross-Needle SWR/Wattmeter, front panel ALC control, operate/standby switch, multimeter.

Select transceiver interface cable, [www.ameritron.com](http://www.ameritron.com)

*Here's what QST said about the ALS-600*

"It protected itself from our boneheaded, sleep-deprived band changing maneuvers . . ."

"I found myself not worrying about damaging this amplifier. It seems quite capable of looking out for itself. . . Kudos to Ameritron."

"I couldn't hear any noise at all from the SPS on the vertical or quad . . ."

"I came to greatly appreciate the size, weight, reliability and simplicity of this amplifier."

"The ALS-600S makes it possible to pack a transceiver and a 600 Watt amplifier, that together weigh less than 30 pounds."

**MFJ • AMERITRON • HY-GAIN • CUSHCRAFT • MIRAGE • VECTRONICS**

For your nearest dealer or to order, call 800-647-1800

**MFJ**

**MFJ ENTERPRISES, INC.**  
300 Industrial Park Rd.  
Starkville, MS 39759  
Phone: (662) 323-5869; 8-4:30 CST,  
Monday-Friday. Fax: (662) 323-6551  
E-mail: [mjfcustserv@mjjenterprises.com](mailto:mjfcustserv@mjjenterprises.com)  
Tech Support: 662-323-0549



**No Matter What™ Warranty**

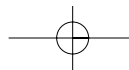
Every MFJ product is protected by MFJ's famous one year *No Matter What™* limited warranty. We will repair or replace your MFJ product *no matter what* (at our option) for one full year. *Prices and specifications subject to change without notice or obligation. MFJ will not be held responsible for printing errors.*



Visit ... [www.mjenterprises.com](http://www.mjenterprises.com) PROUDLY







## MFJ Order Form

Mail order to: MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, MS 39759 USA  
 Phone: 662-323-5869 Fax: 662-323-6551 Email: mfjoffice@mfjenterprises.com Web: www.mfjenterprises.com



Date: \_\_\_\_\_ Callsign: \_\_\_\_\_ Name: \_\_\_\_\_  
**Bill to:** Address: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Email Address: \_\_\_\_\_ Payment: ( ) Visa ( ) MC ( ) Am Exp ( ) Disc ( ) Other\_\_  
 Phone (home): \_\_\_\_\_ Card No: \_\_\_\_\_  
 Phone (day): \_\_\_\_\_ Exp. Date: \_\_\_\_\_ Security Code: \_\_\_\_\_  
**Ship to:**

| Qty | Company | Model No. / Part No. | Description   | Price | Total |
|-----|---------|----------------------|---|-------|-------|
|     |         |                      |   |       |       |
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|     |         |                      |   |       |       |
|     |         |                      | Sales tax where applicable (MS, OH, FL must be added) |       |       |
|     |         |                      | Sub Total   |       |       |
|     |         |                      | Shipping & Handling                                   |       |       |
|     |         |                      | Order Total   |       |       |

### PAYMENT INFORMATION / SALES TAX

**Credit Cards:** Mastercard, Visa, American Express and Discover, government and debit cards. Write your CC#, expiration date, CVV2 code on your card, other info clearly or call 1-800-647-1800; advise if billing address is different than shipping address. **C.O.D. Fee:** Additional \$12.50, above normal shipping charges. Overseas orders are by **Bank Transfer:** Wire transfers directed to: Regions Bank, Birmingham, Alabama, ABA: 062000019, SWIFT: UPNBUS44; For further credit to: Regions Bank, Starkville, Mississippi; For Account of: MFJ Enterprises, Inc., Account Number: 0080558542. **Add** bank fee of \$25.00 for each \$500 amount. **Sales Tax:** Mississippi, Florida and Ohio must add sales tax from county they reside in.  
*Prices and specifications subject to change without notice or obligation. MFJ will not be held responsible for printing errors.*

### NO RISK ORDERING

**NO RISK ORDERING:** Order any product "**directly**" from MFJ Enterprises, Inc., Starkville, MS and try it for 30 days. **If** not satisfied, we'll cheerfully refund your purchase price (less shipping). No books or software.

### MFJ WARRANTY

**WARRANTY INFORMATION:** All MFJ products (except as noted) come with MFJ's famous *No Matter What™* one year limited warranty. The warranty does not include kits, books or software. MFJ will repair or replace (*at our option*) your MFJ product *No Matter What™* for one complete year. **Customer MUST** retain dated proof-of-purchase.

### REPAIRS / TECH SUPPORT

**REPAIRS/TECH Support:** Send unit with copy of purchase receipt to MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, MS 39759.  
**TECH:** (662)323-0549 • **E-Mail:** [mfjcustserv@mfjenterprises.com](mailto:mfjcustserv@mfjenterprises.com)

### UPS / MAIL SHIPPING CHART

\*Code F/G items cannot be sent by USPS/mail. Foreign orders must call for quote.

| Ship Code | FEDEX   | MAIL    | Canada | Foreign |
|-----------|---------|---------|--------|---------|
| A         | \$13.00 | \$13.00 | QUOTE  | QUOTE   |
| B         | 15.00   | 20.00   | QUOTE  | QUOTE   |
| C         | 18.00   | 25.00   | QUOTE  | QUOTE   |
| D         | 21.00   | 30.00   | QUOTE  | QUOTE   |
| E         | 25.00   | 35.00   | QUOTE  | QUOTE   |
| F         | 35.00   | *       | QUOTE  | QUOTE   |
| G         | 45.00   | *       | QUOTE  | QUOTE   |

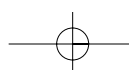
All packages 1 lb. and under will be shipped by US MAIL for \$13.00 minimum charge unless otherwise specified.

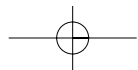
**Shipping Charges:** We ship via best ground method at a flat rate shown above. For faster service, call for quote. We ship Federal Express, Priority or standard mail service. 1-800-647-1800.

Please follow the shipping chart shown above; any *excess* shipping charges calculated will be refunded to you upon your order being received.

*Prices, specifications subject to change without notice or obligation.*

Catalog #040117. (c) MFJ, 2017.





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 www.wc4h.com

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 www.radioinc.com

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 Saint Peters, MO 63376

Gateway Electronics Corp.  
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 ST LOUIS, MO 63146

Wb0w Inc.  
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 PO Box 8547  
 St. Joseph, MO 64508

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 www.dxengineering.com

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 Hamilton, OH 45011  
 www.randl.com

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 Reynoldsburg, Ohio 43068  
 www.universal-radio.com

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 www.myshacksupply.com

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 www.hamradio.com

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 Crossville, TN 38555  
 www.aero-smith.net/cart/

CT Morgan  
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 2300 East 34th St.  
 Chattanooga, TN 37407

The Ham Shop  
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 Summitville, TN 37382  
 www.thehamshop.com

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 1053 Gardiner Mitchell Parkway  
 Longview, TX 75603

Ham Radio Outlet  
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 701 E. Plano Parkway, Suite 406  
 Plano, Texas 75074  
 www.hamradio.com

Main Trading Company  
 Phone: 903-737-0773  
 2246 Bonham St  
 Paris, TX 75460  
 www.mtrradio.com

Texas Towers  
 Phone: (800)-272-3467  
 1108 Summit Ave. Ste. #4  
 Plano, TX 75074  
 www.texastowers.com

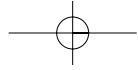
**Virginia**  
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 Portsmouth, VA 23703

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 www.hamradio.com

For dealers outside of the U.S., see . . .

[www.mfjenterprises.com](http://www.mfjenterprises.com)



**MFJ**

# MFJ 1500 Watt Legal Limit IntelliTuner™

Full 1500 watts SSB/CW...Digital & Analog SWR/WattMeter . . . All features of MFJ IntelliTuners™-- Ultra-fast, Safe Automatic Tuning . . . Wide Tuning Range (12-1600 Ohms from 1.8 to 30 MHz) . . . Radio Interfaces . . . Built-in Antenna Switch for two coax/long wire . . . Automatic Bypass protects your amplifier . . . Field Upgradeable Software . . . Very Compact!

MFJ-998  
**\$699<sup>95</sup>**

Ship Code D

The MFJ-998 Full Legal Limit 1500 Watt IntelliTuner™ takes you to the final level in automatic antenna tuners. With a capability of 1500 watts SSB and CW, coupled with automatic tuning, your high-power station can now operate essentially hands-free even when frequency and band changes are made.

### Fast Automatic Tuning

The MFJ-998 instantly matches impedances from 12-1600 Ohms using MFJ's exclusive IntelliTune™, AdaptiveSearch™ and InstantRecall™ algorithms with over 20,000 VirtualAntenna™ Memories. When you key your transmitter, MFJ's InstantRecall™ checks to see if that frequency has been used before. If so, tuning is instantaneous. If not, MFJ's IntelliTune™ algorithm (based on MFJ's efficient SWR Analyzer technology) measures the impedance, snaps the necessary components in place, and then fine-tunes the SWR. If the antenna impedance is outside the tuner's measurement range, MFJ's Adaptive Search™ algorithm measures the frequency and determines only relevant component values -- which are then searched for fast tuning.

### Safe Automatic Tuning and Amplifier Protection

The MFJ-998 includes MFJ's Amplifier Bypass Control™ -- an MFJ exclusive feature! When used with a transceiver interface cable, tuning is safe and "stupid-proof"! When a tuning cycle is initiated, the MFJ-998 first bypasses any in-line amplifier. Next, the MFJ-998 initiates a low-power CW tuning carrier from your transceiver. When tuning is complete, the MFJ-998 reverts your transceiver to its prior power and mode, and re-enables the amplifier. This entire cycle typically takes less than a second! Finally, if the MFJ-998 cannot find a match better than a pre-set amplifier SWR trip-point, the amplifier stays bypassed to provide automatic SWR protec-



tion for your amplifier -- another outstanding MFJ exclusive!

### Analog SWR/Wattmeter

A large super-bright LED lighted analog Cross-Needle SWR/Wattmeter displays selectable 300/60 watt or 3000/600 watt forward/reflected full-scale ranges. You can even select automatic power ranging -- the best power range is automatically selected for you.

### Digital LCD SWR/Wattmeter

A two-line, 16-character backlit LCD meter displays SWR, forward/reflected power, frequency, antenna selected, an auto-ranging bargraph power indication, and much more. You can even read the final matching inductor and capacitor values should you want to build your own fixed matching network. Simple menus determine displayed information - no complex button combinations to remember!

### MFJ VirtualAntenna™ Memory

MFJ's new VirtualAntenna™ Memory system gives you 4 antenna memory banks for each of 2 switchable antenna connectors. Select up to 4 antennas on each antenna connector. Each antenna has 2500 memories, 20,000 total. Has two coax connectors and a binding post for end-fed long wire antennas.

### Download and Upgrade Remotely

Field upgradeable firmware via the serial port -- download and upgrade your MFJ-998 as new features are introduced!

### Plus Much More!

Built-in radio interface provides control of most amateur transceivers.

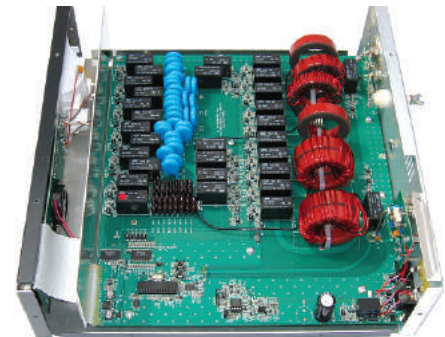
Automatic bypassing when excessive tuning power or power in excess of 1500 watts is applied.

Use balanced line antennas with external MFJ-912, \$69.95, 1.5 kW 4:1 balun.

MFJ-998 is the smallest full legal-limit automatic antenna tuner in the world! 13Wx4Hx15D inches fits easily into your ham station. Weighs just 8 pounds -- great portability! Requires 12-15VDC at 1.4 amps maximum or 110 VAC with MFJ-1316, \$21.95.



Back view of MFJ-998



An Inside view of MFJ-998

## Pre-wired Rig Interface Cables for MFJ-929/998

These cables work with the following MFJ Automatic tuners: MFJ-929, MFJ-928, MFJ-925, and the MFJ-998.

**MFJ-5114K, \$19.95.** Prewired Interface cable for Kenwood TS-590 and compatibles.

**MFJ-5114I, \$19.95.** Prewired Rig Interface cable for Icom and compatibles.

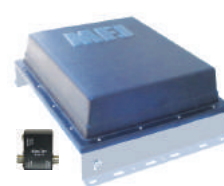
**MFJ-5114Y, \$19.95.** Prewired Rig Interface cable for Yaesu FT-450, FT-950, FT-847, FT-DX-3000 and other compatibles.

**MFJ-5114Y3, \$19.95.** Prewired MFJ-998 to FT-1000MP, FT-9000 Yaesu rigs.

**MFJ-5114Y4, \$19.95.** Prewired MFJ-998 to FT2000 and 5000 Yaesu rigs.

**MFJ-5114YL, \$24.95** For FT-857/897/891/991 and others with only one amp/atu port. RCA phono "y" for amp relay jack.

## MFJ 1.5 kW Remote Automatic Antenna Tuner



MFJ-998RT  
**\$769<sup>95</sup>**  
 Ship code D

Tune your antenna at the antenna! Operating your antenna tuner

remotely greatly reduces losses and allows high efficiencies from long coax runs and high SWR. MFJ-998RT has a wide tuning range, 12-1600 Ohms from 1.8-30 MHz.

Weather protected ABS plastic housing. Has all of the features of the in-shack MFJ-998.

## MFJ ATU PC Board for Elecraft K-3 Rig



MFJ-950K3  
**\$229<sup>95</sup>**  
 Ship Code A

**New!** MFJ-950K3 is a super clone of the KAT3 optional tuning board for the superb Elecraft K3 transceiver. MFJ-950K3 is a direct plug-in PC board for the Elecraft K3 10 Watt or 100 Watt model. Covers 1.8 to 54 MHz. This automatic antenna tuner PC board features an L-Match design and can match SWR up to 10:1. It handles 100 Watts. The ATU PC board has a second antenna port, and a sub-rx SMA port. All antenna ports are protected with gas discharge tubes. Super sensitive relay allows excellent low current drain. MFJ-950K3 is 4Wx3 1/2 Hx1 1/4 D inches and easily slides right into the K3's tuning board slot. Weighs less than 1/2 pound. **Pick up this great accessory for your K3 today and save \$\$\$!**

# MFJ IntelliTuner™ Automatic Tuner

Automatically tunes unbalanced/balanced antennas... Ultra fast... New 20,000 memories... Antenna Switch... Efficient L-network... Select 300 Watts (6-1600 Ohms) or 150 Watts (6-3200 Ohms)... 1.8-30 MHz... 4:1 current balun... LED Lighted Cross-Needle plus Digital SWR/Wattmeters... Audio SWR meter... Backlit LCD... Remote port... Rig interface...

**MFJ**

**World's First dual power level 300/150 Watts SSB/CW Tuner -- \$269<sup>95</sup>**

Select 300 Watt SSB/CW power level and match 6-1600 Ohm antennas Or... select 150 Watt SSB/CW power level and match extra wide-range 6-3200 Ohms!

The MFJ-993B IntelliTuner™ lets you tune any antenna automatically balanced or unbalanced -- ultra fast.

It's a comprehensive automatic antenna tuning center complete with SWR/Wattmeter, antenna switch for two antennas and 4:1 current balun for balanced lines.

MFJs exclusive IntelliTuner™, Adaptive Search™ and InstantRecall™ algorithms give you ultra fast automatic tuning with over 20,000 VirtualAntenna™ Memories.

You get a highly efficient L-network, 6-1600 ohm matching at 300 Watts SSB/CW or extra-wide 6-3200 Ohm matching at 150 Watts SSB/CW, 1.8-30 MHz coverage, Cross-Needle and digital meters, audio SWR meter, backlit LCD, remote control port, radio interface, heavy-duty 16 amp/1000V relays.

**It learns while you're having fun**

As you're ragchewing, contesting or DXing, your MFJ-993B is learning!

When you transmit, the MFJ-993B automatically tunes for minimum SWR and remembers your frequency and tuner settings. The next time you operate on that frequency and antenna, these tuner settings are instantly restored and you're ready to operate in milliseconds!

MFJ new VirtualAntenna™ Memory system gives you 4 antenna memory banks for each of 2 antenna connectors. Select up to 4 antennas on each antenna connector. Each antenna has 2500 memories, 20,000 total.

**Intelligent ultra fast tuning**

MFJs InstantRecall™ first checks its memory to see if you have operated this frequency before. If so, tuning is instantaneous and you're ready to operate.

If not, MFJs IntelliTuner™ algorithm -- based on MFJ's famous SWR Analyzer technology -- kicks in. It measures the complex impedance of your antenna. Next, it calculates the components it needs and instantly snaps them in. Then, it fine tunes to minimize SWR -- you're ready to oper-

MFJ-993B  
Ship Code C  
ate. It's all done in a fraction of a second.

When the impedance is within its measurement range, the MFJ-993B is the fastest automatic antenna tuner in the world.

If it can't accurately determine impedance, MFJ's AdaptiveSearch™ algorithm goes into action. Frequency is measured and relevant components values are determined. Only those values are searched for ultra-fast tuning.

For even faster searches, you can set the target SWR to 2 (settable 1.0-2.0). You can manually tune when you can't transmit (for listening out of ham bands).

**LED Lighted Cross Needle plus Digital SWR/Wattmeters**

LED lighted Cross-Needle and digital meters let you accurately read SWR, forward and reflected power at a glance.

An audio SWR meter lets you hear the tuned SWR when you can't see/read meters.

Turn on a highly visible, instant response SWR LCD bargraph when you need it.

**Backlit LCD Display**

An easy-to-read backlit LCD displays SWR, forward/reflected power, frequency, antenna 1 or 2, L/C tuner values, on/off indicators and other information.

The MFJ-993B is a compact 10Wx2¼ Hx9D inches. Use 12-15 VDC/1 amp or 110 VAC with MFJ-1316, \$21.95.

**Tune any Antenna**

You can tune any antenna -- dipoles, verticals, beams, phased arrays, inverted vees, quads, random wires, mobile antennas, compact limited space antennas.

A 4:1 true current balun lets you tune



any balanced antenna -- horizontal loops, vertical loops, multi-band doublets, quads, folded dipoles, Zepps.

**Remote Control**

Plug in the MFJ-993RC, \$39.95, remote control and use your tuner elsewhere remotely.

**MFJ-993B Interface Pre-wired Cables**

Allows automatic tuning of your MFJ-991B/993B/994B IntelliTuner™ through your radio via these interface cables.

MFJ-5124I, \$19.95, ICOM. Supports IC-706, 707, 718, 725, 728, 736, 746, 756, 765, 775, others that support AH-3 or AH-4.

MFJ-5124A, \$19.95, ALINCO.

Supports DX-70, DX-77 and others.

MFJ-5124K, \$59.95, KENWOOD.

Supports TS-50S, 450S, 570S, 690S, 850S, 870S, 2000 and others that support AT-300.

MFJ-5124Y, \$59.95, YAESU. Supports FT-100D, FT-450, FT-857D, FT-897, FT-950, FT-DX-3000 and other compatibles.

MFJ-5124Y2, \$59.95, YAESU FT-847.

MFJ-5124Y3, \$19.95, Supports YAESU FT-1000MP and compatibles.

MFJ-5124Y4, \$19.95, Supports Yaesu FT2000, FTDX-5000 and compatibles.

**Dual 300/150 Watt Automatic Tuner**


World's First dual power level Tuner --



MFJ-991B Select 300 Watt SSB/CW and match 6-1600 Ohm antennas Or select 150 Watt SSB/CW and match extra wide-range 6-3200 Ohms.

10,000 VirtualAntenna™ Memories. Like MFJ-993B, less digital SWR/Wattmeter/LCD display, audio SWR meter/audio feedback, antenna switch or 4:1 current balun.

## 600 Watt MFJ Automatic Tuner



MFJ-994B  
**\$359<sup>95</sup>**  
Ship Code C

MFJ-994B, 600 Watt Intelli-Tuner™ automatic antenna tuner with 10,000 VirtualAntenna™ Memories. Like MFJ-993B but handles 600 Watts SSB/CW, matches 12-800 Ohms. Does not have digital SWR/Watt-meter/LCD display, audio SWR meter/audio feedback, antenna switch or 4:1 current balun. Tuning must be done at low transceiver power with amplifier bypassed.

<http://www.mfjenterprises.com>

MFJ

# MFJ Compact 200 Watt IntelliTuners™

Automatically tunes any unbalanced antenna . . . Ultra fast . . . 20,000 VirtualAntenna™ Memories . . . Antenna Switch . . . Efficient L-network . . . Matches 6-1600 Ohms at 200 Watts . . . 1.8-30 MHz . . . Digital SWR/Wattmeter . . . Audio SWR meter . . . Radio interface . . .



The MFJ-929 IntelliTuner-Compact™ lets you automatically tune any coax fed or random wire antenna 1.8-30 MHz at full 200 Watts SSB/CW. It can match 6-1600 Ohms (SWR up to 32:1) - - that's a 50% wider matching range at a higher power level than lesser competing products.

You get a digital SWR/Wattmeter with backlit LCD, antenna switch for 2 antennas, built-in radio interface and built-in internal Bias Tee for remote tuner operation.

MFJ's exclusive IntelliTune™, Adaptive Search™ and InstantRecall™ algorithms give you ultra-fast automatic tuning with over 20,000 VirtualAntenna™ Memories.

### MFJ VirtualAntenna™ Memory

MFJ new VirtualAntenna™ Memory system gives you 4 antenna memory banks for each of 2 antenna connectors. You can select up to 4 antennas on each antenna connector. Each antenna has 2500 memories.

### 4 Times the Solutions!

MFJ-929 gives you 256 values each of capacitance and inductances for 131,072



### 2-Year No Matter What™ Warranty

MFJ-939I/K/Y/A **Plug & Play! You won't even know it's there . . .**  
**\$159.95**  
 MFJ-939I/K/Y/A automatically tunes your antenna as you tune your rig. SWR is just always low.

Tunes your coax fed or random wire antennas 1.8-30 MHz from 2 Watts QRP to full 200 Watts SSB/CW.

Matches 6-1600 Ohms (SWR up to 32:1) -- that's a 50% wider matching range than competing products that are less capable and higher priced . . . and it's made in the USA.

### Highly intelligent, ultra-fast tuning!

As you're ragchewing, contesting or DXing, the MFJ-939 is learning your antenna and the way you operate and storing all this in its 20,000 memories. The more you use it, the more it learns.

### Measure & Compute = Instant Match

MFJ-939 uniquely measures your antenna's complex impedance (R, X), computes the L-network and snaps in needed

MFJ-929  
**\$229.95**  
 Ship Code B

products with only 128 L/C values each!

### Highly intelligent, ultra-fast tuning!

Don't be fooled by competing products claiming fast search times -- if you have a quarter of the matching solutions, of course, it takes less time to finish but it's not faster.

MFJ's faster speed comes from advanced technology and software algorithms not from fewer matching solutions.

MFJ's IntelliTuner-Compact™ actually measures complex impedance -- R and X -- of your antenna, computes the L-network values needed and snaps in those components to give you an instant match.

If the load is out of measurement range, AdaptiveSearch™ determines the smaller subset from all solutions that can match a safe load -- and then searches only that subset -- others search through far more solutions.

### Digital LCD SWR/Wattmeter

An easy-to-read, two-line, 16-character backlit LCD displays SWR, peak or average forward/reflected power, frequency, antenna 1 or 2, L/C tuner values, on/off indicators and other info. They are selected from easy-to-understand menus -- not complex combinations of buttons you can't remember.

A fast-response, high-resolution bargraph gives you an auto-ranging 20/200 Watt power meter. You get 60 segments each for forward and reflected power and 36 segments for SWR -- try that with an 8 segment bargraph that makes you change power ranges and doesn't even give you reflected power!

You can read inductance and capacitance

# Plug & Play Auto Tuner

for Icom, Yaesu, Kenwood, Alinco and others

components for instant matching.

AdaptiveSearch™ determines a subset of all solutions that can provide a safe match and searches only that subset giving you an ultra fast match. Others search slowly through all solutions.

InstantRecall™ first checks its memory to see if you have operated this frequency before. If so, tuning is instantaneous and you're ready to go!

MFJ VirtualAntenna™ Memory MFJ exclusive VirtualAntenna™ Memory system gives you 8 antenna memory banks of 2500 memories each.

You can use an antenna switch to select up to 8 antennas and assign each antenna its own 2500 memories!

4 Times More Solutions and Faster! MFJ has 256 values each of capacitance and inductance for 131,072 matching solutions giving you a finely tuned very low SWR. That's 4 times the 32,768 solutions of competitors using only 128 L/C values each!

Don't be fooled by competing products claiming fast search times -- if you have a

quarter of the matching solutions, of course, it takes less time to finish but it's not faster.

MFJ's faster speed comes from advanced technology and software algorithms not from fewer solutions.

Audio SWR Meter An Audio SWR meter beeps when SWR <1.5, 2, 2.5, 3. Alarms if >3. Audible & Visible Diagnostic messages.

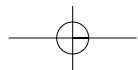
Heavy-Duty Components Heavy-duty L-network: 10 Amp/1000V relays, RF duty silver mica caps won't burn up. Safe, reliable, continuous 200W SSB/CW.

As Small as Your Radio Tiny 6 1/2 W x 1 1/8 H x 7 1/2 D". 2.4 lbs. SO-39s, random wire ant. & gnd posts.

Never Obsolete . . . Super Versatile Truly Plug & Play! No settings, only one cable (included) to plug in! Order MFJ-939I, Icom; MFJ-939K, Kenwood; MFJ-939Y, Yaesu, MFJ-939A, Alinco. Specify Yaesu: FT-100/450/950/ 857/897/1000MP/ 9000/2000 or other. Never Obsolete! If you get a new transceiver, simply order a new Plug and Play cable, \$19.95 each.

Super Versatile! Works with ALL older rigs, classic transmitters, Flex, Elecraft, TenTec, QRP, others. Auto tune antenna -- touch tune button on any MFJ-939I/K/Y for any rig.





# MFJ 1500 Watt Remote Auto Tuner

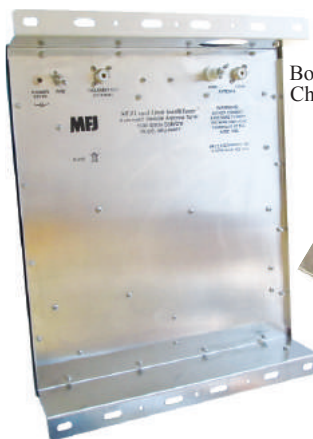
Place this MFJ-998RT remote tuner *at* your antenna to match high SWR antennas/long coaxes -- greatly reduce losses for high efficiency

... Match 12-1600 Ohms, 1.5 kW, SSB/CW, 1.8-30 MHz... Match coax/wire antennas... Weather-sealed... Remotely powered thru coax... Amplifier, radio, tuner protection... Output static/lightning protection... StickyTune™ always tunes when power folds back... DC power jack...

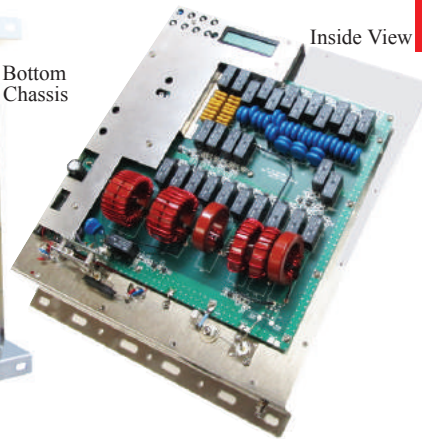
MFJ



MFJ-998RT  
**\$769<sup>95</sup>**  
 Ship Code D



Bottom Chassis



Inside View

**Tune your antenna AT your antenna!**  
 Get greatly reduced losses and high efficiencies with long coax runs and high SWR antennas with this new MFJ-998RT 1.5 kW Remote Antenna Tuner.

**Weather-Sealed**

A tough, durable weather-sealed ABS cabinet with over-lapping lips, sealing gasket and stainless steel chassis protects the MFJ-998RT from all kinds of weather.

**No Power Cable Needed!**

No power cable needed -- remotely powered through coax. Includes MFJ-4117 Bias-Tee with on/off switch for station end of coax. Has 12 VDC jack for power cable, if desired.

**Fully Protected**

MFJ exclusive algorithms protect your tuner, radio and RF power amplifier from

**600W Remote IntelliTuner™**

damage. Automatic inductor and capacitor limiting prevents tuning extreme loads which can destroy your tuner.

Your tuner will not tune if more than 75 Watts with SWR greater than 3:1 is applied or if more than 125 Watts is applied.

Tuner output is static electricity and lightning induced surge protected.

**MFJ exclusive StickyTune™**

Very high SWR can fold back transmitter power and prevent tuning caused by extreme differences in loads (example: changing bands and other conditions).

But MFJ exclusive StickyTune™ always tunes with a simple on/off power cycle and re-transmit.

**Tunes Coax fed and Wire Antennas**

Tunes both coax fed and wire antennas. Has ceramic feed-through insulator for wire antennas. 2 kV Teflon® insulated SO-239 -- prevents arcing from high SWR.

**High Power, Highly Efficient**

A highly efficient L-network matches 6-

**300W Remote IntelliTuner™**

1600 Ohms at full 1500 Watts legal limit SSB/CW 1.8 to 30 MHz with Hi-Q Ls, Cs.

**MFJ-998RT Learns as you Operate**

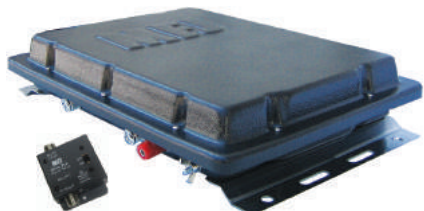
As you operate, the MFJ-998RT automatically tunes for minimum SWR and remembers your frequency and tuner settings. The next time you operate on that frequency and antenna, its tuner solution is restored in milliseconds and you're ready to operate!

**Highly Intelligent, Ultra-fast Tuning**

MFJ InstantRecall™ recalls stored tuning solutions from 10,000 memories. For new frequencies, MFJ Intelli-Tune™ measures your antenna impedance and instantly determines the correct matching components. If antenna impedances cannot be measured, MFJ AdaptiveSearch™ searches only the relevant components that can match your antenna giving you ultra-fast tuning.

Field upgradeable firmware. Requires 12-15 VDC at 1.4 Amps maximum or 110 VAC with optional MFJ-1316, \$21.95. Weighs 9.5 lbs. 13 1/4"Wx6 3/4"Hx17 1/2"D inches.

**200W Remote IntelliTuner™**



MFJ-994BRT -- It's perfect for 600 Watt SSB/CW amplifiers like Ameritron's AL-811/ALS-600/ALS-500M.

Matches 12-800 Ohms. Coax/wire antennas, 1.8-30 MHz.

Fully weather-sealed for outdoor use. Remotely powered through coax.

Tough, durable, built-to-last cabinet, 9 1/4"Wx3Hx 14 1/4"D inches, 4 lbs.

Includes MFJ-4117 BiasTee Power Injector.

MFJ-994BRT  
**\$399<sup>95</sup>**  
 Ship Code C



MFJ-993BRT handles 300 Watts SSB/ CW.

Matches an extra-wide 6-1600 Ohm impedances. Use coax fed or wire antennas from 1.8-30 MHz.

Fully weather-sealed for remote outdoor or marine use.

Remotely powered through coax.

Tough, durable, built-to-last cabinet measures 9 1/4"Wx3Hx14 1/4"D inches.

Weighs just 4 pounds. Includes MFJ-4117 BiasTee Power Injector.

MFJ-993BRT  
**\$299<sup>95</sup>**  
 Ship Code C



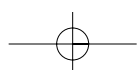
MFJ-926B, 200 Watts SSB/CW, matches 6-1600 Ohms, Coax/wire antennas, 1.8-30 MHz. Includes BiasTee.

Fully weather-sealed for remote outdoor or marine use.

Remotely powered through coax. Tough, durable, built-to-last cabinet measures 9 1/4"Wx3Hx14 1/4"D inches.

Weighs just four pounds.

MFJ-926B  
**\$279<sup>95</sup>**  
 Ship Code C



EM

# MFJ-989D 1500 Watt legal limit Antenna Tuner

The World's most popular legal limit antenna tuner just got better -- with no increase in price! You get better efficiency, lower losses, and a new true peak-reading meter. Easily handles full 1500 Watts SSB/CW, 1.8 to 30 MHz including MARS/WARC bands.



Patent Pending

- 500 pF air variable capacitors
- AirCore™ Roller Inductor with fast-tune Crank Knob
- TrueActive™ Peak-Reading Cross-Needle SWR/Wattmeter with Super-bright LED
- High-Voltage Current Balun
- Rugged Cabinet maintains hi-Q

Made in the U.S.A.

The world's most popular legal limit antenna tuner just got better -- much better -- with no increase in price!

You get better efficiency, lower losses and a new true peak reading SWR/Wattmeter. It easily handles full 1500 Watts SSB/CW and covers 1.8 to 30 MHz, including MARS and WARC bands into balanced or unbalanced loads.

You can match dipoles, verticals, inverted vees, random wires, beams, balanced lines, coax, mobile whips, short-wave -- nearly any antenna.

You get everything you've ever wanted in a high power, full featured antenna tuner -- extremely wide matching range, lighted Cross-Needle SWR/Wattmeter, antenna switch, dummy load and balun.

### Massive Transmitting Capacitors

New huge 500 pF air variable capacitors give you twice the capacitance for much more efficient operation on 160 and 80 Meters.

Specially shaped plates give low minimum capacitance resulting in an extremely wide matching range -- 160 thru 10 Meters.

New larger, more attractive capacitor knobs with easy-to-see dials make tuning much easier and precise.

### MFJ AirCore™ Roller Inductor with new fast-tune Crank Knob

New and improved AirCore™ Roller Inductor gives you lower losses, higher Q and handles more power with no self-resonances. It gives you cool, efficient and smooth tuning on all bands and it's air core can't burn up!

Large, self-cleaning wiping contact gives excellent low-resistance connection without contact arcing or burning.

New fast-tune crank knob lets you reset your roller inductor quickly, smoothly and accurately.

A precision gear driven 3-digit turns counter lets you accurately reset your roller inductor for quick band changing.

### TrueActive™ Peak Reading SWR/Wattmeter

New TrueActive™ peak reading SWR/Wattmeter lets you read true peak or average power on all modes. Large, easy-to-read super-bright LED lighted Cross-Needle meter lets you read SWR and forward/reflected (3000/ 300 Watt ranges) power at a single glance. Uses 9-Volt battery and/or 12 VDC or 110 VAC with MFJ-1312D, \$15.95.

### MFJ High Voltage

#### Current Balun

New high voltage current balun lets you tune high and low impedance balanced lines without core saturation or voltage breakdown.

It's constructed with two giant 2½ inch toroid cores and wound with high voltage wire connected to high-voltage glazed ceramic feedthrough insulators.

#### Super Antenna

#### Switch

MFJ-989D's super heavy duty antenna switch is made of two individual ceramic wafers

MFJ-989D  
**\$409<sup>95</sup>**

Ship Code D

wired in parallel. Extra wide spaced, heavy duty contacts handle extreme voltages and currents. We've never burned one up!

You can select two coax antennas (directly or through tuner), balanced line/random wire, or built-in dummy load.

### Built-in Dummy Load

A full-size 300 Watt non-inductive 50 Ohm dummy load is built-in.

You'll find it handy for transmitter tuning, testing and repairing rigs, setting power level, adjusting mic gain and more.

### New Cabinet maintains high Q

New roomy cabinet helps maintain components' high Q. Vent holes keeps components cool. Super construction -- non-stripping PEM nuts, wing-nut ground post, fire-retardant epoxy glass PC board, and heavy gauge wire throughout. Measures 12 7/8" W x 6 H x 1 1/8" D inches.

### Lexan Front Panel

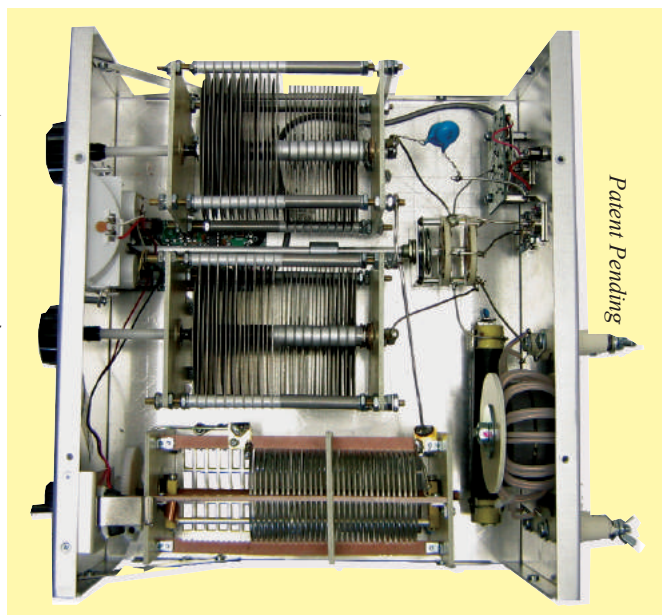
The MFJ-989D has a new nearly indestructible multi-color Lexan front panel. Its detailed logging scales and legends will be legible for a lifetime of DXing.

### Wide Range T-Network

The MFJ-989D uses the time-tested wide range T-Matching Network. It gives you the widest matching range and is the easiest to use of all matching networks. With MFJ's new high value 500 pF air variable capacitors and new low loss roller inductor, it easily handles high power efficiently.

### No Matter What™ Warranty

Every MFJ tuner is protected by MFJ's famous one year No Matter What™ limited warranty. We will repair or replace your MFJ-989D no matter what (at our option) for one full year.



# MFJ KW Differential-T™ Antenna Tuner

**... Gives absolute minimum SWR ... Simple 2-knob tuning ... Lighted Cross-Needle SWR/Wattmeter ... AirCore™ Roller Inductor ... 6-position antenna switch ... Balun for balanced lines ... 1.8-30 MHz coverage**

MFJ-986  
**\$369<sup>95</sup>**

Ship Code E

MFJ's innovative *Differential-T™* tuner has a differential capacitor that makes tuning easier than ever. Gives minimum SWR at only *one* setting. Broadband design ends constant retuning.

MFJ-986 is a rugged roller inductor antenna tuner that handles 3 KW PEP SSB amplifier input power (1500 Watts PEP SSB output). Tunes 1.8-30 MHz *continuously*, including MARS and all the WARC bands.

MFJ's exclusive *AirCore™* Roller Inductor gives *absolute minimum* SWR -- something tapped inductors just can't do.

**3-digit** turns counter plus a spinner knob gives precise inductance control so you can quickly retune your frequency.

A super-bright LED *lighted* peak/average reading cross-needle meter shows SWR, forward and reflected power at a single glance!

You get a 6-position antenna switch that lets you select two coax lines and/or random wires (direct or through tuner), balanced line and external dummy load.

The *MFJ TrueCurrentBalun™* for balanced lines minimizes feedline radiation that causes field pattern distortion, TVI and RF in your shack. *Ceramic* feedthru insulators for balanced lines withstand high voltages and temperatures.

**Differential-T Tuner™ . . . .**  
*A new twist on proven technology*

Replacing two variable capacitors with a *single* differential capacitor gives wide range T-network tuning with just two controls -- a tuning capacitor and a roller inductor.

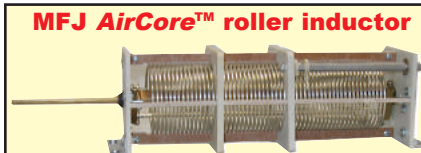


The compact 10<sup>3</sup>/<sub>4</sub>x4<sup>1</sup>/<sub>2</sub>x15 inch all-aluminum cabinet has plenty of room to mount the roller inductor away from metal surfaces for highest Q -- you get high efficiency and more power into your antenna. *Wide-spaced* tuning capacitor plates let you run high power without arcing.

**TrueActive™ Peak Reading**

**New! True-Active™ Peak Reading SWR/Watts LED Meter!**

Simple 2-knob tuning makes it easier than ever. Get minimum SWR at only *one* setting and a broadband response that ends constant retuning. You'll spend your time QSOing instead of fooling with your tuner.



**MFJ AirCore™ roller inductor**

MFJ's exclusive *super heavy duty Air-Core™* Roller Inductor has an air core that can't burn up! Get ultra high-Q, lowest loss, highest efficiency and highest power handling of any roller inductor in ham radio.

MFJ's exclusive *Self-ResonanceKiller™* keeps potentially damaging self-resonances away from your operating frequency.

**Large**, self-cleaning wiping contact gives excellent low-resistance connection without contact arcing or burning.

**Solid** 1/4" brass shaft with self-align bearings gives smooth non-binding rotation.

**SWR/Wattmeter**

*New TrueActive™* peak reading *SWR/Wattmeter* lets you read *true* peak or average power on all modes. Large, easy-to-read *super-bright* LED lighted Cross-Needle meter lets you read SWR and forward/reflected (2000/200 Watt ranges) power at a single glance. Uses 9-Volt battery and/or 12 VDC or 110 VAC with MFJ-1312D, \$15.95. Lamp on/off switch.

**MFJ TrueCurrentBalun™**  
*reduces feedline radiation*

**Most** tuners use a *voltage* balun that forces equal voltages on the two antenna halves. It minimizes unbalanced currents only if the antenna is perfectly balanced -- not the case with practical antennas.

The MFJ-986 uses a *true* current balun to force equal *currents* in the two antenna halves -- even if the antenna is not perfectly balanced!

The *MFJ TrueCurrentBalun™* gives superior balance over voltage baluns and minimizes unbalanced current. This reduces field pattern distortion, concentrates your power for a stronger signal -- plus reduces TVI and RF in your shack caused by feedline radiation.

## MFJ-962D Compact Tuner for Linear Amplifiers

**MFJ AirCore™ Roller Inductor, Compact Size, Lexan scratch-proof front panel . . .**

**. . . handles AMERITRON's AL-811H!**



**New! TrueActive™ Peak Reading SWR/Watts LED Meter**

MFJ-962D  
**\$319<sup>95</sup>**

Ship Code C

knob set including a weighted deluxe spinner knob, ultra compact size (10<sup>3</sup>/<sub>4</sub> x 4 x 10<sup>7</sup>/<sub>8</sub> inches) and scratch-proof nearly indestructible multi-colored Lexan front panel.

**Two** transmitting tuning capacitors and MFJ's exclusive *AirCore™* roller inductor gives precise control to get your SWR down to an absolute minimum. Get extremely

wide matching range from 1.8 to 30 MHz *continuously*, including MARS and WARC bands.

MFJ's *AirCore™* roller inductor has an air core that can't burn up. You get ultra high-Q, low loss and MFJ's exclusive *Self-Resonance Killer™* that eliminates damaging self-resonances.

MFJ-962D now has the *True-Active™* peak-reading SWR/Watts LED Meter! Lets you read *true* peak or average power on all modes. A super-bright LED *lighted* peak and average reading Cross-Needle SWR/Wattmeter makes tuning quick and easy. At one glance you can read SWR, forward and reflected power in two power ranges. Meter LED uses 12 VDC or 110 VAC with MFJ-1312D, \$15.95.

A 6-position *ceramic* antenna switch lets you select 2 coax lines (direct or through tuner), random wire and balanced lines.

You get a heavy duty *MFJ TrueCurrentBalun™* for balanced lines. High-voltage *ceramic* feedthru insulators let you operate high power into balanced feedlines.

*Why settle* for a mere 300 Watt antenna tuner when a *few* extra dollars let you add *real* power when you're ready? The MFJ-962D lets you use your barefoot rig now, then when you're ready . . .

When you're ready . . . you can add a powerhouse linear amplifier at no additional cost.

MFJ-962D handles 1500 Watts PEP SSB amplifier input power (800 Watts PEP SSB amplifier output power). Perfect for *Ameritron's* best selling 800 Watt AL-811H or 600 Watt AL-811 amplifiers.

Features MFJ's *AirCore™* Roller Inductor, new aluminum-skirted

**MFJ**

# MFJ 2500 Watts ContinuousCarrier™ Tuner

Silver plated Edge-Wound Roller Inductor . . . 1000/500 pF Variable Capacitors . . . Antenna Switch . . . 4-Core Balun . . . true Peak Cross-Needle SWR/Wattmeter . . . Dummy Load . . . Extremely Wide Matching Range . . . Patent Pending . . .

The MFJ-9982 ContinuousCarrier™ antenna tuner handles 2500 Watts continuous carrier output on all modes and all HF bands into most unbalanced antennas -- even on 160 Meters where even the best antenna tuners fail!

The MFJ-9982 gives you every feature you'll ever want in a high power tuner -- wide matching range, 1.8 to 30 MHz coverage, 6-position antenna switch, 4-core balun, dummy load, true peak/average lighted SWR/Wattmeter, 6:1 reduction drives with detailed logging scales, 3-digit turns counter, extra large knobs.

### New Components, New Technologies

The Heart and Soul of the MFJ-9982 is its roller inductor and variable capacitors.

MFJ's high power, high-Q continuous current AirCore™ roller inductor is no ordinary roller inductor! It's edge wound from thick .06-inch silver-plated solid copper strap.

It can carry huge circulating RF currents and withstand tremendous heat that'll melt or burn up ordinary roller inductors.

Self-insulating construction reduces stray capacitance -- keeps self-resonant frequencies high and out-of-the-way. Dual, silver-plated compression wheels give ultra low-resistance contacts. New fast-tune crank knob.

High-current, high-capacitance 1000 pF and 500 pF air variable capacitors have low minimum capacitance and are self-insulating.

These newly developed capacitors and MFJ's patent pending innovation gives you very high efficiency on 160/80 Meters and extremely wide matching range on 10/12/15 Meters at 2500 Watts -- a feat only the MFJ-9982 has achieved.

### Antenna Tuner/Artificial Ground



MFJ-934  
\$209<sup>95</sup>  
Ship Code B

MFJ-934 is unique because it has a built-in artificial ground. A ground matching knob lets you switch in inductance to bring an attached wire to a low impedance current point to form an artificial ground. A push button lets you use the Cross-Needle Meter to monitor for maximum ground current. With an artificial ground to work against, you'll be surprised to see how well a random wire can work.

You get a 300 Watt full featured antenna tuner that covers 1.8-30 MHz. Lighted CrossNeedle meter reads SWR/Forward/Reflected power at-a-glance. 4:1 balun for balanced lines. Features efficient airwound inductor, high current/voltage 12-position inductor switch and two 1000 volt air-variable capacitors. Tunes all antennas and feedlines including random wire, coax and balanced lines. 10<sup>3</sup>/<sub>4</sub>Wx3<sup>1</sup>/<sub>2</sub>Hx8D in.

MFJ-9982  
\$699<sup>95</sup>  
Ship Code F



### Hi-Voltage/Current Antenna Switch

The antenna switch is completely isolated to handle high-voltage high impedance antennas. High-current, low impedance antennas are handled by parallel sets of high-current contacts of two ceramic switches.

### New 4-Core Balun

Powerful balun -- Four 2<sup>1</sup>/<sub>2</sub> inch cores, 12-gauge Teflon™ wire. Run balanced lines at full 2500 Watts SSB/CW continuous, 24/7.

### New Balanced Line Feed-Thru Insulator

Allows massive antenna currents to flow directly to the antenna capacitor without passing through lossy screws or bolts.

### TrueActive™ Peak Reading Circuit

New TrueActive™ circuit reads true peak or average power on all modes. Super-bright LED lighted Cross-Needle meter reads SWR/forward/reflected power.

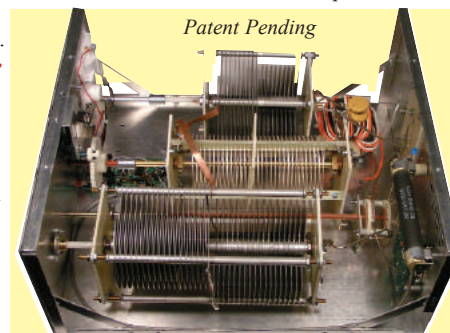
### 1500 Watt Dummy Load

1500 Watt air-cooled non-inductive 50

Ohm resistor. 100W/10 min., 1.5kW/10 sec.

### New Cabinet maintains high Q

New roomy cabinet maintains high Q. Vent holes. Heavy gauge, .08 inch aluminum braced chassis. Vinyl cover, non-stripping PEM nuts, heavy 10-gauge or copper strap wiring throughout. 13<sup>3</sup>/<sub>4</sub>Wx7Dx16<sup>1</sup>/<sub>4</sub>D inches. 15 pounds.



### MFJ Artificial RF Ground

Places your rig near earth ground potential!



MFJ-931  
\$109<sup>95</sup>  
Ship Code B

### Create an artificial ground with this MFJ-931!

It effectively places your rig near actual earth ground potential even if your rig is on the second floor or higher with no earth ground possible! It electrical-ly places a far away RF ground at your rig.

How's your RF ground? Do you have RF "hot spots" that "bite" you when you transmit? Do you have RF feedback that causes your rig to quit working on some bands? Do you have TVI/RFI that makes your neighbors hard to live with? Do you get weak signal reports because of extreme ground losses or radiation pattern distortion?

These problems could be caused by poor RF grounding, especially if your rig is on a second floor with no ground at all. Even if you have a good ground, a long connection wire can ruin its effectiveness by isolating true RF ground from your rig.

### 4 Foot Ground Rod

Durable four foot cop- MFJ-1934  
per bonded steel earth \$99<sup>95</sup>  
ground rod is a tough 3/8 in. diameter that will last. Ship Code B

Pointed end makes it easy to drive into the ground. Use it to tie your equipment to a single earth ground to help bleed off static and RFI and prevent RF hot spots. Use several to form a good RF ground for random, long wire and vertical antennas.

Continued . . . MFJ-931 creates an artificial ground! It resonates a random length of wire thrown along the floor and produces a tuned counterpoise. This artificial ground effectively places your rig near actual earth ground potential with no earth ground possible. Reduces the electrical length of the ground connection wire to virtually zero by tuning out its reactance. MFJ-931 connects between your rig and a random length of wire or a connecting ground wire. It's tuned for maximum ground current using the built-in RF ammeter. 1.8 to 30 MHz. 7<sup>1</sup>/<sub>2</sub>Wx 3<sup>1</sup>/<sub>2</sub>Hx7D in. RF tight alu. cabinet.

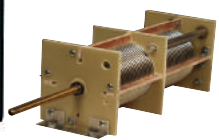


# MFJ 300W Roller Inductor Tuner

World's only 300 Watt AirCore™ Roller Inductor Antenna Tuner gives you absolute minimum SWR . . . Covers 6 Meters thru 160 Meters . . .



MFJ-969  
**\$229<sup>95</sup>**  
 Ship Code C



MFJ-969 gives you MFJ's superb AirCore™ Roller Inductor and full 6 Meters through 160 Meters coverage!

You get everything you've ever wanted including . . . 300 Watts PEP SSB full featured antenna tuner, widest matching range, full-size lighted Cross-Needle SWR/Wattmeter reads true peak forward power, QRM-Free PreTune™, 8 position antenna switch, built-in 50 Ohm dummy load, heavy duty 4:1 balun -- all in a tough, attractive cabinet. MFJ's famous one year No Matter What™ limited warranty.

MFJ-969's AirCore™ Roller Inductor, gear-driven turns counter and spinner knob gives you exact inductance control for minimum SWR.

MFJ's exclusive AirCore™ Roller Inductor has an air core that can't burn up!

You get ultra high-Q, the lowest loss, highest efficiency and highest power handling of any roller inductor in ham radio.

MFJ's exclusive Self-Resonance Killer™ keeps potentially damaging self-resonances away from your frequency.

Huge self-cleaning wiping contact gives you excellent low-resistance connection without contact arcing or burning.

Solid 1/4 inch brass shaft, self-align bearings -- smooth non-binding operation.

The MFJ-969 covers all frequencies from 160 Meters thru 6 Meters, including the "magic band" -- the widest matching range of any full featured antenna tuner.

**Match any antenna**

Match dipoles, verticals, inverted vees, random wires, beams, mobile whips, SWL receiving antennas -- nearly any antenna.

You can use coax cable, random wire or balanced lines. Has heavy duty 4:1 balun.

**True Peak Reading Cross-Needle Meter**  
 MFJ's new ActivePeak ReadingCircuit™ accurately reads true peak forward power -- an MFJ exclusive.

MFJ's lighted Cross-Needle SWR/Wattmeter reads SWR, true peak forward and average reflected power simultaneously on 300 Watt or 30 Watt ranges.

Lamp has on/off switch and uses 12 VDC or 110 VAC with MFJ-1312D, \$15.95. ActivePeakReading Circuit™ can also use a 9 volt battery.

MFJ's 8 positions let you select two coax fed antennas, random wire/balanced line or built-in dummy load for use through your MFJ-969 or direct to your rig.

MFJ's QRM-Free PreTune™ lets you pre-tune MFJ-969 off-the-air into a built-in dummy load without causing QRM.

Pre-tuning into a dummy load makes tuning your actual antenna quick and easy!

The MFJ-969 has a full size non-inductive 50 Ohm dummy load. You'll find it handy for tuning, testing, repairing rigs, setting power level, adjusting mic gain, etc.

The tough aluminum case has a scratch-proof multi-colored Lexan front panel. Compact 3 1/2"Hx10 1/2"Dx9 1/2"W inches.

## Ham Radio's Most Popular 300 Watt Tuner

More hams use MFJ-949s than any other antenna tuner in the world!



MFJ-949E  
**\$189<sup>95</sup>**  
 Ship Code B

More hams use MFJ-949E antenna tuners than any other antenna tuner in the world! . . . Why? Because the world's leading tuner has earned a worldwide reputation for matching just about anything.

**Full 1.8-30 MHz Operation**  
 Custom designed inductor switch, 1000 volt tuning capacitors, Teflon® insulating washers and proper L/C ratio gives you arc-free no worries operation with up to 300 Watts 1.8 to 30 MHz.

**Tunes any antenna**  
 Tunes out SWR on dipoles, verticals, inverted vees, random wires, beams, mobiles . . . nearly anything! Use coax, random wire or balanced lines. Has heavy duty 4:1 balun.

**Custom inductor switch**  
 The inductor switch is the most likely component to burn up in any antenna tuner.

MFJ's inductor switch in the MFJ-949E was custom designed to withstand the extremely high RF voltages and currents that are developed in your tuner. Our switch is built tough and built-to-last!

**8-Position Antenna switch**  
 lets you select two coax fed antennas, ran-

dom wire/balanced line or built-in dummy load through your MFJ-949E or direct to your transceiver.

**Big Lighted Cross-Needle Meter**  
 MFJ's full-size 3-inch lighted cross-needle Meter lets you easily read SWR, true peak forward and average reflected power simultaneously on 300 Watt or 30 Watt ranges. Lamp has on/off switch. Requires 12 VDC or 110 VAC with optional MFJ-1312D, \$15.95.

**QRM-Free PreTune™**  
 MFJ's QRM-Free PreTune™ lets you pre-tune your MFJ-949E off-the-air into its built-in dummy load! Makes tuning your actual antenna faster and easier and you make friends in the amateur radio community by being nice.

**Plus Much More!**  
 Full size built-in non-inductive 50 Ohm dummy load, scratch-proof Lexan multi-colored front panel, superior cabinet and construction and more! Measures a sleek and compact 10 5/8"x3 1/2"x7 inches.

Successful, time-proven, exceptional tuning . . . more!

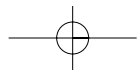


**MFJ-948 Tuner**  
 MFJ-948, \$169.95. Has all the features of the MFJ-949E except for a built-in dummy load.

**Pre-made Premium Coax Patch Cables**  
 Weather resistant 50-Ohm coax patch cables with pre-soldered-on PL-259 connectors. Select length and choose from RG-58, RG-8X or RG-213 type. **Made in U.S.A.** N-models are terminated with the N-type connectors.

| length  | RG-58     | Price  | RG-8X                                      | Price  | RG-213 (H) | Price   |
|---------|-----------|--------|--|--------|------------|---------|
| 3 ft.   | MFJ-5803  | \$6.95 | MFJ-5803X                                  | \$9.95 | MFJ-5803H  | \$12.95 |
|         |           |        |  |        | MFJ-5803NH | \$14.95 |
| 6 ft.   | MFJ-5806  | 9.95   | MFJ-5806X                                  | 11.95  | MFJ-5806H  | \$15.95 |
|         |           |        |  |        | MFJ-5806NH | \$17.95 |
| 9 ft.   | MFJ-5809  | 11.95  | MFJ-5809X                                  | 13.95  | MFJ-5809H  | \$17.95 |
| 12 ft.  | MFJ-5812  | 12.95  | MFJ-5812X                                  | 14.95  | MFJ-5812H  | \$19.95 |
| 18 ft.  | MFJ-5818  | 14.95  | MFJ-5818X                                  | 16.95  | MFJ-5818H  | \$24.95 |
| 25 ft.  | MFJ-5825  | 18.95  | MFJ-5825X                                  | 21.95  | MFJ-5825H  | \$39.95 |
| 50 ft.  | MFJ-5850  | 24.95  | MFJ-5850X                                  | 29.95  | MFJ-5850H  | \$59.95 |
| 100 ft. | MFJ-58100 | 39.95  | MFJ-58100X                                 | 49.95  | MFJ-58100H | \$99.95 |
| 50 ft.  | MFJ-5850E | 19.95  | RG-58, 50 ft. open end, PL-259 on one end. |        |            |         |

**MFJ Coax Cutter and Stripper tools**  
**MFJ-7402, \$19.95.** Coax Cable Cutter cuts cable without crushing it. Cuts aluminum cable up to 4/0 gauge, copper cable 2/0 gauge stranded. Carbon steel, hardened with blade oxide finish. 9 inches.  
**MFJ-7404, \$19.95.** 2-Blades Coaxial Cable Stripper makes it easy to strip coax perfectly every time. Strips outer jacket and inside insulation at same time. Adjustable blades. For RG8, RG11, RG213 cable.



# MFJ Compact Mobile HF Antenna Tuner

**Covers HF and 6 Meters, Handles 300 watts, Has Antenna Bypass Switch**

The compact MFJ-945E mobile antenna tuner covers 6 Meters and HF (1.8- 60 MHz), handles 300 PEP watts, and tunes coaxial cable-fed antennas, plus random wires.

Don't leave home without this mobile tuner, and have a better trip as the MFJ-945E extends antenna bandwidth and eliminates the need to stop, go outside, and readjust your mobile antenna.

The frustratingly narrow bandwidth of mobile antennas can be greatly broadened with this tuner.

Of course, this diminutive tuner can be used to tune coax-fed home station antennas of all kinds, too, as well as random wires.

The cross needle meter shows SWR, forward, and reflected power -- at a glance.



It reads forward/reflected power in 300/60 and 30/6 watt ranges. **MFJ-945E \$139<sup>95</sup>**

The ON/ OFF lamp switch is handy for changing light conditions in your vehicle; the meter lamp is 12 VDC powered with optional MFJ-1312D, \$15.95.

Large, conveniently-placed controls make tuning fast and easy.

The bypass switch lets you bypass the tuner (connecting your antenna and trans-

mitter directly) while still using its SWR/wattmeter.

The back panel has SO-239 coaxial connectors for your transmitter and antenna feedline and a wing nut post for your ground.

For at-home use with a random wire a standard banana plug fits neatly into the antenna jack.

An efficient airwound inductor gives you lower losses for more watts output.

The small, 8Wx2Hx6D inch black aluminum cabinet takes up little space.

A mobile mounting bracket, MFJ-20, is \$6.95. Add \$2.00 shipping for the bracket if ordered separately.

Has MFJ's One Year *No Matter What*™ limited warranty.

## Portable Tuner for QRP to Full-bore Transceiver

The MFJ-971 is a tiny, inexpensive portable 200 watt PEP antenna tuner that's a perfect match for today's ultra-compact HF transceivers while offering features especially designed for the QRP operator.

Covering 1.8 to 30 MHz, this T-match tuner can match coax-fed antennas, as well as those fed with balanced feedline, and random wires. Built-in 4:1 toroid balun for balanced lines.

From the factory, the MFJ-971 offers forward power readings of 30 watts maximum or 300 watts, on its cross needle meter. You can monitor forward power, reflected power, and SWR simultaneously.

For dedicated QRP operation, swapping of a jumper plug internally converts the maximum forward reading on the meter to 6 watts. Great for use with MFJ's 90/94 series of CW and SSB individual band transceivers.

The meter lamp may be powered by an external 12 VDC



MFJ-971 **\$129<sup>95</sup>** Ship Code B

source if you desire (MFJ-1312D, \$15.95).

MFJ-971, while an all-around low-power tuner, is especially suited for MFJ transceivers and power packs. It matches them in size and styling and special brackets allow connecting the units together physically into an attractive and compact package. **Optional bracket set, p/n: 17-9020-1 is \$4.95.**

As in all good antenna tuners, three controls give flexibility in matching: Inductance (12 positions), Transmitter, and Antenna. Once you find the proper setting on each band, just record it for future "instant band changing."

Rear panel includes SO-239 coaxial jacks for transmitter and antenna; 2 sturdy binding posts for balanced line; another binding post for a random wire; ground post; 12 VDC input jack for meter lamp; and low/high power meter range switch.

The MFJ-971 is backed by MFJ's *No Matter What*™ warranty. Measures a tiny 6X6X2.5 inches.

## MFJ 300-Watt Super Value Versa Tuner Covers 160-10 Meters

It's not just a tuner, it's an 8-position antenna switch.

The photo tells the story: you can select among two coaxial-fed antennas, a balanced line (4:1 toroid balun included) or random wire or an external dummy load, and for each you can select "direct" (bypassing the tuner) or "tuned."

This tuner is rated at 300 watts and can match dipoles, vees, random wires, and balanced and coax feedlines, from 1.8 to 30 MHz. You get a lighted cross needle

SWR/wattmeter with on/off switch (lamp uses 12 VDC or 110 VAC with MFJ-1312D, \$15.95). **MFJ-941E \$149<sup>95</sup>** Ship Code B

The meter shows SWR, and forward and reflected power in 300/60 and 30/6 watt ranges selected at the front panel. An efficient 12 position airwound inductor gives low losses for more power out. Uses 1000 Volt capacitors.



The aluminum cabinet has a durable scratch-proof multi-color Lexan front panel to complement your rig and fits right into your station. 10<sup>3</sup>/<sub>8</sub>Wx2<sup>1</sup>/<sub>8</sub>Hx7D inches.

### MFJ's Smallest VERSA TUNER



MFJ's smallest (5x2<sup>1</sup>/<sub>2</sub>x6) and most affordable 200 Watt PEP VERSA TUNER. Match dipoles, vees, random wires, verticals, mobile whips, beams, balanced and coax lines continuously from 1.8-30 MHz. A 4:1 balun for balanced lines is built into this MFJ-901B tuner. Three adjustment controls for maximum matching capability.

### Random Wire Tuner for HF

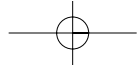


Operate all bands 1.8-30 MHz -- anywhere with any transceiver -- using a single random wire and MFJ's *Random Wire Tuner*. Small enough to carry in your hip pocket. Handles 200 watts output. Matches high or low impedance loads by interchanging input and output, so it uses SO-239 connectors for both. Measures a compact 3<sup>1</sup>/<sub>2</sub>Wx2<sup>1</sup>/<sub>4</sub>Hx5<sup>1</sup>/<sub>4</sub>D in.

### MFJ-941EK Antenna Tuner Kit



Ever wish you could just build your own? But then you get a list of the prices together and the time and effort to put one together and realize it is just not worth it. MFJ has now made it fun and economical to build and test your very own MFJ antenna tuner. You get the popular MFJ-941E, all of its guts totally apart so you can build it yourself. The finished kit features 1.8-30 MHz coverage, 300 Watts power handling, 1.5 inch Cross-needle SWR/Wattmeter, 1000 Volt capacitors, Lexan front panel decal, all aluminum chassis and cover. All knobs, hardware, components and switches are here to build your very own MFJ tuner!!! You don't have to punch a clock, but you don't get an MFJ paycheck either, just the joy and pride of building your own.



# MFJ tiny Travel Tuners

**Tiny 4 1/2 x 2 1/4 x 3 inch tuner handles full 150 Watts! Covers 80-6 Meters, has tuner bypass switch, tunes nearly anything!**

MFJ brings you the world's smallest full power 150 Watt 80-6 Meter Antenna Tuner. Extra wide matching range lets you tune nearly any antenna.

**It's no toy, its got guts!** Built with real *air* variable capacitors (600 Volt, 322 pF) and *three* stacked powder iron toroids to handle real power -- not just QRP. Bypass switch lets you bypass tuner when you don't need it.

You can use nearly any transceiver at full power with nearly any coax fed or random wire antenna for portable, home or mobile operation.

It's perfect for compact rigs like Icom IC-706MKIIG, Yaesu FT-100D, Kenwood TS-50, QRP rigs and others with a built-in SWR meter.

Operate anywhere, anytime with a quick easy set-up! Tune out SWR on your mobile whip from inside your car.

Operate in your apartment with a wall-to-wall antenna or from a motel room with a wire dropped from a window or from a moun-

## Tiny Tuner with Cross-Needle SWR/WattMeter and 4:1 Balun



MFJ-904H  
**\$149<sup>95</sup>**  
Ship Code A

MFJ-904H is the same as MFJ-902 Tiny Travel Tuner but has a large 1.5 inch Cross-Needle SWR/Wattmeter and a 4:1 balun for tuning balanced lines.

It includes binding post connections for balanced line antennas and random wire antennas.

The Cross-Needle meter shows SWR, forward and reflected power *simultaneously at-a-glance*. A push button selects forward or reflected power in 300/60 and 30/6 Watt ranges. Measures a compact 7 1/4 x 2 1/4 x 2 3/4 inches.

## Tiny Tuner with Cross-Needle SWR/Wattmeter

MFJ-904, \$129.95. Same as MFJ-904H, has *Cross-Needle SWR/Wattmeter*, see above in MFJ-904 but no balun. Measures 7 1/4 x 2 1/4 x 2 3/4 inches.



Now covers 6 Meters!  
MFJ-902B  
**\$109<sup>95</sup>**  
Ship Code A



tain top with a wire over a tree limb. It's perfect for DXpeditions or field day -- packs up quickly and takes up little space. Helps you be prepared for emergencies -- this tuner and a wire antenna can be packed and set-up just about anywhere.

MFJ-902B is so small and handy, you'll rely on it wherever you go -- easy to pack away in your briefcase, suitcase, backpack, glove compartment or desk drawer.

It's tiny enough to slide in your back hip pocket! 4 1/2 x 2 1/4 x 2 3/4 inches.

## MFJ Tiny Tuner w/4:1 Balun



MFJ-902H, \$119.95, is similar to MFJ-902 but covers 80-10 Meters and has a 4:1 balun for tuning balanced line antennas. Binding post connections for balanced lines. Compact 5 3/4 x 2 1/4 x 2 3/4 inches.

## MFJ True Dual Band VHF/UHF 200W Antenna Tuner



MFJ-923  
**\$199<sup>95</sup>**  
Ship Code A

MFJ-923 VHF/UHF Dual Band Antenna Tuner covers the complete 144 MHz and 440 MHz frequency ranges.

Built-in Cross-Needle SWR/Wattmeter measures SWR, forward and reflected power in two ranges: 300 or 30 Watts. Meter is usable for both bands 144 and 440 MHz. Handles 200 Watts.

Designed to match a wide range of impedances for both mobile and base operation. Single input and output SO-239 for radio and antenna connection. Perfect match for today's dual band radios with combined single output and dual band antennas. Wing nut post for ground, black aluminum cabinet, compact at 9 1/2 x 4 1/2 x 2 3/8 inches.

## MFJ 6 Meter/VHF/UHF Antenna Tuners

### MFJ 6 Meter Antenna Tuners



MFJ-906, \$99.95. Ship code A  
MFJ-906, \$99.95. Six Meter tuner. Low SWR with most any coax fed antenna.

You'll get more power out of your transceiver and into your antenna for more DX.

Lighted Cross-Needle SWR/Wattmeter

shows SWR, forward, reflected power, 300/60 and 30/6 Watt ranges. Order MFJ-1312D, \$15.95 for meter lamp. Built-in bypass switch, handles 100 Watts FM, 200 Watts SSB PEP. Works with solid state and tube rigs, 50-60 MHz. 8W x 2 1/2 x 3D inches.

MFJ-903, \$69.95. Like MFJ-906. Less meter/bypass switch. Tiny 5W x 2 1/2 x 3D inches makes it great for the backpack!

### 144/220 MHz or 440 MHz Tuner

MFJ-921/924  
**\$89<sup>95</sup>**  
Ship code A



MFJ-921 Dual Band VHF tuner covers 2 Meters/220 MHz.

Built-in SWR/Wattmeter measures SWR in 2 power ranges: 300 or 30 Watts. Meter is usable for both 144 MHz and 220 MHz bands. Low SWR with practically any antenna.

Handles 200 Watts. Designed to match a wide range of impedances for both mobile/base operation. SO-239 input/output connectors, wing nut post ground. Black aluminum cabinet measures a compact 8 x 2 1/2 x 3 inches -- fits just about anywhere.

MFJ-924, \$89.95. 440 MHz band only.

**MFJ**

## MFJ Balanced Line Antenna Tuners

*Superb balance . . . Extremely wide matching range . . . Covers 1.8-54 MHz . . . Cross-Needle SWR Wattmeter . . . Handles 300 Watts . . . Compact size . . .*

The MFJ-974HB is a *fully balanced* true balanced line antenna tuner. It gives you *superb* current balance throughout its very wide matching and frequency range.

MFJ-974HB  
**\$229<sup>95</sup>**  
 Ship Code C



### Tunes any Balanced Line

The MFJ-974HB tunes any balanced lines including 600 Ohm open wire line, 450/300 Ohm ladder lines, 300/72 Ohm twin lead -- shielded or unshielded.

**Superb** current balance minimizes feed-line radiation that can cause troublesome TVI and RFI, painful RF bites, mysterious RF feedback problems and radiation pattern distortion.

### Excellent Balance, Excellent Design

The MFJ-974HB is a *fully balanced* wide range T-Network using four gear driven 1000-Volt air variable capacitors and high-Q air wound tapped inductor for 80-10 Meters and separate inductors for 6 and 160 Meters. The tuning components are mounted symmetrically to insure electrical balance.

A 1:1 current balun is placed on the low impedance 50 input side to convert the balanced T-Network to unbalanced operation. The balun is made of 50 ferrite beads on RG-303 Teflon™ coax to give exceptional and efficient isolation. It stays cool even at maximum power.

### Johnson Matchbox

For decades, the Johnson Matchbox has been the standard of comparison for balanced line tuners. But, it had a severely limited matching range and covered only 80, 40, 20, 15 and 10 Meters.

The MFJ-974HB is its successor. It meets today's needs and even surpasses the Johnson Matchbox outstanding performance.

### Everything You Need

The MFJ-974HB gives you excellent current balance, very wide matching range (12-2000 Ohms) and covers 1.8 through 54 MHz *continuously* including all WARC bands, 160 Meters, 6 Meters and the new 60 Meter band. Handles 300 Watts SSB PEP and 150 Watts CW.

**Tuning** is fast and easy -- just three tuning controls. You can even adjust for highly efficient broadband low-Q operation or use higher Q when you encounter extreme loads.

A large three-inch lighted Cross-Needle SWR/Wattmeter lets you read SWR, peak or average forward and reflected power *all at a glance* on 300 or 30 Watt ranges.

A ground post is provided to ground one output terminal so you can also tune random wires and coax fed antennas.

**Compact** 7½Wx6Hx8D inches fits anywhere.

### Balanced Line = Extremely Low Loss

Balanced lines give extremely low loss.

**Doublet**, horizontal loop, vertical loop, quad, double extended Zepp, Lazy H, W8JK antennas all give efficient multi-band operation when fed with balanced lines.

### 6-80 Meter Balanced Line Tuner

MFJ-974B  
**\$209<sup>95</sup>**  
 Ship Code C



MFJ-974B. Same as MFJ-974HB but for 6-80 Meter operation (no 160 Meters).

### Antenna Accessories

**MFJ-1777, \$64.95.** 102 feet all band doublet antenna covers 160-6 Meters with balanced line tuner.

Super strong custom fiberglass center insulator provides stress relief for 450 Ohm ladder line (100 feet included). Authentic glazed ceramic end insulators. Handles 1500 Watts.

**MFJ-18H100, \$34.95.** 100 feet of quality 450 Ohm ladder line.

**MFJ-18G100, \$24.95.** 100 feet of extremely strong heavy duty 7-strand, 14-gauge hard copper antenna wire.

**MFJ-16C06, \$4.95.** 6 authentic glazed ceramic end/center antenna insulators. Extra strong. Will not arc or melt.

**MFJ-16D01, \$6.95.** Super strong custom fiberglass stress relieving center insulator for 450 Ohm ladder line.

See this catalog for more antenna accessories.

## MFJ 1500 Watt Fully Balanced Antenna Tuner

*Fully balanced MFJ-976 handles 1500 Watts legal limit . . . Extra-wide 12-2000 Ohms matching range . . . continuous 1.8 to 30 MHz coverage including all WARC bands . . . Four separate 500 pF in two gangs gives you a total of 2000 pF capacitance . . . Heavy duty 1:1 current balun . . . more!*



The MFJ-976 is a 1500Watt full Legal Limit *fully balanced* antenna tuner.

You get *superb* current balance, very wide matching range (12-2000 Ohms) and *continuous* 1.8-30 MHz coverage including all WARC bands. Handles *full* 1500 Watts SSB and CW.

You can tune *any* balanced lines includ-

MFJ-976  
**\$499<sup>95</sup>**  
 Ship Code E

ing 600 Ohm open wire line, 450/ 300 Ohm ladder lines, 300/72 Ohm twin lead -- shielded or unshielded. Also tunes random wires and coax fed antennas.

MFJ's *fully balanced* extremely wide-range T-network gives you simple, fast three knob tuning. No complicated switching between high and low impedance and switching in additional capacitance of L-networks.

Four separate 500 pF in two gangs gives you a total of 2000 pF for highly efficient low loss operation on 160 Meters.

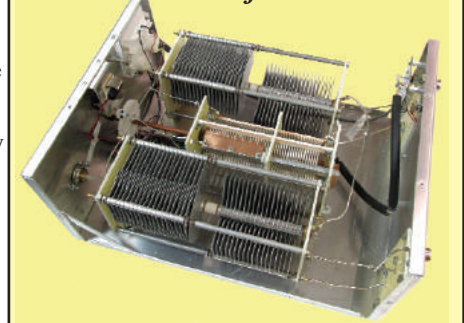
You get excellent 10 Meter performance because of MFJ's low minimum capacitance and exclusive *Self-Resonance Killer™* high-Q *AirCore™* roller inductor with silver plated contacts.

Heavy duty 1:1 current balun gives you

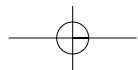
*superb balance* and stays cool even at 1.5kW.

**True active** peak reading lighted Cross-Needle SWR/Wattmeter lets you read SWR, *true peak* or average forward and reflected power all at a glance on 300/3000 Watt ranges. **New!** Super-bright LED meter light. Use 12 VDC or 110 VAC with MFJ-1312D, \$15.95. 12Wx6Hx15¾D in.

### An inside view of the MFJ-976







# MFJ Small, high efficiency Loop Tuners™

Turns any wire loop into small, high efficiency multi-band transmitting loop antenna

Mount for PVC Cross Loop



MFJ-933  
\$189<sup>95</sup>  
Ship Code B

MFJ-935B  
\$209<sup>95</sup>  
Ship Code B

MFJ-936B  
\$259<sup>95</sup>  
Ship Code C

Drape a wire around a bookcase or window and attach both ends to this new MFJ Small Loop Tuner™.

It instantly turns into a small, high efficiency multi-band transmitting loop antenna!

You can operate 5.3 to 30 MHz with a full 150 Watts. No ground, radials or counterpoises needed.

The excellent performance of a high-efficiency small loop antenna is legendary and well proven by users all over the world.

You'll radiate a low angle DX signal that literally rivals full size dipoles and work incredible DX!

It's a very quiet receiving antenna -- you'll hardly notice static crashes. Its high-Q reduces QRM, overloading, harmonics.

It's perfect for apartments, antenna restricted areas and portable operation -- it really gets out!

A 13 foot wire formed into a loop operates 30-20 Meters (4 foot for 17-10 M; 7 foot for 20-15 M; 28 foot for 60-40 M).

You can tune any shape loop -- circle, square, rectangle, any odd shape. A quarter wavelength wire shaped as a circle is the most efficient.

A given wire length covers about 1.5 to 1 frequency range (i.e. 7-10/18-28 MHz, etc.). Exact frequency coverage depends on wire length, loop shape, surroundings and height above ground.

Has MFJ low loss Butterfly loop tuning capacitor, no rotating contacts. Easy-Carry handle. Mount for PVC Cross on cover.

See June, 1986, QST or recent ARRL Antenna Handbook for more details on small, high efficiency loops.

MFJ-936B, \$259.95. For home/portable stations. Has relative RF antenna current meter with sensitivity control and 30/300 Watts Cross-Needle SWR/Wattmeter. 9 1/4 Wx5 1/2 Hx9 1/2 D inches.

MFJ-935B, \$209.95. For portable/home stations. Smaller, lighter. Relative RF current meter with sensitivity control. 6 1/4 Wx5 1/2 Hx9 1/2 D inches.

MFJ-933, \$189.95. Same as MFJ-935B less RF current meter. 6 1/4 Wx5 1/2 Hx9 1/2 D in.

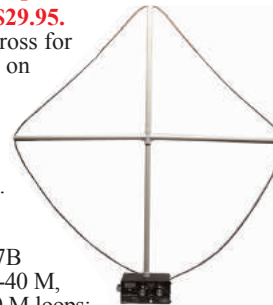
## Wire Loops and Mounts

MFJ-57B, \$29.95.

Has PVC Cross for mounting loop on cover, 20-15M insulated 10-gauge flexible loop, low resistance lugs.

MFJ-58B, \$49.95.

Has MFJ-57B above, plus 60-40 M, 20-15 M, 17-10 M loops; wire clips.



## Butterfly Tuning Capacitors

The heart of the MFJ Loop Tuners is an extremely low loss butterfly tuning capacitor with no rotating contacts.

Each handles 1500 Volts RMS and has a 1/4" diameter by 2 1/2" long shaft.

A. MFJ-19, \$69.95.

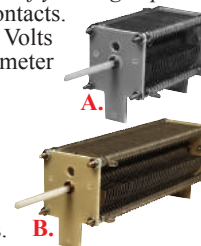
12 to 67 pF.

6Dx3Wx3 1/2 H inches.

B. MFJ-23, \$89.95.

18 to 136 pF.

10Dx3Wx3 1/2 H inches.



## QRPocket™ Loop Ant



MFJ-9232, \$59.95. QRPocket™

Loop Antenna makes portable operation truly portable and fun! No ground needed! High-efficiency loop covers 40-10 Meters with included flexible wire loop. Handles 25 Watts. BNC Connector for transmitter, wing nut posts for loop wires. Durable, plastic cabinet, 2 1/4 Wx4 Hx2 1/4 D inches.

## RF Bypass Switches



MFJ-1705  
\$19<sup>95</sup>  
Ship Code A



MFJ-1705H  
\$29<sup>95</sup>  
Ship Code A

Connect your antenna and transceiver to this MFJ RF Bypass Switch and you can switch in or bypass your antenna tuner, linear amplifier, preamp, wattmeter or other device -- switch in and bypass any coax fed device with PL-259 UHF connectors. DC to 60 MHz. SO-239 connectors. 50-75 Ohms. 3Wx1 1/2 Hx2 1/2 D inches.

MFJ-1705, \$19.95. 300 Watts.

MFJ-1705H, \$29.95. 1500 Watts.

## Variable RF Transformer



MFJ-907  
\$64<sup>95</sup>  
Ship Code A

Multi-tap Variable RF Transformer matches low impedance (2-50 Ohms) of mobile antennas (ham sticks, screwdrivers, etc.) to 50 Ohm transceiver. 11 impedance ratios. Use in reverse to transform high impedances to 50 Ohms. Handles 1000 Watts. 1.8 to 30 MHz. SO-239 connectors.

## Mobile Antenna L-Matcher



MFJ-908  
\$44<sup>95</sup>  
Ship Code A

Matches HF mobile antennas (ham sticks, screwdrivers, etc.) 10-80 Meters by adding L (inductance) at the antenna feedpoint to ground to form L-network with antenna. 11 values of switchable inductance, .2 uH-12 uH. Handles 200 Watts. SO-239 connectors. Measures a compact 4Wx3 1/4 Hx1 3/4 D".

## Mobile Antenna Matcher



MFJ-910  
\$29<sup>95</sup>  
Ship Code A

Select five values of capacitance 120-470 pF to add at antenna feed point to ground to form L-network with antenna. Gives you more power out. Handles 300 Watts. SO-239 connectors. Tiny 3 1/2 Wx3 Hx1 1/4 D".

## Mobile Antenna C-Matcher



MFJ-909  
\$44<sup>95</sup>  
Ship Code A

Matches HF mobile antennas (ham sticks, screwdrivers, etc.) 10-80 Meters by adding C (capacitance) at the antenna feedpoint to ground to form L-network with antenna. 11 values of switchable capacitance 30 pF-2000 pF. 600 Watts. SO-239 connectors. 3 1/2 Wx3 Hx1 1/4 D inches.

## AutoTuner Extender™



MFJ-914  
\$79<sup>95</sup>  
Ship Code A

Does your rig's automatic tuner have limited matching range? MFJ-914 transforms your antenna impedance by as much as 10 times! Puts nearly any antenna into the range of your automatic or manual tuner. Covers 160-10 Meters, handles 300 Watts, has bypass position. Measures a compact 6Wx4Hx2 1/2 D inches.

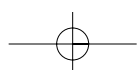
## RF Sampling Module



MFJ-806  
\$29<sup>95</sup>  
Ship Code A

MFJ-806 RF sampler allows you to safely and accurately monitor output signals from transmitters and other high-power RF generators. The sampled output port is DC isolated from the RF source, attenuated by -50 dB and fed to a 50 Ohm BNC output. Maximum through-line power rating is 600 Watts. SO-239s for input/output.

EM



**MFJ**

# MFJ-259C 530 KHz to 230 MHz SWR Analyzer™

## Reads complex impedance . . . Super easy-to-use

Reads SWR . . . Complex RF Impedance: Resistance (R) and Reactance (X) or Magnitude (Z) and Phase (degrees) . . . Coax cable loss (dB) . . . Coax cable length and Distance to fault . . . Return Loss . . . Reflection Coefficient . . . Inductance . . . Capacitance . . . Battery Voltage. LCD digital readout . . . covers 530 KHz-230 MHz . . . frequency counter . . . side-by-side meters . . . Ni-Cad/Ni-MH charger circuit . . . battery saver . . . low battery warning . . . smooth reduction drive tuning . . . more!



**MFJ-259C -- World's most popular Antenna Analyzer just got better! Now covers super wide range -- 530 KHz to 230 MHz -- no gaps! Super easy to use!**

Just set the bandswitch and tune -- just like your transceiver. SWR, Complex antenna Impedance and frequency are all instantly displayed simultaneously!

**Gives you complete picture of your antenna**

Read SWR, return loss and reflection coefficient at any frequency all at once.

Read Complex Impedance as series resistance and reactance (R+jX) or as magnitude (Z) and phase (degrees).

Determine velocity factor, coax cable loss in dB, length of coax and distance to a short or open in feet.

Measure inductance in uH and capacitance in pF at actual operating frequencies.

### Tunable Analyzer Filter



**MFJ-731 Exclusive MFJ \$99<sup>95</sup>** tunable RF filter allows accurate MFJ SWR and impedance measurements between 1.8-30 MHz in presence of strong RF fields. Has virtually no effect on measurements by the analyzer. Works with all SWR Analyzers.

### All-in-one ham radio test set

MFJ-259C **\$299<sup>95</sup>** Includes frequency counter, RF Generator, SWR Analyzer™, RF Resistance and Reactance Analyzer, Coax Analyzer, Capacitance and Inductance Meter and more!

Large easy-to-read two line LCD screen and side-by-side meters clearly display your information.

### Here's what you can do . . .

Find your antenna's true resonant frequency. Trim dipoles and verticals for lowest SWR at your favorite frequencies.

Adjust your Yagi, quad, loop and other antennas, change antenna spacing and height and watch SWR, resistance and reactance change instantly. You'll know exactly what to do by simply watching the displays.

Perfectly tune critical HF mobile antennas in seconds for super DX -- without subjecting your transceiver to high SWR.

Measure your antenna's 2:1 SWR bandwidth and analyze multiband performance! Check SWR outside ham bands without transmitting and violating FCC rules. Adjust your antenna tuner for a perfect 1:1 match without creating QRM.

Take the guesswork out of building and adjusting matching networks and baluns and antennas.

Accurately measure distance to short or open in failed coax. Measure coax length in feet, loss in dB, velocity factor and impedance.

Measure inductance, capacitance. Troubleshoot and measure resonant frequency, Q of traps, stubs, transmission lines, RF chokes, tuned circuits and baluns.

Lower band can be retuned to cover 470 to 940 KHz for maritime and 600 Meter bands.

Built-in Ni-MH/Ni-CD charger circuit, battery saver, low battery warning and smooth reduction drive tuning.

Use 10 AA or Ni-MH batteries (not included) or 110-240 VAC with optional MFJ-1312D, \$15.95. Rugged, compact all-aluminum construction, 4Wx6/4Hx2D inches.

**Maritime and 600 Meter Coverage**  
MFJ-259CM, \$299.95. Like MFJ-259C except the bottom band covers 470-940 KHz for Maritime and 600 Meter bands.

### MFJ Analyzer Dip Coils



**MFJ-66C MFJ-66C, \$29.95.** Plug these MFJ dip meter coupling coils into your MFJ SWR Analyzer™ and turn it into a sensitive and accurate band switched dip meter. Two coils cover 1.8-230 MHz, depending on SWR Analyzer™.

### SWR Analyzer Accessories



**MFJ-29D, \$29.95.** Tote your MFJ-259C anywhere with this genuine MFJ custom carrying case. Has back pocket with security cover for carrying dip coils, adaptors and accessories. Made of special foam-filled fabric, it cushions blows, deflects

scrapes, and protects knobs, meters and displays from harm. Clear protective window for display and cutouts for knobs and connectors. Authentic MFJ logo!

**MFJ-29DAC, \$70.85.** Carrying pouch, dip coil adapters, MFJ-1312D power supply.

**MFJ-99C, \$45.90.** MFJ-1312D, 110/220 VAC power supply, ten Ni-MH batteries.

**MFJ-29DABC, \$103.80.** Deluxe Accessory Pack has 10 Ni-MH batteries, MFJ-1312D power supply, MFJ Carrying pouch, dip coils. Save \$7!

**MFJ-92AA10, \$29.95.** 10-pack MFJ NiMH AA rechargeable batteries.

**MFJ-5510C, \$9.95.** 12 VDC cigarette lighter adapter lets you use your MFJ SWR Analyzer on-the-road to make quick adjustments to your HF/VHF/UHF mobile antennas! 18" retract-ed curly cord, 60 inches fully stretched. Easily fits in glove compartment.

### Adapters for your MFJ-259C

**MFJ-7737, \$5.95.** PL-259 to BNC Female Adapter.

**MFJ-7727, \$5.95.** PL-259 to SMA Female Adapter.

### MFJ-249C SWR Analyzer™

Save a few bucks!

MFJ-249C is similar to the MFJ-259C, but less analog meters. MFJ-249C reads SWR, true impedance magnitude and frequency only on LCD module. Has nicd/nimh charging circuit, can use MFJ-259C accessories.

**\$279<sup>95</sup>** MFJ-249C Ship Code A



### Analyzer Current Balun

This new 1:1 Current balun lets you use your MFJ SWR and Antenna Analyzers on balanced line antennas and other loads. Covers 1.8-30 MHz. 2Wx3/4Hx1/2D in. SO-239 for analyzer input.

**MFJ-917 MFJ-917 \$29.95** Ship Code A  
**MFJ-7702, \$3.95.** PL-259 to PL-259 barrel connector.



**MFJ**

# 530 KHz-230 MHz *plus* 415-470 MHz HF/VHF/**UHF** SWR Analyzer

*Covers 530 KHz-230 MHz and 415-470 MHz ... SWR ... Complex RF Impedance: Resistance(R) and Reactance(X) or Magnitude(Z) and Phase(degrees) ... Coax cable loss(dB) ... Coax cable length and Distance to fault ... Return Loss ... Reflection Coefficient ... Inductance ... Capacitance ... Battery Voltage. LCD digital readout ... frequency counter ... side-by-side meters ... Ni-MH/Ni-Cad charger circuit ... battery saver ... low battery warning ... smooth reduction drive ...*

MFJ-269C covers 530 KHz to 230 MHz and 415 to 470 MHz -- **an MFJ-269C exclusive!** Includes all the features of MFJ-259C, *the world's most popular SWR Analyzer* plus much more!

**Large** easy-to-read two line LCD display and side-by-side meters clearly display your information. **Built-in** Ni-Cad/Ni-MH charger circuit, battery saver, low battery warning, smooth reduction drive tuning. Use as signal source for testing/alignment.

**Built-in CoaxCalculator™** -- calculates coax line length in feet given coax length in electrical degrees and vice versa for any frequency and any velocity factor (great for building matching sections and phasing lines) -- **an MFJ-269C exclusive!**

**New** 12-bit A/D converter gives much better accuracy and resolution than common 8-bit A/D converters -- **an MFJ-269C exclusive!**

**Super** easy to use! Just set the bandswitch and tune the dial -- just like your transceiver.

**530 KHz to 230 MHz Range Features**

**MFJ-269C** gives you a complete picture of your antenna. Read antenna SWR and Complex Impedance 530 KHz to 230 MHz. Built-in frequency counter.

**Lower** band is retunable to cover 470-940 KHz for maritime and 600 Meters.

**Read** Complex Impedance as series equivalent resistance and reactance (Rs+jXs) or as magnitude (Z) and phase (degrees).

**Also** reads parallel equivalent resistance and reactance (Rp+jXp) -- **MFJ-269C exclusive!**

**Determine** velocity factor, coax loss in dB, length of coax and distance to short/open in feet.

**Read** SWR, return loss and reflection coefficient at any frequency simultaneously at a single glance. Also reads match efficiency.

**Also** read inductance in uH and capacitance in pF at RF frequencies.

**Measure** SWR and loss of coax with any characteristic impedance, 10 to over 600 Ohms, including 50, 51, 52, 53, 73, 75, 93, 95, 300, 450 Ohms -- **MFJ-269C exclusive!**

**415 to 470 MHz Range features**

**Just** plug in your UHF antenna coax, set the frequency and read SWR, return loss and reflection coefficient simultaneously. You can read coax cable loss in dB and match efficiency.

**You** can adjust UHF dipoles, verticals,



MFJ-269C  
**\$399<sup>95</sup>**  
Ship Code B

**MFJ-269C PRO™ Analyzer**

**MFJ-269C Pro, \$419.95.** Like MFJ-269C, but has its UHF range coverage **430 to 520 MHz** and an extended *commercial-style* cabinet for lab work (helps protect knobs and connectors from damage).



**MFJ-269C SWR Analyzer Accessories**

**MFJ-39D, \$29.95.** Tote

your MFJ-269C anywhere with this *genuine* MFJ custom carrying case. Back pocket with security cover for carrying dip coils, adaptors and accessories. A special foam-filled fabric cushions blows, deflects scrapes, and protects knobs, meters and displays from harm. Wear it around your waist, over your shoulder, or clip it onto the tower while you work -- the fully-adjustable webbed-fabric carrying strap has snap hooks on both ends. Has clear protective window for frequency display and cutouts for knobs/connectors -- use your MFJ Analyzer™ without taking it out of the case.

**MFJ-269C SWR Analyzer Accessories**

**MFJ-99C, \$45.90.** MFJ-259C/269C

**Power Pack.** 10-Pack SuperCell™ Ni-MH batteries, & MFJ-1312D 110/220 VAC Power supply.

**MFJ-39DAC, \$70.85.** MFJ-269C

**Accessory Pack.** Has MFJ-39D custom Carrying Pouch for MFJ-269C, MFJ-1312D power cube, and MFJ-66C dip coils.

**MFJ-39DABC, \$103.80.** Complete accessory pack! Pouch, batteries, coils, power cube.

**MFJ-92AA10, \$29.95.** MFJ 10-Pack AA SuperCell™ Rechargeable Ni-MH Batteries.

**MFJ-66C, \$29.95.** Dip coil set 1.8-230 MHz. Turns MFJ-269C into a *dip meter*.

**MFJ-5510C, \$9.95.** 12 VDC Cigarette lighter adapter cord for using your MFJ SWR Analyzers *on-the-road*.

18 inches of retracted curly cord, 60 inches fully stretched.

**MFJ-269 Adaptors for HT Antennas**

**MFJ-7730, \$5.95.** (Left). N-Male to SMA Female Adapter.

**MFJ-7731, \$5.95.** (Right). N-Male to BNC Female Adapter.



yagis, quads and other antennas and determine their SWR, resonant frequency and bandwidth.

**You** can test and tune stubs and coax lines. You can manually determine velocity factor and impedances of transmission lines.

**Adjust** and test RF matching networks and RF amplifiers without applying power.

**Has** easy-to-read LCD logarithmic SWR bargraph and SWR meter for quick tuning.

**Take it anywhere**

**Fully** portable, take it anywhere -- on remote sites, up towers, on DX-peditions. Has built-in "N-type" connector.

**Includes** Free N-to-SO-239 adaptor. Use 10 AA Ni-MH or Ni-Cad or alkaline batteries (not included -- alkalines cannot be charged internally) or 110-240 VAC with optional MFJ-1312D, \$15.95.

**Compact** 4Wx2Dx6<sup>3</sup>/<sub>4</sub>H inches.

**Maritime and 600 Meter Coverage**

**MFJ-269CM, \$399.95.** Like MFJ-269C except the bottom band covers 470-940 KHz for Maritime and 600 Meter bands.

**High Capacity 3000mAh AA & 800mAh Ni-MH Batteries**

**MFJ-92AA01, \$3.49 each.**

**MFJ-92AAA01, \$1.99 each.**

**MFJ's** super high capacity Ni-MH AA and AAA batteries have twice the power of standard Nicads at about the same price! **No** detrimental memory effect that plagues typical Ni-Cad batteries.

**MFJ-92AA10, \$29.95.** 10-Pack of 3000 mAh MFJ SuperCells™, perfect for your MFJ-259B and MFJ-269 SWR Analyzers!

**MFJ-92AAA01, \$7.25.** 4-Pack of 800 mAh MFJ SuperCells™, for MFJ-225 graphical SWR Analyzer.



MFJ-92AA01  
**\$3<sup>49</sup>** each  
Ship Code A

MFJ-92AAA01  
**\$1<sup>99</sup>** each



**MFJ POWERHaus™ Ultra-fast Intelligent Charger**

**Four** charging docks charge AA-AAA-C-D, 9V and 18650 Ni-MH, Ni-Cd, Alkaline and Li-ion batteries. Charge single cell or charge a **fully-loaded** dock. **High-speed intelligent** IC provides over-charge, over-current, over-voltage, short circuit and polarity-reversal protections. Auto switches to trickle charge upon full charge. Quick/Slow switch with LED indicator. Quick-charge 2 AA batteries in just 1.3 hours. LCD indicates charging status, cell capacity and when a bad cell is detected. USB Charge port. 100-240 VAC adapter included.

MFJ-633B  
**\$39<sup>95</sup>**



**MFJ**

# MFJ HF/VHF/UHF Antenna Analyzer 1.5-185\* MHz plus 220 and 300-490MHz

*All the RF-diagnostic functions you need with easy-to-use MFJ-266C digital analyzer! The MFJ-266C covers HF, VHF, plus UHF amateur and commercial frequencies with digital precision. It also displays SWR, Complex Impedance, and Impedance magnitude simultaneously -- all on the same easy-to-read LCD screen. Use it to measure Capacitance, Inductance, Field Strength, Frequency, plus generate test signals. You can also fine tune stubs, analyze coax, test baluns and RF transformers, and perform many other important RF-related tasks around the shack or on the road!*

When it comes to simplicity and convenience, MFJ-266C is a winner. Not only is it easy-to-use, but fits comfortably in one hand for on-the-fly measurements on the bench or in the field. Here's the rundown of what this compact powerhouse can deliver:

MFJ-266C  
**\$359<sup>95</sup>**  
Ship Code B

### Frequency Coverage

The MFJ-266C covers all bases -- 160 through 6 Meters, the FM broadcast band, Airband, 2 Meters, 220 MHz, 70 cm, plus VHF/UHF commercial 2-way frequencies:

- Band A:** 1.5 to 2.7 MHz
- Band B:** 2.5 to 4.8 MHz
- Band C:** 4.6 to 9.6 MHz
- Band D:** 8.5 to 18.7 MHz
- Band E:** 17.3 to 39 MHz
- Band F:** 33.7 to 65 MHz (gap\*)
- Band V:** 105 to 230 MHz **220 MHz!**
- Band U:** 300-490 MHz

The velvet-smooth 10:1 vernier drive and solid state varicap makes fine tuning a breeze. Built-in dial lock prevents accidental detuning making measurements. Switched backlighting LCD screen is easy-to-read in any light.

### SWR, Impedance Magnitude, and Complex Impedance

In SWR Mode, MFJ-266C reads SWR 1:1 to 9.9:1, Impedance Magnitude 10-500 Ohms and Complex Impedance (resistance and reactance). Best of all, it displays all three parameters simultaneously and operating frequency with one quick glance. *No other low-cost handheld analyzer offers this!* (Note: Z-mag and R+jX not displayed on UHF).

### Capacitance and Inductance

Find values for unknown capacitance in pF or unknown inductance in uH quickly. Measurements are made at RF frequencies rather than at the low audio frequencies used by many handheld L/C meters.

### Frequency Measurement, Field Strength Readings

In Frequency-Counter Mode, MFJ-266C becomes an accurate 500-MHz counter with a choice of 1-kHz or 100-Hz resolution. The counter mode also features a high-resolution digital field-strength meter for measuring the relative intensity of incoming signals.



Together, these functions are extremely useful for checking the operation of oscillators, transmitters, as well as assessing the strength of radiated signals from antenna arrays.

### Built-in Interference Detection

In Frequency-Counter Mode, MFJ tracks down powerful local signals that disrupt accurate SWR measurements. When picked up by an antenna under test, these signals compete with MFJ-266C's internally generated test signal to make SWR readings appear artificially high. Handheld antenna bridges are subject to additive interference, but only MFJ detects the offending signal, displays severity, and identifies frequency!

### Powerful Signal Source

MFJ-266C also functions as a tunable

signal source, supplying about 2 Volts peak-to-peak across the entire tuning range. You can use this signal to drive mixers, low-power amplifier stages, or filters, and use it as a source for checking antenna patterns on a range. Add a step attenuator, (MFJ-762, \$89.95) and it becomes a low-level signal source for testing receivers and pre-amps.

### Take it With You!

You'll love the compact size and bantam weight of MFJ-266C when perched on a tower. Also, push-button band switching lets you toggle across the spectrum with ease when tucked into cramped spaces.

### User-Friendly Layout

MFJ-266C is ergonomic, antenna N-connector positioned on top of the case and everything else arranged and clearly marked on front panel -- right in front of your eyes.

MFJ-266C's operating manual was professionally written and illustrated to help you understand and master every function quickly. It also includes a guide for ensuring accurate results and getting the most from the unit's advanced features. In the back, you'll find a one-page "Quick Guide" that reviews all controls and functions.

### Many Instruments in One

Having MFJ-266C is like owning several pieces of test equipment. You get a powerful wide-range signal source, Inductance/Capacitance meter, network analyzer, RF field-strength meter and a 500-MHz frequency counter all-in-one small package.

### Bullet Proof Construction

Features like the rugged aluminum case, solid-state band switching, robust internal construction, and solid-state LCD display ensure that bumps and drops won't faze the unit in the least. Expect it to hold calibration and reliable service for years to come.

### Vital Statistics

Uses 4 internal AA alkaline batteries or optional 12VDC/110 VAC adaptor with optional MFJ-1312D, \$15.95.

Has built-in Li-ion battery charger.

Use optional MFJ-18650, \$8.95.

Powerful 3.7V, 3000 mAh Li-ion battery.

Compact 3 3/4"Wx6 1/2"Hx2 3/4"D inches.

Weighs 1.32 lbs. Draws 30-mA in counter and 140-mA in analyzer modes.

Includes N-to-SO-239 adaptor.



## MFJ HF SWR Analyzer 1-60 MHz

MFJ-213  
**\$199<sup>95</sup>**  
Ship Code B

MFJ-213 covers 1-60 MHz with digital precision, see it bright and clear on the nice, green backlit LCD.

It also displays SWR, complex impedance, and impedance magnitude simultaneously -- all on the same easy-to-read LCD screen.

Use it to measure capacitance, inductance, field strength, frequency, plus generate test signals.

You can also fine tune stubs, analyze coax, test baluns and RF transformers, and perform many other important RF-related

tasks around the shack or on the road!

MFJ-213 has all of the features of the popular MFJ-266C but is for HF use only, covers 1-60 MHz.

Protected by MFJ's famous One Year limited *No Matter What*™ warranty. MFJ will repair or replace (at our option) your analyzer *no matter what* for one full year.

# MFJ Antenna Expert™

MFJ VNA Antenna Analyzer covers 1 to 230 MHz, 1Hz resolution.  
 • Frequency sweep plots: SWR, Impedance, Resistance, Reactance, Phase Angle, Complex Return Loss, Smith Chart • Sign of reactance  
 • Amazing accuracy with OSL (Open-Short-Load) calibration.

MFJ

New MFJ-226 introduces the MFJ Times Technology™ series of advanced Antenna Analyzers!

MFJ-226  
**\$339.95**  
 Ship Code B

This groundbreaking VNA antenna analyzer -- MFJ-226 Antenna Expert™ -- delivers OSL calibration and true reactance including its sign from 1 MHz to 230 MHz with a 1-Hz frequency resolution!

**Incredibly Powerful**  
 MFJ-226 is the first and only low-cost handheld VNA (Vector Network Analyzer) to feature OSL (open/short/load) calibration for super accuracy and sign of reactance to positively identify inductive or capacitive reactance.

These two features, normally only found on lab instruments, place incredible diagnostic power in the palm of your hand.

With it, you'll measure impedance plus many other critical load parameters directly, through feedline or test cable with exceptional accuracy, correcting for line loss and phase angle.

**Single Frequency Mode**  
 Presents an unusually wide range of load information including . . . SWR, Frequency, Impedance Magnitude, Series and Parallel Impedance ( $R \pm jX$ ), S11 (Rectangular and Polar), Capacitance and Inductance

**Swept-Frequency Mode**  
 Generates, displays, and captures accurate plots versus frequency of SWR, Impedance (Z), Resistance (R), Reactance ( $\pm X$ ), Return Loss (S11), Phase Angle and Smith Chart

**Smith Chart** plot shows S11 magnitude and phase angle over any frequency span you specify.

**32 Memories**  
 32 memories let you capture screens made in the field for download into your PC via mini USB port for later storage and use.

**Store OSL Calibrations**  
 You can run OSL calibrations through your test cable or feedline or at different frequencies and store them for future use.

**Fits Your Hand Perfectly**  
**Better doesn't mean bigger!** The MFJ-226's compact and virtually indestructible molded case fits your hand perfectly with real backlit keys that depress to give you tactile feedback.

**Easy-to-read Backlit LCD**  
 Bright 2 1/2 inch LCD backlit screen is easy-to-read, even in direct sunlight.

**Use two AA batteries**  
 Use disposable Alkaline or rechargeable NiMH AA batteries (not included). Firmware upgradeable via USB port. Includes N-to-SO-239 adapter and 48-inch mini USB to USB cable. 3 1/4Wx6 1/2Hx1D

**New!**



inches. 9.3 ounces.

**Looks, Feels, Performs Like a Professional Instrument**

MFJ-226 has both the hefty feel and advanced performance of professional field-service instruments costing hundreds, even thousands of dollars more.

If you've ever wished for accuracy and flexibility of a professional-grade S11 VNA without the boat-anchor packaging and prohibitive price, your search ends here. The MFJ-226 pulls together the latest advances in RF technology and delivers them to you at a price you can't afford to pass up!

**Commercial Grade VNA**  
**New! MFJ-227, \$339.95.**

Like MFJ-226 but covers 88 to 228 MHz in VHF range and 330 to 500 MHz in UHF range. Has all features of MFJ-226.

## Precision Calibration Loads



**MFJ-252B/N/U, \$29.95**

UHF or BNC connectors. Select B, N or U.

**Calibrate** your analyzer with MFJ Precision Calibration Loads.  
**Non-inductive**, useable up to 1 GHz. Set includes a 50 Ohm, .1W (+/-1%), open and short loads.  
**Available in N,**

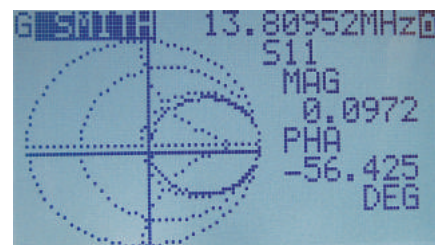
Here's a few Screen Shots



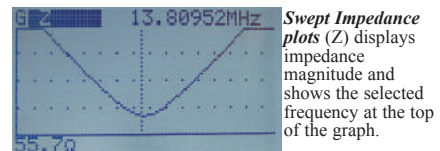
**Main Menu** selects these modes: Single Frequency, Swept Frequency, Calibration Screen (manages OSL calibrations), Settings Screen (basic analyzer setup) and PC Mode (dumps data in computer).



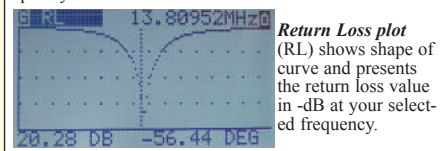
**Single Frequency Mode.** First screen shows SWR in BIG 3/4 inch digits and the Frequency reading in a single glance.



**Smith Chart** plot. Moveable cross-hair tracks plot over any frequency span. Displays S11 magnitude, phase angle at any frequency.



**Reactance Plot** shows reactive curve, but also provides R and X values numerically at the selected frequency.



**Phase plot** also presents RL data and phase angle, but the plot depicts the Phase Shift across the selected frequency span.

MFJ

# MFJ-225 HF/VHF Two-Port Graphic Antenna Analyzer

Take RF testing to the next level with the new MFJ-225! All the basic analyzer functions you've come to depend on plus a host of advanced features like built-in LCD graphics, two-port VNA measurement, PC-Interface using IG-miniVNA freeware, precise DDS frequency control, self-calibrating . . . easy-to-use!

## Two Analyzers in One

Out in the field, MFJ-225 is a compact completely self-contained handheld analyzer. On the bench it becomes a full-fledged two-port (S21) desktop machine when teamed up with your PC. Using powerful IG-miniVNA freeware, you'll run detailed data analysis and then print out stunning color-graphic plots to document your work!

## Seeing is Believing

Get a big picture every time with MFJ-225's built-in back-lighted 3-inch LCD graphic display. Make fine circuit adjustments using full-screen easy-to-view SWR bar graph, capture vivid swept displays for SWR, impedance, return loss, phase angle, more! Operation is simple, you can adjust the center frequency, tuning step, and sweep width instantly while viewing your plot, literally shaping it before your eyes.

## Continuous HF-VHF Coverage

Tunes from 1.5 MHz to 179.9 MHz with rock-solid stability and no gaps. That's because the MFJ-225's VFO is a state-of-the-art programmable DDS (direct digital synthesis) generator with pin-point 1-kHz frequency resolution. DDS control means no mechanical band switches or tuning elements, just a reliable velvet-smooth optical encoder to glide across the spectrum.

## Powerful Clean Signal Source

The MFJ-225 DDS stimulus generator also gives you a leveled -5 dBm signal source for driving mixers, low-power amplifiers, filters, networks, diplexers, and antennas on the test range. And, your test signal is always clean, with over -50 dBc of harmonic and spur suppression. That's better than many precision lab generators costing thousands of dollars! Connect an external step attenuator, and it becomes a high-quality signal generator for peaking sensitive receivers and preamplifiers.

## Information Powerhouse

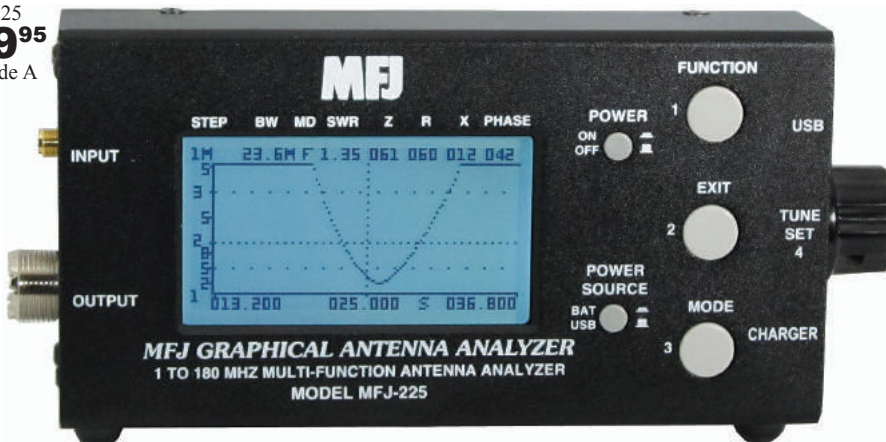
The MFJ-225 simultaneously compiles and displays all important parameters you need on a single screen, giving you a wider range of results at a glance. You'll work faster and smarter without the inconvenience of scrolling through menus or making tedious conversions to get your data.

## What the MFJ-225 Measures:

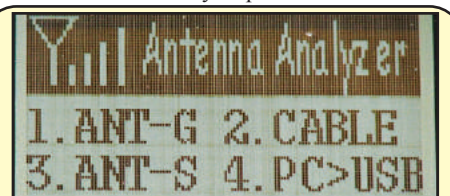
- SWR (1:1 to 9.9:1)
- Complex Impedance (R+jX)
- Impedance Magnitude (Z)
- Return Loss (RL, 0-30dB)
- Phase (0-180°)
- Capacitance (0-9999pF)
- Inductance (.1uH-80uH)
- Cable Length (0.5-45m)
- Cable Loss (0-30dB)

## Two-Port Flexibility

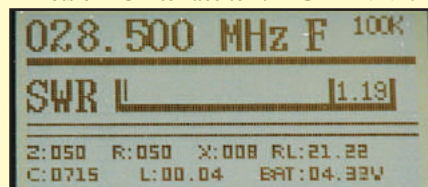
In addition to traditional single-port (S11) reflected-power measurements, MFJ features an invaluable advantage of making two-port (S21) forward-power measurements, essential for optimizing filters, di-



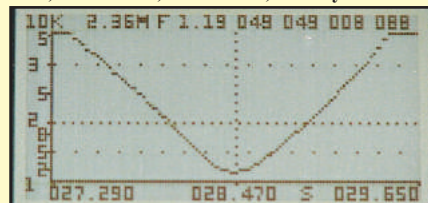
plexers, matching networks, etc. It bridges the gap between a simple scalar analyzer and true vector-analysis performance.



MFJ-225's simple 4 selection menu chooses Bar Graph SWR, Cable Test, Swept Antenna Plots or PC interface to run IG-miniVNA.



SWR Bar Graph gives more than SWR! Get test frequency, DDS tuning step, digital SWR value, impedance magnitude, complex impedance, return loss, C/L values, battery condition.



SWR graph of typical 10-Meter antenna gives big picture plus plot's center frequency, sweep width, DDS tuning step. Additional plots obtained by a switch for impedance magnitude, resistance, reactance, return loss and phase.

## Ergonomic Operation

"Advanced features" conjure visions of greater complexity and more buttons to push . . . not true for MFJ-225! The graphic display is "advanced" because it places more information at your fingertips without needless scrolling and searching. Also, the layout is unique with three large soft-touch selector buttons located on the front panel next to the screen and a large side-mounted

frequency control knob conveniently positioned for your right hand. Everything is located where it needs to be for intuitive operating and unobstructed screen view!

## Easy To Power

MFJ-225 can be powered by four AAA alkaline batteries or four AAA Ni-MH rechargeable batteries (batteries not incl.). Optional MFJ-1312D, \$15.95 or any external 12 VDC power is required for the built-in recharging circuit with charge indicator LED. LED will light while charging and turn off when cycle is completed. On the bench, power it through the USB power port using any USB power source. Optional USB cable, MFJ-5430, \$2.95.

## Self-Calibrating

In order to maintain out-of-the box accuracy, all analyzers require periodic calibration checks -- a potentially time-consuming operation that may require special RF loads and step-by-step procedures. However, the MFJ-225 uses built-in firmware to perform its entire calibration routine in less than a second! Simply initiate the "calibrate" command and you're done!

## Specifications

MFJ-225 requires 4 NiMH AAA cells or optional power adapter MFJ-1312D, \$15.95. PC interface requires a USB Type-B cable.

Analyzer's OUT port is SO-239. IN port is SMA-female. 3<sup>3</sup>/<sub>32</sub>Wx6<sup>1</sup>/<sub>8</sub>Hx1<sup>1</sup>/<sub>2</sub>D inches.

## Accessories

MFJ-92AAA04, \$7.25. 4-Pack of Ni-MH rechargeable batteries.

MFJ-7719, \$4.95. SMA Male to SO-239 adaptor for VNA port.

MFJ-1312D, \$15.95. 12 VDC, 300 mA, center positive 2.1 mm plug. Power adaptor for charging Ni-MH batteries internally.

MFJ-5430, \$3.95. USB cable for external power from your PC for MFJ-225.

MFJ-95, \$28.71. Accessory Package includes all of the above accessories. Save \$ when you purchase the package!

## NoMatterWhat™ Warranty

Protected by MFJ's famous No Matter What™ limited one year warranty.



## MFJ-223 1-60 MHz Color Graphic VNA Analyzer

### Pocket-Size, Incredible Performance! Truly accurate SWR, R, X and Z!

This pocket-sized wonder breaks the mold for analyzer design with user-friendly convenience, top notch accuracy, and a vivid TFT multi-color display. Don't let the size fool you, MFJ-223 is packed with all the VNA features and performance you need!

For example, get data for SWR, resistance (R), reactance (X), and impedance magnitude (Z) delivered on a color-coded high-resolution bar-graph display or sharply defined swept-frequency plots.

Get continuous DDS frequency coverage with 100-Hz resolution and a full selection of tuning steps and sweeps.

There's a movable marker that calls up alpha-numeric data for any point on any plot -- and a memory to capture current data when you turn the analyzer off.

Get other useful features too, like a built-in help menu and a field-strength indicator warns when powerful interference is present.

Best of all, juggling batteries is a thing of the past -- a long-running lithium-polymer power source is built right in. Recharge via any USB port.

#### Check out these specifications:

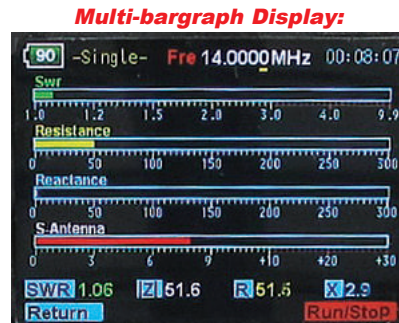
- Single-frequency and swept-frequency operating modes
- Truly accurate SWR, R, X, and Z measurements
- Seamless DDS coverage with 100-Hz resolution from 1-60 MHz
- Smooth "skip-free" encoder tunes fast or slow without missing a step
- Powerful +5-dBm stimulus generator

MFJ-223  
**\$349<sup>95</sup>**  
Ship Code A



Shown actual size  
overrides local interference

- Field-strength meter measures local signals, detects potential interference
- DDS generator precision signal source



SWR, R, X and Z are simultaneously displayed in vivid color graphs.

- Vivid 1600-pixel/inch color graphics on a 2x2 inch non-glare TFT screen
- High-lumen output, easy to read in direct sunlight
- Easy setup, only four control switches with convenient on-screen soft menus
- Personalized ID function programs your call or name onto the display
- Built-in 3.7-V 1800-mAH lithium-polymer battery charges with Battery Status Indicator and Auto Shut-off.
- Optional MFJ-5431, \$4.95, Micro USB to USB Charge Cable.
- Charge % always displayed, multi-color LED monitors charge status
- Built-in clock shows elapsed time when unit is turned on
- Tiny 2<sup>3</sup>/<sub>4</sub>Wx3<sup>1</sup>/<sub>2</sub>Hx1<sup>3</sup>/<sub>8</sub>D", just 5.1 oz.
- BNC Male to SO-239 adaptor included.

## MFJ RF Design Box Variable Inductor/Capacitor Tester

This compact device places a wide range of patchable L and C values in your hands to solve virtually any HF tuning and matching problem. MFJ-5904 RF Design Box is one of those rare "must have" units, especially if you have an antenna analyzer!

After all, inductors and capacitors are fundamental building blocks for RF design. Imagine being able to build and test virtually any popular HF configuration in minutes without ever lifting a soldering iron!

No need for modeled predictions when you can connect a few patch leads and find optimized values for absolute peak performance. Even try different network configurations to see which one is the best!

Here are just a few of the circuits you can assemble: • L-networks, T-networks, Pi-networks • Band-pass filters, Band-stop

filters • Traps and reject Filters • Loading inductors • Shunt-L/C shunt-matching elements • Load Converters • Power Reducers • Q meter • Antenna-analyzer pre-selector • Selective field-strength meter • Ant. Tuners

MFJ-5904 is built for reliable portability with a compact molded case and high-quality jacks and controls. Best of all, each component is 300-watt ATU rated so you can put your designs to the test using a 100-Watt rig!

Two capacitor banks are continuously adjustable 12 pf to 912 pf plus a stepped inductor that is adjustable 0.1 to 11.2 uH. Controls RF-isolated from the aluminum front panel for your safety, and you'll get plenty of guidance from a professionally written and illustrated user's manual.

Packed with loads of information and

MFJ-5904  
**\$149<sup>95</sup>**  
Ship Code A



data to erase the "black magic" associated with RF design.

This tremendous training tool will help you develop a true hands-on feel for how each type of RF tuned-circuit works.

Why spend hours soldering and lashing prototype circuitry together only to discover that something else might work better? Let the RF-Design Box do it all for you in a matter of minutes. 7Wx3Hx5<sup>3</sup>/<sub>8</sub>D inches.

### MFJ White Noise Generator



MFJ-5014  
**\$39<sup>95</sup>**  
Ship Code A

The MFJ-5014 is perfect for IF and HF sensitivity checks, tuning and testing filters, adjusting networks, and much more. Combine with a directional coupler to measure return-loss. Requires 9-V battery for operation. Has BNC and SO-239 connectors. Tiny aluminum construction, 4<sup>1</sup>/<sub>4</sub>Wx1<sup>3</sup>/<sub>4</sub>Hx2<sup>3</sup>/<sub>8</sub>D inches.

### Variable Res/Cap Sub Box



MFJ-5902  
**\$39<sup>95</sup>**  
Ship Code A

A 10-K potentiometer and a two-section 300-pF variable capacitor, both with calibrated scales, combined into one handy handheld package (capacitors may be paralleled). Insulated terminal posts accept standard test probes and patch cables. 4Wx1<sup>1</sup>/<sub>2</sub>Hx2<sup>3</sup>/<sub>8</sub>D inches.

### Variable Resistor Sub Box

MFJ-5900  
**\$74<sup>95</sup>**  
Ship Code A



Six standard-value pots with calibrated scales, universal terminal posts accept test probes and patch cables. Great for design work or service bench! 7Wx3Hx5<sup>3</sup>/<sub>8</sub>D inches.



**HF 10-160M SWR Analyzer™**

**MFJ-207**  
**\$109<sup>95</sup>**  
 Ship Code A  
**MFJ HF SWR Analyzer** helps you build the antennas you need for DX work. Just plug in the coax to measure the SWR of any HF antenna, 160-10 Meters. Jack for external frequency counter. 9VDC battery or 110 VAC with **MFJ-1312D**, \$15.95. Measures 7½Hx2½Wx2¼D”.

**HF/VHF SWR Analyzer™**

**MFJ Starter SWR Analyzer™** lets you read SWR from 530 KHz to 230 MHz quickly only on a single analog meter. Tune knob, frequency control switch. No LCD module, counter or charging circuit. Use 10 AA cells or 110 VAC with MFJ-1312D, \$15.95. Compact, hand-held size: 4x2½x6¾”.



**MFJ-209C**  
**\$199<sup>95</sup>**  
 Ship Code A

**MFJ-219B UHF Analyzer**

**MFJ-219B**  
**\$119<sup>95</sup>**  
 Ship Code A  
**The MFJ-219B Antenna SWR Analyzer** covers 420 to 450 MHz. Has meter for SWR and jack for external frequency counter. Measures 2½Wx7½Hx 2¼D”.  
**MFJ-219** has “N” connector with free N-to-SO-239 UHF adapter. Also they have Battery Check and Power Saving feature. For 50 Ohm antenna systems. Use 9-Volt battery or 110 VAC with **MFJ-1312D**, \$15.95.



**MFJ Inductance/Capacitance Multimeter**

*No more guesswork identifying unmarked or faulty inductors and capacitors.* Let the MFJ-200A Handheld LC-Meter do it for you! Measures capacitance down to .01 pF and inductance to 001 mH.

**MFJ-200A** delivers laboratory performance at an unbeatable price using a sophisticated high-speed micro-controller to compute unknown capacitance/inductance.

**Highly accurate, compact, rugged, self-calibrating, and super easy-to-use.** Simply turn on, select function, press zero-calibrate button, and connect your component. Result appears instantly on the easy-to-read LCD with 4-digit numerical resolution.

**You can even store calibration data in memory.** MFJ gives you four selectable ranges: 0.01pF - 10uF; 1uF - 100uF; 0.001uH - 100mH; .001mH - 100H.

**Accuracy is typically 1% for most values.** During any given test, you can press the Function button to read the exact frequency used for the measurement.

Use four AA batteries (not included), 5.5 VDC AC adapter, or any USB source

**New!**

**MFJ-200A**  
**\$79<sup>95</sup>**  
 Ship Code A

with a mini-USB plug.

**Should** you forget and leave power on, a shutdown feature turns it off. Just push power switch to resume testing.

**No test bench is complete without a good digital L/C meter.** Enjoy hand-held convenience plus all the benefits of twenty-first century micro-technology. Handheld, 3½Wx6Hx1D”.

**MFJ-200ASC, \$9.95**

**This surface mount component clip** lets you measure tiny SMT inductors and capacitors. Use with your MFJ-200A. Durable hard plastic tool with spring handles.



**MFJ VHF SWR Analyzer™**

**MFJ-208**  
**\$99<sup>95</sup>**  
 Ship Code A  
**VHF SWR Analyzer™** finds SWR on a calibrated dial of antennas 138-156 MHz -- a must-have for VHF antenna builders!

**Has jack for external frequency counter -- helps in testing your VHF handhelds and other gear.**

**Measures 7½Hx2½Wx2¼D inches -- super compact so you can carry it to your antenna source.** Use 9 Volt battery or 110 VAC with optional **MFJ-1312D**, \$15.95 wall adapter.



**MFJ Doppler Direction Finder**

**New!**



**MFJ-5005**  
**\$449<sup>95</sup>**  
 Ship Code A

Antennas not included

**Quickly find hidden transmitters on a fox hunt or just trying to find transmissions from 100 to 1000 MHz.**

**MFJ-5005** is a very economical but very sophisticated *Doppler Direction Finder* with GPS. Connect a PC or laptop to position and draw plots on *GoogleEarth™* display window accompanied with Navi 2020 plotting program.

**The large LED display shows the signal in numerical degrees and also on the 36-LED circular ring.**

**Set-up is super easy!** Connect it to the cigarette lighter and an HT with the supplied cables. Connect the antenna control cable, put the antennas on top of your vehicle roof and you're ready to roll!

**Completely assembled.** Package includes mobile mounting bracket, four magnet mount bases with BNC connector, GPS antenna, cigarette lighter power cable, audio cable and software.

**Receiver size is 7¼Wx2¼Hx5D”.**

**MFJ Antenna Bridge**

**New & Improved!**  
 Now has AGC for constant readings.

**MFJ-204B**  
**\$99<sup>95</sup>**  
 Ship Code A

**No other equipment needed.** Take it to your antenna site. Determine if your antenna is too long or too short, measure its resonant frequency, and its resistance to 500 ohms. It's the easiest, most convenient way to determine antenna parameters. Resistance bridge, null meter, tunable oscillator-driver (1.8 to 30MHz). 9 VDC or 110 VAC with **MFJ-1312D**, \$15.95. 7½Hx2½Wx2¼D inches.



**MFJ RX Noise Bridge**

**Quickly adjust** almost any antenna for maximum performance, 1 to 100 MHz.

**Lengthen or shorten your antenna** for minimum SWR. Measure resonant frequency, feedpoint resistance and reactance.

**Works with any receiver or transceiver.** **Hand-calibrated** resistance scale, expanded capacitance range and exclusive built-in range extender. 4¼Wx2Hx4D in.

Use 9 Volt battery (not included).



**MFJ-202B**  
**\$79<sup>95</sup>**  
 Ship Code A

**Economical Dip Meter covers 1.5-250 MHz**

**Back in the vacuum tube days** they called these babies *grid* dip meters and every ham and experimenter either had one. **The MFJ-201** solid state version is smaller, lighter, and vastly more versatile than its ancestor. Use it as a dip meter to find a coil's resonant frequency.

**MFJ-201**  
**\$149<sup>95</sup>**  
 Ship Code A



**Couple it to an antenna, or to**

coax lines to get their electrical length. **Or use it as an absorption wavemeter** for measuring transmitter output, neutralizing tank circuits, or a field strength meter.

**Other traditional dip uses include:** crystal oscillator, monitoring audio signal output (it includes a headphone jack), and measuring inductance and capacitance.

**This solid-state grid dip meter covers 1.5-250 MHz in 6 bands,** has thumb wheel tuning, color code readout, 6 coils, ear-phone jack and battery check. Uses a 9V battery for operation. Measures a compact 2Wx2½Dx7H inches including coils.





## MFJ-868B World's largest SWR/Wattmeter has giant 6 1/2" meter

World's largest HF+6M SWR/Wattmeter measures a giant 6 1/2 inches diagonally across meter scale! Covers 1.8-54 MHz.

MFJ-868B  
**\$149<sup>95</sup>**  
 Ship Code B

**This one you can See!** Its huge scale gives you ultra-fine resolution and its big high-contrast numbers makes reading a breeze -- even across your shack.

The meter needle position and motion gives you an accurate indication for what's going on *quickly* without actually reading the scale -- like your analog watch.

### True Peak Reading Circuit

MFJ's exclusive *TrueActive™* peak reading circuit captures *true* peak or average forward and reflected power readings. Has 20/200/ 2000 Watt ranges makes it valuable for QRP or QRO operation.

### Full SWR Scale

The full SWR scale makes reading SWR



much more accurate and easier to read. *Power Saver™ Circuit*

Exclusive MFJ Wattmeter *Power Saver™* circuit turns on meter only when RF power is being measured.

Covers 1.8-54 MHz. Use 9 volt battery or 12 VDC or 110 VAC with optional MFJ-1312D, \$15.95. Cabinet measures 7Wx5 1/2 Hx5D inches.

## World's Largest VHF/UHF SWR/Wattmeter!

MFJ-867, \$159.95. MFJ-867 is similar to MFJ-868B giant wattmeter but covers 144/220/440 MHz frequencies. Has 400/200/20 Watt ranges.



## Giant Automatic SWR/Wattmeter



## Giant 6 1/2" Meter!!! Covers 1.8 to 54 MHz!

MFJ-869 Fully-automatic auto ranging MFJ-869 has a giant 6 1/2 inch meter. Ship Code B

MFJ-869 has 20/200/2000 Watt scales with a *TruePeak™* active circuit and average forward and reflected power modes and fully-automatic SWR readings.

It also has an *Amplifier Bypass Control™* and *Control Relay* for high SWR. MFJ-869 has Field-upgradeable firmware. Has high SWR Audio and Visual Alarms to warn you of imminent danger to your expensive electronic equipment.

It covers 1.8-60 MHz frequency ranges. It's an all-new microprocessor design that'll give you years of use. Has seven LED indicators. All-metal attractive black cabinet measures 7Wx5 1/2 Hx5D inches.

## MFJ HF QRP Wattmeter and SWR Bridge

MFJ-813  
**\$39<sup>95</sup>**  
 Ship Code A

Read forward and reflected

power from 0-5 Watts on a calibrated meter scale -- Plus read SWR and relative power at any power level from 100 mW to 50 Watts. Bruene-style bridge circuit detects both RF current and RF voltage to ensure uniform accuracy across a wide range of load impedances, operating frequencies, and power levels. It's a great tool for working on your QRP radios, running on-air QRP signal trials, or setting up antennas out in the field. Covers 1.8 to 50 MHz. SO-239 UHF connectors. Rugged black aluminum case measures a compact 4 1/2 Wx2 1/4 Hx3D inches.



## MFJ Giant Cross-Needle Peak-Reading SWR/Wattmeters

Extra-Large 3 3/8 inch meter . . . Read forward/reflected power and SWR at a glance . . . Individual Meter scales for each power range . . . LED backlighting . . . Three-color scale . . . True directional coupler . . . Low bias Schottky Diode Detectors for increased linearity from low power to high power . . .

These new MFJ Giant SWR/Watt-meter series have large 3 3/8 inch Cross-Needle SWR/Watt-meters that have a three-color scale for improved readability.

These wattmeters simultaneously display forward/reflected power and SWR all at a glance! They each have individual meter scales for each power range that increase reading accuracy.

A *True™ Active peak-reading circuit* is included for SSB operation (MFJ-891 only). LED backlighting provides smooth and even illumination for easy night viewing.

Low bias Schottky diode detectors increase linearity from low power to high power readings.

A true directional coupler for increased accuracy gives solid readings over the entire frequency range, HF to UHF. DC grounded antenna connectors prevent electrostatic build up.

SWR less than 1.2:1. Meter accuracy is +/- 10% of full scale or better. Has lighted meter on/off switch.

These wattmeters are extra sturdy with large rubber feet and a rugged metal and a

designer-styled plastic injection molded front panel. Handsome black speckled finish and gray molded front panel aesthetically complements today's modern transceivers. Has super quality SO-239 input/output connectors. 7 1/4 Wx4 1/2 Hx4 1/2 D inches. Ship Code A

MFJ-891  
**\$109<sup>95</sup>**  
 Ship Code A

Select from the following models:

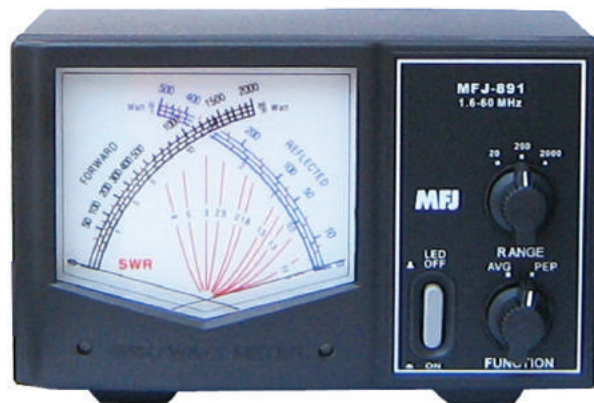
MFJ-891, \$109.95. Covers 1.6 to 60 MHz. Handles 2 kW in three ranges: 20/200/2000 Watts. MFJ-891 has precision *TrueActive™* PEP Circuit for SSB operation.

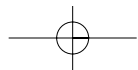
MFJ-892, \$109.95. Covers 1.6 to 200 MHz. Handles 200 Watts in three ranges: 2/20/200 Watts.

MFJ-893, \$109.95. Covers 125-525 MHz. Handles 200 Watts in three ranges: 2/20/200 Watts.

MFJ-894, \$129.95. Covers 1.6-60 MHz and 125-525 MHz. Incorporate two RF sensors for HF or VHF/ UHF operation. Handles 200 Watts in three ranges: 2/20/200 Watts.

MFJ-896, \$129.95. Covers 26-30 MHz. Handles 2000 Watts in three ranges: 20/200/2000 Watts.





## MFJ Compact HF, VHF, UHF SWR/Wattmeters

**MFJ-860**  
**\$59.95**  
 Ship Code A

**MFJ-862**  
**\$69.95**  
 Ship Code A

**MFJ-864**  
**\$99.95**  
 Ship Code A

**This MFJ Cross-Needle SWR/wattmeter covers HF thru VHF -- 1.8-60 MHz, 144 MHz, and 440 MHz bands -- for only 99.95!**

**MFJ-864, \$99.95**, Cross-Needle Meter reads forward and reflected power and SWR *simultaneously* and features separate HF and VHF/UHF directional couplers, each with its own SO-239 connectors.

This lets you connect your HF and VHF/UHF (1.8-60, 144, and 440 MHz bands) transceivers at the same time. You can then monitor SWR and power of either transceiver at the flick of a switch. Others have a single set of connectors -- you have to plug and unplug to use separate HF or VHF rigs.

**Power ranges:** 30/300 watts forward and 6/60 watts reflected. Each power range for each band is individually calibrated. Schottky diodes are used for best accuracy.

Single knob operation makes it easy to use and the meter is lighted for easy reading. Meter uses 12 VDC or 110 VAC with optional adapter, MFJ-1312D, \$15.95.

The all metal cabinet has a tough vinyl cladding. You won't find a tougher, longer lasting finish anywhere. **MFJ-864** measures a compact 7 $\frac{1}{4}$ Wx2 $\frac{1}{2}$ Hx2 $\frac{1}{4}$ D inches.

**MFJ-862, \$69.95**, similar to MFJ-864 but covers 144/220/440 MHz. 30/300 Watts forward, 6/60 Watts reflected ranges. 5 $\frac{3}{4}$ x2 $\frac{1}{2}$ x2 $\frac{1}{4}$  in. Has one sensor for all 3 bands.

**MFJ-860, \$59.95**, similar to MFJ-864 but for 1.8-60 MHz only. Push button selects 30/300 Watts forward, 6/60 Watts reflected. Compact 4 $\frac{1}{2}$ x2 $\frac{1}{4}$ x3 inches.

## MFJ GrandMaster™ SWR/Wattmeter Series



**GrandMaster™** SWR/Power Meters are the Cadillacs of ham radio! If you will not settle for less than the best accuracy and precision these **GrandMasters™** are for you.

You get a large 3 $\frac{1}{4}$ x1 $\frac{1}{4}$  inch precision illuminated meter for easy wide-angle viewing. A highly visible black and red meter scale on a bright white background makes it quick and easy to read SWR, for-

ward or reflected power. Lamp requires 13.8 VDC or 110 VAC operation.

A functional and simple front panel layout lets you select power ranges, bands or make SWR readings intuitively.

The **GrandMaster™** series feature an SWR scale that extends the full view of the meter. 3:1 SWR is centered at mid-scale to give you precision, wide-range measurements.

All **GrandMasters™** feature peak and average, forward and reflected power readings and have selectable power ranges.

Each **GrandMaster™** is housed in an all metal cabinet with rubber feet and protected by durable speckled black paint. A designer injection molded grey front panel

perfectly matches any transceiver. 7 $\frac{1}{2}$ Wx3 $\frac{3}{8}$ Hx4 $\frac{1}{4}$ D inches.

Air dielectric SO-239 connectors with gold plated center pins gives superb performance to beyond 525 MHz.

**GrandMasters™** are precisely factory calibrated for accurate measurements.

**Choose from four MFJ GrandMasters™**

**MFJ-870, \$79.95.** HF, covers 1.6 to 60 MHz. 30, 300, 3000 Watt power ranges.

**MFJ-872, \$79.95.** HF/VHF, covers 1.8 to 200 MHz. 5, 20, 200W power ranges.

**MFJ-873, \$79.95.** VHF/UHF, covers 125-525 MHz. 5, 20, 200W power ranges.

**MFJ-874, \$109.95.** HF/VHF/UHF, covers 1.8-525 MHz. 5, 20, 200W power ranges.

### 1.8-60 MHz SWR/Wattmeter with TrueActive™ Peak Reading circuit

**MFJ-815D**  
**\$89.95**  
 Ship Code A  
 Covers 1.8-60 MHz

**MFJ-817C**  
**\$99.95**  
 Ship Code A  
 Covers 144/220/440 MHz

- LED Backlighted lamp
- Large 3" Cross-Needle Meter
- True Active Peak Reading Circuit

**MFJ-815D** and **MFJ-817C** read *true-peak* or average power on a large illuminated three-inch Cross-Needle Meter.

**TrueActive™** peak reading circuit gives an incredibly accurate SWR/power reading in SSB/CW over a wide frequency range.

**Cross-Needle Meter** reads SWR and *true peak* average, forward and reflected power *simultaneously* -- all in a single glance.

**MFJ-815D** covers 1.8 to 60 MHz. **MFJ-817C** covers 144/220/440 MHz. Each has a mechanical adjustment for accurately zeroing the meter.

Push button selects range, meter lamp on/off and peak for SSB or average for CW operation. SO-239 Connectors.

*Continued below right . . .*

### MFJ Digital SWR/Wattmeters FWD, REF, SWR at a Single Glance!

**MFJ-845**  
**\$99.95**  
 Ship Code A  
 Covers 1.6-60 MHz

**MFJ-847**  
**\$99.95**  
 Ship Code A  
 Covers 125-525 MHz



**New!** New MFJ Digital SWR/Wattmeters display Forward, Reflected Power, SWR and Battery life *all in a single glance!*

Large 1 $\frac{1}{2}$ " forward power digits and 5/8 Reflected and SWR digits! LCD screen is 2.25 inches diagonally. Power on/off, backlight on/off switches.

Power with triple AAA battery or micro USB port. SO-239 Connectors.

**MFJ-845** covers 1.6-60 MHz and handles 0-200 Watts. **MFJ-847** covers 125-525 MHz and handles 0-120 Watts.

**Super compact** 4Wx3Hx1D inches.

**Continued from left . . .**

**MFJ-815D** has 3000 and 300 Watts forward and 600/60 Watts reflected power ranges. **MFJ-817C** has two power ranges: 300/30 Watts and 60/6 Watts. Read SWR from 1:1 to 8:1.

**LED Meter lamp** uses 12 VDC or 110 VAC with optional MFJ-1312D, \$15.95.

**TrueActive™** Peak Reading Circuit can use 9 Volt battery. Metal black aluminum cabinet measures 6Wx3 $\frac{1}{2}$ Hx4 $\frac{1}{2}$ D inches.

### VHF SWR Wattmeter plus Field Strength

**MFJ-812B**  
**\$39.95**  
 Ship Code A

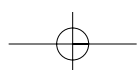
**MFJ-812B** is the world's most popular -- and most affordable -- VHF SWR/Wattmeter. Has a built-in field strength meter. Covers 2 Meters and 220 MHz. Reads forward and reflected power in two ranges -- 30 or 300 Watts.

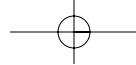
Reads SWR from 114 MHz through 220 MHz. Also reads relative field strength from 1 to 220 MHz. Has binding post for field strength antenna. Black. 4 $\frac{1}{2}$ Wx2 $\frac{1}{4}$ Hx3D inches.

### Econo HF SWR/Wattmeter

**MFJ-816**  
**\$39.95**  
 Ship Code A

**MFJ-816 HF SWR/Wattmeter** lets you read forward and reflected power on two scales -- 30 and 300 Watts -- and SWR from 1.8 to 30 MHz. Toroid current pickup gives uniform sensitivity. Easy push-button operation. Sturdy black aluminum cabinet. SO-239 connectors. 2-color meter scale. 4 $\frac{1}{2}$ Wx2 $\frac{1}{4}$ Hx3D inches -- makes it ideal for portable use.





## High-accuracy MFJ Digital SWR/Wattmeter, 1.8-54 MHz, 1500 Watts

MFJ's high-accuracy digital SWR/Wattmeter/Frequency Counter measures up to 1500 Watts. Get three high-resolution ranges with accuracy in each range, 1.8 to 54 MHz! True peak or average forward and reflected Watts, SWR and frequency can be simultaneously displayed.

Select auto-ranging bargraph modes to display forward and reflected power or forward power and SWR twin bargraphs or SWR only bargraph. Frequency, SWR and forward power are also displayed numerically. Digital-analog displays make it visually easy to tune tuners, amplifiers and rigs.

You get three high-resolution forward/reflected power ranges that are automatically selected: a true QRP range (25 Watt full scale), a mid-range (250W full scale) and a high-range (1500W full scale). Each has excellent resolution.

MFJ's TrueActive™ peak reading circuit gives you true peak or average power on all

modes. PeakHold™ feature freezes the highest forward power displayed bar segment for one second.

Built-in frequency counter gives any transmitter digital frequency readout in continuous carrier mode. Perfect for older and QRP rigs such as MFJ-9420 and MFJ-9340 QRPCubs™.

All information is displayed on a big 2-line, 16-character, high-contrast backlit

MFJ-826B  
\$179<sup>95</sup>  
Ship Code B



LCD display. Use 12 VDC or 110 VAC with optional MFJ-1312D, \$15.95. All metal black cabinet, 6 1/2"Wx2 3/8"Hx6D".

MFJ

## Digital and Cross-Needle SWR/Wattmeter



MFJ-828  
\$229<sup>95</sup>  
Ship Code B

Control™ (protects amplifier during high SWR events), and Control Relay with normally open and closed connections that toggles when SWR is above a pre-set limit. Field-upgradeable firmware.

MFJ-828 has ALL of the features of the MFJ-826B 1.8-60 MHz, 1500 Watts high-accuracy digital SWR/Wattmeter/Frequency Counter . . . PLUS . . . it has a large, 3 inch lighted Cross-Needle SWR/Wattmeter and Amplifier Bypass

## MFJ-844 VHF/UHF SWR Mobile Power Meter



MFJ-844  
\$69<sup>95</sup>  
Ship Code A  
MFJ-844 covers 144 and 440 MHz. Insertion loss is 0.3 dB or lower with 50

Ohm impedance. SO-239 connectors.

Its tiny size lets you put it just about anywhere in your operating position. 3 1/4"Wx3H x 1 1/4"D inches.

Handles 200 Watts and measures SWR and Power in three power ranges: 15W, 60W, and 200W.

A multi-colored white, orange, and black meter face makes for easy reading in quick glances. Extra large, highly visible meter. Die-cast metal, quality connector.

## Compact Cross-Needle SWR/Wattmeters



MFJ-822 or MFJ-842  
\$59<sup>95</sup>  
Ship Code A

Compact HF/VHF and VHF/UHF SWR/Wattmeter. Has huge 3" Cross-needle meter. Read forward/reflected power and SWR simultaneously.

Perfect for mobile or portable operation. Two selectable power ranges, built-in meter light (+12 VDC). SO-239 connectors. 3 1/4"Wx3 1/4"Hx3 1/4"D in.

MFJ-822 covers 1.8-200 MHz, 30 or 300 Watts. MFJ-842 covers 140-525 MHz, 15 or 150 Watts.

## Ruggedized flat Mobile/portable SWR/Wattmeter



MFJ-818  
\$79<sup>95</sup>  
Ship Code A

MFJ's flat, compact SWR/Wattmeter is plenty rugged to take the abuse of brutal mobile or portable operation. Easily mounts on dash for easy viewing. Flat mount on wall/shelf in shack for best view angle. Meter is fully enclosed in a strong aluminum case with just the scales exposed. Only two small switches slightly protrude so there's little to break.

Simultaneously read SWR/forward/reflected power on this full size 3-inch lighted Cross-Needle Meter. 0/300 Watt ranges, 1.8-30 MHz, SO-239. Use 12 VDC for meter lamp or plug into cigarette lighter with MFJ-5510, \$9.95. 3 Tiny all-metal cabinet has rubber feet. 5Wx3Hx2D inches.

## MFJ Cross-Needle SWR/Wattmeters



MFJ-883  
(125-525 MHz) pictured.

MFJ-883  
\$89<sup>95</sup>  
Ship Code A  
3-inch precision illuminated Cross-Needle meter has easy wide-angle viewing.

Read SWR, forward power and reflected power simultaneously in a single glance!

Three-color scale gives improved readability. LED backlight gives excellent night vision. Requires 13.8 VDC or 110/VAC operation. All are precisely factory calibrated for super accuracy. Air-Dielectric SO-239s have gold plated center pins to give superb performance beyond 525 MHz.

A functional and simple front panel layout lets you select power ranges, bands, or make SWR readings intuitively.

Housed in all-metal cabinet with rubber feet and protected by a durable speckled

black paint. Designer injection molded grey panel matches any rig. 5 1/2"Wx3 1/8"H5D".

MFJ-880, \$89.95. HF, covers 1.6 to 60 MHz, Power range 0-2000 Watts in 3 ranges: 20/200/2000 Watts.

MFJ-882, \$89.95. HF and VHF. 1.8 to 200 MHz, power range of 0-200 Watts in three ranges: 2/20/200 Watts.

MFJ-883, \$89.95. VHF and UHF, 125 to 525 MHz, power range 0-200 Watts in three ranges: 2/20/200 Watts.

MFJ-884, \$109.95. HF/VHF and UHF, 1.8 to 525 MHz, three power ranges: 2/20/200 Watts. Separate HF and VHF/UHF power sensors with SO-239 connectors.

## Flat Mount 1.8-60 MHz Mobile SWR/Wattmeter



MFJ-819  
\$159<sup>95</sup>  
Ship Code A

Just 1 3/8" thick -- easily mounts on your dashboard for easy viewing. Flat mount on wall or shelf in your ham shack for best viewing angle.

Remote sensor with 25 feet thin, flexible cable lets you place sensor and coax out-of-the-way. Handles full 1500 Watts, 1.8-60 MHz. LED lighted Cross-Needle meter.

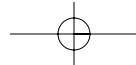
Active electronics lets you read true peak or average power in two power ranges. Has "High SWR" LED.

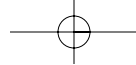
Flat-Mount SWR/Wattmeter measures 5Wx3 1/4"H x 1 3/8"D inches; remote sensor is a tiny 3 1/2"Wx2 3/4"H x 2 3/4"D inches. Use internal (not included) 9V battery or 12 VDC.

## New! Digital SWR/Wattmeter

Like MFJ-884 but large 3.5" bright orange LCD display. Reads SWR, forward and reflected power digitally in a single glance. 1.5-525 MHz, HF/VHF switch, 200 Watts.

MFJ-849  
\$169<sup>95</sup>  
Ship Code A





**MFJ**

# MFJ in-line Calibrated RF Ammeters

... for tuning your antenna tuner/xmtr/amp for maximum radiated power, for determining antenna feedpoint impedance, for comparing antennas and tuners, for trouble shooting, checking for changes ...



**MFJ-834 Coax In-Line Calibrated RF Ammeter**  
 Connect the MFJ-834, \$79.95  
 MFJ-834 \$79.95  
 Ship Code A

Coax In-Line RF Ammeter between your antenna and tuner/ transmitter/amplifier and measure antenna feedline current in 3 calibrated ranges.

Use it ... for tuning your antenna tuner/ transmitter/amplifier for maximum radiated power ... for determining antenna feedpoint impedance... for comparing antennas and tuners ... for trouble shooting ... and for checking for changes.

**Tuning** for maximum feedline current for any given antenna always gives maximum radiated power!

Any adjustment -- transceiver or amplifier tuning/loading controls, antenna tuner settings, whatever -- that increases feedline current improves power transfer and gives you a stronger radiated signal.

**Radiated** power increases rapidly because power increases as the square of the current.

**Minimum SWR** does not always mean maximum radiated power -- your tuner or lossy coax may be dissipating power -- and you may not get peak output power even if your tuner or amplifier is properly tuned.

Use the MFJ-834 to determine best antenna tuner settings and to compare various tuners.

**Calculate** antenna feedpoint impedance by dividing your applied power by square of feedpoint current. *Continued right*



**MFJ-836 all-in-one RF Ammeter/SWR/Wattmeter**  
 The MFJ-836, \$139.95 is an all-in-one RF Ammeter/SWR/Wattmeter!  
 MFJ-836 \$139.95  
 Ship Code A

You can quickly determine feedpoint impedance and monitor antenna system for detrimental changes under power.

**Read** RF current in three calibrated ranges -- 1, 3, 10 Amperes. A large 3-inch lighted easy-to-read Cross-Needle meter lets you read SWR, forward (300/3000W) and reflected power (60/600W) simultaneously.

MFJ's exclusive TrueActive™ circuit gives you true peak or average power readings. SO-239 connectors. Use 9 Volt battery and/or 12 VDC or 110 VAC with MFJ-1312D, \$14.95. 6Wx3½Hx4½D inches.

**MFJ-836H, \$149.95.** Like MFJ-836 but 3, 10, 30 Amps high current ranges.

*Continued from left*

Your antenna can change when you apply power -- insulators break down, traps heat up, capacitors leak -- and your feedpoint impedance may be drastically different from your SWR Analyzer measurements.

MFJ RF ammeters are rugged, read accurately over 1-30MHz in three linear ranges (3, 1, 3 Amperes) and barely perturb the antenna.

**Large** 3-inch lighted meter. Use 12 VDC or 110 VAC with MFJ-1312D, \$15.95.

**MFJ-834H, \$89.95.** Like MFJ-834, but 3, 10, 30 Amps high current ranges.



**MFJ-835 Balanced Line RF Ammeter**  
 How do you detect imbalance in open-wire or ladder line? By measuring and comparing each feedline wire current -- your feedline is balanced if the currents are equal.  
 MFJ-835 \$129.95  
 Ship Code A

How do you detect imbalance in open-wire or ladder line? By measuring and comparing each feedline wire current -- your feedline is balanced if the currents are equal.

**MFJ-835, \$129.95 BalancedLine RF Ammeter™** is two identical calibrated RF ammeters using an MFJ Cross-Needle meter.

**Feedline** currents are simultaneously displayed on separate calibrated scales in three ranges (.3, 1, 3 Amperes).

**Balance** is clearly revealed on MFJ's exclusive BalancedBar™ -- when currents are balanced, the dual needles cross in the center -- no matter the actual current.

If the needles cross within the vertical BalancedBar™ the balance is within 10%. If not, you know which line is unbalanced and by how much.

**Equal** currents in the feeder wires minimize feedline radiation and reduces pattern distortion, RFI, TVI and wasted power. You could lose up to 10% of your power.

**Imbalance** is due to feedline not being perpendicular to antenna, if one side runs close to metal or is shorter or closer to ground.

The MFJ-836 helps you solve all your unbalanced problems.

**Heavy-duty** 5-way binding posts for feedlines. Use 12 VDC or 110 VAC with MFJ-1312D, \$15.95. 6Wx3½Hx4½D in.

## Calibrated Clamp-On RF Ammeter



**MFJ-854 Clamp-On RF Ammeter** quickly snaps over wires and cables to measure RF currents flowing in antenna elements, radials, ground wires and on outside of coax.  
 MFJ-854 \$119.95  
 Ship Code A

MFJ-854 Clamp-On RF Ammeter quickly snaps over wires and cables to measure RF currents flowing in antenna elements, radials, ground wires and on outside of coax.

**Tune** counterpoises, radials and ground systems. Balance your radials. See how much signal is radiating from your antenna, feedline or ground wire. Study/optimize your antennas for peak performance. Find current peaks/nulls on antennas/ feedlines. Plot current profile, measure and tweak current flow at each antenna element in phased arrays.

**Determine** your antenna feedpoint impedance, radiated power, power losses and efficiency. Track down RFI-causing currents on coax shield, rotator cable, guy wires, house wiring, telephone and television cables.

Has five calibrated ranges to 3 Amperes including sensitive 30 mA range with linearity compensation to assure accuracy at low currents. It's sensitive enough to use an MFJ SWR Analyzer as the source to drive your antennas.

Less than 1 mA on super-sensitive Variable Range yields usable meter deflection for tracking RFI on household wiring and cables.

1-30 MHz plus. ½ inch diameter cables. 2 ½ Wx5½Hx1½D in.

## Calibrated mini Clamp-On RF Ammeter



**MFJ-853 mini Clamp-On RF Ammeter** accurately measures RF current in antenna elements, radials, ground wires, coax shield. Non-metallic lightweight case minimizes electric field disturbances for accurate readings -- clamp on mobile whip/vertical. Adjust for maximum radiated current. Determine radiated power/losses. Profile its current distribution -- it's maximum at base and tapers to zero at end.  
 MFJ-853 \$59.95  
 Ship Code A

readings -- clamp on mobile whip/vertical. Adjust for maximum radiated current. Determine radiated power/losses. Profile its current distribution -- it's maximum at base and tapers to zero at end.

Use like MFJ-854 to do many of its tasks. 0.3, 1, 3 Ampere ranges. Small 2¼Wx3¾Hx1D in.

**MFJ-853H, \$69.95.** Like MFJ-853, but has 3, 10, 30 Ampere high-current ranges.

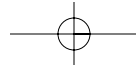


**MFJ-805 Super-Sensitive RFI Sniffer** works with mobile installations, ferreting out alternator hash, ignition pulses and microprocessor noise on feedlines and power leads. Isolate cables picking up RFI and know when you've suppressed the problem. Easy-to-use. Clamp current transformer over suspected cable or wire (up to ¼ in. dia.) to detect RFI causing common-mode currents. 2¼Wx4¾Hx1D inches fits in shirt pocket. Use 9 Volt battery. Usable VLF to VHF. Gain adjustable over 50 dB range.  
 MFJ-805 \$99.95  
 Ship Code A

## MFJ Super-Sensitive RFI Sniffer

MFJ-805 works with mobile installations, ferreting out alternator hash, ignition pulses and microprocessor noise on feedlines and power leads. Isolate cables picking up RFI and

know when you've suppressed the problem. Easy-to-use. Clamp current transformer over suspected cable or wire (up to ¼ in. dia.) to detect RFI causing common-mode currents. 2¼Wx4¾Hx1D inches fits in shirt pocket. Use 9 Volt battery. Usable VLF to VHF. Gain adjustable over 50 dB range.



### Find Power Line Noise Fast!



Choose the highly directional 3 element Yagi (MFJ-856, \$159.95) for pinpoint accuracy or the compact telescoping dipole (MFJ-852, \$119.95) for quick noise finds.

Walk or drive around with these handheld power line noise meters to search out leaky insulators, loose hardware and corroded ground lines quickly. Track noise right down to the pole, transformer or insulator, or other source.

Operates in the 135 MHz region where activity is a minimum and radiation from corona and arcing is far more localized. 0.3 uV sensitivity and wide-range AGC for

noise level meter -- over 70 dB! Plug in headphones and hear noise you're tracking or plug in a tape recorder. 2Wx4Hx1.5D in.

Use this ultra-sensitive pocket-sized RFI Detector to track down and eliminate RFI caused by radiating cables and wires. It'll tell exactly which cable is radiating RFI so you can eliminate it with a simple toroid or clamp-on filter.

Find RFI generated by consumer devices, computers and office equipment. Eliminate the RFI source and hash, birdies, whistles and transient noises amazingly disappear.

MFJ-1767, \$79.95. Add this 3-element beam to your MFJ-852, and turn it into an RFI finder.

### MFJ Field Strength Meters

Determine radiation pattern; make changes to your antenna and see if it radiates better or worse. Adjust ground lead, artificial ground, counterpoise or tune transmitter or antenna tuner for maximum field strength. Check for floating RF.

MFJ-802B \$49.95 Ship Code A

40" Balanced Dipole Field Strength Meter MFJ-802B, \$49.95.

Sensitive telescoping 40-inch balanced dipole is ground independent and reduces influence of surroundings. Big 3-inch meter. Sensitivity control lets you handle milliwatt to kilowatt signals. 1/4" phone jack for MFJ-802R



remote RF sensing head (pictured inset). 2 5/8 Wx4Hx1 1/2 D in. MFJ-802R, \$34.95.

Read your field strength remotely where you can control your transmitter or rotate your beam. Requires shielded two conductor cable (not included). 2 3/8 Wx3 3/8 Hx1 D in. MFJ-802BX, \$74.90, MFJ-802B field strength meter & MFJ-802BR, remote sensor combination. Saves \$!

### Telescoping Whip Field Strength Meter

MFJ-801 \$29.95 Ship Code A

Take quick field-strength readings from 100 KHz to 500 MHz with this compact telescoping whip field strength meter. 1.75 inch meter. Sensitivity control. 20 inches (extended) monopole. Finger contact on side increases sensitivity when needed. 2 7/8 x 3 5/8 x 1 inches.

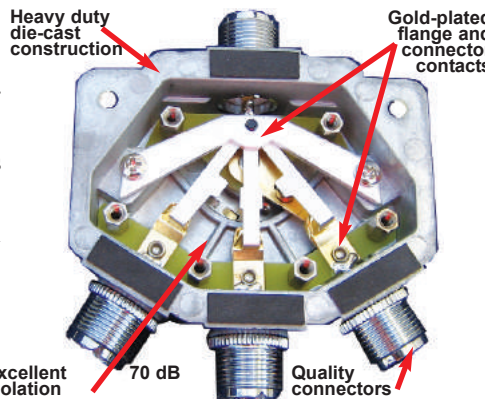


### MFJ Rhinos™ 2, 3, 4 Position Antenna Switches Built tough, built to last and built to work for a long lifespan!

MFJ's Rhinos™ tough, durable 2, 3, and 4 position antenna switches have gold plated flanges, connector contacts -- low VSWR, low insertion loss.

A rock-solid, sturdy, die-cast design gives up to an excellent 70 dB isolation. These switches are built like a rhino, tough inside and out! A superior internal design lets them work for you for a long lifespan.

Rhinos™ handle power up to 2 kW. Operating frequency ranges from DC to 3 GHz with less than a 1.2:1 SWR. A super compact size lets you put them anywhere. Handy premade mounting holes.



Inside View of MFJ-2703, \$64.95

Eight models to choose from . . . MFJ-2702, \$32.95. 1 GHz, 2 positions, SO-239. 2 3/4 Wx3 1/2 Hx1 3/4 D inches. MFJ-2702N, \$42.95. 3 GHz, 2 pos., N-type. MFJ-2703, \$64.95. 800 MHz, 3 positions, SO-239. 3 1/8 Wx3 1/2 Hx1 3/4 D inches. MFJ-2703N, \$74.95. 1.5 GHz, 3 pos., N-type. MFJ-2704, \$89.95. 900 MHz, 4 positions, SO-239. 4 1/4 Wx4Hx1 3/4 D inches. MFJ-2704N, \$99.95. 1.5 GHz, 4 pos., N-type. MFJ-2704M2, \$99.95. 900 MHz, 4 pos., Inputs are SO-239, outputs are two each: SO-239, N-type. 4 1/4 Wx4H x1 3/4 D in. MFJ-2704N2, \$99.95. 1.5 GHz, 4 pos., Inputs are N-type, outputs are two each: SO-239, N-type. 4 1/4 Wx4H x1 3/4 D inches.



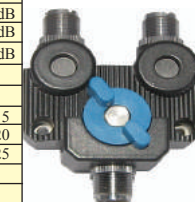
MFJ-2704 \$89.95 MFJ-2704N \$99.95  
SO-239, 900 MHz N-type, 1.5 GHz  
Ship Code A Ship Code A



MFJ-2704M2 \$99.95 MFJ-2704N2 \$99.95  
239/N, 900 MHz N/239, 1.5 GHz  
Ship Code A Ship Code A



MFJ-2703 \$64.95 MFJ-2703N \$74.95  
SO-239 N-type  
800 MHz 1.5 GHz  
Ship Code A Ship Code A



MFJ-2702 \$32.95  
SO-239 DC-1 GHz  
Ship Code A

MFJ-2702N \$42.95  
N-type, 3 GHz  
Ship Code A

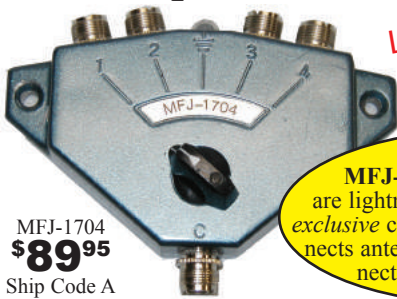
### MFJ Rhino™ Series Antenna Switch Specifications

| Model No.              | MFJ-2702  | MFJ2702N  | MFJ-2703  | MFJ2703N  | MFJ-2704  | MFJ2704N  | MFJ2704M2 | MFJ2704N2 |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Price                  | \$32.95   | \$42.95   | \$64.95   | \$74.95   | \$89.95   | \$99.95   | \$99.95   | \$99.95   |
| Useable Freq.          | 1 GHz     | 3 GHz     | 800 MHz   | 1.5 GHz   | 900 MHz   | 1.5 GHz   | 900 MHz   | 1.5 GHz   |
| Power Rating           |           |           |           |           |           |           |           |           |
| DC-30 MHz              | 2 kW      | 2 kW      | 2 kW      | 2 kW      | 1.5 kW    | 1.5 kW    | 1.5 kW    | 1.5 kW    |
| 30-200 MHz             | 1 kW      | 1 kW      | 1 kW      | 1 kW      | 1 kW      | 1 kW      | 1 kW      | 1 kW      |
| 200-500 MHz            | 500 W     | 500 W     | 500 W     | 500 W     | 500 W     | 500 W     | 500 W     | 500 W     |
| 500-900 MHz            | 250 W     | 250 W     | 250 W     | 150 W     | 250 W     | 250 W     | 250 W     | 250 W     |
| .900-1.5 GHz           |           |           |           | 150W      | 150 W     | 150 W     | 150 W     | 150 W     |
| Insertion Loss         |           |           |           |           |           |           |           |           |
| DC-500 MHz             | >= .05dB  | >= .05dB  | >= .05dB  | >= .05dB  | >= .10dB  | >= .10dB  | >= .10dB  | >= .10dB  |
| 500-900 MHz            | >= .10 dB | >= .10 dB | >= .10 dB | >= .10 dB | >= .20 dB | >= .20 dB | >= .20 dB | >= .20 dB |
| .900-1.5 GHz           |           | >= .15 dB |           | >= .15 dB |           | >= .30 dB |           | >= .30 dB |
| 1.5 - 3 GHz            |           | >= .20 dB |           | >= .20 dB |           |           |           |           |
| Output Isolat.         |           |           |           |           |           |           |           |           |
| DC-500 MHz             | <= 70 dB  | <= 70 dB  | <= 70 dB  | <= 70 dB  | <= 60 dB  | <= 60 dB  | <= 60 dB  | <= 60 dB  |
| 500-900 MHz            | <= 60 dB  | <= 60 dB  | <= 60 dB  | <= 60 dB  | <= 55 dB  | <= 55 dB  | <= 55 dB  | <= 55 dB  |
| .900 - 1.5 GHz         |           | <= 55 dB  |           | <= 55 dB  |           | <= 50 dB  |           | <= 50 dB  |
| 1.5 - 3 GHz            |           | <= 50 dB  |           | <= 50 dB  |           |           |           |           |
| VSWR                   |           |           |           |           |           |           |           |           |
| DC-500 MHz             | >= 1.05   | >= 1.05   | >= 1.15   | >= 1.10   | >= 1.1    | >= 1.15   | >= 1.15   | >= 1.15   |
| 500-900 MHz            | >= 1.1    | >= 1.10   | >= 1.25   | >= 1.15   | >= 1.25   | >= 1.20   | >= 1.20   | >= 1.20   |
| .900 - 1.5 GHz         |           | >= 1.15   |           | >= 1.20   |           | >= 1.25   |           | >= 1.25   |
| 1.5 - 3 GHz            |           | >= 1.20   |           | >= 1.25   |           |           |           |           |
| Grounded Unused Output | NO        | NO        | YES       | YES       | YES       | YES       | YES       | YES       |

**MFJ**

# Lightning Protected Heavy Duty Coax Switches

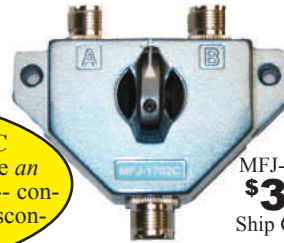
*MFJ gives you a center ground position, automatic grounding of unused positions, handles 2.5 kW PEP and works to over 500 MHz!*



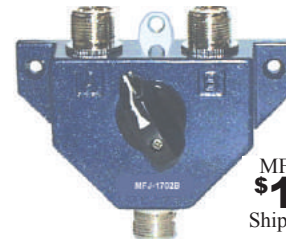
MFJ-1704  
**\$89<sup>95</sup>**  
Ship Code A

Lightning  
Surge  
Protection

**Super!**  
MFJ-1704 and MFJ-1702C  
are lightning protected and have an  
exclusive center ground position -- connects  
antennas to ground and disconnects  
your radio from use.



MFJ-1702C  
**\$39<sup>95</sup>**  
Ship Code A



MFJ-1702  
**\$19<sup>95</sup>**  
Ship Code A

**Mount** this 4-position SO-239 switch on your operating desk and you'll have more than the convenience of being able to instantly select any of four antennas or the center ground position -- you'll also get the replaceable lightning surge protection device that helps protect against distant lightning induced surges and static. Handles a full 2.5 kW PEP. Extremely low SWR. Isolation is rated from better than 60 dB at 30 MHz to better than 50 dB isolation at 500 MHz, negligible insertion loss, 50 Ohms.

**MFJ-1704N, \$94.95.** Like MFJ-1704, with "N" type connectors.

**MFJ-1702C** 2-position Coax Switch has a new lightning surge protection device that helps protect against distant lightning induced surges and static. MFJ-1704 and MFJ-1702C have a (sets antenna to ground) center ground position and handles 2.5 kW PEP, 1 kW CW. It has better than 60 dB isolation at 300 MHz and better than 40 dB at 450 MHz. 50 Ohms. Unused terminals are automatically grounded for static and RF

protection. It has less than 0.2 dB insertion loss and SWR below 1.2:1. The MFJ-1702C has a heavy cavity type construction and uses SO-239 connectors. Has handy mounting holes. Measures 3Wx2Hx2D in.

**MFJ-1702CN, \$44.95.** Like MFJ-1702C, with "N" type connectors. Covers DC to 1.1 GHz.

**MFJ-1702, \$19.95.** Like MFJ-1702C, less lightning surge protection, center ground.

## MFJ Six Position Antenna/Transceiver and Antenna Switches



MFJ-1700C  
**\$119<sup>95</sup>** *New and Improved*  
Ship Code B **MFJ-1700C!**

**The new MFJ-1700C** adds lightning surge protection and boasts a much better isolation between connectors and wires internally.

**This high power Antenna and Transceiver Switch** lets you select one of six antennas and one of six different transceivers in any

combination. Now you can have dedicated radios and antennas doing select ham radio activities.

**You can also plug in** an antenna tuner, SWR wattmeter, other electronic equipment. Has quality SO-239 connectors.

**You are always connected to** the antenna and radio selected. MFJ-1700C handles 2 kW PEP SSB, 50-75 Ohm loads.

**Unused terminals are automatically grounded.** SO-239 connectors. Covers 1.8 to 30 MHz. Measures 4<sup>3</sup>/<sub>4</sub>Wx6<sup>1</sup>/<sub>2</sub>Hx3D in.

## 6 Position HF Antenna Switch

**Select one of six antennas.** Covers 1.8-30 MHz. Unused terminals are automatically grounded.

Quality SO-239 connectors for hook-up to your antennas. Handles 2 kW PEP SSB, 1 kW CW, 50-75 Ohm loads. Measures 10Wx3Hx1<sup>1</sup>/<sub>2</sub>D in.



MFJ-1701  
**\$79<sup>95</sup>**  
Ship Code B

## MFJ 12-Position Coax Patch Panel

**MFJ Coax Patch Panel connects devices with virtually no loss, feed-through or cross-talk . . .**

**Provides 12 Teflon<sup>®</sup> SO-239** coax feedthru barrel connectors to patch 12 coax fed devices together with short coax jumpers.

**This extremely high performance and versatile military/professional patch panel approach** has virtually no loss, no feed-thru and no cross-talk -- depends only on the quality of your coax -- and has far better performance than any switching system.

**To use,** connect your coax fed devices (rigs, antennas, SWR/Wattmeters, tuners, amplifiers, preamps, switches, and other electronic equipment) to coax connectors inside the



MFJ-4706  
**\$79<sup>95</sup>**  
Ship Code A



MFJ-4704  
**\$69<sup>95</sup>**  
Ship Code A

patch panel.

**Each device is then available** on the front panel and can be connected to any other device using a short coax patch cable. All can be used at the same time.

**Cables enter through side or rear** on either side. Has wing nut for ground. Side/back mounting tabs let you mount to a wall, under your table, or on ham station desk.

**Compact 9Wx5Hx4D inches** fits just about anywhere.

## MFJ 8-Position Coax Patch Panel

**MFJ-4704, \$69.95.** Similar to MFJ-4706 but for 8 coax-fed devices.

## MFJ Balanced line antenna switch



MFJ-1706  
**\$109<sup>95</sup>**  
Ship Code B

**Use one of six different balanced feedlines** 1.8 to 30 MHz. Handy, versatile 5-way binding posts. Handles 1500 Watts PEP SSB. Silk-screened label positions. Aluminum, 9Wx3<sup>1</sup>/<sub>4</sub>Hx6<sup>1</sup>/<sub>2</sub>D".

**MFJ-1706H, \$119.95,** similar, but has high-voltage glazed ceramic feedthrough insulators instead of 5-way binding posts.



MFJ-1706 back



MFJ-1706H back

## MFJ HF, VHF and UHF Bias Tee DC Power Injectors



MFJ-4116  
**\$29<sup>95</sup>**  
1-60 MHz  
Ship Code A  
MFJ-4119N  
**\$39<sup>95</sup>**  
1-440 MHz

**Send up to 1 Amp DC/50** Volts DC through coax cable to power your electronic equipment.

**Use with your automatic antenna tuner, remote antenna switch, antenna relay box, etc.,** without running separate cables.

**Requires one MFJ-4116** on each end of coax to inject

DC power and to retrieve DC power.

**MFJ-4116** covers all HF bands and Six Meters, 1-60 MHz. Has SO-239 connectors.

**MFJ-4119N** covers HF, VHF and UHF. Has N-type connectors. Measures a super-compact 2<sup>3</sup>/<sub>4</sub>Wx2<sup>1</sup>/<sub>2</sub>Hx1<sup>1</sup>/<sub>4</sub>D inches.

**MFJ-4116P, \$54.95,** pair of MFJ-4116.

**MFJ-4117, \$34.95.** Like MFJ-4116, but with switch to turn remote equipment on/off.

**MFJ-4118, \$44.95.** Like MFJ-4116, but

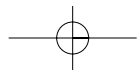
provides both +12VDC and -12VDC. Has three switched position settings: +12VDC, OFF and -12VDC.



MFJ-4117  
**\$34<sup>95</sup>**  
Ship Code A



MFJ-4118  
**\$44<sup>95</sup>**  
Ship Code A



# MFJ Desktop or Remote Antenna Switches

**MFJ**

## Desk/Remote 6/4 pos. Antenna Switches



**MFJ-4716** Use this **\$89<sup>95</sup>** MFJ-4716 Six-  
Ship Code B *position*  
*Antenna Switch*  
on your desk or place it  
out-of-way under your  
desk or in another room  
and use a remote control.

A simple rotary switch lets you select 1 of 6 antennas. All unused inputs are grounded. You can connect a sense line to your transceiver so when it's off, all inputs are automatically grounded.

In the OFF position, all inputs are grounded or control is transferred to the MFJ-4716RC, \$39.95, Remote Control.

**Ultra-fast** gas discharge tube *lightning surge protector* protects transceiver and safely shunts static electricity and lightning induced surges safely to ground. Does not protect against a direct lightning hit.

**Super** easy-to-use -- just one simple rotary switch. There are no complicated computer buttons to learn or microprocessors to fail or generate RFI that could mask rare DX.

**SO-239** connectors. 1500 Watts/50-75 Ohm load, 1-60 MHz. Useable to 150 MHz. Connects to MFJ-2716RC remote control with common CAT 5 cable, not included (available from MFJ, see below.). Use 12 VDC or 110 VDC with MFJ-1312D, \$15.95. 8Wx2<sup>3</sup>/<sub>8</sub>Hx4<sup>1</sup>/<sub>4</sub>D inches. For indoor use, not weather protected.

**MFJ-4716RC, \$39.95.** 6-position. Remote Control for MFJ-4716. CAT 5 cable not included. Tiny 2<sup>3</sup>/<sub>4</sub>Wx3<sup>3</sup>/<sub>8</sub>Hx1D inches.

**4-Position Desktop/Remote Antenna Switch**  
**MFJ-4714, \$79.95.** Like MFJ-4716, but switches between four antennas.

**MFJ-4714RC, \$39.95.** 4-position Remote Control for MFJ-4714, 4 antenna desktop/remote antenna switch.

**Cat-5 Cable for Antenna Switches**  
**MFJ-5262, \$6.95.** 7' CAT-5 cable with connectors.  
**MFJ-5265, \$23.95.** 25' CAT-5 cable/connectors.



**MFJ-4712**  
**\$79<sup>95</sup>**  
Ship Code B



## MFJ 2-Position Remote Antenna Switch

This MFJ 2-position *remote* antenna switch uses a *single* coaxial feedline to feed two antennas, DC power and control signals -- no power or control cable needed.

It's perfect for switching from HF to VHF -- no more unplugging coaxial lines from your antennas just to switch frequency -- a quick switch does it for you.

MFJ-4712 covers 1.8 MHz-150 MHz and handles 1500 Watts. Impedance is 50-75 Ohms.

The compact 4Wx2<sup>3</sup>/<sub>8</sub>Hx1<sup>1</sup>/<sub>2</sub>D inch *Outside*

*Switch Box* is fully enclosed and weather protected. It also has three quality *Teflon*<sup>®</sup> SO-239 connectors for transmitter, antenna one and antenna two.

It uses a Stainless steel 1<sup>1</sup>/<sub>2</sub>" tall bracket with a U-bolt for masts up to 1<sup>1</sup>/<sub>2</sub> in. O.D. *Inside remote control unit* is a tiny 2<sup>1</sup>/<sub>4</sub>Wx2<sup>1</sup>/<sub>2</sub>Hx1<sup>1</sup>/<sub>4</sub> inches.

The MFJ-4712 is protected by MFJ's famous one year *NoMatterWhat*<sup>™</sup> limited warranty.

## Automatically Switch your Rig between 2 Antennas

There are times when you want to use separate transmitting and receiving antennas but your transceiver has only one antenna port. For example, an efficient 75M vertical for transmitting and a separate low noise Beverage for receiving. With an MFJ-1707, simply connect your transceiver, transmit and receive antennas. As soon as you key your rig, the MFJ-1707 RF sensing circuitry instantly switches your rig from receiving to transmitting antenna. Your amplifier control output of your transceiver can also automatically switch antennas. Adjustable delay prevents transmit antenna from instantly switching to receive. Auxiliary contact closure to ground during receive. All modes. 200W SSB PEP. 4Wx2<sup>3</sup>/<sub>8</sub>Hx1<sup>1</sup>/<sub>2</sub>D". Use 12 VDC or 110 VAC with MFJ-1312D, \$15.95.



**MFJ-1707**  
**\$89<sup>95</sup>**  
Ship Code A

## Rig/Antenna RF Safety Switch



**MFJ-1703**  
**\$29<sup>95</sup>**  
Ship Code A

your expensive transceivers safe from transmitting into nothing! No more burning up your radio because you forgot to change your antenna switch! 1.8 to 30 MHz. Your transceiver is always hooked up to one of two antennas! Connect two rigs and two antennas and switch to different combinations. 300 watts PEP SSB, 150 watts CW. Handy mounting tabs. All metal, switches 50-75 Ohm unbalanced lines.

## MFJ RF Sense T/R Switch



**MFJ-1708**  
**\$79<sup>95</sup>**  
Ship Code A

**Automatic** T/R Switch senses transmitted RF and switches your antenna from receive to transmit using a relay. Shorts your receiver antenna input to ground to protect your receiver. Provides an auxiliary contact closure to ground during receive (opened in transmit) for muting speaker, an "On-Air" sign or other use. Instead of using RF sense to switch the antenna, a control line input lets your key/keyer or PTT line switch the antenna. Adjustable time delay circuit gives you delayed switching. All modes. 200 Watts SSB PEP. Measures 4Wx2<sup>3</sup>/<sub>8</sub>Hx1<sup>1</sup>/<sub>2</sub>D inches. 12 VDC or 110 VAC with MFJ-1312D, \$15.95.

## Desktop/Remote 6 & 4 position Antenna/Transceiver Switches



Place this MFJ-4726 Six-Position **\$159<sup>95</sup>** MFJ-4726  
Antenna/Transceiver Switch on your desk  
Ship Code B

or place it out-of-way under your desk or in another room and use a remote control. Select one of six antennas and one of six transceivers in any combination with just 2 *easy-to-use* rotary switches.

**Plug** in antenna tuner, SWR/Wattmeter or other into its common ports, so it is always connected to the antenna and radio selected.

All unused inputs are grounded. When rotary switches are in OFF position, all inputs are grounded or control is transferred to MFJ-



**4726RC, \$59.95,** remote control.

**Automatically** grounds all inputs when you turn off transceiver. **Lightning surge protector** protects transceivers and shunts surges to ground. Does not protect against a direct lightning hit.

**SO-239s.** 1500 Watts into 50-75 Ohm load 1-60 MHz. Useable to 150 MHz. Use CAT 5 cable for remote control, not included (Buy from MFJ, see below). Use 12 VDC or 110 VAC with MFJ-1312D, \$15.95. For indoors, not weather protected. 8Wx5Hx4<sup>1</sup>/<sub>4</sub>D".

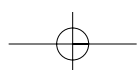
**MFJ-4726RC, \$59.95.** 6-position. Remote control for MFJ-4726. Use CAT 5 cable, not included.



**4-Position Desktop/Remote Ant./Xcvr Switch**  
**MFJ-4724, \$139.95.** Like MFJ-4726, but switches between four antennas/transceivers.

**MFJ-4724RC, \$59.95.** 4-position Remote Control for MFJ-4724. Tiny 2<sup>3</sup>/<sub>4</sub>Wx3<sup>3</sup>/<sub>8</sub>Hx1D inches.

**Cat-5 Cable for Antenna Switches**  
**MFJ-5262, \$6.95.** 7' CAT-5 cable with connectors.  
**MFJ-5265, \$23.95.** 25' CAT-5 cable/connectors.



# MFJ Dry Dummy Load with Precision SWR/Wattmeter

**World's** most versatile 1.5 kW dummy load has a built-in true peak reading SWR/Wattmeter that you can switch and use independently!

*You'll find tons of uses!*

Tune up your transceiver, linear amplifier or antenna tuner into a safe 50 Ohm dummy load at full power.

Then instantly switch to your antenna and monitor SWR, forward and reflected power.

Use for testing/tuning transmitters, transceivers, amplifiers, tuners, baluns, transformers, filters, matching networks, coax, stubs, transmission lines & antennas.

MFJ-267  
**\$159<sup>95</sup>**  
 Ship Code B



**Cross-Needle SWR/Wattmeter**  
 Extra-large three-inch lighted Cross-Needle meter reads SWR (1:1 to 8:1), forward and reflected power simultaneously.

Reads true peak PEP or average power on 300/3000 Watts forward and 60/600 Watts reflected power ranges 1.8-54 MHz.

High accuracy comes from a carefully designed directional coupler, an accurate active-peak reading circuit and a precision d'Arsonval meter movement.

RF tight perforated aluminum cabinet. 4½Wx3½Hx10½D inches. Uses 12 VDC or 120 VAC with MFJ-1312D, \$15.95.

**MFJ NoMatterWhat™ Warranty**  
 MFJ-267 is protected by MFJ's famous No Matter What™ one year limited warranty. MFJ will repair or replace your MFJ-267 dummy load no matter what for one full year.

handle 100 Watts for ten minutes or 1500 Watts for ten seconds. Comes with power derating curve.

## MFJ Dry "Handy" Loads . . . 3 GHz or 500 MHz

**3 GHz, 200W Dry Load**  
 The heart of these 50 Ohm dry dummy loads are the resistor inside.



MFJ-262BN  
**\$69<sup>95</sup>**  
 With N male DC to 3 GHz  
 Ship Code A

Made with copper flanges and beo ceramic for incredibly low thermal resistance and capacitance.  
 DC to 3 GHz on MFJ-262BN with an SWR of less than 1.2:1. DC to 1 GHz with SO-239.

Handles up to 200 Watts for 5 seconds and 35 Watts continuously. Black finned aluminum construction. 1¾Wx4¾Hx1½D inches.

**500 MHz, 100W Dry Load**  
 Connects directly to your rig or test equipment with a PL-259. Use with your MFJ-259B SWR Analyzer™ or MFJ-261N for MFJ-269.



MFJ-261  
**\$27<sup>95</sup>**  
 With PL-259 DC to 500 MHz  
 Ship Code A

No patch cable used, reduces SWR. Finned aluminum, air-cooled heatsink. Handles 100 Watts peak, 15 Watts average. 50 Ohms. DC to 500 MHz with less than 1.15:1 SWR. 1½ round by 3" long.

MFJ-261N, \$37.95 Like MFJ-261, but has N-male connector.

## MFJ wide-band 3GHz, 300 Watt Dry Dummy Load



MFJ-263  
**\$99<sup>95</sup>**  
 Ship Code B

MFJ-263 wideband dry dummy load uses a specially designed metal-film non-inductive terminating resistor which allows it to cover a very wide frequency range from DC to 3 GHz.

That also produces an incredibly low and flat SWR across the entire frequency spectrum.

MFJ-263 will handle a full 300 Watts for 10 seconds and it will handle 125 Watts continuously, making it an excellent dummy load for transceiver and other gear testing.

A high-quality Teflon® insulated low-loss N-type connector is used to insure the absolute minimum SWR possible.

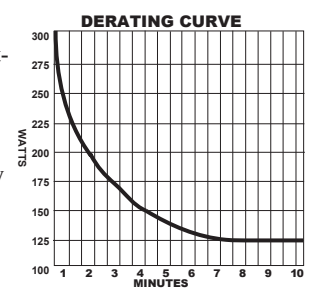
The MFJ-263 has a custom heavy-duty finned heatsink that spans the entire length of the cabinet and keeps operation safe and cool.

Strong, lightweight, all-aluminum construction is super-durable and will give years of continuous testing service.

A derating curve is permanently silk-screened into the bottom chassis for quick and easy reference. See below right.

Measures 10¾W x2¼Hx5¼D inches. Weighs just 3.5 pounds.

MFJ-263 is protected by MFJ's famous 1 year No Matter What™ limited warranty. We'll repair or replace (our option) your dummy for one full year from your purchase date.



## MFJ Analyzer Precision Calibration Loads



**New!**

Calibrate your analyzer with these MFJ Precision Calibration loads. MFJ-252s are non-inductive.

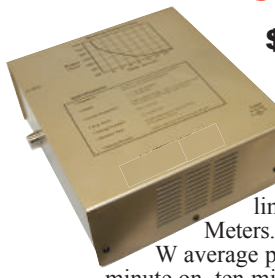
Useable up to 1 GHz. Each set includes a 50 Ohm, .1W (+/- 1%), open and short loads.

Available with N, UHF or BNC connectors. Select MFJ-252B for BNC connectors, MFJ-252N for type N connectors, or MFJ-252U for SO-239 connectors.

MFJ-252B/N/U, \$29<sup>95</sup>

## MFJ 2500W fan-cooled Dry Load

MFJ-265  
**\$219<sup>95</sup>**  
 Ship Code C  
 MFJ's 2500 Watt fan cooled load handles legal limit amps, DC- 6 Meters. Dissipates 2500 W average power for one minute on, ten minutes off, 300W continuous. SWR less <1.25 to 1 below 30 MHz, <1.4 from 30-60 MHz. Four 50 Ohm non-inductive resistors have an incredibly high energy density of 7000 joules per cubic inch per second with a voltage gradient of 10 kV per inch! Detailed power curve silk-screened on cabinet. 12 VDC or 110 VAC. 8¼Wx4Hx 9½D in. SO-239s. 5 pounds.



## MFJ Switchable RF Dummy Load

MFJ-251  
**\$149<sup>95</sup>**  
 Ship Code B  
 MFJ-251 gives you five dummy loads in one box! Select from 16.6, 25, 50, 100 or 150 Ohms with a front panel switch. MFJ-251 simulates high impedances and low impedances with an SWR of 3:1, 2:1 and 1:1 so you can test and calibrate your wattmeters and test SWR accuracy. At 50 Ohms it handles 300 Watts for 30 seconds with an SWR below 1.1:1 to 30 MHz. Covers Dc to 60 MHz. Has SO-239 connector. Compact 4½Wx 2¼H x6½D inches. Optional 12 VDC/110 VAC adaptor, MFJ-1312D, \$15.95.





# MFJ UHF/VHF/HF Dummy Loads

## MFJ VersaLoad™ kW Dummy Load MFJ-250X



VersaLoad™ kW dummy load lets you run 1KW CW or 2 KW PEP for 10 minutes.

Run 1/2 KW CW or 1 KW PEP for 20 minutes. Run continuous duty 200W CW or 400 W PEP. Derating curve. Quality 50 ohm non-inductive resistor.

MFJ-250X  
\$49<sup>95</sup>

Use transformer oil (not incl.). Low VSWR to 400 MHz. Under 1.2:1 to 30 MHz. 1.5:1 for 30-300 MHz. 2:1 for 300-400 MHz. SO-239, safety vent/cap. Carry handle. 7 1/2 H x 6 1/8 W.

MFJ-250, \$69.95. Includes transformer oil (no PCB). Ship Code D.

### Industrial Grade Transformer Oil

MFJ-21, \$29.95. 1 gal. industrial grade transformer oil, (no PCB). Ship Code C.

## Dry 1.5 kW UHF/VHF/HF Load Ham

radio's most versatile 50 ohm dummy load. Works with all radios 160 Meters to 650 MHz and from QRP to the full 1500 watt legal limit.



MFJ-264  
\$74<sup>95</sup>

SWR below 1.3 to 650 MHz and below 1.1 at 30 MHz. Handles 100W for 10 minutes, 1500W for 10 seconds.

Strong lightweight aluminum construction. Compact 3Wx3H x9D inches.

Has MFJ's famous No Matter What™ one year limited warranty.

MFJ-264N, \$84.95. Similar to MFJ-264 but with type "N" connector.

## Dry 300 Watt VHF/HF Dummy Load

Air cooled, non-inductive resistor is housed in a perforated metal housing.

Has SO-239 connector. Full load for 30 seconds. Silk-screened derating curve to 5 minutes.



MFJ-260C  
\$39<sup>95</sup>

Handles 300 Watts. SWR below 1.1:1 to 30 MHz, 1.5:1 from 30 to 650 MHz. A super compact 2 1/4 x 2 1/4 x 7 inches.

MFJ-260CN, \$49.95. Similar to MFJ-260C but with type "N" connector.

### Coax Patch Cables

MFJ-5803, \$6.95. 3-foot RG-58 coaxial line with PL-259 connectors.

MFJ-5806, \$9.95. 6-foot RG-58 coax.

MFJ-5809, \$11.95. 9-foot RG-58 coax.

MFJ-5812, \$12.95. 12' RG-58 coax.

Also available in RG-8X and RG-213.

## MFJ AC Digital Line Voltage Meters



MFJ-DM55-1U  
\$19<sup>95</sup>

These handy digital voltage meters let you monitor voltage on your AC outlets on a large 1.5Wx.75H inch cool blue LED backlight display. Voltage digits are a huge 3/4"! Each plugs directly into your wall outlet and consumes less than 1 Watt about every killowatt hour. Accuracy +/- 1.5%. Compact 2 1/8 W x 1 1/2 H x 1 1/2 D inches.



MFJ-DM55-1E  
\$19<sup>95</sup>

MFJ-DM55-1U measures AC 80 to 200 Volts. Has U.S. 2-prong 110V plug.

MFJ-DM55-1E measures AC 130 to 300V. Has Euro plug 220V.

MFJ-7780, \$9.95. Euro to NEMA 6-20P adaptor. MFJ-7782, \$9.95. Euro or US 2-prong to NEMA 6-15P.

## MFJ AC Line RFI Filter

Filters and reduces AC power line RFI, hash, noise, transients, surges generated by computers, motors, RF transmitters, static/lightning by 30 db and up to 60-80 dB with a good earth ground. Super fast, nano-second overvoltage protection.



MFJ-1164B  
\$79<sup>95</sup>

Provides inductive isolation, capacitive decoupling, RFI rejection, overvoltage protection of both common mode and differential signals. Rejects/shunts undesired signals to ground. Four 3-wire, 15 Amp, 120 VAC outlets spaced for large adaptors. 25A/3000W max. Fused, 5 1/2' cord, wing nut ground. Mount holes. 12Wx3 1/2 Hx2 D.

### Transceiver Surge Protector

MFJ-1163, \$69.95. Protects your expensive rig/equipment from damaging power surges. Capacitive decoupling and ultra-fast 120 VAC/25A/3000W MOVs protect. (4) 3-prong grounded AC outlets.

## MFJ A/C On/Off Switch Control



MFJ-1172  
\$139<sup>95</sup>

Turn ON or OFF your rig and accessories remotely with this MFJ remote AC switch controller. Operating your station remotely can be hazardous! Your radio could get stuck on transmit or computer lock-up. Turn off or just reset everything with this remote AC controller. Installation is easy. Plug in equipment to be controlled in the AC socket of the MFJ-1172 and the DC control line from a remote control device like MFJ Remote Shack™. Requires control voltage 4.5-12 VDC. Output is 110 VAC at 15 Amps. 64" cord and AC plug. 3Wx4Hx2 1/2 D in. AC input 110V.

MFJ-1174, \$159.95. Like MFJ-1172, but for 220 VAC input, output is 220V/15A. Has 6-15P plug.



## MFJ Ultrasonic Receiver with parabolic reflector pinpoints power line noise

HF and VHF operation can be affected by noise which makes it hard to hear weaker stations and adds to your fatigue.

MFJ-5008  
\$179<sup>95</sup>

Often, the noise is coming just outside your door, from power lines. Power companies are usually very willing to help out with noise issues, but not all companies have the necessary equipment or trained personnel to properly locate nearby noise sources.



MFJ-5008 aids you in locating the noises generated by corona discharge and arcing components. It's an acoustic receiver tuned to the ultrasonic range of 40 KHz -- lets you hear ultrasonic noises generated by arcing connections and corona discharge.

An 18-inch diameter plastic dish gives a narrow beamwidth to pin-point noise sources to less than 12 inches at 50 feet. A short focal point makes the overall front-to-back depth just seven inches. The handle is mounted close so the center of gravity reduces fatigue on the hand from the weight pulling down in front.

An ultrasonic transducer is mounted in a sturdy metal support--reduces dish bending/warping. Target holes built into the dish and aligned with the beam helps pinpoint the noise sources on the pole.

Receiving electronics are mounted on the handle for convenient operation. Use 9-Volt battery (not incl.). Receive noise generated by power lines from several hundred feet away. 3.5 mm jack for stereo/mono headphones. 20 1/2 W x 19 1/2 H x 7 D. Weighs 2.5 lbs.

MFJ-392B, \$24.95. MFJ's Communication Headphones are the perfect companion for your MFJ-5008.

Not only can you use MFJ-5008 to find power line noises, you can also listen to a wide range of nature! In ultrasonic range bats, birds, and insects can be heard.

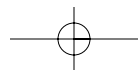


### MFJ SoundGUN™ Parabolic Audio Receiver

New! MFJ-5007, \$199.95. MFJ SoundGUN™ Professional Parabolic Audio Receiver, like MFJ-5008 but for audio and includes MFJ-392B. For professional listening and surveillance, field audio for sports broadcasting, eavesdropping, police and espionage, this technology has always been reserved for law enforcement and scientists until now. It may not be used to violate the privacy rights of others. Consult state laws regarding intended use.



Read Voltage 95-135 Volts with MFJ-850B MFJ-850B, \$24.95. Color coded scale lets you read voltage from 95-135 Volts, 2% accuracy. Built-in AC socket, so you don't lose the outlet. 2 1/4 W x 2 1/4 H x 1 1/2 D inches. It's perfect for the ham shack and motorhomes!



## Safeguard expensive gear from static electricity and lightning surges

### MFJ Lightning Surge Protectors handle 400 Watts PEP or 1500 Watts PEP

**MFJ**



**400Watts!**  
MFJ-270  
**\$19<sup>95</sup>**  
Ship Code A  
**Safeguard**  
your expensive equipment from static electricity and lightning induced surges on 50 Ohm coaxial line.  
MFJ's Guardian Angel™ Lightning Surge Protector has an Ultra-fast gas dis-

charge tube that safely shunts up to 5000 amps of peak impulse current harmlessly to an independent ground. SWR less than 1.1:1. Less than 0.1 dB loss. Use up to 1000 MHz. MFJ-270 handles 400 W PEP. MFJ-272 handles 1.5 kW PEP. MFJ-270 and MFJ-272 *do not* protect against a direct lightning hit.  
**MFJ-270, \$19.95.** SO-239 to SO-239.  
**MFJ-270MF, \$27.95.** SO-239 to PL-259.  
**MFJ-270N, \$27.95.** Low-loss N-connectors.  
**MFJ-97, \$7.95.** Replacement gas discharge

MFJ-272  
**\$29<sup>95</sup>**  
Ship Code A



**1.5kWatts**  
tube for MFJ-270.  
**MFJ-272, \$29.95.** SO-239-SO-239.  
**MFJ-272N, \$34.95.** N Connectors.  
**MFJ-272MF, \$34.95.** SO-239 to PL-259.  
**MFJ-97H, \$17.95.** Replacement Gas Discharge tube for MFJ-272.

## Reduce Harmonics, Avoid TVI with MFJ Filters

### Low Pass TVI Filter Handles Full Legal Power

MFJ-704  
**\$89<sup>95</sup>**  
Ship Code A



MFJ-704 suppresses TVI, RFI, telephone and other interference by reducing unwanted harmonics going to your antenna.

At the same time your HF signal passes on through with low loss so you can snag that rare and exciting DX!

If your harmonics are causing TVI problems, an MFJ-704 can keep your neighbors happy while you have fun with

ham radio!  
Nine Chebyshev poles, MFJ's exclusive *TeflonDielectric Technology™* capacitors, Hi-Q inductors, ground plane shielding and an RF tight cabinet give you excellent TVI and RFI protection.  
These exclusive *Teflon Dielectric Technology™* capacitors give you extremely low loss and eliminate voltage breakdown and capacitor heating -- even at full 1500 Watts with a 2:1 SWR load!  
**Handles** full legal power from 1.8-30 MHz. SWR below 1.3 to 30 MHz into 50 Ohms. Attenuates above 40 MHz.  
**Measures** a compact 3x3x9 inches. Handy mounting tabs.

### 200W Low Pass TVI Filter

MFJ-702B  
**\$34<sup>95</sup>**  
Ship Code A



**Be a good neighbor.**  
Plug this Low Pass TVI filter between your transmitter and antenna or tuner and reduce your transmitter harmonics by 50 dB! Harmonics could be the source of interference to your neighbor's TV, radio, VCR, telephone, etc. SWR is below 1.5 to 30 MHz into 50 Ohms. Perfect for barefoot transceivers -- handles 200 Watts with less than 0.5 dB insertion loss. Attenuation is 50 dB at 54 MHz. SO-239 connectors. 3x2x1.5 inches.



MFJ-705  
**\$139<sup>95</sup>**  
Ship Code B

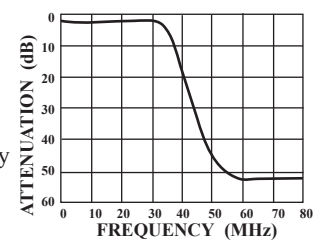
between Transmitter and Antenna or Tuner. Reduces TV interference (TVI) radiated by transmitters operating below 30 MHz. Suppresses harmonics appearing in the TV bands. Additional attenuation to TV IF frequencies above 40 MHz. Low

### MFJ 2500 Watts Low Pass TVI Filter

Suppress TV interference at the source with the MFJ-705 Low Pass Filter. Use

loss to 30 MHz. 9-pole inverse Chebyshev.  
**SPECIFICATIONS:**  
**Passband:** 0-30 MHz  
**Cutoff freq:** 35 MHz  
**Attenuation:** 52.25 MHz (Channel 2 Video), -60 dB, Worst case at 65 MHz, -60 dB  
**Power Capacity:** 2500 W Key Down - 50% Duty  
**Impedance:** 52 Ohms  
**Insertion Loss:** 0.25 dB @ 30 MHz.  
**Size:** 9½"Wx4¼"Hx2½"D inches.

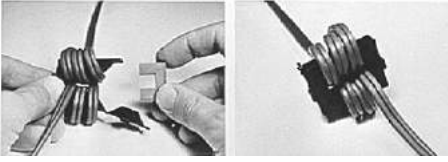
MFJ-705 Frequency Response



### MFJ RFI Free Choke Kit for RFI Suppression

MFJ-701 (Set of 4)  
**\$24<sup>95</sup>**  
Ship Code A

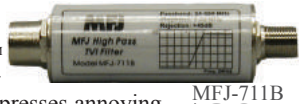
It's easy to eliminate common RFI problems. Simply wind the offending cable around MFJ's RFI suppressing toroids to get rid of RFI. Four square ferrite toroids are formulated espe-



cially for eliminating RFI from 0.5 to 200 MHz. Wind on all kinds of cable, computer ribbon, TV coax, power, telephone, etc.

### High Pass Filter for TV sets

MFJ-711B,  
**\$29.95.** MFJ's

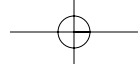


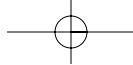
*ShieldBreaker™* high pass filter effectively suppresses annoying TVI! Wipe out TVI caused by 2-way, broadcast, commercial, amateur and CB radios operating below 30 MHz. Use between cable/antenna and TV/VCR. 75 ohm cable. Type F male/female connectors.

### Ferrite RFI Suppression Chokes

These RFI snap-on Chokes are selected for RFI suppression. Install on DC power line to keep ignition noise from your mobile rig and amplifier. Remove RF on cables and wires to your radio station. Isolate RFI on feedline from your station. Two-piece design, snap and lock securely around your cable. Install end to end along rigid cable or loop multiple turns with smaller soft cable. Select from four sizes, .25" ID to .75" ID.

| Model # - Price each | Model# - Price 4-Pk    | Hole Size                                     | Typical Cable Use |
|----------------------|------------------------|---|-------------------|
| MFJ-700A, \$2.75     | MFJ-700A4, \$10.95     | .275 inches diameter                          | RG58/59/6U/8X     |
| MFJ-700B, \$3.50     | MFJ-700B4, \$13.95     | .402 inches diameter                          | RG213/6X          |
| MFJ-700C, \$4.95     | MFJ-700C4, \$18.95     | .528 inches diameter                          | RG11/8U           |
| MFJ-700D, \$5.95     | MFJ-700D4, \$22.95     | .750 inches diameter                          | LMR600            |
| MFJ-700P9, \$32.95   | Combination Pack of 9; | consists of 4-A, 2-B, 2-C and 1-D RFI chokes. |                   |





## Pocket-size Frequency Counter 300 Hz - 2.8 GHz



MFJ-886B  
\$129<sup>95</sup>  
Ship Code A

MFJ-886B covers 300 Hz to 2.8 GHz with 1 Hz resolution and four selectable gate speeds. Super compact handheld unit measures just 2 3/8" W x 3 1/4" H x 1 1/8" D inches.

This truly pocket-sized MFJ-886B has a large easy-to-read 2W x 3/4" H 10-digit backlit LCD and a 11-segment RF Signal Strength Bargraph.

Low power consumption with internal lithium battery (800 mAh).

Has low battery indi-

cator. Run for about 12 hours on a single charge! Auto-sleep mode.

MFJ-886B includes a built-in lithium battery, 12 VDC, 1A power adaptor/charger for 110 VAC and a telescoping antenna with BNC connector.

MFJ-886B has a 50 Ohm amplifier for 1 MHz to 3 GHz operation and a 1M Ohm amplifier for 10 Hz to 50 MHz. Has 45 degree flip stand for easier viewing.

Has highly sensitive input with a time base at < 10 PPM.

Hold button locks the MFJ-886B display and will continually display the last frequency received. There is also an automatic hold mode for locking in on special frequencies.

### Pocket-size Function Generator



MFJ-5000  
\$99<sup>95</sup>  
Ship Code A

This unique unit is the only compact, battery-operated

function generator designed for travel or bench use. Based on an XR-2206 integrated circuit, it provides square, triangular, and sine waves contin-

uously from 1 Hz to well over 150 KHz in 3 ranges. 4H x 3W x 1D inches. Frequency range switch, external power jack, 5-way binding posts. Use 9V battery.

### Professional Function Generator

MFJ-5004  
\$149<sup>95</sup>  
Ship Code A



Gives precision sine, square and triangular wave forms from 1 Hz to 1 MHz in 6 decade ranges. Amplitude adjustable 0-12 volts peak-to-peak. DC offset is adjustable -6 to +6 VDC. Output is short circuit protected with output impedance of 400 Ohms. Sturdy black all metal cabinet. 110 VAC.

### 81 dB Step Attenuator



MFJ-762  
\$89<sup>95</sup>  
Ship Code A

This will be your most useful ham shack accessory! 50 ohms. Usable to 500 MHz. 250 milliwatt maximum input. BNC connectors. Shielded stages. Connect between receiver and antenna and use an S-meter as a precision calibrated field strength meter.

Prevent receiver blocking, cross-modulation. Determine gain and loss. Ideal for fox hunting. Evaluate linearity.

Measure input and output level differences. Isolate circuits.

Extend the range of your sensitive equipment. 6 1/2" W x 2 1/2" H x 1 1/2" D inches.

### 2-Meter FM Signal Analyzer



MFJ-224  
\$179<sup>95</sup>  
Ship Code A

MFJ's handheld Two Meter FM Signal Analyzer™ lets you measure signal strength with over 60 dB dynamic range and measure actual feedline loss in dB. Plug in any scope and your MFJ-224 becomes a service monitor! Lets you visually analyze modulation wave forms, audio distortion, noise and instantaneous peak deviation. Tune in any signal between 143.5 - 148.5 MHz. Built-in discriminator-meter function makes accurate tuning simple and easy. 4W x 2 1/2" D x 6 3/4" H". Use 9V battery.

### 1-50 MHz Precision Antenna Phase Meter



MFJ-222  
\$149<sup>95</sup>

Uses low power, high-speed dual comparator circuit to allow precision phase measurements 1-50 MHz. A circuit indicates if unknown phase lags or leads the reference

signal. Signals used for measurement can come from an antenna analyzer or any other generator that will supply at least 1 Volt peak output into the load. It has a built-in switchable 50 Ohm load (250 mW max) so the use of an external load and BNC TEE is not needed in most tests. MFJ-222 will read the frequency of the signal so generators with only a coarse or no frequency readout can even be used. Set-up is simple. Plug in the signal generator output to IN, connect the Reference OUT to the input of the network and the output of the network to UNKNOWN IN. Turn it on and read the phase shift and the frequency. A bright two line LCD display allows precision readout of the phase from -180 to +180 degrees without interpreting an analog meter or guessing at the phase polarity. With low power components, it will operate many hours on a single 9V battery or with optional AC adapter MFJ-1312D, \$15.95. Compact 4 1/4" W x 4 3/4" H x 2D inches.

MFJ

### MFJ Portable Signal Tracer-Injector

The MFJ Multi-purpose Portable

MFJ-5012  
\$99<sup>95</sup>  
Ship Code A

Signal Tracer-Injector quickly finds defective stages in all kinds of signal amplifiers, radio receivers and transmitters. Includes home theaters, hi-fi amplifiers, public address systems, guitar amplifiers, AM/FM/ TV transceivers, phones, scanners, shortwave, etc.

Use to find opens and shorts in cables and wires, identify and locate individual wires in multi-conductor cables.

Has an AM detector and variable gain audio amplifier. 3W x 4H x 1D inches.



### Safely tune your amp with this MFJ AmplifierSaver™ Interface



MFJ-214  
\$69<sup>95</sup>  
Ship Code A

This lets you safely tune up your kilowatt linear amplifier at full peak power for best linearity. Keeps average power to a low, safe level to prevent overheating power supply stress.

Relieves temperature related stress on amplifiers, tuners, and dummy loads too.

It also can be used as a valuable diagnostic tool for tests of QSK systems, wattmeters, and more. Plugs into rig's CW key jack (for convenience you can use a "Y" connector).

Simply press the Pulse Tune button and

tune your amplifier normally for maximum power output. Use 9V battery, not included.

### MFJ Deluxe AmplifierSaver™



MFJ-216  
\$79<sup>95</sup>  
Ship Code A

The MFJ-216 Deluxe AmplifierSaver™ includes front panel adjustments of pulse rate and duty cycle.

Allows for easy performance testing of wattmeters, QSK systems and other electronic equipment.

Measures 3 1/2" W x 1 1/2" H x 4D inches.

### Tune-Up Matchmaker™



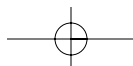
MFJ-212  
\$99<sup>95</sup>  
Ship Code A

Adjust your antenna tuner for 1:1 SWR without transmitting!

Avoids overheating/arcing caused by high SWR and long tune-ups.

Your MatchMaker™ inserts between transceiver and antenna tuner. Simply tune your transceiver to the desired frequency, then power-up the MatchMaker™. Then adjust your tuner for a null in the pulsing "white noise" in your receiver.

Automatic T/R switch bypasses MFJ-212 to prevent damage. Handles 300 Watts. Works with all radios, 160 through 6 meters. Measures a compact 3 1/2" x 1 1/4" x 4 inches. Use MFJ-1312D, \$15.95.



**MFJ**

# MFJ High Current DC Multi-Outlet Strips

Choose super heavy-duty 5-way binding posts AND/OR Anderson PowerPole® connectors

Provide multiple high current DC outlets for transceivers and accessories from your transceiver's main DC power supply – keeps you neat, organized and safe. Prevents fire hazards. Keeps wires from tangling up and shorting out. Outlets are fused/switched/RF bypassed.

## MFJ DC Multi-Outlets with versatile 5-way binding posts

MFJ-1118  
**\$84.95**  
Ship Code A



**MFJ-1118, \$84.95.** Lets you power two HF and/or VHF rigs and six or more accessories from your transceiver's main 12 VDC supply. Two pairs of super heavy duty 35 amp 5-way binding posts connect your transceivers. Each pair is fused and RF bypassed. Handles 35 Amps total. Six pairs of heavy duty, RF bypassed 5-way binding posts let you power your accessories. They handle 15 Amps total, are protected by a master fuse and have an ON/OFF switch with "ON" LED

light. Built-in 0-25 VDC voltmeter. Six feet super heavy duty eight gauge color-coded cable with ring tongue terminals. Binding posts are spaced for standard dual banana plugs. Heavy duty aluminum construction. 12 1/2"x2 3/4"x2 1/2" inches.

MFJ-1116  
**\$59.95**  
Ship Code A



**MFJ-1117, \$64.95.** For powering four HF/VHF radios (two at 35 Amps each and two at 35 Amps combined) simultaneously. Tiny 8x2x3 inches.

MFJ-1112  
**\$44.95**  
Ship Code A



**MFJ-1116, \$59.95.** Similar to MFJ-1118. No 35 amp posts. Has "ON" LED and 0-25 VDC voltmeter. 15 amps total.

MFJ-1117  
**\$64.95**  
Ship Code A



**MFJ-1112, \$44.95.** Similar to MFJ-1116. No on/off switch, LED, meter, fuse.

## MFJ DC Multi-Outlets with Anderson PowerPole® connectors

Anderson PowerPole® is a registered trademark of Anderson Power Products.

Genderless, polarized and color coded connectors conform to ARES & RACES emergency 12V connector standard

Each Anderson PowerPole® outlet can carry up to 40 amps. You can fuse each outlet as needed to protect your accessories or transceiver. The main fuse is 40 amps.

The standard color coded fuses simply plug in from outside. They are widely available ATC/ATO automobile fuses and can be used for 6, 12, 24 VDC systems.

The heavy duty DC input cable is built-in – you don't have to pay extra just to use it! It's a high-current carrying capacity eight gauge, flexible, stranded, six foot (can be shorten) cable with 5/16 ring terminals. It's color coded Red and Black.

Extra Anderson PowerPole® connectors, contacts and fuses are included at no extra cost, unlike lesser competitive products.

A massive 0.062 inch thick double sided plated through PC board with wide traces is used. The current path has an equivalent current carrying capacity of an enormous 4 ounce trace.

RF-tight aluminum cabinet has mounting ears and ground post with wing nut.

## All PowerPoles®



**MFJ-1128, \$104.95.** 12 outlets. Factory installed fuses: three 1A, four 5A, four 10A, one 25A, one 40A. Built-in 0-25 VDC Voltmeter. ON/OFF switch controls outlet 4 through 12, handles 20 Amps total. Outlet 1, 2 and 3 are unswitched, handle 40 amps total. Includes 12 pair of Anderson PowerPole® 24 35A contacts, 10 fuses (2 each: 1,5,10,25,40A). 12Wx1 1/4"Hx2 3/4"D inches.

## PowerPoles® AND 5-Way Binding Posts



**MFJ-1129, \$114.95.** Get the best of both connectors! 10 outlets. Installed fuses: two 1A, three 5A, three 10A, two 25A, one 40A. Outlets 1, 2, 4-8 are Anderson PowerPole®. Outlet 3 is a 35A high current binding post; outlet 9, 10 are 15A binding posts. Built-in 0-25 VDC Voltmeter. ON/OFF switch for outlets 4-10, 20 amps total. Outlets 1, 2, 3 unswitched, handle 40 amps total. Includes 7 pairs of PowerPole® 14 35A contacts, 10 fuses (2 ea, 1,5,10,25,40). 12 1/2"Wx1 1/4"Hx2 3/4"D in.

**MFJ-1126, \$84.95.** 8 outlets. Factory installed fuses: two 1A, three 5A, two 10A, one 25A, one 40A. Includes 6 pair of Anderson PowerPole® 12 35A contacts and 5 fuses: (1 ea. 1,5,10,25,40). 9Wx1 1/4"Hx2 3/4" inches.

**MFJ-1124, \$64.95.** 6 outlets. Installed fuses: one 1A, one 5A, two 10A, two 25A, one 40A. Outlets 1-4 are PowerPole®. Outlets 5, 6 are 35A high current binding posts. Includes 4 pair PowerPole® 8 35A contacts, 5 fuses (1ea, 1,5,10,25,10) 8Wx1 1/4"Hx2 3/4"D inches.



**MFJ-1124, \$64.95.** 6 outlets. Installed fuses: one 1A, one 5A, two 10A, two 25A, one 40A. Outlets 1-4 are PowerPole®. Outlets 5, 6 are 35A high current binding posts. Includes 4 pair PowerPole® 8 35A contacts, 5 fuses (1ea, 1,5,10,25,10) 8Wx1 1/4"Hx2 3/4"D inches.

**MFJ-1126, \$84.95.** 8 outlets. Factory installed fuses: two 1A, three 5A, two 10A, one 25A, one 40A. Includes 6 pair of Anderson PowerPole® 12 35A contacts and 5 fuses: (1 ea. 1,5,10,25,40). 9Wx1 1/4"Hx2 3/4" inches.

**Anderson PowerPole® with 35A contacts**  
MFJ-11C06, \$6.95, 6 pairs.  
MFJ-11C12, \$13.95, 12 pairs.  
MFJ-11C25, \$25.95, 25 pairs.  
MFJ-11C100, \$99.95, 100 prs.  
MFJ-7602, \$16.95. Tool for crimping Power-Poles®.

## MFJ 6-Way Desk-Top DC Power Distribution Unit

Convenient planar design optimizes DC distribution on your desk or workbench



MFJ-1106 MFJ-1106  
**\$34.95**  
Ship Code A

is an inexpensive, compact, and low profile DC distribution platform designed for your operating desk. Contains seven Anderson Power Pole™ connectors all connected in parallel, permitting one DC input to be shared by six DC outputs. Includes seven sets of mating connectors for your cables. Any connector may be used as an input or output, and the total current carrying capability is 30-amps. 2 3/4"Wx1Hx3 3/4"D inches, not including PowerPoles™ sticking out on 3 sides.

## MFJ DC Line RFI Filtered Outlet

MFJ-1142 is a compact, filtered DC outlet. Connects between rig and DC power supply to reduce RFI, hash, noise transients, motor noises, alternators or fuel pump whine, power windows, other motors and RF transmitters. For 12V or 24V DC power source. Heavy-duty 5-way binding posts and Anderson PowerPoles® for input and output. 3Wx2 3/4"Hx4 3/4"D".



**MFJ-1142, \$59.95.** Ship Code A

## New! Four Connector PowerPole™ Splitter

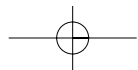
Gives one input and three outputs. Handles total 30 Amps. Input (30A) and each output is fused (25, 10, 5A) and has open fuse indicator. 2 3/4"Wx3 3/4"Hx1 1/2"D inches.

MFJ-1104  
**\$29.95**  
Ship Code A



**Banana Plugs for binding posts**  
A. MFJ-7713, \$5.95. 1 red, 1 black high current banana plug. Solderless, thumb Screw. Fits 10 to 12 gauge wire.  
B. MFJ-7709, \$6.95. High current dual banana plug, Black/Red polarity rings. Solderless, thumb screw. .75" standard spacing -- fit MFJ outlets and others with 10-12 gauge wire.  
C. MFJ-7700P, \$6.95. Six red and six black solderless banana plugs.  
MFJ-11F20, \$9.95. 10 ATO Fuse pack. 2 each: 1, 5, 10, 25, 40 amp.





# MFJ-4416C Super Battery Booster

Keeps your transceiver operating at full efficiency and performance by eliminating low or marginal voltages in the mobile environment . . .

MFJ



MFJ-4416C  
**\$179<sup>95</sup>**  
Ship Code A

voltages as low as 9V up to desired 13.8 volts at up to 30A peak with a typical efficiency of close to 90%.

MFJ-4416C includes Anderson PowerPole™ connectors and high-current 5-way binding posts for both the DC input and regulated output. An internal 30-amp input fuse protects the unit from excess output current demands.

There are also selectable limits on the minimum voltage that the unit will accept: 9-volts, 10-volts (default), and 11-volts. This protects you from over-discharging a battery and possibly damaging it. Also includes output over-voltage crow-bar protection should regulation be lost.

The external boost enable Input allows remote enabling of the MFJ-4416C. You can either ground a line or connect the line to 4-13 Volts. You can also use an amp key line or ignition source to enable.

The second efficiency enhancement feature is a user-adjustable output voltage control which lets you set the output voltage anywhere between 12- and 13.8-volts.

When setting the output at 12-volts, input voltages greater than 12V will pass through, but the efficiency of the regulator is higher. And lower input voltage means your transceiver will run cooler!

Typically save over 30 watts in heat dissipation during transmit, and even 3-4 watts during receive. So it can actually be good to

Today's compact 100-watt HF rigs are designed to operate from about 12-16 volts, with output signal distortion, output power problems, and transceiver reset often occurring when voltage drops below 12 volts.

In the mobile environment, low voltage is caused in two ways:

**First** - even low resistance DC wiring can result in a noticeable voltage drop. For a 100-watt transceiver with a 20-amp typical current requirement, just 1/10th of an ohm resistance in your DC cable and connectors results in a 2-volt drop!

**And second** - when you turn your car off, battery voltage drops from around 13.8 volts to close to 12V after a short period of time. Couple this with any voltage drop in the cables, you suddenly have a problem.

MFJ's Super Battery Booster eliminates low voltage problems by boosting input

let the voltage sag to 12V, then let MFJ-4416B protect from lower voltages. Just 7 3/4"Wx4Hx2 1/8"D" and lightweight at 1.3 lbs.

## Battery Booster Remote Control



MFJ-4416RC  
**\$79<sup>95</sup>**  
Ship Code A

Get full remote control capability of your MFJ-

4416C Super Battery Booster! Plus MFJ-4416BRC allows you to monitor battery voltage, battery booster output voltage. You can place the battery booster near your battery or other convenient location.

MFJ-4416RC lets you turn booster and has a low battery alert on/off. Front panel also features *boosting* and *low battery* LEDs. Four mounting holes make it easy to install. Just plug in Cat-5 cable to connect to battery booster. 5Wx2Dx3H inches.

## MFJ-4403 Transceiver Voltage Conditioner



MFJ-4403  
**\$119<sup>95</sup>**  
Ship Code A

### Transceiver Voltage Conditioner

provides reverse, over-voltage, voltage transient and short circuit protections.

MFJ-4403 gives superb noise and ripple filtering and power supply buffering for your base, portable or mobile transceiver.

If you accidentally reverse your voltage connection, the MFJ-4403 protects your transceiver against instant destruction and alerts you with a bright warning LED. Once DC polarity is corrected, MFJ-4403 recovers and operates normally.

Heavy-duty transient suppressor handles

peak currents up to 200 Amps -- it safely protects your transceiver from vehicle and poorly regulated power supply start-up voltage spikes.

Four Farads of ultra high-value capacitors filters off virtually all power supply noise and ripple, and provides power supply buffering so even underrated and marginal power supplies will run your HF transceiver to its full capacity.

For temporary mobile operation -- rental car, weekend trips, vacations, etc. Run your transceiver a full 100 Watts SSB from your 10-15 Amp cigarette lighter socket.

Standard Anderson Powerpole™ connectors are used for the DC input and output. Compact 4Wx3Hx2D inches.

## MFJ Mobile Transceiver Protector



MFJ-4402  
**\$79<sup>95</sup>**  
Ship Code A

MFJ-4402 protects your mobile rig from many

unseen operating problems found in vehicles today. A built-in surge protection diode reduces the chance a high voltage spike will damage your rig due to an alternator failure or jumping off from other vehicles, and it has reverse polarity protection.

Sagging voltages on your vehicle start-up can cause your radio to not power up correctly, to lose memory channels and possibly corrupting your service and set-up menus in your transceiver. When

your vehicle is shut off there are still many circuits that have power on them, so issues like distortion, frequency shifting with modulation or no vehicle start-up happen.

MFJ-4402 will cut your rig off if the voltage gets too low for proper vehicle operation. A delay timer, which is controlled off of the ignition sense line insures that your rig doesn't turn on until the vehicle starts up and normal voltage is reached.

MFJ-4402 connects to your rig with Anderson PowerPoles™ for high-current lines and a bayonet lug to the ignition sense line. A 30A (maximum) fuse protects for over-current or reverse voltages.

Compact 2 7/8"Wx4Hx1 1/2 inches that fits nicely into your vehicle installation.

## MFJ Mobile Digital DC Voltage Monitors

Is your car battery giving proper voltages to power your mobile rig? **B**



Low voltages can distort your signal and cause your expensive rig to reset or even shut down. MFJ's new voltage monitors show car battery voltage at all times. Three 3/8" tall bright red LEDs are easily seen day or night. Plug into a cigarette lighter and you're ready to monitor! Use 12V or 24V batteries, 8-30 VDC, accuracy +/- 1.2 VDC. Built-in fuse.

**A. MFJ-4431, \$11.95.** Mounted display, adhesive, plug with 2 foot wire, module is a compact 2 3/8"Wx1 3/8"Hx5/8"D".

**B. MFJ-4432, \$11.95.** All-in-one plug/module, 1 1/2"Wx1Hx2 3/4"D".

**MFJ-4434, \$14.95.** 12VDC Socket Adaptor (right). Cigarette Lighter Socket to red/black binding posts. Fused. 1.5Wx.75Hx4D".

## 4.5-30 VDC/30A Digital Volt/Amp Panel Meter with built-in Current Shunt



MFJ-4422  
**\$34<sup>95</sup>**  
Ship Code A

Connect in-line to monitor voltage and current of your

mobile radio or accessories. Displays voltage and current simultaneously with a .01 to .1V resolution. Dual .28" red/blue LED digits. Built-in current shunt, input/output with Anderson PowerPoles™. Handles up to 30A. Reverse polarity protection. 3Wx2Hx1D".

**MFJ-4421, \$9.95.** Snap-in Volt Panel Meter, 0-30 VDC range. Has large .56" digits. 1.9Wx1.1Hx.87D.

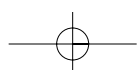
## High Precision Wattmeter/Power Analyzer



MFJ-4424  
**\$34<sup>95</sup>**  
Ship Code A

Displays Amps, Volts and Watts continuously from 4.8-60V. Measure current, peak current, power and peak power. PowerPoles™, backlit LCD display. 3.25Wx1.75H".

Displays Amps, Volts and Watts continuously from 4.8-60V. Measure current, peak current, power and peak power. PowerPoles™, backlit LCD display. 3.25Wx1.75H".





# MightyLite™ 30A Meter Switching Power Supply

## Super-Compact 5Wx2½Hx6D” with meter, adjustable voltage



MFJ-4230MV has a *selectable* input voltage: choose 120 or 240 VAC @47-63 Hz.

A simple front-panel push-button switch lets you choose either Ammeter or Voltmeter - allows you to select Amps or Volts as you wish to read them.

MFJ-4230MV has an excellent 75% efficiency and extra low ripple and noise, <100 mV. Whisper-quiet fan cools by convection and *forced air* cooling.

Normal air-flow around the power supply is continuous and a heat sensor increases the fan speed when the temperature rises above 70 degrees celsius.

It features over-voltage and over-current protection systems and has a quiet internal cooling fan with “fan on” LED.



DC output is five way binding posts on the back of the MFJ-4230MV so you can power your dedicated HF, VHF or UHF transceiver with ease.

**MFJ-4230MVP, \$99.95.** Like MFJ-4230MV, but adds pair of *PowerPoles™* on back of the unit. Binding posts on front.

**MFJ-4230MPF, \$119.95. *New!***  
Like MFJ-4230MVP but *PowerPoles®* are installed on the front panel.



Back of MFJ-4230MV

Has a meter and adjustable voltage. **Just 5Wx2½H x6D”**, it weighs only 3 lbs. -- the perfect *pack-n-go* power supply for field day, DXpeditions, camping, hiking or for your next business trip or vacation to some far away place.

MFJ-4230MV gives 25 Amps continuously or 30 Amps surge at 13.8 VDC. The voltage is front-panel adjustable 4 to 16 V.

MFJ-4230MV **\$89.95**  
Ship Code B

The world's most compact switching power supply is incredible!

MFJ-4230MVP **\$99.95**  
with *PowerPoles®*  
Ship Code B

**MFJ-4230DMP, \$139.95. *New!***



Like MFJ-4230MVP but has digital LCD display. Shows Amps and Voltage simultaneously on a backlit screen. Power Poles® on back.

## MightyLite™ 28 Amp Switching Power Supply



MFJ-4128 can power your HF, VHF, or UHF mobile or base transceiver with an output of 28 Amps maximum and 25 Amps continuously at 13.8 VDC.

This basic power supply has all of the output connectors you will ever need!

MFJ-4128 has five way binding posts for high current rigs and Ship Code B quick connectors for low current accessories. It also has a low 7 amperage cigarette lighter plug, perfect for powering small accessories.

It is super lightweight (only 4 lbs.) and super-compact 7Wx2½Hx7½D inches.

It features over-voltage and over-current protection systems and has a quiet internal cooling fan with “fan on” LED.

MFJ-4128 features a selectable AC input voltage from 85 to 135 VAC or from 170-260 VAC.

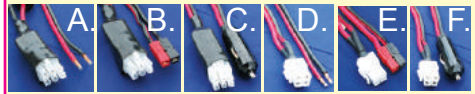
## MFJ Portable Variable Power Supply

This MFJ power supply is portable enough to fit in any toolbox 3Wx4Hx1D”. It's so light you can carry it anywhere. Provides fixed 5 VDC output along with a variable 1.5-12 VDC output. Total output is 500 mA. Output terminals and ground are convenient 5-way binding posts. Easy output voltage setting. Input 110 VAC.



MFJ-4105 **\$99.95**  
Ship Code A

### HF Power Cords



- A. MFJ-5535, \$14.95.** MFJ-5535 replaces your HF radio power cord at a fraction of the original cost. Two *super-flex*, 12 gauge, multi-strand, soft wires 8 feet in length. It has two in-line fuses/holders. Keyed plug prevents reverse polarity. For 6-pin type Yaesu, Icom, Kenwood, and other compatibles.
- B. MFJ-5535M, \$19.95.** Same as MFJ-5535 but with *Anderson PowerPoles®*.
- C. MFJ-5535C, \$19.95.** Same as MFJ-5535 HF power cord but has cigarette lighter plug. No fuse/holder.
- D. MFJ-5538, \$19.95.** Heavy duty replacement power cable for IC-7000, Kenwood TS-480, and other compatibles. Keyed plug prevents reverse polarity. Has 4-pin connector with 9 foot, 12 gauge, red and black flexible cord, and inline fuses/holders are also included.
- E. MFJ-5538M, \$24.95.** Same as MFJ-5538 but with *Anderson PowerPoles™*.
- F. MFJ-5538C, \$19.95.** Same as MFJ-5538 but with Cigarette lighter plug.

### VHF/UHF Power Cords



- A. MFJ-5512, \$12.95.** Two *super-flex*, 14 ga., 15' multi-strand, soft wires. *In-line* fuse/holder. T-connector. Yaesu, Icom, Kenwood, Alinco.
- B. MFJ-5512M, \$17.95.** Same as MFJ-5512 but with *Anderson PowerPoles™*.
- C. MFJ-5515C, \$14.95.** VHF/UHF power cable. Cigarette lighter for car, T-connector for rig. Built-in 20A fuse, 3 feet.
- D. MFJ-5515M, \$19.95.** Lighter plug & *PowerPoles™*. Auto DC output. 20A fused, 2 flex 12 ga. multi-strand, soft wires, 3 ft.

### DC Accessory Cables

- 1. MFJ-5510C, \$9.95.** Lighter plug w/2.1 mm coaxial. Power 12VDC acc., 3A fused, 3'.
- 2. MFJ-5510M, \$14.95.** Lighter plug to *Anderson Power Poles™*, 3A fused, 3 feet.
- 3. MFJ-5511M, \$14.95** like above, 30A, 5'
- 4. MFJ-5513M, \$4.95.** 2.1 mm, and *Anderson PowerPoles™*, DC output, 12VDC.
- 5. MFJ-5513, \$1.95.** 3 foot, 2.1 mm pig-tail cable to power most popular MFJ keyers, tuners, analyzers, and accessories.

### PowerPole® Adaptor Cables



- MFJ *PowerPole®* cables are super-flex, 12 ga. multi-strand soft red/black zip cord.
- A. MFJ-5514M, \$12.95.** #10 ring lugs to *PowerPoles®* connect to power supply binding posts. No shorting out. 35 A, 3 ft.
  - B. MFJ-5541M, \$14.95.** Red/black banana plugs to *PowerPoles®* adaptor, 15A, 3 feet.
  - C. MFJ-5542M, \$15.95.** Dual binding post plug to *PowerPole®* adaptor. Fits standard 11/16” binding post spacing. 30A, 3 feet.
  - D. MFJ-5544M, \$14.95.** *PowerPole* to *PowerPole®* extension cable, 35A, 3 feet.
  - E. MFJ-5543M, \$8.95.** *Powerpole®* patch cable with pre-tinned wire ends. 35A, 3 feet.
- Anderson PowerPoles® with 35A contacts**
- MFJ-11C06, \$6.95, 6 pairs.
  - MFJ-11C12, \$13.95, 12 pairs.
  - MFJ-11C25, \$25.95, 25 pairs.
  - MFJ-11C100, \$99.95, 100 prs.
  - MFJ-7602, \$16.95. Tool for crimping *Power-Poles®*.



# MFJ Switching Power Supplies

**Power your HF transceiver, 2-Meter/440 MHz mobile/base & accessories with these 25 or 45 Amp MFJ MightyLite™ Switching Power Supplies! No RF hash, Super lightweight, Volt/Amp Meters . . .**

MFJ's new adjustable voltage switching power supplies do it all! Power HF/2M/440 MHz rigs and accessories. No more hauling around bulky supplies that cause a hernia.

MFJ's 25 Amp MightyLite™ weighs just 3.7 lbs. -- 5 times lighter than an equivalent conventional power supply. Measures a super compact 5 1/4"Wx4 1/2"Hx6"D". MFJ's 45 Amp is even more dramatic -- 8 times lighter, weighs just 5.5 lbs! Just 7 1/2"Wx4 3/4"Hx9"D".

**No RF hash!**

These babies are clean . . . Your buddies won't hear any RF hash on your signal! None in your receiver either!

Some competing switching power supplies generate objectionable RF hash in your transmitted and received signal.

These super clean MFJ MightyLites™ meet all FCC Class B regulations.

**Low Ripple . . . Highly Regulated**

Less than 35 mV peak-to-peak ripple under 25 or 45 amp full load. Load regulation is better than 1.5% under full load.

**Fully Protected**

You won't burn up our power supplies!

## Super Compact MightyLite™ 25 Amp Switching Power Supply

The smallest and lightest power supply in ham radio! Tiny 5 3/4"Wx3Hx5 3/4"D" fits anywhere . . .

MFJ-4125, similar to the popular MFJ-4225MV but is smaller and doesn't have meters or cigarette lighter socket.

Has 5-way binding posts for high current radio connects and a pair of speaker type terminals for low current accessories.

Super protection modes include Over Voltage and Over Current. Whisper quiet internal cooling fan generates tremendous air flow to help keep components cool.

### Ultra-Compact 0-24 VDC Switching Power Supply



MFJ-4218MV  
**\$99<sup>95</sup>**  
0-24 VDC  
Ship Code A

MFJ-4218MV has adjustable output from 0 to 24 VDC. You can power more than your HF or VHF radio.

Adjustable low output allows you to run low power accessories -- 1.5V, 3V, 5V, 9V or any voltage in between, 0-24 VDC.

24 VDC output setting lets you power your marine radio and accessories. Voltage adjustment control has a detent to set voltage at 13.8 VDC.

Large backlighted dual meters continue monitoring output voltage and current.

MFJ's Exclusive HashSQUASH™ Filtering System makes MFJ switching power supplies the quietest in the industry.

Has a pair of 5-Way binding posts for output connection. Output protection includes short, overload and over-temperature. Has load fault indicator with auto reset after each fault detected.

Rated output current is 18A at 13.8 VDC or 9A at 24 VDC. Easy for traveling, just 6Wx2 1/4"Hx6 3/4"D inches. Weighs just 2.2 lbs. 110 VAC.

**NO RF HASH!**



MFJ-4225MV  
25 Amp, LED lighted  
**\$99<sup>95</sup>**  
Ship Code B  
MFJ-4245MV  
45 Amp, LED lighted  
**\$149<sup>95</sup>**  
Ship Code C

They are fully protected with Over Voltage and Over Current protection circuits.

**Worldwide Versatility**

MFJ MightyLites™ can be used anywhere in the world! They have switchable AC input voltage and work from 85 to 135 VAC or 170 to 260 VAC. Replaceable fuse.

**MightyLites™ . . . Mighty Features**

MFJ MightyLites™ feature a front-panel voltage control. It lets you vary the output voltage from 9 to 15 Volts DC and gives you a highly regulated voltage output.

Easy access front-panel with 5-way binding posts for heavy duty use and cigarette lighter socket for accessories. MFJ-4245MV has 2

**NO RF HASH!**



Now with LED lights!

MFJ's Exclusive HashFILTER™ Filtering System eliminates RF hash that plagues other manufacturer's switching power supplies.

sets quick-connects on rear for accessories.

Large 3 inch dual meters are illuminated to make it easy to monitor load voltage and current. Whisper quiet internal fan cools your power supply for long life.

About the MFJ-4225MV, QST (January 2000) said, "its external control for varying the output voltage is very handy for test bench applications," and noted, "overall, noise generated by this supply is very low".

MFJ-4125  
**\$84<sup>95</sup>**  
Ship Code B  
**NO RF HASH!**



MFJ-4125P  
with 2-pair Anderson  
PowerPole® connectors  
**\$94<sup>95</sup>**  
Ship Code B

MFJ-4125 has switchable AC input voltage. 110 VAC at 47-62 Hz and 220 VAC at 47-63 Hz.

Super regulation. AC input versatility allows 85-135 VAC or 170-260 VAC.

Weights 3.5 lbs. Measures an unbelievable 5 1/4"Wx2 1/2"Hx5 3/4"D" -- it's the smallest and lightest power supply in ham radio!

MFJ-4125P is similar to MFJ-4125. Adds 2-pair of Anderson PowerPole™ connections.

### Ultra-Compact 15 Amp Switching Power Supply



MFJ-4115  
**\$59<sup>95</sup>**  
Ship Code A

MFJ-4115 is super-compact, perfect for traveling on vacations, camping or business trips -- weighs just 1 1/2 lbs and is a tiny 3 3/4"Wx2 1/4"Hx7 3/4"D inches.

This tiny supply will easily fit in your briefcase or suitcase and power most VHF/UHF or QRP radios. This supply and your rig will add fun to your boring hotel room!

MFJ's Exclusive HashSQUASH™ Filtering System eliminates RF hash that plagues other manufacturer's switching power supplies.

MFJ-4115 has over-voltage and over-current protection systems and works with AC input from 90 to 130 Volts.

Output is 13.8 VDC, 17 Amps surge and 15 Amps continuous.

It features one set of 5-way binding post connections and transmit and power LEDs.

MFJ-4115 is super clean, has a quiet fan and super regulation. Has load fault indicator and automatic shut-down.

### MightyLite™ 15 Amp Switching Power Supply



MFJ-4215MV  
**\$69<sup>95</sup>**  
Ship Code A

MFJ-4215MV can power your VHF/UHF mobile radio with 13 Amps continuous and 15 Amps surge. Has variable voltage control from 4.0 to 16 Volts with 1% voltage regulation. It has less than 9 mV peak-to-peak ripple at the rated load.

MFJ's Exclusive HashSQUASH™ Filtering System eliminates RF hash that plagues other manufacturer's supplies.

Easy-access front panel connectors: 5-way binding posts, cigarette lighter socket and Voltage Adjustment control. Backlighted Voltage and Ampere meters. Power on and "fault" LED indicators.

Switchable AC input: 90-125 or 200-240 selectable. Has external replaceable fuse. MFJ-4215MV is fully protected with Short-circuit, overload and over-temperature protection systems. It also has an auto-restart feature after a fault. Whisper quiet cooling fan. Weighs just 2.9 pounds, measures 5Wx3 3/4"Hx7"D inches.

EM

# MFJ 75 Amp Switching Power Supply

Power your HF Mobile Amplifier or your HF and VHF/UHF transceivers from one power supply! Features MFJ's exclusive HashSQUELCH™ RF Filtering System -- eliminates RF hash that plagues other manufacturer's switching power supplies . . . lightweight (just 10.5 lbs) . . .



MFJ-4275MV **\$259<sup>95</sup>** MFJ's heavy duty 75 Amp switching power supply is excellent for powering your HF mobile amplifier or your HF and VHF/UHF rigs and accessories.

It's great for Ameritron's ALS-500M Solid State Mobile HF Amplifier and others with a power requirement of up to 75 Amps.

With Anderson PowerPoles™!

MFJ-4275MV delivers 75 amps maximum and 70 amps continuously without even flexing its muscles. Input selectable voltage 110 VAC or 220 VAC.

It's highly regulated with load regulation better than 1%. Ripple voltage is less than 12 mV peak-to-peak at rated load.

No RF hash! MFJ's exclusive HashFilters™ Filtering System eliminates RF hash that plagues other manufacturer's switching power supplies.

Fully protected -- your MFJ-4275MV has Short-Circuit, Overload and Over-Temperature protection systems. Also has an auto restart after a fault. Has power on and Fault LED indicators.

Front panel adjustable voltage 4.0 to 16 VDC. Front-panel meters with backlight monitor voltage and current simultaneously.

MFJ's Exclusive HashFilters™ Filtering System eliminates RF hash that plagues other manufacturer's switching power supplies.

Attractive front panel features several options for connecting your gear: 1 pair of 5-way binding posts, 2 pairs of Anderson PowerPoles™, 1 pair of high-current 5-way binding posts, a cigarette socket for mobile accessories, and two pairs of quick connects.

Whisper quiet fan speed increases as load current increases -- keeps components cool and protected.

An automatic battery charging feature provides charging current of 20 Amps maximum, 5A continuous, 30 mA trickle charge.

Measures 9 3/4" W x 5 1/2" H x 9 1/2" D inches. Weighs just 10.5 lbs. -- light enough to carry on DXpeditions, camping and vacations.

No more hauling around big, bulky conventional power supplies that can give you a hernia! Pack this 75A supply on your next trip and no worries you will hurt your gut!

## MightyLite™ 35 Amp Switching Power Supply

MFJ-4235MV can power your HF or VHF/UHF mobile or base transceiver with an output of 30 Amps continuous and 35A surge. You can vary the voltage from 4.0 to 16 Volts with 1% voltage regulation. MFJ-4235MV features less than 9 mV peak-to-peak ripple at the rated load.

MFJ's Exclusive Hash-SQUASH™ Filtering system eliminates RF hash that plagues other manufacturer's switching power supplies. MFJ-4235MV has no RF hash in the ham bands!

It features switchable AC input from 90 to 125 or 200 to 240 Volts. It has an easy-to-replace external replaceable fuse.

MFJ-4235MV is fully protected with

short circuit, overload and over-temperature protection systems.

Your power supply will be safe from any overheating or other problems with your equipment -- it will shut down before any harm comes to it. It also has an auto-restart after a fault.

Attractive front panel features multi-color current and voltage meters with backlight -- makes it easy to monitor simultaneously.



MFJ-4235MV **\$134<sup>95</sup>** Ship Code C

ously. It has a power on and Fault LED indicator for a quick warning sign of any trouble that might come your way.

Output connectors feature one pair of 5-way binding posts for your rig, a low amperage cigarette lighter socket and quick connect terminals for any accessories. Also has one pair of 5-way binding posts for automobile battery charging.

Whisper-quiet cooling fan keeps your components cool and safe for operating.

MFJ-4235MV weighs just 4 lbs., so you won't break your back carrying it to field day, DXpeditions, to a buddy's house for testing or camping or business trips.

Measures 7W x 4 1/4" x 8 3/4" D inches.

## MFJ 30/35 Amp Regulated DC Power Supply

Massive 19.2 pound transformer, Adjustable 1-14 VDC, Quick connects, cigarette lighter socket . . .

MFJ's heavy duty power supply is excellent for powering your rig/accessories.

A massive 19.2 pound transformer makes this power supply super heavy duty! It delivers 35 amps maximum and 30 amps continuous without even flexing its muscles. Plugs into any 110 VAC wall outlet.

It's highly regulated with load regulation better than 1%. Ripple voltage is less than 1 MV. No RF hash! Fully protected -- has over voltage, fold back short circuit and over-temperature protection systems.

You get front panel adjustable voltage from 1 to 14 VDC with a convenient detent set at 13.8 VDC. Front-panel meters monitor voltage and current.

Three sets output terminals include pair of heavy duty 5-way binding posts for HF/VHF rigs.

Two pairs of quick-connects are for your accessories and a covered cigarette lighter socket is used for your mobile accessories.

A front-panel fuse holder makes fuse replacement easy. Quiet fan speed increases

MFJ-4035MV **\$149<sup>95</sup>** Ship Code F



as load current does -- keeps cool.

Measures 9 1/2" W x 6 1/2" H x 9 1/2" D inches.

## AC and DC Adaptors for MFJ Accessories

All MFJ adaptors have an output cord with a 2.1 mm center positive coaxial DC power plug, except as noted.

"X" models have an open-end 2-conductor wire for connecting an AC input plug.



| Figure | Item No.   | Price   | Input Voltage | Output Voltage | Current   |
|--------|------------|---------|---------------|----------------|-----------|
| A      | MFJ-1312D  | \$15.95 | 100-240 VAC   | 13.8 VDC       | 500 mA*   |
| B      | MFJ-1312DX | \$15.95 | 230 VAC       | 12 VDC         | 500 mA    |
| C      | MFJ-1316   | \$21.95 | 120 VAC       | 12 VDC         | 1.5 Amp   |
| D      | MFJ-1318   | \$29.95 | 120 VAC       | 16 VDC         | 500 mA    |
| E      | MFJ-1317   | \$34.95 | 100-240 VAC   | 13.8 VDC       | 2.9 Amp*  |
| F      | 407-1072   | \$15.95 | 120 VAC       | 12 VAC         | 1 Amp     |
| B      | 407-1072X  | \$15.95 | 230 VAC       | 12 VAC         | 1 Amp     |
| G      | 407-1075   | \$21.95 | 120 VAC       | 16 VAC         | 1 Amp     |
| H      | 407-1109   | \$29.95 | 120 VAC       | 14 VAC         | 2.9 Amp** |

\*Denotes Switching Type Adaptors. \*\*This model has 3.5 mm, 3-conductor output plug.



## MFJ and Curtis is a winning CW combo!

The Best of all CW worlds -- a MFJ/Curtis keyer™ in a compact package that fits on the Bencher iambic paddle! Buy the combination or just the keyer for your Bencher or MFJ paddle.

MFJ's most popular keyer is small but big in features giving you adjustable weight and tone and has front panel volume and speed controls (5-65 wpm). Has built-in dot-dash memories, speaker, sidetone and auto

MFJ-422E  
**\$199<sup>95</sup>**  
Ship Code B



or semi-auto/tune modes.

Keys solid state or tube transmitters. Fully shielded. 9 volt battery or 110 VAC with MFJ-1312D, \$15.95.

Keyer mounts on paddle base to form a small 4x2 1/4 x 4 1/4". Buy the combo or just the MFJ keyer (MFJ-422EX) to fit on your MFJ-564 or MFJ-564B iambic paddles (see below).

**Paddles to use with MFJ-422EX**

**MFJ-564 Black or Chrome, \$79.95 (see below).**

MFJ-422EX  
**\$99<sup>95</sup>**  
Ship Code A



## MFJ Curtis Iambic Keyer has Dot, Dash Memory



MFJ-407E  
**\$79<sup>95</sup>**  
Ship Code A

Everything you need to send great CW from this MFJ Curtis Keyer™ -- easy access front panel controls, all keyer modes, dot-dash memories, jam-proof spacing, weight control, sidetone, built-in speaker and more. Speed, weight, tone and volume controls, and tune, semi-auto and on/off switches are on the front panel.

A dual paddle key such as the MFJ-564, lets you use the *iambic mode*. In this mode, you can insert a dot before a dash finishes or insert a dash before a dot finishes. Also, squeezing both paddles generates alternating dots and dashes. This lets you send characters such as C, K, and R with a single squeeze. It turns an inexperienced fist into a professional.

You can use the *automatic* mode with a single or dual paddle. You automatically generate dots and dashes by pressing the paddle.

You can switch into a *semi-automatic "bug"* mode to generate dots automatically and dashes manually. Or you can use a *"straight key"* and manually generate your own dots and dashes.

You get dot-dash memory, self-completing dots and dashes, jam-proof spacing and instant start keying.

Select Type A or Type B keying to match your sending style.

Weight control lets you adjust your dot-dash space ratio to make your signal sound distinctive to bust through pile-ups. It also lets you compensate for the turn-on delay of your transmitter.

Has tune switch for tuning your transmitter or antenna tuner. RF proof. Built-in speaker for sidetone.

Keys solid state and tube transmitters. Use 9 volt battery or 110 VAC with MFJ-1312D, \$15.95. Attractive black cabinet measures 5 3/4 x 1 3/4 x 4 3/4 inches.

**MFJ/Curtis ECONO Keyer™**

MFJ-401E is the same as MFJ-407E except weight and tone controls are

MFJ-401E  
**\$69<sup>95</sup>**  
Ship Code A



adjusted internally and doesn't have a tune switch. Use 9 volt battery or 110 VAC with MFJ-1312D, \$15.95. 4x1 3/4 x 3 3/4 inches.

**Build Your Own Keyer with this Curtis Chip**

Revolutionary new Curtis Chip. Choose . . . 28 pin skinny DIP or SMT SOIC package. MFJ-8045ABM, \$29.95.



**Pre-Wired Keyer to Rig Cables**

MFJ-5164, \$11.95. Keyer to radio keying cable. Has phono plug on keyer end to fit MFJ keyers and a 3.5 mm plug with 1/4" phone plug adaptor to fit most transceivers.



### MFJ Nano-size Keyer/Paddle Combination



MFJ-402  
**\$69<sup>95</sup>**  
Ship Code A

Ham radio's tiniest electronic keyer has a built-in iambic paddle! It's just 2x3x1 inches and weighs 3 1/2 ounces!

Fully-enclosed paddle has a "bug" feel for smooth CW. It's precision formed from resilient phosphorous bronze.

It's easy-to-use. Just set one button and send one letter to change your keyer settings -- speed 5-65 WPM, weight 25%-75%, iambic mode A/B, normal or "bug" mode and reverse paddle.

Screwdriver adjustment for easy speed change. Tune mode for tuning antenna tuner or transmitter. RF proof. 4 foot cord with 3.5 mm plug. Direct output keys solid state rigs.

No on/off switch -- keyer turns off between dits! Battery lasts nearly shelf life.

### Pocket Travel Keyer has Built-in Paddle



MFJ-403P  
**\$79<sup>95</sup>**  
Ship Code A

MFJ's Travel Keyer is a full-featured CW keyer with a built-in iambic paddle. Ultra-compact 3 3/4 W x 1 H x 2 1/4 D" is

perfect for traveling or for home use with QRP or "big" rigs. Put it in your briefcase along with your MFJ Cub™ or other rig on your next trip.

Built-in sidetone with LM386 audio amplifier, speaker and volume control makes monitoring sending easy. Adjustable speed 3 to 60 WPM. Sidetone pitch is adjustable 300 to 1000 Hz.

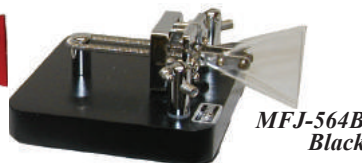
Weight adjustable from 25% to 75%. Tune mode, RF proof, Battery Saver feature. Select a keyer mode to suit you -- iambic mode A or B, fully automatic or semi-auto "bug" mode. Use 9 Volt battery, not included. Direct output keys solid state rigs.

MFJ-403, \$59.95. MFJ ultra compact CW Travel Keyer only.

### MFJ Deluxe Iambic Paddles



MFJ-564/B  
**\$79<sup>95</sup>**  
Ship Code B



MFJ deluxe iambic paddles feature a full range of adjustments in tension and contact spacing, self-adjusting nylon and steel bearings, contact points that almost never need cleaning, precision machined frame and non-skid feet on heavy base. Use with MFJ-422DX/MFJ-490X keyers. MFJ-5166, \$11.95, (left). Paddle to Keyer cable. Has pre-wired solder lugs on paddle end and 3.5 mm plug with 1/4" phone plug adaptor to fit MFJ keyer.



### MFJ Miniature Iambic Paddle



MFJ-561  
**\$24<sup>95</sup>**  
Ship Code A

This miniature, lightweight iambic paddle is just 1 3/4 W x 1 3/4 D x 3/4 H inches and weighs just 2 1/2 ounces. Tiny enough to fit in an Altoids® tin (cord and all!) for protection. It's perfect for traveling or for home use with QRP or "big" rigs. Perfect companion for MFJ or other key-

ers. Great for any QRP or QRO rig! The paddle is precision formed from special phosphorous bronze spring material with an A150 temper. This gives you an excellent feel so you can send smooth CW. Mounted on rugged metal base with non-skid rubber feet. Has 4 foot cord and 3.5 mm plug -- ready to plug into keyer or rig! MFJ-561K, \$19.95. Build your own! MFJ iambic paddle kit with instructions, cord, hardware needed to build your paddle.

# MFJ Millennium™ CW Memory Keyer

MFJ

MFJ-495 combines the latest millennium microprocessor technology with non-volatile EEPROM memory for a full-featured, low cost, high reliability design. Send CW or load messages with paddle, keyboard or serial port.

Easy-to-use menus and LCD display let you set all keyer functions with easy push buttons. Keyer functions also are changed from paddle, keyboard or computer. LCD also shows messages as it's sent from memory or live from your paddle, keyboard or computer.

The MFJ-495 has 32 message memories of 256 characters each. You can repeat messages continuously, insert timed pauses within messages, insert an auto-incrementing serial number, have messages call other messages or insert embedded commands to change speed, weight, etc. automatically.

Supports direct and grid-block outputs and has port for optional remote control. PTT output, speaker, sinewave sidetone, more!



MFJ-495  
**\$179<sup>95</sup>**  
 Ship Code B

**Features include:**  
**Iambic** keyer with dot and dash memories; automatic, semi or hand-key mode.  
**Keyboard Input** lets you plug in any AT keyboard for type ahead buffer. All commands, functions, and memories are done through the keyboard!  
**Message editing** capability.  
**Input queue** to store multiple messages.  
**Auto-incrementing** contest serial numbering from 001 to 9999.  
**Digital** and linear analog speed control from 5 to 99 wpm (3:1 to 20:1 range)  
**Farnsworth**, speed from 10 to 99 wpm  
**Ultra speed** sets messages up to 990 wpm  
**Adjustable** weight 25% to 75%

**Adjustable** sidetone from 300 to 1000 Hz  
**Keying** output delay up to 20 ms  
**Push-to-talk (PTT)** hang time up to 5 sec.  
**Direct** (pos.) or grid-block (neg.) keying  
**Timed** tune for XMTR adjustment  
**Timed** pauses in messages/message loop  
**Internal** speaker with adjustable volume  
**Supports** Qwerty and Dvorak keyboards  
**190 characters** type-ahead keyboard buffer with low buffer warning  
**Dual** user mode supports operators with different configuration settings

**Compact** and handsome all-black metal cabinet measures just 61/4Wx21/2Hx61/4D in. Use 12 VDC or 110 VAC with MFJ-1312D, \$15.95 AC adapter.

**RFI-Suppressed Keyboard**  
 MFJ-551, \$39.95. RFI suppressed keyboard.

**Remote Control Unit**  
 MFJ-70, \$34.95. Full function wired remote control for MFJ-495.

## Menu Memory Keyer/Bencher Paddle



MFJ-490E  
**\$249<sup>95</sup>**  
 Ship Code B

**MFJ Menu Driven Memory** Keyers™ are the easiest keyers to operate. There's no keypad, no complex sequence, nothing to remember. Just select a menu by pressing a button. LED lights to indicate which menu is active. Select features by pressing buttons. Easy as using a touch screen! Menu is clearly printed on front (or top) panel -- no confusion. Save and play messages, decrement serial numbers, set speed, weight, sidetone, enter iambic, semi-auto, handkey, message queue, paddle command modes, turn sidetone on/off, transmitter tune, and set keying output on/off.

Select iambic A/B, reverse, Morse trainer, and store starting serial number for contests. Bypass menu function, tells status in CW.

Adjust speed, 5-100 wpm, by pressing paddle smoothly or by knob control. Morse trainer lets you practice or teach in Farnsworth or normal mode. Letters, numbers, prosigns, or any combination for practice using five character groups, or more realistic 1-8 groups.

## Super Menu Driven Memory Keyer

Get contest serial numbering (0-9999) with auto-increment, built-in sidetone, speaker, volume control and adjustable 300-3000 Hz tone. Use auto, semi-auto, bug or handkey modes, reverse dot/dash paddles, adjust weight 5-95%, compensate for transmitter distortion, key direct or grid-block transmitters, solid state/tube rigs. MARS characters recognized.

Memory Keyer™ has 192 character (8K) memories divided into four soft sectors. Uses 9V battery (not included) or 110 VAC with MFJ-1312D, \$15.95. Memories are backed up by a lithium battery.

Order MFJ-490E, \$249.95, Memory Keyer/Iambic paddle combination, 5X3X5 1/2 in. MFJ-490EX, \$159.95, is the keyer only.

MFJ-492, \$119.95, stand alone keyer, 6 1/2 X 2 1/2 X 6 3/4 inches.

MFJ-492X, \$134.95 (MFJ-492 with 8K additional memory installed), MFJ-80, \$21.95, (8K memory for MFJ-492 only).

MFJ-78, \$34.95, full function wired remote control.



## MFJ Deluxe Code Practice Oscillator & key



MFJ-557  
**\$39<sup>95</sup>**  
 Ship Code B

MFJ-550  
**\$14<sup>95</sup>**  
 Telegraph key only  
 Ship Code A

MFJ-557 Deluxe Code Practice Oscillator features a Morse straight key on a non-skid heavy steel base -- stays put and doesn't move around while you're sending. MFJ-557 lets you practice sending code at home, work, riding in your car -- practically anywhere -- because you can take it wherever you go. Volume control adjusts

from barely audible to blaring full sound. Practice without bothering anyone. Tone control for wide adjustment, from high "squeaky" to low "booming" tones. Earphone jack for private listening. Plug in an external speaker (MFJ-281, \$12.95) for high volume in the classroom. MFJ-557 runs on a 9 volt battery (not included) or 110 VAC with MFJ-1312D, \$15.95. Plugs into jack on the side.

When you're finished cleaning up your sloppy fist, hook up the MFJ-550 straight key to your transmitter and go on-the-air.

Don't pass up a super buy! Built-in speaker, adjustable contacts. Compact 8 1/2 X 2 1/4 X 3 3/4 inches. Black.

## Deluxe Wood Telegraph

MFJ-553 Deluxe Wood Base Telegraph features a Morse Code straight key on a non-skid, beautifully stained wood base. A steel under-plated bottom makes it stay put on your table and it doesn't move around while you are sending! Designed by KA5MAN, this key lets you send code at home, work, riding in your car -- practically anywhere -- because it's easy to take wherever you go.

Prewired 3 foot cable with 3.5 mm plug.

Hook-up the straight key to your rig and go on-the-air sounding like you were born working QSOs and look good doing it. Makes a handsome addition to any shack.

## Classroom Morse Code Tutor



MFJ-414  
**\$219<sup>95</sup>**  
 Ship Code B

The Cadillac of all Morse Code trainers! For VECs, Elmers, teachers, ham clubs, schools and hams who want the best. Has everything in the famous MFJ-418 Pocket Size Morse Code Tutor™ plus . . . Hear powerful classroom audio from its built-in speaker/ amplifier with true sinewave sidetone and no harsh keyclicks. Down/upload custom practice groups from PC with serial port . . . Store 16 FCC exams for VECs . . . Print correct answers using printer port . . . Record quality code tapes with tape output . . . Send on-the-air CW practice with HF/VHF radio.

## Use HT for on-the-air CW Fun

MFJ's Jim Handy™ CW interface plugs into your 144/440 MHz handheld and converts it into a modulated CW rig -- just plug in your key.

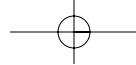
Get your ham buddies on-the-air and enjoy some fantastic CW fun. Run code practice on your repeater. Start your own FM CW Net. Have fun and upgrade! A transmit/receive switch automatically switches HT to transmit when you send CW and returns to receive when you stop.

Built-in speaker, volume control and great sounding true sinewave sidetone -- no harsh keyclicks. Use 9V battery (not incl.). Pre-wired cables available in this catalog.

## Classroom Code Oscillator

The world's finest code practice oscillator is designed for demanding classroom use and abuse.

It produces a true pure sinewave sidetone with no trace of harsh keyclicks. You'll hear the clearest, sweetest sounding CW you have ever heard. Delivers full 1 watt into built-in 3" speaker -- fills an entire room. Low distortion -- less than .2% total harmonic distortion from its BTL (Bridge-Tied-Load) amplifier. Volume control, 400-1000 Hz tone control, on/off switch, power on LED, 1/4 inch key jack, 3.5 mm external speaker jack, uses 12 VDC. All metal enclosure 4 3/4 X 1 1/2 X 5 in.



# MFJ Pocket size Morse Code Reader™



**Is your CW rusty?**  
Relax and place this pocket sized MFJ Morse Code Reader near your receiver's speaker . . .

MFJ-461  
**\$89<sup>95</sup>**  
Ship Code A

Then watch CW turn into solid text messages as they scroll across an easy-to-read LCD display.

Use as backup in case you miss-copy characters - - it makes working high speed CW a breeze - - even if you're rusty.

**Practice** by copying along with the MFJ-461. It'll help you learn the code and increase your speed as you instantly see if you're right or wrong.

**Eavesdrop** on Morse code QSOs from hams all over the world. It's a universal language that's understood the world over.

### Automatic Speed Tracking

**MFJ AutoTrak™** automatically locks on, tracks and displays CW speed up to 99 Words-Per-Minute.

**Simply** place your MFJ-461 close to your receiver speaker until the lock LED flashes in time with the CW.

### Four Display Modes

1. Bottom line scrolls and fills with text, then that entire line is displayed on top line until bottom line refills -- makes reading text extra easy! Automatically displays speed in WPM.

2. Same as 1, without speed display -- gives you maximum text display.

3. Top line scrolls, bottom line displays speed in Words-Per-Minute.

4. Both top and bottom lines scroll.

**Two-line** LCD display has 32 large 1/4 inch high-contrast characters.



### MFJ Instant Replay

The last 140 characters can be instantly replayed. Lets you re-read or check copy if you're copying along side the MFJ-461.

### High Performance Modem

**Consistently** get solid copy from MFJ's high performance PLL (phaseslock loop) modem. Digs out weak signals. Even tracks slightly drifting signals.

**Of** course, nothing can clean up and copy a sloppy fist, especially weak signals with lots of QRM/QRN.

### Computer Interface

The MFJ-461's serial port lets you display CW text full screen on a bright computer monitor -- just use your computer serial port and terminal program.

### More Features

**When** it's too noisy for its mic pickup, connect it to your radio with a cable.

**Battery** saving

feature puts MFJ-461 to sleep during periods of inactivity. It wakes up and decodes when it hears CW.

Uses 9 Volt battery (not included).

### True Pocket Size

**Fits** in your shirt pocket with room to spare - smaller than a pack of cigarettes. Tiny 2 1/4 x 3 3/4 x 1 in. 5 1/2 ounces.

### Accessories

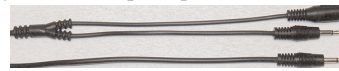
**MFJ-26B, \$9.95.** Soft leather protective pouch for MFJ-461. Clear plastic overlay for display, push button opening, strong, durable pocket or belt clip secures MFJ-461.

**MFJ-5161, \$16.95.** MFJ-461 to computer serial port cable (DB-9).

**MFJ-5162, \$7.95.** Connects MFJ-461 to radio external speaker 3.5 mm jack.

**MFJ-5163, \$10.95.** Connects MFJ-461 and another accessory

to radio external speaker, 3.5mm.



# MFJ Pocket Size Morse Code Tutor

**Beginner's Course**  
ARRL/VEC format. Learn small fixed sets of characters. Previously learned sets are combined with new sets to reinforce all you have learned.

MFJ-418  
**\$89<sup>95</sup>**  
Ship Code A

**Practice** copying, then instantly replay to check your copy on the LCD display.

### Custom Character Sets

**Having** trouble with certain characters? Build and save 3 custom sets of 16 characters for extra practice -- *an MFJ exclusive.*

**Practice** copying realistic on-the-air style plain English QSOs. Gets you ready to pass your FCC test and upgrade. Also builds confidence for your first real contact.

### MFJ Word Recognition Mode™

**MFJ's** Word Recognition Mode™ gives you hundreds of commonly used words in ham radio. Practice recognizing *entire words* instead of individual letters.

**Select** letter, number, punctuation, prosign or FCC character sets (has *only* letters, numbers and prosigns required on FCC tests), random call signs, random words, QSOs or combo sets for practice -- *you'll never run out of study material!*

### MFJ InteractiveMode™

**InteractiveMode™** lets you decide when to copy the next or previous group and how many -- great for beginners!



**Select** normal or Farnsworth spacing.

**Farnsworth** makes it easier to learn *entire* characters. Stop counting individual dots and dashes that slows learning! Adjusts 10 to 60 WPM.

**Use** fixed length or more realistic random length groups (up to 8 characters).

**You** can change speed *on-the-fly* while playing a session 3 to 60 words-per-minute.

### SettingSaver™

**Settings** are automatically saved, ready to use next time--just turn on and replay.

**Check** your copy, select from menus and program custom characters and words on 2 line LCD display with 32 huge 1/4

inch high-contrast characters -- *powerful sound and sight learning!*

**Only MFJ** gives you *SilkySmooth Sidetone™* with *TruTone™* sinewave and *SoftStart™* dots/dashes -- lets you concentrate on learning without distracting, harsh keyclicks. Use earphones for private practice or built-in speaker for groups. Volume control. Variable pitch 300-1000 Hz.

**Fits** in your shirt pocket with room to spare -- smaller than a pack of cigarettes. Tiny 2 1/4 x 3 3/4 x 1 in., weighs less than 5 1/2 ounces. Uses 9 volt battery (not included).

**Tapes** play the same old boring stuff over and over. Unlike tapes, you'll *never* memorize MFJ-418's random sessions.

### Pocket Tutor Accessories

**MFJ-26B, \$9.95.** Soft leather protection for MFJ-418 with pocket/belt clip.

### MFJ-281,

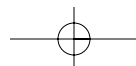
**\$12.95.** Speaker for group practice. Loud, powerful audio! 3 3/4 x 3 x 2 1/4"

### More MFJ Morse Tutors

**MFJ-417, \$69.95.** Similar to MFJ-418, but no LCD.

Most software features.

**MFJ-413, \$49.95.** Similar to MFJ-417, less random words, QSOs, SettingSaver™.



**MFJ**

# Morse Code Reader has Built-in Memory Keyer

*Is your CW rusty? Relax...* plug-in this MFJ Morse Code Reader and built-in keyer. Then watch CW turn into solid text messages as they scroll across an *easy-to-read* LCD display. Makes working high speed CW a breeze. Type-ahead buffer, message memories, adjustable speed get you ready to compete with the best hi-speed CW ops -- they'll never know you didn't even pass the code test!

The MFJ-464 gives you everything you need to have the ultimate CW Station: sends and Reads 5-99 WPM . . . Automatic speed tracking . . . Large 2-line LCD shows send/receive messages . . . single or iambic paddle or computer keyboard operation . . . Front panel speed, volume controls . . . 4 message memories . . . type ahead buffer . . . read again buffer . . . adjustable weight & sidetone . . . RFI proof . . . much more!

### Reader has Auto Speed Track

MFJ AutoTrak™ automatically locks on, tracks and displays CW to 99 wpm.

Simply plug-in your MFJ-464 to your receiver speaker until the lock LED flashes in time with the CW.

### High performance modem

Consistently get solid copy from MFJ's high performance PLL (phaselock loop) modem. Digs out weak signals. Even tracks slightly drifting signals. Of course, nothing can clean and copy a sloppy fist, especially weak signals with lots of QRM/QRN.

### Built-in keyer features

The MFJ-464 combines the latest millenium microprocessor technology with non-volatile EEPROM memory for a full featured, low cost, high reliability design.

You can send CW or load messages using a paddle, keyboard or through your computer serial port.

Easy-to-use menus and LCD display let you set all keyer functions merely by pushing buttons. Keyer functions can also be changed from your keyboard or computer.

The LCD also shows the message as it's being sent from memory or live from your paddle, keyboard or computer.

The MFJ-464 has 4 message memories of 256 characters each. You can repeat messages continuously, insert timed pauses within messages, insert an auto-incrementing serial number, have messages call other messages or insert embedded commands to change speed, weight, etc. automatically.



MFJ-464  
**\$199<sup>95</sup>**  
Ship Code B

(Keyboard, paddle not included)

### Sinewave Sidetone . . . More!

MFJ-464 supports Direct keying output. Has PTT output, built-in speaker, sinewave sidetone and more! Iambic keyer with dot and dash memories; automatic, semi or hand-key mode. Input queue lets you store multiple messages. Auto-incrementing contest serial numbering from 001 to 9999.

### Adjustable Speed 5-99 WPM

Digital linear speed control, 5-99 wpm Farnsworth Mode with speed adjustable from 10-99 wpm.

Ultra speed sets messages up to 990 wpm. Adjustable weight 25% to 75%.

Adjustable sidetone from 300-1000 Hz.

Keying output delay to 20 milliseconds.

Push-to-talk hang time to 5 seconds.

Timed tune function for XMTR adjusting.

Timed pauses in messages/message loop.

Internal speaker with adjustable volume.

Qwerty & Dvorak keyboards.

### Type-Ahead Buffer

190 character type-ahead keyboard buffer with low buffer warning.

**Keyboard Input** Use any AT keyboard to program functions & memories.

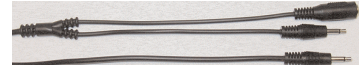
**Compact** black metal, 6 1/4"Wx2 1/2"Hx6 1/4"D". 12VDC or 110VAC w/ MFJ-1312D, \$15.95.

### MFJ-464 Accessories

MFJ-5161, \$16.95. MFJ-464 to computer serial port cable (DB-9).

MFJ-5162, \$7.95. Connects MFJ-464 to radio's external speaker 3.5 mm jack.

MFJ-5163, \$10.95. Connects MFJ-464 and



another accessory to your radio speaker.

MFJ-5164, \$11.95. Keyer to radio keying cable. Has phono plug on keyer end to fit MFJ keyers and 3.5 mm plug with 1/4" phono plug adapter to fit most transceivers.



MFJ-551, \$24.95. RFI suppressed keyboard, a must to avoid RFI problems when operating CW keyboard mode.

## MFJ Deluxe Iambic Paddles



MFJ-564 Chrome

MFJ-564/B  
**\$79<sup>95</sup>**  
Ship Code B



MFJ-564B Black

MFJ deluxe iambic paddles feature a full range of adjustments in tension and contact spacing, self-adjusting nylon and steel bearings, contact points that almost never need cleaning, precision machined frame and non-skid feet on heavy base. MFJ-422D and MFJ422DX/MFJ-490X keyers can be used.

MFJ-5166, \$11.95. Iambic Paddle to keyer cable. Has pre-wired solder lugs on paddle end and 3.5 mm plug with 1/4" phone adapter to fit MFJ keyer.

## Custom Acrylic Key Covers



MFJ-50  
**\$64<sup>95</sup>**  
Ship Code A  
Custom fit MFJ, Bencher, Vibroplex, Bengali, other Iambic Paddles. **Free call-sign engraving.** No glue residue, all pressed construction. Paddle, cable holes. 1/4" thickness.

## Super CW Keyboard -- No Computer Required!



MFJ-452  
**\$159<sup>95</sup>**  
Ship Code B

MFJ-452X  
**\$129<sup>95</sup>**  
Ship Code A  
No Keyboard

MFJ Super CW Keyboard lets you send effortless CW as soon as you turn it on -- no computer to boot, no program to load -- just start typing.

You get a standalone MFJ CW Keyboard that includes an RFI suppressed keyboard, a two line 16 character LCD display, eight 250 character non-volatile message memories, a 150 character type-ahead buffer, iambic keyer, plus a powerful Morse Code trainer, more!

Variable speed from 5 to 100 WPM, adjustable

weight from 5 to 95%, sidetone from 300 to 3000 Hz and serial number from 0 to 9999. Has buffer and memory full audible indicators. Keys solid state and tube rigs. AT101 compatible keyboard plugs into compact 3 1/2"x2 1/2"x3 1/2" inch interface. Use 12 VDC or 110 VAC with MFJ-1312D, \$15.95.

MFJ-452X, No keyboard.

Use MFJ-5164, \$11.95, keyer to rig keying cable.

### MFJ Dedicated CW Keyboard

MFJ-451, like MFJ-452 but without LCD display and has two 100 character memories. MFJ-451X, no keyboard.



MFJ-451  
**\$129<sup>95</sup>**  
Ship Code B

MFJ-451X  
**\$109<sup>95</sup>**  
Ship Code A  
No Keyboard

The World Leader in Amateur Radio Accessories!

**MFJ**

## Save Your Voice with the MFJ Contest Voice Keyer

### Use 8-pin modular or 8-pin round microphone plug!

Let this MFJ Contest Voice Keyer™ call CQ, send your call and do contest exchanges for you in your own natural voice!

Store frequently used phrases like "CQ Contest this is AA5MT", "You're 59" ... "QTH is Mississippi" and more! Contest by pressing a few buttons and save your voice.

You can record and play back five natural sounding messages in a total of 75 seconds. EEPROM technology keeps messages stored for up to 100 years -- no battery backup needed.

You can repeat messages continuously and vary the repeat delay from 3 to 500 seconds. Makes a great voice beacon and calling CQ so easy. A receive audio jack lets you record and play back off-the-air signals -- great help if you didn't get it right the first time! No more "Please repeat".

A playing message can be halted by pressing the Stop Button, your PTT mic button or by your VOX PTT line. A closure to ground



via remote control or computer also halts messages.

Has jack for remote or computer control (using CT, NA, TR or other program and its interface). Lets you select, play and cancel messages.

The MFJ-434B is transparent to your microphone -- your mic's audio characteristics do not change when your MFJ-434B is installed. Dual controls make it easy to tailor audio level to match your voice.

MFJ-434B  
**\$199<sup>95</sup>**  
Ship Code B

All audio lines are RF filtered to eliminate RFI, audio feedback and distortion. An audio isolation transformer totally eliminates hum and distortion caused by ground loops.

It's easy to use -- just plug in your 8 pin microphone cable and plug the MFJ-434B shielded cable into your transceiver's mic connector. Internal jumpers let you customize it to Kenwood, Icom, Yaesu, Alinco or Radio Shack rigs. Use your station or built-in microphone for recording.

Built-in speaker-amplifier lets you monitor stored messages. 3.5 mm speaker/headphone jack. SMT technology.

Use 9 Volt battery, 9-15 VDC or 110 VAC with optional MFJ-1312D, \$15.95. Measures a compact 6 1/2"Wx2 1/2"Hx6 1/2"D inches.

MFJ-73, \$34.95. Remote Control Head with cable for MFJ-434B lets you set the MFJ-434B out of the way.

## MFJ Desk Mic/Ham Station Console

**For HF, VHF & UHF Radios**

A high-sensitivity ceramic microphone element (10.5 inches with FlexNeck™) bends and stretches to your most comfortable operating position. A fine mesh metal grill helps to eliminate background noise.

MFJ-299 has a high quality compressor amplifier with high, medium, and low selection switches. It always sends out a constant and optimum level without distortion, regardless of audio input level.

Equipped with a built-in graphic equalizer with center frequencies of 270, 540, 1000 and 2000 Hz. Gives best audio quality for FM mode and max efficiency for SSB.

Has On-Air indicator and an output level volume control. On-Air blinks on and off when in receiving mode and will light up continuously when transmitting.

MFJ-299 is equipped with PTT momentary and PTT lock switches: allow switching between long winded and fast two-sided QSOs.

Frequency up/down switches let you operate your transceiver at your desktop microphone. 4 function keys (CALL, VFO, MR, PF) are not applicable for all transceivers.

An output level meter lets you adjust output level, NOT to exceed 0 dB.

Revolutionary triple radio socket makes it easy to install any model rig: Icom, Yaesu, Kenwood, Alinco, Wouxun, Pofung. See chart below.

Built-in battery check circuit. Press power switch and the level meter shows battery condition with power voltage for a few seconds.



MFJ-299  
**\$99<sup>95</sup>**  
Ship Code B

## MFJ-297 Desk Mic

For HF or VHF/UHF Transceivers

MFJ-297 speech frequency tailored microphone cuts through noise/QRM. Switch for powerful SSB punch or full range broadcast quality FM/AM. Silibant Sound Shield™, momentary/locking PTT switch, On-Air LED, frequency up/down button (not applicable with all rigs), output level control, more! 4Wx1 1/2"H6D" with 11" flexible boom. 1 lb. Use 2 "AA" batteries. Cable chart below.



MFJ-297  
**\$69<sup>95</sup>**  
Ship Code A

### GooseNeck™ Microphone Holder

- Heavy-duty all-metal base stays put!
- GooseNeck™ for super flexibility -- move your mic where you want it!
- Tough, Durable plastic microphone clip holds tight! Turns your favorite handheld microphone into a super attractive desktop mic!



MFJ-390  
**\$14<sup>95</sup>**  
Ship Code A

## MFJ Professional Boom-Mic Headphones

MFJ-393 I/K/Y  
**\$59<sup>95</sup>**  
Ship Code A

*Prewired for Icom, Yaesu and Kenwood!*

**Professional grade MFJ Boom-Mic Headphone set is**

for contesting, DXing and traffic nets. Comfort designed leatherette padding lets you operate for hours at the rig.

Superb 3/4 inch thick padding on each ear and headband. MFJ-393 is so super lightweight, you won't even know they're there!

Headband adjusts for perfect fit to keep out external noise. Frequency response is enhanced for communications to bring out speech fidelity you never knew existed. Signals never sounded so clear!

The flexible microphone boom lets you position the mic comfortably at an optimum distance to minimize silibant sounds. MFJ's frequency tailored microphone element lets you bust through noise and QRM! 6 feet of cable lets you move about your ham station!

Even casual operators will appreciate the advantages of MFJ's superbly crafted Boom-Mic headphones for hands-free operating and DXing at an incredibly low MFJ price.

MFJ-393 I/K/Y, \$59.95. Headphones with pre-wired adapter cable. MFJ-393I for 8-pin round Icom and compatibles, MFJ-393Y for Yaesu 8-pin round and compatibles, MFJ-393K for Kenwood 8-pin round. MFJ-393MI for 8 pin modular Icom and compatibles, MFJ-393MY for Yaesu and MFJ-393MK for Kenwood and compatibles.

MFJ-393, \$29.95. Headphones only. Does not include prewired radio cable.

### MFJ PTT Foot Operated Switch

This MFJ foot switch keeps your hands free for logging, computer operation and tuning. Reduces fatigue and improves efficiency -- could be the difference between winning or losing a contest. Normally open switch.



MFJ-1709  
**\$19<sup>95</sup>**  
Ship Code A

2 1/2"Wx3 1/2"Dx1 1/4"H". Non-skid pad foot pedal. 1/4 in. phone plug. 10 ft. cord.

|                            |                                |           |                              |                                  |            |            |                                 |            |             |
|----------------------------|--------------------------------|-----------|------------------------------|----------------------------------|------------|------------|---------------------------------|------------|-------------|
| <b>\$17<sup>95</sup>ea</b> | <b>8 Pin Round HF Mic Plug</b> |           |                              | <b>8 Pin Modular HF Mic Plug</b> |            |            | <b>8-pin Mod VHF/UHF Radios</b> |            |             |
| MFJ Desk Mic               | ICOM                           | Kenwood   | YAESU                        | ICOM                             | Kenwood    | YAESU      | Icom/Kenw                       | Yaesu      | Wou/Pof/Any |
| MFJ-297                    | MFJ-5397I                      | MFJ-5397K | MFJ-5397Y                    | MFJ-5397MX                       | MFJ-5397MX | MFJ-5397MY | MFJ-5397MX                      | MFJ-5397MY | MFJ-5397MC  |
| MFJ-299                    | MFJ-5397I                      | MFJ-5397K | MFJ-5399Y<br>5399Y2 (FT-847) | MFJ-5397MX                       | MFJ-5397MX | MFJ-5397MX | MFJ-5397MX                      | MFJ-5397MX | MFJ-5397MC  |

### MFJ-624E Hybrid Phone Patch gives crisp, clear hum-free audio

MFJ-624E Deluxe Hybrid Phone Patch gives you crisp, clear, hum-free audio, and that's what phone patching is all about. It's jumper selectable for Kenwood, Icom, Yaesu, and Alinco rigs with 8 pin mic connectors.

Use VOX or push-to-talk. RF pi-filters and PC board eliminates RF feedback. Use with virtually any rig. Built-in VU meter monitors phone line levels to prevent cross talk. Adjust null depth for maximum isolation between rig. Separate XMTR /receiver gain controls eliminate need to readjust your rig after patching. Null

MFJ-624E  
**\$159<sup>95</sup>**  
Ship Code B



control, standard phone connection, RJ-11. Speaker jacks, audio in/audio out. 8x2x6". Use 12VDC, 9V battery or 110 VAC with MFJ-1312D, \$15.95.

Includes output cables to connect transceivers with 8 pin round or 8 pin modular mics.

**MFJ**

# Switch any two Mics to any two Rigs

MFJ's new MFJ-1263 *Microphone Control Center* lets you mix and match any two microphones to any two radios.

Microphones or transceivers can have 8-pin round or 8-pin modular connectors. You don't have to change connectors or rewire -- just push buttons.

Your favorite microphones will never become obsolete. You can use your favorite microphone with your present or new rig by pushing a button.

You can instantly switch from a hi-fi ragchewing mic to a hard-hitting DX mic when a rare one suddenly pops up.

Plug in PTT foot switch (MFJ-1709, \$19.95) or let your computer or voice keyer (MFJ-434B, \$199.95) control the PTT line to free your hands for contesting/DXing.

Plug in a boom mic/headset (MFJ-393, \$49.95) to save the day during noisy field day or multi-operator contesting.

You can plug in your headphones and an external speaker (MFJ-281, \$12.95).

A headphone volume control elimi-



nates the need to readjust your rig's volume when you switch the speaker on. The headphones are always active. A push button turns the speaker on or off.

When you want to use your desk or hand mic just push a button.

An input jack and On/Off switch is provided to insert external audio into the microphone audio input line. Great for inputting sound card, SSTV, AFSK, TNC and other audio sources.

The MFJ-1263 works with any radio - Kenwood, Yaesu, Icom, Alinco and compatible transceivers - using an 8-pin round



MFJ-1261  
Code A  
**\$109.95**

MFJ-1261, \$109.95. Like MFJ-1263 but has one mic input and two radio outputs. One MFJ-5398, MFJ-5397MX included.



MFJ-1260  
Code A  
**\$99.95**

MFJ-1260, \$99.95. Same as MFJ-1263 but has two microphone inputs and one radio output. One MFJ-5398 and one MFJ-5397MX radio cables included.

or modular microphone jack. Internal jumpers configure the MFJ-1263 for your radio -- your mics never become obsolete! 6Wx1½Hx5D inches. Includes one MFJ-5398 and one MFJ-5397MX radio cables.

**ORDER Extra Radio Cables!** MFJ-1261/1260/1263 to transceiver cables, \$17.95. Order MFJ-5398 for 8-Pin Round; MFJ-5397MX for 8-Pin Modular.

## MFJ Equalizer/Conditioner



MFJ-655B  
**\$219.95**  
Ship Code B

MFJ-655B all-in-one audio console gives you *Pro Audio* processing that makes your audio professional sounding.

It gives you all the capabilities you'll ever need . . . 8-Band Equalizer . . . Downward Expansion noise gate . . . clean Compressor . . . smooth Limiter . . . low noise Preamp . . . universal microphone interfacing . . . impedance matching . . . level control . . . and RF/audio isolation.

Its processing is so smooth and transparent, no one will detect its presence. All they will hear is your outstanding audio that brings you unsolicited compliments.

The MFJ-655B uses the Analog Devices SSM2166. This professional quality audio conditioner gives outstanding performance over an exceptionally wide bandwidth with very low noise and very low total harmonic distortion, typically .25%.

Select 600 Ohm, 200 Ohm or Hi-Z input impedances to match dynamic, electret or high impedance crystal/ceramic microphones.

One MFJ-5398 for 8-pin round and one MFJ-5397MX for 8-pin modular included.

Use 12 VDC or 110 VAC with MFJ-1312D, \$15.95. 10¾Wx3¼Hx5D inches.

## MFJ-1251 Universal Microphone Converter

Convert any 8-pin round or modular microphone for use with any 8-pin round or modular radio.

MFJ-1251  
Code A  
**\$29.95**



Example: You want to use your favorite Yaesu FT-2000 8-pin round microphone with your Icom IC-706 rig. Or you bought a modular soundcard interface, but now you have an 8 pin round rig. No need to buy a new mic or accessory! Use your favorites and save money by using what you already have!

Internal jumpers set any microphone to match any radio. Supplied with one 8-pin round and one 8-pin modular output cable to radio.

## 2-Radio Headphone Selector/Mixer



MFJ-640  
Ship Code A  
**\$49.95**

Combine or select audio from two different receivers -- Great for operating "split" for contests, DXing, or cross-band VHF/UHF satellite. Connect the audio output of 2 receivers to the 3.5mm audio connectors on back of unit. Plug in headphones and you are ready to go. Has 1/4" and 3.5mm stereo headphone jacks -- no adapters! Compact 4¾Wx2¼Hx5D inches.

## SpeechArticulator™ improves intelligibility



MFJ-653  
**\$149.95**  
Ship Code A

MFJ-653 hamProAudio™ Speech Articulator™ greatly improves transmit speech intelligibility for super punch!

Boost highly intelligible band of frequencies centered around 2 kHz by up to 16 dB. Remove low frequencies with little intelligence. Cutoffs are 1.1 kHz and 500 Hz.

## hamProAudio™ Equalizer/Conditioner



MFJ-654  
**\$199.95**  
Ship Code B

More compact and has everything that the MFJ-655 has except for the built-in VU meter. Measures 9Wx3¼Hx5D inches.

SSM-2166 broadcast industry speech IC syllabic compressor adjustable 15 to 1 ratio doubles RF power and low distortion.

A highly effective noise gate smoothly removes annoying background noise picked up during speech pauses. **The results?** Be heard and understood. Powerful, intelligible speech slices through DX clutter! 5Wx1¾Hx4¾D". Output cables included. Optional MFJ-1312D, \$15.95 power cube.

## hamProAudio™ transmit audio Conditioner



MFJ-651  
**\$129.95**  
Ship Code B

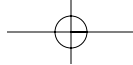
Transmit audio Microphone Conditioner. Downward Expansion noise gate, Compressor, Limiter, low noise Preamp, Universal Mic-Interface, headphone monitor, PTT, Auxiliary-in, RF proof, aluminum case. 9Wx2¼Hx5D in.

## hamProAudio™ transmit audio Equalizer



MFJ-652  
**\$129.95**  
Ship Code B

Voice Band Equalizer (300, 600, 1200, 2400 Hz center frequencies), low noise Preamp, Universal Mic-Interface, headphone monitor, PTT, Auxiliary-in, RF proof, aluminum case. 7¼Wx2¼Hx5D inches.



# MFJ Speech Intelligibility Enhancer

...makes barely understandable speech highly understandable!



MFJ-616  
**\$189<sup>95</sup>**  
 Ship Code B  
 300, 600, 1200 and 2400 Hz. You can boost or cut each by nearly 20 dB.

**"What did you say?" Can you hear but... can't always understand what they're saying?**  
 As we get older, high frequency hearing loss reduces our ability to understand speech. Here's why...

**Research** shows that nearly half the speech intelligibility is contained in 1000 to 4000 Hz range, but contains a miniscule 4% of total speech energy. On the other hand, the low frequencies, 125 to 500 Hz have most of the speech energy (55%) but contribute very little to intelligibility -- only 4%.  
 To dramatically improve your ability to understand speech, you must:  
**First**, drastically increase the speech energy above 500 Hz, where 83% of the speech intelligibility is concentrated.  
**Second**, drastically reduce speech energy below 500 Hz where only 4% of speech intelligibility lies.  
**The MFJ-616** splits the audio speech band into four overlapping octave ranges centered at

control and separate 2 1/2 Watt amplifiers let you equalize perceived loudness to each ear so both ears help.  
 By boosting high and cutting low frequencies and adjusting the balanced control, speech that you can barely understand become highly understandable!  
**Even if you don't** have high frequency hear-

ing loss, you'll dramatically improve your ability to understand speech.  
*QST* for April, 2001 said ...  
*"I expected a subtle effect at best, but I was astonished... The result was remarkably clean, understandable speech without hissing, ringing or other strange effects... made a dramatic improvement..."*  
**Immune** to RFI. Has phone jack, on/off speaker switch, 2 inputs, bypass switch. 10Wx2 1/2Hx6D". Needs 12 VDC.

**MFJ-1316, \$21.95.** For 110 VAC operation. Provides 12 VDC/1.5 Amps.  
**MFJ-72, \$65.80.** All-in-one MFJ-616/618 Accessory Pack. Includes MFJ-392B headphones, two MFJ-281 speakers and MFJ-1316 power supply. **Save \$7!**



## Dual Channel Speech Intelligibility Enhancer

The new MFJ-618 has all of the speech-enhancing features of the MFJ-616 and gives you separately adjustable frequency channels for your left and right ears.  
**This** lets you compensate for deficiencies in your hearing that may be dramatically different for each ear. By equalizing the frequency response of both ears, you vastly improve speech intelligibility.  
**The MFJ-618 Sound-Field Expansion™**



adds a 3-dimensional spatial presence that can greatly improve speech intelligibility by up to an additional 3 dB. It's like hearing and feeling the presence of a person directly in front of you. 10Wx3Hx6D". 12VDC or 110 VAC w/MFJ-1316, \$21.95.



### MFJ ClearTone™: Our most Popular Speaker

**MFJ-281 Plug \$12<sup>95</sup>** in this MFJ ClearTone™ speaker and bring out speech fidelity that you never knew existed. **MFJ-281** restores the smooth sound of sinewaves that CW naturally generates and makes it easy to under-

stand and copy.  
**The MFJ-281 ClearTone™** speaker was carefully designed to improve the intelligibility of speech in the frequency range of 600 to 4000 Hz while reducing undesirable noise, static and hum.  
**3-in.** speaker handles 8 Watts. 8 Ohms impedance, has six feet of cord terminated with a 3.5 mm mono plug.  
**Tiny**, compact 3 3/4x3x2 1/4 inches, but powerful booming sound!

### MFJ CyberEAR™!

**MFJ-388 Tiny powerful MFJ CyberEar™** plugs in and loops over ear -- captures and amplifies sounds by 12 dB!

Extends your hearing range, helps you hear every word at hamfests and club talks -- even if you're on the back row! Great for eyeball QSOs. Volume control, on/off switch. For left or right ear. 3 interchangeable ear plugs. Flesh color -- hardly noticeable. Super lightweight -- 10 grams with battery! Includes batteries. Hear even better -- buy one for each ear! 30 day money back if not absolutely delighted. Not a hearing aid.

**Super CyberEAR™**  
 Hear everything!  
 Capture and amplify sounds up to 50 dB!  
 Left or right ear plugs, volume control, extremely small. Not a hearing aid.

### MFJ Amplified Mobile Speaker

Perfect for mobile use -- great clarity and clear tones on CW and SSB -- excellent swivel mounting bracket! Has fused plug for the cigarette lighter socket of a base station power supply. Large 2 3/4" speaker with a 3-inch fine metal mesh grill reduces undesirable noise, static and hum. 6 watts output, 8 Ohms impedance. 8 ft. cord, a 3.5 mm mono jack plug with 13 foot cord, on/off power switch, gain control knob. Requires 12 VDC at 2 amps for maximum

### MFJ Compact Mobile Speaker

Enjoy superb audio and convenience with this economical mobile speaker. Matches 8 and 4 ohm impedances. Handles 3 Watts. 30-inch cord lets you get it to your rig's speaker output. Tiny 2 1/2x2x3 inches fits anywhere. Tough ABS plastic cabinet is built to last. volume, max 1 watt audio source. Powerful but compact -- 4 3/4Wx3 1/2Hx1 1/4D inches.

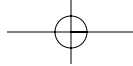
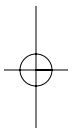
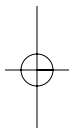
### MFJ Deluxe Communication Station Speaker

**MFJ** brings you ultra high quality communication audio with ham radio's most advanced communication speaker.  
**How?** By using America's most modern speaker design, advanced speaker cone and voice coil materials and construction, and a carefully crafted, acoustically-rigid cabinet.  
**Handsome** black cabinet measures 5 1/4Wx9 3/4Hx6 1/2D in. You won't believe the clarity and depth of the audio when you hear the incredible improvements in speech intelligibility and CW tone. 4-in. full range speaker.  
**It** also reduces listening fatigue. It can literally transform your transceiver!

**The MFJ-385B \$39<sup>95</sup>** smooth, wide range response Ship Code C of the MFJ-385B gives you faithful reproduction with no hint of unwanted resonances and sound coloration. Speech becomes more intelligible and easier to understand.  
**Pure** sine wave tones of CW make copying and tuning in signals easier and faster.

### Amplified ClearTone™ Speaker

**MFJ-382 MFJ's Deluxe ClearTone™** speaker is an excellent 1-watt amplified speaker for many uses.  
**The MFJ-382** gives superb, loud and powerful ClearTone™ audio. Speaker is 3-in. diameter. **Adjustable** from barely audible to high volume, this rugged speaker is sturdy and compact. All metal cabinet with rubber feet. 3 1/2x1 3/4x4 1/2 in. 9 volt battery (not included) or 110 VAC with MFJ-1312D, \$15.95.



**MFJ**

## MFJ Noise-Canceling Filters Wipe Out Interference



MFJ-1026  
**\$199<sup>95</sup>**  
 Ship Code B

*Wipe out noise and interference before it gets into your receiver with a 60 dB null!*  
**Eliminate** all types of noise -- severe power line noise from arcing transformers

and insulators, fluorescent lamps, dimmers, touch controlled lamps, computers, TV birdies, lightning crashes, electric drills, motors, industrial processes.

**It's** more effective than a noise blander because interference much stronger than your desired signal can be completely removed without affecting your signal.

**Works** all modes -- SSB, AM, CW, FM, frequencies from BCB to lower VHF.

**Null** out strong QRM on top of weak rare DX ! You can null out a strong local ham or AM broadcast station to prevent receiver from overloading.

**Use MFJ-1026** as adjustable phasing network. You can combine two antennas to give you various directional patterns.

**Null** out a strong interfering signal or peak a weak signal at a push of a button.

**Easy-to-use!** Plugs between transmitting antenna and transceiver. To null, adjust amplitude and phase controls for minimum S-meter reading or lowest noise. To peak, push reverse button.

**Use** built-in active antenna or an external one. MFJ's exclusive *Constant Amplitude Phase Control™* makes nulling easy.

**RF-sense** T/R switch automatically bypasses your transceiver when you transmit. Adjustable delay time. 12 VDC or 110 VAC with **MFJ-1312D, \$15.95**. Measures 6½X1½X6¼ inches.



MFJ-1025  
**\$179<sup>95</sup>**  
 Ship Code B

**MFJ-1025, \$179.95.**  
**MFJ-1025** is like MFJ-1026 less built-in active antenna, use external antenna. Same size, power requirements.

## MFJ Tunable, Programmable Brick Wall DSP Filter

**MFJ's tunable super DSP filter** automatically eliminates heterodynes, reduces noise and interference simultaneously on SSB, AM, CW, packet, AmTOR, PACTOR, RTTY, SSTV, WeFAX, FAX, weak signal VHF, EME, satellite.

**You** get MFJ's tunable FIR linear phase filters that minimize ringing, prevent data errors and have "brick wall" filter response with up to 57 dB attenuation 75 Hz away.

**Only MFJ** gives you 5 tunable DSP filters. You can tune each lowpass, highpass, notch, and bandpass filter including optimized SSB and CW filters. You can vary the bandwidth to pinpoint and eliminate interference.

**Only MFJ** gives you 5 factory pre-set filters and 10 programmable pre-set filters that you can customize. Instantly remove QRM with a turn of a switch!

**MFJ's** automatic notch filter searches for and eliminates multiple heterodynes.

**You** also get MFJ's advanced adaptive noise reduction. It silences background noise and QRN so much that SSB signals sound like FM.

**The** automatic notch and adaptive noise reduction can be used with all relevant tunable pre-set filters.

**Automatic** gain control (AGC) keeps audio level constant during signal fade.

### Tunable bandpass filters

**Narrow** band signals like CW & RTTY jump out of QRM when you switch in MFJ's tunable FIR bandpass filters.

**You** can tune the center frequency from 300 to 3400 Hz, and vary the bandwidth from 30 Hz to 2100 Hz -- from super-tight CW filters to wide razor-sharp Data filters.

**You** can use two tunable filters together.



MFJ-784B  
**\$279<sup>95</sup>**  
 Ship Code B

For example, tune one to mark, one to space and set bandwidth tight for a super sharp RTTY filter.

**You** can tune the lower cutoff frequency 200 to 2200 Hz and the upper cutoff frequency 1400 to 3400 Hz. This lets you create custom filters for voice, data and other modes. Signals just 75 Hz away literally disappear -- they are reduced 57 dB!

### Automatic notch filter

**MFJ's** automatic notch filter searches for and eliminates multiple heterodynes in milli-seconds. It's so fast, that even interfering CW and RTTY signals can also be eliminated. Selectively remove unwanted tones using the two manually tunable notch filters -- an MFJ exclusive. Knock out unwanted CW stations while you're on CW.

### Adaptive Noise Reduction

**Noise** reduction works in all filter modes and on all random noise -- white noise, static, impulse, ignition noise, power line noise, hiss.

**The** LMS algorithm gives you up to 20 dB of noise reduction. Noise reduction is adjustable to prevent signal distortion.

### 15 Pre-set filters, or customize

**Select** from 15 pre-set filters. Use for SSB, AM, CW, packet, AmTOR, Pactor, RTTY, SSTV, WeFAX, FAX or any mode.

**If** you don't like our pre-set filters, you can program your own -- an MFJ exclusive! Save center frequency/bandwidth,

lowpass/highpass cutoffs, auto/manual notch, noise reduction -- all filter settings -- in 10 programmable filters.

**More MFJ DSP Filter Features**  
**MFJ's tunable Spotting Tone™** -- accurately tunes even the narrowest CW filter.

**MFJ's** exclusive *Adaptive Tuning™* -- tuning rate automatically becomes finer as you narrow bandwidth -- makes narrow filters super easy-to-use.

**MFJ's** exclusive *FilterTalk™* -- sends precise filter settings in Morse code.

**Automatic** notch with variable aggressiveness, quieter 2½ Watt audio amplifier, speaker switch keeps phones always active.

**Manual** and auto notch can be used together. Noise reduction, automatic notch & custom filter saved in memory is selected.

**Accurate** easy-to-use input level indicator, improved manual notch in the CW mode, adjustable line level output, more Mark-Space frequencies and baud rates for data filters and automatic bypass during transmit for monitoring CW sidetone, voice/data by sensing the PTT line.

**A** push-button bypasses your filter -- lets you hear the entire unfiltered signal. 2½ Watt amplifier, volume control, input level control, speaker jack, Push-to-talk sense line, line level output. Measures a compact 9½x2½x6 inches.

**Plugs** between your Xcvr or receiver and external speaker or headphones. 12 VDC or 110 VAC w/**MFJ-1312D, \$15.95**.

### Cable Pack, MFJ-5184, \$9.95.

**Includes** receiver cable, DC cable, 2 open-end TNC cables and power plug.



## MFJ's SSB/CW Audio Filters

MFJ-752D, \$119.95.

All mode dual tunable filter lets you zero in and pull out your favorite stations and notch out interference at the same time. Two independently tunable filters let you peak, notch, low or high pass signals to eliminate heterodynes and interference -- even on the most crowded bands. Tune both filters from 300 to 3000 Hz. Vary bandwidth from 40 Hz to almost flat. Notch depth to 70 dB. Works with any rig. 2

watts for speaker. Inputs for 2 rigs. Switch selectable. Switchable noise limiter for impulse noise through clipper removes background noise. OFF bypasses filter. Use 9-18 VDC or 110VAC with MFJ-1312D, \$15.95. 10x2x6 inches.

### MFJ-751B, \$89.95.

Zero in SSB/CW with tunable peak/notch filters. Tune 300-3000 50 dB notch. 1½x4¾x5 inches.



**MFJ-722B, \$99.95.** The "Optimizer" switch selectable SSB/CW filter offers razor sharp filtering with switch-selectable bandwidths (80, 110, 50, 180 Hz centered on 750 Hz), steep-skirted SSB filtering, 300-3000 Hz tunable 70 dB notch filter. Plug into phone jack. Speaker. Built-in 2-Watt amp. Headphone jack. Use 9-18 VDC or 110 VAC with optional MFJ-1312D, \$15.95.



# Multireader™ Taps Into Secret Signals



MFJ-462B

**Ever wonder** what those mysterious chirps, whistles, and buzzing sounds are on the short-wave bands?

**Much** of it is RTTY, ASCII, CW and AMTOR (FEC) signals passing commercial, military, diplomatic, weather, aeronautical, maritime, amateur and other traffic.

**Tap into these "secret" signals** Plug this self-contained MFJ **Multireader™** into your shortwave receiver's earphone jack. Then watch these mysterious signals turn into exciting text messages as they scroll across an easy-to-read LCD display. No computer, interface, special cables or other equipment is needed.

**Eavesdrop** on the latest breaking news as press agencies from all over the world relay them on RTTY -- it's like having a private wire service in your home. Copy RTTY

**\$199<sup>95</sup>**  
Ship Code B

weather stations from Antarctica, Mali, Congo and many others.

**Listen** to military traffic passing from Panama, Cyprus, Peru, etc. Catch diplomatic, research, commercial and maritime traffic. Listen to maritime users, diplomats and amateurs send and receive error free messages using various forms of TOR (Telex-Over-Radio).

**Monitor** Morse code communications from hams, military, commercial, aeronautical, diplomatic and maritime coastal stations from around the world.

**There's** plenty of exciting non-voice traffic on shortwave that'll keep you fascinated . . . traffic you can't read unless you have a decoder.

**Printer monitors 24 hours a day** MFJ's exclusive **TelePrinterPort™** lets you monitor any station 24 hours a day by printing their transmissions. Plug your Epson compatible printer into the MFJ-462B printer port and you're ready to print. **Save** several pages of text in 8 K of memory for later review or re-reading.

**Consistently** get solid copy from MFJ's high performance **PLL** (phaselock loop) **modem technology**. Digs out weak signals buried in noise and even tracks slightly drifting signals. Mark and space tones are copied

to give you greatly improved decoding under adverse conditions.

**Easy to use, tune and read**

**Just** push a button to select modes and features from a menu. A precision tuning indicator makes tuning your receiver for best copy on all modes quick and easy.

**The** 2 line 16 character LCD display has contrast adjustment. One line comes in at speed of signal, second line is delayed so you catch every exciting word!

**Copy** most standard shifts and speeds in all modes. MFJ's **AutoTrak™** automatic Morse Code speed tracking helps MFJ-462B to track and decode high speed CW.

**MultiReader™ Accessories**

Use 12 VDC or use 110 VAC with MFJ-1312D AC adapter, \$15.95. MFJ-462B measures 6 1/4"Wx2 1/2"Hx6 1/4"D inches.

**MFJ-5162, \$7.95.** Receiver cable connects MFJ **Multireader™** to your radio's external speaker (3.5mm jack).

**MFJ-5412, \$11.95.** Printer Cable is 25-pin cable for Epson compatibles.

**MFJ-5163, \$10.95.** Speaker "Y" cable.

**MFJ-5300, \$6.95.** Three foot, 3.5 mm stereo extension cord with volume control. Can use for mono radio speaker output to set audio level to external devices. Has pocket clip for portable use.

**MFJ**

## MFJ Shortwave Regenerative Receiver Kit

**Remember** hunching over your regenerative receiver for hours with a pair of headphones pressing uncomfortably against your ears?

**You** could hear just about anything that fancy superhets could hear. Sure, you had to play around with the regeneration control just right and have a steady hand to tune but you could hear 'em.

**Don't** you wish you could relive some of this fun and excitement of your youth -- share some of it with your kids and grandkids? Well, you can -- with the MFJ-8100 World Band Shortwave Radio Kit.

**Spend** a fun evening with your child or grandchild and help him put this simple kit together. When the two of you finish, watch his glow of excitement as he tunes the world bands -- just like you did -- and remember for

MFJ-8100K  
**\$79<sup>95</sup>**  
Kit  
Ship Code B



life. It might inspire a career in electronics.

**This** baby performs. It has an RF stage that really picks up the weak ones and it goes into regeneration smoothly without pops or dead spots. Stations all over the world will come in loud and clear with just a 10 foot wire antenna strung outside or across the room.

**With** a 10 foot wire antenna, you'll be amazed at what you can hear -- stations all over the world will come in loud and clear.

**Listen** to international shortwave broadcasts, hams on SSB and CW, WWV, RTTY,

packet and much more. Covers all or part of 75/80, 49, 40, 30, 31, 20, 25, 22, 19, 17, 16, 15, and 13 Meters in five bands.

**Range A** covers: 3.51-4.31 MHz, Range B: 5.95-7.40 MHz, Range C: 9.56-12.05 MHz, Range D: 13.21-16.4 MHz, and Range E: 17.6-22 MHz.

**Has** vernier reduction drive, bandswitch, volume and RF gain controls, uses 9V battery and is built into a rugged aluminum cabinet.

**Two** earphone jacks let you and your child or grandchild listen together with your Walkman style earphones or plug-in speakers. Measures 7Wx6Hx2 1/2 D inches.

**MFJ-8100K, \$79.95.** Shortwave regenerative receiver kit. You stuff the components, solder and assemble!

**MFJ-8100W, \$109.95.** Shortwave Regenerative receiver, wired and tested at MFJ and **ready-to-operate!**

## MFJ Shortwave Radio Communication Headphones

**MFJ-392B** is perfect for amateur radio and shortwave radio listening. Great for all modes -- SSB, FM, AM, data and CW.

**Each** earphone its own volume control.

**Superb** padded headband and **ear cushioned** design makes listening extremely comfortable.

**You'll** forget they're even on as you listen to stations all over the world!

**High-performance** driver unit reproduces enhanced communication sound. Signals never sounded so **crystal clear!**

**Bring** out speech fidelity you never knew existed. Has free 1/4 inch phono adaptor.

**Has** gold plated plug and cord. Super lightweight earphones (8 ounces) come with 9 feet of cord for roaming around.

**MFJ-392B** handles 450 mW and has a fre-

quency response of 20-20,000 Hz.

Impedance is 32 ohms, sensitivity is 102 dB/mW.

**Works** in stereo mode

with 3.5 mm plug. Works

mono with 1/4 inch adaptor. **MFJ-392B \$29<sup>95</sup>**  
Ship Code A



## MFJ LW/MW/SW Preselector/Tuner

**MFJ-956** boosts your favorite listening stations while rejecting images, intermod and phantom signals.

**Greatly** improves your reception from 0.15 to 30 MHz, especially below 2 MHz.

**Super** easy to operate, select bandswitch and tune!

**Has** Tuner Bypass and Ground Receiver positions.

**All** black aluminum cabinet is a super compact 2x3x4 inches.

**Input** and Output are SO-239 connectors.

MFJ-956  
**\$69<sup>95</sup>**  
Ship Code A



## MFJ Receiver Antenna Tuner/Preamp

MFJ-959C  
**\$119<sup>95</sup>**  
Ship Code A

**Don't** miss rare DX due to signal power loss between your receiver and antenna. The MFJ-959C provides proper impedance matching to transfer maximum signal from antenna to receiver. Covers 1.6 to 30 MHz. 20 dB preamp with gain control boosts weak stations. 20 dB attenuator prevents overload. Select from 2 antennas and 2 receivers. Measures 9x2x6 inches. Use 9-18 VDC or 110 VAC with optional adapter, **MFJ-1312D**, \$15.95.



**MFJ**

## Indoor Tuned Active SWL Antenna Covers 0.3 to 40 MHz

*MFJ invented the tunable active antenna! New technology uses cascode FET/bipolar transistor and a gigahertz bandwidth buffer*

MFJ invented the tunable active antenna! Numerous copies have been made without success -- including most recent ones.

**Why?** Because MFJ has made continuous improvements where others have not. MFJ-1020C has been completely redesigned and new technology.

New technology uses a cascode FET/ bipolar transistor and a gigahertz bandwidth buffer.

It improves gain and selectivity, reduces noise and intermod, and is NOT prone to self-oscillations that can severely

damage your receiver.

With the MFJ-1020C tuned indoor active antenna you'll rival reception of outside wire antennas hundreds of feet long and pick up signals loud and clear from all over the world.

**World Radio TV**

**Handbook** says MFJ-1020 is a "fine value . . . fair price . . . best offering to date . . . performs very well indeed."

MFJ-1020C  
**\$99<sup>95</sup>**  
Ship Code A



MFJ's unique tuned circuitry minimizes intermod, improves selectivity and reduces noise outside the tuned band. You can also use it as a tuned preselector with an external antenna.

Covers 0.3 to 40 MHz including VLF, AM broadcast, all shortwave and all amateur radio bands.

Has Tune, Band, Gain, On-Off/Bypass controls and SO-239 coax connectors. Use 9 volt battery, or 12 VDC or 110 VAC with **MFJ-1312D, \$15.95.** 6Wx2Hx5D inches. Includes telescoping whip.

## 54" Active Outdoor Antenna



MFJ-1024  
**\$159<sup>95</sup>**  
Ship Code B

**World Radio TV Handbook** says MFJ-1024 is a "first rate, easy-to-operate active antenna . . . quiet . . . excellent dynamic range . . . good gain . . . very low noise factor . . . broad frequency coverage . . . excellent choice . . ."

Mount it outdoors away from electrical noise for maximum signal and minimum noise. Has convenient mounting holes for easy installation.

MFJ-1024 covers 50 KHz to 30 MHz. 20 dB attenuator, gain control, ON LED.

Switch selects two receivers and auxiliary or active antenna. Control unit measures a compact 6Wx3Hx5D inches.

Remote unit has a 54-inch telescopic whip, 50 feet of coaxial line and PL-259

connector. Measures 3Wx2Hx4D inches. Use 12 VDC or 110 VAC with **MFJ-1312D, \$15.95.**

## Compact 0.3 to 200 MHz antenna

Your ham band only antenna does great on the ham bands . . . but this MFJ all band active antenna will help you hear strong signals from all over the world from 300 KHz to 200 MHz -- including low, medium, shortwave and VHF bands.

Enjoy shortwave newscasts, ship-to-shore, airline, commercial RTTY and others.

It also improves weak noisy scanner radio reception from high to low band VHF -- hear signals you couldn't hear before.

A J-310 FET handles strong signals and noiseless feedback circuit gives you excellent low noise reception. 4.5 GHZ MRF-901 transistor lets you receive weak signals well into VHF.

On/off switch, power on LED, SO-239 coax connector and detachable 20 inch telescoping antenna. 9 volt battery or 110 VAC with **MFJ-1312D, \$15.95.** Measures 3Wx1 1/4Hx4D inches.

MFJ-1022  
**\$69<sup>95</sup>**  
Ship Code A



## High Dynamic Range Passive Preselector Can't Overload



MFJ-1046  
**\$119<sup>95</sup>**  
Ship Code A

MFJ's new Passive Preselector has extremely high dynamic range! Improves performance of nearly any HF or shortwave receiver/transceiver. Vastly improves most expensive receivers. Especially helpful to broadband front-ends prone to overload.

Protects sensitive receivers from damage (including switching diodes, attenuator resistors) from very strong signals: multi-transmitter, multi-band ops -- contests, field-day, hams, CBers, TV/FM/AM stations.

Eliminates phantom signals by sup-

pressing out-of-band signals causing intermod, blocking, cross modulation. Completely eliminates 2nd order intermod.

MFJ's unique Hi-Q series tunable circuit gives you superb performance.

The tunable series tuned circuit works into a very low impedance formed by broadband toroid transformers.

Has narrow bandwidth, excellent stop-band attenuation, very low loss, constant bandwidth and gain over each band.

Excellent attenuation in adjacent bands. The entire 1.6 to 33 MHz HF band is covered in five overlapping bands.

An air variable tuning capacitor, 1.8 to 1 tuning range and a vernier reduction drive gives you precision tuning.

Measures 7 1/2x2 1/2x3 1/4 inches.

## Preselector with T/R Relay



MFJ-1048  
**\$139<sup>95</sup>**  
Ship Code A

Like MFJ-1046 but adds an RF sense transmit and receive switch with adjustable time delay to automatically bypass your MFJ-1048 when you transmit.

Also adds PTT line Transmit and Receive switching. MFJ-1048 connects between antenna and transceiver. Measures 7 1/2x2 1/2x3 1/4 inches.

Use 12 VDC or 110 VAC with optional adapter, **MFJ-1312D, \$15.95.**

## All-Band Transceiver Preselector

MFJ-1040C  
**\$119<sup>95</sup>**  
Ship Code A

Lets you copy weak, barely readable signals. Rejects out-of-band signals, images. 1.8 to 54 MHz. Get up to 20 dB gain. Also has Gain control. Uses a cascode FET/bipolar transistor for low noise, high gain with a 20 dB attenuator. You can connect 2 antennas and 2 receivers with SO-239 connectors. You can automatically bypass the MFJ-1040C when you are transmitting to 125 watts. Delay control. Has jack for push-to-talk. 6 1/2Wx2 1/2H x4D inches. Use 9-18 VDC or optional 110 VAC, 300 mA adaptor **MFJ-1312D, \$15.95.**



## All-Band Receiver Preselector

MFJ-1045C  
**\$89<sup>95</sup>**  
Ship Code A

Lets you copy weak, barely readable signals. Rejects out-of-band signals, images. 1.8 to 54 MHz. Get up to 20 dB gain.



MFJ-1045C, \$89.95, is similar to the MFJ-1040C, but it does not have the attenuator, transceiver auto bypass, delay, or PTT that the MFJ-1040C does. Compact 6Wx2 1/4Hx6 1/4D inches.

# MFJ-890 DX Beacon Monitor

MFJ

Get up-to-the-minute worldwide DX band conditions in minutes on 14, 18, 21, 24, 28 MHz bands using the International Beacon Network of 18 transmitters around the world!

MFJ-890  
**\$119<sup>95</sup>**  
Ship Code A

MFJ's DX Beacon Monitor lets you see which beacon you're hearing on your transceiver -- an LED lights on its world map to show you the beacon location and where to point your antenna.

It's fascinating to hear and watch each beacon location light up as they become active across the world. Great for DXers, contesters, ragchewers and SWLers.

The International Beacon Network provides a reliable source of signals for determining HF propagation 24 hours a day.

It consists of 18 beacons around the world. Each beacon transmits on 14.1, 18.11, 21.150, 24.93 and 28.2 MHz. The transmit sequence moves westward from New York across North America, Asia, Pacific to Africa, Europe, South America.

On each frequency, each beacon transmits for ten-seconds -- its call sign at 22 wpm CW and a one-second dash at 100 watts and three one-second dashes at 10, 1, and 0.1 watts.



When each beacon completes a transmission it goes silent on that band and switches to the next higher band.

For more information see Oct/Nov, 1994, Sept, 1997 QST and Jan 1999, Sept/Dec 2001, Jan 2002 Practical Wireless of U.K.

The more beacons you hear, the more

open the band is to different parts of the world.

The more dashes you hear per beacon, the better the quality of propagation and the more robust the band is. If you hear the 100 milliwatt dashes from many beacons you know it's wide open!

In just three minutes you'll know how band conditions are worldwide.

You don't have to copy CW at 22 wpm to identify a beacon. As you hear a beacon, an LED instantly lights on a world map to show you its location. You can positively identify each beacon -- even if the signal is weak, fluttery or distorted.

The MFJ DX Beacon Monitor has a built-in WWVB atomic clock receiver to provide ultra precise synchronization with the GPS-synchronized beacons. You also may manually sync the Monitor (the Monitor is not a receiver).

MFJ-890 is a self-contained standalone unit. 6<sup>3/4</sup>Wx5<sup>1/4</sup>Hx3D". Use 12 VDC or 110 VAC w/optional MFJ-1312D, \$15.95. No antenna/radio connection required.

MFJ-890UK, \$119.95 (for England).

## MFJ Micro ATV Transmitter Transmits Live Pictures on Cable TV Channels



MFJ-8708  
**\$159<sup>95</sup>**  
Ship Code A

This tiny MFJ Micro ATV Transmitter™ lets you transmit a high quality Amateur Television video signal on 433.97 MHz (cable channel 58, 59, or 60). All you need to do is plug in an antenna and a video source -- your camcorder, camera, VCR or other video source.

With an antenna and a TV set (or down

converter/ TV) tuned to cable channel 58, 59, or 60, you'll have a complete ATV video station.

The MFJ-8708 puts out a solid 50-100 mW signal, capable of transmitting up to 1.8 miles with a 3-element beam. By using a suitable UHF power amplifier and high-gain antenna, you can enjoy two way ATV communications over many, many miles with fellow ATV hams.

To transmit video simply connect video to the RCA phono connector and antenna to the BNC connector and connect a 9 volt battery or other 9 VDC source.

You can use any standard NTSC or PAL composite video (1V pk-pk) source.

The MFJ Micro ATV Transmitter™ can only be operated by a Technician class or

higher licensed Radio Amateur. All transmissions must be directed to at least one other licensed Radio Amateur.

MFJ-8708, 4 channel, cable channels 58, 59, 60 and test channel. Weight only 1 1/2 ounces, less battery. Has audio and video inputs.



MFJ-8704  
**\$119<sup>95</sup>**  
Ship Code A

MFJ-8704, cable channel 59 video only. Weighs only one ounce, less battery (battery, quarter not included).

## MFJ 4.5 Watts ATV Transmitter Amazingly compact 2.35Wx2.8Dx.75H inches, but super powerful!



MFJ-8709  
**\$199<sup>95</sup>**  
Ship Code A

This super high performance amateur radio ATV transmitter module is capable of putting out a whopping 4.5 Watts! The RF power output is controlled by an analog potentiometer from near zero output to 4.5 Watts maximum. Current draw varies with power level selected.

Frequency control is provided by means of a digital integer-N, phase locked loop. Dual PLLs provide a frequency locked video carrier and an audio sub-carrier. Transmit frequency is selected via a four position dip switch. Four standard US ATV frequencies 426.25, 427.25, 434.00, and 439.25 MHz on channels 58, 59 and 60.

Video modulation is accomplished by a 12-bit digitally controlled DAC-digital to analog controller. A specially embedded software algorithm controls the modulation depth and pre-distortion level to deliver an ultra-clean video signal to the final RF amp.

High power transmitting over 0.5 Watt

output requires an external heatsink. When provided with an external heatsink, MFJ-8709 can be used for extended key down operation. Reverse polarity protected.

**RF power output:** 4.5W Max, 50 Ohm  
**Audio Subcarrier:** 4.5 MHz  
**Spurious Outputs:** Better than -40dBc  
**Phase Noise:** -75 dBc/Hz @ 500 KHz  
**DC power in:** 12-13.5 V Max, (+/-100mV)  
**Current Draw:** 2.2 Amps @max output  
**Frequency control:** XTAL ref. to 4 MHz  
**Frequency stability:** +/-20 PPM  
**Video In:** Composite NTSC 1V P-P  
**Audio In:** Line level 200-250 mV RMS  
**Operating Temp:** -20° to +85° Celsius  
**Size:** 2.35Wx2.8Dx.75H inches

**MFJ**

# MFJ 5-watt CW Transceivers

*New improved ultra-hot receiver...enjoy DXing or ragchewing wherever you go...brush up on CW and upgrade...no-compromise performance...at a terrific price!*

**Easy Operation:** The most user-friendly radio you'll ever own. Sets up in seconds -- no microprocessor mumbo jumbo.

**Great Sensitivity:** New *hotter-than-ever* superhet receiver brings weakest signals in at full volume (super-quiet FET post amp stage in the IF filter makes this the best CW receiver going).

**Excellent Selectivity:** Tight CW bandwidth crystal ladder filter fights unwanted QRM and noise to the maximum.

**Smooth and Stable VFO:** Wide-spaced reduction drive VFO capacitor glides slowly across the easy-to-read dial.

**True RIT:** RIT control has center-detent - makes listening or calling off-frequency a snap!

**Easy on your Ears:** Smooth AGC tracks only the signals you want to hear -- it never locks onto strong signals outside the audio bandpass. MFJ's *InstantRecovery AGC™* snaps the receiver back at full gain after transmitting.

**Built-in speaker:** High efficiency 3" speaker driven by 100 mW of audio gives great volume.

**Rugged Transmitter:** Motorola power amplifier transistor delivers full QRP output, tolerates opens and accidental shorts without damage.

**Sinewave Sidetone:** Pure 700 Hz CW sidetone makes sending as much fun as receiving!

MFJ-9040/9030/9020  
MFJ-9017/9015  
**\$209<sup>95</sup>**

Each. Choose band.  
Ship Code B



**Semi-QSK:** Set adjustable hold transmit/receive switching to suit your normal sending speed or set it for full QSK during contests.

**Easy to Power:** It uses little power -- only 50 mA average on receive and 1.2 amp peak on transmit. Perfect for battery operation in remote locations!

**Rugged Construction:** MFJ CW radios are built on G-10 double-sided plate-through PC boards in our plant. Rugged all-metal cabinet with silkscreened brushed stainless steel front panel and black metal cover.

### Frequency Coverage:

*Choose your favorite band!* 40 & 15 Meter models cover all your favorite band segments -- makes a perfect "first radio" for new upgrading CW Loving hams.

- MFJ-9040** covers 7.000-7.150 MHz;
- MFJ-9030** covers 10.100-10.150 MHz;
- MFJ-9020** covers 14.000-14.075 MHz;
- MFJ-9017** covers 18.068-18.110 MHz;
- MFJ-9015** covers 21.000-21.200 MHz.

### Integrated CW Station

*Radio, tuner, power pack fasten together to form a tiny 6X6.5X8.5-in. integrated CW station.*

**\$384.80** buys a complete CW station. Includes CW transceiver, \$209.95; MFJ-971 tuner, \$129.95; MFJ-4114 power pack, \$79.95; portable antenna, \$39.95 . . . order: MFJ-9140B, 40M; MFJ-9130B, 30M; MFJ-9120B, 20M; MFJ-9117B, 17M; MFJ-9115B, 15M. <sup>\$459<sup>95</sup></sup> if purchased separately.

**MFJ-27, \$6.95**, carry handle. **Save \$!**



## Great SSB/CW Accessories for your 90 Series MFJ Transceivers

**MFJ-902B, Now with 6 Meters!**

**\$109.95.** Tiny Travel Tuner, 4 1/2 x 2 1/4 x 3 inches, fits in the palm of your hand!



Handles a full 150 Watts, covers 80-6 Meters, has tuner bypass switch, tunes nearly anything! Perfect for backpacking, traveling, camping, etc. Great for rigs like IC-706MKIIG, Yaesu FT-100D, Kenwood TS-50.



**MFJ-971, \$129.95.** 200 Watt PEP Antenna Tuner also has 6 Watt range setting for QRP. Covers 1.8-30 MHz. 4:1 Toroid Balun is built in for balanced lines. Stackable with your MFJ-90 Series Transceivers.



**MFJ-561, \$24.95.** Miniature lightweight iambic paddle is just 1 3/4 W x 1 3/4 D 3/4 H inches and weighs just 2 1/2 ounces -- tiny enough to fit in an Altoids<sup>®</sup> tin (cord and all!) -- great for traveling with QRP or "big" rigs!



**MFJ-402, \$69.95.** Ham radio's tiniest electronic keyer with built-in iambic paddle! It's a *nano-size* 2x3x1 inches and weighs just 3 1/2 ounces! Speed adjusts 5-65 WPM, weight 25-75%, has iambic mode A or B, normal or "bug" mode and reverse.

## Hip-pocket size QRP Cub CW transceiver



MFJ-93XXK  
**\$99<sup>95</sup>**

Kit, Ship Code A

**MFJ QRP-Cub™** Trans-

ceivers use surface mount technology to achieve big performance in a pocket-size.

The kit version has all SMT parts mounted and soldered. You just insert and solder the "through-hole" parts such as the connectors, inductors and trimmer caps.

**Designed** by QRP-ARCI hall-of-famer K1BQT for real world low-power operating conditions. Buy all or choose from 80, 40, 30,

20, 17, or 15 Meters. Specify band in "XX" area of model number.

**Hot receiver** with 0.2 uV sensitivity, low noise, sharp passband crystal filter, Differential mode AGC, rock steady, over 80 dB signal range, robust AF output, 2 Watts thru 20 Meters, 1 Watt 15/17 Meters.

**Power** adjustable to zero, full QSK for smooth break-in, natural sidetone, shaped keying, custom TX offset, receiver passband center, low power drain. Tiny 3 3/4 W x 1 1/2 H x 4 1/2 D inches. Wired unit covered by MFJ's *No Matter What™* warranty.

**MFJ-93XXW, \$149<sup>95</sup>.** Wired & tested cub. Specify band in "XX" portion of model #.

## Portable and QRP Power Supplies and Accessories

**MFJ-4110, \$59.95.** Portable AC power supply. Connect to MFJ radios. LED indicates when power is applied. Output is approximately 13.8 VDC at 1.2 amps.



**MFJ-416, \$49.95.**

CW option kit for your MFJ-9406 six meter and your MFJ-9402 two meter adventure transceivers.

**MFJ-726, \$49.95.** Narrow audio filter built for MFJ CW transceivers.

**MFJ-4114, \$79.95.**

AC Power supply/Battery Pack uses Ni-Cd D cells or alkaline D cells (not included). Matches MFJ radios. Output is 13.8 VDC at 1.2 amps. Voltage regulated. Ni-Cd charge circuit.



**MFJ-412, \$49.95.** Curtis Chip Iambic Keyer Module for your MFJ 90 Series Transceivers. Use your MFJ paddles with the MFJ-412 and your transceiver for *complete CW fun!*

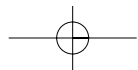
## Folded Dipole Portable Antennas

Single band, lightweight, folded dipoles are perfect for MFJ QRP rigs. Low SWR, direct coax feed, 200 Watts.



**\$39<sup>95</sup> each!**

Perfect for MFJ Rigs! **MFJ-1774B** (40M); **MFJ-1773B** (30M); **MFJ-1772B** (20M); **MFJ-1771B** (17M); **MFJ-1770B** (15M); **MFJ-1770C** (10M); **MFJ-1776B** (6M).



# HF SSB Travel Radios™ are Feature-Packed

*...the most powerful 12 watt radios you'll ever own ... hot receiver ... potent speech processing ... rugged transmitter ... proven on-air design ... real analog S-meter ... powerful audio*

Turn on your new MFJ SSB transceiver and you'll marvel at how well it performs.

**Weak stations** roll in with surprising clarity, faithfully reproduced by a single conversion receiver. On transmit, MFJ's exclusive **ConstantCurrent™** speech processor cuts thru noise and QRM like a far more complex radio.

**Take** this performance along on your next vacation or business trip -- the MFJ transceiver, microphone, power supply, and antenna can easily fit into your brief case or carry-on bag.

**Simple operation:** No microprocessor mumbo-jumbo -- on the air in minutes!

**Great sensitivity:** Features a quiet double balanced mixer front-end, single conversion clarity and plenty of gain. If a signal is there, you'll get it loud & clear!

**Analog S-Meter:** A real calibrated S-meter -- not a useless bargraph -- that makes adjusting an antenna tuner or finding the best beam heading clear-cut.

**Excellent Selectivity:** 8 poles of tight IF



filtering cuts adjacent chatter and focuses transmitter power where needed.

**Smooth VFO:** No annoying synthesizer jump or obscure keypad commands! Effort-less tuning, custom reduction-drive ball-bearing capacitor.

**Powerful audio:** Big audio -- even in noisy locations from a special Signetics audio chip and rugged 3 inch speaker. One Watt audio output at 10% THD.

**Low Current Requirements:** You'll

never have to lug around a heavy power supply to run this radio.

**Rugged Transmitter:** Bullet-proof output transistor runs cool, easily tolerates 3:1 VSWR and feedline shorts or opens.

**Built to last:** Conservative design, plate-through PC board, quality components, handsome silkscreened front panel and tough metal case ensure years of dependable service.

**MFJ-9415** covers 21.200-21.400 MHz.

**MFJ-9417** covers 18.08-18.17 MHz.

**MFJ-9420** covers 14.150-14.350 MHz.

**MFJ-9440** covers 7.150-7.300 MHz.

**MFJ-9475** covers 3.750-4.000 MHz.

**Draws** 50-100 mA on receive and 1.2 amps peak on transmit at 13.8 VDC. 2 1/2x6 1/2x6 inches.

**MFJ-415B, \$49.95.** CW module for your MFJ-9420 and MFJ-9440, a must for DXers. Provides semi-QSK break-in and sidetone. Not compatible with MFJ-9415/9417/9475 models.

**MFJ-9415/MFJ-9417**

MFJ-9420

**MFJ-9440/MFJ-9475**

**\$259<sup>95</sup>**

\$269.95 with mic

Ship Code B

## MFJ SSB Adventure Radios



MFJ-9402  
**\$309<sup>95</sup>**

(\$319.95 with MFJ-290 mic)  
Ship Code B

MFJ-9406/9410/9412  
**\$279<sup>95</sup>**

(\$289.95 with MFJ-290 mic)  
Ship Code B

*... take on mountain tops, down cool streams, overseas, on your bicycle trip, etc. . . .*

**Choose from 2/6/10/12 Meters!**

**MFJ-9406** for 6 Meters -- the magic band -- can economically open to you the exciting propagation at 50 MHz, not to mention local ragchews.

... And you can take this little set anywhere ... on top of mountains, down cool streams, overseas, on your bicycle trip, campgrounds, etc.

Your little MFJ Adventure Radio can combine with your other outdoors hobby for an even more enjoyable experience!

You get full coverage of 50.0 to 50.3 MHz with power output of 10 Watts PEP.

**MFJ-9402**, 2 Meters operates SSB and (optional) CW with 7 Watts output, 144.0-144.3 MHz.

**MFJ-9410**, 10 Meters packs 20 Watts SSB PEP output. You'll be amazed at the clarity of its receiver. Covers 28.3-28.6 MHz.

**MFJ-9412**, Adventure Radio for **12 Meters**. 20 Watts SSB and CW PEP output and covers 24.890-24.990 MHz.

Adventure radios are easy to operate: just turn on and go!

They all sport MFJ's exclusive **ConstantCurrent™** syllabic speech processing for an added 4 to 6 dB of punch.

All four Adventure radios fea-

ture single-conversion superhet receivers with a low-noise front end and double-balanced mixer to fight intermod and dig deep, and a 2.3 kHz crystal ladder filter.

All Adventure radios include a built-in low pass filter to help avoid TVI.

You also get real analog S-meters that double as speech processing level monitors, analog tuning with no unexpected rate shifts or stair-stepping, powerful one-half watt of audio from their 3 1/2 inch top-mount speakers, and a solid-state FET switch to key an external amplifier.

They're energy efficient, operating from a 2 amp AC supply (3A for the model 9410) or from a 12 volt battery.

**MFJ-416, \$49.95.** Optional CW module for Adventure rigs.

Adventure Radios are built-to-last through conservative design, premium quality, plate-through PC boards, quality components, handsome silkscreened aluminum faceplate and tough cabinets.

Fit an Adventure Radio just about anywhere: each is just 2.5X6.5X6 inches.

**Special offer --** add an MFJ-290 microphone for just \$10 more.

## MFJ Adventure Accessories

**MFJ-1762, \$99.95.** 3-element 6 Meter yagi quadruples your effective radiated power over a half-wave dipole. 6 foot boom, 2 lbs. Can use TV rotator and mast. Handles 300 Watts PEP SSB. Mounts vertically or horizontally. Current balun decouples feedline. Great front-to-back ratio.



**MFJ-1756, \$99.95.** Omni-directional low-angle vertical radiator lets you work plenty of DX in all directions even with low power. **GroundIsolated™** radial system eliminates common mode current paths. Reduces undesirable feedline/supporting structure radiation. 55-inch. strong aluminum radiator.

**MFJ-1896, \$69.95.** 6-Meter Moxon antenna for limited space features low SWR and a broad cardioid pattern with 5.5-dBi forward gain, high front-to-back ratio. Element span is a compact 7 feet on a 34 inch boom with a turning radius of under 4 feet. It's winter-storm tough but extremely lightweight, under 5 lbs. Handles 1 kW. Feedpoint is an SO-239 pigtail. It's the perfect choice for getting on the "magic" band as the sun spot count rises and legendary band openings return. Also, it's your best choice to take on those exciting mountain-topping and rover adventures!



**MFJ-1736, \$29.95.** Hang this 6 Meter J-pole in the clear. Omni-directional full size 1/2 wave antenna with low angle radiation beats 1/4-waves.

**MFJ-1776B, \$39.95.** Low SWR 6-Meter folded dipole. **MFJ-1770B, \$39.95.** (10 Meters).

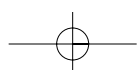
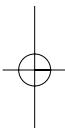
**MFJ-906, \$99.95.** 6 Meter antenna tuner with lighted cross-needle meter (with **MFJ-1312D, \$15.95**). 100 Watts FM, 200 Watts SSB PEP. **MFJ-903, \$69.95,** Same as MFJ-906, less meter (See Page 6).

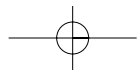
**Mirage A-1015-G** 150 watt output 6-meter amplifier with built-in GaAs FET receiver pre-amp. \$389. See page 134 for full description.

**MFJ-290** dynamic handheld mic for all MFJ SSB Adventure Radios™, \$29.95 when ordered separately.

**MFJ-4110 Portable AC Power Supply, \$59.95,** fits in your pocket and is a perfect companion for your radio-on-the-go. 13.8 VDC output at 1.2 Amps.

**MFJ-4114 Rechargeable AC Power Supply, \$79.95,** with battery pack uses Ni-Cad D cells or alkaline D cells (not included). Switch-selectable AC or batteries. Output 13.8VDC, 1.2A. Page 31.





## MFJ USB-to-Radio Multimode Interface

Sign up for the digital revolution and explore a whole new world of amateur radio excitement using MFJ's universal USB radio interface!

The new MFJ-1204 USB Radio Interface is exceptionally easy to setup and use. However, simplicity doesn't mean compromised performance. Here are just a few of the MFJ-1204's advanced features:

- Full USB connectivity
- Powered by USB port
- Dedicated on-board sound card
- Quick plug-and-play connectivity
- Incredibly easy to adjust and operate
- Works with all digital modes
- Dozens of free downloadable programs
- Innovative circuitry eliminates delay control
- Complete line of interface cables
- Low cost, small size, light weight
- Perfect for base station, portable, or "go-kit" apps

**Initial** no-solder jumpers take only a second to install, and once in place, they're locked in until you decide to change radios. To hook up, simply connect the MFJ-1204 to any free USB port on your computer and plug the appropriate interface cable into the back of your radio. *That's it!* No need to disconnect the microphone or fumble around with multiple patch cords to get started. Convenient front-panel controls set Receive and Transmit levels, and there's no front-panel "Delay" to adjust because the MFJ-1204 controls your radio's PTT line using a unique internal detector circuit.

**Transmit** and receive using traditional modes such as CW, RTTY, SSTV, AMTOR, PSK31, and EchoLink, or explore newer modes like MT-63, WINMOR, WSPR, and WSJT-X. In fact, new experimental modes

**New!**  
MFJ-1204  
**\$99<sup>95</sup>**  
Ship Code A  
Includes cable



**Plug & Play!**

are emerging all the time. If your radio can pass the signal and computer can run the mode's online software, MFJ-1204 sound card and computer will handle the rest!

**Just** select a cable configured for your radio, plug it in, and go. The signal path between the radio and computer is completely isolated against ground loops and common-mode noise.

**Prewired Interface cables Included. Add'l Cable, \$19.95**

| MFJ-1204 w/cable, *99 <sup>95</sup> | Add'l Cable p/n *19 <sup>95</sup> | Description   |
|-------------------------------------|-----------------------------------|---|
| MFJ-1204P4                          | MFJ-5704P                         | For 4-Pin Round Mic Connector                         |
| MFJ-1204P8                          | MFJ-5708P                         | For 8-Pin Round Mic Connector                         |
| MFJ-1204J11                         | MFJ-5711J                         | For RJ-11 Mic Connector                               |
| MFJ-1204J45                         | MFJ-5745J                         | For RJ-45 Mic Connector                               |
| MFJ-1204D5                          | MFJ-5705D                         | For 5-Pin DIN Data / Accessory Port Connector         |
| MFJ-1204D8                          | MFJ-5708D                         | For 8-Pin DIN Data / Accessory Port Connector         |
| MFJ-1204D13I                        | MFJ-5713DI                        | For ICOM 13-Pin DIN Accessory Port Connector          |
| MFJ-1204D13K                        | MFJ-5713DK                        | For Kenwood 13-Pin DIN Accessory Port Connector       |
| MFJ-1204D13K1                       | MFJ-5713DK                        | Kenwood 140/450S/850/870/950/57D/590S/660/2000        |
| MFJ-1204D13K2                       | MFJ-5713DK                        | Kenwood TS-440/690                                    |
| MFJ-1204D13K3                       | MFJ-5713DK                        | Kenwood TS-940  |
| MFJ-1204MD6                         | MFJ-5706MD                        | For 6-Pin mini DIN Data / Accessory Port Connector    |
| MFJ-1204K3                          | MFJ-5700K3                        | For Elecraft K3's rear panel Audio In/Out & PTT jacks |
| MFJ-1204KX3                         | MFJ-5700KX3                       | For the Elecraft KX3's Mic and Phones jacks           |
| MFJ-1204K                           | MFJ-5700K                         | For various Baofeng, Wouxun and Kenwood HTs           |
| MFJ-1204R                           | MFJ-5700R                         | For various Yaesu HTs including the FT-60R, VX-8GR    |
| MFJ-1204UT                          | MFJ-5700UT                        | For building your own cable (bare wires on radio end) |

## MFJ Sound Card-to-Rig Interface

Plug this sound card interface between your rig and computer and operate all digital modes.

Provides fully automatic operation with audio and push-to-talk control. Matches sound card audio, eliminates ground loops and provides mic override.

Operate PSK-31, packet, APRS, Amtor, RTTY, SSTV, CW, high-speed CW Meteor Scatter and others. Use as Contest Voice and CW Memory Keyer.

Models for all radios with 8-pin round (MFJ-1275/1279), 8-pin modular (MFJ-1275M/1279M) or 4-pin round (MFJ-1275T/1279T).

Audio isolation transformers and relays eliminate ground loops, audio hum, noise and distortion. Extensive RF suppression, line isolation eliminates RF problems.

Transmit mic audio at any time by pressing PTT to override digital modes -- great for SSTV and Contest Voice Keyer.

Serial port -- lets computer control radio to override/interrupt digital transmissions. VOX Control -- lets you use VOX when not

MFJ-1279/M/T  
**\$139<sup>95</sup>**  
Ship Code B



using computer serial port control. Level Controls are for transmitter drive and for receiver-to-sound card drive levels.

**MFJ-1279 Super Soundcard Interface adds:**

- Auxiliary Input Jack
- Direct CW/FSK Keying Jack
- Headphone Jack
- Footswitch jack

MFJ-1275/M/T, \$109.95. Basic sound-card interface. Like MFJ-1279 but no headphones, footswitch jack, direct CW keying or auxiliary input jack.

MFJ-1273B/M, \$59.95. Like MFJ-1275, but no mic jack, mic switch.

## MFJ TNC/Mic Switch



8-Pin Modular (RJ-45) Mic Plug  
MFJ-1272B/M  
**\$49<sup>95</sup>**  
Ship code A  
8-Pin Round Microphone Plug

Switch between your TNC Multimode Packet Controller or Microphone by simply pushing a button! No more unplugging constantly to change modes.

Just plug these pre-wired cables into your rig's mic connector and into your TNC and you are ready to go!

Works with HF, VHF and UHF rigs with 8 pin round or 8 pin modular mic connectors -- For radios with the 8-pin round mic plugs, select "B". For radios with the 8-pin modular (RJ-45 phone type plug), select "M".

Plug-in jumpers let you quickly set-up for virtually any radio. Factory set for Kenwood. Audio-in, speaker jacks. Tiny 3 1/4 x 1 1/4 x 4".

## MFJ RS232 to USB Adapter and others



MFJ-5429, \$24.95. DB9 Male RS-232 Serial Port to USB 1.1 and 2.0 port adapter cable. Includes driver for Win98/ME/2000/XP/Vista on a 3.5 inch floppy disk. Use this to connect serial port devices to a computer with no serial ports.

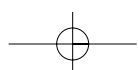


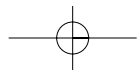
MFJ-5427, \$24.95. Use computer USB port to print on a parallel printer. 6 ft. cable, USB/DB-25 Female. Driver included.

MFJ-5428, \$24.95. Same as MFJ-5427, but has USB and Centron-ics 36 Male. Driver included.



| Radio Mic Conn         | TNC TYPE  | All MFJ TNCs/ PK900/12/96/ PacComm, other TNC2 compatibles | KAM VHF KAM HF / KPC3 KP9612 | AEA PK-232 |
|------------------------|-----------|--|------------------------------|------------|
| 8 pin round mic plug   | MFJ-1272B | MFJ-1272BYV MFJ-1272BYH                                    | MFJ-1272BX                   |            |
| 8 pin modular mic plug | MFJ-1272M | MFJ-1272MVV MFJ-1272MVH                                    | MFJ-1272MX                   |            |





# TNC-X -- An Inexpensive TNC for VHF Packet and APRS!

TNC-X is a low-cost, low power TNC currently deployed in thousands of locations all over the world. Just connect your FM radio and your computer and the world of digital packet radio is yours to enjoy. TNC-X is a self-contained TNC, not a computer sound card interface that ties up your computer's resources.

TNC-X is a KISS mode TNC. It works with every packet radio software program that supports KISS mode. These days, that makes it compatible with almost everything in packet radio. And unlike some other TNCs, you never have to worry about it "accidentally" falling out of KISS mode. KISS mode makes it extremely simple to use. There are no complicated menus of parameters to adjust. You just plug it in and it works!

TNC-X is a genuine USB TNC, not a TNC with an outboard serial to USB converter added to it. As a result, when you plug it into a USB port on your computer, it derives its power from the USB port. You need not provide a separate power connection. For those who want to use it with older computers, it also supports a separate conventional serial port. You can even switch back and forth between USB and serial if you like. TNC-Xs USB port works with all major computer operating systems including Windows (all versions after 95, including 64-bit), Mac OS X (as well as Mac OS 8 and 9), and Linux.

TNC-X beats the competition in decoding packets from poorly adjusted transmitters. You get a built-in active audio filter in front of the TNC's modem to clean up analog signals before they are digitized, substantially improving demodulation performance. TNC-X also supports true software DCD. You can leave the squelch of the radio connected to TNC-X open for very fast transmit/receive turn-around times.

TNC-X is a natural for emergency communications and is being used in this application across the country and around the world. It is fully compatible with Winlink 2000 both on the server side and



MFJ-1270X  
**\$129<sup>95</sup>**  
Ship Code B

on the client side. Just specify KISS mode in your PacLink MP or RMS software and you're ready to roll! . . . or better yet . . .

TNC-X is perfect for APRS™. It is fully supported by virtually every APRS™ mapping program in use today. It provides a truly low cost mechanism for mapping the

locations of other amateur radio stations. TNC-X contains an expansion header that allows you to add daughter boards to provide entirely new capabilities. Add an X-Digi board and convert TNC-X into a modern, remotely configurable digipeter (see below). With TNC-X, you only buy the capabilities you need. You don't pay for features that you will never use. Measures 5 1/8"Wx1 1/2"H3 1/4"D™.

**Plug-and-play** . . . it's compatible with all of MFJ's TNC to radio cables (below), as well as MFJ's A to B USB cable. **MFJ-1270DG, \$29.95.**



**X-Digi** is an inexpensive board that plugs into TNC-X's expansion header and makes it into a stand-alone full-featured digipeter. It supports the new WIDEN-N paradigm for APRS™ digi-peters, or can act as a general purpose digipeter.

When operating as an APRS™ digipeter, X-Digi has the capability to trap and eliminate duplicate position reports, substantially reducing congestion on APRS™ frequencies. It has the capability of sending up to four different beacons, each with its own text, and each at its own transmission interval.

**Together** TNC-X and X-Digi consume very little power (less than 25 mA). In a pinch, you can power TNC-X and X-Digi all day long on a 9-Volt battery

**X-Digi** is remotely configurable over the air. You can change virtually every digipeter parameter without ever having to revisit your remote site. Password protection ensures that no one else will tamper with your digi's settings.

**Your X-Digi** will never be obsolete. New firmware will be made available for free by the internet. No special equipment is required to flash the updated code into your X-Digi.

TNC to Radio  
Prewired Cables  
**\$17<sup>95</sup>**  
Ship code A

**Pre-Wired Radio-to-TNC Cables**  
Take all the hassle and soldering out of wiring your rig to your TNC with prewired radio cables.

| TNC TYPE                       | All MFJ TNCs and Multimodes | KAM VHF/<br>KAM HF/<br>KPC3/<br>KPC9612* | PK-232     | PK900/PK96/<br>PK12/DSP232<br>/PacComm/<br>other TNC-2<br>compatibles |
|--------------------------------|-----------------------------|--|------------|---|
| Alinco®/Strd HT                | MFJ-5022                    | MFJ-5022YV                               | MFJ-5022X  | MFJ-5022  |
| Icom®/Yaesu/<br>RadioShack HTs | MFJ-5024                    | MFJ-5024YV                               | MFJ-5024X  | MFJ-5024B   |
| Kenwood® HTs                   | MFJ-5026                    | MFJ-5026YV                               | MFJ-5026X  | MFJ-5026  |
| Yaesu R-Series HT              | MFJ-5020                    | MFJ-5020YV                               | MFJ-5020X  | MFJ-5020R   |
| Yaesu 8-pin                    | MFJ-5080                    | MFJ-5080YV<br>MFJ-5080YH                 | MFJ-5080X  | MFJ-5080  |
| Icom® 8-pin                    | MFJ-5084                    | MFJ-5084YV<br>MFJ-5084YH                 | MFJ-5084X  | MFJ-5084  |
| Kenwood/Alinco<br>8-pin        | MFJ-5086                    | MFJ-5086YV<br>MFJ-5086YH                 | MFJ-5086X  | MFJ-5086  |
| Yaesu<br>8-pin modular         | MFJ-5080M                   | MFJ-5080MYV                              | MFJ-5080MX | MFJ-5080M   |
| Icom®<br>8-pin modular         | MFJ-5084M                   | MFJ-5084MYV                              | MFJ-5084MX | MFJ-5084M   |
| Kenwood<br>8-pin modular       | MFJ-5086M                   | MFJ-5086MYV                              | MFJ-5086MX | MFJ-5086M   |
| Radio Shack<br>8-pin modular   | MFJ-5088M                   | MFJ-5088MYV                              | MFJ-5088MX | MFJ-5088M   |

1. does not include IC-W2A  
2. does not include 2500  
3. does not include 25A, 255A  
4. does not include IC-100H, IC-2700H  
5. YV for KAM VHF port, YH for KAM HF port. Other Kamtronic use YV  
6. YV for KP9612 1200 baud port  
7. YH models for KPC9612 9600 baud port  
8. Excludes DJ-100, 120T, 200, 500

**Pre-wired Accessory Port-to-TNC cables . . . \$21<sup>95</sup>**

| TNC TYPE                                   | MFJ TNC/MMC<br>PK900/PK12/DSP232<br>/PacComm/TNC2s | KAM VHF<br>KAM HF<br>KPC3 | KPC-9612   |
|--|--|---------------------------|------------|
| ICOM HF<br>8 Pin DIN                       | MFJ-5063   | MFJ-5063YH                | -----      |
| ICOM VHF<br>8 Pin DIN                      | MFJ-5064   | MFJ-5064YV                | MFJ-5064YV |
| ICOM 706<br>13-Pin DIN                     | MFJ-5065   | MFJ-5065YH<br>MFJ-5065YV  | MFJ-5065YV |
| KENW/YAESU,<br>AZDEN VHF<br>6-Pin mini DIN | MFJ-5060   | MFJ-5060YV                | MFJ-5060YV |
| KENW HF<br>13-Pin DIN                      | MFJ-5066   | MFJ-5066YH                | -----      |

**Open End Cables with Radio Connectors**

- MFJ-5082, \$11.95. 8 pin round mic.
- MFJ-5106, \$6.95. 6 pin mini DIN.
- MFJ-5205, \$6.95. 5-pin DIN. MFJ TNC.
- MFJ-5208, \$6.95. 8 pin DIN. Acc. Port.
- MFJ-5213, \$12.95. 13-pin DIN, Acc port.
- MFJ-5220, \$6.95. Yaesu FT-50R cable.
- MFJ-5222, \$6.95. Split conn. Alinco.
- MFJ-5224, \$6.95. IC/YA/AL/RS HTs.
- MFJ-5226, \$6.95. Kenwood Handhelds.
- MFJ-5268, \$6.95. 8 pin modular mic.

## MFJ PacketOnly™ Transceivers



MFJ-8621A  
**\$189<sup>95</sup>**  
Ship Code B

Why tie up your expensive 2-Meter rig on a single packet channel?

Use this MFJ-8621A/X2 to set up your dedicated packet station.

Combined with the MFJ-1270X TNC above you can have a complete packet station and at a low cost. Enjoy dedicated high quality packet 1200 to 9600 baud on 2-Meters, 24-hours-a-day!

MFJ's data radios are compatible with all TNCs with hardware DCDs and most TNCs with software DCDs. It couldn't be easier -- just plug in appropriate cable, your antenna, 12 VDC and you're ready to go!

MFJ-8621A, \$189.95. Ready to operate on 145.01 MHz.  
MFJ-8621AX2, \$199.95. Ready to operate APRS on 144.390 MHz.



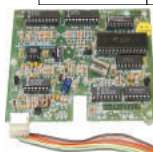
### MFJ Cigarette Lighter Cable

Plug in your favorite accessories and operate off your auto's 12 VDC cigarette lighter socket with 3A fuse. Has 2.1 mm DC coaxial plug. Or operate from your power supply in the shack! Provides power to your MFJ analyzer, keyer, meter or tuner MFJ-5510C lamp, etc. Make quick adjustments to HF/ VHF/ UHF mobile antennas with your analyzer in hand! 18" retracted curly cord, 60" fully stretched.

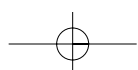
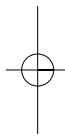
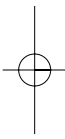
### MFJ Computer Printer, Serial & USB Cables

|          |         |  |
|----------|---------|--|
| MFJ-5412 | \$11.95 | Printer Cable, 36-Pin Centronics to DB-25 male, 6 feet     |
| MFJ-5414 | \$9.95  | Serial Cable, DB-25 male to DB-9 female, 6 feet            |
| MFJ-5413 | \$9.95  | Serial Cable, DB-25 male to DB-25 female, 6 feet           |
| MFJ-5409 | \$9.95  | Serial Cable, DB-9 male to DB-9 female, 6 feet             |
| MFJ-5408 | \$9.95  | Serial Cable, DB-9 female to DB-9 female, 6 feet           |
| MFJ-5419 | \$9.95  | Serial Y-cable, (1) DB-9 female to (2) DB-9 male, 8 inches |
| MFJ-5430 | \$2.95  | USB A Male to USB B Male, 6 foot cable, beige.             |

### MFJ TNC2 2400 Baud Modem

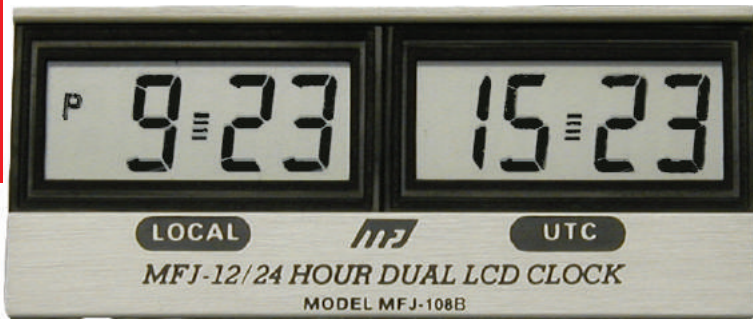


MFJ-2400, \$9.95.  
2400 baud packet modem for MFJ and TNC2 compatibles. Lessens congestion on crowded bands with faster communication. Still gets 300/1200 baud for other TNC compatibility.



MFJ

# MFJ 24/12 Hour Clocks



## Dual Displays: 24 and 12 Hour Clock

**MFJ-108B**  
**\$21.95**  
 Ship code A

**MFJ-108B** dual clock has separate 24 hour and 12 hour displays. Lets you read both UTC and local time simultaneously. Features huge high-contrast 5/8 inch LCD numerals that makes it easy to read across the room. Mounted in attractive solid brushed aluminum frame with sloped face for easy viewing. Synchronizable to UTC for split-second timing. Quartz controlled for excellent accuracy. Long life button battery included. 4 1/2" W x 1D x 2H". MFJ one year limited warranty.

## DXer's 24Hr. Wall Clocks



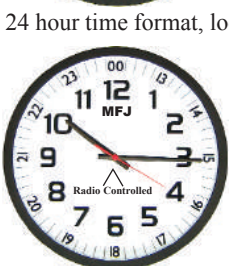
**MFJ-115, \$24.95.** Set this 24 hour Quartz clock to UTC/ GMT and you can determine the time in any time zone of the world at any time of the day. Premier world cities encircle its colorful world map face to indicate time zone. 12" face is easy to see across room. Seconds hand.



**MFJ-105D, \$24.95.** This is the world's most popular ham radio wall clock! True 24 hour Quartz movement. Huge 12 inch black face with large white numerals give excellent visibility across room. Attractive gold colored hour, minute and seconds hands looks great on any hamshack or other wall!

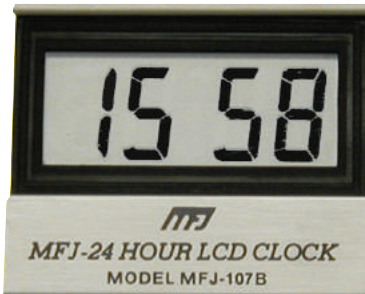


**MFJ-126B, \$19.95.** New! 12 hour Quartz movement gives 12 hour time on inner dial (for XYL) and 1200 to 2400 hour time on its outer dial (for you). Attractive clean, white face is highly visible. Handsome black trim shows 24 hour time format, looks great in any decor.



**MFJ-131RC, \$39.95.** Read 24/12 hour time at a single glance on dual time displays! This 12-inch dia. atomic wall clock can be seen from across the room! Liven up any hamshack and automatically receive WWVB signal. Red second hand. Attractive, clean, white, real glass face is highly visible and will improve the decor of any room.

## Hi-Contrast LCDs



**MFJ-107B, \$12.95.** 24 hour UTC Clock has large 5/8 inch LCD numerals. 2 1/4 x 1 x 2 inches. Synchronizable to UTC. Solid brushed aluminum frame lasts for years. Long life button battery included.



**MFJ-112B, \$29.95.** This DXer's World Map Clock shows you the time at any QTH throughout the world on an attractive LCD world map. Also shows day of week, month, date and year. Time displays hour/minute/second. Choose 12/24 Hour. Easy push-buttons move you east and west on the map to display a QTH in every time zone. Daylight saving time feature. Attractive grey. Cool blue backlight for night viewing. Great for gift or use as logging clock. 4 1/2" W x 3 3/8" H x 2 1/4" D inches. One year No Matter What™ limited warranty.

## 14" Atomic Wall Clock

**MFJ-137RC, \$29.95.**

This **HUGE** 14" twelve (12) hour clock is a monster! That's why many are used in hospitals and schools across the United States! The MFJ-137RC automatically sets itself and is accurate to the second! DST mode can be disabled. Handsome black with white face looks great in your hamshack, office, hospital, etc. Uses AA battery, not included. Can also manually set.



## Huge 2.5" LED Clock



**MFJ-117, \$39.95.** This 12/24 hour clock has the biggest and brightest LEDs of any clock we have ever seen! Giant 2.5 inch super bright LEDs are nearly the width of a 2-Meter HT -- you can see them from across the street, day/night! Perfect for decreasing eyesight. 12/24 hour switch. Wall/ desk mount. Black with bright red LEDs! 12W x 7 1/2" H in. Use 9V battery for backup. Hour/minute set buttons. 110 VAC, 60 Hz.

**MFJ-113, \$19.95.**

Switchable 12/24 hour display with **HUGE** 1.8" red LEDs. Absolutely shines from across the room. Super compact 3 1/2" H x 9W x 2 1/2" D in. 9 minute 1D timer, alarm, 9V battery back-up. Use 110 VAC, 60 Hz. Great for the sight impaired!



## Solar Powered Temperature/Humidity Weather Station

**MFJ-141, \$29.95.**

Displays In/Out temperatures and humidities, minimum and maximum temperatures. Solar powered receiver and remote temperature/humidity sensor includes rechargeable batteries. Backlit green display is easy-to-see from across the room. Desktop, compact size is just 1 1/4" W x 6 1/2" x 1 1/4" inches.







# MFJ ATOMIC 24/12 HOUR CLOCKS

• Automatically receive WWVB radio signal from National Institute of Standards and Technology in Ft. Collins, Colorado for millisecond accuracy • Choose 24/12 Hour time format or simultaneous dual times • Choose from huge selection of wall or desktop mounts

**JUMBO 4" digits solar-powered Atomic clock TrueUTC™, plus 7 other time zones . . . Thermometer/Hygrometer . . . MFJ Atomic Alarm Clock -- SUPER DEAL!**

This JUMBO LCD clock display boasts giant 4 inch digits and MFJ exclusive TrueUTC™ time!

The whole display is 15 3/4" W x 10 3/4" H x 3/4" D inches. You can place it on a desk with its convenient flip stand or hang on your wall.

MFJ-139RC is solar powered so you never need batteries. A power on/off button lets you save the solar power storage when the clock is not in use, like when you are moving or packing it for a DXpedition.

Use 24 or 12 hour time format and you get TrueUTC™ time zone plus 8 other time zones including Hawaii and Puerto Rico. A push button lets you select GMT or other time zone on the time zone map. Daylight savings time can also be turned on or off.

MFJ-139RC also has an indoor ther-

**Jumbo 4" digits!**



mometer and hygrometer to tell you indoor humidity.

It also displays the month, date and day of the week. Everything is displayed in one simultaneous look at this handsome clock. Beautiful metallic tan color and bright LCD display looks great in any hamshack or office building.

MFJ-139RC \$99<sup>95</sup> Ship Code B

Unbelievable amount of features at such a low price! HUGE 1-inch high digits, automatically-controlled for absolute pin-point accuracy, 24/12 hour selectable, DST on/off, dual alarms, 5-min.

**New!**



MFJ-122RC \$12<sup>95</sup>

Ship Code A indoor thermometer (32-122 degrees F), moonphase, uses just two AAA 1.5V batteries (not included) 3 1/2" W x 4" H x 1 1/4" D in.

## MFJ Dual Time Display Travel Atomic Clock

MFJ-133RC LCD travel clock displays 2 time zones at once.

Show UTC and local time or other dual time format! 24 or 12 hour format. Atomic-controlled for absolute pin-point accuracy! Features HUGE 1 1/8" high-contrast numerals easily read 6 feet away . . . but super compact 4 W x 3 H x 3/4 D". Attractive silver clock folds up and slides in your shirt pocket for great travelability.



MFJ-133RC \$34<sup>95</sup> Ship Code A

## In/Out Temp/Cal/Weather Atomics



MFJ-134RC \$39<sup>95</sup> Ship Code B

High-tech 24/12 hour clocks feature in and wireless outdoor temp sensors, calendar and monster size 2 1/4" time digits --

easily seen across the room! Select moonphase or weather forecast icons.

MFJ-134RC and MFJ-144RC automatically set themselves via WWVB from Fort Collins, Colorado. Daylight savings time can be disabled so they can be set to UTC. They also have

various alarm settings, calendar display, day-of-week and choice of English, French, or Spanish languages.

Mount on the wall or set on your desk. Wireless sensor is inside 1 1/2" W x 5 1/4" H x 1 D" durable plastic. Hardware included for easy mounting anywhere.

These indoor clocks are 12 W x 7 3/4" H inches in a handsome dark wood frame with black display.



MFJ-144RC \$39<sup>95</sup> Ship Code B

## Solar Atomic Clock never needs batteries

This fabulous solar-powered 24/12 Hour atomic clock never needs batteries, has a large LCD display (time digits 1 3/8" x 2 1/4") and gives precision accurate time from WWVB. Handsome desktop. Alarm. Compact 3 W x 4 1/4" H x 1 1/2" D in.

MFJ-136RC \$29<sup>95</sup> Ship Code A



## Large Display Wall Mount Atomic 24/12 Hour Clocks

### 24/12 Time/Calendar Temp Atomic Clock



MFJ-130BRC \$24<sup>95</sup> Ship Code B

MFJ-130BRC is a 24/12 hour wall/desk mount atomic clock. It has HUGE 1 7/8" digits that can be seen from across your room. This handsome silver and black base with a bright green LCD display looks great in any shack or any other part of the house for that matter. MFJ-130BRC has a running seconds display and also displays the month, date, and day. Indoor temperatures are also displayed and all is simultaneous. You get all the info you need to carry on a ragchew QSO with your buddies.

### Dual Time Atomic Clock with UTC Zone



MFJ-121B \$79<sup>95</sup> Ship Code B

clock. Displays 24/12 hour time simultaneously -- each can be independently set. Automatic backlight lights up every day at your preset time for 8 hours. Mounted in a handsome silver-metallic, hard-plastic frame, it features HUGE, easy-to-see 1 W by 2 H inch LCD numerals, an exclusive UTC zone and running seconds display. 11 3/8" W x 7 1/4" H x 1 D" mounts on wall or desk mount. Daylight savings time can be disabled independently in each clock display. Uses four AA batteries.

### Solar Powered Eternity Atomic Clock



MFJ-123B \$49<sup>95</sup> Ship Code B

MFJ's exclusive solar powered Eternity Atomic Clock™ works for an "eternity"! No need for batteries or to set time! Receives WWVB signal. Display is a whopping 3 1/2" H x 6 1/4" W inches with huge 2" time digits. Choose 24 or 12 hour time. Has indoor temperature, running seconds, month/date and day-of-week displays. 9 1/2" W x 6 1/4" H x 1 D in. Attractive silver metallic looks fantastic on the wall or desk mounted in the shack or office! Has power on/off switch for when clock is in storage or not in use.

## MFJ Radio-Controlled 24/12 Hour Dual clock With ID Timer!



MFJ-148RC  
**\$59<sup>95</sup>**  
Ship Code A

**New!**

MFJ-148RC is a specially designed clock for amateur radio. It has two independent atomic 24/12 hour clocks with exclusive UTC time zone and a *dedicated Station ten minute ID timer*.

Uses *single time base* to keep both clocks perfectly synchronized. Radio controlled to keep perfect time. Each clock can be independently set for 12 or 24 hour display, time zone and DST on/off.

Set one clock on 12 hours for local time and the other on 24 hours format for UTC. Turn DST off on the UTC clock and you will never have to worry about time changes messing up the UTC time again. *Never forget to ID again.*

**Built-in** 10 minute station ID timer with LED and buzzer alerts. Timer resets by a simple press of the timer switch. Huge 5Wx1.5H LCD display with LED backlights. Flip stand for desk display and mounting hole for wall mount. Uses two AA batteries (not included). Sexy black hard plastic cabinet is 6.5Wx3.5Hx3/4D in.

## MFJ Radio-Controlled Wrist Watches Global World Time Atomic Wristwatch



MFJ-188BRC  
**\$39<sup>95</sup>**  
Ship Code A

This is the full-featured atomic wristwatch you have been waiting for! Dual time ring for 24/12 hour formats plus it features US and world time zone settings. Highly sensitive radio receiver receives signals from Germany, continental USA, UK and Japan (60 KHz only) according to chosen time zone. Set time zone to UTC -- stay on top of universal time no matter where you are. Individually set wristwatch to any major city in the world. If traveling in Russia, set the time zone to the Moscow zone, it searches for the signal and keeps you on time. When in Japan, set to Tokyo. Super bright LED night light at the 12 O'clock position. Handsome black leather band. It also has a reception success or failure indication. Now you will know when your wristwatch is keeping you on time or not and not show up to a meeting an hour late.



MFJ-189RC  
**\$19<sup>95</sup>**  
Ship Code A

MFJ-189RC has a *genuine* black, leather band that is rich looking and perfect for office style and at the hamfest. It also features *stylish* non-numerical 12-hour and second notches on the silver-metallic face. The analog watch face looks like a work of modern art! Receives the WWVB atomic signal so it always stays accurate. Super easy to set and read.

## Professional Wireless Weather Station Stand-alone or Remote Monitoring with your Smartphone, Tablet or Computer



MFJ-198B  
**\$189<sup>95</sup>**  
Ship Code D

**New!**

It is completely wireless. Wireless outdoor sensors include: Solar powered wind sensor that tracks wind speed, wind chill, wind direction and gust; Self-emptying rain gauge to measure rainfall amounts; Thermo-Hygro sensor to monitor temperature and humidity. **New!** Gateway adaptor and cable connects to your existing network router for remote monitoring and alerts.

### Look at all these features . . .

- 12/24 Hour Time and Calendar
- Manual Set time or Internet time Date sync when using Gateway adaptor
- Forecast Icons with tendency
- Indoor/Outdoor Temperatures With Min/Max and date records
- Indoor/Outdoor Humidity With Min/Max and date records

- Wind Chill down to -40 degrees F
- Relative Air pressure with history graph
- Wind Speed with Min/Max Time/Date
- Wind Gust with Max time and Date
- Rainfall for last hour, 24 hour, week, month and total
- Weather Alarms for Temperature, Humidity, Wind gust/Direction, Pressure, Rain and Storm Warning
- Wireless sensor range up to 200 feet Transmits at 915 MHz
- LCD contrast setting for easy viewing
- Stores over 1750 sets Weather records
- Wall Mount or Free Standing
- Station power with 3C batteries (Batteries not included)
- Station Size: 8.66Lx1.60Wx6.80H"
- MFJ's famous one year *No Matter What™* warranty. MFJ will repair or replace your weather station *no matter what* for one full year.

MFJ-198B is a LaCrosse Wireless Weather Station that monitors home and backyard weather and displays the data on a 7 1/2"Wx3 3/8"H LCD screen.

It works as a stand-alone station or as a remote monitoring station from a smartphone, tablet or computer by using the included Gateway adaptor.

## Full-color Atomic wireless weather stations

MFJ-154RC and MFJ-156RC LaCrosse Wireless Color Weather Stations give you precision Atomic time and real-time weather data straight from your backyard.

These weather stations feature *dynamic color* forecast icons that change based on weather conditions.

With the wireless remote sensor they easily monitor forecast and temperature trends, indoor/outdoor temperature, high/low temperature alerts and other weather data -- all on one easy-to-read large 7 1/2" diagonal color display.

Station unit powers with included AC adaptor or 2 AA batteries. Remote sensor uses three AAA batteries. Batteries are not included. Each station includes one outdoor sensor.

MFJ-154RC is 4 1/8"Wx6 1/4"H x2 3/4"D inches, MFJ-156RC is 6 1/4"Wx4 1/8"Hx2D inches.



MFJ-154RC



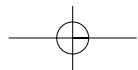
MFJ-156RC

MFJ-154RC or MFJ-156RC  
**\$59<sup>95</sup>**  
Ship Code A

**New!**

### Check out these features . . .

- 12/24 Hour Atomic Time and Date
- Daylight Savings Time On/Off
- Animated Color Forecast Icons
- Indoor/Outdoor Temperatures (F/C) and Trend
- Indoor/Outdoor Humidity and Trend
- Min/Max Temperature and Humidity Records
- Moon Phase (154RC)
- Mold Risk Indicator (156RC)
- Heat Index and Dew Point (156RC)
- Alarm/Snooze Icons
- Signal Strength for Sensor
- Adjustable Back Light
- Low Battery Icon for In/Out Sensors
- 300 Feet Range for Sensor
- Desk Top or Wall Mount
- MFJ *No Matter What™* warranty.



## MFJ Speaker Mics for Yaesu, Icom, Kenwood and Wouxun HTs!



MFJ-295  
(Y, I, K,) Fits Yaesu, Icom, Kenwood Wouxun and compatibles.  
**\$16<sup>95</sup>**  
Ship Code A

Here's a top quality handheld speaker mic that fits snugly in your hand! It's perfect for new Yaesu, Icom, Radio Shack, Kenwood, Alinco, ADI and compatible handheld transceivers.

Fits perfectly in your hand and gives booming receive audio so you can monitor

stations while the microphone is attached to your lapel -- no more holding the speaker

MFJ-295R Fits Yaesu VX-7R series only  
**\$19<sup>95</sup>**  
Ship Code A

up to your ear! Compact 2Wx3Hx1 1/4D inches.

MFJ's high-quality non-directional electret condenser microphone gives your handheld crystal clear transmit audio.

The MFJ-295 Microphone has -53 dB sensitivity and 1K Ohm impedance.

Excellent top quality speaker produces 83 dB of crystal clear and loud, booming receive audio. 8 Ohm impedance.

Includes a built-in 3.5 mm earphone jack lets you continuously monitor receive audio and it lets you hear your radio in a loud, noisy environment (see MFJ-301, \$6.95 or MFJ-302, \$9.95, below right).

A top quality PTT thumb switch with an eight-position swivel lapel clip rotates

360 degrees. 3 1/2 feet of durable, stretchable cord. Made of high-impact plastic. Water resistant with protective rubber at all of the bending points, it won't break easily.

Choose your model . . .

MFJ-295Y, \$16.95 is for newer Yaesu single prong plugs like Yaesu VX5R and Icom single pin plugs like Q7A.

MFJ-295I, \$16.95 is for Icom, Radio Shack, Alinco, ADI and compatibles.

MFJ-295K, \$16.95 is for Kenwood, Wouxun, Alinco and other compatibles.

MFJ-295R, \$19.95 fits new Yaesu VX-7R handheld radios.

## Replacement HF Radio Handheld Microphones



MFJ-290K/Y/I/T  
MFJ-290MK/MI/MY  
MFJ-290K4/Y4/I4/T4  
**\$24<sup>95</sup>**  
Ship Code A

MFJ now offers dynamic HF Radio replacement handheld microphones! Replace your old, beat-up Icom, Kenwood, Yaesu, Alinco, or TenTec microphones.

Gives PTT and quality mic audio. Heavy-duty construction, extra long, spiral cord. Specify MFJ-290K/Y/I/T for 8-pin round mic connector. Select MFJ-290MI for Icom modular, MFJ-290MK for Kenwood modular and MFJ-290MY for Yaesu modular. Choose MFJ-290K4/Y4/I4/T4 for 4-pin round mic connector.



## New deluxe Speaker/Mic has Volume control



MFJ-296 (I, K, Y) **\$21<sup>95</sup>** Ship Code A  
MFJ-296R for VX7R **\$24<sup>95</sup>** Ship Code A

This deluxe speaker microphone has a volume control knob that allows you to set it for a super quiet room or noisy environment like a hamfest or banquet.

MFJ-296 has a 360 degree rotating lapel clip, a first-rate electret mic element and a full-size speaker that

gives you superb receive audio. It also gives you excellent transmitting

audio -- no more muffled sounding audio or scratchy voice transmissions -- your contacts will hear you loud and clear!

Also has 3.5 mm earphone jack (see MFJ-301/MFJ-302 right), for monitoring, a momentary PTT switch, and a retractable cord.

MFJ-296I, \$21.95, fits Icom, Radio Shack, older Yaesu and other compatibles.

MFJ-296Y, \$21.95, for Yaesu FT50R, VX5R series rigs.

MFJ-296K, \$21.95, for Kenwood, Wouxun, Alinco and other compatibles.

MFJ-296R, \$24.95, fits Yaesu VX7R handheld series only.

## Wouxun/Baofeng Accessories from MFJ

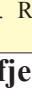
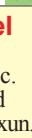
A. MFJ-1717SF, \$18.95. 15 3/4", 1/2 Wave on 440 MHz, 2.15 dBi gain. Full-size 1/4 wave antenna on 2M. Factory low SWR. High-Q, rugged! SMA female screws into Handheld.

B. MFJ-1717SFZ, \$21.95. New! Like MFJ-1717SF but "bendable".

C. MFJ-293K, \$24.95. Secure, comfortable tiny earbud/boom mic with rubber flex earloop. 5 inch flex boom, PTT, 6 ft. cord.

D. MFJ-295K, \$16.95. HT mic fits snugly in hand! Booming transmit/receive audio. 3.5 mm earbud jack. PTT sw., lapel clip, 3 1/2 foot cord.

E. MFJ-1719SF, \$14.95. Small-Wonder™ HT antenna, just 1" tall. Transmit 144/440 MHz, receives 1200 MHz. Great for monitoring 2 Meter activity.



## MFJ HandyPal™ HT Mic Earphones



MFJ-301 **\$6<sup>95</sup>** Ship Code A

This MFJ earpiece is the perfect companion for your MFJ or other speaker-microphone. Continuously monitor receive audio and hear your HT in a noisy environment without bothering anybody else. Comfortable foam fits securely in your ear and doesn't hurt. Super lightweight. Fits 3.5 mm jack.

MFJ-302 is similar but has a soft earloop speaker that wraps around your entire ear -- gives a more natural-sounding audio and cuts out background noise -- also has more comfort and security. 3.5 mm jack and cord.

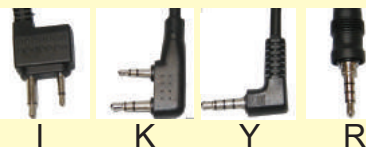
MFJ-302 **\$9<sup>95</sup>**

Ship Code A



## Identify your speaker/mic model

MFJ uses the letters I, K, Y and R to denote what connector is on the speaker mic. I is for Icom, some Yaesu, Radio Shack and most Alinco. K is for most Kenwood and Wouxun. Y is for Yaesu VX5R series and Icom Q7A. R is for the new Yaesu VX7R series.



## MFJ 2-Meter Amplifier



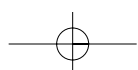
MFJ-8802 **\$299<sup>95</sup>** Ship Code C

The MFJ-8802 is a back-to-basics multi-mode 140-Watt VHF linear power amplifier for 2-Meter SSB/CW/FM\*. A pair of high-tech Mitsubishi 12-volt FETs deliver high gain, stability with excellent linearity.

Buffered T/R switching interfaces with virtually any multi-mode transceiver amplifier keying circuit. Drives to full output with 5 Watts -- the perfect companion for low-power multi-mode radios like the FT-817, KX-3, other QRP SDRs, and most popular 2-Meter transverters.

SWR load-fault circuitry protects output transistors from severely mismatched loads. By keeping circuitry simple, MFJ-8802 delivers a potent signal at a truly affordable price.

Harmonics: >60 dBc; Input SWR: <1.5:1; Antenna SWR: 2:1 or less; Keying: Logic-low (ground contact); Power: 13.8V@25A. \*Heat-sink fan required for extended FM or key-down digital. Compact 6Wx3Hx6.5D", 3 pounds.



**MFJ**

## MFJ Deluxe Headset Microphone™ adds professionalism



MFJ-288 (K, I, Y, R)  
**\$24<sup>95</sup>**  
 Ship Code A

**This deluxe headset microphone gives hams the professional look they deserve -- great for public service**

This MFJ Deluxe Headset Microphone™ lets you carry on a private QSO while in a noisy environment. The microphone can pick up your voice, whether booming or at a quiet whisper

when placed appropriately near your mouth. The earphone gives superb tonal quality so even distant stations will come in loud and clear. Made of sturdy black plastic and strong metal sliders, one size fits all! Superb speaker and mic foaming make it super comfortable for long ragchews. Small PTT switch attaches to your shirt

or pants pocket. Six foot cord. MFJ-288I fits Icom, Radio Shack, older Yaesu, ADI, Alinco, other compatible HTs. MFJ-288K fits Kenwood, Wouxun and compatible handheld radios. MFJ-288Y fits VX-5R series, IC-Q7A & compatibles. MFJ-288R fits new Yaesu VX-7R series handheld transceivers.

## MFJ Featherweight earbud Boom Microphone™

**Features rubber flex earloop design for security and comfort and 5-inch boom mic**



MFJ-293I  
**\$24<sup>95</sup>**  
 Ship Code A

Finally . . . a secure and comfortable earbud and boom microphone that's as small and inconspicuous as your radio! No more gaudy, oversized headsets or massive

handheld speaker microphones!

This tiny earbud features a secure and comfortable rubber flex earloop design and 5 inch flexible boom microphone that adjusts perfectly to your mouth.

The flexible earloop secures your earbud to the back of your ear for an extra comfortable fit. No more worrying about it falling out of your ear or having to mess with it to get it just right.

It's perfect for monitoring your receive audio when you are in a loud environment. MFJ-293's special rubber flex earloop

design adjusts to fit the right or left ear (big or small) very securely and comfortably. You can involve yourself in other conversations and still hear what is going on on the radio.

Made of a sturdy black polyurethane and comfortable rubber earloop, it'll give years of dependable use. Tiny thumb-sized PTT switch is built right into the 6 feet of cord.

MFJ-293I fits Icom, older Yaesu, Radio Shack, ADI, Alinco and other compatible Handheld transceivers.

## MFJ Featherweight Vibration earbud Microphone™

**Picks up the vibration of your earbone and translates it into a signal through your HT**

**Background Noise FREE!**

The speaker and microphone are both integrated into the earpiece -- it picks up the vibration of your earbone and then translates the vibration into a signal through your handheld transceiver!

MFJ-283I doesn't make sound like a robot like some other models do. This mic sounds like your natural voice.

**Super Audio Quality!** It only transmits the vibrations from your ear -- no background noise!

It's perfect for high-ambient environments like hamfests, traveling through airports, on the bus, riding motorcycles, ATVs, etc. It truly is amazing!

Older competitive versions of earbud vibration mics sounded terrible -- there was background noise and transmissions sounded like a robot was on the other end. With the new MFJ-283 technology only your natural-sounding voice is transmitted.

MFJ-283I, K, Y, R  
**\$29<sup>95</sup>**  
 Ship Code A



PTT switch has velcro for attaching to wool clothes or your belt.

Two clips on the cord let you position and secure the earpiece/PTT to your body comfortably and a 42-inch durable cord lets you snake it around your body how you want.

You can also almost totally conceal your cord, PTT and earpiece. You'll look like a detective, airport security or even a government spy -- nobody will even realize you are on your handheld radio talking.

MFJ-283I for Icom, Shack, Alinco, ADI and older Yaesu transceivers. MFJ-283K for Kenwood and compatibles, MFJ-283Y for Yaesu FT50R, VX5R series, MFJ-283R for Yaesu VX7R series.

## MFJ Featherweight Earbud Speaker Microphone

**Tiny earphone and thumbsize microphone/PTT switch is built right into the cord! It's barely noticeable and so lightweight, you won't know it's there!**



MFJ-292 (K, I)  
**\$17<sup>95</sup>**  
 Ship Code A

**Be Cool!**  
 MFJ's Featherweight Earbud/Mic has a tiny earphone and thumb-size microphone/PTT switch built right into the cord.

It's barely noticeable and so lightweight you won't know it's there -- people will think you are a detective or airport security or even a government spy!

Get crystal clear receive/transmit audio

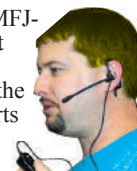
out of an ultra-light (30 grams) speaker. Non-directional electret condenser mic has -64 dB sensitivity, 1.1K Ohm impedance. Has 4 foot cord.

MFJ-292K for Kenwood, Wouxun and compatibles.

MFJ-292I for Icom, Alinco handhelds and compatibles.

## MFJ BoomMic/FM Scan

MFJ-284, \$29.95, same as MFJ-293, but adds an FM broadcast scan radio inside the tiny PTT switch. Lets you catch up on the news or listen to music or sports while monitoring a 2-Meter operating frequency! Auto switches from FM to HT audio when monitoring frequency is detected. Batteries included. Order MFJ-284I (Icom) and MFJ-284Y for Yaesu VX5R series and the Icom Q7A handhelds.



## MFJ Neckset Microphone doesn't mess up your hair!

MFJ-282, \$24.95.

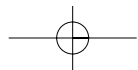
Don't mess up your hair and you can still wear your cap!

MFJ-282 stays naturally hidden behind your neck.

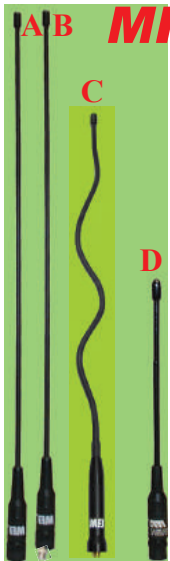
Super audio, lightweight and comfortable!

MFJ-282I fits Icom and older Yaesu; MFJ-282K fits Kenwood, Wouxun and compatibles; MFJ-282Y fits Yaesu FT-50R, VX5R-series, Icom Q7A; MFJ-282R fits VX7R series.





## A B MFJ HT Rubber Duck & telescopic antennas



**A. MFJ-1717, \$18.95.** *The World's best selling HT antenna!* When other rubber ducks just give you noise, you'll enjoy dependable QSOs with the MFJ-1717. Only 15 3/4" in length, it's a halfwave on 440 MHz that gives you a hearty 2.15 dBi gain. On 2 Meters, you get an efficient full-size 1/4 wave antenna for full size performance. MFJ-1717 is precisely tuned at the factory for low SWR. High-Q, low loss construction gives you maximum radiated power! BNC connector. Rugged! It'll take all the bending,

twisting, flexing and tugging you can dish out, and just pop right back up. Radiator is protected by a durable synthetic rubber compound and has a hard protective safety tip. Strong rigid base protects the matching network from flexing and changing frequency. Handles 25 Watts PEP. Durable construction. MFJ-1717 has BNC. **MFJ-1717S, \$18.95.** Similar to MFJ-1717, but has male SMA connector. **B. MFJ-1717SF, \$18.95.** Similar to MFJ-1717S, but has female SMA connector.

Fits the new, popular Wouxun handheld radios. **C. MFJ-1717SZ, \$21.95.** **New!** Similar to MFJ-1717S but with SMA male and is "bendable". Bend into any shape, tie it into a knot or roll it up and stick it in your shirt pocket. MFJ *Flex-It*™ is for those concerned with stiff antennas in the side of their gut. Shape/Re-shape for whatever reason and it pops back to form when ready to operate. Has same performing abilities as

the popular MFJ-1717/S. **MFJ-1717SEFZ, \$21.95.** SMA female connector, Wouxun/Baofeng HTs. **D. MFJ-1716, \$14.95.** Dual band 144/440 MHz Flex duck like MFJ-1717, but 7 1/2" length, 1/4 wave on 440 MHz and loaded 1/4 wave on 2M. Tough, durable. BNC. **MFJ-1716S SMA male.** **New! MFJ-1716SF** for Baofeng/Wouxun. Has SMA female.

**MFJ**

### MFJ Telescopic Handheld Antenna Range Extenders



**A. MFJ-1714, \$16.95.** For really long range this ended 1/2 wave 2-M is hard to beat! Outperforms 5/8 wave because the 5/8 wave needs a ground plane. 10.5" collapsed, it's just a duck. 40" extended gives you a **LongRanger**™! **MFJ-1714S, \$16.95.** Like above, is SMA male. **New! MFJ-1714SF** for Baofeng/Wouxun HTs, has SMA female.

**B. MFJ-1712, \$14.95.** This telescopic **Dual Band** (144/440 MHz) is a 1/4 wave on 2 Meters, 5/8 wave with gain on 440 MHz. Just 4 1/2 inches collapsed. Acts like a rubber duck. 16" ext. for superior performance. **MFJ-1712S, \$14.95.** Like MFJ-1712, but has SMA male connector. **MFJ-1712SE, \$14.95.** Like MFJ-1712S, but with SMA female.

**C. MFJ-1710, \$9.95.** The **PocketLinear**™ is a pen-sized 3/8 wave for 2 Meters! Carry this antenna in your shirt pocket like a pen with a pocket clip. When your rubber ducky just won't receive well, pull it out, extend to 24" and carry on your QSO. BNC. Tiny 5 1/4" collapsed. **MFJ-1710S, \$9.95.** Like MFJ-1710 but with SMA male connector.

### MFJ SuperFlex ThinDucks™

**A. MFJ-1715, \$19.95.** Tie it in a knot . . . when you use it, it'll bounce back in shape -- you can't break it! Takes all the bending, twisting, flexing and tugging you can dish out, pops right back! MFJ-1715 12 1/2" **SuperFLEX**™ radiator is a 1/2 wave on 440 MHz -- gives a hearty 2.15 dBi gain. On 2 Meters it's an efficient full size 1/4 wave antenna. Safety tip, durable synthetic rubber. Add "S" for SMA male. Add "**SF**" for Baofeng/Wouxun radios. SMA female. **B. MFJ-1713, \$16.95.** 5 1/2" similar to MFJ-1715 except for 440 gain. 1/4 wave on 440 MHz and an efficient loaded 1/4 wave on 2M. Add "S" for SMA male. "**SF**" for Baofeng/Wouxun, SMA female.



### MFJ Triple Band FlexiDucks™

**A. MFJ-1720S, \$29.95.** MFJ's Triple Band **2M/6M/440 HT FlexiDuck**™ antenna is 19 inches tall -- It's a 5/8 Wave on 440 MHz to give you a hearty 3.2 dBi gain. On 2 Meters you get a 1/4 Wave antenna with 2.15 dBi gain. On 6 Meters you get an efficient full size 1/4 Wave antenna for full-size performance. Precision-tuned at the factory for low SWR. High-Q, low loss construction gives you maximum radiated power. 10 Watts. SMA male. **B. MFJ-1718S, \$24.95.** MFJ Triple Band **2M/220/440 MHz HT FlexiDuck**™. 17 inches tall. SMA male connector. **New! B. MFJ-1718SF, \$24.95.** SMA Female.



### SmallWonder™ Flexi-Antenna



**MFJ-1739S/1739SF, \$16.95.** This dual band 144/440 MHz **Flexi-Duck antenna** is just 2 1/2 inches tall. You can also receive the Airband, 800 and 900 MHz for more listening fun! 1/4 Wave, handles 6 W. SMA male or SMA female.

### SmallWonder™ HT Antenna



**MFJ-1719/MFJ-1719S/SF, \$14.95.** This HT Antenna is truly amazing for its size! Less than 1" tall, it's great for traveling and monitoring calls. It doesn't get in your way! Receives and transmits on 2 Meter/440 MHz. Also receives great signals at 1200 MHz. MFJ-1719 has BNC, MFJ-1719S has SMA male. **New! MFJ-1719SF** has SMA female connector, fits Wouxun Handhelds.

### MFJ 2-Meter Pocket Roll-up



**MFJ-1730, \$29.95.** Roll up this 1/2 wave 2-Meter antenna and stick it in your pocket. Vacations, camping, etc. Get home station performance *on-the-go!* Just 75" long. Hang in a tree, plug the BNC into your HT and enjoy some great QSOs. Omnidirectional, has significant gain over a 1/4 wave. Doesn't need a ground plane so it's convenient for indoors. Handles 200 Watts.

**MFJ-1731, \$29.95.** 440 MHz pocket roll-up antenna, 1/2 wave. 51" roll-up J-pole for 440 MHz like MFJ-1730.

### Back-of-Radio 144/440 Base



**MFJ-1717PL, \$24.95.** Plug into a 2 Meter/440 MHz mobile/base rig -- not a 10-element yagi but it'll get you out in a hurry! Fold-over, flexi-duck, PL-259. 2 dBi gain on 440 MHz, full-size 1/4 wave 2 Meter. Hi-Q, low loss construction. 16 1/2", hard safety tip. Handles 25 Watts PEP. **MFJ-1717P, \$24.95.** Like MFJ-1717PL, but no fold-over. Has straight PL-259.

### MFJ "Long-John" HT Antenna Foldover Telescopic HT antenna



**MFJ-1818, \$24.95.** This "Long-John" HT antenna gives you a whopping gain on 2-Meters! You get 2.15 dBi gain in a 1/2 Wave, super efficient antenna. 9 inches collapsed and 38 1/2 inches fully extended. Has a **FlexSpring**™ base that prevents your connector from breaking. It's tough, durable and well-protected for years of dependable service. 50 Ohms, BNC connector. Handles maximum 10 Watts.

### MFJ Scanner/Receiver Antenna



**MFJ-1811, \$14.95.** Dedicate this antenna to your Scanner or Receiver operations. Features both telescopic and foldover attributes. Folds-over to create right angle connection to back of base or mobile, and it telescopes/collapses for your HT. It's 24" extended and 7" collapsed. 1.8-1800 MHz, has 2.15 dB gain. 10 Watts, 50 Ohms. BNC connector. VSWR is 1.5:1.

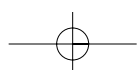


**MFJ-1812, \$19.95.** Dual band 144/440 MHz HT antenna combines telescopic and foldover features in a single antenna. Extends to improve range plus it folds over to get out of the way of your gut. MFJ-1812 is just 6" retracted and 16" extended. High Q low loss construction, super durability for years of use.

### MFJ Compact Magnet Mounts



Put your flexible HT duck on the roof of your car! Tiny but powerful magnet is 2 3/4" dia. -- strong! **MFJ-332S, \$14.95.** SMA female connector. 12 feet of tough, flexible RG-58AU coax with SMA male end. **MFJ-332B, \$14.95.** Like MFJ-332S but has BNC female with BNC male coax.





# FT-817, KX3, other QRP rig Accessories

## MFJ Walkabout Antenna 80 through 6 Meters

MFJ-1899T  
**\$79<sup>95</sup>**

Ship Code A

**Work DX  
walking about!**

This MFJ Walkabout antenna is designed for the FT-817, KX3 and other QRP rigs.

Covers all bands 80 Meters through 6 Meters including WARC Bands.

Its ten section telescoping whip is 52 inches fully extended and is 7 inches when collapsed.

The whip unscrews from the 12 inch base loading coil. It is ultra-compact for easy traveling. Handles 25 Watts.

You change bands by plugging the "wander lead" into the appropriate socket on the base coil.

Fine tuning is done by adjusting the telescopic whip.

Has BNC connector. Use MFJ adapter for SO-239.



## Single Band Walkabouts 6/10/12/15/17/20/30/40/80

6/10,12,15,17,20 M 30/40/80 Meters  
**\$24<sup>95</sup> \$34<sup>95</sup>**

Ship Code A Ship Code A

Highly efficient single band Walkabout antennas for FT-817 and KX3 and QRP rigs let you work exciting DX no matter where you are -- hotel, mountain top, etc.!

Each 10 section telescoping whip is 51 inches fully extended and collapses to 5 1/2 inches and screws into a base loading coil. Handles 25 Watts. Has BNC connector.

**PL-259-to-BNC  
right angle Adapter**



MFJ-7703, \$7.95. Reinforced elbow for less stress on radio connector.

- MFJ-1806T (6M) \$24.95
- MFJ-1810T (10M) \$24.95
- MFJ-1812T (12M) \$24.95
- MFJ-1815T (15M) \$24.95
- MFJ-1817T (17M) \$24.95
- MFJ-1820T (20M) \$24.95
- MFJ-1830T (30M) \$29.95
- MFJ-1840T (40M) \$29.95
- MFJ-1880T (80M) \$29.95



## Tiny 10 oz. Switching Power Supply for Yaesu FT-817 and QRP Rigs.

MFJ-4103 Miniature Switching Power Supply can deliver up to 40 Watts (13.8 VDC at 2.89 Amps) of reliable power anywhere in the world.

Incredibly tiny -- 4 1/8 X 2 5/8 X 1 3/8" and weighs just 10oz., including power cord, connector. Output DC cable with a standard coaxial DC power connector (2.1mm ID, 5.5mm OD).

Sturdy adapter cable included for Yaesu radios.

The MFJ-4103 has excellent specs and out performs all other switching power supplies made for the FT-817. Perfect for QRP rigs needing up to 2.89 Amps.

Works for input voltages 100-240 VAC and power line frequencies 47-63 HZ.

Use the MFJ-4103 almost anywhere in the world by plugging in an AC power cord with an appropriate wall plug for that country (Not included. Laptop computer AC cord recommended).

Overvoltage, overcurrent and overtemp protected. Excellent 1% line and 5% load regulation and 1% peak to peak ripple/noise. Op temperature is 0-40° C.

Mean time between failure is 100,000 hours at full load at 25° C ambient.

Meets FCC part 15 class B, UL 1950 and CSA 22.2.



MFJ-4103  
**\$49<sup>95</sup>**

Ship Code A

## Pocket™ 4:1 Balun

MFJ-9211, \$19.95.



Tiny 2Wx3Hx1D inches.

When using a balanced line antenna, don't forget your 4:1 current balun. It has five way binding posts for your balanced line connection and a BNC output to your RIG.

## Pocket™ Ground

MFJ-9231, \$59.95.



Place your rig near actual earth ground potential no matter where you are operating. Electrically places a far away RF ground at the rig. Hook rig ground, adjust counterpoise, tune for max current and operate safely 1.8-30 MHz.

## MFJ Radio Voice Mail



MFJ-664  
**\$139<sup>95</sup>**  
Ship Code A

Two way radio voice mail lets you and friends or family leave and retrieve messages for each other.

When in radio range, stay in touch 24-hours-a-day no matter where you are. Program custom access codes and security codes so you can decide who uses your Radio voice mail. It's your own private, portable repeater. MFJ-664 provides emergency communications when repeaters are down.

Test your own signal quality by repeating your transmission thru another radio. Automatically repeat recorded message continuously. Great for determining band openings, foxhunting and public service announcements.

Non-volatile memory -- up to 2 full minutes of voice messages. Keypad can be used for remote operation with Morse code verification of functions. End-of-message beep and output level control for clean audio.

Use 9V battery or 9-15 VDC or 110 VAC with MFJ-1312D, \$15.95. 4Wx3 1/2 Dx1 1/2H". Use radio with PTT or mic closure sensing. Pre-wired cables, see page 53.

## MFJ JimHandy™ CW Interface

MFJ's JimHandy™ CW interface plugs into your 144/440 MHz HT and converts it into a modulated CW transceiver -- just plug in your key. Get your ham buddies on-the-air and enjoy some fantastic CW fun.

Run code practice sessions on your repeater. Start your own FM CW Net. Have fun! Upgrade! The transmit/receive switch automatically switches your HT to transmit when you send CW and returns to receive when you stop keying. Built-in speaker, volume control and great sounding true sinewave sidetone -- no harsh keyclicks. 4Wx1 1/4Hx3 3/4D". Use 9V battery (not incl). Pre-wired patch cables, see page 53. MFJ-550 key only, \$14.95.



MFJ-552  
**\$99<sup>95</sup>**  
Ship Code A

## QRPocket™ Antenna Tuner

MFJ-9201, \$49.95. Covers 80-10 Meters. Handles 25 Watts. Custom 12-position inductor switch, tune/bypass switch, antenna, transmitter capacitors, BNC feed-points for antenna/transmitter. Tiny 4Wx2 3/4Hx1 1/2D" so it, your rig and antennas easily fit into a backpack or briefcase to go with you to field day, a DX pedition, vacation or business.



## QRPocket™ Loop Antenna

MFJ-9232, \$59.95.

Tiny QRPocket™ Loop Antenna makes portable operation truly portable and fun! No ground needed! This high-efficiency loop covers 40-10 Meters with included flexible wire loop. Handles 25 Watts. Has BNC connector for transmitter, two wing nut posts for loop wire connections, tuning/matching capacitors. Durable hard plastic cabinet is a tiny 2 1/4Wx4Hx2 1/4D".



**New!**

## SWR/Wattmeter

MFJ-9213, \$39.95. Read forward and reflected power in 3 ranges: 5, 30, 100 Watts on a calibrated meter scale. Read SWR, relative power from 0-5 Watts. Bruene-style bridge circuit detects both RF current/RF voltage, ensures uniform accuracy, 1.8-50 MHz, BNC in/out. 4 1/2Wx2 1/4Hx2 3/4D inches.

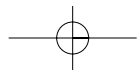


## QRP WattMeter & Dummy load

MFJ-9214, \$29.95.

Check true QRP output with this sensitive QRP Wattmeter. Built-in 50 Ohm load for testing rig. Reads 5W full scale 1.8 to 150 MHz. BNC male fits directly to your HT. 2Wx2 1/4H x1 1/2D". Fits in your pants pocket! MFJ-7737, \$5.95. BNC female to PL-259 adaptor.





# MFJ VHF/UHF MAGNET MOUNT MOBILE ANTENNAS



## Magnet Mount Dual Band 144/440 MHz Mobile



**MFJ-1724B** This MFJ-1724B is the world's best selling **\$24<sup>95</sup>** dual band 2 Meter/440 MHz magnet mount mobile antenna! It's perfect for your dual band mobile or HT. Free BNC handheld adapter. MFJ's powerful 3 1/2 inch magnet base holds your antenna firmly even at highway speeds. The base has a scratch resistant rubber guard to protect your car. The MFJ-1724B black stainless steel whip looks like an attractive cellular antenna. Only 19 inches tall, you can park in your garage without knocking is over. Low SWR across both bands keeps your transceiver safe from overheating. Get excellent gain on 440 MHz band and 2 Meters. Handles 300 Watts PEP. 12 feet coax, PL-259.

## MFJ 5/8 Wave 2/6 Meter Magnet Mount Mobile



**MFJ-1728B** MFJ's 5/8 wave on 2M **\$26<sup>95</sup>** give you the maximum possible theoretical gain of any single element mobile antenna, no matter how much others cost. On 6M, it is a high performance full quarter wave antenna. It's an excellent companion for your MFJ-9406 or other 6 Meter mobile or HT. Gives you great "magic band" signals used mobile or as a base station antenna. It's perfect for your mobile or HT. **MFJ-1728B** comes with a free BNC adapter. It's rated at 300 Watts PEP. Low SWR lets your transceiver deliver full power safely. Heavy duty magnet mount holds your antenna tight at highway speeds. 12 ft. of coax. Stainless steel radiator will endure years of harsh mobile use. Handy Allen wrench included.

**NEW!** Order the popular MFJ-1728B without a magnet mount and mount to your existing mount. Order **MFJ-1728S** for SO-239 connector, **MFJ-1728M** for NMO connector, and **MFJ-1728T** for 3/8-24 threaded connector.

## MFJ UltraLite™ Mag Mounts



**MFJ-1721** **\$12<sup>95</sup>** (left) is an UltraLite™ Mobile magnet mount antenna. 12 ft. RG-174U coax. 1/4 wave on 2-Meters. Weighs less than 2 oz. 1/8" rare earth magnet. Thin 20 inch flexible whip. BNC. **MFJ-1722**, (right) is similar to MFJ-1721, but dual Band UltraLite™. 5/8 Wave on 440 MHz. 1/4 Wave on 2 Meters. **MFJ-1722S**, similar to MFJ-1722 but has SMA.

## MFJ Mobile Antenna Ground Plane Kit

**MFJ-1401** converts most mobile antennas into a ground plane base station antenna. 200 Watts. Accepts VHF/ UHF mobile antennas with PL-259 connector. Includes stainless steel mounting hardware, two U-bolts, allen wrench, and four 20.5 inch radials. Easy installation: 6 1/2" tall bracket fits on any 2-inch pipe with clamps or mounting holes. **\$29<sup>95</sup>** Ship Code B

## MFJ Classic HamGear™ Apparel



**MFJ-15**, \$14.95. Durable HT pocket with elastic cord and velcro closure fits on your belt -- keeps radio secure.



**MFJ-6200**, \$19.95. This MFJ waistpack is the perfect hamfest, DXpedition or field day hands-free carry-all. It has an amazing 9 spots to put your ham radio gear, tools, accessories, refreshments, etc.

**MFJ-18**, \$29.95. This MFJ Radio chest harness holds your handheld radio or cell phone snugly for no worries, hands-free operation. Great for rugged action use like DX peditions, field day, biking, hiking, hamfests, search & rescue, etc. Accessory pockets. One size fits all.

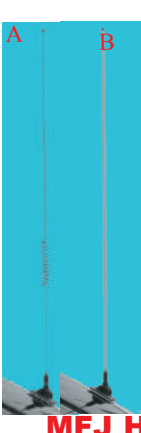


## Power\*Gain™ Dual Band 144/440 MHz Mobile



**MFJ-1729** MFJ's Power\*Gain™ is ham radio's most powerful dual band magnet mount mobile antenna! Outstanding gain on 440 MHz and 2 Meters. Low SWR lets your rig deliver full power safely. Get a whopping 2.6 dB gain on 2 Meters and 6.3 dB gain on 440 MHz. Perfect for dual band mobiles or HTs. Free BNC adapter. Handles 300 Watts PEP. MFJ's exclusive 27 1/2 inch stainless steel SlimLine Radiator™ minimizes wind vibration for less SWR flutter giving you longer range and better readability. Includes 12 feet of coax with PL 259 Connector, heavy duty magnet mount. **MFJ-1723**, \$39.95. Similar to MFJ-1729, covers 220 MHz, 2.6dB gain. 22.5 inch radiator.

## MFJ Glass Mount Dual Band 144/440 Mobiles



**A MFJ-1734** Glass mount dual band 144/440 MHz mobile. A 6 inch counterpoise mounted inside lowers SWR and makes tuning easy. **\$44<sup>95</sup>** Ship Code B

**B MFJ-1738** Excellent gain on 440 MHz and 2 Meters. Low SWR lets your transceiver deliver full power safely. **\$34<sup>95</sup>** Ship Code B

MFJ's Exclusive 26 inch stainless steel radiator minimizes wind vibration for less SWR flutter.

Gives you much longer range and better readability. Handles 50 Watts. 12 Ft. tough coaxial line with PL-259 connector, and mounting hardware.

**MFJ-1738**, \$34.95. Similar to MFJ-1734 but 2 Meter mobile glass mount antenna.

**MFJ-94**, \$4.95. Remount Kit for Glass Mounts. Avoid factory tint placement.

## MFJ Handheld Antenna Window Mount



**MFJ-310/MFJ-310S** This Handheld Antenna Window Mount gets your antenna outside where it can radiate freely -- takes away the auto shielding effect and gives increased signal strength and reception. Use 144/440 MHz handheld radio with BNC or SMA connector. Includes 10 feet of mini RG-58 coaxial line. The indoor portion of the mount safely rolls up inside your auto's window. Your antenna is mounted outside where it can radiate freely and provide you with great performance! Order "S" for SMA connector. Order "SF" for Pofung/Wouxun HTs with reverse SMA.

## SMA/BNC Cables and Adaptors



**A. MFJ-5612S**, \$14.95. SMA Male to SO-239 adapter cable.

**B. MFJ-5612SF**, \$14.95. SMA Female to SO-239 adapter cable for Wouxun and Baofeng handhelds.

**C. MFJ-5612B**, \$14.95. BNC Male to SO-239 adapter cable.

**MFJ-7716**, \$4.95 each. SMA female to BNC male adaptor.

**MFJ-7718**, \$4.95 each. SMA male to BNC female adaptor.

**MFJ-7719**, \$4.95 each. SMA male to SO-239 adaptor.

## MFJ Coffee Mug



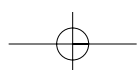
One year Warranty does not apply!

**MFJ-9-102**, \$3.95. Porcelain MFJ Coffee Mug with Ameritron, Hygain, Cushcraft, Mirage and Vectronics on other side. Great with your favorite hot or cold beverage, but clean it first. Warranty doesn't apply.

## MFJ Gift Certificates

MFJ can make that special day for your lovable ham even more special! MFJ Gift certificates are available at any time -- Christmas, Valentines Day, Birthdays, just for the heckuva it, whenever.

Call 1-800-647-1800. Any gift amount can be purchased for your ham loved one or buddy. Use your credit card, paypal account or simply send personal check or money order.



# MFJ Duplexers and Triplexers, HF to 1.2 GHz

## MFJ-916B HF/VHF/UHF Duplexer handles 200W



MFJ-916B \$24.95 Ship Code A  
MFJ-916BC \$49.95 Ship Code A

This duplexer lets you use HF or 2 Meter/440 MHz antennas with separate HF or 2 Meter and 440 MHz rigs without a built-in duplexer.

Also use two dual band antennas with a dual band rig with only one RF output. Heavy-duty diecast enclosure houses low pass networks that separate/combine 144/440 MHz signals. Low loss SO-239s. 50 Ohm ports, 200 Watts PEP.

MFJ-916BN, \$29.95. Like MFJ-916B but has type N connectors for low loss.

**Duplexer with coax pigtails**

MFJ-916BC, like MFJ-916B but has 3' coax pigtails w/PL-259s on duplex sections.

## Mast Mount Duplexer

**MFJ-916BM, \$59.95.** Like MFJ-916B but designed for outdoor use. Save coax, reduce losses. Tower leg or mast pole mount near your antennas. Heavy-duty weather protected PVC housing, mounting bracket. U-bolt fits up to 1 1/2" diameter mast or pipe. Measures 3 1/2"Wx3 1/2"Hx5D inches. MFJ-916BMN, \$69.95, N connectors.



## MFJ HF/6M/VHF/UHF 200/600W Duplexers



MFJ-4916S \$59.95 Ship Code A

MFJ-4906S \$59.95 Ship Code A

MFJ-4956S \$34.95 Ship Code A

Use an HF, 2 Meter, 6 Meter or 440 MHz antenna with a separate HF, 2 Meter, 6 Meter or 440 MHz transceiver without a built-in duplexer.

Or use two dual-band antennas with a single dual-band transceiver with only one RF output.

Heavy duty diecast enclosure houses low pass networks that separate or combine HF/6M/144/440 MHz signals. Ports are 50 Ohms, handle 600 Watts PEP.

MFJ-4956S, \$34.95.

SO-239 connectors and handle 500 watts HF/6M, 300 Watts on 144/440 MHz.

MFJ-4916S/4906S, \$59.95.

These units have SO-239 connectors and handle 600 Watts PEP.

## HF/VHF/UHF/1.2 GHz 200/500/800 Watt Triplexers



MFJ-4926S \$59.95 Ship Code A

MFJ-4926C \$69.95 Ship Code A

Use HF, 6M, 2M, 440 MHz and 1.2 GHz antennas with a transceiver without a built-in triplexer. Or use 3 different transceivers with one HF/VHF/UHF/1.2 GHz antenna. Heavy-duty diecast enclosure houses low pass networks that separate/combine HF/6M, 144/440 MHz and 1.2 GHz signals. Ports are 50 Ohms, units handle 200, 500 and 800 Watts PEP. MFJ-4926S has SO-239 connectors and handles 800 Watts. MFJ-4926C has 12" coaxial PL-259 pigtails. MFJ-4936S has SO-239 connectors and handles 500 Watts. MFJ-4946SN has both type N and SO-239 connectors.

| Model #     | MFJ-916B           | MFJ-916BN          | MFJ-916BC          | MFJ-4916S         | MFJ-4906S       | MFJ-4956S         |
|-------------|--------------------|--------------------|--------------------|-------------------|-----------------|-------------------|
| Price       | \$24.95            | \$29.95            | \$49.95            | \$59.95           | \$59.95         | \$34.95           |
| Freq (MHz)  | 1.6-225<br>350-540 | 1.6-225<br>350-540 | 1.3-225<br>350-540 | 1.6-60<br>140-470 | 1.6-30<br>50-54 | 1.3-60<br>140-540 |
| Output      | SO-239             | N-Female           | Pigtail/259        | SO-239            | SO-239          | SO-239            |
| Output Con  | SO-239             | N-Female           | Pigtail/259        | SO-239            | SO-239          | SO-239            |
| Input       | SO-239             | N-Female           | SO-239             | SO-239            | SO-239          | SO-239            |
| Power Watts | 200                | 200                | 200                | 600               | 600             | 500/300           |
| Insert Loss | .20 dB             | .20 dB             | .20 dB             | .20 dB            | .20 dB          | .20 dB            |
| VSWR        | < 1.2              | < 1.2              | < 1.2              | < 1.2             | < 1.2           | < 1.2             |
| Isolation   | > 55 dB            | > 55 dB            | > 55 dB            | > 55 dB           | > 55 dB         | > 60 dB           |
| Impedance   | 50 Ohms            | 50 Ohms            | 50 Ohms            | 50 Ohms           | 50 Ohms         | 50 Ohms           |

|                | MFJ-4926S                    | MFJ-4926C                    | MFJ-4936S                     | MFJ-4946SN                     |
|----------------|------------------------------|------------------------------|-------------------------------|--------------------------------|
| Price          | \$59.95                      | \$69.95                      | \$69.95                       | \$69.95                        |
| Freq (MHz)     | 1.6-60<br>110-170<br>350-570 | 1.6-60<br>110-170<br>350-570 | 1.6-150<br>220-225<br>400-550 | 1.6-160<br>350-550<br>850-1300 |
| Output Con     | SO-239                       | Pigtail PL259                | SO-239                        | SO-239                         |
| Output Con     | SO-239                       | Pigtail PL259                | SO-239                        | SO-239                         |
| Output Con     | SO-239                       | Pigtail PL259                | SO-239                        | N-Female                       |
| Input Con      | N Female                     | SO-239                       | SO-239                        | N-Female                       |
| Power (W)      | 800/500/500                  | 800/500/500                  | 500/500/500                   | 800/500/200                    |
| Insertion Loss | .20/.20/.20 dB               | .20/.20/.20 dB               | .23/.23/.30 dB                | .20/.30/.34 dB                 |
| VSWR           | < 1.2                        | < 1.2                        | < 1.2                         | < 1.2                          |
| Isolation      | > 55 dB                      | > 55 dB                      | > 55 dB                       | > 55 dB                        |
| Impedance      | 50 Ohms                      | 50 Ohms                      | 50 Ohms                       | 50 Ohms                        |

# Compact HF Mobile SWR/Wattmeters

## Flat Mount 1.8-60 MHz Mobile SWR/Wattmeter



MFJ-819 \$159.95 Just 1 5/8" thick -- easily mounts on your dashboard for easy viewing. Flat mount on wall or shelf in your ham shack for best viewing angle. Remote sensor with 25 feet thin, flexible cable lets you place sensor and coax out-of-the-way. Handles full 1500 Watts, 1.8-60 MHz. LED lighted Cross-Needle meter. Active electronics lets you read true peak or average power in two power ranges. Has "High SWR" LED. Flat-Mount SWR/Wattmeter measures 5Wx3 1/4"H x 1 1/2"D inches; remote sensor is a tiny 3 1/2"Wx2 3/4"H x 2 3/4"D inches. Use 9V battery or 12 VDC.

## Ruggedized flat Mobile/portable SWR/Wattmeter



MFJ-818 \$79.95 Ship Code A  
MFJ's flat, compact SWR/Watt-meter is plenty rugged to take the abuse of brutal mobile or portable operation. Easily mounts on dash for easy viewing. Flat mount on wall/shelf in shack for best view angle. Meter is fully enclosed in a strong aluminum case with just the scales exposed. Only two small switches slightly protrude so there's little to break. Simultaneously read SWR/forward/reflected power on this full size 3-inch lighted Cross-Needle Meter. 30/300 Watt ranges, 1.8-30 MHz, SO-239. Use 12 VDC for meter lamp or plug into cigarette lighter with MFJ-5510, \$9.95. Tiny all-metal cabinet has rubber feet. 5Wx3Hx2D inches.

## Compact Cross-Needle SWR/Wattmeters



MFJ-822 or MFJ-842 \$59.95 Ship Code A  
Compact HF/VHF and VHF/UHF SWR/ Wattmeter. Has huge 3" Cross-needle meter. Read forward/reflected power and SWR simultaneously. Perfect for mobile or portable operation. Two selectable power ranges, built-in meter light (+12 VDC). SO-239 connectors. 3 1/2"Wx3 1/4"Hx3 1/4"D in. MFJ-822 covers 1.8-200 MHz, 30 or 300 Watts. MFJ-842 covers 140-525 MHz, 15 or 150 Watts.



# MFJ RuffRider™ High Gain Mobile Antennas



A. B. C. D. E. F. G. H.  
Shown on magnet mounts, not included.

Use any SO-239 or NMO mount. FREE NMO adapter!

Choose Black or Chrome!

Most RuffRiders™ come with MFJ's 90 degree "fold-over" feature -- lets you pull into your garage without knocking your antenna over!  
MFJ's RuffRider™ High Gain multi-banded antenna series is for serious mobile hams demanding highest quality at low prices.

Featuring the finest quality construction using precision machined components. They battle the elements, handle rugged rides and the day-to-day highway abuse.  
Each has a PL-259 base mount for quick installation to a heavy duty SO-239 magnet, trunk/hatch, gutter or mirror mount. Free NMO adapter is included for use with an NMO mount. MFJ's tri-magnet mount recommended for big antennas.  
Choose from several different length and gain antennas...

**MFJ-1402 A. VHF/UHF RuffRider Junior™.** Premium, short 16 1/2" antenna fits in any garage on any auto. 1/4 Wave on 2 Meters, 1/2 Wave, 3 dB gain on

440 MHz. 100 Watts. No fold-over feature for MFJ-1402/B. **MFJ-1402B, \$29.95. Black.**

**B. VHF/UHF RuffRider High Power™.** Just 40" long MFJ-1412 handles full 200

**\$29.95** Watts. Great for high power mobile amp. 1/2 Ship Code A Wave, 3 dB gain on 2 Meters, 3/8 Wave, 5.5 dB gain on 440 MHz.

**MFJ-1412B, \$29.95. Black.**

**C. VHF/UHF RuffRider High Gain™.** 41 1/2" long antenna gives extra gain with little height increase.

**MFJ-1422 B. \$34.95. Black** 150 Watts. 1/2 wave, Ship Code B 3.2 dB gain on 2 M, 3/8 Wave, 5.7 dB, 440 MHz.

**MFJ-1422B, \$34.95. Black**

**D. VHF/UHF RuffRider Hyper Gain™.** This 62 1/2" brute gives a whopping 5 dB gain on 7/8 Wave 2-Meters, 3/8 Wave and a MONSTER 7.6 dB gain on 440 MHz. Our highest gain dual band antenna will work rock yours and anyone else listening. Handles 150 Watts. Tri-mag recommended **MFJ-1432B, \$49.95. Black.**

**E. Tri-Band VHF/UHF/6M RuffRider Triple Threat™.**

**MFJ-1436** 59 inches of stacked elements with high-Q phasing coils give a whopping 7.2 dB gain on 440 MHz, 4.5 dB on 2 Meters and 2.15 dB on 6 Meters. Handles 150 Watts.

**MFJ-1436B, \$59.95. Black.**

**F. MFJ-1434 RuffRider Triple Threat II™.** Slim 38", similar to MFJ-1436, but 2.15 dB on 2-Meters, 3.5 dB on 220 MHz, and 6 dB gain on 440 MHz. 100 W.

**MFJ-1434B, \$79.95. Black.**

**G. MFJ-1438 RuffRider QuadBander™.** This 52", 7.2 dB - 440 MHz, 4.5 dB - 144, 2.15 dB on 6. Go HF! 150 W.

**MFJ-1438B, \$99.95. Black.**

**H. MFJ-1438B, \$99.95. Black.** Covers 40/20/15/10/6/2 M & 440 MHz! Use up to 4 coils at one time. Use tri-magnet.

MFJ

## MFJ Truck Bed Mount SO-239, NMO, 3/8-24

**MFJ-349** **\$19.95** Ship Code A  
Mount this 5Wx5Dx1H" by .120 thick aluminum triangle bracket in any corner of your truck bed and you'll have a super-strong HF or VHF or UHF antenna mounting system. Can be used with 3/8-24, SO-239 and NMO connectors. Couple it with an MFJ-341S (SO-239), MFJ-341M (NMO) or MFJ-343 to complete. MFJ-341S/M has 17' coax.



## MFJ Heavy Duty Balcony Antenna Mount



**MFJ-1907** **\$39.95** Ship Code A  
Use this MFJ-1907 to safely and securely mount an antenna to your balcony in your apartment or condo. Go portable, on your camper or from a tree limb in the woods. Use hamsticks, lightweight verticals, small screwdrivers and lightweight dipoles. Made of high-strength .1" aircraft aluminum. Extends 14 inches out away from guttering or metal roofs. Can be mounted vertically or horizontally. Use HF style (3/8-24 threaded connector) or VHF/UHF (SO-239 connector). 1 1/2" U-bolts are included.

## MFJ 5/8 Wave 2/6 Meter Mobile Antenna



**MFJ-1728S/M/T** **\$24.95** Ship Code B  
MFJ's 5/8 wave on 2 Meters gives the maximum possible theoretical gain of any mobile antenna, no matter how much other antennas might cost.  
MFJ-1728 S/M/T is a whopping 53" for a super-radiating performance. Built tough--you'll get years of dependable service.  
On 6 Meters, it is a high performance full quarter wave antenna that gives you great "magic band" signals used mobile or as a base station antenna.  
It's rated at 300 Watts PEP. Low SWR lets your transceiver deliver full power safely. Now you can pick your style:  
**A. MFJ-1728M**, for NMO type connector.  
**B. MFJ-1728S** for SO-239.  
**C. MFJ-1728T** for HF-style 3/8-24 thread connector.

## HT SWR/Power Meters



**MFJ-840** **\$29.95** Ship Code A  
MFJ-840 accurately checks the power output of your 2-Meter HT into a 50-Ohm dummy load. Also checks battery charge. 5 Watts full scale. BNC connector. Compact 2Wx2 1/4 Hx1 1/2 D inches can go with you anywhere.



**MFJ-841** **\$49.95** Ship Code A  
This connects directly in-line between your HT and antenna. Reads SWR up to 6:1 and power output to a full 5 watts. A three-position toggle switch selects SWR, SWR set, or forward power. Compact 2Wx2 1/4 Hx1 1/2 D inches.

## 3/8-24 HF Antenna Adaptors



|   |          |         |  |
|---|----------|---------|--|
| A | MFJ-7710 | \$16.95 | 3/8-24 to PL-259 Adaptor                           |
| B | MFJ-7725 | \$6.95  | 3/8-24 Quick Connector                             |
| C | MFJ-7735 | \$11.95 | 3/8-24 Fold over adaptor                           |
| D | MFJ-7707 | \$6.95  | 3/8-24 to NMO Adaptor                              |
| E | MFJ-7748 | \$5.95  | SO-239 to 3/8-24 Female Adaptor                    |
| F | MFJ-7714 | \$4.95  | 3/8-24 Chassis mount with insulating washer        |
| G | MFJ-7715 | \$4.95  | 3/8-24 male, .20" hole whip ferrule                |
| H | MFJ-7712 | \$4.95  | 3/8-24 male, .10" hole whip ferrule                |
| I | MFJ-7764 | \$19.95 | 3/8-24 HD barrel SS spring, 4" L, for 60" antennas |
| J | MFJ-7763 | \$11.95 | 3/8-24 SS spring, 3" L, for 60" antennas           |
| K | MFJ-7762 | \$7.95  | 3/8-24 SS spring, 2" L, for 24" antennas           |

## MFJ Vise-Grip Antenna Mount



**MFJ-351T, \$9.95.** Vise-grip 3/8-24 antenna connection for quick, anywhere placement. Grip up to 1.25" mast. SO-239 coax connect.

## 3/8-24 Mount 2M/440 MHz Dual Band Whip Antenna

**MFJ-1414** is a tall 58 1/2 inches. It's a 3/8-24 Stud-Mount Dual Band Whip antenna with 2.15 dB gain on 2-Meters (1/2 wave) and 3.5 dB gain on 440 MHz.

Handles 200 Watts. Sleek, stainless steel, heavy duty construction (no plastic coils to break).

Lets you use just one mount for all of your HF/VHF/UHF antennas.

**MFJ-1414** **\$19.95** Ship Code C



# MFJ HamSticks!

## 600W MFJ Hamsticks

**New!**

**This is what you have been waiting for!** A high power mobile hamstick that **handles 600 Watts!**

**Your Choice:**

MFJ-2610T - 10 Meters  
MFJ-2615T - 15 Meters  
MFJ-2617T - 17 Meters  
**\$39<sup>95</sup> each**

MFJ-2620T - 20 Meters  
MFJ-2640T - 40 Meters  
**\$49<sup>95</sup> each**

MFJ-2675T - 40 Meters  
**\$59<sup>95</sup> each**

All are Ship Code C

**Black** anti-static jacket protects the loading coil and blends in with your vehicle. Its sleek, low profile construction has low wind loading and its semi-rigid fiberglass eliminates the need for springs or guys.

The stainless steel whip is highly flexible but super strong with chrome plated brass fittings that will give you years of service. Whip is adjustable for lowest SWR. 3/8-24 threaded base and whip make it fast and easy to remove from the car and change bands.

**Includes** allen wrench and complete tuning and matching instructions. Collapsible to 53" for storage.

**MFJ-336T, \$34.95.** Tri-magnet mount for 600W HS.

**MFJ-1675T**, the longest of the 600W hamsticks has a 53 inch long base and the whip with the ferrule is 40 inches, giving you almost 8 feet of a *real* mobile antenna.

**Now** you got real height and real power to give you the best single frequency mobile antenna around.

The fiberglass rod is super thick and weighing in at one and a quarter pound, it gives you the durability and strength to handle the mobile pounding of the road.

## 250W MFJ Hamsticks

**Your Choice:**

MFJ-1675T - 75 Meters  
**MFJ-1660T - 60 Meters**  
MFJ-1640T - 40 Meters  
MFJ-1630T - 30 Meters  
MFJ-1620T - 20 Meters  
MFJ-1617T - 17 Meters  
MFJ-1615T - 15 Meters  
**MFJ-1612T - 12 Meters**  
MFJ-1610T - 10 Meters  
MFJ-1606T - 6 Meters

**\$16<sup>95</sup> Each**  
6-17 Meters

**\$18<sup>95</sup> Each**  
20-40 Meters  
Ship Code B

**\$24<sup>95</sup> Each**  
60-75 Meters

**Each** is ruggedly constructed. A heavy duty 4<sup>3</sup>/<sub>8</sub> inch diameter fiberglass rod; a nearly indestructible .125 inch diameter PH-17-7 stainless steel whip and chrome plated brass fittings will give you years of dependable service.

**It's** sleek, low profile construction has low wind loading and its semi-rigid fiberglass eliminates the need for springs or guys while mobile.

**Black** anti-static jacket protects the loading coil and blends with any vehicle. Stainless steel whip is adjustable for lowest SWR. Pull it down to park in the garage or fully extend it for maximum efficiency during mobile operation.

**Includes** allen wrench and complete tuning and matching instructions. MFJ-16XXT *HamTenna*<sup>TM</sup> Whips handle 250 Watts PEP. Stainless whips are about 7 feet fully extended, and collapse to about 4 feet for easy storage.

**Simply** screws into any 3/8 x 24 female mount for quick band-changing. Check out MFJ magnet mounts, lip mounts.

## Short Mobile HF whips Only 25-36"!

**MFJ**  
"Short" HF  
Mobile Whip  
Antennas are  
designed to  
let you mount  
an HF antenna  
with just a  
5-inch magnet  
mount  
going  
mobile.

**Your Choice:**  
MFJ-2375T - 75 Meters  
MFJ-2360T - 60 Meters  
MFJ-2340T - 40 Meters  
MFJ-2330T - 30 Meters  
MFJ-2320T - 20 Meters  
MFJ-2317T - 17 Meters  
MFJ-2315T - 15 Meters  
MFJ-2312T - 12 Meters  
MFJ-2310T - 10 Meters  
MFJ-2306T - 6 Meters

**\$19<sup>95</sup> Each**  
Ship Code B

**No need**  
to drill holes

or make special hard mounts on your car to get on HF! Put on a magnet mount or trunk lip mount and you are ready to go HF mobile!

**These** are super low profile and makes it easy to go in and out of your garage. No more replacing hamsticks because you ran under a low bridge or hit a tree limb that wasn't going to give.

**Constructed** like the MFJ "HamTenna" series but stand only 36 inches tall.

Collapsible to 25 inches for easy storage. Thin, lightweight with low wind resistance. Uses 3/8-24 connector on a 5-inch magnet or trunk lip mount. Adjustable stainless-steel whip for minimum SWR. Short, mobile HF whips are tiny but powerful enough to handle 250 Watts PEP.

**Choose** any band 75-Meters through 6-Meters. Recommended 5" magnet mount, MFJ-335BT, \$15.95. Trunk lip mount, MFJ-345T, \$39.95 or the MFJ-348T, \$42.95. Other style MFJ mounts available in this catalog

Mount is not included



## 4 1/2 Foot Extender Mast

**MFJ-1600T, \$19.95.**

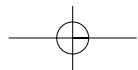
**This** 4 1/2 foot long, 3/8 inch diameter fiberglass/copper conductor with 3/8x24 male and female mounts on ends gets your hamstick way up in the air.

**Black** anti-static jacket. Convert base loaded antennas to highly efficient center loaded antennas.

**Use** MFJ ham sticks, Bug Catcher, MFJ-2620/2640T, MFJ manual screw-driver antenna, *Hustler* or any loading coil with 3/8x24 threads.

**Extend** ham sticks for highly efficient fixed station antennas. Get the extra height you need at home to put your call on the map!

**Replacement** for broken or bent Hustler bottom mast section. Add telescoping whip for multi-band vertical. See MFJ telescopes in this catalog.



# MFJ Magnet, Mirror & Trunk Lip Mobile Antenna Mounts

## MFJ 5" Magnet w/Coax



**MFJ-335BS**  
SO-239



**MFJ-335BM**  
NMO



**MFJ-335BT**  
3/8 - 24  
For HF sticks

**Each \$15<sup>95</sup>**  
Ship Code B

These 5-inch *super strong* magnet mounts have 17 feet of coaxial line terminated with PL-259 connector. Choose SO-239 (BS) or NMO (BM) for your VHF/UHF antennas or 3/8-24 threaded (BT) for your HF antennas or other type antenna with a 3/8-24 connector. All MFJ magnet mounts are jet-black in color.

## MFJ Triple Magnet Mount



**MFJ-336S**  
SO-239

**MFJ-336M**  
NMO

**MFJ-336T**  
3/8x24

**\$34<sup>95</sup> Each** Ship Code C

Three super-strong 5-Inch Magnets make up this MFJ *Goliath*™ Tri-Magnet Mount. MFJ-336 has three super strong 5-inch magnets bolted to a 1/4 inch triangular mount. 17 feet of coaxial line is terminated with a PL-259 connector. **Caution:** once on, it's difficult to get it back off! Select SO-239, NMO or 3/8x24 threaded.

## 3-Inch Magnet Mount



**MFJ-333BS**

**MFJ-333BM**  
NMO

**Each \$11<sup>95</sup>**  
Ship Code A

3-inch black magnet mounts have 17' coax terminated with PL-259. Choose SO-239 (BS) or NMO (BM). Lightweight antennas.

## Connector Protective Caps



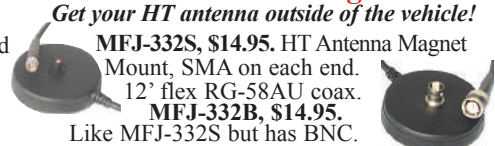
**A. MFJ-7720, \$1.49.** Screw-on SO-239, brass chrome plate.

**B. MFJ-7756, \$1.99.** Screw-on NMO, PVC, black.

**C. MFJ-7758, \$0.99.** 5-pack, push-on SO-239/N, vinyl, black.

**D. MFJ-7750, \$0.99.** Push-on N/SO-239, black PVC, retaining strap.


## 2 1/2" HT Antenna Mag Mounts



**MFJ-332S, \$14.95.** HT Antenna Magnet Mount, SMA on each end. 12' flex RG-58AU coax.

**MFJ-332B, \$14.95.** Like MFJ-332S but has BNC.

## Trunk/Hatch Lip Mounts



**MFJ-345S**  
SO-239

**\$34<sup>95</sup>**  
Ship Code A

MFJ's *RuffRider*™ Mounts feature *extra-wide* four inch lip and large reinforcing tabs on each side safely distributes load over your vehicle's lip. They each can rotate 360 degrees to allow you to put your antenna in every possible configuration.



**MFJ-345T**  
3/8x24

**\$39<sup>95</sup>**  
Ship Code A

Two large set screws on each end locks your mount into place. A scratch proof rubber guard protects your vehicle's finish. Secures large VHF/UHF and medium size HF antennas. Adjustable angles. Perfect for MFJ's large *RuffRider*™ VHF/UHF Antenna series or MFJ's *Hamtenna*™ HF whips.



**MFJ-345M (NMO)**

**\$39<sup>95</sup>**  
Ship Code A

Has 10 feet of low loss coaxial line and each is terminated with a PL-259 connector. Allen wrenches included. Weather caps for SO-239 models also.

**MFJ-345S, \$34.95.** Has SO-239 connector.

**MFJ-345T, \$39.95.** Has HF style 3/8x24 threaded connector.

**MFJ-345M, \$39.95.** Has NMO connector.

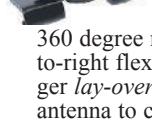
## MFJ Deluxe Lip Mounts



**MFJ-348S**  
SO-239

**\$39<sup>95</sup>**  
Ship Code A

These *Deluxe* Trunk/Hatchback Lip Mounts are heavy-duty -- each has a wide 3.3 inch lip and reinforcing tabs on each side to safely distribute the antenna load.



**MFJ-348T**  
3/8x24

**\$42<sup>95</sup>**  
Ship Code A

The MFJ-348 series have a 360 degree rotation and a 180 degree left-to-right flexibility. A convenient thumb/finger *lay-over* knob lets you lay down your antenna to clear garages and low over-



**MFJ-348M**  
NMO

**\$42<sup>95</sup>**  
Ship Code A

hangs -- several position detents in either direction. Scratch-proof rubber guard protects your vehicles finish. Each has 17 feet of coaxial line terminated with a PL-259 connector.




**MFJ-348M**  
NMO

**\$42<sup>95</sup>**  
Ship Code A

The MFJ-348 series will secures large VHF/UHF antennas and medium size HF antennas including HF sticks.

**MFJ-348M, \$42.95.** NMO connector.

## Mini Trunk Lip Mounts

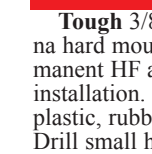


**MFJ-346M/T**  
NMO or 3/8-24

**\$24<sup>95</sup>**  
Ship Code A

mini lip mounts are stainless steel, include 17 feet coaxial cable terminated with PL-259 connector. Rubber cushion protects surface from scratches. Order MFJ-346M (NMO) or MFJ-346T (3/8-24).

## GumDrop™ 3/8-24 Mount




**MFJ-343**

**\$9<sup>95</sup>**  
Ship Code A

Tough 3/8-24 antenna hard mount for permanent HF antenna installation. Durable plastic, rubber seal protects vehicle. Drill small hole for SO-239 bottom.

## Mirror/Rack/Pipe Mounts



**MFJ-342T**

**\$9<sup>95</sup>**  
Ship Code A

MFJ-342T is a 3/8-24 threaded HF antenna pipe/mirror mount that holds MFJ's HF mobile *HamTennas*™ or any 3/8" style whips steady on your automobile's mirror, luggage rack or other pipe. Hard aluminum clamps can mount up to a 1" pipe. SO-239 connector w/lock washer feeds coaxial line underneath 3/8" connector. Coax not included.



**MFJ-342S**

**\$14<sup>95</sup>**  
Ship Code A

MFJ-342S is similar to MFJ-342T, but has SO-239 connector, includes 17 feet of coax terminated in a PL-259. Mount up to a 1" pipe.

**MFJ-344** is similar to MFJ-342T, but is a vertical mount for 3/8-24 threaded HF antennas. Mount up to a 1" pipe.

## Deluxe Mirror/Pipe Mount



**MFJ-340S/M**  
SO-239

**\$34<sup>95</sup>**  
Ship Code A


**MFJ-340** Deluxe *RuffRider*™ Mirror/ Pipe Mount attaches on a support rod of your mirror, luggage rack or spare tire carrier of your vehicle (up to 5/8" in dia.).

Secures large VHF/ UHF and medium size HF antennas with a PL-259 connector. Two axis of rotation position your antenna to any desired angle. Serrated swivel joint locks secure with huge 3/8" set screw. A convenient thumb/finger turn knob. 10 foot coax with PL-259.

Has 17 feet of coaxial line is terminated with a PL-259 connector, Allen wrenches included. Weather caps for SO-239 model.

**MFJ-340S** has SO-239 connector. **MFJ-340M** has NMO connector.

## MFJ Hard Mount Coax



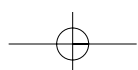
**A. MFJ-341S, \$19<sup>95</sup>** SO-239 on antenna end and PL-259 for radio end. 17 feet coax.

**B. MFJ-341SS, \$19<sup>95</sup>** SO-239 on antenna end and SMA male for radio end. 3 feet coax.

**C. MFJ-341M, \$19<sup>95</sup>** NMO on antenna end and PL-259 for radio end. 17 feet coax.

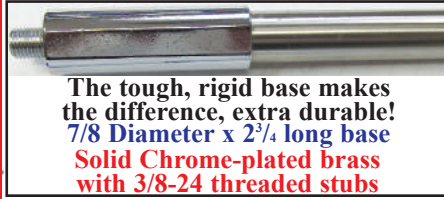
For those permanent antenna mount positions, select:

Ship Code A



**MFJ**

## Ultra-Strong Stainless Steel Telescopic Antennas 5 models . . . 17, 12, 10, 8 or 4.5 ft. Extended



**The tough, rigid base makes the difference, extra durable!**  
**7/8 Diameter x 2 3/4 long base**  
**Solid Chrome-plated brass with 3/8-24 threaded stubs**

MFJ's premium stainless steel telescopic whips are the perfect choice for building collapsible multi-band dipoles, mobiles, portable and base antennas.

They are great for traveling, mini DXpeditions, vacations, etc.

They can also be used to replace your current automatic screwdriver whip for a more highly efficient fixed mobile operation.

Rigidly collared at the base, stronger than plated brass, and impervious to rust and corrosion, they stand up to the forces of nature and the rigors of portable operation where others might fail.

With four models to choose from, select the ideal length for the frequencies you need to cover.

The base of each whip features a standard 3/8-24 threaded mounting stud for installation on mobile or fixed antenna mounts like MFJ's lip mounts, magnet mounts, tripods and dipole mounts. The tough, rigid base makes the difference for an extra-durable and long-lasting antenna system.

For 1/4 Wave verticals, use MFJ-342T or MFJ-344 mounts. For dipoles, use two whips with the MFJ-347 dipole mount.

**A B C D E** See pg. 61 for 3/8-24 mounts.

### A. MFJ-1979, \$59<sup>95</sup>

**17-foot** stainless steel telescopic whip is manufactured with a solid 7/8" diameter by 2 3/8" long chrome-plated brass base. 5/8" diameter bottom section and a .10" top section with a 5/16" diameter round ball tip. 17 feet fully extended. 10 sections. Collapses to 27".

Telescopes for full 1/4 Wave operation on 20 Meters without loading coil and 30/40/60/80/160 Meters with loading coil.  
P/N: 404-0009, \$22.95. 230 uH loading coil, 10 turns/inch.

### B. MFJ-1977, \$44<sup>95</sup>

**12-foot** stainless steel telescopic whip. Replaces screwdriver antenna whip for highly efficient fixed operation. Telescopes to 1/4 Wave, covers FM/12/15 M.

Use base loading coil to cover lower bands. Solid 3/4 inch diameter by 2 3/8 inch long chrome plated brass base. 5/8 inch bottom section, .10 inch top section with 5/16 inch diameter round ball tip.

**12-feet** fully extended. Seven sections. Collapses to 26 inches.

### C. MFJ-1976, \$39<sup>95</sup>

**10-foot** stainless steel telescopic whip. 10 ft. fully extended, this whip can cover 10M through FM band without loading and lower bands with a loading coil.

**Solid 3/4" dia.** by 2 3/8" long chrome plated brass base. 7/16 inch bottom, .10" top section with 5/16" diameter round ball tip.

**10 feet** fully extended. 7 sections. Collapses to 20" for easy travelability.

### D. MFJ-1974, \$34<sup>95</sup>

**8-foot** stainless steel telescopic whip. Fully extended at 8.2 feet, this whip

covers 10 Meters thru FM band without loading, lower bands with coil.

**Solid 3/4 inch diameter** by 2 3/8 inch long chrome plated brass base. 7/16 inch bottom section, .10" top section with 5/16 inch diameter round ball tip.

**8.2 feet** fully extended. 5 sections. Collapses to 24" for easy travelability.

### E. MFJ-1972, \$14<sup>95</sup>

**4.5-foot** stainless steel telescopic whip. Great for mobile or base/fixed operation. Covers 6 Meters, 2 Meters, Air band and FM band. 1/2 inch hex base with 3/8-24 threaded stud. 9/32" bottom section. 4.5 feet fully extended. 3 sections. Collapses to 22 inches.

### MFJ-1963, \$9.95

### 6-foot SuperStik™

Stainless steel telescopic whip. Great length for building portable antenna projects -- use it as a tuning "stinger" on a larger vertical, a top section for a center-loaded or base-loaded portable QRP antenna, or use two for a "trick-stick" style dipole. Weighs just 1.2 oz. 6 foot fully extended, 14 inches collapsed. 6 sections, 9/32" bottom, 7/64" top. Standard 10-32 stub mount.

### MFJ-7749, \$2.95.

10-32 to 3/8-24 stub adaptor.

### stainless steel antenna whips

**Solid stainless steel 108 and 72 inch whips** with corona discharge caps.

**Super durable whips** for mobile screwdriver style antennas. Both have HF style 3/8x24 thread stud connectors.

**A. MFJ-1966, \$26.95.** 108 inches.

**B. MFJ-1964, \$21.95.** 72 inches.

## HF Portable/Mobile Manual Screwdriver Antennas

**MFJ's Manually Tuned Screwdriver Antennas let you operate all bands between 80 and 6 Meters continuously including all WARC bands and the new 60 Meter bands (\*depends on model). It far outperforms other HF compact antennas!**

MFJ's new **Manually Tuned Screwdriver Antennas** let you operate *all bands* 80-6 M continuously including all WARC bands and new 60 Meter bands (depends on model).

An extra long 10 foot (19" collapsed) whip lets you really get out and work rare DX! 4 1/2 foot (23" collapsed) stainless steel whip is included for mobile. Each unit has a highly efficient loading inductor.

For highest Q, the coil is wound with heavy gauge wire with wide spaced turns on a mostly-air core. A tuning sleeve electrically removes turns to eliminate detrimental self-resonance effects. The tuning sleeve is on the low impedance side of the coil to minimize power robbing and detuning stray or hand capacitance. Frequency stays put after you tune it. A separate movable sleeve adjusts frequency. A nylon-tipped thumb-screw locks sleeve. Wing nut lets you connect a matching capacitor or inductor for 1:1 SWR.

Use 3/8x24 mount. 200Watts PEP. Add coax, connect ground/counterpoise.

### Portable Manual Screwdriver Antennas

**MFJ-1661** covers 40-2M with 10 foot whip. Covers 6-20 Meters with 4 1/2 foot whip. 12 inches long by 2 inches in diameter. Weighs one pound.

**Portable Versions**  
Uses longer 10 ft. whip for full frequency coverage.

**MFJ-1664** covers 80-6M with 10 foot whip. Covers 6-40 Meters 4 1/2 ft. whip. 24" long by 2 inches in diameter. Weighs just 1.8 pounds.

**MFJ-22, \$4.95.**  
Shunt matching coil with solder lugs. For use at base of mobile/screwdriver antennas with high SWR.

### Mobile Manual Screwdrivers

**MFJ-1662** covers 40-2M with 4 1/2 foot mobile or 10 foot fixed operation telescoping whip. Continuously adjustable loading coil is 15 inches long by 2 inches in diameter and weighs 1.3 lbs.

**Mobile Versions**  
Get full frequency coverage with short 4.5 ft. whip.

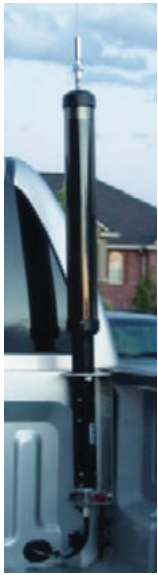
**MFJ-1668** covers 80-6M with 4 1/2 foot mobile or 10 foot fixed operation telescoping whip. Continuously adjustable loading coil is 36 inches long by 2 inches in diameter and weighs 2.6 pounds.

# Tarheel Antennas

Without a doubt . . . the best built, best looking, best performing screwdriver antennas in the world!

## Screwdriver Antennas and Controllers

CNC



**TH-100A-HP . . . 3.4-28 MHz . . . 1.5 KW PEP . . . Pittman 12V Commercial Motor . . .**

**TH-100AHP** provides continuous coverage from 3.4 to 28 MHz with the 6' whip. **TH-100A-HP** provides continuous coverage from 3.4 to 28 MHz with the 6' whip. This is, without a doubt, the best built, best looking, best performing and highest power motorized antenna for its size and design on the market.

**Pre-installed sensors** lets you add one of the auto controllers below. All CNC machined antenna components are either aircraft aluminum or stainless steel and blue-printed -- (you can take 100 antennas apart, mix them up and then reassemble them and they will all work the same!).

**Get the Package Deal!**  
**TH-100A-HPKG . . . \$579.95**  
 Includes 100A-HP antenna, 6' whip, MT-1 bracket with whip quick-twist disconnect, 21' RG8X coax, seal, 20' control cable, manual switch, ferrite decoupling core, matching coil, fuseholder/fuse, 3/8-24-1/4 stud and silicone dielectric compound.

Our coil form is 2" diameter and made of fiberglass. Other antenna builders know fiberglass is better but they choose not to use it because of expense and difficulty in machining.

We use 14 gauge wire for high power capability wound at eight turns an inch for maximum efficiency. The decoupler is CNC machined for tight tolerances with custom fingerstock designed to contact three turns of coil all the time with over 25 pounds of combined contact pressure. You can run up to 1.5 kW PEP trouble-free.

**TH-100A-HP** comes with the Pittman 12 Volt commercial grade gear motor for the best performance. The motor is very durable and extremely quiet while receive tuning.

**TH-100A-HP** has a Lexan™ Weather Shield -- this is the same stuff used on racecar windshields and even used to make bulletproof win-

dows. Uses Powder Coat Paint System -- Folks this is not spray paint in a can. You get a finish that looks as glossy and will last as long as the paint on a new vehicle!

That's just some of the effort going into a Tarheel. You won't be disappointed -- we GUARANTEE it!

**TH-MT1, \$119.** Stainless steel mounting bracket kit includes: bracket with SO-239 and three U-bolt sets.

| ANTENNA SPECIFICATIONS                   |                  |
|--|------------------|
| Lower Mast Length                        | 3 feet           |
| Whip Length                              | 6 feet           |
| Freq. coverage w/6' whip                 | 3.4-28 MHz       |
| Power Rating                             | 1.5 kW PEP       |
| Typical SWR                              | 1.5:1 or less    |
| Total Height w/6' whip (fully collapsed) | 9 feet, 4 inches |
| Total Height w/6' whip (fully extended)  | 11 feet          |
| Weight                                   | 8 lbs.           |

### Little Tarheel . . . 7-54 MHz . . . 200 Watts PEP . . . Dynamite comes in Small Packages!

The Little Tarheel, when properly installed on your vehicle, will provide continuous coverage from 7.0 to 54 MHz with the supplied whip. The Little Tarheel II will provide continuous coverage from 3.5 to 54 MHz with the supplied whip.

Both antennas, like all of our motorized antenna models are built to meet the highest standards but in a much smaller size. In this case, Dynamite really comes in small packages!

Sensors are already preinstalled so you can add one of the auto controllers below. Little Tarheels are designed for the ham who wants to enjoy HF mobile but not interested in a huge antenna on the car.

Don't let the small size fool you, it is

**TH-1LHP** designed to be mounted higher on the vehicle and when mounted higher you have much less ground losses which equal better performance. It also lets you use a more common type of mount like the MFJ-336T tri-magnet mount or MFJ-345T lip mount.

**TH-2L** designed to be mounted higher on the vehicle and when mounted higher you have much less ground losses which equal better performance. It also lets you use a more common type of mount like the MFJ-336T tri-magnet mount or MFJ-345T lip mount.

You get the same great look as our other larger antennas with our Power Coat Paint System and our Lexan™ Weather Shield -- not the flimsy stuff that others use.

Little Tarheel series uses the Pittman commercial 12-Volt gear motor.

Included standard with the screwdriver antenna is the whip, 20 feet of plug-n-play control cable, manual control box, ferrite decoupling core and 3/8-24 threaded stud.

| ANTENNA SPECIFICATIONS         |             |             |
|--------------------------------|-------------|-------------|
|                                | TH-1LHP     | TH-2L       |
| Lower Mast Size                | 1.5"        | 1.5"        |
| Lower Mast Length              | 16"         | 16"         |
| Whip Length                    | 32"         | 32"         |
| Total Length (fully collapsed) | 48"         | 48"         |
| Total Length (fully extended)  | 54"         | 54"         |
| Freq. Coverage (Continuous)    | 7.0-54 MHz  | 3.5-54 MHz  |
| Power Rating                   | 500W PEP    | 200W PEP    |
| Typical SWR                    | 1.5 or less | 1.5 or less |
| Weight                         | 1.8 lbs.    | 1.9 lbs.    |

## MFJ Automatic Screwdriver Antenna Controllers

### New! MFJ Truly Automatic Screwdriver Controller

Works with all rigs 160-60 Meters! No interface cables needed! RF sensor reads frequency data and moves antenna to nearest programmed setting. Save 8 settings per band.

**MFJ-1928** automatically tunes antenna to lowest VSWR. LCD reads frequency, VSWR, turns count and motor operating current. Manual up/down buttons can be used for fine tuning.

**2-speed** motor control: high speed for quick adjustments, low speed for fine tuning. Home mode is hands-free lowering of antenna in low overheads. Adjustable current limit prevents motor damage, stall-outs.

**Meter** port allows use with AWM-35B/H SWR/Wattmeter. 3/2"Wx3/4"Hx1/4"D". 4-pin molex matches most screwdriver antennas.

**\$229.95**  
Ship Code A



### Programmable Screwdriver Controller

Save ten favorite screwdriver antenna positions in memory and quickly return to any saved position.

**Up/Down** buttons manually move the antenna to desired position. 4-digit turns counter gives precise antenna position.

**MFJ-1924** gives precise antenna position. MFJ's exclusive *AutoPark™* feature automatically bottoms antenna for parking in the garage. *Resets and calibrates* counter each time -- eliminates antenna slippage, turns count errors. MFJ's *Dead-OnSTOP™* automatically reverses the motor briefly just before it stops to eliminate overshoot. MFJ's *Stall-Protector™* automatically detects motor stall, completely shuts off power to motor. Use with single and dual magnetic sensors. Requires 12 VDC. 3/2"Wx3/4"Hx1/4"D".

**MFJ-82, \$29.95.** Mag sensor, High Sierra.  
**MFJ-83, \$9.95.** Mag sensor for Hi-Q.

**\$139.95**  
Ship Code A



### Automatic Screwdriver Antenna

Perfect for Kenwood, Icom or Yaesu rig equipped with CI-V interface. Plug controller to your rig and the MFJ-1927 receives frequency data and will automatically tune your screwdriver. All features of MFJ-1924. Includes radio interface cable. 3/2"Wx3/4"Hx1/4"D".

### MFJ Digital Screwdriver Controller

**MFJ-1922B** Tells exactly where your antenna is positioned! Retune fast, no guessing. *Bright .40"* high-intensity 4-digit LED, precision micro-controller gives digital count -999 to +999. On/off/reset switch. Easy calibration. 3/2"Wx3/4"H x1/4"D".

**Rig Interface Cables Available . . .**  
**RJ-DB9KY, \$24.95.** For Kenwood and Yaesu transceivers with DB9 serial port, com port.  
**RJ-8MY2, \$24.95.** For Yaesu 8-pin mini Din rigs with a Cat/Linear port.  
**CB-35, \$4.95.** All Icom rigs, 3.5 mm remote.



**MFJ-1927 K.I.Y**  
**\$169.95**  
 Ship Code A



**\$109.95**  
 Ship Code A



## MFJ 10-band HF/VHF Mobile Antenna

MFJ-1699S/T  
**\$69<sup>95</sup>** Operate 80, 40, 30, 20, 17, 15, 12, 10 Meters HF mobile and 6 and 2 Meters VHF with just one amazing antenna!

**MFJ-1699** features low SWR and 200 Watts power handling for a super-performing mobile HF/VHF antenna.

**Changing** bands is super-easy -- just change the tap on the "wander-lead" to the next band you want to explore. Maximum height is 65".

**PL-259** or 3/8-24 connector makes it easy to mount on any type of lip, trunk, magnet or pipe type mount. See MFJ mounts in this catalog. Easily collapsible for storage.

Order **MFJ-1699S** with **PL-259**.  
 Order **MFJ-1699T** with **3/8-24** stub.

### 20/40M 4 1/2' base-loaded Telescopic Mobile whips

**Efficient, base-loaded 4 1/2** foot HF Whip Antenna is *thin, sleek, and low profile* with very low wind resistance. **MFJ-2420T (20 Meters) \$29<sup>95</sup>**  
**MFJ-2440T (40 Meters)** Lightweight. A 3/8x24 trunk lip or 5-inch magnet mount holds it tight and secure. Handles 125 Watts. *Enjoy your road trip on HF!*

**Whip** collapses to 22 inches for easy parking or storage in trunk. Easy-on, easy-off 3/8x24 stud. Use as center loaded antenna with bottom mast to improve efficiency.

## HF/VHF/UHF Mobile

MFJ-1456  
**\$149<sup>95</sup>** This new mobile antenna lets you operate all of your favorite HF/VHF/UHF bands as a base station antenna or as a mobile.  
 Ship Code C  
*Free NMO Adapter!*

**Covers 40/20/15/10/6/2 Meters** and 440 MHz with automatic bandswitching!

**Now** you can DX and rag-chew just like the big boys with their fancy screw-driver antennas at almost three times less the cost!

**Use** 1 or up to 4 loading coils at the same time. Adjustable whip for tuning.

**Handles 100 Watts.** SO-239 connector quickly screws onto mirror, luggage or tri-magnet.

**See MFJ mounts** in this catalog.

**Antenna** is 75 inches with tallest coil mounted vertically. Great for Icom-706! Requires Tri-Magnet mount.

**MFJ No Matter What™** one year limited warranty.

MFJ-1456 HF Loading Coils



## MFJ HF Hi-efficiency Mobile Continuous Wide Band Coverage: 40-2 or 20-2 Meters

MFJ-1652  
**\$79<sup>95</sup>** 20-2 Meters  
 Ship Code B

MFJ-1654  
**\$89<sup>95</sup>** 40-2 Meters  
 Ship Code B

**This** excellent HF Hi-Q Mobile or base stealth HF Antenna consists of an 8 foot stainless steel radiator and a Hi-Q air-wound loading coil. Handles 1 kW PEP SSB.

**You'll** get outstanding results on both transmit and receive. Stainless steel whip telescopes from 2-8 feet. Easily pack it away when parked to prevent theft or vandalism. Bring it out at night and your neighbors will never know you were on the radio. Packs away into a tiny space for antenna restrictions.

**You** can use a longer whip, up to 17 feet for stationary operation. See MFJ stainless steel whips in this catalog. Gives better performance.

**It** is easily adjustable for 40 Meters through 2 Meters with the MFJ-1654 or 20 Meters through 2 Meters with the MFJ-1652. Simply tap a different coil area to change the bands quickly.

**It** is super-easy-to-install, both

## MFJ HF mini-Bugcatcher

**Become** an "HF Mobileer" almost instantly with almost no effort! Have tons of fun rag-chewing and DXing on the HF bands. Turn boring drives into fun-filled action-packed ham radio adventures.

MFJ-1624  
**\$89<sup>95</sup>**  
 Ship Code C

**It** only takes minutes to attach a trunk lip mount (MFJ-345T, \$39.95), mirror or luggage mount (MFJ-342, \$9.95) or tri-magnet mount (MFJ-336T, \$34.95).

**Screw** in your MFJ-1624 mini bugcatcher HF mobile antenna and get on the road to grab those rare QSOs with folks all around the world.

**Throw** your rig into your car, plug it in the cigarette lighter and turn the power down to 20 Watts or so (to avoid overloading your cigarette lighter; antenna handles 300 Watts PEP).

**Operate** HF mobile and enjoy DXing! **Bugcatcher** design uses large highly-efficient air-wound inductor --it will far out perform other compact HF mobile antennas.

**Exclusive built-in** inductive matching network keeps SWR low. 5 1/2 foot whip collapses to 2 1/2 feet for easy storage and garages. Base loaded for minimum wind load and stress. Change bands by moving "wander lead". 3/8 by 24 inch threaded mount.

A high impedance matching automatic tuner can do wonders! Check out MFJ-939 YKI series, 200 Watts, 1.8-30 MHz, 20,000 virtual antenna memories, 2-year warranty. It's the perfect travel companion for your mini bugcatcher!

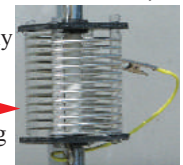


pieces screw together and into a 3/8-24 threaded base. Use any standard 3/8-24 threaded mount in lip, trunk, magnet or pipe types. See MFJ mounts in this catalog.

**Covered** by MFJ's famous *No Matter What™* one year limited warranty. MFJ will repair or replace (at our option) your antenna no matter what for one full year.

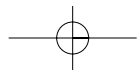
**Use** a high impedance automatic tuner like MFJ-939 YKI series to get multiple bands out of one tapped position. The MFJ-939 has 20,000 virtual antenna memories, comes with the rig interface cable and is extremely compact.

**MFJ-65, \$59.95.** → Hi-Q air-wound loading coil only for 20-2 Meters, as used on MFJ-1652. Measures 2 inches diameter by 3" length.



**MFJ-67, \$69.95.** → Hi-Q air-wound loading coil only for 40-2 Meters, as used on MFJ-1654. 2 inches diameter by 6 inches length.

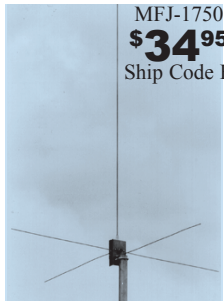




# MFJ 5/8 Wave 2M Ground Plane



For an incredible \$34.95, you get a 300 Watt 5/8 Wave ground plane 2 Meter home station antenna. Other 5/8 wave ground planes can't work any better -- no matter how much they cost . . .



**MFJ-1750** Look at all you get **\$34.95** at an incredible price!  
 Ship Code B **\$34.95!**  
 You get a 300 Watt 5/8 wave ground plane base antenna for 2 Meters that gives you the maximum possible calculated gain of any single element antenna. Other 5/8 waves

can't work any better -- no matter how much they cost.  
 You get *shunt fed matching network* for lowest possible SWR over entire 2 Meter band. Plus, it bleeds off unwanted static.  
 You get MFJ's *RapidTuneRadiator™* for quick accurate tuning.  
 You get a ceramic insulator for low RF loss. Result? Maximum radiated power is achieved.  
 Easy installation to any 1 to 1 1/2 inch mast, (not included) with a single U-bolt

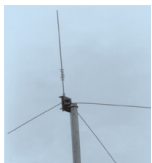
(included).  
 You get strong lightweight aluminum construction protected by MFJ's *No MatterWhat™* limited warranty.  
 You get MFJ's famous *No Matter What™* one year limited warranty.  
 Just \$34.95 gets you the most incredible value in a 5/8 wave base station ground plane. Remember, other 5/8 wave ground planes can't work any better.  
**MFJ-1750, \$34.95.** 2 Meter 5/8 Wave.  
**MFJ-1752, \$34.95.** 220 MHz 5/8 Wave.

## Dual Band 144/440 Ground Plane



**MFJ-1754** MFJ's dual band 144/440 ground plane antenna is small, lightweight and super easy to mount to any 1 to 1 1/2 inch mast, (not included) with a single included U-bolt -- you'll have it up and operating anywhere in just minutes. Great for backpacking.  
**\$39.95**  
 Ship Code A  
**Mount** it inside to get on-the-air quickly. You get extra long range on 440 MHz with a high gain halfwave over quarter wave antenna and solid 1/4 wave performance on 2 Meters.  
**Ground** plane is sloped to give low SWR across both bands and to minimize feedline radiation. This gives you more useful radiated power, reduced TVI and noise pickup by the coax shield.

## Improved 1/4 Wave Ground Plane



**MFJ-1740** For \$29.95, you get an improved 300 Watt 1/4 Wave Ground Plane for 2 Meters that'll bring up repeaters as well as or better than any 1/4 wave ground plane -- even if it costs twice as much.  
**\$29.95**  
 Ship Code A  
**The improved** MFJ 1/4 wave ground plane minimizes feedline radiation for more useful radiated power, reduced TVI and noise pickup by the coax shield.

You get MFJ's *Fast-Tune-Radiator™* that makes tuning to your favorite part of the band a snap. U-bolt and mounting hardware included. Easy to install on 1 1/2" mast. Can be cut for 220 or 440 MHz. A cutting chart is included.

## Portable 3-element 2-Meter beam



**Unique** design lets you set it up or take it down in seconds! Elements simply screw into the boom. Easy to store and sturdy enough to use as your base antenna.  
**Center** mount it and use it vertically on FM or horizontally for SSB. By rotating it you can minimize QRM. You can also mount it vertically or horizontally on the leg of a tower . . . great for Packet and *PacketCluster™*.  
**Compact** 2 3/4 foot boom gives you calculated gain within 1 dB of a four element Yagi with a boom nearly twice as long. Extra thick elements maintain high gain and directivity over virtually the whole 2-Meter band. Ferrite choke balun gives excellent feedline decoupling. Coax coupling is further reduced by mounting the SO-239 connector behind the reflector.  
**Weights** just 2 lbs. Boom is 30 1/2 x 1 3/4 x 1 1/4 in. Mounts easily to mast or tower leg with single included U-bolt. Mast not included.

**MFJ-1763**  
**\$54.95**  
 Ship Code B

## Stacked 2-Meter 5/8 Wave

MFJ's stacked 5/8 wave radiators give you more than twice the omni-directional gain of a single 5/8 wave radiator! Wide 10 MHz 2:1 SWR bandwidth . . . excellent ferrite choke balun feedline decoupling . . . shunt choke for bleeding off unwanted static . . . strong lightweight aluminum. Works as an excellent 6 Meter full half-wave centered antenna. Great for MFJ's 6 Meter radios! Mounts vertically for FM/packet or horizontally for SSB. U-bolt (included) to any 1 to 1 1/2 inch mast or tower leg. **MFJ-1766, \$124.95.** Gives you *four* times the gain of a single 5/8 wave. 2 MFJ-1764 antennas, phasing cables. Double gain on 6M.  
**MFJ-1765, \$39.95.** Includes phasing cables for two MFJ-1764s.

**MFJ-1764**  
**\$59.95**  
 Ship Code B



## MFJ Dual Band 144/440 MHz Yagi



**MFJ-1760** MFJ-1760 gives a whopping 8 dBi gain on 2-Meters and 6 dBi gain on 440 MHz. Has 3-elements on two meters and 5-elements on 440 MHz. Requires only one feedline for *true* dual band performance. Point in direction of your QSO for more direction of your output power. This reduces interference and increases signal strength. Has 17 dB front-to-back ratio on 2-Meters and 10 dB on 440 MHz. Handles 500 Watts. The longest element is 40.5 inches and the boom is 45 inches. Mast diameter is 1.5 inches. Weighs just 2 pounds.

## MFJ 7 element 144/440 MHz Yagi

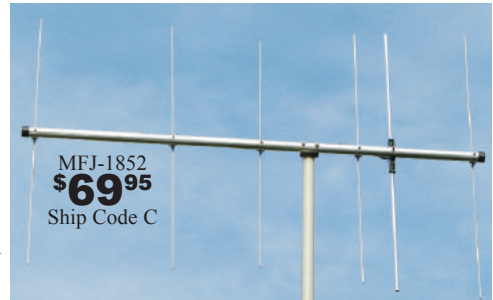


**MFJ-1768** Get 7 elements on 440 MHz and 4 elements on 2 Meters.  
**\$99.95**  
 Ship Code C  
**Exclusive** dual band balanced feed with *FerriteChoke™* decoupling prevents pattern skewing-- gives low SWR. 1/4 inch diameter driver elements give wide bandwidth. *National Bureau of Standards* design is optimized for maximum gain, high front-to-back, clean symmetrical pattern. Mounts vertically for FM/Packet or horizontally for SSB with single included U-bolt on 1 to 1 1/2 inch mast or tower leg.  
**Includes** a 5 foot, 1 1/8 inch diameter boom, antenna weighs in at 2 pounds. Elements are electrically isolated from boom.

## MFJ 2-Meter wide-band Yagi

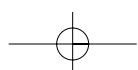
Covers the entire 2-Meter Band from 144-148 MHz

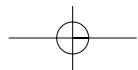
**Our** versatile new six-element MFJ-1852 2-Meter Band Spanner Yagi delivers 10-dBi gain, 20-dB front-to-back ratio, and covers 144 to 148 MHz plus MARS with *rock bottom* SWR. Best of all, there's no power-robbing matching network or finicky tuning adjustments because it's *CAD optimized* for full-band operation using the latest advanced algorithms!



**Whether** you're working weak-signal CW, SSB, digital, satellites, or FM, you'll appreciate the MFJ-1852's compact small size, light weight (3.5 lbs.), and stealthy good looks. You'll *love the way it performs*, with consistently low reflected power, high directivity, and superb rejection of unwanted noise/interference.  
**MFJ-1852** makes a great antenna for the home QTH, but it is also perfect for vacation spots, emergency shelters, field day camp, and rover excursions. The boom is 3' long and the longest element is 41", so it's easy to pack away on your next trip. Handles 600 Watts. Has SO-239 feedpoint. If serious about staying in touch, why not pick one up to cover all of your "bases".  
*It's the perfect plug-and-play solution!*

**MFJ-1852**  
**\$69.95**  
 Ship Code C





# MFJ Pulsar™ 6M/VHF/UHF/1.2 GHz Base Antennas



**MFJ's Pulsar™ Base/Repeater Antenna** series is *built to last!*

*Heavy duty* fiberglass radomes and overlapping shells add strength and stability. Stainless steel hardware and waterproof joints eliminate moisture/pollution. *Super high wind loading.*

**MFJ-1526 - \$149.95.** Pulsar *ULTRA MightyGain™*. Dual Band 144/440 MHz Base/Repeater Antenna. Our highest gain Pulsar™ antenna. Great 8.3 dB on 2 Meters and 11.7 dB on 440 MHz. 17 ft., shipped in two sections. SO-239 Connector, handles 200W.

**MFJ-1526N - \$149.95.** Same as MFJ-1526, has "N" connector.

**MFJ-1524 - \$119.95.** Pulsar *Hyper MightyGain™*. Dual Band 144/440 MHz Base/Repeater Antenna. You get high gain with little weight. Just 10 feet tall. Features

6.5 dB gain on 2 Meters and 9 dB gain on 440 MHz. Shipped in two sections. SO-239 connector, handles 200 Watts. *All are ship code C.*

**New! MFJ-1521, \$59.95.** Pulsar *Mini Limited Space VHF/UHF Antenna.* Just 4.5 feet tall but gives BIG gain, 3dB on 2M and 5.5dB on 440 MHz. Perfect for balconies, attics, other limited spaces.

**MFJ-1522 - \$69.95.** Pulsar *Economy Priced Dual Bander™* Base/Repeater Antenna. 5.5 ft. tall. 4.5 dB gain on 2 Meters, 7.2 dB on 440 MHz. Great for antenna restricted households and apartments. Easy to hide on Balcony or backyard. SO-239 Connector. Handles 200 W.

**MFJ-1516 - \$99.95.** Pulsar *VHF Base Station™*. The ultimate 2 Meter Base/Repeater Station Antenna! Great 7.8 dB gain is perfect for dedicated repeater or home use. 15ft. shipped in three sections. SO-239 Connector.

Handles 200 Watts.

**MFJ-1536 - \$119.95.** Pulsar *VHF TriBander™*. The Perfect Base/Repeater Antenna for VHF. Covers 2 Meters, 6 Meters, and 440 MHz. You get 2 dB on 6 Meters, 6 dB gain on 2 Meters, and 8 dB gain on 440 MHz. Only 8.2 ft., shipped in two sections. SO-239 Connector. Handles 200W.

**Quadbander covers 6 M and 144/220/440 MHz**

**MFJ-1538 - \$119.95.** Pulsar *VHF Quad-Bander™*. Like MFJ-1536, but covers 6M/144/220/440 MHz.

**MFJ-1532N - \$99.95.** Pulsar *VHF/UHF and 1.2 GHz TriBander™* Base /Repeater Antenna. VHF operation plus exciting 1.2 GHz!! 4.5 dB gain on 2 Meters, 8.3 on 440 MHz, and a whopping 11.7 dB 1.2 GHz. 5 1/2 ft. Type "N" connector. Handles 200 Watts.

## MFJ 6-Meter Antennas

### MFJ 6-Meter Moxon Ant

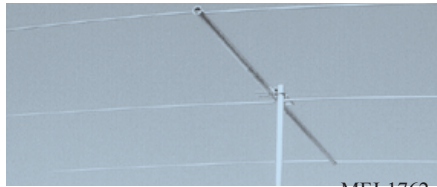
MFJ-1896  
**\$69<sup>95</sup>**  
Ship code B

Handles  
1 kW

MFJ's 6-Meter Moxon for limited space features

low SWR and a *broad cardioid pattern* with **5.5-dBi forward gain**, high front-to-back ratio. Element span is a compact 7 feet on a 34" boom with **turning radius of under 4"**. It's winter-storm tough but extremely lightweight, under 5 lbs. Feedpoint is an SO-239 pigtail. It's the perfect choice for getting on the "magic" band as the sun spot count rises and legendary band openings return. Also, it's your best choice to take on those exciting mountain-topping and *rover* adventures!

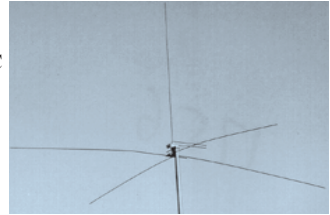
### MFJ 6-Meter Yagi



This super lightweight 6 Meter Yagi will quadruple your effective radiated power over a 1/2 wave dipole. MFJ-1762 has a 6 foot boom and three elements. Weighs just 2 pounds. Handles 300 Watts PEP SSB. Mounts vertically or horizontally. Gives a great front-to-back ratio. It's the perfect match for your MFJ-9406 6-Meter *Adventure Radio™*.

MFJ-1762  
**\$99<sup>95</sup>**  
Ship code C

### MFJ 6-Meter Vertical



MFJ-1756  
**\$99<sup>95</sup>**  
Ship code C

MFJ-1756 is a omnidirectional low-angle vertical

radiator that lets you work plenty of DX in all directions, even with low power. 55" strong aluminum radiator and four 60 inch radials. A rugged *adjustable* air-insulated matching stub lets you obtain a near perfect 1:1 SWR. Mounts to any 1 to 1 1/2 inch mast with a single U-bolt clamp (included). Lightweight and truly portable.

## MFJ 10-15 Meter Antennas

### MFJ 10 & 15 Meter Moxon Antennas

MFJ-1890  
**\$84<sup>95</sup>**  
Ship code B

Handles  
1kW!

MFJ-1895  
**\$104<sup>95</sup>**  
Ship code B

This rugged *close-spaced* 2-element Yagi has a driven element and reflector with the tips folded toward each other to minimize turning radius. **MFJ-1890 for ten meters spans a mere 12' on a lightweight 50" boom.** Weighs just 8 lbs., yet delivers an amazingly clean *cardioid pattern* with 3.3 dBd forward gain and 30 dB of *interference killing* front-to-back rejection! Mount anywhere using lightweight TV antenna hard-

ware. SO-239 pigtail feedpoint. **MFJ-1895 for fifteen meters spans sixteen feet on a lightweight 67" boom.** It also delivers 3.3 dBd forward gain. Weighs ten pounds.

### MFJ 10-Meter Mobile

**MFJ-1410T** super-performing 10-Meter mobile gives you plenty of punch and gain for *rough-shot mobile operation.* Explore the exciting world of DX from your auto with this 53" stainless-steel radiator. Low SWR, handles 300 Watts PEP SSB. HF style 3/8-24 threaded connector.

MFJ-1410T  
**\$29<sup>95</sup>**  
Ship code B

### Work the World from your Backyard, this 10M Vertical is all you need!

*Extremely lightweight for portable use . . . Low Angle Radiation for outstanding DX Vertical/Horizontal Mounting Bracket . . .*

**Ten Meters is Wide Open!** This 11-foot vertical lets you work *all the DX you can handle!* Features lightweight 11-foot radiator

and two 6-foot radials both made of aluminum. Weighs less than 3 lbs., easy to put up/take down for DXpeditions or stealth.

**MFJ-1790** has a super low angle of radiation to focus your signal *where you want it* -- reduces QRM/Noise and gives great DX!

**Included** mast bracket can be turned horizontal or vertical -- lets you attach it to an existing mast or pole with ease!

**MFJ-1790** covers entire 10-meter band (28.0-29.7 MHz), 300 Watts PEP SSB.

**MFJ-9410X, \$289.95.** Ten Meter Adventure Radio with microphone.

MFJ-1790  
**\$69<sup>95</sup>**  
Ship Code B

### Scanner-Discone Antenna receives 25-1300 MHz, transmits 50-1300 MHz



MFJ-1868  
**\$69<sup>95</sup>**  
Ship code C

**Ultra wide-band antenna** receives 25-1300 MHz.

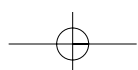
Perfect for scanners. Transmit 50-1300 MHz. Handles 200 Watts. Ideal for 6/2 1/4 Meters, 70/33/23 CM ham bands. Excellent for testing various transmitters on single coax. Includes

SO-239 connector, 50 feet coax, stainless steel elements and mounting hardware.



MFJ-1866  
**\$49<sup>95</sup>**  
Ship code C

**MFJ-1866** is like MFJ-1868, but only transmits from 144 to 1290 MHz. Coax and hardware is not included.





## Portable/Mobile Emergency Communications Center

### NEW! MFJ-897 for Yaesu FT-897D Rig!!!

The MFJ-706/7000/897 is an *Emergency Communications (EmComm)* box that turns your ICOM IC-706, IC-7000 or Yaesu FT-897D into an instant and foolproof portable/mobile emergency communications center. It covers all HF, VHF and UHF amateur radio frequencies available on the IC-706/7000/FT-897D popular transceivers.

It is literally a complete "grab-and-go" communications center that can provide a full 100 Watts SSB/CW signal simply by plugging into any available vehicle cigarette lighter socket or light-duty 10 to 15 Amp 12 VDC power supply.

An MFJ exclusive *PeakPowerBoost™* circuit delivers instantaneous SSB/CW power peaks using several Farads of super capacitance.

A built-in, full range automatic antenna tuner turns any random wire or other antenna into a highly effective HF antenna. Simple foolproof automatic tuning is done with a single push of a button.

A 3/8-24 antenna mount gives you the

#### IC-706™ Presentation Stand



MFJ-361  
**\$34<sup>95</sup>**  
Ship Code A

IC-706, mic not included.

Beautifully blend an entire Ham Radio Station into your living room! *Icom™* 706 detachable panel and speaker are displayed on an attractive compact stand. Put the rig, power supply and antenna tuner out-of-sight. Hide an unsightly rat's nest of power cables, feedlines and AC cords. Adjustable height and tilt for best viewing angle. Optimized for highly intelligible speech and CW, the MFJ-281 speaker can be tilted for best sound. Large soft rubber feet. All hardware is included to mount your IC-706 detachable front panel (*must be mounted on Icom MB-63 mounting bracket*). 12Wx1 1/4Hx4 1/8D in.



MFJ-706  
**\$399<sup>95</sup>**  
Ship Code D

MFJ-7000  
**\$399<sup>95</sup>**  
Ship Code D

MFJ-897  
**\$399<sup>95</sup>**  
Ship Code D

706/mic not incl.

ability to screw on a loaded whip (such as a Hamstick) for long range HF communication or use a high-gain VHF/UHF antenna for local communications.

The IC-706/7000/FT-897D control heads can easily be removed and placed in a convenient location while the larger *MFJ EmComm* box can be placed in the trunk, or on the floor or backseat of your vehicle.

#### MFJ Truck Trailer Hitch Antenna Mount

MFJ-2822 slides into your trailer hitch slot and a bolt locks it in place. Your trailer hitch mount can hold small, medium and large HF/VHF/UHF antennas -- you can even mount the tiny Tarheel Screwdriver HF antenna.

**Heavy-duty** aluminum construction. Has SO-239 for VHF/UHF antennas and a 3/8-24 threaded *GumDrop™* connector for HF antennas.

**Removes** height restrictions by mounting your antenna at the lowest possible point on your truck or SUV. 2Wx2Hx10 1/4D inches.



MFJ-2822  
**\$39<sup>95</sup>**  
Ship Code B

MFJ-706/7000 are a compact 6 3/4"Wx4 1/2"Hx13 1/2"D inches. MFJ-897 is 8 3/4"Wx4 1/2"Hx13 1/2"D inches.

**When** you're ready to move on, just grab the handle and go. Handle is positioned so the *MFJ* box is perfectly balanced for carrying. Tough front and back covers secure and fully protect all of the enclosed electronic gear.

A convenient compartment stows microphone and other accessories so you are always ready for emergencies.

The IC-706 and IC-7000 and FT-897D speakers are fully exposed so speech audio is always loud and clear.

The transceiver is well ventilated to prevent overheating so you can provide continuous high-power communications.

MFJ-706/7000 and FT-897D can be used horizontally or vertically.

**When** a sudden emergency arises you literally can grab an entire communications center, rush to the site, and be in instant HF/VHF/UHF communication in minutes!

**Simple,** reliable emergency communications can easily be provided by any untrained personnel.

#### MFJ Stainless steel License Plate Antenna Mount

Replace your license plate with the MFJ-2820 and remount your license plate. This gives you a convenient no-hassle sturdy antenna mount for most

HF/VHF/UHF antennas -- great for low garages! Has holes for 3/8-24 HF mount or SO-239/NMO VHF/UHF mount. Braced *stainless steel* construction.

**Antenna** is offset mounted so it does not block license plate. Clearance hole for lamp. Antenna can be mounted above or below license plate. Ground wire holes. May not work with all vehicles.



MFJ-2820  
**\$49<sup>95</sup>**  
Ship Code B



MFJ-1925/12  
**\$79<sup>95</sup>**  
Ship Code A

**Use any rig with Yaesu ATAS Screwdriver Antenna**  
MFJ lets you use the popular Yaesu ATAS series screwdriver antennas with popular Icom, Kenwood, Alinco, and other transceivers. **MFJ-1925 I2** plugs directly into the popular Icom IC-

706 transceiver. An Up/Down switch puts the Icom 706 in low power and tunes the antenna. MFJ-1925/12 is simple to install. No modification to radio/antenna is needed. SO-239 connectors. **Order** MFJ-1925 I2 for Icom 706. **Order** MFJ-1925 for Kenwood, Alinco and compatibles.

#### MFJ 10-40 Meters Portable Antenna

**DXCC, WAZ, WAC, WAS won with MFJ-1621!**

MFJ-1621 lets you operate anywhere -- apartment, campsite, resort hotel, even at the beach. Work 40-10 Meters using included 54-inch telescoping whip. The antenna is mounted on a sturdy, 6x3x6 inch cabinet. Features a *built-in* antenna tuner, field strength meter, 50' RG-58 coax. Handles 200W PEP SSB.

It's a complete portable multi-band antenna system -- use it in any location. 3/8x24 threaded connector disengages easily and collapses to 22" for easy portability. Just place in any electrically clear location, set the bandswitch, tune the capacitor for maximum field strength and operate!

MFJ-1621  
**\$99<sup>95</sup>**  
Ship Code B

MFJ-1644  
**\$159<sup>95</sup>**  
Ship Code B



Just add a short whip and counterpoise wire and *instantly* get an effective and portable 150 Watt *all-band* 3.5-30

MHz antenna. Compact and simple-to-use portable, fixed and in emergencies. **High** power, hi-Q 3-core variable loading coil efficiently resonates short whip or wire. Identical inductor tunes counterpoise. Use 30-10 Meters with included 12' telescoping whip antenna and counterpoise assembly.

**Add** longer whip/random wire and external loading coil for more efficient operation especially on 80-30M. 12' whip, hamstick, Hustler antennas all work great.

**Tune** for low SWR with built-in

#### Whip Tuner/Artificial Ground gives instant 80-10M, 150 Watt Antenna

reversible L-network. *Current balun* decouples radiating elements.

**Tune** for maximum current on *RF Current Meter* to give you maximum radiated power and minimum SWR. Sensitivity control lets you use QRP to 150W QRO.

**Ultra** low capacitance fiberglass antenna/counterpoise insulator minimizes shunting current to ground for max radiated power.

**Standard** 3/8x24 female connector for whip antennas and wing-nut for counterpoise. SO-239. 7 1/4Wx2 1/4HX2 1/2D inches.

**MFJ-63, \$39.95.** High-efficiency air-wound 80/40M loading coil with 3/8x24 male/female connectors.

**MFJ-1642, \$129.95.**

Like MFJ-1644 but less *RF Current Meter*.



# Collinear Array and End-Fed Zepp Antennas

2-elements, 2 dB gain ... 4-elements, 4.5 dB gain ... Very Quiet ... Handle 1500 Watts ...

**MFJ**

## When Radio was King ...

These classic high-performance antennas give you a powerful, booming signal, need just two trees are updated with stronger, more durable materials, adapted to simple, direct coax feed to make them hang-and-play.

### Two and Four Element Arrays

**MFJ-62XX** single band two half-wave element collinear array gives you nearly 2 dB gain -- about 150% power gain -- and twice the receiving capture area of a half-wave dipole. They have direct coax feed and low SWR across the entire band.

The **MFJ-64XX** four half-wave element collinear array gives you a whopping 4.5 dB gain -- about 300% power gain. You get four times the receiving capture area of a half-wave dipole -- you'll hear DX you've never heard before! They require a balanced line tuner or a tuner with balun.

## Hang and Play™!

Virtually hang and play™ when you receive them. No cutting, soldering, tuning, or trimming needed. Follow easy set-up instructions and you're on-the-air!

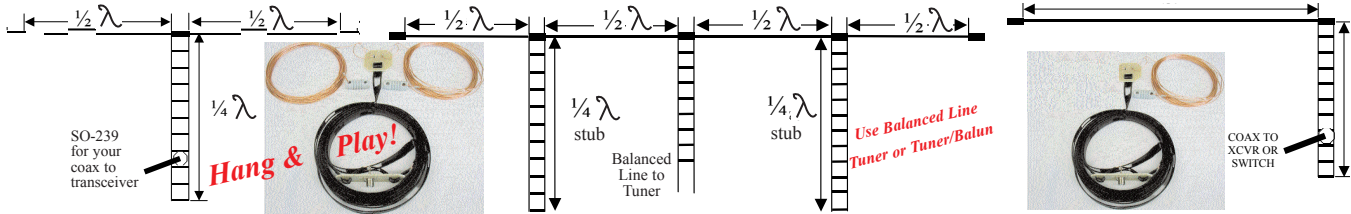
They are completely assembled and include super strong custom fiberglass center insulators, authentic glazed ceramic end insulators, heavy duty 7-strand, 14 gauge hard copper element wire and an extremely strong, solderless, crimped construction.

With larger capture area and power gain, you'll hear & work more DX than ever before! A pair of these at right angles can provide worldwide coverage. These arrays radiate bi-directional perpendicular to the wire and handle full 1500 Watts and reduce noise up to three S-units below verticals.

**Feedline** and stub simply hangs from antenna and is bent at the bottom or pulled away at an angle to make it convenient.

## 1/2 Wave End-Fed Zepps

When an end-fed antenna is desirable or when a center-fed antenna is not possible or convenient, these *hang and play™* end-fed Zepp antennas provide excellent no-compromise performance. The MFJ end-fed Zepp is a *completely assembled* single band half-wave antenna. It's designed for *direct coax feed* and handles a full 1500 Watts legal limit with low SWR. *Hang and Play!* Just follow the easy installation instructions -- no cutting, soldering, tuning, or trimming. They radiate in a wide broadside pattern. Feedline/stub can be "bent" at the bottom, pulled away at an angle. Super-strong fiberglass feed point insulator, glazed ceramic insulator, heavy-duty 7-strand, 14 gauge hard copper wire, extremely strong solderless crimped-construction. Super-strong custom fiberglass SO-239 mount provides stress-relief for the ladder line.



### 2-Ele. Collinear Array, 4 models

- MFJ-6215, \$44.95. 15M, 46' hor., 10' vert.
- MFJ-6217, \$49.95. 17M, 54' hor., 12' vert.
- MFJ-6220, \$49.95. 20M, 70' hor., 16' vert.
- MFJ-6230, \$54.95. 30M, 96' hor., 22' vert.
- MFJ-6240, \$64.95. 40M, 136' hor., 30' vert.

Coax feedline is not included.

All are Ship Code B.

### 4-Element Collinear Array, 3 models

- MFJ-6415, \$99.95. 15M, 92' hor., 10' vert.
- MFJ-6417, \$104.95. 17M, 108' hor., 12' vert.
- MFJ-6420, \$114.95. 20M, 140' hor., 16' vert.

Each includes 100 feet of 450 Ohm ladder line for connection to your tuner.

All are Ship Code B.

### 1/2 Wave End-Fed Zepp, 5 models

- MFJ-6115, \$36.95. 15M, 23' hor., 10' vert.
- MFJ-6117, \$38.95. 17M, 27' hor., 12' vert.
- MFJ-6120, \$39.95. 20M, 35' hor., 16' vert.
- MFJ-6130, \$44.95. 30M, 48' hor., 22' vert.
- MFJ-6140, \$49.95. 40M, 68' hor., 30' vert.

Coax feedline not included. Ship code B.

## MFJ W9INN Balun Box

Converts unbalanced coax line to balanced ladder transmission line. Giant 2-core 4:1 balun wound with Teflon® wire. 3 1/2 x 2 1/4 x 7 in. Heavy duty ceramic feed-thru insulators. 1500 Watts full legal limit. SO-239. Ground post, mounting holes.



MFJ-912  
\$69.95  
Ship Code B

## Switchable 1:1 or 4:1 Current Balun/Unun

Switchable. 1:1 or 4:1 current balun/unun. **\$34.95** Ship Code A  
transformer uses low-permeability ferrite cores to give amazingly flat response 1.8-30 MHz. Transforms 200 or 50 ohm balanced or unbalanced loads to 50 ohms. Change balanced to unbalanced with ground post. 300 Watts. 2 1/2 W x 4 3/4 H x 1 D inches.



## True 4:1 Current Balun/Unun

True 4:1 current balun/unun transforms 200 ohm balanced and unbalanced loads to 50 ohms. True transmission line transformer gives an amazingly flat response 1.8-30 MHz. Two low-permeability ferrite cores easily handles 300 watts. Change balanced to unbalanced with ground post. 2 1/2 W x 4 3/4 H x 1 D inches.



MFJ-911  
\$24.95  
Ship Code A

## Yagi Boom-Mounted Balun

This 1:1 current-choke style balun mounts on the boom of your HF or 6-Meter Yagi to transition from unbalanced feedline (coax) to the balanced driven element. Prevents unwanted pattern distortion from feedpoint imbalance, radiation from outer surface of coax shield, element de-tuning, RFI to consumer electronics and noise transfer to the radio's receiver. MFJ uses a toroid style transmission line choke that is rated for max legal power on SSB/CW and that delivers an impressive 35 dB of through-transmission (S21) common-mode isolation. Molded case, SO-239 connector. 5 1/2 W x 2 H x 3 D in.



MFJ-2911  
\$39.95  
Ship Code A

## MFJ Wall-Mounted Balun

Mounts on the exterior wall of your shack to keep RF out of your operating position and away from internal house wiring. Also prevents electrical noise generated in your location from migrating up to the antenna feedpoint and raising your receiver's noise floor. Toroid-style transmission-line choke is rated for maximum legal power on SSB/CW. Delivers an impressive 30+dB of through-transmission (S21) common-mode isolation on 80-10 Meters. Convenient disconnect point for lightning protection. All-stainless hardware and rugged components. SO-239 connector. 4 W x 2 1/8 H x 2 3/4 D inches.



MFJ-2912  
\$39.95  
Ship Code A

## MatchMaker™ Feed Network

Raise your HF dipoles high above ground for better DX without losing that perfect 1:1 match! This center block transforms 75 Ohm loads down to 50 Ohms. Has a superbly effective 1:1 current balun for transition from balanced element to coaxial line. 1.5kW PEP SSB/CW. 4 W x 1 1/2 H x 2 3/4 D inches.



MFJ-2975H  
\$39.95  
Ship Code A

MFJ-29100H, \$39.95. Transform 100 Ohms to 50 Ohms. MFJ-29100H has the same features as the MFJ-2975H.

# MFJ UltraLite™ and PowerLite™ OCFD Wire Antennas

Delivers Amateur Radio's most-interesting DX bands -- 40, 20, 10 & 6 Meters -- to your fingertips!

40/20/10/6M  
300 Watts  
MFJ-2010  
**\$59<sup>95</sup>**  
Ship Code B



**MFJ-2010 Ultra-Lite™** for 40,20,10 and 6 Meters, handles 300 Watts PEP SSB/CW.

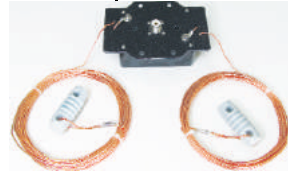
**Perfect** for low-profile portable and QRP operation. Weighs less than two pounds and pulls high in the air with lightweight cord.

**Virtually invisible** 66-foot jacketed wire element. Delivers up to 6-dBi gain on 40 Meters, 9-dBi on 20 Meters, and a whopping 11.5-dBi gain on 10 and 6 Meters! Long leg is 44.6 and short is 22.3 feet.

**Day or night**, there's always DX on these bands. If you hear it, you'll work it -- even QRP!

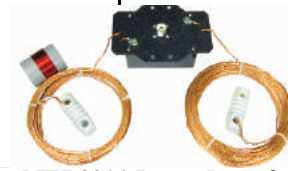
**MFJ-2013, \$79.95.** Ultra-Lite™ for 60/30 Meters, handles 300 Watts PEP SSB. Get 1/2 wave dipole ERP on 60-Meters plus up to 9-dBi of globe-spanning gain on 30M. Brings a whole new meaning to 30-Meter QRP. 86 feet long.

40/20/10/6M  
1.5 kW  
MFJ-2012  
**\$79<sup>95</sup>**  
Ship Code B



**MFJ-2012 Power-Lite™** 40/20/10/6 Meters, handles 1500 Watts PEP CW/SSB. 67' long overall, long leg 44.6, short leg is 22.5 feet. Robust high-power version of the MFJ-2010 with 14-gauge stranded-copper wire and porcelain end insulators. Pull-tested to 200 pounds.

75/40 Meters  
1.5 kW  
MFJ-2014  
**\$99<sup>95</sup>**  
Ship Code B

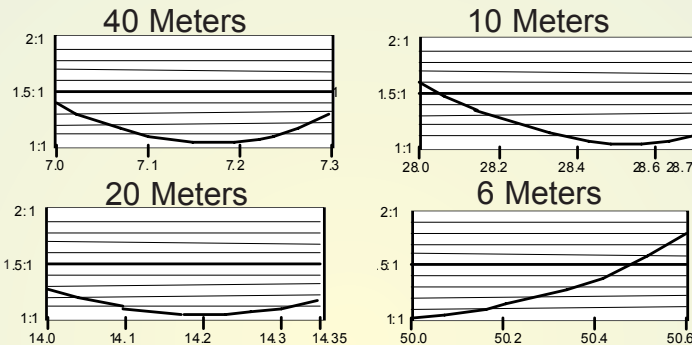


**MFJ-2014 Power-Lite™** for 75 and 40 Meters, handles maximum legal limit 1500 Watts PEP CW/SSB. Replaces your old 75-Meter dipole and adds 40 Meter coverage with up to 9-dBi of *powerhouse gain!* Rugged 122' long. Great for foreign broadcast and 7-MHz!

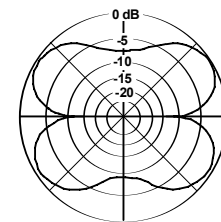
**MFJ-2016, \$129.95.** Power-Lite™ for 160 and 75 and 40 Meters, handles maximum legal limit 1500 Watts PEP CW/SSB. Covers the low end of 160 Meters plus delivers 9-dBi gain in the 75 Meter SSB DX window. Heavy-duty components, rugged construction. 240'.

**MFJ**

## MFJ-2010/2012 VSWR Graphs

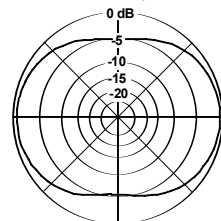


40-Meter Pattern, MFJ-2014  
20-M Pattern, MFJ-2010/12



Outer Ring 9.1 dBi

75-Meter Pattern, MFJ-2014  
40-Meter Pattern, MFJ-2010/12



Outer Ring 6.5 dBi

**Engineered** from the ground up, innovative new antennas by K1BQT break traditional OCFD design barriers to deliver wider bandwidth, lower SWR, solid gain, and full-frequency agility without a tuner!

**How good are they?** W4ILV bought an MFJ-2012 and wrote EHAM, "... the best wire antenna I've ever used!" **We think you'll agree, and here's why:**

**Highest Efficiency.** Full-sized radiator with Matchmaker™ feed block that tests over 98-percent efficient. *All your power gets radiated!*

**Best Match.** NEC-modeled element delivers the same feed-point impedance on every band. Innovative new transformer designs

yield exact ratio needed for a great match.

**Super Balun.** OCFDs need good baluns to block feedline radiation. Built-in bifilar-wound Guanella current-choke has over 30-dB of common-mode rejection on all bands. Kills pattern irregularities, RFI, noise.

**Real Gain.** Delivers a 6-dBi ground-reinforced dipole pattern on the fundamental and a 9-dBi full-wave cloverleaf on the second harmonic. You get an amazing (up to) 11.5 dBi peak gain on higher bands.

**Height Compensation.** Element feedpoints are compensated for typical mounting height, so you always get the lowest possible SWR on all bands!

**Frequency Compensation.** Normally, a OCFD cut for 3.85 MHz resonates on 7.7 MHz. Our unique OCFD element design resonates at mid-band on both 75 and 40!

**Built to Last.** UV-resistant marine-ABS feedblocks, stainless hardware, and Teflon® SO-239 connector ensure maximum protection from the environment.

**Easy-to-Install.** Installs in flat-top or inverted-V set-up, feedblock has attachment points for tower or tree support. Suggested installation height is 35-70 feet.

**Low Cost.** Outperforms multi-band vertical antennas by a wide margin for an unbelievable fraction of the cost!

## MFJ Apartment Antennas . . . Mount indoor or outdoor, windows, balconies . . .

MFJ-1622  
**\$99<sup>95</sup>**  
Ship Code C



**MFJ-1622** lets you operate 40-10 Meters on HF, 6/2 Meters on VHF with a single antenna! Universal mount/clamp lets you attach it to window frames, balconies and railings. Works great indoors mounted to a table or bookshelf. It's not a 5-element yagi, but you'll work your share of exciting DX! Highly efficient air wound "bug catcher" coil, telescoping 5 1/2' radiator lets you really get out! Radiator collapses to 2 1/2 ft. for easy storage and carrying. Includes coax, choke balun, counterpoise wire and safety rope. Operating frequency adjusted by moving the "wander lead" on the coil and adjusting the counterpoise for best SWR.

**Complete antenna system** mounts on window frames, balconies, and railings.

**Perfect** for apartment dwellers.

**Covers 80-6 Meters.** Includes universal mount/clamp, built-in antenna tuner with RF isolator, long 12 foot telescoping whip (22.5 inches collapsed), high efficiency loading coil for 40/80 Meters, counterpoise wires, and safety rope. Handles 200 Watts.

**MFJ-1623, \$179.95.** Like MFJ-1625, but covers 6 through 30 M.

**MFJ-63, \$39.95.** High-efficiency air-wound 80/40 Meter loading coil with 3/8x24 male and female connectors. For whips and verticals.

The ultimate portable HF vertical antenna!

In this kit, you get a 2.5" dia., 5-inch length coil; a ten foot telescopic whip; six special silver plated coil clips, and a chassis mount SO-239 connector.

The rest of the parts needed to build this antenna are in Phil Salas, AD5X' article from QST Magazine, 2005. The antenna is a full quarter-wave on 20-10 Meters, and also works 60, 40 and 30 Meters. *Have fun!*

Mention AD5X when you order for a pleasant surprise.

MFJ-1964K  
**\$54<sup>95</sup>**  
Ship Code B

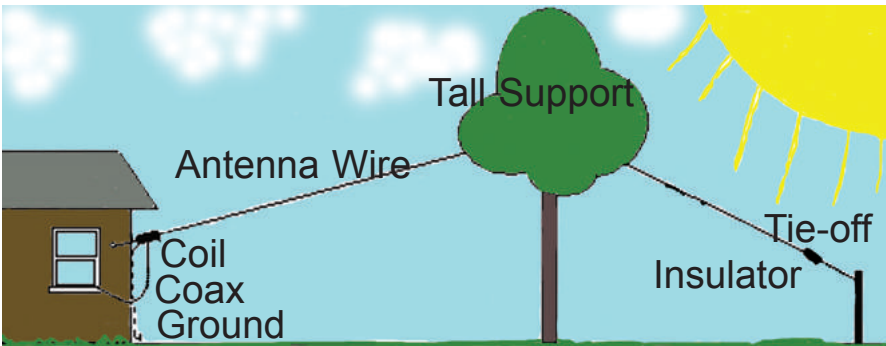


MFJ-1625  
**\$199<sup>95</sup>**  
Ship Code C

# MFJ **All-Band 80-10 Meter End-Fed Half-wave Antennas . . .**

**New!**

**Cover all HF bands with one single wire and no tuner!**



- **Full HF coverage**, no tuner needed on most frequencies.
- **No long counterpoise**, radials or feedline required
- **Rugged** weather-resistant 50-Ohm **matching network**
- **Fast setup** and **takedown**
- **Easy storage/transport**
- **Stainless hardware**, UV resistant materials throughout

**End-Fed Horizontal Wires** (EFHW) cover multiple bands without traps, stubs, or resonators.

**End-fed radiators** have the unique quality of resonating on the 1/2-wave fundamental frequency plus odd/even harmonics above!

**Broad-band matching** transformer at feed point lets the entire HF spectrum be yours! SWR is so low you may never need a tuner.

**Get on the air!** Just one high center or end support -- installation is fast for home, road, emergencies.

**EFHWs** install virtually anywhere in minutes! Comes with a rugged insulated-wire radiator that prevents detuning when contacting limbs/branches. "No-snag" end insulator slides over branches and through foliage without hang-ups.

**Toss your EFHW** over a high limb for an inverted-V, raise the far end high for a powerful sloper, or even go vertical with an inverted-L. Dark jacketed wire is virtually invisible -- **Don't let antenna restrictions keep you off the air!**

**It's no secret** that weather events are getting stronger -- the EFHW makes a great emergency back-up for your regular antenna.

**Power ratings** are in Watts PEP for SSB/CW modes, with 50% or less transmit time (ICAS). Each network designed and tested

to ensure great performance in a wide range of operating conditions.

**End-fed horizontal wire**, an EFHW, offers the perfect solution for a wide range of ham activities.

**Whether** you're QRP backpack, vacationing, emcomm station, or an antenna neighbors will never see, MFJs got an EFHW for you:

**MFJ-1982LP, \$49.95.** 30 Watts QRP, 80-10 Meters. 132 feet

**MFJ-1984LP, \$39.95.** 30 Watts QRP, 40-10 Meters. 66 feet.

**MFJ-1982MP, \$69.95.** 300 Watts Restricted space, 80-10M, 132 ft.

**MFJ-1984MP, \$59.95.** 300 Watts Restricted space, 40-10M, 66 ft.

**MFJ-1982HP, \$89.95.** 800 Watts, high power, 80-10 Meters. 132 ft.

**MFJ-1984HP, \$79.95.** 800W, high power, 40-10 Meters. 66 feet.

**MFJ-1982HP, \$89<sup>95</sup>**



**Typical SWR, MFJ-1984 LP**

| Band | Frequency/SWR | 2:1 SWR Span |
|------|---------------|--------------|
| 80M  | 3.65 / 1.1    | 3.5-3.9      |
| 40M  | 7.19 / 1.4    | Full Band    |
| 30M  | 10.8 / 1.3    | Tuner Req    |
| 20M  | 14.3 / 1.3    | Full Band    |
| 17M  | 18.1 / 1.8    | Full Band    |
| 15M  | 21.25 / 1.1   | Full Band    |
| 12M  | 24.9 / 1.5    | Full Band    |
| 10M  | 28.2 / 1.0    | 28.0-28.80   |

# MFJ All-Band G5RV Antennas

Operate all bands through 10 Meters, even 160 Meters, with a single wire antenna!

MFJ



**MFJ-1778** MFJ's famous Ship Code B G5RV antenna is the most popular ham radio antenna in the world! You hear strong signals from G5RVs day and night, 24/7.

And it's no wonder . . . it's an efficient, all band antenna that's only 102 feet long - shorter than an 80 Meter dipole. Has 32.5 foot ladder line matching section ending in

## Folded Dipole Portable Antennas

Single band, light-weight, portable folded dipoles. Low SWR, direct coax feed, 200 W.



Perfect for MFJ Rigs! MFJ-1774B (40M); MFJ-1773B (30M); MFJ-1772B (20M); MFJ-1771B (17M); MFJ-1770B (15M); MFJ-1770C (10M); MFJ-1776B (6M);

## MFJ BASIC Dipole Antenna Kit

Everything you need to make one 80-10M dipole antenna or up to three different dipoles for 40 Meters and up. You get 142 feet of 14-gauge stranded copper antenna wire, 9 ceramic "dog-bone" insulators, and 6 aluminum wire clamps with stainless steel nuts and screws. The special wire clamps allow you to adjust wire length easily and also hold it in place before you make that final cut decision.



MFJ-2774K has everything that is in the MFJ-2772K plus 3 multi-purpose center insulators, 100 feet of 1/8" nylon rope, 2 PL259s, 2 RG-58 reducers, SO-239, stainless steel screws/nuts. Has 6 ceramic insulators. Make a G5RV, doublet or dipole. Multi-purpose center plates have pre-punched holes designed to secure and relieve stress of feedline weight. Use ladder or coax. Pre-punched hole for SO-239.

**Optional feedlines available below.**  
 MFJ-18H050, \$19.95. 50' 450 Ohm line.  
 MFJ-18H100, \$34.95. 100' 450 Ohm line.  
 MFJ-5850, \$24.95. 50' RG-58 w/PL259s.  
 MFJ-58100, \$39.95. 100' RG58 w/PL259s.  
**Other Coax, Lengths available, see pg. 10.**

**Dipole Center Insulators**  
**A. MFJ-16D01, \$6.95.** Super strong custom fiberglass stress relieving center insulator for 450 Ohm ladder line. . . . Continued right

SO-239 connector for your coax feedline. Use as Inverted Vee or Sloper, and it's even more compact and needs just one support. With an antenna tuner, you can operate all bands 80 Meters through 10 Meters and even 160 Meters with an antenna tuner and a ground. MFJ's fully assembled G5RV handles 1500 Watts. Hang and Play™ -- add coax, some rope to hang and you're on the air! **MFJ-1778M, \$44.95.** Half-size, 52 foot G5RV JUNIOR covers 40-10 Meters with tuner. Handles 1500 Watts.

## MFJ Single Band Dipole Antennas

Ultra high quality center fed dipoles will give you trouble-free operation for years. Custom injection-molded UV-resistant center insulator, built-in connector, hang hole. Heavy duty 7-strand, 14-gauge hard copper wire. Extremely strong solderless crimped construction. Authentic glazed ceramic end insulators. Use as horizontal, sloping dipole or inverted vee. 1.5 kW. Cut to length for your favorite frequency with cutting chart.

**MFJ-1779A** \$69.95 265 ft., 160M Ship Code C  
**MFJ-1779B** \$49.95 135 ft., 80-40M Ship Code C  
**MFJ-1779C** \$29.95 35 ft., 20-6M Ship Code C

**20 Meter Extended Double Zepp**  
 90 foot long, 20 Meter Extended Double Zepp. Whopping 3 dB gain doubles your power! 80-10 Meters with tuner. 100 foot ladder line, glazed ceramic end insulators, ladder line stress relieving fiberglass center insulator, 7-strand, #14 gauge hard copper wire. 1500 Watts. Requires balanced line tuner or tuner/balun.



| Model | Cable dia. | Hole dia. | Height | Diam. | Force-lbs |
|-------|------------|-----------|--------|-------|-----------|
| 17A01 | 1/4"       | .256"     | 2.32"  | 1.61" | N/A       |
| 17B01 | 5/8"       | .630"     | 3.50"  | 2.52" | 10,000    |
| 17C01 | 3/4"       | .787"     | 4.25"  | 2.87" | 12,000    |

. . . Continued from left  
**B. MFJ-16D02, \$8.95.** Multi-purpose feed line stress relieving insulator plate has pre-punched holes to secure and relieve stress of your antenna's feedline weight. Can be used with 450 Ohm ladder line or coax feedline. Pre-punched holes for SO-239 connector.

**MFJ All Band Doublet**  
 MFJ-1777 is a 102 foot all band doublet antenna that covers 160 through 6 Meters with a balanced line tuner. Super strong custom fiberglass center insulator provides stress relief for ladder line (100 ft. incl). Ceramic end insulators. 1500 Watts.



## Dual Band HF Dipole Antennas

**80/40 Meter Dipole Antenna**  
**MFJ-17758** \$89.95 Ship Code C  
**MFJ-17754** \$59.95 Ship Code C  
**MFJ-17758, \$89.95.** Short 85 foot long dual band 80/40 Meter dipole antenna is full-size 40 M and ultra-efficient end-loading on 80M. 1.5kW. Super-strong injection-molded center insulator, built-in SO-239, hang hole. Solderless, crimped construction. 7-strand, #14 ga. hard copper antenna wire. Connect coax feedline directly, no tuner needed.

**40/20 Meter Dipole Antenna**  
**MFJ-17754, \$59.95.** Like MFJ-17758, 42' dual band 40/20M dipole. Full-size 20 Meters, ultra-efficient end-loading on 40M.

**80 Meter End-Fed Zepp**  
 High performance, no compromise End-fed Zepp. Use when center feed is not possible or desirable. 125 feet long, includes 100 feet ladder line. Strong fiberglass insulator provides ladder line stress relief. Glazed ceramic end insulator. 1500 Watts. Requires balanced line antenna tuner or tuner/balun.

**Aluminum or Fiberglass Mast Guy Rings**  
 Designed to fit standard aluminum and fiberglass tubing from 3/4", 1" or up to 1 1/4" diameter OD. Strong aircraft grade aluminum 1/8" thick and 2 1/2" OD. **New!** Fiberglass rings made from 1/8" thick FR4. Five 3/8" holes are properly arranged for 3 or 4 point guy line configurations. Holes are chamfered which provides for a smooth surface for guy line connection. Buy aluminum-type, MFJ-2830A, B or C, \$2.49 each or a set-of-three, MFJ-2830X, \$6.95. Buy fiberglass-type, MFJ-2840A, B or C, \$2.99 each or a set-of-three, MFJ-2840X, \$8.25.

| Model#    | Price  | Description                                 |
|-----------|--------|---|
| MFJ-2830A | \$2.49 | 2 1/2" OD alum. Guy ring for 3/4" tube.     |
| MFJ-2830B | \$2.49 | 2 1/2" OD aluminum Guy ring for 1" tube.    |
| MFJ-2830C | \$2.49 | 2 1/2" OD alum. Guy ring for 1 1/4" tube.   |
| MFJ-2830X | \$6.95 | Set of 3 alum. guy rings, has all 3 above.  |
| MFJ-2840A | \$2.99 | 2 1/2" OD fiberglass Guy ring, 3/4" tube.   |
| MFJ-2840B | \$2.99 | 2 1/2" OD fiberglass Guy ring for 1" tube.  |
| MFJ-2840C | \$2.99 | 2 1/2" OD fiberglass Guy ring, 1 1/4" tube. |
| MFJ-2840X | \$8.25 | Set of 3 fiber guy rings, has all 3 above.  |

**MFJ**

## BigEAR™ 8-Band Portable Dipole

Discover the BigEAR™ Advantage . . . **BIG Signal, Best Bang for the BUCK!** Backpack portable, fast set-up and tune, Continuous Coverage 7.0-55.0 MHz, Very Low SWR, Highly Efficient 34' Element, 1 kW PEP SSB/CW, Long-Lasting Construction!

If you're headed for the hills or off to the shore, MFJ's BigEAR™ portable HF antenna sets a new standard for toughness, simplicity and QSO grabbing!

Efficiency is the key to launching a big signal in remote areas and BigEAR™ does it so well you might forget you left home!

The secret lies in MFJ's incredibly strong and weather-resistant stainless-steel telescopic whips -- a whopping 34' span, twice the length of other portables.

Add a robust 45-degree center block and our unique Hi-Q matching system and you have a "pair of ears" that digs out the weak ones that the other guys miss.

MFJ-2289 does it all with fewer parts to assemble and a much faster tune-up procedure. In fact, you'll be on-the-air with rock bottom SWR while your buddies are still reading their instruction manuals!

The MFJ-2289 is truly a "general coverage" antenna because you can tune it up with exceptionally low SWR on any frequency between 7.0 and 55 MHz.

With 34' of signal-radiating element available, you won't be handicapped by power-robbing losses of big loading coils.

You get consistent performance and maximum RFI protection because our lab-rated Guanella Balun is built right into the

**34' of Radiating Elements!  
7.0 - 55.0 MHz!!!**

MFJ-2289  
**\$179<sup>95</sup>**  
Ship Code C



feed assembly. It's proven to be highly effective across the full tuning range.

Heavy-duty components keep the MFJ-2289 up. Also the 1kW PEP power rating assures a wide margin of electrical safety.

Sturdy aluminum and stainless-steel.

Includes U-bolt for up to 1 1/4" masts.

MFJ-1919EX, \$159.95. Tripod with 18' telescopic fiberglass mast. See below.

MFJ-1918EX, \$89.95. Tripod with 9.5' telescopic fiberglass mast. See more below.



MFJ-6204, \$44.95. BigEAR™ Carry Bag, 5Wx7Hx42L" packs your big ear and MFJ-1918EX tripod/mast to the field.

Burlap, padding, snap hooks, zipper, protection pockets, carry handles/carry strap. **New! MFJ-2289PKG, \$299.95.** BigEar™, MFJ-1918EX tripod/mast, carry bag combo.

## 20M to FM Broadcast Multiband Portable Telescopic Dipole Antenna

MFJ-2299 is a rugged continuously adjustable stainless-steel dipole that covers the FM broadcast band through 20 Meters. It sets up quickly and makes a great temporary antenna for apartments, motel balconies, RVs, mountain topping, and boating. Great for field day also!

Best-of-all, its full-size 1/2 Wave element delivers the high-efficiency you need to work QRP DX or monitor distant shortwave broadcasts from virtually any location. Frequency coverage is continuous. Optimum length may deviate slightly depending upon factors such as height

above ground, proximity to nearby objects, etc.

You simply adjust for the lowest SWR.

MFJ-2299 includes MFJ-347 dipole mount and two 17' MFJ-1979 stainless-steel telescopic whips with 3/8x24 studs, collapsible to 27 inches.

Super quick and easy to put together. Just screw the bracket onto your mounting pole, screw in the whips and add your coax! **Save \$10!** Purchase the complete MFJ-2299 kit instead of individual parts.



## MFJ "HF Stick" mini-Dipole Mount

Build your own 80-6 Meter mini-dipole using two HF mobile whips! Mounts on mast up to 1 1/4" OD. Super heavy-duty solid aluminum construction. Only MFJ has exclusive, isolated dipole elements that let you insert balun or coil up coax to isolate feedline. Gives you a true balanced dipole that prevents RF on coax shield, eliminates pattern distortion, reduces noise pickup and RFI radiation from coax and provides deep dipole end-nulls for nulling out interference.

MFJ-347  
**\$19<sup>95</sup>**  
Ship Code A



## Single-band Rotatable mini-Dipoles

Use these inexpensive, lightweight, isolated mini-dipoles when space is limited for temporary or permanent installations. Rotate to null QRM/noise and to focus your signal. Includes two HF sticks of your choice and MFJ-347 mini-dipole mount.



Your Choice:  
MFJ-2275 - 75M, \$49<sup>95</sup>  
MFJ-2260 - 60M, \$49<sup>95</sup>  
MFJ-2240 - 40M  
MFJ-2230 - 30M  
MFJ-2220 - 20M  
MFJ-2217 - 17M  
MFJ-2215 - 15M  
MFJ-2210 - 10M  
MFJ-2212 - 12M  
MFJ-2206 - 6M

## Big Stick 8-Band Vertical Antenna

For Top Portable Performance, Carry a "Big Stick"! Like our Big Ear, this portable monopole features MFJ's rugged 17' stainless-steel collapsible whip paired with an adjustable high-Q air-wound coil.

MFJ-2286  
**\$99<sup>95</sup>**  
Ship Code C

Efficiency matters, so it's not surprising this winning combination stands head and shoulders above shorter backpack antennas.

Consider these features:

**True Backpack Portability:**

Antenna is over 18 feet long fully extended, but disassembles and collapses to 28" in seconds. Fits into most any size packs!

**Light Weight:** Just over 2 lbs., you'll hardly know your packing it!!!

**Versatile:** Includes MFJ-342T pipe mount -- quickly and easily mounts to a 1/4 or 1/2 inch pipe or mast. SO-239 with lock washer feeds coax underneath the 3/8-24 connector.

**General Coverage:** Tapped loading coil covers 7.0-55.0 MHz without gaps. Great for Ham Bands and outstanding for image-free shortwave broadcast!

**Rugged Construction:** All aluminum, stainless steel construction ensures years of excellent performance. One Killowatt rated components guarantee electrical safety.

**Counterpoise kit included:**

Ensures low SWR, high efficiency, maximum site safety.

BigStick™ is for the Ham radio operator on the move and on-the-go and hungry for the next great QSO anywhere or anytime!

## Portable Tripods

MFJ-1919EX  
**\$159<sup>95</sup>**  
w/18' ext. mast

Each have black steel base forms with strong braced equilateral triangles on a side. Non-skid feet

MFJ-1918EX  
**\$89<sup>95</sup>**  
w/9.5' ext. mast

MFJ-1919  
**\$89<sup>95</sup>**  
Ship Code D

MFJ-1918  
**\$49<sup>95</sup>**  
Ship Code C

and strong base and mast locks. MFJ-1919, \$89.95, holds 100 lbs of antenna steady. Extends a whopping 7.8 feet. Base extends up to 4.8 sq. ft. 1.4" dia. mast accepts most U-bolts. Collapses to 54" by 6" dia. 9 3/4 lbs.

MFJ-1919EX, \$159.95. Base of MFJ-1919 plus telescopic fiberglass mast with QuickClamps™. 18' extended. 5' Collapsed. Strong 1/8" wall fiberglass, 3/4" dia. top, 1 1/2" dia. bottom. 15 lbs.

MFJ-1918, \$49.95, holds 66 lbs. of antenna steady. 6' extended. 1" dia. 38" collapsed, 4" dia. 6 3/4 lbs. MFJ-1918EX, \$89.95.

Like MFJ-1918 plus 9.5' telescopic fiberglass mast with QuickClamps™. 3.8 ft. collapsed. 3/4" top, 1" bottom. 6.5 lbs.

## 1/2 Wave, 6-Band Rotatable Mini-Dipole

Low profile 14 feet... 7 ft. turning radius... 40, 20, 15, 10, 6, 2 Meters  
... 1500 Watts... Directivity focuses signal, reduces QRM/noise...



**You can hardly see this mini 14 foot rotatable dipole across the street! Its tiny 7-foot turning radius fits on the smallest roof -- it's perfect for town houses, apartments and condos.**

The MFJ-1775 is inconspicuous and low profile -- not much bigger than a TV antenna and can easily be turned by a lightweight TV rotator (see AR-303/AR-500, page 123).

**It's no Wimp!** Its directivity reduces QRM/noise and lets you focus your signal in the direction that you want -- so you can work some real DX.

You can operate 6 bands -- 40, 20, 15, 10, 6 and 2 meters -- and run full 1500 Watts SSB/CW on all HF bands!

MFJ-1775  
**\$249<sup>95</sup>**  
Ship Code D

**Features** automatic band switching and uses highly efficient end-loading with its entire length always radiating. With 6 and 2 Meters thrown-in, you have ham radio's most versatile rotatable dipole!

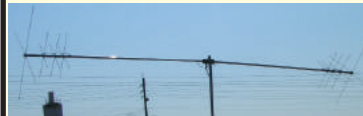
**Each** HF band uses a separate, efficient end-loading coil wound on fiberglass forms with Teflon™ wire, and capacitance hats at each end (no lossy traps). 6 and 2 meters are full-length halfwave dipoles.

**Built-to-last** -- incredibly strong solid rod fiberglass center insulator and 6063 T-6 aircraft strength aluminum tubing radiator. Assembles in an afternoon. Adjusting one band has little effect on other bands.

**MFJ-1775W, \$249.95.** WARC band version for 12, 17, 30, 60 Meters only.

## MFJ 80/40/20 Meter Rotatable Dipole

A full legal limit efficient 80, 40, and 20-meter antenna that is shorter than a 20-meter dipole...



MFJ-1785  
**\$369<sup>95</sup>**  
Ship Code E

**Now** you can operate the low bands on 80, 40, and 20 Meters with a true rotatable dipole that'll blend in with the sky!

**Take** advantage of the excellent propagation of the low bands during the low sunspot cycle.

**This** rotatable dipole lets you focus your signal in the direction you want so you can work some real DX! Small, low profile, inconspicuous.

**The** entire antenna length is used on all three bands. The MFJ-1785 is constructed of 6063 T-6 aircraft strength aluminum tubing with a solid center fiberglass insulator and handles 1500 Watts SSB/CW.

**The** 80 and 40 meter end-loading coils are wound on fiberglass forms with Teflon™ wire, and resonated with capacitance hats to ensure an extremely low-loss structure.

**Balun** included! 33 feet wide. **Requires** a medium-duty rotator such as Hy-gain's AR-40 -- See page 123 for more details.

## MFJ 20/15/10/6 Meter Rotatable Dipole

**MFJ-1769** is a full-size high-efficiency 26', 20-15-10-6 Meter full legal limit rotatable dipole that is super low-profile -- almost invisible from across the street! 13-foot turning radius, tiny 9 lb. weight fits on small roofs, apartments and condos -- easily turned by a lightweight rotator like Hy-Gain's® AR-303/500. Mount in the attic for antenna restrictions. **It's no wimp!** Bi-directional pattern reduces QRM/noise while maximizing your signal in the directions that you want -- work some real DX! Full 1500 Watts SSB/CW. MFJ-1761, \$29.95. 6-Meter add-on kit.



MFJ-1769  
**\$279<sup>95</sup>**  
Ship Code D

## MFJ Pipe-to-Pipe Mast Kit



MFJ-1909  
**\$39<sup>95</sup>**  
Ship Code B

**Allows** mounting of vertical antenna or antenna mast to the tripods (MFJ-1919 or MFJ-1918). Includes 8 heavy-duty extruded aluminum clamps and stainless steel hardware. Fits mast pipe from 1 to 2 inches in diameter.

## Build your own wire antenna with these special MFJ parts . . .



**Coax Center Insulator**  
MFJ-16B01, \$19.95.

**Built-in** SO-239 connector, super strong, UV resistant, custom injection molded, hang hole for inverted vees, wire tie points, lightweight.



**Center Insulator for Dipole Antennas**  
MFJ-16G01, \$29.95.

**Super-strong**, UV resistant, custom injection molded, hang hole for multi-band dipole ends. Accepts 1/4 or 3/8" dia. coax.



**End Insulator for Multi-Band Dipole Antennas**

MFJ-16H02, \$6.95. Set of two. **Super-strong** for multiband doublets. 7", (178 mm). Heavily serrated end insulators with 5/16" holes. Aluminum tube inserts in end holes for max loads.



**MFJ Glazed Ceramic Center/End Insulator**

MFJ-16C01, \$0.89 each. MFJ-16C06, \$4.95. Six Pack.

**Authentic** glazed ceramic antenna insulator. Extra-strong -- will not break with long antennas and will not arc over or melt even under full legal power. Molded ridges give extra-long path to prevent high-voltage breakdown. Smooth 5/16" wire holes prevent wire damage. Use as center or end insulator for dipoles, doublets, G5RVs, guy wires, vees.



**MFJ Glazed Ceramic Egg Insulator**

MFJ-16A01, \$0.79 each. MFJ-16A06, \$4.56. Six Pack.

**Authentic** glazed ceramic egg insulator, has 7/16" holes. 9/64 diameter by 2 1/8" length. High power, will not melt like plastic ones do.

**Ladder Line Center Insulator**

MFJ-16D01, \$6.95.

Strong fiberglass, 450 Ohm ladder line center insulator. Double weave ladder line stress-relief. Strong wire tie points. Hang hole for inverted vees.

**Ladder Line Middle Insulator**

MFJ-16F01, \$8.95.

Strong fiberglass ladder line middle insulator. High-strength SO-239 coax connection at midpoint. Quadruple weave-thru ladder line stress relief.



**LadderLine End Insulator**

MFJ-16E01, \$9.95. Strong fiberglass, 450 Ohm end insulator. Double weave, SO-239 coaxial connector.

## Tripod Anchor Foot Braces

MFJ-1905  
**\$24<sup>95</sup>**  
Ship Code A

**Hold** your antenna tripod extra sturdy with these new stainless steel anchor foot braces. 3-pack has stainless hardware to fit existing MFJ or other tripod. Ground secure with 2 spike or single spike stakes (not incl.). For high winds or uneven ground areas for safety. Fits any tripod leg up to 1 1/2" dia. Drill holes in tripod legs may be necessary.



## 5.5 ft. Heavy-Duty Antenna Mast Tripod

Use this **super heavy-duty antenna mast tripod** to hold masts 1.25 up to 2.5 inches in diameter. Adjustable thumb screws have protective tips.

**Huge** 8' diameter footprint is great for holding massive antennas or big antenna masts sturdy, safely. Base minimum height is 50", can be set to a max height of 78".

**Each** leg has independent height adjustment from 0-18 inches with thumbscrew and locking pin -- prevents slipping -- use on **uneven ground sur-**



**faces.** Each leg has non-skid rubber feet and can accommodate anchor foot braces, see left.

**MFJ-1921's** frame is constructed with black 1 3/8" super strong steel pipe.

**Collapses** fast and easy to a minimum carrying size of just 7Wx69Hx7D inches. Weighs just 14 lbs. -- true portability.

**Optional** anchor foot braces, MFJ-1905, \$24<sup>95</sup>. Set of three, see left.

Adjustable and locking telescopic legs  
MFJ-1921  
**\$169<sup>95</sup>**  
Ship Code F



## MFJ Telescopic Fiberglass Masts

### Lightweight Telescopic Portable Masts -- 20-43 feet!

Just pull out each section and twist to lock. These portable, temporary telescopic fiberglass masts extend to the sky! Select from 20 to 43 feet, 5 models.

Each mast collapses to an acceptable height for true portability. These fiberglass masts are also super lightweight and with high strength. Weight is not a factor -- the largest mast, MFJ-1917 weighs just 7.7 lbs. Twist and Lock sections allow quick pull-up and take-down.

Use them while traveling, camping, from hotels, hamfests, field day, DX-peditions. MFJ-1917, the largest mast can be used for a full-time permanent wire installation or small, lightweight beam or vertical.

Put up a full size inverted Vee, dipole or vertical antenna in minutes and get full size performance and the height you need to QSO with anyone, anywhere.

Use multiple telescopic masts to construct other types of antennas like loops, quads, rotatable dipoles even beams. The ideas are endless!

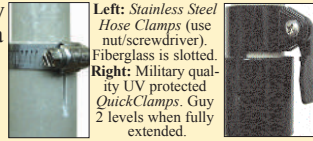
- A. MFJ-1910, \$79.95. 33 ft., light duty w/top tie ring.
- B. MFJ-1911, \$89.95. 20 ft., light duty w/top tie ring.
- B. MFJ-1913, \$89.95. 28 ft., lightweight w/top tie ring.
- C. MFJ-1915, \$139.95. 25 ft., for heavy duty use.
- C. MFJ-1916, \$159.95. 34 ft., for heavy duty use.
- C. MFJ-1917, \$169.95. 43 ft., heavy duty w/top tie ring.

| Model No. MFJ- | Max Height | Collapsed Length | Top Dia. Inches | Bot Dia. Inches | Bot Thick Inches | Top Thick Inches | No of sections Total | Weight in lbs. |
|----------------|------------|------------------|-----------------|-----------------|------------------|------------------|----------------------|----------------|
| A 1910         | 33 ft.     | 3.75ft           | .100            | 1.750           | .057             | .032             | 10                   | 3.3            |
| B 1911         | 20 ft.     | 3.83ft           | .877            | 1.830           | .080             | .050             | 6                    | 3.6            |
| B 1913         | 28 ft.     | 3.83ft           | .333            | 1.830           | .080             | .032             | 8                    | 4.4            |
| C 1915         | 25 ft.     | 4.79ft           | 1.02            | 2.165           | .096             | .050             | 6                    | 6.8            |
| C 1916         | 34 ft.     | 4.79ft           | .686            | 2.165           | .096             | .050             | 8                    | 7.5            |
| C 1917         | 43 ft.     | 4.79ft           | .160            | 2.165           | .096             | .038             | 10                   | 7.7            |

### Super-Strong Fiberglass Mast -- Select 10, 22, 33 or 43 Feet!

| MFJ-1904H<br>22 Feet | MFJ-1904HD<br>25 Feet | MFJ-1906H<br>33 Feet | MFJ-1906HD<br>38 Feet | MFJ-1908H<br>43 Feet | MFJ-1908HD<br>50 Feet |
|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|
| \$139.95             | \$159.95              | \$189.95             | \$219.95              | \$229.95             | \$259.95              |
| Ship Code C          | Ship Code C           | Ship Code E          | Ship Code E           | Ship Code E          | Ship Code E           |

This is a *super-strong* heavy duty telescoping MAST, not a flimsy pole! Masts are made of .125 inch *thick wall* fiberglass tubing. Support "real" weight including small yagis, verticals, loops, full-size dipoles, more.



Left: Stainless Steel Hose Clamps (use nut/screwdriver). Fiberglass is slotted. Right: Military quality UV protected QuickClamps. Guy 2 levels when fully extended.

Standard models and H models have 2-inch OD bottom sections and a 3/4" top section.

HD models are extra heavy-duty, they have 2 1/2" OD bottom and 1" OD top sections. Standard model is supplied with stainless steel hose clamps. H and HD models come with military quality UV protected *QuickClamps*™.

MFJ-1906, \$139.95/MFJ-1906H, \$189.95 are 33 feet extended, 6 feet collapsed, six 6-ft. sections, 13 lbs.

MFJ-1908, \$179.95/MFJ-1908H, \$229.95 are 43 feet extended, 8 feet collapsed, six 8-ft. sections, 16 lbs.

MFJ-1908HD, \$259.95 is 50' ext., 8' collapsed, has 2 1/2" OD bottom, 1" OD top, seven 8-foot sections, 24 lbs.

MFJ-1906HD, \$219.95 is 38' ext., 6' collapsed, has 2 1/2" OD bottom, 1" OD top, seven 6' sections, 24 lbs.

MFJ-1904HD, \$159.95 is 25' ext., 4' collapsed, has 2 1/2" OD bottom, 1" OD top, seven 4 ft. sections, 14 lbs.

MFJ-1904H, \$139.95. 22' ext., 5' collapsed, 9 lbs.

MFJ-1902H, \$119.95 is 10' extended, 38" collapsed, weighs just 5 lbs., true portability -- fits in suitcase!

MFJ-1900, \$69.95. Mast base mount. See left.

MFJ-14, \$59.95. Extra set of 5 Military quality UV protected *QuickClamps*™. Fits 3/4" to 2" OD masts.

MFJ-14HD, \$69.95. Extra set clamps, 1- 2 1/2" masts.



## Individual Fiberglass tubes, Aluminum masts and tubes ... Pages 88 & 140

### Antenna Balun/Unun, Center Insulators & RF Isolators

#### MFJ Hi-Permeability Ferrite Bead Baluns

Choose from 1:1, 4:1 or 9:1 baluns . . .



MFJ-918 True Current Balun/Center Insulator \$24.95 forces equal antenna currents in dipoles for superior performance. Reduces coax feed-line radiation and field pattern distortion -- your signal goes where you want it! Reduces TVI, RFI and RF hot spots in your shack. Don't build a dipole without one! MFJ 1:1 baluns use hi-permeability ferrite beads on high-quality RG-303 *Teflon*® coax. 4:1 and 9:1 baluns use RG-62 coax. Handles

1.5 kW, 1.8-30 MHz. Has *Teflon*® connectors, stainless hardware with direct 14-gauge stranded copper wire connector to antenna. Available in 1:1, 4:1 or 9:1 for dipole antenna, wall mount or portable uses.

For Center-fed Dipoles . . .

Made of heavy-duty weather protected PVC housing with *Teflon*® SO-239 connector, stainless steel eye bolts.

MFJ-918, \$24.95. 1:1 balun, 2" diameter by 6 inches length.

MFJ-2919, \$34.95. 4:1 balun, 2" diameter by 11 inches length.

MFJ-2920, \$59.95. 9:1 balun, 2" diameter by 11 inches length.

For portable uses . . .

Made of heavy-duty weather protected PVC housing. Pair of red and black 5-way binding posts and *Teflon*® SO-239 connector.

MFJ-918BP, \$29.95. 1:1 balun, 2" dia.x6" length.

MFJ-2919BP, \$39.95. 4:1 balun, 2"Dx11" length.

MFJ-2920BP, \$49.95. 9:1 balun, 2" dia.x11" L.

For Wall mount uses . . .

ABS weather-proof cover with mounting bracket. Tower, mast or wall mounted. 7Wx3Hx5 3/8"D". *Teflon*® SO-239 input, binding posts for outputs.

MFJ-918WM, \$29.95. 1:1 Balun.

MFJ-2919WM, \$49.95. 4:1 Balun.

MFJ-2920WM, \$69.95. 9:1 Balun.



MFJ-918BP 1:1 \$29.95 Ship Code A



MFJ-918WM \$29.95 Ship Code A

#### True 4:1 Current Balun/Center Insulators



MFJ-913 \$29.95 MFJ-913/MFJ-919 are true current baluns/ antenna center insulators that transform 200 ohms to 50 ohms.

Transmission Line Transformer construction using 100 ohm characteristic impedance transmission line gives flat 160-10 Meter response. Low permeability ferrite cores, SO-239, stainless

steel hardware with direct 14 gauge stranded copper wire connection to antenna. Heavy duty weather housing. MFJ-913 handles 300 Watts and is 4 1/2"Hx2 inches in diameter.

MFJ-919 handles 1500 Watts. Sturdy cube shape housing, 3 1/2"W x3 1/2"H x2 1/2"D inches.



#### MFJ-915 RF Isolator

### Stop RF from traveling on coax lines

MFJ-915 RF Isolator prevents unwanted RF from traveling on the outside of your coax shield into your expensive transceiver.

This unwanted stray RF can cause painful "bites" when you touch your microphone or volume control, cause your display or settings to go crazy, lock up your transceiver or even turn off your power supply. In mobile installations, stray RF can be even more drastic and harmful -- it could cause your car to do funny things or even (tragically) blow your automobile's computer system. Clear up these problems, plug an MFJ-915 RF Isolator between your antenna and transceiver and then relax. Heavy-duty weather protected PVC housing is just 5"Wx2 inches in diameter. Handles full legal limit, 1.5 kW. Covers 1.8-30 MHz.



MFJ-915 \$29.95 Ship Code A



# MFJ Antennas for Restricted Areas

MFJ



## MFJ Super High-Q Loop™ Antennas

MFJ's tiny 36 inch diameter loop antenna lets you operate 10 through 30 MHz continuously -- including the WARC bands!

**Ideal** for limited space -- apartments, small lots, motor homes, attics, or mobile homes. Enjoy both DX and local contacts mounted vertically. Get both low angle radiation for excellent DX and high angle radiation for local, close-in contacts. Handles 150 watts.

**Super easy-to-use!** Only MFJ's super remote control has *Auto Band Selection™*. It auto tunes to desired band, then beeps to let you know. No control cable is needed. Fast/slow tune buttons and built-in two range Cross-Needle SWR/Wattmeter lets you quickly tune to your exact frequency.

MFJ-1786  
**\$449<sup>95</sup>**  
Ship Code F

All welded construction, no mechanical joints, welded butterfly capacitor with no rotating contacts, large 1.050 inch diameter round radiator -- not a lossy thin flat-strip -- gives you *highest possible efficiency*.

Each plate in MFJ's tuning capacitor is welded for low loss and polished to prevent high voltage arcing. Welded to the radiator, has nylon bearing, anti-backlash mechanism, limit switches, continuous no-step DC motor -- smooth precision tuning.

**Heavy duty** thick ABS plastic housing has ultraviolet inhibitor protection.

**MFJ-1788, \$499.95.** Same as MFJ-1786 but covers 40 - 15 Meters continuously. Includes super remote control.

**MFJ-1782, \$409.95.** Like MFJ-1786 but has fast, slow tune button control box.



**MFJ-1780, \$329.95. Box Fan Portable Loop** is about the size (2x2") of a box fan, complete with handle. Covers 14-30 MHz. Remote Control box has fast/slow tunes.

## MFJ Vertical for Antenna Restricted Areas

40, 20, 15, 10 Meters, Automatic BandSwitching



WARC Band Version Now Available!

MFJ-1795  
**\$169<sup>95</sup>**  
Ship Code E

**Great** for permanent or portable operation in antenna restricted areas. Hide in trees, behind fences, buildings - only 7 to 10 feet tall (adjustable).

**Low angle** of radiation for DXing, omnidirectional, handles 1500 watts PEP. Highly efficient end-loading. Entire length radiates. Low SWR.

**Ground** mounts with suitable ground such as the *Ground-Coupled Antenna Base*, radials or ground rods. Roof mount with radials.

**MFJ-1901P95, \$239.95.** MFJ-1795 and MFJ-1901 combination.

## MFJ Compact Vertical Antennas 80/40/20/15/10/6/2/UHF



**New!** MFJ-2389  
**\$299<sup>95</sup>**  
Ship Code D

MFJ-2389 gives you 8 popular bands in one antenna!

**You** get a 1/4 Wave on HF, 80-6 Meters, a 1/2 Wave and 2.15 dBi gain on 2 Meters and a 5/8 Wave with 5.5 dBi gain on 440 MHz.

**SWR** is 1.5:1 or less and it handles 200 Watts PEP SSB, 150 Watts on 6M to 70CM on FM.

**Super** lightweight at less than 6 lbs. and just 8.5 feet tall, this antenna lets you mount in a restricted space environment such as an attic or balcony. Its ground radial system is built-in, so no fooling with counterpoise wires. Has SO-239 feedpoint connection.

## HF/6M Ground-Plane Vertical

**Broadband** vertical antenna with no ground radials is super easy to assemble. No tuning!

**MFJ-2386, \$229<sup>95</sup>** Ship Code D  
**New!** SWR < 1.6:1, 3.5-54 MHz. Receives 2.0 to 90 MHz. Handles 250W SSB PEP. At just 23.5' and only 7 pounds you can easily raise it up and down for stealth operation. Use 1-2 inch diameter mast. Wind survivability is 67 MPH. SO-239 for coaxial connection.

## MFJ Portable Ground-Coupled Antenna Base



MFJ-1901  
**\$109<sup>95</sup>**  
Ship Code E

**MFJ-1901** is a stable way to mount verticals and provides an effective ground. Place the base in a desired location, push legs firmly into the ground. Attach radials for more improved performance. Easily set-up or take down antennas for stealth operation. Stainless steel 2x2" base has folded and tapered stainless legs on corners. Strong enough to support 18 foot verticals. Two u-bolts included plus SO-239 and 3/8-24 threaded connectors.

## MFJ Wide-band Receiving Loop

**Dig** out previously unreadable signals and track down annoying sources of interference with the MFJ-1886 HF Receive Loop Antenna!



**New!** MFJ-1886  
**\$249<sup>95</sup>** Ship Code D  
MFJ-1886TR  
**\$279<sup>95</sup>** with built-in T/R switch

**MFJ-1886** Receive Loop gives you tremendous power to copy weak stations through impossibly strong levels of QRN or QRM. Covering AM broadcast through 30 MHz and beyond, its superbly directive element and *bullet-proof* low-noise preamplifier digs out buried signals normally lost.

**Get** perfect loop balance for deep precise nulls, dual-MMIC push-pull pre-amplification for wide dynamic range, aircraft-grade 36" aluminum loop, great portability (just 2 1/2 lbs.), mount with standard TV hardware, tough weatherproof enclosure for outdoors, powered with AC adapter/Bias-T included

**Mount** on any conventional mast (1 3/4" OD), hardware included. The MFJ-1886 receive loop is a powerful tool that help you locate those noise sources you can suppress, and null out the ones you can't!

## Feather-Lite™ 80-6M Ant.

**Self-supporting** vertical sets up in minutes, collapses to only 3.8' -- perfect for RVs, vacations, field day... More than a simple "flagpole", this antenna includes a base-loading coil, balun, counterpoise. **Stout** 1 3/4" base supports *twist-lock* fiberglass sections--telescopes to 31 feet in just seconds.

**Air-wound** high-efficiency loading coil is continuously tapped for full coverage 3.5-7 MHz. No guess work or ground rods needed, just connect 4 insulated 12' radial wires to tuning unit.

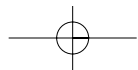
**Lab** rated Guanella balun has 30-dB common-mode suppression. **Use** conductive eyebolt at top to install wires for inverted "L" or "T" to enhance low frequency coverage.

**Operation** on 30/20/15/12/10/6M requires an ATU. Safety-rated for 600 Watts PEP on SSB/CW.

**MFJ-2980, \$99.95.** Like MFJ-2982, but covers 40-6 M.

**MFJ-1919, \$89.95** optional portable heavy-duty tripod for supporting/mounting. Extra-wide base gives full, steady support, up to 100 pounds.





# MFJ 160-6 Meter Antenna

MFJ

*Operate all bands 160 through 6 Meters at full 1500 Watt with this self-supporting, 43 feet high performance vertical! Assembles in less than an hour -- low-profile blends in with the sky. Neighbors won't even know it's there!*

Entire length radiates to provide exceptional low angle DX performance on 160-20M and very good performance 17-6 M. Shorten by telescoping down for more effective low angle radiation on higher bands.

Wide-range automatic or manual tuner at your rig easily matches this antenna for 160-6M. There's no physical tuning adjustments on antenna -- simply put it up!

Optimized balun design allows direct coax feed with negligible coax loss (typically less than 1/2 dB from 60 to 6 Meters, less than 1 dB 160-80 Meters with good quality low-loss coax).

With just 2 square feet wind load, the fully self-supporting MFJ-2990 -- no guy

## MFJ All-band Ground Radial Kit

All-band ground radial system kit for the

MFJ-2990 and other vertical antennas requiring a radial system. Convenient and effective, it provides the necessary return path for ground currents to reduce ground losses.

Consists of 2 sets of 4 radial wire assemblies giving a total of eight 14 foot radial wires. Each has a 1/4" ring lug for attaching to the antenna ground point. Each end of the radial wires has a solder lug for staking the wire end.

MFJ-2990  
**\$359<sup>95</sup>**  
Ship Code E



MFJ-1932  
**\$34<sup>95</sup>**  
Ship Code A

wires needed -- has the lowest wind-loading and lowest visibility of any vertical antenna! The key is a six foot section of tapering diameter stainless steel whip that flexes in strong wind instead of stressing the bottom sections. Its 2-inch O.D. and .120 inch thick walled tubing bottom section makes it incredibly strong -- it'll stay up!

Weights 20 lbs -- easily put it up by yourself because its corrosion resistant 6063 aircraft aluminum tubing and stainless steel construction make it light and super-strong.

You can easily assemble it in an hour! Ground mounting lets you completely hide its antenna base in shrubbery. Includes ATB-65 high-strength antenna mount. Requires ground system -- at least one radial. More extensive ground system will give much better performance.

This very low-profile antenna is perfect for stealth operation in antenna restricted areas. Hide it behind trees, fences, buildings, bushes. Use it as a flagpole. Telescope it down during the day. Put it up at night and take it down in the morning before the neighbors even notice!

Quick and easy installation makes it great for DXpeditions, field day and other portable operations.

## New! MFJ 50-75 Ohm Transformers

Dipoles raised above close proximity to ground become 75-Ohm antennas. Tempting as it is to correct this mismatch in the shack with a tuner, why not fix it at the source? These low-cost, no-tune 50-75 Ohm transformers can also be used to match equipment into low-loss 75-Ohm cable-tv coax, or reverse connect them to match 35-Ohm verticals and yagis. 1500 Watts PEP SSB/CW, ICAS 1.8-50 MHz. 100% shielded indoor. Low insertion loss (0.05 dB), large binocular ferrite core, silver plated Teflon<sup>®</sup> jacked winding, Teflon<sup>®</sup> SO-239s. Use weatherproof MFJ-2924P for outdoors. These are a "must have" addition to your RF tool kit!



MFJ-2924M  
**\$29<sup>95</sup>**  
Ship Code A

MFJ-2924P  
**\$39<sup>95</sup>**  
Ship Code A

## 1.5kW 80/160M high-efficiency Matching Network

MFJ-2910 improves efficiency on 160 and 80 Meters for the popular new 43-foot all band vertical antennas by eliminating SWR-related coax and unun mismatch losses. When fed with a 1:4 unun, the 43' antenna has a reasonable compromise SWR on 60-10 Meters. However, at 160/80 Meters it is virtually impossible to match this antenna because of the low radiation resistance. If you are using low loss coax, you will lose much power in the coax and unun due to bad antenna mismatches. Installed at the base of the 43' vertical, AV-6110 will significantly eliminate these losses and put 160 and 80 Meters back within the tuning range of the tuner inside the shack. Includes high-voltage insulated base tube, remote power injector with switch for 160, 80 Meters and off positions. Handles 1.5kW. Matching box mounted in a rugged, weather-resistant PVC housing. Fits at forty-three foot antenna base, just 3Wx16Hx3D inches.

### 600 Watts 80/160 Meter Matching Network

MFJ-2908, \$249.95. Has all features of the AV-6110, but handles 600 Watts on 80, 300 Watts on 160M. 3Wx11Hx3D".

MFJ-2910  
**\$299<sup>95</sup>**  
Ship Code B



## Universal Vertical Tilt Base

A unique design allows this tilt base to fit most vertical antennas with or without base bracket. Pre-punched hole makes it easy to mount many different type of verticals. Fits Hygain's AV18VS/ 14VS/18AVQ/680/640/620/AV-6160, Cushcraft R8/R9, MFJ-1796/1798/2990 and others with tube bases or masts up to 2 1/4" OD. Mount one side of the tilt base to the mast and the other to the base. No climbing a ladder -- raise antenna up/down easily before severe weather by yourself -- just walk it up or walk it down. Ground radial holes also provided. 1/8" thick aluminum. Includes (4) 2 1/4" U-bolts, (4) 1 1/2" U-bolts, mast saddles and stainless steel nuts/bolts.



MFJ-1903  
**\$79<sup>95</sup>**  
Ship Code B

## 160 Meter Tuner Range Extender for 43' Verticals

MFJ-2904 43" vertical antennas are very popular. However, on 160M, these antennas have a very high reactance and high voltage at the feedpoint. Tuning with a tuner results in maximum efficiency 80-10M, but conditions at 160M present a challenge for most tuners. To get around this problem, add the range extender to the base of the antenna to increase 160M matching capabilities. Reduces reactance and puts antenna in range of the auto or manual tuner. Damaging high-voltage currents are reduced -- preventing tuner damage. 1.5 kW. Weather-resistant PVC, ceramic feedthroughs for input/output. 3 1/2"Wx3 1/2"Hx11D". Use MFJ-998RT/MFJ-994BRT or other tuners.

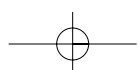
MFJ-2902, \$59.95. Like AV-6104, 300 Watts, 5-way binding posts for in/out. 3 1/2"W x3 1/2"Hx7D". Use with MFJ-926B/927/993BRT auto tuners or manual tuners.

MFJ-2904  
**\$79<sup>95</sup>**  
Ship Code B



## Ladder Line, Twin Lead, Copper Wire, Installation Rope

- |  |   |   |  |
|--|---|---|--|
| <b>A</b>   | <b>B</b>  | <b>C</b>  | <b>D</b>   |
| <b>A. 450 Ohm ladder line.</b> 18# solid copper covered steel, insulated/spaced by heavy duty black polyethylene. Uniform spacing of conductors insures proper balance for balanced/dipole antennas.<br>MFJ-18H050, 50 Ft., \$19.95<br>MFJ-18H100, 100 Ft., \$34.95<br>MFJ-18H250, 250 Ft., \$89.95<br>Additional per foot, \$0.35 foot. | <b>B. 300 Ohm TV Twin-lead.</b> 20# stranded copper wire, insulated/spaced by black polyethylene. For dipole, j-ppole, low power uses.<br>MFJ-18T050, 50 Ft., \$22.95<br>MFJ-18T100, 100 Ft., \$44.95 | <b>C. Copper Antenna Wire.</b> Flexible 7-strand, 14#, solid-copper wire. Strong/long-lasting.<br>MFJ-18G100, 100 Ft., \$24.95<br>MFJ-18G250, 250 Ft., \$59.95<br>Additional per foot, \$0.25 foot. | <b>D. Nylon or Polyester Rope.</b> Black nylon (D) or Polyester dacron rope for wire antenna installations. UV resistant.<br>MFJ-19A100, 100 Ft., \$9.95<br>MFJ-19A250, 250 Ft., \$18.95<br>MFJ-19C100, 100 Ft., \$12.95<br>MFJ-19C250, 250 Ft., \$29.95 |



# MFJ Cobweb Antenna

For restricted spaces, 5-Bands: 20/17/15/12/10 Meters . . .

**MFJ**



**New!**

MFJ-1835  
**\$219<sup>95</sup>**  
300W SSB/CW

MFJ-1835H  
**\$249<sup>95</sup>**  
1500W SSB/CW

**Restricted space spoiling your operating fun? MFJ Cobweb puts your call back on the map!**

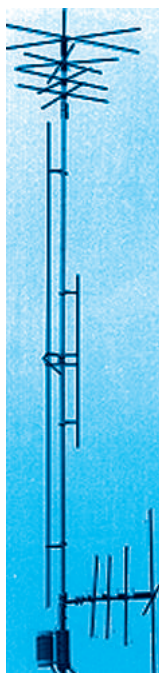
**This** five-band (20, 17, 15, 12, 10 Meters) half-wave *Cobweb Antenna* is perfect for restricted space or portable operation.

**Sky-gray** fiberglass spreaders and *nearly invisible* wire elements (flat 9x9x1/2 feet square, 8 pounds), blend in with your surroundings while standing tough against nasty weather.

**Horizontally** polarized for less local noise pickup plus solid gain over verticals will allow you to work DX easily -- even on QRP. Radiation pattern is nearly omnidirectional so you don't need a rotator. No radials needed! Low SWR is due to MFJ's exclusive *Spider-Match™* broadband network. Use lightweight TV hardware to mount it on your chimney, balcony, fence post or other. SO-239.

**Low in cost**, but big on performance, MFJ's *Cobweb* will turn your space problem into a fresh stack of QSLs from far away places.

## 1/2-wave, 6-Band no radials Vertical



MFJ-1796 **Only 12 feet high** with tiny 24" footprint!

Mount anywhere -- ground level to tower top -- apartments and small lots.

**Perfect** for field day, DXpeditions, camping.

**Efficient** end-loading, no lossy traps. Entire length always radiating. Full size 1/2 wave on 2/6M.

**High** power *air-wound* choke balun eliminates feedline radiation. Adjusting one band has minimum effect on others. 40-20-15-10-6-2 Meters.

**Automatic** bandswitching, low radiation angle, omni-directional, 1500 W. Goes together in an afternoon.

**MFJ-1796W, \$259.95.**

WARC version for 12/17/30/60M.

**MFJ-1792, \$189.95.**

80/40M, 33 ft. Requires guying/radials.

**MFJ-1793, \$209.95.** Like MFJ-1792, but full size 20 Meter 1/4 Wave radiator also. Covers 80-40-20 Meters.

## 1/2 Wave, 10 Band 80-2M Verticals



MFJ-1799 **Highly efficient** end-loading 1/2 Wave vertical covers 10 bands:

75/80, 40, 30, 20, 17, 15, 12, 10, 6 and 2 M.

**Requires** no radials, no lossy traps. Features efficient end-loading.

**Only** 20 feet high and has a very manageable 7-foot footprint so you can easily mount it in a small area or patio.

**MFJ-1799** is low profile so it can blend in with trees and the sky.

**High** power air-wound choke balun eliminates feedline radiation. MFJ-1799 features automatic bandswitching, a low radiation angle, omni-directional, 1500W PEP.

**Built-to-last.** Incredibly strong solid fiberglass rod and large diameter 6063 T-6 aircraft strength aluminum tubing are in the main structure. Efficient high-Q coils are wound on tough low loss fiberglass forms with *Teflon®* wire.

**MFJ-1799X, \$349.95.** Like MFJ-1799, but covers 40-2 Meters.

## 7-Band SkyMaster 40-10M Verticals



MFJ-1797 **\$329<sup>95</sup>** Ship Code F

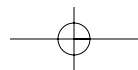
**MFJ-1797, \$329.95,** *SkyMaster™* vertical antenna covers all your favorite HF bands: 10, 12, 15, 17, 20, 30 and 40 Meters and handles 1000 Watts PEP. It is best these days to be inconspicuous and MFJ gives a super small footprint.

**It's** the perfect antenna for roof-mounting, ground mounting, off your patio deck, or to blend into the trees. It is super lightweight, just 7.5 lbs. with the whip and only 23.5 feet.

**With** the 14.5 foot whip you get more efficiency on 40 Meters. No ground or radials are needed. Super low profile without the whip.

**Use** mast size up to 1 3/4 inches.

**MFJ-1797LP, \$299.95.** Like MFJ-1797 but without the 14.5 foot whip section. Less efficient and narrow bandwidth on 40M. Weighs 6 pounds, only 9 feet tall for super low profile.



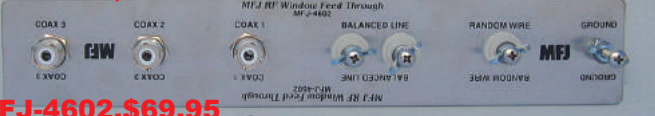
# MFJ Antenna Window Feedthrough Panels

Weather-proof window feedthrough panels bring HF/VHF/UHF antennas, balanced lines, random wire antennas, ground, DC/AC power and Rotator/Antenna Switch Cables into your hamshack without drilling through walls!

**MFJ**



**MFJ-4603, \$89.95**



**MFJ-4602, \$69.95**



**MFJ-4601, \$59.95**

**MFJ-4601N, \$79.95**



**MFJ-4600, \$79.95**



**MFJ-4604, \$99.95**



**MFJ-4605, \$159.95**

**MFJ-4601N, \$79.95**

**MFJ-4600, \$79.95**

**MFJ-4604, \$99.95**

**MFJ-4605, \$159.95**

**MFJ** Weather-Proof Antenna Feedthrough Panels mounts in your window sill. Lets you bring all your antenna connections into your hamshack *without* drilling holes through walls. Simply place in window sill and close window. One cut customizes it for any window up to 48 inches. Use horizontally or vertically. *Real Western Red Cedar* wood is naturally resistant to

## MFJ AdaptiveCable™ Wall Plates

6.95Wx12.1H inches



MFJ-4614 (Four Holes)

**\$34.95**

Ship Code A



MFJ-4612 (Two Holes)

**\$24.95**

Ship Code A

MFJ-4611 (Single Hole)

**\$14.95**

Ship Code A

MFJ's exclusive weather-sealed

*AdaptiveCable™* Wall Plates let you bring nearly any cable -- rotator, antenna switch, coax, etc. -- through walls without removing connectors.

Pass cable connectors up to 1 1/4 x 1 5/8 inches. Sliding plate adjusts hole size to weather-seal virtually any size cable. Rubber grommet seals out rain, snow, other adverse weather.

Complete kit includes 18 gauge *stainless steel* plates for each side of wall, sliding plates, rubber grommets, weather stripping and mounting screws. Models for one, two and four cables.

rot, decay and insects -- lasts longer, maintenance-free. Pitch and resin free for a wide range of beautiful finishes or leave it in its naturally beautiful raw finish. Edges sealed by weather-stripping. Seals and insulates against all weather conditions. All are 3/4Dx3 1/2 Hx48W inches, except for MFJ-4605, which is 3/4Dx7Hx48W".

Inside/outside stainless steel plates bond all coax shields together to ground connection. Stainless steel ground post brings outside ground connection inside.

## Seven models to choose from:

**MFJ-4603, \$89.95. MFJ Universal Window Feedthru Panel.** Four 50 Ohm *Teflon*® SO-239 coax connectors lets you feed HF/VHF/UHF antennas at full legal power limit.

A 50 Ohm *Teflon*® coax *N-connector* lets you use any antenna up to 11 GHz, including 450 MHz, UHF, satellite, moon bounce and 2.4/5.8 GHz Wi-Fi antennas.

A 75 Ohm, 1 GHz *F-connector* makes it easy to bring in television, Satellite, HD, cable TV and FM radio signals.

A pair of high-voltage *ceramic feedthru insulators* lets you bring in 450/300 Ohm balanced lines directly to your antenna tuner.

Has random/longwire antenna *ceramic feedthru insulator*.

*5-way binding posts* lets you supply 50 Volts/15 Amps DC/AC power to your outside antenna tuners/relays/switches.

*Stainless* ground post brings in ground connection, bonds inside/outside stainless steel panels together and drains away static charges.

MFJ's exclusive *Adaptive Cable Feedthru™* lets you bring in rotator/antenna switch cable, etc. without re-moving connectors (up to 1 1/4 x 1 5/8 in). Adapts to virtually *any* cable size. Seals out rain, snow, adverse weather.

**MFJ-4602, \$69.95. Our most popular model.** Three SO-239 *Teflon*® coax connectors let you feed HF/VHF/UHF antennas. High voltage *ceramic feed-thru insulators* bring 450/300 Ohm balanced lines into your hamshack. *Ceramic feed-thru insulator* for longwire or random wire, *Stainless steel* ground post brings ground in.

**MFJ-4601, \$59.95. For coax fed antennas.** Has six high quality *Teflon*® SO-239 connectors for HF/VHF/UHF coax fed antennas and a stainless steel ground post. Handles full 1500 Watt legal limit.

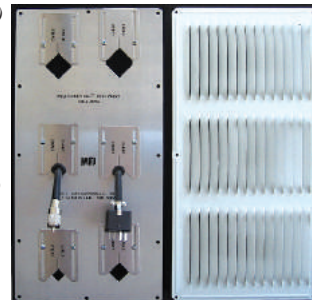
**MFJ-4601N, \$79.95.** Like MFJ-4601, but has N-type connectors.

**MFJ-4600, \$79.95. Balanced Line/Coax Feedthru Panel.** Four sets of ceramic feedthrough insulators and two SO-239 connectors.

**MFJ-4604, \$99.95. MFJ Weather-Sealed CableThru™ Window Panel.** Five *Adaptive Cable Feedthrus™*, two for connectors up to 1 1/4 x 1 5/8 inches and three for UHF/N size coax connectors. Adapts to virtually *all* cables used in ham radio. Seals out weather.

**MFJ-4605, \$159.95. All-Purpose FeedThru/CableThru™ Window Panel.** Combines MFJ-4603 and MFJ-4604! Gives you every connection you'll ever need and more -- without drilling holes in wall!

## Bring cables thru eave of your house



MFJ-4616 shown with vent (not included) it replaces.

Six Holes

**\$26.95**

Ship Code A



MFJ-4613 shown with vent (not included) it replaces.

Three Holes

**\$14.95**

Ship Code A

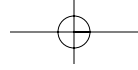
Replace your standard house eave/soffit air vents with these *MFJ AdaptiveCable™ Air Vent Plates*.

Bring in coax, rotator, antenna switch, power cables, etc. of nearly any size up to 1 1/4 x 1 5/8 inches.

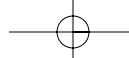
Sliding plates and rubber grommets adjust for virtually any cable size to seal out adverse weather, insects and varmints. Use existing vent hole, mounting screws and screw holes.

**MFJ-4616, \$26.95.** Full-size. For six cables.

**MFJ-4613, \$14.95.** Half-size. For three cables.





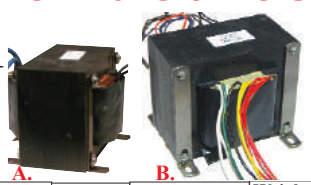


HOMEBREW

# Select MFJ hard-to-find Components for your Homebrew Projects

## Power Supply, Amplifier Transformers Ameritron sells Eimac<sup>®</sup> Tubes

These transformers are for building power supplies and amplifiers. 406-3800 is designed for linear power supplies, that is capable of delivering current up to 30 Amps at 13.6 VDC. 406-1109-2C is designed for a single 3-500Z tube, 1000 Watts HF Amplifier. Has buck/boost winding. Can be used as a replacement transformer for Heathkit SB-1000, AL-80A.



| Fig. | Part No. #  | Price    | Pri. Voltage                         | SEC Voltg                                  | Current                     | Dimensions                              | Weight  |
|------|-------------|----------|--------------------------------------|--|-----------------------------|---|---------|
| A    | 406-3800    | \$34.95  | 120V                                 | 18V  | 30A                         | 4Wx4Lx3 <sup>7</sup> / <sub>8</sub> "H" | 11 lbs. |
| B    | 406-1109-2C | \$180.00 | 90-140, 205-250 w/buck boost winding | 1. 1047Vac<br>2. 22 Vac CT<br>3. 5.2Vac CT | .1 Adc<br>1.5 Adc<br>15 Aac | 6Wx6Lx5 <sup>1</sup> / <sub>2</sub> "H" | 26 lbs. |

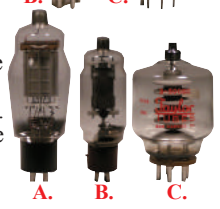
Ameritron sells Eimac<sup>®</sup> tubes for amateur radio, broadcast and industrial uses. Call for a quote!

- A. 3CX800A7
- B. 3CX1200D7
- C. 3CX1500A7



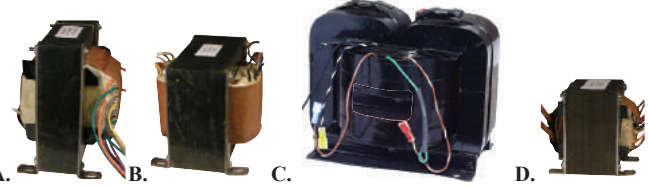
## 811A, 572B, 3-500Zs ...

Don't just buy any untested tube that can damage your amp. Buy Ameritron fully tested and warranted tubes. A. 380-0811A, \$24.95, 811A tube. B. 380-0572B, \$79.95, 572B tube. C. 380-0500GT, \$219.95, Taylor 3-500ZG tube. Match pairs are also available.



## Amplifier Power & Filament Transformers

Specially designed for our most popular HF amplifiers. Has unique buck-boost winding to adapt to low or high line voltage conditions. Use of electrical silicone steel lamination makes these transformers highly efficient, resulting in low loss and producing less heat. Well constructed for low noise and coated with varnish. 110/220 VAC. Usable for 50 or 60 Hz.



| Fig. | Part No. #                        | Price    | Pri. (Volt)           | Sec. (Volt)                           | Dim./Applications  | Weight  |
|------|-----------------------------------|----------|-----------------------|---------------------------------------|--|---------|
| A    | 406-1532                          | \$105.50 | 110/220 w/ buck-boost | 1500VAC@.5A<br>12VAC@1A<br>6.5VAC@16A | 5Wx4 <sup>1</sup> / <sub>2</sub> Hx6 <sup>1</sup> / <sub>2</sub> D<br>811A 4-tube amplifier  | 17 lbs. |
| B    | 406-1572                          | \$142.60 | 110/220 w/ buck-boost | 900V@.5A<br>12V CT@1A                 | 6Wx5 <sup>1</sup> / <sub>2</sub> Hx5 <sup>1</sup> / <sub>2</sub> D<br>572B, 4-tube amp       | 23 lbs. |
| B    | 406-1248-1                        | \$247.00 | 110/220 w/ buck-boost | 868VAC@.5A<br>22VCT@1.5A<br>12.8V@5A  | 6Wx7 <sup>1</sup> / <sub>2</sub> Hx5 <sup>1</sup> / <sub>2</sub> D<br>3CX800A7<br>2-tube amp | 33 lbs. |
| C    | 406-1418-1D Hypersil <sup>®</sup> | \$403.00 | 110/220 V             | 2570 Vac@.8A                          | 8Wx7Hx7D<br>3CX1500A7<br>3CX1200A7/Z7<br>2x3-500G amps                                       | 32 lbs. |
| D    | 406-1419-1J                       | \$74.00  | 110/220 V             | 5.6V@30A<br>14V@2A                    | 2 <sup>1</sup> / <sub>2</sub> Wx3Hx3 <sup>3</sup> / <sub>4</sub> D<br>3-500Z filament        | 5 lbs.  |
| D    | 406-1419-2J                       | \$74.00  | 110/220 V             | 7.7V@21A<br>14V@2A                    | 2 <sup>1</sup> / <sub>2</sub> Wx3Hx3 <sup>3</sup> / <sub>4</sub> D<br>3CX1200A7 Filam        | 5 lbs.  |
| D    | 406-1419-3J                       | \$74.00  | 110/220 V             | 5.6V@15A<br>14V@2A                    | 2 <sup>1</sup> / <sub>2</sub> Wx3Hx3 <sup>3</sup> / <sub>4</sub> D<br>3CX1500A7 Filam        | 5 lbs.  |

## Tube Sockets



| Fig. | Part No. # | Price   | Fit Tube Type        | #pin | Manufacturer PN/Description    |
|------|------------|---------|----------------------|------|--------------------------------|
| A    | 50-0080-5  | \$32.20 | 3-500Z, 3CX1200A7    | 5    | custom made glass epoxy socket |
| B    | 625-8199   | \$2.49  | 6LQ6 or equivalent   | 9    | PCB mount pins                 |
| C    | 625-8731-1 | \$35.00 | 3CX1500A7/8877       | 7    | Ceramic                        |
| D    | 625-8800   | \$29.95 | 3CX800A7             | 11   | EF Johnson 124-0311-100        |
| E    | 625-8811   | \$3.20  | 811A, 572B or equiv. | 4    | 4-pin ceramic                  |

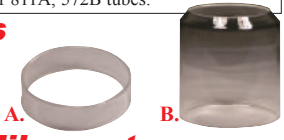
## Tube Plate Caps & Heatsinks



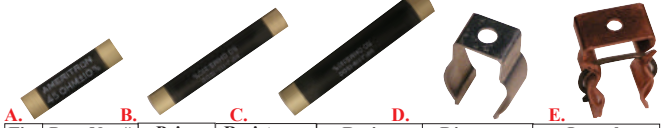
| Fig. | Part No. # | Price  | Description  |
|------|------------|--------|--|
| A    | 750-1800   | \$5.95 | Plate cap for 3-500Z tubes. Finned aluminum heat sink with set screw. 3/16" dia. by 9/16" thick. |
| B    | 750-0323   | \$7.98 | Plate cap for 3-500Z tubes. Finned aluminum heat sink with set screw. 1/16" dia. by 3/16" thick. |
| C    | 755-3626   | \$8.28 | Plate clip for 3CX1500A7/8877 tube.  |
| D    | 755-6811   | \$2.50 | Ceramic plate cap for 811A, 572B tubes.  |

## Tube Glass Chimneys

A. 391-1500, \$25.62 Chimney for 3CX1500A7/8877 tube  
B. 391-3500, \$35.47 Chimney for 3CX1200A7 and 3-500Z tubes.



## Non-Inductive Resistors ... Ideal for Dummy Loads



| Fig. | Part No. # | Price   | Resistance   | Rating     | Diameter   | Length     |
|------|------------|---------|--|------------|------------|------------|
| A    | 113-1220   | \$22.50 | 22 Ohm   | 35W cont.  | 3/4 inches | 2.5 inches |
| A    | 113-1350   | \$22.50 | 35 Ohm   | 35W cont.  | 3/4 inches | 2.5 inches |
| A    | 113-1450   | \$15.00 | 45 Ohm   | 35W cont.  | 3/4 inches | 2.5 inches |
| A    | 113-2100   | \$22.50 | 100 Ohm  | 35W cont.  | 3/4 inches | 2.5 inches |
| B    | 115-1500   | \$20.16 | 50 Ohm   | 90W cont.  | 3/4 inches | 5 inches   |
| D    | 119-1500   | \$32.31 | 50 Ohm   | 200W cont. | 1 inch     | 6 inches   |
| D    | 755-3080   | .75     | Terminal clip for 3/4" dummy load resistor, requires 2 per resistor. |            |            |            |
| E    | 755-4100   | 2.76    | Terminal clip for 1" dummy load resistor, requires 2 per resistor.   |            |            |            |

## Feedthru Insulators

606-1006, \$4.95 Ceramic Feed-through insulator comes complete with hardware. 3/4" diameter x 1 1/4". Fits 7/16" dia. chassis hole.



A. 606-0014, \$2.50. 5-way binding post, black, 30 Amp, insulated.  
B. 606-0013, \$2.50. 5-way binding post, red, 30A insulated.  
C. 606-0004, \$1.25. 5-way binding post, black, 15 Amp.  
D. 606-0003, \$1.25. 5-way binding post, red, 15Amp.

## HT Adapter Cables

Release the strain on your HT antenna connector with these adapter cables. SMA or BNC. Flexible, mini coax, 3 feet.  
A. MFJ-5612S, \$14.95. SMA Male to SO-239 adapter cable.  
B. MFJ-5612SF, \$14.95. Female SMA to SO-239.  
C. MFJ-5612B, \$14.95. BNC Male to SO-239 adapter cable.



## Insulating Spacers Cooling Fans and Blowers

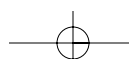
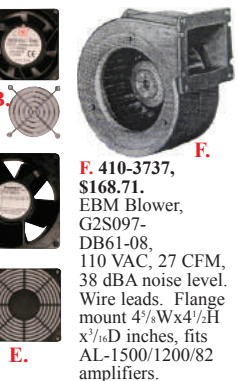
These spacers are used to properly isolate your dummy load resistor from the chassis. Withstands high power/frequencies.



A. 719C-0500C, \$0.50. Ceramic spacer, 1/4"OD, 1/2" long, 6-32 threaded both ends.  
B. 719C-0500C-2, \$2.50. Same as A except 1/2" OD.  
C. 718D-1000, \$1.71. Delrin spacer, 1/2" dia. by 1" long, 8-32 threaded holes on both ends.

High output box fans and blowers are ideal for cooling amplifiers.

A. 410-3583, \$18.85. 80x80x38.5 mm, 1800 RPM, 28 CFM, 30 dBA noise level, sleeve bearing, 120 VAC, 60 Hz, w/ 14" wire lead.  
B. 410-4584, \$90. Fan guide.  
C. 410-3138, \$43.06, high quality box fan by EBM, metal housing with metal impeller, extremely quiet 120x120x38.5 mm, 61 CFM, 28 dBA noise level, sleeve bearing, 120 VAC, 60 Hz, wire terminals. Fits AL-80A/B.  
D. 410-3132, \$43.06. Like 410-3138, for 12VDC.  
E. 410-4600, \$3.34, Metal Fan Guards.  
F. 410-4586, \$.99, plastic.





**MFJ**

**Select MFJ hard-to-find Connectors, Plugs, Adaptors...**



| Fig. | Part No. | Price      | Description                                |
|------|----------|------------|--|
| A1   | MFJ-7746 | \$6.95 ea. | N Male Reverse to N Female Adaptor         |
| B1   | MFJ-7755 | \$6.95 ea. | 3/8-24 Female Coupler, 1 1/4 inch length   |
| A    | MFJ-7705 | \$5.95 ea. | N-Male to SO-239 Adaptor                   |
| B    | MFJ-7730 | \$5.95 ea. | N-Male to SMA Female Adaptor               |
| C    | MFJ-7731 | \$5.95 ea. | N-Male to BNC Female Adaptor               |
| D    | MFJ-7702 | \$3.95 ea. | PL-259 to PL-259 Adaptor                   |
| E    | MFJ-7703 | \$7.95 ea. | PL-259 to BNC Female, Right Angle Adaptor  |
| F    | MFJ-7733 | \$6.95 ea. | PL-259 to "T" SO-239 (2) Adaptor           |
| G    | MFJ-7734 | \$4.95 ea. | PL-259 Right Angle Adaptor                 |
| H    | MFJ-7732 | \$3.95 ea. | PL-259 to RCA Phono Jack                   |
| I    | MFJ-7727 | \$5.95 ea. | PL-259 to SMA Female Adaptor               |
| J    | MFJ-7717 | \$5.95 ea. | PL-259 to SMA Male Adaptor                 |
| K    | MFJ-7737 | \$5.95 ea. | PL-259 to BNC Female Adaptor               |
| L    | MFJ-7711 | \$5.95 ea. | F Female to F Female Coupler, 1.75" length |
| M    | MFJ-7701 | \$4.95 ea. | SO-239 to SO-239 Coupler, 1.75" long.      |

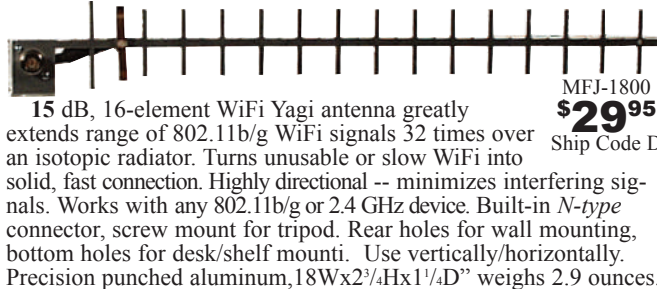
| Fig. | Part No. | Price      | Description                                      |
|------|----------|------------|--|
| C1   | MFJ-7752 | \$7.95 ea. | Nx3 Female T Coupler                             |
| D1   | MFJ-7754 | \$6.95 ea. | SO-239x3 T Coupler                               |
| N    | MFJ-7719 | \$4.95 ea. | SO-239 to SMA Male Adaptor                       |
| O    | MFJ-7729 | \$4.95 ea. | SO-239 to SMA Female Adaptor                     |
| P    | MFJ-7708 | \$3.95 ea. | SO-239 to BNC Male Adaptor                       |
| Q    | MFJ-7716 | \$4.95 ea. | BNC Male to SMA Female Adaptor                   |
| R    | MFJ-7736 | \$4.95 ea. | BNC Male to SMA Male Adaptor                     |
| S    | MFJ-7718 | \$4.95 ea. | BNC Female to SMA Male Adaptor                   |
| T    | MFJ-7728 | \$4.95 ea. | BNC Female to SMA Female Adaptor                 |
| U    | MFJ-7706 | \$6.95 ea. | NMO to SO-239 Adaptor                            |
| V    | MFJ-7738 | \$5.95 ea. | SO-239 to RCA Male or Motorola made plug         |
| W    | MFJ-7739 | \$5.95 ea. | N-female to N-female Barrel Coupler, 1.75" long. |
| X    | MFJ-7743 | \$4.95 ea. | SMA Female to SMA Female Coupler, 5/8" length    |
| Y    | MFJ-7744 | \$3.95 ea. | SO-239 to SO-239 Coupler, 1 inch length.         |
| Z    | MFJ-7745 | \$5.95 ea. | Right Angle N Male to N female Adaptor           |



| Fig. | Part No. | Price       | Description  |
|------|----------|-------------|--|
| 1    | MFJ-7707 | \$6.95 ea.  | NMO to 3/8x24 threaded Adaptor                     |
| 2    | MFJ-7710 | \$16.95 ea. | 3/8-24 to PL-259 Adaptor                           |
| 3    | MFJ-7725 | \$6.95 ea.  | 3/8x24 Antenna Mount Quick Connect Adaptor         |
| 4    | MFJ-7735 | \$11.95 ea. | 3/8x24 Antenna Mount Fold-Over Adaptor             |
| 5    | MFJ-7714 | \$4.95 ea.  | 3/8x24 Chassis Mount with insulating washer        |
| 6    | MFJ-7748 | \$5.95 ea.  | SO-239 to 3/8x24 Male or Female adaptor            |
| 7    | MFJ-7712 | \$4.95 ea.  | 3/8x24 to .10 inch hole whip ferrules              |
| 8    | MFJ-7715 | \$4.95 ea.  | 3/8x24 to .20 inch hole whip ferrules              |
| 9    | MFJ-7740 | \$1.95 ea.  | PL-259, Teflon <sup>®</sup> , nickel plated        |
| 10   | MFJ-7741 | .55 ea.     | Coax Reducer for RG-58                             |
| 10   | MFJ-7742 | .55 ea.     | Coax Reducer for RG-8X                             |
| 11   | MFJ-7721 | \$1.49 ea.  | SO-239 4-hole Chassis Mount Teflon <sup>™</sup>    |
| 12   | MFJ-7720 | \$1.49 ea.  | SO-239 screw-on Protector cover, metal             |
| 13   | MFJ-7723 | \$1.95 ea.  | N-Female 4-Hole Chassis Mount, Teflon <sup>™</sup> |
| 14   | MFJ-7722 | \$1.95 ea.  | SO-239 Single Hole Mount, Teflon <sup>®</sup>      |
| 15   | MFJ-7726 | \$1.49 ea.  | BNC Female, Chassis Mount                          |

| Fig. | Part No.  | Price        | Description   |
|------|-----------|--------------|---|
| 16   | MFJ-7724  | \$2.49 ea.   | N-Female Single hole Mount, Teflon <sup>™</sup>               |
| 17   | MFJ-7704  | \$7.95 ea.   | BNC to dual Binding Posts                                     |
| 18   | MFJ-7709  | \$6.95 ea.   | Dual Banana Plugs, High Current                               |
| 19   | MFJ-7713  | \$5.95 ea.   | 1 Red, 1 Black High Current Banana Plugs                      |
| 20   | MFJ-7700P | \$6.95 pk.   | 6 Red, 6 Black Banana Plugs / Pack                            |
| 21   | 606-0014  | \$2.50 ea.   | 5-Way Binding Post, Black, 30 Amps, insulated                 |
| 22   | 606-0013  | \$2.50 ea.   | 5-Way Binding Post, Red, 30A, insulated                       |
| 23   | 606-0004  | 1.25 ea.     | 5-Way Binding Post, Black                                     |
| 24   | 606-0003  | 1.25 ea.     | 5-Way Binding Post, Red                                       |
| 25   | 606-1006  | \$4.95 ea.   | Feed-through Ceramic Insulator with hardware                  |
| 26   | MFJ-7750  | \$0.99 ea.   | Black PVC Protect Cap for SO-239 w/retaining strap            |
| 27   | MFJ-11C06 | \$6.95 ea.   | 35A Anderson PowerPoles <sup>™</sup> (6prs) Pg. 31, more info |
| 28   | MFJ-7756  | \$1.99 ea.   | NMO protective cap, rigid, screw-on. Black.                   |
| 29   | MFJ-7758  | \$0.99(5-pk) | N/SO-239 Connector protective cap, soft black vinyl.          |

**MFJ 2.4 GHz, WiFi Yagi Antenna**



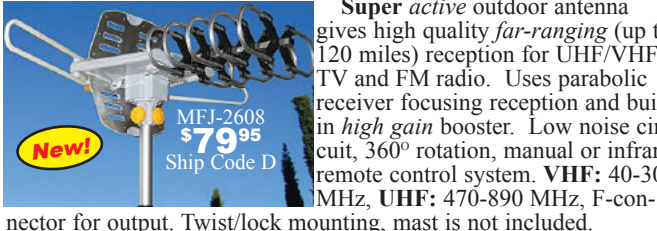
MFJ-1800  
**\$29<sup>95</sup>**  
Ship Code D

15 dB, 16-element WiFi Yagi antenna greatly extends range of 802.11b/g WiFi signals 32 times over an isotropic radiator. Turns unusable or slow WiFi into solid, fast connection. Highly directional -- minimizes interfering signals. Works with any 802.11b/g or 2.4 GHz device. Built-in N-type connector, screw mount for tripod. Rear holes for wall mounting, bottom holes for desk/shelf mount. Use vertically/horizontally. Precision punched aluminum, 18Wx2 3/4"Hx1 1/4"D weighs 2.9 ounces.

**WiFi Yagi Antenna-to-Computer Cable**

MFJ-5606SR, \$24.95.  
Reverse SMA male to N-male, 6 feet of RG-174 coax line.

**HDTV Outdoor Antenna System**



MFJ-2608  
**\$79<sup>95</sup>**  
Ship Code D

**New!**

Super active outdoor antenna gives high quality far-ranging (up to 120 miles) reception for UHF/VHF TV and FM radio. Uses parabolic receiver focusing reception and built-in high gain booster. Low noise circuit, 360° rotation, manual or infrared remote control system. VHF: 40-300 MHz, UHF: 470-890 MHz, F-connector for output. Twist/lock mounting, mast is not included.

**64 Feet, 11-Section Telescopic Aluminum Mast**

MFJ-1965  
**\$199<sup>95</sup>**  
Ship Code D

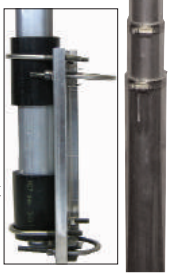
This 11-section multi-purpose aluminum telescopic pole can be used for vertical antennas or as a mast, pictured right. Use as a portable mast for field day and camping trips, temporary for emergency set-ups, or for permanent installation for wire antennas or for lightweight beams and vertical antennas.

MFJ-1965 is 64 feet fully extended so it can really get you up in the airwaves and just 6 feet fully collapsed (without clamps) so it can be handled easily while portable and stored in smaller locations.

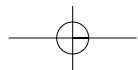
Guying is required if the mast is extended beyond 30 feet, especially in a permanent situation. Top section is .625 inches OD, so can handle most antennas. The bottom section is a hefty 2 inches OD x .120 wall. Weighs 24 lbs.

**Base Mount for Fiberglass and Aluminum Masts**

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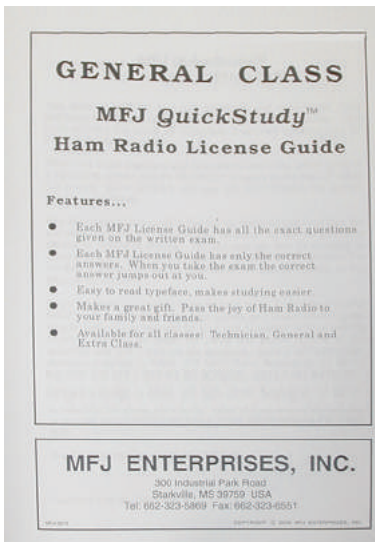






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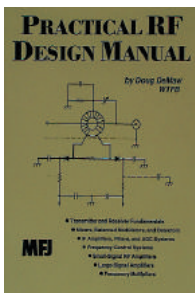
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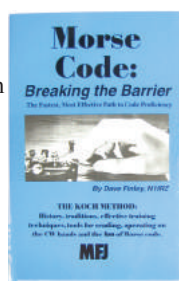
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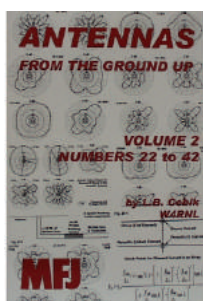
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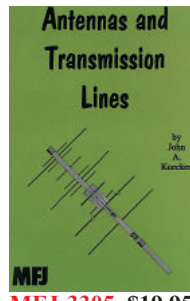
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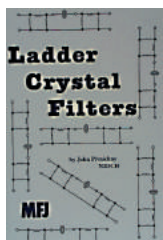
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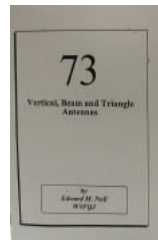
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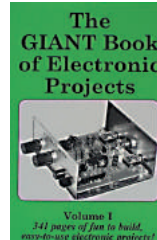
**MFJ-3509, \$19.95.** Ladder Crystal Filters. Generous references, John Pivnichny, N2DCH.



**MFJ-3303, \$14.95.** "73 Verticals, Beams, Triangle Antennas". By Ed Noll, W3FQJ.



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**MFJ-3501, \$19.95.** 30 different electronic kit projects, schematics, part placement. ham toys, etc.

## MORE GREAT MFJ SELECTIONS

**MFJ-3101, \$9.95.** The Fox Hunt Adventure. Relive a sense of mystery as young Ben discovers amateur radio and service.

**MFJ-3502, \$12.95.** Solid State QRP Projects. By Ed Noll, W3FQJ.

**MFJ-3301, \$14.95.** Troubleshooting Antennas and Feedlines. Search it out! By Ralph Tyrell, W1TF.

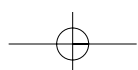
**MFJ-3504, \$16.95.** FET Principles, Experiments and Projects. By Ed Noll, W3FQJ.

**MFJ-3036, \$14.95.** PROH: Packet Radio Operators Handbook. By Buck Rogers, K4ABT.

**MFJ-35, \$9.95.** Wonderful World of Ham Radio! Excellent introduction to ham radio for kid!

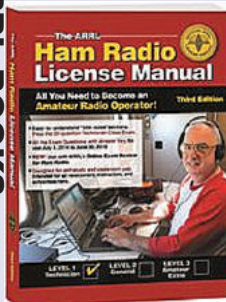
**MFJ-32, \$12.95.** Packet Radio is Made Easy. By Buck Rogers, K4ABT. Packet radio for beginners!

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ARRL BOOKS

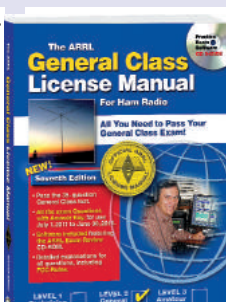
## ARRL License Study Guides & Books



**ARRL-5977, \$29.95.** ALL you need to become an Amateur Radio Operator! Every page presents information you will need to pass the exam and become an effective operator. Easy-to-understand “bite-sized” sections. Use this book to pass the 35 question

Technician license test. Includes the latest question pool with answer key. The ARRL Exam Review is now online for convenient study. Designed for self-study and classroom use. Intended for all newcomers and instructors, and school teachers.

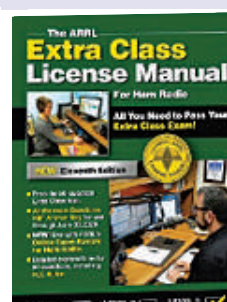
#0222



**ARRL-5919, \$29.95.** Upgrade to General and enjoy the thrill of the world-wide HF bands! All you need to pass your General class exam! All the exam questions with answer key. Software included featuring the ARRL Exam Review CD-ROM. Detailed explanations for all questions, FCC rules

for when you upgrade and get on-the-air. Pass the 35-question General Class exam -- The exciting world of HF, DX and meeting new friends all around the world awaits you!

#0307

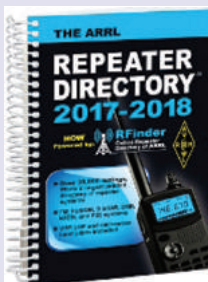


**ARRL-5920, \$29.95.** Achieve the highest level in Amateur Radio! Pass the 50-question Extra Class exam and be the toast of your ham club! All the exam questions with answer key are contained in this book. Software is included featuring the ARRL Exam Review CD-

ROM. Detailed explanations for all questions including FCC rules. Being “EXTRA” takes you to the final pinnacle of Ham Radio and affords more operating privileges, plus the distinction of being one of the top dogs!

#0451

### ARRL 2017-2018 Repeater Directory



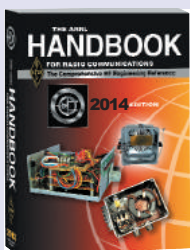
**ARRL-5975, \$17.95.** The best directory of frequencies for the thousands of repeaters around the country. Includes popular D-Star and APCO-25 repeaters. Also has handy references for operating practices, emergency handling and more. Pocket-sized (6<sup>7</sup>/<sub>8</sub>Wx9<sup>1</sup>/<sub>4</sub>H inches) directory lets you take it with you on the run, in the field or on business or vacation. Don't forget to throw it in the briefcase or place it in your glove compartment when you travel! #0697

### ARRL Log Book



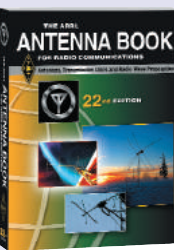
**ARRL-5950, \$7.95.** You got to have this detailed ARRL log book for your operating station! It is clean, well laid out and ready to make your detailed entries. Keep it close nearby to log all of those contacts you're going to make in ham radio! 52 total log pages with room for 25 contacts per page. You get 1,300 total log entries! The perfect spiral bound ARRL log book is just 8.5x11 inches so fits easily at your operation position on your desk. #1250

### ARRL HANDBOOK



**ARRL-5934, \$59.95.** The ARRL Handbook is the most comprehensive guide to radio electronics and experimentation. This book is part reference and part applied theory. It is filled with practical treatments of basic electronic fundamentals, RF design, digital and software radio technology, and antenna construction. A fully searchable CD-ROM is included. You get fundamental theory, practical design and principles, antenna systems and radio propagation, equipment construction and maintenance and most importantly, station assembly and management of your ham station. A handy equipment testing and troubleshooting guide is also included. #6634

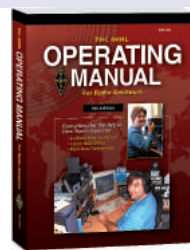
### ARRL ANTENNA BOOK



**ARRL-5948, \$49.95.** The ultimate reference for Amateur Radio antennas, transmission lines and propagation. The ARRL Antenna Book is THE SOURCE for current antenna theory and a wealth of practical, how-to construction projects. Features antenna designs enhanced

by the latest advances in computer modeling. Design, build and install any type of antenna -- from a very simple wire to specialized or highly optimized arrays. Fully searchable CD-ROM included and contains additional utility programs including YW, TLW, HFTA, Range-Bearing, ArrayFeed1 and EZNEC-ARRL antenna modeling for Windows. Requires Microsoft Windows 98 or later for PCs. #6948

### OPERATING MANUAL



**ARRL-5960, \$29.95.** The ARRL Operating Manual is the most complete book about Amateur Radio operating. It was written to help guide you through the dozens of ways hams communicate with each other. Contains info that every ham needs to explore new activities, find

references and more. Contains information about Amateur Radio, VHF/UHF-FM Repeaters, Emergency Communications, Traffic Handling, DXing, Contesting, HF Digital Communications, Image Communications, Amateur Satellites, FCC Rules and You, Operating Legally, Safely and Appropriately, Operating Awards and Callsign Prefix Listings, Antenna Bearing Maps, Abbreviations and more. #5965

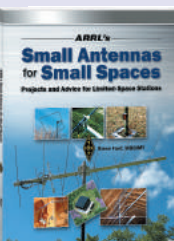
### ARRL HF Digital



**ARRL-5916, \$22.95.** By Steve Ford, WB8IMY. Everything you need to get started in digital radio applications. You'll understand how to set up and operate your equipment and software, and make the best use of your HF digital station. It's

your guide to understanding the most active HF digital modes in use today. Expanded setup information, varieties of PSK, Packet radio, APRS, D-STAR, digital applications in public service, emergencies! #6016

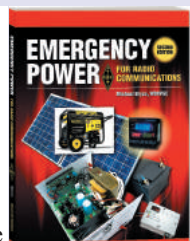
### Small Antennas



**ARRL-5993, \$22.95.** by Steve Ford, WB8IMY. A great resource for radio amateurs who live in apartments, condos or on small lots. Antenna restrictions destroying your love for ham radio? You get the ideas you need to fool those inspectors every time.

Filled with practical advice to find the right antenna design to fit your space. Get on air despite your environment and have fun trying new and fun antenna ideas. #8393

### Emergency Power

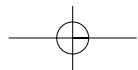


**ARRL-5953, \$24.95.** by Michael Bryce, WB8VGE. Explore the various means of electric power generation, from charging batteries, to keeping the lights on. Covers the foundation of any communications installation -- the power source. Prepare for the worst, does

the advanced thinking for you and has you ready for any natural disaster so your radio and other electronic equipment is still operating in the face of disaster. #6153

90

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Messi & Paolini Coax



**MFJ**

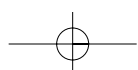
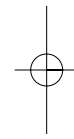
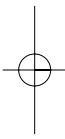
Exclusive distributor of

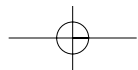


*The coaxial cables*  
**Pro Choice**



www.mfjenterprises.com • Toll-Free 800-647-1800





**Messi & Paoloni Coax**

# Why Should You Choose Messi & Paoloni Coaxial Cable?

*Engineering excellence . . . Exclusive 24-spool braiding machines . . . PE-coated copper-foil shielding . . . Exclusive foam-expanded three-layer PE dielectric seals . . . 99.99% pure electrolytic annealed bare copper . . . More! If you want the best, do not settle for less!*

**Do it for engineering excellence** and superior attention to detail in the best European tradition! *State-of-the-art manufacturing facility* specializes in premium-grade products for most demanding installations.

**Advanced M&P product features include:**

- \* **Exclusive 24-spool braiding machines** lay down 50% more conductor crossovers per inch than normally available. This innovation yields lower leakage specs and exceptionally tight bend-radius performance.
- \* **PE-coated copper-foil shielding** delivers much greater conductivity, physical flexibility and industry-leading leakage suppressed -105 dB or more. Noise is a huge problem, and we go the extra mile to lock it out!
- \* **M&P's exclusive foam-expanded three-layer PE dielectric** seals out moisture to prevent loss and to ensure low SRL across the cable's entire operating range for years to come.
- \* **Select from 99.99% pure electrolytic annealed bare copper** center conductors for fixed applications, or go with annealed copper-clad aluminum when weight is a factor (*Airborne Series*).

\* **Choose between highly flexible UV-resistant PVC jacketing** for easy handling or trample-resistant UV protected PF for more difficult environments. Robust, flooded, dual-jacketed cables are also available for direct-burial or above-ground runs in difficult terrain.

\* **M&P's catalog** is a valuable 44-page reference that gives all the info you'll need to find the best solutions for your site. Detailed products, data tables, frequency charts, help guide you.

\* **Products Available Now** in the US through MFJ and its coast-to-coast network of dealers:



Here's a few sample prices of M&P cable. U versions are prewired with PL-259 connectors. N-type available. see [www.mfjenterprises.com](http://www.mfjenterprises.com) for full specifications and pricing.

- Airborne 5:** Replaces LMR-200, lighter than RG-58, much lower loss.  
ZMP-AB5, \$0.79 per foot  
ZMP-AB5-50U, \$59.90. 50' w/PL-259.  
ZMP-AB5-100U, \$99.40. 100' PL-259.
- Airborne 10:** Replaces LMR-400, 43% lighter than 100% copper cable.  
ZMP-AB10, \$1.14 per foot.  
ZMP-AB10-50U, \$77.40. 50' w/PL.  
ZMP-AB10-100U, \$134.40. 100' PL.
- HyperFlex 5:** Replaces LMR-240 UF, stranded center conductor, exceptionally flexible with very low leakage.  
ZMP-HYF5, \$0.84 per foot.  
ZMP-HYF5-50U, \$62.40. 50' w/PL259  
ZMP-HYF5-100U, \$104.40. 100' PL.

**HyperFlex 10:** Replaces LMR-400 UF,

- very flexible, excellent against noise.  
ZMP-HYF10, \$1.49 per foot.  
ZMP-HYF10-50U, \$94.90. 50' w/PL.  
ZMP-HYF10-100U, \$169.40. 100' PL.
- HyperFlex 13:** Replaces LMR-600 UF, handles high power levels, easy install.  
ZMP-HYF13, \$3.25 per foot.  
ZMP-HYF13-50U, \$182.90. 50' PL.  
ZMP-HYF13-100U, \$345.40. 100' PL.
- UltraFlex 7:** Replaces LMR-300, high flexibility, stranded center conductor.  
ZMP-UF7, \$1.20 per foot.  
ZMP-UF7-50U, \$80.40. 50' PL-259.  
ZMP-UF7-100U, \$140.40. 100' w/PL.
- UltraFlex 10:** Replaces DX 400 MAX, high power, low loss, easy install.  
ZMP-UF10, \$1.25 per foot.  
ZMP-UF10-50U, \$82.90. 50' PL-259.  
ZMP-UF10-100U, \$145.40. 100' PL.
- UltraFlex 13:** Replaces LMR-500 UF, highest power rating, easy installation.  
ZMP-UF13, \$3.10 per foot.

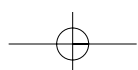
- ZMP-UF13-50U, \$175.40. 50' PL259.
- ZMP-UF13-100U, \$330.40. 100' PL.
- Broadpro50C:** Replaces LMR-500 UF, highest power rating, easy installation.  
ZMP-BP50C, \$1.30 per foot.  
ZMP-BP50C-50U, \$85.40. 50' PL.  
ZMP-BP50C-100U, \$150.40. 100' PL.

**Connectors/Accessories**

- ZMP-CS05M-N, \$12.95. N-male soldering, AB5, HYF-5, RG58 C/U.
- ZMP-CS05M-U, \$9.95. PL-259.
- ZMP-CS07M-N, \$8.00. N-male soldering, UF7 (.287" diameter).
- ZMP-CS07M-U, \$7.50. PL-259.
- ZMP-CS10M-N, \$12.95. N-male soldering, AB10, HYF10, UF10, BP50, RG-213/U, RG-214/U, (.405" diameter)
- ZMP-CS10M-U, \$9.95. PL-259.
- ZMP-CS13M-N, \$15.00. N-male, solderless, UF13 (.50" diameter).
- ZMP-CS13M-U, \$15.00. PL-259.
- ZMP-7608, \$24.95. M&P special coaxial cable cutter.

**M&P versus LMR Isolation, Copper Foil and PE Dielectric Comparison**

|                              |  |  |
|------------------------------|--|--|
| <b>Isolation Shielding</b>   | M&P Cables have greater than 105 dB of isolation shielding.  | LMR cables have greater than 90 dB of isolation shielding.   |
| <b>Copper Foil Shielding</b> | We use copper foil with Polyethylene coating and copper outer braid which does not set up galvanic corrosion problems over time. Pe coating also reduces the chance of the copper foil breaking when flexing during install and over time. | LMR uses aluminum tape and tinned copper. Galvanic corrosion can form over time between aluminum and tin plating that can cause deterioration of the aluminum, tin and tin plated copper wire. Deterioration can cause noise to be generated in the cable. |
| <b>PE Dielectric</b>         | The Foam PE dielectric of the M&P cables is processed such that it forms a 3-layer dielectric sealing keeping the foam from moisture incursion into the foam.  | LMR PE Foam is a closed cell foam dry nitrogen injected with much less moisture incursion as compared to the M&P 3-layer dielectric sealing.   |



# MFJ RemoteShack™

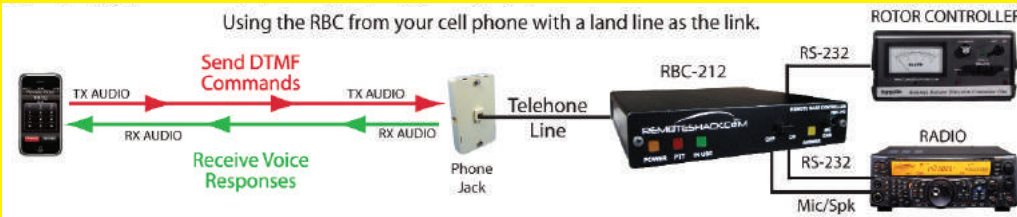
Control your rig . . . Rotate your beam . . . Switch Antennas . . . Use your cellphone or computer/internet to control from anywhere . . . Plug & Play for your transceiver . . . MFJ No Matter What™ Warranty

**RBC-212**  
**\$499<sup>95</sup>**

**Plug and Play Cable Kit, \$79.95.**

Each package is specifically wired for your individual rig.

See chart to determine your radio and cable package.



## What is the RemoteShack™ controller?

RBC-212 is a remote base controller equipped with two link input ports, one radio control port and two multifunction ports each on the AUX and RS-232 ports. The TELCO link port allows connectivity from VOIP services such as Vonage, MagicJack, AT&T or a standard telephone line.

**Audio** in/out link port allows connection to an audio source such as Skype, or an FM radio link. Both links can be connected simultaneously for redundancy.

With the optional *plug&play* cable kit, installation is accomplished in minutes with only mic gain to adjust. Simply connect the radios' serial and accessory ports to the RBC.

Connect a telephone line to the RBC. Call the telephone number connected to the RBC with your cell phone. The RBC will auto-answer and connect you to your radio. It's that easy!

When RBC answers, you will be greeted with a high quality female voice. "Enter your passcode". After you enter your 4-digit DTMF passcode, you will be informed of the remote base status . . . "Welcome. Remote Base Ready! 14.1875 USB".

At this point you will be in receive mode and monitoring the frequency. You can directly change the frequency at any time or scan the bands using different scan speeds.

Each RBC comes with a code "cheat-sheet" to operate your radio and other equipment remotely.



Scan the QRO code and Check out RemoteShack™ on YouTube!

<http://www.mfjenterprises.com> • Toll-Free 800-647-1800

## Send DTMF commands from your cell phone or laptop remotely



Cable package not included with controller, select from chart below.

| Controller # | Radio Brand | Transceivers Supported  | Cable Pkg. # |
|--------------|-------------|-------------------------|--------------|
| RBC-212-KN1  | Kenwood     | 480/870/570/590/2000/B2 | RBC-KN1      |
| RBC-212-KN1  | Kenwood     | TS-480                  | RBC-KN2      |
| RBC-212-KN3  | Kenwood     | TM-D710, V71            | RBC-KN3      |
| RBC-212-YU1  | Yaesu       | FT-950                  | RBC-FY2      |
| RBC-212-YU1  | Yaesu       | FT-2000/DX5000          | RBC-FY3      |
| RBC-212-YU2  | Yaesu       | FT-450                  | RBC-FY5      |
| RBC-212-YU4  | Yaesu       | FT-847                  | RBC-FY1      |
| RBC-212-YU4  | Yaesu       | FT-857/897              | RBC-FY6      |
| RBC-212-YU1  | Yaesu       | FT-DX9000               | RBC-FY4      |
| RBC-212-YU5  | Yaesu       | FT-991                  | RBC-FY2      |
| RBC-212-EC1  | Elecraft    | K3, K2                  | RBC-EC1      |
| RBC-212-EC1  | Elecraft    | KX-3                    | RBC-EC3      |
| RBC-212-FX1  | Flex        | 1500/3000               | RBC-FX1      |
| RBC-212-FX1  | Flex        | 5000                    | RBC-FX2      |
| RBC-212-IC1  | Icom        | IC-7000                 | RBC-IC1      |
| RBC-212-IC1  | Icom        | IC-7300                 | RBC-IC4      |
| RBC-212-IC2  | Icom        | IC-706MKII, 706         | RBC-IC1      |
| RBC-212-IC3  | Icom        | IC-706MKIIG             | RBC-IC1      |
| RBC-212-IC4  | Icom        | IC-718                  | RBC-IC5      |
| RBC-212-IC5  | Icom        | IC-7410/9100            | RBC-IC4      |
| RBC-212-IC6  | Icom        | IC-746                  | RBC-IC2      |
| RBC-212-IC7  | Icom        | IC-756                  | RBC-IC2      |
| RBC-212-IC8  | Icom        | IC-7600                 | RBC-IC2      |
| RBC-212-IC9  | Icom        | IC-7700                 | RBC-IC3      |
| RBC-212-IC10 | Icom        | IC-7800                 | RBC-IC3      |
| RBC-212-IC11 | Icom        | IC-781                  | RBC-IC2      |
| RBC-212-IC12 | Icom        | IC-7200                 | RBC-IC4      |

REMOTE SHACK

## ACCESSORIES

RBC-CMI1, \$249.95.  
Noise Cancelling Microphone



Plug into your cellphone and get real PTT. Provides receive audio for your car/headphones. Cellphone, phones not included.

RBC-LIC-1, \$24.95.  
Laptop-to-RBC Interface cable

RBC-DCDC, \$24.95.  
Powers CMI-1 mobile, +12 DC to 9 VDC Converter.

RBC-120REL, \$179.95.  
Remote Switched AC Outlet

Turns radio (or other 120V/15A device like a power supply) on/off remotely.

Required for rigs without remote on/off capability: all Icom and older 80-90s rigs.

RBC-80REL, \$69.95. 12V/40A.

RBC-8REL, \$249.95.  
8 SPDT Relay Controller and RF Remote Control

Configure relays momentary/latched, autoswitch relay on after log in/out. Includes 12V supply. Use with 9REL for relay control.

RBC-9REL, \$179.95.  
120 Volt, 8 outlet Power Strip

Each outlet 5A rated.

Max 15 Amps.

RBC-10REL, \$189.95.  
8 Channel Relay Monitors

switch levels and local switch to override 8REL.

RBC-PSS, \$249.95.  
Programmable Serial Splitter

Auto-switch your serial port when using RBC-212 -- all devices can be shared.

RBC-CPI1, \$179.95.  
Cordless Phone Interface

RBC-RCC, \$36.95.  
Rotator Cable

required to control rotator (must have RS-232 port).

# AMERITRON®

## 2017 Amateur Radio Catalog



# Powerful Linear Amplifiers!

# Ameritron HF+6 1200W Solid State Amplifier

1.5-54 MHz... 1200 Watts PEP Output, Instant Automatic bandswitching, no tuning... no warm-up, SWR protected, Quiet Variable-Speed Cooling... PEP FWD/REF Metering... PA Balance /ALC Metering and LED Indicator... Front Panel Band/Error LEDs... more!



you adjust output power on the convenient front panel display. You get front panel operation, band and error LED indicators like reflected power and bandswitch errors.

### Automatic Bandswitching!

Put your amplifier and power supply out-of-the-way! Control your amplifier directly from your rig!

ALS-1306 automatic band switching capability reads band data from your transceiver and automatically changes bands as you make adjustments on your transceiver. An optional interface cable is required for your particular radio.

### ALS-1306 Transceiver Interface Cables

|           |   |                    |
|-----------|---|--------------------|
| DB-13D    | Icom IC-706/7000/718 & others w/13P din |                    |
| DB-7DI    | Icom with ACC2 7-pin din                | \$24 <sup>95</sup> |
| DB-DB7DK  | Kenwood with DB9 except 480             | Each               |
| DB-DB8MK  | Kenwood TS-480                          |                    |
| DB-8MY2   | Yaesu FT-897/857/100/817/840/890/991    |                    |
| DB-8DY    | Yaesu with standard 8 din Band data     |                    |
| DB-10MY   | Yaesu FT-450/950/1200                   |                    |
| DB-DB15Y  | Yaesu FT-DX-3000                        |                    |
| DB-DB15HE | Elecraft (BCD)                          |                    |



**New!**

ALS-1306  
**\$3299**  
Suggested Retail

AMERITRON's new ALS-1306 is a 1.5-54 MHz solid state near legal limit™ FET no-tune Amplifier -- get 1200 Watts PEP output on all bands, including 6-Meters. Instant automatic bandswitching! No tuning, warm-up or tubes to baby, no fuss!

ALS-1306 reliability is insured by using eight rugged MRF-150 power FETs. They are mounted on the dual heavy duty heat sink and properly arranged to spread out the heat over a large surface. This is something that other amplifiers using a single power device cannot do. Some FETs actually are a package of several transistors in one large case. This concentrates all of the heat in one small package. They not only are more difficult to cool, if one transistor fails, they all have to be replaced.

The ALS-1306 RF deck operates at 50 Volts for efficient, low distortion linear RF power service. It's cooled by a whisper quiet cooling fan. Fan speed is regulated by temperature sensors, assuring minimum noise for adequate cooling.

### 1200 Watts SSB Output Power Covers 1.5-54 MHz (HF+ 6 Meters!)

ALS-1306 runs up to 1200 Watts of clean SSB output power (just 100 Watts drive gives you the full rated 1200 Watts output) for continuous coverage between 1.5-54 MHz. 10/12 Meters is already included.

Operator-friendly layout fits nearly any station configuration. The attractive desktop amplifier unit weighs only 22 pounds. Compact 10Wx6½Hx18½D inches.

SWR Protection prevents amplifier damage if you switch to a wrong band, use the wrong antenna or have a high SWR. Over-power protection enables if output forward power or reflected power exceeds a safe level.

Output power is automatically reduced to prevent amplifier damage by controlling ALC to exciter.



### Peek Inside...

Be prepared to be amazed at the beautiful workmanship of this finely crafted piece of electronic art! It's another beautiful, yet powerful Ameritron Amplifier!

LED-illuminated Cross-Needle SWR/Wattmeter lets you read SWR, forward and reflected peak power simultaneously. You also get ALC, SWR, PA balance and current metering with LED backlight. An Operate/ Standby switch lets you run "barefoot", but you can instantly switch to full power if needed.

Front-panel ALC control! This exclusive Ameritron feature lets

### Clean, Modular Construction

Unlike other solid state amplifier designs that are packed so tightly they are un-serviceable, Ameritron's ALS-1306 amplifier construction is super-clean with easy-serv-ice modular construction.

### ALS-1306 Power Supply



The ALS-1306 is powered by a 50 VDC switching power supply. Comes with a pre-wired cable to plug into the ALS-1306.

This hash-free fully regulated switching power supply is only 12 lbs. and measures a compact 10Wx6½Hx9½D inches. It can be placed conveniently out-of-the-way at your operating station. Output is 50 VDC at 50 Amps to the ALS-1306. Wired for 220 VAC, selectable to 110 VAC. Draws less than 25 Amps at 110 VAC; 12A @220 VAC.

Call your favorite dealer for your best price!

**AMERITRON**®  
... the world's high power leader!  
116 Willow Road, Starkville, MS 39759  
TECH (662) 323-8211 • FAX (662) 323-6551  
8 a.m. - 4:30 p.m. CST Monday - Friday  
For power amplifier components call (662) 323-8211  
<http://www.ameritron.com>

# AL-811 . . . 600 WATTS . . . \$849!

*More hams use Ameritron AL-811 amplifiers than any other amplifier in the world . . . The AL-811 has earned a worldwide reputation for legendary quality, flawless performance, proven reliability and superb customer service . . .*



**Now with LED Meters!**

Ameritron's AL-811 linear amplifier gives you plenty of power to bust through QRM!

You get a quiet desktop linear that's so compact it'll slide right into your operating position -- you'll hardly know it's there . . . until QRM sets in. And you can conveniently plug it into your nearest 120 VAC outlet -- no special wiring needed.

You get three tough 811A transmitting tubes, extra heavy duty power supply, all HF band coverage, pressurized ventilation, tuned input, dual illuminated meters, adjustable ALC and much more for an incredible \$849!

*The First 600 Watts makes the difference*

The AL-811 gives you 600 Watts PEP output -- that's nearly 2 full S-units over your bare-foot rig. That could mean the difference between hearing, "You're Q-5 armchair copy" and "Sorry, can't copy you, too much QRM."

Now you won't have to stand aside while the *big guns* steal your DX. You'll log some of those stations first.

*All band, all mode Coverage*

**AL-811** covers all HF bands. No compromise on WARC and most MARS bands -- you get a 100% rated output.

**Operate** AL-811 on all modes. Get 600 Watts output PEP SSB and 500 Watts output CW. You even get 300 Watts on continuous carrier modes like RTTY, SSTV, and FM.

The low cost 811A tubes resist failure because . . . **First**, they're constructed with widely spaced elements that minimize the chance of elements touching and causing a short -- even if the plate gets hot enough to melt.

**Second**, they use a directly

heated thoriated tungsten filament cathode that prevents the electron emitting layer from instantly stripping off -- even if mistuning causes a sudden, severe current overload.

The Ameritron AL-811 is excellent for the newcomer

AL-811  
**\$849**

Suggested Retail

load. That's excellent high voltage regulation!

**Rectifier** diodes are rated for a massive surge current of 200 amps--won't blow even if you accidentally short the high voltage supply.

**Wire** wound, 7 Watt, 50 K Ohm equalizing resistors safely protect each filter capacitor -- *not* 2 Watt, 100 K Ohm carbon composition resistors that can open and cause filter capacitors to explode or fail.

Ameritron's AL-811 power supply is built tough so you get peak performance year after year.

*Tuned input provides excellent load for any rig*

A Pi-Network tuned input provides a 50 Ohm load for your rig. Even fussy solid state rigs can deliver their full drive to the AL-811.

with efficiencies close to 70%. Even a 3:1 SWR load won't damage tubes/tank components.

A ball bearing vernier reduction drive makes plate tuning safe, precise and easy.

A quiet blower pressurizes the cabinet with a large volume of air flow. It keeps the 811A tube temperature *well below* the tube manufacturer's rating -- even with a key down carrier at 400 Watts output -- without the *overwhelming* noise of oversized fans.

*Two illuminated LED meters*

**Two** illuminated LED meters give you a clear picture of your operating conditions so you can tell right away if something is wrong. Long-lasting LED lamps.

The Grid Current meter *continuously* checks for improper loading. The other meter switches between high voltage and plate current to warn of abnormal conditions.

*Exclusive Adapt-A-Volt™ power transformer*

**Too** high of line voltage stresses components and causes them to wear out and fail. Too low line voltage causes a "soft tube" effect -- low output and signal distortion.

Ameritron's exclusive *Adapt-A-Volt™* power transformer has a special buck-boost winding that lets you compensate for stressful high line voltage and performance robbing low line voltage. Your components last longer and gives you peak performance -- regardless of your line voltage.

*Plus much, much more . . .*

An Operate/Standby switch lets you run barefoot, but you can instantly switch to full power if needed. A transmit LED tells you when your rig is keying your AL-811. A 12 VDC keying relay makes it compatible with all solid state and tube rigs.

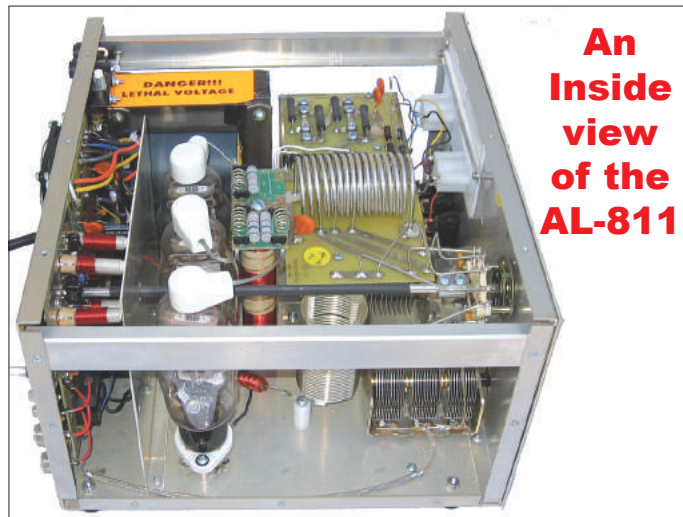
**Back-pulse** cancelling diode protects the rig keying circuit. Shielded RF compartment. One year limited warranty.

**Compact** 16Dx13<sup>3</sup>/<sub>4</sub>Wx8 H<sup>3</sup>/<sub>4</sub>. 30 lbs. UPS shippable, has transformer installed and wired for 120 VAC. Draws 8 amps at 120 VAC. Export model is AL-811X wired for 240 VAC.

**AMERITRON**

116 Willow Road, Starkville, MS 39759  
Tech: 662-323-8211 • Fax: 662-323-6551

[www.ameritron.com](http://www.ameritron.com)



**An Inside view of the AL-811**

because it's tough enough to withstand momentary mistuning. And the tubes are so inexpensive that you can replace one for mere pocket change.

*Extra heavy duty power supply gives you peak performance year after year*

The heart of the AL-811 power supply is its heavy duty power transformer with a *high silicon steel* core weighing a hefty 17 pounds.

A full wave bridge using 67.5 mfd of total capacitance (four 270 ufd, 450 volt capacitors) produces 1500 Volts under full load and 1700 Volts no

**Low** loss slug tuned coils -- tunable from the rear panel -- let you optimize performance. High quality low drift silver mica capacitors maintain proper tuning.

*Output tank:*

*Optimum Q on each band*

The low loss pi-network output tank has been carefully designed for optimum Q on each band and built with top quality RF components.

The result is peak performance over each band, wide impedance matching range and exceptionally smooth tuning

**AMERITRON...the world's high power leader!**



# AMERITRON® AL-811H

## 800 WATTS OUT . . . \$999!



AL-811H  
**\$999**

Suggested Retail

Only the AMERITRON AL-811H gives you four *fully neutralized* 811A transmitting tubes. You get absolute stability and superb performance on higher bands that can't be matched by un-neutralized tubes.

AMERITRON mounts the 811A tubes vertically -- not horizontally -- to prevent hot tube elements from sagging and shorting out. Others, using potentially damaging horizontal mounting, require hard-to-find 811A tubes to retard harmful sagging and shorting.

**Powerful** 20 CFM computer grade fan -- not an open frame phonograph motor -- draws in cool air to pressurize the cabinet and efficiently cool your 811A tubes for an

**Now with LED Meters!**  
extra long life.

You also get efficient full-size heavy duty tank coils, computer grade capacitors, heavy duty high silicon core power transformer, slug tuned input coils, operate/standby switch, transmit LED, ALC, dual meters, QSK compatibility with QSK-5 option and much more!

**SPECIFICATIONS:**

- **Output power:** 800 Watts PEP, 600 Watts CW.
- **All Band Operation:** Covers 160-15 Meters including WARC bands. Can be user modified for 12 and 10 Meters.
- **Four 811A Tubes:** Uses four rugged, fully neutralized low cost 811A PA tubes.
- **Vertical Tube Mounting:** Prevents shorting of tube filament/grid, prolongs tube life.
- **Fully Neutralized:**

Improves stability and performance on higher bands.

- **Input Tune Circuit:** Adjustable rear panel slug tuned input circuit.
- **ALC Control:** Built-in adjustable ALC control.

- **Vernier Reduction Drives:** Tuning and loading reduction drives make tuning smooth and easy.
- **Dual Illuminated LED Meters:** Monitor vital operating functions.
- **Heavy Duty Power Supply:** 17 pounds, high silicone steel core transformer and computer grade filter capacitor gives 1700 Volts high voltage at no load and 1500 Volts at full load.

**Multi-Voltage Operation:** User selectable for 100/110/120/210/220/230 VAC operation. Shipped with transformer installed and wired for 120 VAC for domestic model or 240 VAC for export model.

• **Air-Cooled:** Quiet pressurized ventilation keeps tubes safely cooled.

**QSK Compatible:** Optional external electronic pin diode Transmit/Receive switch. **QSK-5, \$359.95.** See page 96 for details.

- **Attractive Lexan front decal**
- **One Year AMERITRON warranty.**
- **Dimensions:** 8 1/4 H x 13 3/4 W x 15 1/2 D inches.
- **Operating Weight:** 32 lbs. • **Made in USA**

**New! Get the AL-811HD with 572B tubes . . . \$1299**

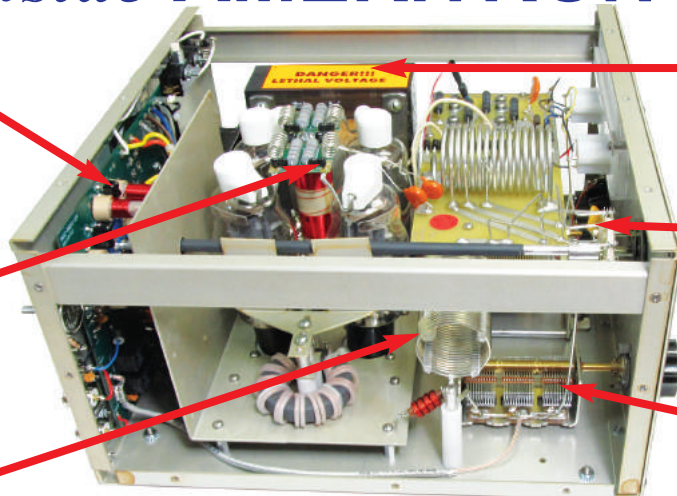
AL-811HD gives you the AL-811H with four 572B tubes installed. Get a higher power tank circuit and grid overload protection. Grid Overload Protection protects the tubes from excessive grid current due to mistuning and it protects against excessive drive power. Four 572B tubes give you more plate dissipation than a single 3-500Z tube. AL-811HD gives you 800 Watts output in SSB and 600 Watts for continuous duty in CW, RTTY, SSTV and AM operation.

## A look inside AMERITRON's AL-811H

Pi-Network Tuned input provides 50 Ohm load for your rig.

Four fully neutralized and rugged 811A transmitting tubes vertically mounted.

Output tank circuit with optimum "Q" for each band



Heavy duty power supply: 17 lb. high silicone steel transformer and computer grade capacitors.

Heavy duty band switch

Pi-network gives smooth tuning and excellent harmonic suppression.

[www.ameritron.com](http://www.ameritron.com)

# AMERITRON Doubles Average SSB Power

**AL-80B kilowatt output desktop linear can double your average SSB power output with high-level RF processing...runs cooler because its 3-500G tube completely turns off between words**

Ameritron's AL-80B kilowatt output desktop linear can double your average SSB power output with high-level RF processing using

AL-80B  
Suggested Retail  
**\$1595**

Ameritron's exclusive *Dynamic ALC™*. You get cooler operation because the AL-80B's exclusive *Instantaneous RF Bias™* completely turns off the classic 3-500G tube between words. It saves hundreds of watts wasted as heat.

You get a full kilowatt PEP output from a whisper quiet desktop linear. It's a compact 8 1/2"Hx14Dx15 1/2" inches and plugs into your nearest 120 VAC outlet. Covers all bands 160-15 Meters, including WARC and MARS (10/12 Meters modifiable; FCC license required).

You get 800 watts output on CW, 500 watts output on RTTY, an extra heavy duty power supply, genuine 3-500G tube, nearly 70% efficiency, tuned input, Pi/Pi-L output, inrush current protection, multi-voltage transformer, dual cross-needle meters, QSK compatibility, two-year warranty, made in the USA, plus much more!

**Dynamic ALC™ doubles average SSB power**

The AL-80B's exclusive *Dynamic ALC™* gives you high-level low-distortion RF processing. It can more than double your average SSB power for up to 6 dB improvement in intelligibility, maximizing talk power without distortion/splatter.

A convenient front panel control lets you adjust output power level.

AL-80B's exclusive *Instantaneous RFbias™* turns off the classic 3-500G tube (except filaments) between words and dots and dashes, eliminating hundreds of watts wasted as heat for cooler operation and longer component life.



The guts of the AL-80B is its heavy duty power supply. A 26 pound transformer using a high silicone steel core, computer grade capacitors, heavy duty bleeders and ten 3 amp, 1000 volt power rectifiers give you a stiff 2700 volts fully loaded. Many amps using two 3-500Gs use such small power supplies they don't deliver much more power than the AL-80B.

The AL-80B is built on a rugged steel chassis with a separate fully-shielded RF compartment to minimize RFI and TVI.

A whisper quiet internal fan draws in cool air over power supply components and pressurizes the classic 3-500G tube compartment to remove heat for longest life.

**Tuned input lets your rig deliver full output**

50 Ohm broadband Pi-Network tuned input is used. Even fussy solid state transmitters will deliver full power!

A carefully designed Pi/Pi-L output network using the optimum Q for each band gives exceptionally smooth tuning, extremely wide matching range, full band coverage, and peak

performance at all power levels.

**Step-Start Inrush**

*Protection™* stops damaging inrush current with a start up sequence that's easy on your tube and power supply components.

Our exclusive *Multi-Voltage Power Transformer™* lets you optimize for 14 different primary line voltages. The high voltage secondary can be wired to reduce plate voltage for efficient operation below 400 watts for use outside the USA.

AMERITRON's dual LED illuminated cross-needle meters give you four separate meters to

monitor your operating conditions -- you can tell right away if something is wrong. Grid and plate current and forward output power are monitored for improper loading and abnormal conditions.

The fourth meter can be switched to monitor your 3-500G tube DC plate voltage, reflected PEP power, antenna system SWR, ALC voltage to your rig, and the grid current that starts ALC action -- get a clear picture of your AL-80B.

The T/R (transmit/ receive) relay in the AL-80B switches nearly as fast as some vacuum relay QSK T/R switches.

Operate/Standby switch lets you run barefoot, but can instantly switch to full power if needed.

Has transmit LED; 12 VDC, 200 mA accessory jack; 12 VDC keying relay for solid state and tube rigs; tough Lexan over-aluminum front panel. Two-year warranty.

Weights 48 lb. Power required: 120 VAC, 12A. Made in the U.S.A.

## An inside look at AMERITRON'S AL-80B

Dual LED illuminated cross-needle meters give you four separate indicators that monitor your operating conditions -- PEP forward power, PEP reflected power, SWR, Grid Current, Plate Current, Plate Voltage and ALC.

Heavy Duty Bandswitch.

Tank coils spaced away from chassis for optimum "Q".

Pi-Network gives smooth tuning and full band coverage, even on 160 and 80 Meters.

Heavy duty power supply: 26 lb. high silicone steel transformer and computer grade capacitors.

Rear panel adjustable input Pi-Network.

Genuine classic 3-500G Tube.

## AMERITRON'S AL-80B Kilowatt Desktop Linear

**SPECIFICATIONS:**

**Frequency Coverage:** 1.8, 3.5, 7, 14, 21 MHz and WARC bands.

Export/User modified models include 10/12 Meters.

**Input Circuit:** Adjustable Pi-Network, VSWR 1.3:1 or less at resonance.

**Output Circuit:** Pi-L/Pi-Network.

**Input Bandwidth:** 20% for 2:1 VSWR or better.

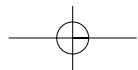
**Drive Requirement:** 85 Watts for 800 Watt CW output. 10 dB gain.

**Shipping Weight:** Amplifier, 54 lbs.; tube, 3 lb.

**Operating Weight:** 48 pounds.

**Efficiency:** CW/SSB better than 66%.

**Dimensions:** 15 1/4"Dx14Wx8 1/2"H inches.



## AMERITRON'S four 572B tubes . . . 1300 Watts . . . \$1895!

AMERITRON creates a new class of Near Legal Limit™ amplifiers with the AL-572 . . . you get nearly full legal SSB power output for 65% of the price of a full legal limit amplifier . . .



You get 1300 Watts PEP SSB nominal power out on amateur bands 160 through 15 Meters!

Four rugged 572B tubes give you near legal limit power and instant 3-second warm-up time.

This whisper quiet, desktop linear plugs into your nearest 120 VAC outlet -- no special wiring needed.

You get . . . Ameritron's exclusive Instantaneous RF Bias™, Dynamic ALC™, ParasiticKiller™, Step-Start™ Inrush Protection, heavy duty power supply, fully neutralized tubes, Pi/Pi-L network, tuned input, pressurized ventilation, dual LED lighted Cross-Needle meters, multi-voltage power transformer, front panel ALC control, 6:1 vernier reduction drives, and much more!

The AMERITRON AL-572 gives you 1300 Watts PEP SSB nominal power output on 160 through 15 Meters, using four rugged 572B tubes with 3 second warm-up time. This whisper quiet, desktop linear plugs into your 120 VAC outlet - no spe-

AL-572  
Suggested Retail **\$1895** special wiring needed. You get heavy duty power supply; fully neutralized tubes; pressurized ventilation; multi-voltage power transformer; front panel ALC control; 6:1 vernier drives . . . and more!

You'll typically get 1300 Watts PEP SSB, 1000 Watts CW continuous, on all amateur bands from 160 through 15 Meters AMERITRON's exclusive Instantaneous RF Bias™ completely turns off the 572B tubes between words and dots and dashes, for cooler operation and longer component life, while Dynamic ALC™ can more than double your average SSB power.

AMERITRON's Step-Start™ Inrush Protection limits inrush current to your power supply and tube filament, greatly extending tube life and amplifier components.

A heavy duty power supply using a high silicon steel transformer delivers 2500 Volts at 0.7 Amps with good regulation.

A Pi-Network tuned input using slug tuned coils provides a good 50 ohm load for your rig. A quiet internal fan draws in cool air over power supply components and pressurizes the tube compartment.

Grid current, plate current and forward PEP output power are continuously monitored by dual, lighted cross-needle meters.

A fourth scale switches among peak reflected power (and SWR), high voltage, ALC threshold, and ALC output voltage.

No one will ever know the difference!

Ameritron's multi-voltage power transformer has a unique buck-boost winding. It lets you select from 14 primary voltages centered on 115 and 230 VAC.

You can match your AL-572 to your AC line voltage so you'll get peak performance and long component life -- regardless of your line voltage.

An Operate/Standby switch lets you run barefoot, but you can instantly switch to full power if you need it. Transmit LED: 12 VDC. 200 mA accessory jack; 12 VDC keying relay for solid state/tube rigs; tough, nearly indestructible Lexan-over-aluminum front panel. Shipped with transformer installed. Draws 16 A at 120 VAC.

For lightning fast QSK operation use the optional Ameritron electronic PIN diode QSK switch. Shipped wired for 120 VAC. Weighs 40 lb. Power required: 120 VAC, 16 amps. Made in the USA.



Inside view of AL-572



## AMERITRON AL-800/AL-800H HF Linear Amplifiers: High POWER in a Compact, Desktop Package

Select the 1250 Watt PEP AL-800 single 3CX800A7 near-legal-limit amplifier, or the 1500 Watt PEP dual 3CX800A7 amplifier that loafs along at full legal limit -- and don't worry about desk space.



AL-800F  
Single Import tube  
**\$1995**

AL-800  
One Eimac® tube  
**\$2545**

AL-800HF  
Two Import tubes  
**\$2745**

AL-800H  
Two Eimac® tubes  
**\$3845**

Ameritron's compact AL-800 /AL-800H amps are both desktop linears with plenty of muscle!

At 14.25Wx8.5H x14.5D inches, the more compact AL-800 uses a single 3CX800A7 to provide 1250 Watts PEP SSB and 850 Watts CW with 85 Watts typical drive level.

And the AL-800 will even run from a 20-Amp 120 VAC line source if desired. AL-800 typically draws 17 Amps peak current at 120VAC, or 8 Amps

at 240 VAC and weighs just 51 lbs.

For more power and headroom, the AL-800H uses a pair of 3CX800A7 tubes to easily provide 1500 Watts PEP/CW with a typical drive level of just 55 Watts.

The AL-800H draws 14 Amps peak current at 240 VAC (1500 Watts CW output) and weighs just 52 lbs.

Other than power differences, these amplifiers are very similar in features and operation. Both cover 160-15 Meters, and are modifiable to cover 12/10 M with proof of your FCC license.

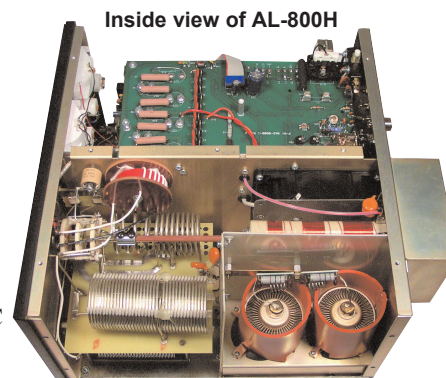
Both include a Step-Start™ input power circuit, a time delay circuit to allow for tube warm-up, thermal overload protection, grid current limiting to protect your tube(s), a DynamicBias™ circuit and a built-in multi-voltage (14 user-selectable AC line voltages from 90-140; 200-250 VAC) heavy duty power transformer. Hefty 32 lb. grain orientated silicone steel core transformer.

Front panel monitoring and tuning functions are also virtually identical. Both amplifiers include a Standby/Operate switch for barefoot or full power operation, an ALC SET control, Transmit and Fault LEDs.

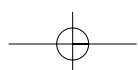
Dual LED illuminated Cross-Needle

meters provide detailed monitoring of amplifier performance. The left meter continuously measures grid and plate currents, and the right meter continuously measures peak RF output power on one scale, and plate voltage, Reflected power and SWR, ALC voltage, and ALC adjustment set.

Quiet pressurized ventilation keeps tubes safely cooled. A Pi/Pi-L output network gives you smooth tuning and wide matching range. Vernier reduction drives make tuning and loading adjustments smooth and easy.



Inside view of AL-800H



# AMERITRON *super legal limit amplifiers*

## Ameritron's AL-1500 Amplifier with Eimac<sup>®</sup> 3CX1500A7



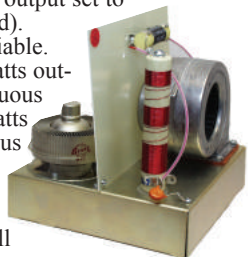
AL-1500F  
**\$3395**  
 Import tube  
 Suggested Retail  
 AL-1500  
**\$4295**  
 Eimac<sup>®</sup> tube

Feel the need for maximum legal HF output power? AMERITRON's AL-1500 will give it to you. Using the *Herculean* 3CX1500A/8877 ceramic tube with its high power gain, the AL-1500 needs only 65 watts of drive from your exciter to deliver the goods-- transceivers and other exciters just loaf at 1500 watts out.

**Cool**, efficient operation is provided by a forced-air system with tube chimney, using a commercial grade die-cast ball bearing blower for maximum tube life. The tube is further protected by time delay starting and automatic over-current shutoff to remove drive power if the amplifier is mis-tuned.

You get full legal power output from a whisper quiet desktop linear. Measures 18 1/2 D x 17 W x 10 H inches, and covers all bands, 160-15 Meters, including WARC and MARS (80% of full output set to nearest amateur band). 10/12 Meters modifiable.

You get 1500 watts output (1/2 hour continuous carrier) and 2500 watts (30 second continuous carrier and 2500 watts- plus 30 minute PEP two-tone test). You get all

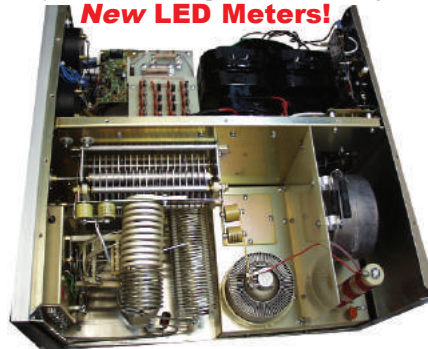


this power, plus, 65% efficiency, pi-network tuned input, Pi/Pi-L output, inrush current protection, multi-voltage transformer, QSK compatibility, and a one-year warranty.

The guts of the AL-1500 is its heavy duty power supply, with a 32 lb. *Hypersil*<sup>®</sup> transformer using a high silicone steel core, computer grade capacitors (33 mfd total), heavy duty bleeders and twenty 3 amp, 1000 volt power rectifiers give you a stiff 3300 volts fully loaded.

The AL-1500 is built on a rugged steel chassis with a separate RF compartment fully shielded to keep RF from leaking out,

### New LED Meters!



An inside look at the AMERITRON AL-1500 keeping RFI and TVI to a minimum.

**Superb** RF design and layout, Hi-Q tank circuit and commercially rated RF power components give you 65% plate efficiency over the entire operating range. Power goes into the antenna instead of into heat.

**50-ohm** broadband Pi-Network tuned input with slug-tuned coils is used. Even fussy solid state transmitters deliver full power!

A carefully designed Pi/Pi-L output network using the optimum Q for each band with vernier ball drives gives smooth tuning, wide matching range, full band coverage, and peak performance at all power levels.

The AL-1500's grid overload circuit pro-

tections the tube from excessive grid current; if 175 mA of peak grid current is reached, the "OPR" LED will no longer light and the amplifier will go into a bypass condition until reset by the operator.

### Transformer provides many options

Since excessive line voltage stresses components (low line voltage causes a "soft tube" effect, for example), Ameritron's exclusive Multi-Voltage Power Transformer<sup>™</sup> lets you optimize for different line voltages. Select from 4 different primary voltage ranges, from 205-219 VAC to 252 to 265 VAC. The amplifier comes wired from the factory for 240 VAC.

The AL-1500 has two illuminated panel meters. Grid Current meter provides continuous reading of the critical grid current and indicates proper, safe amplifier operation.

The other meter can be selected to read Plate Voltage, Plate Current, Peak RF Watts, or ALC. A SSB/CW selector switch chooses bias voltage for best linearity on SSB or lowest dissipation on CW.

The Operate/Standby switch, in Standby, maintains the tube's filament and plate voltages while allowing "barefoot" operation.

Includes 12 volt DC auxiliary jack and an "XMT" LED to provide indication of proper amplifier keying by the exciter. **Power required:** 240 VAC, 15 amps.

**Frequency coverage:** 1.8, 3.5, 7, 14, 21 MHz & Warc bands. User-modifiable for 28 MHz (FCC license required). **Size:** 18 1/2 D x 17 W x 10 H". 77 pounds. UPS shippable, 3 boxes.



### Hypersil<sup>®</sup> Transformer weighs 32 lbs.

### Slug Core Tuning Tool 965-6204,

**\$3.00.** Plastic tuning stick for adjusting slug cores. .1 inch hex end, 7/4 inches long. Fits Ameritron tube amplifier input coils.



## Ameritron's 3CX1200Z7 Amplifier      Ameritron's Dual 3-500G Amplifier



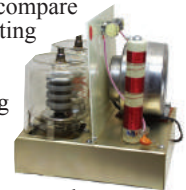
Ham Radio's toughest tube -- the Eimac<sup>®</sup> 3CX1200Z7 is in ham radio's toughest amplifier! It has a 50-Watt control grid dissipation. It also has the same super heavy duty power supply that's in our AL-1500 amplifier that

AL-1200 loafs at full power. A **\$4195** Suggested Retail 3CX1200Z7 has the lowest quantity history of field replacement of any modern transmitting tube that we use. It has the ruggedness and power handling of ceramic tubes combined with the long-life of thoriated tungsten filaments.



This classic linear gives you full legal output using a pair of 3-500G graphite tubes. Examine the features and component ratings of the AL-82 and compare it to any competing amplifier using two 3-500Gs.

AL-82 Most competing amplifiers using 3-500Gs can't give you 1500 Watts because their lightweight power supplies can't use these tubes to their full potential. Our AL-82 amplifier uses the same *Hypersil*<sup>®</sup> power transformer and used in the AL-1500 and AL-1200 amplifiers -- *powerful stuff, just loafs at full power!*



### Rig Output Power Control



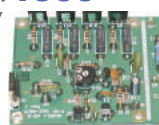
Use for transceivers without output power control to drive an amplifier or tune an antenna tuner. Avoid over-driving your amplifiers and tuners. Use with any transceiver/amplifier combination with external ALC. Front panel transmit power and ALC control, in/out phone jacks for CW, Amp Key, ALC. 110 VAC. 5/4 W x 2 1/4 H x 3 1/2 in.

100

### Add-on Electronic Bias for AL-82/1200/1500

EBS-1 PC board reduces heat by reducing quiescent current to low values during periods when exciter output falls below 100 mW. Remote detector board for Ameritron amplifiers.

EBS-1H, \$49.95, for other brand amplifiers. Call 662-323-8211 for more details.



EBS-1 **\$39.95** Suggested Retail

### GOP-100 Grid Overload Protection Module - \$39.95

Grid Overload Protection module protects your amp's tube from excessive grid current. Fast-acting electronic circuit rapidly disables the amp if excessive grid current condition occurs. Easy to install in your Ameritron amp. Factory installation available, 662-323-8211 for details.



# Ameritron 1200W Output Solid State Amplifier

1200 Watts PEP Output, Instant bandswitching, no tuning, no warm-up, SWR protected, 1.5-22 MHz... Quiet Variable-Speed Cooling System... PEP Forward/Reflected Metering... PA Balance /ALC Metering and LED Indicator... Front Panel Band and Error LEDs...



ALS-1300  
**\$2899**

Suggested Retail

Call Your Dealer for Your Best Price!

**AMERITRON ALS-1300 is a solid state near legal limit™ FET no-tune Amplifier. Get instant bandswitching, no tuning, no warm-up, no tubes to baby and no fuss!**

Reliability of the ALS-1300 is insured by using eight rugged MRF-150 power FETs. Ameritron's eight FETs are mounted on the dual heavy duty heat sink. They are properly arranged to spread out the heat over a large surface, something that other amplifiers using a single power device cannot do. Some FETs actually are a package of several transistors in one large case. This concentrates all of the heat in one small package. They not only are more difficult to cool, if one transistor fails they all have to be replaced.

The ALS-1300 RF deck operates at 50 Volts for efficient, low distortion linear RF power service. It's cooled by a whisper quiet cooling fan. Fan speed is regulated by temperature sensors, assuring minimum noise for adequate cooling.

ALS-1300 runs up to 1200 Watts of clean SSB output power (just 100 Watts drive gives you the full rated 1200 Watts output) for continuous coverage between 1.5-22 MHz. 10/12 Meters available to licensed amateurs with an optional kit (MOD-10MK, \$39.95). Must present FCC license at time of sale.

The operator-friendly layout fits nearly any station configuration. The attractive desktop amplifier unit weighs only 22 pounds. Compact 10Wx 6½Hx18D inches.

SWR Protection prevents amplifier damage if you switch to the wrong band, use the wrong antenna or have a high SWR. Over-power protection enables if output forward power or reflected power exceeds a safe level.

Output power is automatically reduced to prevent amplifier damage by controlling ALC to exciter.

LED illuminated Cross-Needle SWR/Wattmeter lets you read SWR, forward and reflected peak power simultaneously. You also get ALC, SWR, PA balance and current metering with LED backlight. An Operate/Standby switch lets you run "barefoot", but you can instantly switch to full power if needed.

Front-panel ALC control! This exclusive Ameritron feature lets you adjust output power on the convenient front panel display.

You also get front panel Operation, Band,

and error LED indicators like reflected power and bandswitch errors.

Enjoy 1200 Watts of no tune Solid State power with the Ameritron ALS-1300 amp.

### ALS-1300 Power Supply



The ALS-1300 is powered by a 50 VDC switching power supply. Comes with pre-wired cable to plug into the ALS-1300. This hash-free fully-regulated switching

power supply is only 12 lbs. and measures a compact 10Wx6½Hx9½D in. It can be placed conveniently out-of-the-way at your operating station. Output is 50 VDC at 50 Amps to the ALS-1300. Wired for 220 VAC, selectable to 110 VAC. Draws less than 25 Amps at 110 VAC; 12A at 220 VAC.

**HF+6M 1200W Solid State Amplifier**

New!

ALS-1306  
**\$3299**  
Suggested Retail

- 1200 Watts PEP on HF + 6M
- Built-in Automatic Band Switching
- Built-in 10/12 Meters

See Page 95 for more details.

## Let your rig auto bandswitch your Solid-State Ameritron Amps

Ameritron's ARI-500 Amplifier Radio Interface reads band data from your Icom, Yaesu, Kenwood, Elecraft or Alinco rig so you can remotely and automatically band switch your Ameritron Solid State Amps (ALS-500M/ALS-600/ALS-1300).

Now you can mount your amp out-of-the-way in your trunk, at the back of your motorhome or elsewhere and operate with just this tiny box at your station control.

Works with ALS-500M amplifiers with serial numbers above 13049 (below 13049



ARI-500  
**\$119.95**  
Suggested Retail

requires the ARF-500K.

Works with ALS-1300, ALS-600, ALS-600S amplifiers and older ALS-600 and ALS-600S amplifiers with the remote A/B jacks on the front panel.

| ARI-500 Cables . . . \$24.95 |                               |
|------------------------------|-------------------------------|
| Model #                      | Transceiver                   |
| RJ-13D                       | Icom 706, 7000, 718           |
| RJ-7DI                       | Icom ACC2, 7 pin              |
| RJ-DB97DK                    | Kenwood w/RS232 except TS-480 |
| RJ-DB8MK                     | Ken TS480 and compatibles     |
| RJ-DB9Y                      | FT-847 CAT                    |
| RJ-8MY                       | FT-847 Tuner Port             |
| RJ-8MY2                      | FT-857D, 897D, FT-1000MP      |
| RJ-10MY                      | Yaesu FT-450/950/1200         |
| RJ-8DY                       | Yaesu with 8 pin Data         |
| RJ-DB15Y                     | Yaesu FT-DX3000               |
| RJ-DB15HE                    | Elecraft (BCD)                |

## Precision HF+6 Meter peak-reading SWR Wattmeters

### Flat Mount Mobile SWR/Wattmeter



AWM-35B/BH Just 1½" thick - easily mounts on your dashboard for easy viewing. Flat mount on wall or shelf in your ham shack for best viewing angle. Remote sensor with 25 feet thin, flexible cable lets you place sensor and coax out-of-the-way. Handles full 1500 Watts, 1.8-60 MHz. LED lighted Cross-Needle meter. Active electronics lets you read true peak or average power in two power ranges. Has "High SWR" LED. Flat-Mount watt-meter measures 5Wx3¼H x1½D"; remote sensor is tiny 3½Wx2¼H x2¼D". Use 9V battery or 12 VDC.

AWM-35B has 300 Watt low, 3 kW high meter scale.  
AWM-35BH has 100W low, 1000W high meter scale.

### Base Station 1500 Watt SWR/Wattmeter

We painstakingly designed the AWM-30B to make accurate, precise power measurements.

Designed-in-accuracy is the result of a carefully designed directional coupler, an accurate active peak reading circuit and a precision d'Arsonval meter movement. Ameritron's AWM-30B reads true-peak or average power on a large LED lighted three inch Cross-Needle meter. Handles 1500 Watts, 1.8 to 60 MHz. Has 3000/300 Watt ranges. Reads forward and reflected power and SWR on highly visible dual cross-needle meter movement.

Remote sensor with cable lets you conveniently place sensor. Battery saver turns unit off with no RF applied. Uses 12 VDC or 9 volt battery (not included). Beautiful wrap-around custom metal cabinet looks great in your shack. Compact 4½Wx4½Hx5½D in.

AWM-30B  
**\$149.95**  
Suggested Retail



# AMERITRON *no tune* Solid State FET Amplifier

*No tuning, no fuss, no worries -- just turn on and operate . . . Incredibly low \$2075 includes AC power supply, 600 Watts output, continuous 1.5-22 MHz coverage, instant bandswitching, no warm-up, no tubes to baby, fully SWR protected, extremely quiet, very compact . . .*



• Made in U.S.A.

ALS-600  
**\$2075**

Suggested Retail  
(Includes AC Power Supply, ALS-600PS)

ALS-600S  
**\$1975**

Suggested Retail  
(Includes Switching Power Supply, ALS-600SPS)

AMERITRON's revolutionary ALS-600 and ALS-600S are amateur radio's *only* linear amplifiers that use four rugged TMOS RF power FETs -- gives unequaled no tune

solid state performance. **ALS-600, \$2075**, includes a linear 120/220 VAC, 50/60 Hz AC power supply for home operation.

**ALS-600S, \$1975**, includes a 120/220 VAC portable switching power supply, just ten pounds.

You get instant bandswitching, no tuning, no warm-up, no fuss! ALS-600 gives 600 Watts PEP Output power and 500 Watts CW with continuous coverage 1.5 to 22 MHz; 10/12 Meters with easy-to-install optional kit, \$29.95 plus shipping. Must present FCC license at time of sale.

SWR Protection prevents amplifier damage if you switch to the wrong band, use the wrong antenna or have a high SWR. Over-power protection enables if output forward power or reflected power exceeds a safe level. Output power is automatically reduced to prevent amplifier damage by controlling ALC to exciter.

The ALS-600 is extremely quiet. A low speed, low volume fan is so quiet you'll hardly know it's there, unlike noisy blowers used in other amplifiers. ALS-600 is a compact 9½"Wx6½"Hx12D inches -- takes up less space than your rig! Weighs just 12½ lbs.

An LED illuminated Cross-Needle SWR/Wattmeter lets you read SWR, forward and reflected *peak* power simultaneously. An Operate/Standby switch lets you run "barefoot", but you can instantly switch to full power if you need it.

You get a front-panel ALC control! This *exclusive* AMERITRON feature lets you adjust your output power on the convenient front panel display. You also get front panel Transmit, ALC, and SWR LED indicators. A 12 VDC output jack lets you power low current accessories. Enjoy 600 Watts of no tune Solid State power. Call your favorite dealer for your best price.

But it gets even better than this! Do you want to place even the main ALS-600 amplifier out of the way? Do you want the ALS-

**New ALS-606 on the front page of this catalog!**

600 to change bands automatically when you change bands on your transceiver? You now have these options. A pair of RJ45 remote control interface jacks on the amplifier permits ALS-600 to be controlled either manually by the compact ALS-500RC Remote Control Head, or automatically by the ARI-500 Automatic Band Switch. The Automatic Band Switch reads band data from your transceiver and automatically changes the ALS-600 bands as you change bands on your transceiver. See more details on page 99.

**Heavy Duty Linear Power Supply (included with ALS-600) features:** • Massive choke input filter greatly improves voltage regulation and reduces peak AC line current • AMERITRON's *exclusive Multi-Voltage Power Transformer* lets you compensate for stressful high line voltage and performance robbing low line voltage • *Step-Start Inrush Protection™* stops damaging inrush currents and extends the life of your power supply components • Illuminated Cross-Needle Meter monitors voltage and current of 50 VDC line. • Extremely quiet fan • Very compact 9½"Wx6½"Hx12D inches -- can be placed conveniently out of the way • Wired for 120 VAC, supplies 50 VDC at 25 Amps to ALS-600 amplifier • Also use on 100-130 VAC and 220-250 VAC, 50/60 Hz • Draws less than 12 Amps at 100 VAC and less than 6 Amps at 230 VAC • Includes prewired cable to plug into ALS-600 amplifier. Purchase **ALS-600PS** separately for **\$599.95**.

**Switching Power Supply (included with ALS-600S)** works with all ALS-600 amplifiers. Extremely lightweight, just 10 lbs. Superb regulation, very low radiated noise. Measures a compact 9"Wx6"Hx14½"D inches. Great for portability! Purchase **ALS-600SPS** separately for **\$699.95**.



**Just don't take it from us . . . here's what "they" say about our solid state base station amplifier:**

" . . . the amplifier faulted only when it was supposed to. It protected itself from our boneheaded, sleep-deprived band changing maneuvers . . ."  
 "I found myself not worrying about damaging this amplifier. It seems quite capable of looking out for itself. . . Kudos to Ameritron."  
 "I couldn't hear any noise at all from the SPS (*switching power supply*) on the vertical or quad . . ."  
 "I came to greatly appreciate the size, weight, reliability and simplicity of this amplifier."  
 "The ALS-600S makes it possible to pack a transceiver and a 600 Watt amplifier, that together weigh less than 30 pounds." QST, 2005.

## AMERITRON Inrush Current Protector stops damaging inrush current



ICP-120 or ICP-240  
**\$79.95**  
Suggested Retail  
When you first turn on your amplifier, a massive inrush current gushes in. House lights flicker as you hear a loud "thump" from your amp. This terrible inrush current stresses all your power supply components to their limits. Your cold tube filament suffers abusive thermal shock.

**Protects your amplifier, tubes and power supply components . . .**

Eventually, this massive inrush current will damage your amplifier.

Ameritron's *Step-Start Inrush Current Protector™* stops damaging inrush current. Momentary high-voltage "spikes" in the AC line can also cause damage to your amp. The ICP-120/240 has built-in varistors to absorb these spikes before they can cause damage. Works with nearly all linear amplifiers.

By starting your linear amplifier through a high power current limiting resistor and then

shorting the resistor with a relay, the start-up sequence is easier on tube and power supply components. All Ameritron kilowatt amplifiers have this critical protection -- now you can add this protection to your amp without complicated wiring -- you don't even have to remove the cover!

**Ameritron ICP-120, \$79.95** for 120 Volt wired amplifiers. Limits current to 12 Amperes during heavy draw inrush period, 20 Amperes during continuous operating current.

**ICP-240, \$79.95** for 240 Volt wired amps.

## Get power of 2 amplifiers with Ameritron's Splitter/Combiner!



**New!** Use the ASP-200 and ACB-1000 together and get a combined output power of 2 amplifiers! **ASP-200** splits your radio's output into two outputs to drive two amplifiers of equal power.

amplifiers for a *combined amplifier output power* and still maintains the 50 Ohm output for your antenna.

**Amps** of equal power like two ALS-500M or two ALS-600 can be used.

**ASP-200, \$69.95.** Handles radio power to 200 W. SO-239. 4Wx1½"Hx2¾"D"

**ACB-1000, \$149.95.** Handles *combined* power to 1.5 kW. SO-239s. 6Wx3x4D".

## ARF-1000 RF Filter reduces harmonics

Use with rigs or amps that are producing unwanted harmonics. Frequency select switches to one of six different ranges from 1.5 to 30 MHz. Handles 1000 W SSB input power, 600 W CW or 400 W RTTY. SWR is less than 1.3:1 on all ham bands. SO-239 connectors. 5½"Wx3½"Hx9¼"D in.



**ARF-1000**  
**\$159.95**  
Suggested Retail

# AMERITRON mobile *no tune* Solid State Amp

500 Watts, Instant bandswitching, no tuning, no warm-up, SWR protected, 1.5-22 MHz . . .  
 ARI-500 Amplifier Radio Interface reads transceiver band data -- automatically bandswitches ALS-500M amp . . . ALS-500RC Remote Head gives total remote control!



**ALS-500M**  
**\$949**  
 Suggested Retail

Just turn on and operate -- no warm-up, no tuning, instant bandswitching. Compact. Ameritron's ALS-500M solid state mobile amp gives you 500 Watts PEP SSB or 400 Watts CW output! Covers 1.5-22 MHz, (10/12 Meters with MOD-10M, \$29.95 kit, requires FCC license). Mail with order to Ameritron.

Virtually indestructible! Load Fault Protection eliminates amplifier damage due to operator error, antenna hitting tree branches, 18-wheeler passing by. Thermal Overload Protection disables/bypasses amp if temperature is excessively high. Auto resets. Typically 60-70 watts in gives full output. ON/OFF switch

bypasses amplifier for "barefoot" operation. Extremely quiet fan comes on as needed. Excellent harmonic suppression, push-pull output, DC current meter. 13.8 VDC/80 Amps. Super-compact 3 1/2x9x15 inches. 7 pounds.

**ALS-500M, \$949**, 500 Watt mobile amp.  
**ALS-500MR, \$979**, ALS-500M mobile amp plus ALS-500RC Remote Head for full manual remote control.

**ARF-500K, \$179.95**, Remote kit for older ALS- 500M mobile amps with serial # below 13049. Includes filter/relay board for ALS-500M, AL-500RC Remote Head, cables, hardware, instructions.

**ARF-500K2, \$289.95**. Includes ARF-500K Remote kit for older ALS-500Ms plus ARI-500 Amplifier Radio Interface below.

**New ARI-500, \$119.95**, Amplifier Radio Interface reads band data from your transceiver so you can automatically bandswitch your ALS-500M amplifier. See below left.

Choose ARI-500 for fully automatic bandswitching or ALS-500RC for manual remote control.



**ALS-500RC, \$49.95**, Remote Head lets you place your ALS-500M or ALS-600 amplifier out-of-the-way and gives you full manual remote control. Select desired band, turn on/standby and monitor current draw on its DC Current Meter. Power, transmit and overload LEDs. RJ-45 cables plug into Amplifier/ Remote Head. Works with serial numbers above 13049 (below 13049 requires the ARF-500K, above). Compact 4Wx2 1/4Hx1D inches.



## Let your rig auto bandswitch your Solid-State Ameritron Amps

Ameritron's ARI-500 Amplifier Radio Interface reads band data from your Icom, Yaesu, Kenwood, Elecraft or Alinco rig so you can remotely and automatically bandswitch your Ameritron Solid State Amps (ALS-500M/ALS-600/S/ALS-1300).

Now you can mount your amp out-of-the-way in your trunk, at the back of your motorhome or elsewhere and operate with just this tiny box at your station control.

Works with ALS-500M serial numbers above 13049 (below 13049 requires the ARF-500K, see above).

Works with all current ALS-600 and



**ARI-500**  
**\$119.95**  
 Suggested Retail

ALS-600S amplifiers and older ALS-600 and ALS-600S amplifiers with the remote A/B jacks on the front panel.

Works with all ALS-1300 amplifiers.

### ARI-500 Cables . . . \$24.95

| Model #   | Transceiver                |
|-----------|----------------------------|
| RJ-13D    | Icom 706, 7000, 718        |
| RJ-7DI    | Icom ACC2, 7 pin           |
| RJ-DB97DK | Kenwood RS232 except TS480 |
| RJ-DB98MK | Kenwood TS480, compatibles |
| RJ-DB9Y   | FT-847 CAT                 |
| RJ-8MY    | FT-847 Tuner Port          |
| RJ-8MY2   | FT-857D, 897D, FT-1000MP   |
| RJ-10MY   | Yaesu FT-450/950/1200      |
| RJ-8DY    | Yaesu with 8 pin Data      |
| RJ-DB15Y  | Yaesu FT DX3000            |
| RJ-DB15HE | Elecraft (BCD)             |

## Base Operation Power Supply for your ALS-500M Amplifier



**SPS-75MV**  
**\$259.95**  
 Suggested Retail

Has Anderson PowerPoles™

**AMERITRON's Exclusive HashFilters™**  
 Filtering System eliminates RF hash that plagues other manufacturer's switching power supplies.

switching power supplies.

**Fully protected** -- your SPS-75MV has Short-Circuit, Over-load and Over-Temperature protection systems. Also has an auto restart after a fault. Has power on and Fault LED indicators.

You get front panel adjustable voltage from 4.0 to 16 VDC. Front-panel meters with backlight let you monitor voltage and current simultaneously.

Attractive front panel features several options for connecting your gear: One pair of 5-way binding posts, two pair of Anderson PowerPoles™ one pair of high-current 5-way binding posts, a cigarette socket for mobile accessories, and two pairs of quick connects. Whisper quiet fan speed increases as load current increases -- keeps components cool and protected.

An automatic battery charging feature provides charging current of 20 Amps maximum, 5 Amps continuous, and 30 mA trickle charge.



Measures 9 3/4Wx5 1/2Hx9 1/2D inches. Weighs just 10.5 lbs., so it's still light enough to carry on DXpeditions, camping trips and vacations. No more hauling around big, bulky conventional power supplies that can give you a hernia!

Ameritron's heavy duty 75 Amp switching power supply is excellent for powering your HF mobile amplifier or your HF and VHF/UHF rigs and accessories.

It's great for Ameritron's ALS-500M Solid State Mobile HF Amplifier and others with a power requirement of up to 75 Amps.

SPS-75MV delivers 75 amps maximum and 70 amps continuously without even flexing its muscles. Input voltage selectable for 110 VAC or 220 VAC.

It's highly regulated with load regulation better than 1%. Ripple voltage is less than 12 mV peak-to-peak at rated load.

No RF hash! Ameritron's exclusive HashFilters™ Filtering System eliminates RF hash that plagues other manufacturer's

# AMERITRON Amplifier-to-Transceiver Interface

Protects expensive radio from damage by keying line transients and steady state current and voltages

ARB-704 will work with most any transceiver without need of the plug-and-play pre-wired cable.

The ARB-704 advanced interface is compatible with all common radios and amplifiers even though radios and amplifiers do not have standardized voltages, accessory plugs, or wiring. It's designed to work with any amplifier/radio combination.

The input is designed to be compatible with any transmitter or transceiver, and the output is compatible with AC control lines or DC positive or negative amplifier control lines having up to 200 Volts peak open circuit voltage and 300 mA of operating current.

### Why you need the ARB-704

Amplifiers can damage radios if the amplifier has too much relay control voltage, voltage spikes, or excessive current on the relay control line. Such damage often appears as "stuck" or "sticky" transmit relays in exciters or shorted transistors on transmit control lines. In most cases where the radio is damaged, the system transmits normally but the external amplifier stays locked in a "transmit" mode. This pre-



ARB-704 INTERFACE BUFFER  
**\$59<sup>95</sup>**

ARB-704I2 for IC-706 series radios (Includes PNP-13D)

vents receive signals from coming through the amplifier with normal levels whenever amplifier is in "ON"/"OPERATE" position.

The ARB-704 has many electrical advantages over conventional relay buffer systems. The ARB-704 has no moving parts, switches almost instantaneously. It is noiseless, has very long life, and will not develop dirty contacts. It operates with negative, AC, or positive amplifier relay control lines.

It works with any relay voltage (AC, positive, or negative) up to 200 peak volts and any relay current up to 300 mA. The ARB-704 is fully compatible with conventional amplifier relay systems. It is especially suited for buffering vacuum relay QSK amplifiers, since the ARB-704 does not affect attack or release times in a deleterious manner.

The ARB-704 operates with transmitters or transceivers that pull amplifier control lines to

ground, or output a wide range of positive or negative control voltages. The transmitter only switches currents under 0.35 milliamperes and very low voltages when using the ARB-704. Measures a super compact 4 1/4"Wx1 3/4"Hx2 3/4"D".

### PLUG-AND-PLAY CABLES

Cables are \$17.95 each.

ARB-704 is supplied with the following: One power connector cord and plug with red wire (+12 Volts) and black wire (neg. and ground).

Three phono (RCA) cords with connectors on each end are also supplied for relay, ALC and amplifier control lines.

| Model#    | Transceivers  |
|-----------|---|
| PNP-8D    | FT-1000/2000,(MP), 767GX,920,990,747GX  |
| PNP-8M    | FT-890, 840, 817, 857, 897, 900   |
| PNP-35    | FT-100, (D) [A plug-and-play cable is not needed if your radio is not listed.]          |
| PNP-5M    | FT-847  |
| PNP-10MY  | FT-450/950/1200   |
| PNP-DB15Y | FTDX-3000   |
| PNP-5D    | FT-980  |
| PNP-7D    | TS-440, 690, 450, 180, 140, 950, 130, 870, 2000, 120, 530, 430, 830, 850, 940, 570, 990 |
| PNP-7DK   | TS-930 (serial numbers lower than 309)  |
| PNP-8MK   | TS-480  |
| PNP-8DI   | ICOM ACC JACK   |
| PNP-7DI   | ICOM ACC 2 JACK   |
| PNP-13D   | All models of the IC-706 series, 718, 7000  |
| PNP-8DT   | TENTEC 599 Eagle  |

## AMERITRON QSK-5 High Power High Speed Transmit/Receive Switch

This self-contained AMERITRON QSK-5 Transmit/Receive Switch uses electronic PIN diode switching to give you lightning fast QSK operation from nearly any HF linear amplifier.

QSK-5  
**\$399<sup>95</sup>**  
Suggested Retail

It lets you use your linear amplifier for high power QSK CW, for packet, AMTOR and any mode requiring extremely fast switching between transmit and receive.

Installation is simple. Just plug in a few cables to start enjoying QSK -- there's no complicated internal wiring.

The world's most advanced QSK switch has new technology that'll make your amplifier last longer and prevent TVI, RFI and key clicks.

AMERITRON's exclusive AmpSaver™ (available in QSK-5PC) completely turns off your power amplifier tube current between dots, dashes and words! This new QSK technology gets rid of unwanted power dissipation that causes damaging heat. Your expensive amplifier



runs cooler so every component in your amplifier lasts longer.

Our exclusive SureSwitch™ handshaking prevents "hot switching" RF power. Prevents TVI, RFI, key clicks and possible damage to your amp.

The QSK-5 is six times faster than a typical mechanical vacuum relay "QSK" switch that can just barely keep up with QSK transceivers. As radios get faster and better, mechanical switching just won't be able to switch fast enough. Unlike

noisy mechanical vacuum relays, the QSK-5 is extremely quiet -- there's no relay chatter keeping you from enjoying QSK.

You won't have to pay for QSK again if you buy another amplifier. Unplug the QSK-5 and use it with your new amp.

Handles 2500 Watts PEP and 2000 Watts CW in normal amateur service when SWR is below 1.5:1. Handles 750 Watts on continuous carrier modes such as RTTY, SSTV, and FM. Optional cooling fan (CF-5, \$39.95) allows sustained operation at 1500 Watts in any mode. Use with positive voltage keying up to +25 Volts. 6Dx4Hx9 1/2W".

Internal QSK Available for the following AMERITRON models: AL-80B, AL-1500, AL-1200, AL-82, AL-800, and AL-800H.

Contact Ameritron for installation details on the QSK-5PC internal switch.

## Tune-up your linear amplifier perfectly! No overheating, tube damage, power supply stress, arc over



ATP-102  
**\$79<sup>95</sup>**  
Suggested Retail  
The ATP-102 Amplifier

Saver™ lets you safely tune up your linear amplifier perfectly for full power output and best linearity. This deluxe version tuning pulser has Duty Cycle and Pulse Rate Controls on its front panel for easy performance testing of Wattmeters, QSK systems, and other equipment.

It protects your expensive amplifier from overheating, tube damage, power supply stress and arc-over during tune-up. It prevents premature failure and costly component replacements.

AMERITRON's innovative pulse tuning technology lets you tune your amplifier at full peak output power for best linearity. It keeps average power to a low safe level to prevent overheating and power supply stress.

"Why can't I just tune up at low power to reduce overheating and component stress?" you ask yourself. Well you can . . . but if you don't

re-tune at high power (which causes overheating) you can create severe splatter and abuse your tube grids because of excessive grid current.

If your linear uses tubes that are easily damaged by normal tune-up, the ATP-100 could extend tube life.

"Sniff-out" RFI or TVI caused by rusty guy wires, rain gutters, clotheslines and others by generating full peak power without amp damage. Also use to test wattmeters and QSK systems.

Set and forget internal trimpots let you tailor duty cycle and pulse rate precisely for your rig and amplifier. Plugs into your rig CW key jack. Simply press Pulse Tune button and tune your amplifier normally for maximum power output.

Locking Pulse Tune and momentary Carrier Tune buttons. Fully shielded all metal case. 3 1/4"Wx1 1/4"Hx4D inches. Uses 9 Volt battery.

### Amplifier Tuning Pulser

ATP-100, \$69.95. Like ATP-102 but less Duty Cycle and Pulse Rate Controls on front panel.



## Ameritron TRP-150 Transceiver Front-end Protector

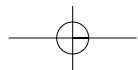


TRP-150  
**\$59<sup>95</sup>**  
Suggested Retail

TRP-150 protects your receiver front-end from high level RF signals. Use this

for added safety when operating in a multi-station contest environment and when another station is nearby. Close proximity of a high power transmitter on one antenna can result in a potentially damaging RF signal being applied to a receiver on a nearby antenna. If both transmitters are on the same band, the filter on the receiver won't help and receiver damage can occur. Connecting between transceiver and antenna, TRP-150 protects the rig during receiving and automatically bypasses it during transmitting. SO-239 for RF In/Out and phono jacks for radio and amp keys. Requires 12VDC for power. Tiny 2 1/4"Wx2 1/2"Hx1 1/4"D inches.





## AMERITRON HF Mobile "Screwdriver" Antenna

1.2 kW... 3.5-30 MHz continuous ...1.5:1 VSWR...more!



SDA-100  
**\$489<sup>95</sup>**  
Ship Code D

AMERITRON's SDA-100 is the best built, best looking, best performing HF mobile screwdriver antenna in the world! Properly installed on your vehicle this antenna covers 80-10 Meters with a 6 foot whip. Remove the whip for 40-6 Meters.

What makes our antennas stand above all the rest is that our CNC machined components are from aircraft aluminum or stainless steel and blueprinted, meaning you can take the antennas apart and mix them up, then reassemble and they work the same.

Our fiberglass coil form is approximately 2 inches in diameter. Other antenna builders know fiberglass is better but they choose not to use it because of the expense and difficulty in machining. We use 14 gauge wire for high power capability, wound at eight turns an inch for maximum efficiency. We machine groove our coils so they will not loosen up or jam -- they won't wear out, for years of trouble free service!

New Lexan cover is super durable and protects your Ameritron screwdriver for years of trouble-free service.

The decoupler we use is CNC machined for tight tolerances with custom finger-stock designed to contact 3 turns of coil all the time with over 25 pounds of combined contact pressure. With this design you can run up to 1.2 kilowatts PEP, trouble free. It's so superior to anything else on the market that we put our outstanding AMERITRON warranty behind it.

We use a new heavy duty Pittman commercial 12 volt gear motor, which is very durable and quiet while receive tuning. This motor is super heavy duty for years of trouble-free service. Antennas come with sensors already installed so if you add an auto controller, everything is ready.

**The AMERITRON SDA-100 includes:**

Up/Down switch; 5 feet of motor DC cable with detachable weather sealed connector; decoupling toroid matching coils. SDA-100 comes in a handsome black, using Dupont Basecoat/Clearcoat system.

**Optional accessories:**

**SDM-100, \$99.95.**

Stainless steel flange mount base bracket, with multiple pre-punched holes. The SDA-100 mounting rod is a 1-in. pipe thread 14-inches long. Ship Code B.

**SWP-100, \$24.95.**

6-ft stainless steel whip.

**SMC-100, \$4.95.**

Shunt matching coil with solder lugs.

For use at base of mobile/screwdriver antennas with high SWR.

**Combination Prices**

**SDA-110, \$599.95.**

Combination SDA-100 mobile screwdriver antenna, SDC-100B auto-controller, and SWP-100 whip.

**SDA-112, \$629.95.** Combination of SDA-100, SDC-102 and SWP-100.

## Truly Automatic Ameritron Screwdriver Controller

**SDC-105**

works with all rigs 160-60 Meters! No interface cables needed! RF sensor reads frequency data and moves antenna to the nearest programmed setting. Save 8 settings per band.

Tune command will tune antenna automatically to lowest VSWR. LCD display reads frequency, VSWR, turns count and motor operating current. Manual up/down buttons can be used for fine tuning.

2-speed motor control: high speed for quick adjustments, low speed for fine tuning. Home mode allows hands-free lowering of antenna in low overhangs. Adjustable current limit prevents motor damage or stall-outs.

Meter port allows use with AWM-35B/H SWR/Wattmeter. 3 1/2"Wx3 1/4"Hx1 1/4"D". Has 4-pin molex plug to match most screwdrivers.

## Programmable 10-Memory Screwdriver Controller

SDC-102 lets you save 10 screwdriver antenna positions in memory.

With a push of a button, quickly return to any saved position. Up/Down buttons manually move the antenna to desired position. 4-digit turns counter, bright LEDs give precise position. 3 1/2"Wx3 1/4"Hx1 1/4"D".

## Automatic Screwdriver Antenna Controller: Icom/Kenwood/Yaesu

Perfect for rigs equipped with a CI-V interface. Receives rig frequency data and will auto-

SDC-104 K.I.Y. automatically tune your screwdriver antenna. Includes rig interface cable. 3 1/2"Wx3 1/4"Hx1 1/4"D inches.

SDC-104 K.I.Y. automatically tune your screwdriver antenna. Includes rig interface cable. 3 1/2"Wx3 1/4"Hx1 1/4"D inches.

## SDC-104 Rig Interface Cables

No need to get a new SDC-104 controller because you buy a different transceiver, additional rig interface cables are available.

**RJ-DB9KY, \$24.95.** For Kenwood and Yaesu rigs with DB9 Serial port COM port.

**RJ-8MY2, \$24.95.** For Yaesu with 8 pin mini DIN, CAT/Linear port.

**RJ-CB-35, \$4.95.** For all Icom rigs with a 3.5 mm Remote port.

## Digital Screwdriver Controller

4-digit super bright LEDs tell exactly where your antenna is positioned! Re-tune exactly -- fast, no guessing. Digital count range -999 to +999. On/ off/ reset switch for easy calibration. 4Wx1 1/2"H x2D". Use 13.8VDC.

**SRS-100, \$29.95.**

Magnetic sensor kit for High Sierra to use SDC-100/102/104. Not compatible with Sidekick™.

**SRS-1001, \$9.95.** Magnetic sensor kit for Hi-Q antennas to use SDC-100/102/104.



SDC-105  
**\$229<sup>95</sup>**  
Ship Code A



SDC-102  
**\$139<sup>95</sup>**  
Ship Code A



SDC-104 K.I.Y.  
**\$169<sup>95</sup>**  
Ship Code A



SDC-100B  
**\$109<sup>95</sup>**  
Ship Code A



## Ameritron Mobile Installation Accessories

**ALS-500M DC Power Wire Harness**

**MIA-6, \$69.95.** Get an extra DC power harness for your ALS-500M amplifier. Saves you from the hassle of moving your amp cable assembly. Fully assembled 8 foot cable, fuse holders and fuses included.

**In-Line Fuse Holder/Distribution Block**

**MIA-1, \$6.95.** AGU in-line fuse holder; heavy duty, waterproof, handles to 80A, 4-10 gauge wire, built-in mounting bracket.

**MIA-2, \$14.95.** AGU in-line fused power distribution block; 1 input for 4 gauge wire, 2 outputs for up to 8-gauge wire, plastic cover with mounting ears.

**MIA-3, \$59.95.** 12 VDC Bosch relay. Turns amplifier high current DC supply line ON/OFF remotely with vehicle ignition switch. SPST, heavy duty dual contacts. Handles 75 Amps.

**Remote Power ON/OFF for Amplifier**

**MIA-3, \$59.95.** 12 VDC Bosch relay. Turns amplifier high current DC supply line ON/OFF remotely with vehicle ignition switch. SPST, heavy duty dual contacts. Handles 75 Amps.

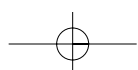
**Battery Post Break-out Block**

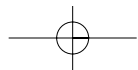
**MIA-4, \$14.95.** Don't damage your amp because of poor battery connections. Replace old clamps with this gold metal battery break-out block. Has 4 AWG terminal for your auto battery and two 8 AWG connections for your amplifier.

**Braided Ground Strips**

**MIA-5, \$9.95.** Makes solid grounding for your mobile radio or screwdriver antenna installation. Made from ultra-fine tinned copper braid. Extremely flexible. 7/8-inch width, 13" long. 3/8" holes on each end.

AMERITRON . . . the World's High Power Leader!





**AL-80B Specifications:**  
**Input:** Circuit type: Pi-network, slug tuned coils. Maximum VSWR at resonance: 1.3:1 or less. Minimum 2:1 VSWR bandwidth: 20% of center frequency. Max. drive power permissible: 100 Watts. Typical drive for full power output: 85 W.  
**Output:** Typical SSB PEP voice operation: 1000 Watts. Typical CW operation: 800W 1/2 hour PEP two tone test: 800 Watts.  
**1/2 hour continuous carrier (RTTY):** 500 Watts.  
**Power Supply:** Circuit type: Full wave voltage doubler. No load voltage: 3000 Volts. Full load voltage: 2700 Volts. Full load current: .450 Amp. Regulation: 10%. Transformer: 26 pounds. Capacitors: 33 uFd total, computer grade. Maximum draw at rated output: 12 Amps. AC Input: 120 V, 50/60 Hz.  
**Tubes:** Type: Classic 3-500G. Continuous dissipation: 500 Watts. Warm-up time: 5 seconds. Metering: Multimeter: reads HV, forward power, reflected power, SWR, ALC, ALC set. Current Meter: Reads plate and grid current. ALC: True ALC 0-10V negative, front panel adjustable. Efficiency CW: Typically 66% or greater. \*Efficiency SSB (envelope crest): Approximately 66% or greater. MARS/WARC: Yes, set to the nearest band. Connectors: Keying: Supplies 100 mA when grounded, built-in back-pulse cancelling diode, protects the exciter. 12 VDC open circuit. RF input: SO-239, 50 Ohm input. RF Out: 50 Ohms with full power into any SWR below 3:1. Power: NEMA 5-15P, 120 Volts. Dimensions: 15 1/2 Dx 14 1/2 W x 8 3/4 H inches. Operating Weight: 48 lbs. Shipping Weight: Unit, 54 lbs.; Tube, 3 lbs. Frequency Coverage: Domestic model: 160, 80, 40, 30, 20, 17, 15 M. 10/12 M with modification. Must present FCC license at time of sale to obtain details. Third Order IMD at Rated Output: -35 dB.

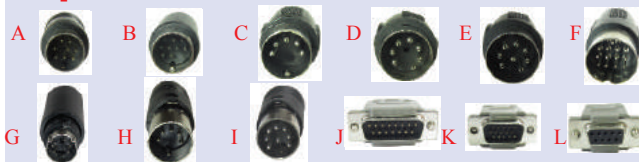
**AL-572 Specifications:**  
**Input:** Circuit type: Pi-network, slug tuned coils. Maximum VSWR at resonance: 1.3:1 or less. Minimum 2:1 VSWR bandwidth: 20% of center frequency. Max. drive power permissible: 100 Watts. Typical drive for full power output: 70 Watts.  
**Output:** Typical SSB PEP voice operation: 1300 Watts nominal (7 MHz). Typical CW operation: 900 Watts nominal. 1/2 hour PEP two tone test: 1000 Watts. 1/2 hour continuous carrier (RTTY): 650 Watts.  
**Power Supply:** Circuit type: Full wave voltage doubler. No load voltage: 2800 Volts. Full load voltage: 2500 Volts. Full load current: .7 Amp. Regulation: 14% or less. Transformer: 21 pounds. Capacitors: 33 mFd total, computer grade. Maximum draw at rated output: 16 Amps. AC Input: 120 V, 50/60 Hz.  
**Tubes:** Type: 572B (x4). Continuous dissipation: 640 Watts. Warm-up time: 5 seconds. Metering: Multimeter: reads HV, forward power, reflected power, SWR, ALC, ALC set. Current Meter: Reads plate and grid current. ALC: True ALC 0-10V negative, front panel adjustable. Efficiency CW: Typically 60% or greater. \*Efficiency SSB (envelope crest): Typically 60% or greater. MARS/WARC: Yes, set to the nearest band. Connectors: Keying: Supplies 100 mA when grounded, built-in back-pulse cancelling diode, protects the exciter. 12 VDC open circuit. RF input: SO-239, 50 Ohm input. RF Out: 50 Ohms with full power into any SWR below 3:1. Power: NEMA 5-15P, 120 Volts. Dimensions: 15 1/2 Dx 14 1/2 W x 8 3/4 H inches. Operating Weight: 40 lbs. Shipping Weight: 48 lbs. Frequency Coverage: Domestic model: 160, 80, 40, 30, 20, 17, 15 Meters. 10/12 Meters with modification. Must present FCC license at time of sale to obtain details. Third Order IMD at Rated Output: -34 dB (below PEP rated output).

**AL-82 Specifications:**  
**Input:** Circuit type: Pi-network, slug tuned coils. Maximum VSWR at resonance: 1.2:1 Minimum 2:1 VSWR bandwidth: 20%. Max. drive power permissible: 130 Watts. Typical drive rated output: 100 Watts  
**Output:** Typical SSB PEP voice operation: 1500 Watts. Typical CW continuous operation: 1500 Watts. 30 second PEP two tone test: 1800 Watts plus. 1/2 hour PEP two-tone test: 1800 Watts.  
**Power Supply:** Circuit type: full wave bridge, capacitor input. No load voltage: 3600 Volts. Full load voltage: 3300 Volts. Full load current: .8 Amp. Regulation: 10% or better. Transformer: 32 lb HypersilR, capacitors: 26 uFd total, computer grade. Maximum draw at rated output: 13 Amps. AC Input: 240 V, 50/60 Hz.  
**Tubes:** Type: 3-500G Classic (2). Continuous dissipation: 1000 Watts. Warm-up time: 5 seconds. Metering: Multimeter: Plate current, plate voltage, drive/ALC, power output (PEP Watts). Grid Meter: Reads PA grid current ALC: Negative going, 0-20 V, phono jack. Efficiency CW: 65% typical. \*Efficiency SSB (envelope crest): 62% typical. MARS/WARC: Yes, set to the nearest band. Connectors: Keying: engages amplifier when grounded. +12 VDC open circuit and supplies 100 mA when grounded. A built-in back-pulse cancelling diode protects the exciter. RF input: SO-239, 50 Ohm input. Power: NEMA 6-15P, 240 Volts. Dimensions: 18 1/2 Dx 17 W x 10 H inches. Operating Weight: 76 pounds. Shipping Weight: Unit, 50 lbs.; Tubes, 6 lbs.; Transformer, 35 lbs. Frequency Coverage: Domestic model: 160, 80, 40, 30, 20, 17, 15 Meters. 10/12 Meters with modification. Must present FCC license at time of sale to obtain modification details. Third Order IMD at Rated Output: -34 dB at 1500 Watts Output.

**AL-1200 Specifications:**  
**Input:** Circuit type: Pi-network, slug tuned coils. Maximum VSWR at resonance: 1.2:1 or less. Minimum 2:1 VSWR bandwidth: 20% of center frequency. Max. drive power permissible: 130 Watts. Typical drive for full power output: 130 W.  
**Output:** Circuit type: Pi-L. 1/2 hour PEP two tone test: 1800 Watts. 30 second PEP two tone test: 1800 Watts plus. Power Supply: Circuit type: Full wave bridge, capacitor input. No load voltage: 3600 Volts. Full load voltage: 3300 Volts. Full load current: .8 Amp. Regulation: 10% or better. Transformer: 32 lb. HypersilR. Capacitors: 26 uFd total, computer grade. Maximum draw at rated output: 13 Amps. AC Input: 240 V, 50/60 Hz.  
**Tubes:** Type: Eimac 3CX1200Z7. Continuous dissipation: 1200 Watts. Warm-up time: 5 sec. Metering: Multimeter: Reads plate current, plate voltage, drive/ALC, power output (PEP Watts). Grid Meter: Reads grid current. ALC: Negative going, 0-20 Volts, adjustable, phono jack. Efficiency CW: 65%. \*Efficiency SSB (envelope crest): 62%. MARS/WARC: Yes, set to the nearest band. Connectors: Keying: Engages amplifier when grounded, +12 VDC open circuit and supplies 100 mA when grounded, built-in back-pulse cancelling diode protects the exciter. RF input: SO-239, 50 Ohm input. Power: NEMA 5-15P, 240 Volts. Dimensions: 18 1/2 Dx 17 W x 10 H in. Operating Weight: 77 pounds. Shipping Weight: Unit, 50 lb., Tube, 5 lb., Transformer 35 lb. Frequency Coverage: Domestic model: 160, 80, 40, 30, 20, 17, 15 Meters. 10/12 Meters with modification. Must present FCC license at time of sale to obtain details. Third Order IMD at Rated Output: -34 dB at 1500 Watts output.

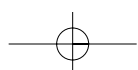
**AL-1500 Specifications:**  
**Input:** Circuit type: Pi-network, slug tuned coils. Maximum VSWR at resonance: 1.3:1 or less. Minimum 2:1 VSWR bandwidth: 20% of center frequency. Max. drive power permissible: 100 Watts. Typical drive for full power output: 65 Watts.  
**Output:** Circuit type: Pi-L. 1/2 hour continuous carrier: 1500 Watts. 30 second continuous carrier: 2500 Watts plus. 1/2 hour PEP two tone test: 2500 Watts plus. 30 second PEP two tone test: 2500 Watts plus. Power Supply: Circuit type: Full wave bridge, capacitor input. No load voltage: 3600 Volts. Full load voltage: 3300 Volts. Full load current: 1 Amp. Regulation: 10% typical. Transformer: 32 lb. HypersilR. Capacitors: 26 uFd total, computer grade. Maximum draw at rated output: 15 Amps. AC Input: 240 V, 50/60 Hz.  
**Tubes:** Type: Eimac 3CX1500/8877. Continuous dissipation: 1500 Watts. Warm-up time: 180 sec. Metering: Multimeter: Reads plate current, plate voltage, drive/ALC, power output (PEP Watts). Grid Meter: Reads grid current. ALC: Negative going, 0-20 Volts, adjustable, phono jack. Efficiency CW: 65%. \*Efficiency SSB (envelope crest): 62%. MARS/WARC: Yes, set to the nearest amateur band. Connectors: Keying: Engages amplifier when grounded, +12 VDC. 100 mA when grounded, built-in back-pulse cancelling diode protects the exciter. RF input: SO-239, 50 Ohm input. Power: NEMA 6-15P, 240 Volts. Dimensions: 18 1/2 Dx 17 W x 10 H in. Operating Weight: 77 pounds. Shipping Weight: Unit, 50 lb., Tube, 3 lb., Transformer 35 lb. Frequency Coverage: Domestic model: 160, 80, 40, 30, 20, 17, 15 Meters. 10/12 Meters with modification. Must present FCC license at time of sale to obtain details. Third Order IMD at Rated Output: -36 dB.

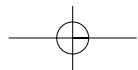
**Ameritron Rig-to-Amplifier Interface Open-end Cables and Connectors**



These open-end cables and connectors will fit most current HF transceivers. Select the open-end cable or a connector from the chart (right). For an ARB-704 cable, 600-5005 is also required. For an ALS-1306 cable, 610-3409K is also required. Pre-assembled amplifier-to-radio interface cables are available on pages 97, 99, 100 and 140.

| Figure | Item Number | Price   | Description                       | Radio Compatibility                                    |
|--------|-------------|---------|-----------------------------------|--|
| A      | 620-8068H   | \$6.95  | 8-Pin Mini DIN, Male, 3 ft.       | Kenwood TS-480<br>Yaesu FT-897/857/100/817/840/890/990 |
| B      | 620-8060    | \$9.95  | 10-Pin mini DIN, Male, 3ft.       | Yaesu FT-450/950/1200                                  |
| C      | 620-8025BH  | \$4.95  | 5-Pin DIN, Male, 3 ft.            | Yaesu FT-980   |
| D      | 620-8027BH  | \$4.95  | 7-Pin DIN, Male, 3 ft.            | Most Kenwood, ICOM ACC 2                               |
| E      | 620-8028BH  | \$4.95  | 8-Pin DIN, Male, 3 ft.            | ICOM ACC   |
| F      | 620-80213H  | \$10.95 | 13-Pin DIN, Male, 3 ft.           | ICOM IC-706/7000/718                                   |
| G      | 600-6005    | \$3.95  | 5-Pin Mini DIN, Male Connector    | Yaesu FT-847   |
| H      | 600-5005    | \$3.95  | 5-Pin DIN, Male Connector         | Ameritron ARB-704                                      |
| I      | 600-5008B   | \$6.95  | 8-Pin DIN modified connector      | Yaesu Band Data  |
| J      | 610-3515K   | \$2.50  | DB15 Male Connector               | Yaesu FT-DX3000  |
| K      | 610-3515HDK | \$3.50  | DB-15 Male High Density Connector | Elecraft   |
| L      | 610-3409K   | \$2.50  | DB-9 Female Connector             | ALS-1306   |

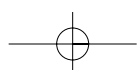




| <b>AL-811/AL-811H Specifications:</b>  | <b>AL-800/AL-800H Specifications:</b>   | <b>ALS-500M Specifications:</b>  | <b>ALS-600/ALS-606 Specifications:</b>  | <b>ALS-1300/ALS-1306 Specifications:</b>   |
|--|---|--|---|--|
| <p><b>Input:</b><br/>Circuit type: Pi-network, slug tuned coils.<br/><b>Maximum VSWR at resonance:</b> 1.3:1<br/><b>Minimum 2:1 VSWR bandwidth:</b> 15%<br/><b>Max. drive power permissible:</b> AL-811: 80 Watts; AL-811H: 100 Watts.<br/><b>Typical drive rated output:</b> AL-811: 60 Watts; AL-811H: 75 Watts<br/><b>Output:</b><br/><b>Typical SSB PEP voice operation:</b> AL-811: 600 Watts, AL-811H: 800 Watts.<br/><b>Typical CW operation:</b> AL-811: 400 Watts; AL-811H: 600 Watts.<br/><b>1/2 hour PEP two tone test:</b> AL-811: 500 Watts; AL-811H: 650 Watts.<br/><b>1/2 hour continuous carrier (RTTY):</b> AL-811: 300 Watts input; AL-811H: 400 Watts input.<br/><b>Power Supply:</b><br/>Circuit type: full wave bridge.<br/><b>No load voltage:</b> 1700 Volts.<br/><b>Full load voltage:</b> 1500 Volts.<br/><b>Full load current:</b> AL-811: 550 mA; AL-811H: 650 mA.<br/><b>Regulation:</b> 10%.<br/><b>Maximum draw at rated output:</b> AL-811: 8 A; AL-811H: 10A.<br/><b>AC Input:</b> 120 V, 50/60 Hz (AL-811/H) 240 V, 50/60 Hz (AL-811X/AL-811HX).<br/><b>Tubes:</b><br/><b>Type:</b> (AL-811: 3) (AL-811H: 4) 811A vertically mounted.<br/><b>Continuous dissipation:</b> 65 Watts per tube.<br/><b>Warm-up time:</b> 5 seconds<br/><b>Metering:</b><br/><b>Multimeter:</b> reads HV and plate current.<br/><b>Grid Meter:</b> Reads PA grid current<br/><b>ALC:</b><br/>Negative going, 0-20 V, adjustable, phono jack<br/><b>*Efficiency SSB (envelope crest):</b> greater than 70%<br/><b>MARS/WARC:</b><br/>Yes, set to the nearest band.<br/><b>Connectors:</b><br/><b>Relay:</b> engages amplifier when grounded. +12 VDC open circuit and supplies 100 mA when grounded. A built-in back-pulse cancelling diode protects the exciter.<br/><b>RF input:</b><br/>SO-239, 50 Ohm input.<br/><b>RF Out:</b><br/>50 Ohms with full power into any SWR below 3:1.<br/><b>Power:</b><br/>NEMA 5-15P, 120 Volts.<br/><b>Dimensions:</b><br/>15 1/2 Dx 13 3/4 W x 8 1/4 H inches.<br/><b>Operating Weight:</b><br/>32 pounds.<br/><b>Shipping Weight:</b><br/>41 pounds.<br/><b>Frequency Coverage:</b><br/>Domestic model: 160, 80, 40, 30, 20, 17, 15 Meters. 10/12 Meters with modification. Must present FCC license at time of sale to obtain modification details.<br/><b>Third Order IMD at Rated Output:</b> -33 dB.</p> | <p><b>Input:</b><br/>Circuit type: Pi-network, resistor attenuated/slug tuned coils.<br/><b>Maximum VSWR at resonance:</b> 1.3:1 or less.<br/><b>Minimum 2:1 VSWR bandwidth:</b> within +20% or -40% of selected band/ within 20% of center frequency.<br/><b>Max. drive power permissible:</b> 100 Watts.<br/><b>Typical drive for full power output:</b> 70/55 Watts.<br/><b>Output:</b> Circuit type Pi/Pi-network output.<br/><b>Typical SSB PEP voice operation:</b> 1250/1500+W<br/><b>Typical CW continuous operation:</b> 1000/1500 W.<br/><b>1/2 hour PEP two tone test:</b> 1000/1500 Watts.<br/><b>1/2 hour continuous carrier (RTTY):</b> 750/1000 W.<br/><b>Power Supply:</b> Circuit type: Full wave voltage doubler.<br/><b>No load voltage:</b> 2600 Volts.<br/><b>Full load voltage:</b> 2300/2250 V.<br/><b>Full load current:</b> 1/1.2 A.<br/><b>Regulation:</b> 12% "less/15%".<br/><b>Transformer:</b> 32 lbs grain oriented EI lamination.<br/><b>Capacitors:</b> 78/63 uFd total, high current computer grade.<br/><b>Maximum draw at rated output:</b> 12/13A@240 VAC. Typical line current at 1500 Watt PEP output. 9A at 240 VAC. Power line current in standby: .5 A at 240 VAC.<br/><b>AC Input:</b> 120V, 50/60 Hz.<br/><b>Tubes:</b> Eimac® 3CX800A7.<br/><b>Continuous dissipation:</b> 800W per tube, 1600W total.<br/><b>Warm-up time:</b> 180 seconds.<br/><b>Estimated life:</b> 6,000-8,000 hours ICAS.<br/><b>Metering:</b> <i>Multimeter:</i> reads Peak forward power, Peak reflected power, SWR, ALC threshold output voltage, and high voltage.<br/><b>Current Meter:</b> Reads plate and grid current.<br/><b>ALC:</b> Negative going, 0-10 V, phono jack output, front panel adjustments.<br/><b>Efficiency CW:</b> Approximately 65-66% or greater.<br/><b>Eff. SSB (envelope crest):</b> Approx. 66% or greater.<br/><b>MARS/WARC:</b> Yes, set to the nearest band.<br/><b>Connectors:</b><br/><i>Keying:</i> Requires contact closure or sink of +12 VDC at 100 mA, back pulse protected, phono jack.<br/><b>RF input:</b><br/>SO-239, 50 Ohm input.<br/><b>RF Out:</b><br/>50 Ohms with full power into any SWR below 3:1.<br/><b>Power:</b> NEMA 5-15P, 120/240 Volts.<br/><b>Dimensions:</b><br/>17 1/4 Dx 14 1/2 W x 8 3/8 H in.<br/><b>Operating Weight:</b> 51/52 lbs.<br/><b>Shipping Weight:</b> Unit, 59/60 lbs.; Tubes, 3/5 lbs.<br/><b>Frequency Coverage:</b><br/>Domestic model: 160, 80, 40, 30, 20, 17, 15 Meters. 10/12 Meters with modification. Must present FCC license.<br/><b>Third Order IMD at Rated Output:</b> -35 dB.</p> | <p><b>Frequency Coverage:</b><br/>(US) 1.5 to 22 MHz continuous; (Export) 1.5-30 MHz continuous.<br/><b>Input: Circuit type:</b><br/>Broadband, resistor swamped.<br/><b>Maximum VSWR at resonance:</b> 1.5:1.<br/><b>Bandwidth:</b> Broadband.<br/><b>Maximum drive power permissible:</b> 100 Watts.<br/><b>Typical drive for rated output:</b> 60 Watts.<br/><b>Output: Circuit:</b> Broadband, low pass.<br/><b>Typical SSB PEP voice operation:</b> 500 Watts PEP.<br/><b>Typical CW operation:</b> 400 Watts.<br/><b>Power requirement for amplifier:</b><br/>14-16 VDC, 80A (peak).<br/><b>Output devices:</b><br/>Transistor, (4) 2SC2879.<br/><b>Metering:</b><br/>Current meter, 0-100 A.<br/><b>ALC:</b> None.<br/><b>Efficiency CW:</b> 40%.<br/><b>Efficiency SSB:</b> (envelope crest) 45%.<br/><b>MARS/WARC:</b> Yes, continuous coverage.<br/><b>Keying:</b> Relay closure or sinking to ground of +12 VDC at 100 mA, RCA phono jack.<br/><b>Power Supply connector:</b><br/>Beau multi-contact male chassis mount.<br/><b>Power Supply Cable:</b> 8 foot pre-wired with Beau connector on one end; other end with 5/8 inch ring lugs, 10 gauge wire (x2), in line fuse holders, fuses included.<br/><b>RF Connectors:</b><br/>SO-239 for input and output.<br/><b>Dimensions:</b><br/>15 1/2 Dx 8 7/8 W x 3 3/4 H in.<br/><b>Operating Weight:</b><br/>7.5 lbs.<br/><b>Shipping Weight:</b><br/>12 lbs.<br/><b>Third Order IMD at rated Output:</b><br/>-35 dB PEP or better.</p> <p style="text-align: center;"><b>ALS-600SPS Switching Power Supply Specs:</b></p> <p><b>Line Input:</b><br/>120 VAC/240 VAC.<br/><b>Output:</b> 50 VDC, 25 Amps, +/-14 VDC, 1 A.<br/><b>Metering:</b><br/>Cross-needle for volt/amp.<br/><b>Output Cable:</b><br/>6 foot prewired cable with Beau multi-contact connector to mate with ALS-600 amplifier.<br/><b>Dimensions:</b><br/>12Dx9 1/2 W x 6 H inches.<br/><b>Operating Weight:</b><br/>9 lbs.*<br/><b>Shipping Weight:</b><br/>15 lbs.*<br/><b>AC Line Connector:</b><br/>NEMA-5-15P.</p> <p><b>Note:</b><br/>* Total Shipping weight for ALS-600 Amplifier and ALS-600SPS power supply is 33 lbs., shipped together.</p> | <p><b>Frequency Coverage:</b><br/>(US) 1.5 to 22 MHz continuous; (Export) 1.5-30 MHz continuous.<br/><b>Input: Circuit type:</b><br/>Broadband, resistor swamped.<br/><b>Maximum VSWR at resonance:</b> 1.5:1.<br/><b>Bandwidth:</b> Broadband.<br/><b>Maximum drive power permissible:</b> 100 Watts.<br/><b>Typical drive for rated output:</b> 100 Watts.<br/><b>Output: Circuit:</b> Broadband, low pass.<br/><b>Typical SSB PEP voice operation:</b> 600 Watts PEP.<br/><b>Typical CW operation:</b> 500 Watts.<br/><b>Power requirement for amplifier:</b><br/>50 VDC, 25 Amps, +/-14 VDC, 1 Amp.<br/><b>Output devices:</b><br/>Power MOSFET (4) MRF-150.<br/><b>Metering:</b><br/>Amplifier-Cross-needle meter for VSWR, FWD, reflected true peak indicating wattmeter.<br/><b>ALC:</b><br/>Negative going 12 VDC, adjustable, RCA phono jack.<br/><b>Efficiency CW:</b> 50%.<br/><b>Efficiency SSB:</b> (envelope crest) 55%.<br/><b>MARS/WARC:</b> Yes, continuous coverage.<br/><b>Keying:</b><br/>Relay closure or sinking to ground of +12 VDC at 100 mA, RCA phono jack.<br/><b>Power Supply connector:</b><br/>Beau multi-contact male chassis mount.<br/><b>RF Connectors:</b><br/>SO-239 for input and output.<br/><b>Dimensions:</b><br/>9 1/2 W x 6 1/2 H x 12 D inches.<br/><b>Operating Weight:</b><br/>12.5 lbs.<br/><b>Shipping Weight:</b><br/>18 lbs. (amp only).<br/><b>Third Order IMD at rated Output:</b><br/>-35 dB PEP or better.</p> <p>ALS-606 is similar to ALS-600 but has automatic bandswitching and covers 1.5-54 MHz.</p> <p style="text-align: center;"><b>ALS-600/ALS-606PS Power Supply Specifications:</b></p> <p><b>Line Input:</b><br/>120 VAC/240 VAC.<br/><b>Output:</b> 50 VDC, 25 Amps, +/-14 VDC, 1 Amp.<br/><b>Metering:</b><br/>Cross-needle for volt/amp.<br/><b>Output Cable:</b><br/>6 foot prewired cable with Beau multi-contact connector to mate with ALS-600 amplifier.<br/><b>Dimensions:</b><br/>9 1/2 W x 6 1/2 H x 12 D inches.<br/><b>Operating Weight:</b><br/>32 lbs.*<br/><b>Shipping Weight:</b><br/>37 lbs.*<br/><b>AC Line Connector:</b><br/>NEMA-5-15P.</p> <p><b>Note:</b><br/>* Total Shipping weight for ALS-600 Amplifier and ALS-600PS power supply is 57 lbs., shipped together.</p> | <p><b>ALS-1300 Frequency Coverage:</b> (US) 1.5 to 22 MHz continuous; (Export) 1.5-30 MHz continuous.<br/><b>ALS-1306 Frequency Coverage:</b> 1.5 to 54 MHz continuous (excluding 27 MHz).<br/><b>Input: Circuit type:</b><br/>Broadband, resistor swamped.<br/><b>Maximum VSWR at resonance:</b> 1.5:1.<br/><b>Bandwidth:</b> Broadband.<br/><b>Maximum drive power permissible:</b> 100 Watts.<br/><b>Typical drive for rated output:</b> 100 Watts.<br/><b>Output: Circuit:</b> Broadband, low pass.<br/><b>Typical SSB PEP voice operation:</b> 1200 Watts PEP.<br/><b>Typical CW operation:</b> 1000 Watts.<br/><b>Power requirement for amplifier:</b><br/>50 VDC, 50 Amps, +/- 14 VDC, 2 Amps.<br/><b>Output devices:</b><br/>Power MOSFET (8) MRF-150.<br/><b>Metering:</b><br/><i>Two Cross-Needle Meters</i> for VSWR, FWD, REF true peak indicating wattmeter, ALC, high voltage PA1 and PA2. Constant current monitor PA1 and PA2.<br/><b>ALC:</b> Negative going 12 VDC, adjustable, RCA phono jack.<br/><b>Efficiency CW:</b> 50%.<br/><b>Efficiency SSB:</b> (envelope crest) 55%.<br/><b>MARS/WARC:</b> Yes, continuous coverage.<br/><b>Keying:</b> Relay closure or sinking to ground of +12 VDC at 100 mA, RCA phono jack.<br/><b>Power Supply connector:</b><br/>Beau multi-contact male chassis mount.<br/><b>Bandswitch:</b><br/>ALS-1300, manual or use optional Radio Interface, ARI-500 and radio interface cable.<br/><b>ALS-1306</b>, manual or automatic with built-in automatic bandswitch. Requires optional radio interface cable.<br/><b>RF Connectors:</b><br/>SO-239 for input and output.<br/><b>Dimensions:</b><br/>18Dx10Wx6 1/2 H inches.<br/><b>Operating Weight:</b> 22 lbs.<br/><b>Shipping Weight:</b> 27 lbs.<br/><b>Third Order IMD at rated Output:</b><br/>-35 dB PEP or better.</p> <p style="text-align: center;"><b>ALS-1300/ALS-1306 Included Switching Power Supply Specifications:</b></p> <p><b>Line Input:</b><br/>120 VAC@30 Amps<br/>240 VAC@14 Amps (Default)<br/><b>Output:</b> 50 VDC, 50 Amps, +/-14 VDC, 2 A.<br/><b>Output Cable:</b><br/>6 foot prewired cable with Beau multi-contact connector to mate with ALS-1300/ALS-1306 amplifier.<br/><b>Dimensions:</b><br/>9 1/2 Dx 10 W x 6 1/2 H inches.<br/><b>Operating Weight:</b><br/>15 lbs.*<br/><b>Shipping Weight:</b><br/>20 lbs.*<br/><b>AC Line Connector:</b><br/>NEMA-6-15P.</p> <p><b>Note:</b><br/>* Total Shipping weight for ALS-1300/ALS-1306 Amplifier and power supply is 49 lbs., shipped together.</p> |



\* Exact performance measurements may vary due to the accuracy of test equipment and the measurement methods used. (Prices and specifications subject to change without notice or obligation).



# AMERITRON *True Legal Limit™* Tuner

*Easily handles 1500 Watts continuous carrier even on 160 Meters . . . High-current edge-wound silver plated Roller Inductor . . . Two 500 pf high capacitance tuning capacitors with 6:1 vernier reduction drives . . . 3 core choke balun . . . Six position antenna switch . . . True peak reading Cross-Needle SWR/Wattmeter . . .*

- *Handles well over 1.5 kW carrier*
- *Super High Current edge-wound silver plated Roller Inductor*
- *500 pf tuning capacitors with 6:1 vernier reduction drives*
- *3 core choke balun*
- *6 position antenna switch*
- *True peak reading meter with LED Meter Light*

AMERITRON's ATR-30 *True Legal Limit™* roller inductor antenna tuner is ham radio's toughest! It'll handle 1500 Watts *continuous carrier output* on all modes and *all HF bands* into most antennas -- even on 160 Meters where most antenna tuners fail.

**Perfect** for Ameritron's most powerful amplifiers where the ATR-30 just loafs.

**All band coverage** lets you operate 1.8-30 MHz including all MARS & WARC bands.

### Super High Current Roller Inductor

You'll see Ameritron's new *super high current* air core roller inductor. It's *edge wound* from a thick solid copper strip and silver plated.

This produces a large surface area and a massive conductor. It can carry huge circulating RF currents and withstand tremendous heat that'll melt or burn ordinary roller inductors.

A gear driven turns counter and crank knob gives you precise inductance control.

### Two 500 pf Tuning Capacitors

## Ameritron AC Digital Line Voltage Meters



ADM55-1U **\$19<sup>95</sup>**  
 These handy digital voltage meters let you monitor voltage on your AC outlets on a large 1.5Wx.75H inch *cool blue* LED backlight display.

**Keeps** you aware of brown-outs, over voltage or low power that could cause harm to your amplifier. Voltage digits are a huge 3/4"! Each plugs directly into your wall outlet and consumes less than 1 Watt about every kilowatt hour. Accuracy is +/- 1.5%. Compact 2 1/8Wx1 1/2Hx1 1/2D inches.

**ADM55-1U** measures AC 80 to 200 Volts. Has US 2-prong 110V plug.

**ADM55-1E** measures AC 130 to 300V, has Europlug 220V.

**ADM-7780, \$9.95.** US 2-prong to NEMA 6-20P Adaptor.

**ADM-7782, \$9.95.** Euro or US 2-prong to NEMA 6-15P.

ATR-30  
**\$599<sup>95</sup>**

Suggested Retail  
 Two 500 pf -- the highest of any antenna tuner -- variable transmitting capacitors give you no-arc wide range impedance matching for true high power performance.

**6:1 vernier reduction drives** makes capacitor tuning smooth and easy.

### Super Balun, 6 position Antenna Switch

**Super heavy duty** three core choke balun lets you match virtually any balanced feed-line antenna without core saturation.

A 6 position antenna switch lets you select your desired operating antenna.

### Read true Peak Power

**Ameritron's** active electronic *true* peak reading meter accurately reads forward and reflected power and SWR *simultaneously* on a super-bright LED lighted Cross-Needle meter.

### Roomy Cabinet maintains High-Q

**Roomy** extra-strong .080 inch thick aluminum cabinet gives highest efficiency and lowest loss. 13 1/4Wx5 5/8 Hx17 1/2 D inches.

### Legendary After-Sale Service

Has Ameritron's superb one year limited

## Fan Cooled Dry Dummy Load



ADL-2500  
**\$219<sup>95</sup>**  
 Suggested Retail

**AMERITRON's** 2500 Watt *fan cooled* dummy load handles any legal limit amplifier, and lets you tune-up your expensive amplifier fast and super easy. Works with all amplifiers, transceivers and transmitters from DC through 6 Meters.

It can dissipate 2500 Watts average power for one minute on, ten minutes off. Handles 300 Watts continuous. SWR is less than 1.25 to 1 below 30 MHz and less than 1.4 from 30 to 60 MHz.

**Four** 50 Ohm non-inductive super high energy density resistors are used. Each has an incredibly high energy density of 7000 joules per cubic inch per second with a voltage gradient of 10 kV per inch!

**Detailed** specifications/power curve are permanently silk-screened on the cabinet for easy reference. Uses 12 VDC. 9 1/2Dx8 1/4 Wx4H in. Has SO-239 connectors. 5 lbs.



warranty with legendary customer service.

## ATR-20 Antenna Tuner . . . ATR-20, \$459.95.



**Handles** 1.2 kW PEP SSB. Slightly less on 160 Meters. 13 1/2W x 5 1/2H x 13 3/4D in.

**Roller** inductor T-network, peak reading SWR/Wattmeter with super-bright LED.

**Covers** 1.8-30 MHz, 6 position antenna switch, balun.

**Great** for Ameritron's widely popular one kilowatt AL-80B Amplifier!

## Legal Limit Oil-filled Dummy Load



ADL-1500X  
**\$54<sup>95</sup>**  
 Without Oil.  
 Suggested Retail  
 ADL-1500  
**\$74<sup>95</sup>**  
 Oil included.

**AMERITRON's** Legal Limit oil filled dummy load lets you run the maximum legal limit of 1500 Watts for a full five minutes.

**ADL-1500** has high quality industrial grade transformer oil (no PCB) and heavy duty 50 Ohm resistor.

**AMERITRON's** Legal Limit oil filled dummy load gives you SWR under 1.2 to 30 mHz and low SWR to 400 MHz.

**Durable,** sturdy gallon can measures 7 1/2Hx6 5/8D inches. Detailed specifications and power curve.

**Order** ADL-1500 with industrial grade transformer oil. Order ADL-1500X without oil.

**ADL-21, \$29.95.** 1 Gallon Industrial Grade Transformer oil.

# AMERITRON RCS-4 Remote Coax Switch

*Now covers 6 Meters . . . improved relays . . . Greater Power Handling!*



**RCS-4** Ameritron RCS-4 is a remote controlled coax switch that selects 1 of 4 outputs by supplying all control voltages through the coax.

**Elimination** of control cables gives you a fast, neat and inexpensive installation -- *only 1 coax line for 4 antennas.*

**You** get two units -- the switching box (5<sup>3</sup>/<sub>8</sub>Dx7Wx3H inches.) that can be tower, mast or wall mounted and the control console (6<sup>1</sup>/<sub>8</sub>Dx5<sup>1</sup>/<sub>4</sub>Wx 3<sup>3</sup>/<sub>8</sub>H inches.) that is located at your operating station.

**The** attractive indoor console has bright LED antenna selector indicators.

**A** steel enclosure provides 100% shielding to prevent RFI and TVI.

**Switching** time is 50 milliseconds. *Teflon*<sup>®</sup> SO-239 connectors provide reliable connections.

**The** weatherproof switching box uses three

**Lightning Protected**  
model RCS-4L, \$199<sup>95</sup>

heavy duty 16 ampere hermetically sealed relays on a rugged G-10 fiberglass circuit board.

**Quality** components are used throughout the entire unit to ensure maximum life for the sometimes difficult-to-reach switching box.

**RCS-4** operates 120 VAC. RCS-4X for 220/240 VAC. RCS-4 allows safe operation with 14 Volts control voltage.

**Frequencies** 1.5 - 100 MHz are covered by this excellent station accessory. Handles over 2.5 kW.

**Specifications:**

**4** positions; **Loss** at 30 MHz less than 0.1 dB; **VSWR** is under 1.25:1, 1.5-60 MHz;

**Impedance:** 50 Ohms; **Power:** >2.5 kW PEP, 1.5 kW average.

# RCS-8V HF to VHF/UHF Remote Coax Switch



Ameritron's Remote Coax Switch lets you remotely switch up to five separate antennas using one inexpensive small control line (like standard telephone wire) --

**RCS-8V** *Eliminate* a tangle of troublesome coax and have a simple and neat installation -- with just a single feedline.

**The** RCS-8V consists of two units -- the weatherproof switching box that mounts on your tower or mast and the control unit that's placed at your operating station.

**VSWR** is less than 1.2 from DC to 250 MHz and less than 0.1 dB loss at 150 MHz -- great for the HF/VHF/UHF operator.

**It** handles over 5 kW below 30 MHz and 1 kW at 150 MHz. You can ground unused positions or leave them open.

**The** indoor control unit is all metal to prevent RFI and TVI. It also has LEDs to indicate the antenna you've selected.

**A** Lexan scratch-proof panel has a markable surface for labeling your antenna positions.

**RCS-8V** operates from a 120 VAC power

**Lightning Protected**  
model RCS-8VL, \$209<sup>95</sup>

source or RCS-8VX for 220/240 VAC. Use any 6 conductor control line (not supplied) and allows safe operation with 14V control voltage.

**RCS-8VN, \$179.95.** Same as RCS-8V but has N- type connectors instead of SO-239.

**SPECIFICATIONS:**

**Number of antenna positions:** 5.

**Loss at 150 MHz:** less than 0.1 dB.

**VSWR:** under 1.2:1 from DC to 250 MHz.

**Impedance:** 50 Ohms. **Power Capability:**

5 kW PEP below 30 MHz, 2.5 kW average.

**Power requirements:** 12 VDC @ 100 mA.

AC adapter supplied. **Connectors:** *Teflon*<sup>®</sup>

SO-239 for RCS-8V; "N" for RCS-8VN.

**Control Box:** 6Dx6<sup>1</sup>/<sub>8</sub>W x2<sup>1</sup>/<sub>4</sub>H inches.

**Switch Box:** 5<sup>3</sup>/<sub>8</sub>Dx7Wx3H inches.

# RCS-10 Remote Coax Switch with 8 positions



Ameritron's RCS-10 remote coax switch selects one of eight antennas using an inexpensive three or four conductor control line (such as standard telephone wire).

**Eliminate** a tangle of troublesome coax and have a simple and neat installation --

**RCS-10** with just a single coax feedline.

**The** RCS-10 consists of two units -- the weatherproof switching box that mounts on your tower or mast and the control unit that's placed at your operating station.

**Outdoor Unit Features:**

**Inexpensive and simple wiring:** selects up to eight antennas using one four conductor telephone type control line.

**High Power Capability:** The RCS-10 relay box will handle over 5 kW into matched loads below 30 MHz.

**SPECIFICATIONS:**

**Long Relay Life:** UL/CSA/VDE approved sealed relays with 16 ampere switching current rating. Tested to withstand 1200V RMS. **Flexible Mounting:**

RCS-10 hardware accepts mast sizes from 1 inch to 2 inches. **Reliable Connectors:**

Teflon UHF-style SO-239 females, internal barrier strip for control lines. **Low Voltage:** Requires 10-15 Volts at less than 300 mA.

**Number of Antenna Positions:** 8.

**Frequency Coverage:** DC to 100 MHz.

**Lightning Protected**  
model RCS-10L, \$219.95

**VSWR:** Under 1.25:1 below 30 MHz; Under 1.3:1 below 60 MHz; Under 1.8:1 below 150 MHz.

**Impedance:** 50 Ohms.

**Power Capability:** 5 kW PEP, 2.5 kW average into 50 Ohms below 30 MHz.

**Power Requirement:** RCS-10, 10-15 VDC

or 120 VAC with AC adaptor supplied.

RCS-10X, 10-15 VDC or 230 VAC with

AC adaptor supplied. **Relay Switch**

**Control Line:** 4 conductors telephone-type

cable, not supplied. **Relay Control Line**

**Voltage:** 10-15 VDC at less than 300 mA.

**Flexible Control Box with External**

**Interface:** Accepts and outputs one-of-

eight and outputs three-line BCD data to

remote relay unit. **Highly Weather**

**Resistant:** Sealed relays, stainless hard-

ware, and U-V resistant cover. **Easy-to-**

**Read Antenna Indicators:** Eight wide-

spaced LED's indicate the selected antenna.

**Size:** Control Box: 6<sup>1</sup>/<sub>4</sub>Wx3<sup>1</sup>/<sub>4</sub>Hx4<sup>5</sup>/<sub>8</sub>D in.

## AMERITRON Automatic Remote Antenna Coax Switch

Automatically reads data from your transceiver and selects up to 8 pre-programmed antennas . . .

The RCS-12 is an automatic remote antenna switch. It reads information from the transceiver and selects the pre-programmed antenna automatically. Programming is as easy as a push of a button. It works with most Icom, Yaesu, Kenwood and other rigs that have a band data output line. It has a manual/automatic switch that will allow manual selection of antennas as well. It has eight LEDs to indicate which antenna is selected.

RCS-12C  
\$239.95  
Suggested Retail



**Stops** expensive antenna switching damage. No HOT switching with RCS-12! It's late at night, there's a run of stations, and the operator pushes a button. SWR shoots up! Even if the *SWR Watch Protection* kicks in, you still lose your run frequency while you look to see what happened, if you notice at all! At best you only lose your run frequency; at worse you lose an amplifier or antenna switch.

**You've** learned a painful lesson! Cost of a blown bandswitch or antenna relay pales in comparison to the price of a contest. You'll never know if this was your year because a split-second error turned you from a winner to loser. Another year before you try again.

**With** a properly connected and programmed RCS-12 it is impossible to pick the wrong antenna. It is impossible to damage equipment by switching antennas while transmitting.

**You** no longer have to hover over guest operators like a mother hen; RCS-12 will

not let them make an antenna switching mistake. Ameritron's RCS-12 is compatible with virtually any antenna switching system. It works with BCD or one-of-eight outputs, and is fully compatible with 12 or 24 volt relay systems.

**RCS-12** can handle directional control of two four-squares, or one four-square along with an assortment of other antennas. It can handle up to eight individual antennas. Any single position or combination of positions can be programmed for any particular band. The operator pushes an antenna selector button and the RCS-12 takes over.

**The RCS 12** monitors the amplifier keying line. It prohibits antenna relay transfers while your amplifier is active. Simultaneously, it remembers what antenna function the operator called for. It switches at the first amplifier drop. It holds the amp off until switching is complete and relays are settled.

**It** monitors the band data from radios. The internal band decoder knows which groups of switch positions are allowed on each band. It prevents a distracted operator from picking the wrong switch position.

When the radio changes bands the RCS-12 goes to the last antenna used for that band.

**RCS-12** makes it impossible to put the radio on the wrong antenna. It's impossible to switch relays while the amplifier is on, whether you are switching stacks, directions, or antenna arrays or any combination of the three. RCS-12 works with four-squares, stacking systems, directional arrays and other combos of up to 8 antenna selections.

\*Not compatible with Kenwood TS-480, or TS-2000 transceivers.

**Measures** 8 1/4Wx2 1/4Hx7D". 1.5 lbs.

**RCS-12, \$309.95** includes automatic controller and 8 position relay box. Covers DC to 100 Mhz and handles over 5KW @ 50 ohm below 30 MHZ. Powered with 10-15VDC or with 120VAC adaptor, included. Order RCS-12X for 220VAC operation.

**RCS-12L, \$349.95** RCS-12 with lightning surge protection.

**RCS-12C, \$239.95.** Automatic Controller only. 110VAC, compatible with RCS-8V/RCS-10 outdoor relay boxes.

### ALS-1306/RCS-12 Rig Interface Cables

|           |   |         |
|-----------|---|---------|
| DB-13D    | Icom IC-706/7000/718 & others w/13P din |         |
| DB-7DI    | Icom with ACC2 7-pin din                | \$24.95 |
| DB-DB7DK  | Kenwood with DB9 except 480             | Each    |
| DB-DB8MK  | Kenwood TS-480                          |         |
| DB-8MY2   | Yaesu FT-897857/100/817/840/890/991     |         |
| DB-8DY    | Yaesu with standard 8 din Band data     |         |
| DB-10MY   | Yaesu FT-450/950/1200                   |         |
| DB-DB15Y  | Yaesu FT-DX-3000                        |         |
| DB-DB15HE | Elecraft                                |         |

## AMERITRON EXTENDED WARRANTY PLAN

**Ameritron's** extended warranty plan is the same as the original warranty, just extended for the amount of months described on your purchase invoice. The extended warranty warrants to the purchaser that if the product should fail during the agreed term, Ameritron has the option to repair or replace part (s) except tube and output transistors) and provide necessary labor free of charge. Warranty repair can only be done at the Ameritron facility. Purchaser must return defective product to Ameritron prepaid in its original packing or equivalent. Ameritron is not responsible for loss or damage due to shipping.

### WHAT IS COVERED

**Necessary** labor done at Ameritron to repair the product back to specifications. Return shipping (within the United States at Ameritron's choice of shipping) with insurance at replacement cost.

### WHAT IS NOT COVERED

**Repairs** done by unauthorized Ameritron

facility. Returning of product to Ameritron facility. Shipping and labor to replace light bulbs and fuses accessible by the owner. Parts damaged due to shipping damage. Parts damaged due to misuse, neglect, intentional, accidental or improper installation. Cosmetic defects, dents, scratches, peeling, rusting, corrosion and chips. Maintenance and cleaning. Flood, fire, lightning and any other act of nature. PA tubes and RF Output Transistors (shipping and labor are covered). Unauthorized modifications made to the product. Returning of product with no problem detected. Return shipping is NOT covered on products sent in for services listed under "What is NOT covered".

### HOW TO ORDER

**If** your Ameritron product is still within its original warranty, contact Ameritron by phone, fax, mail or email with model of product, serial number, date of purchase and dealer purchased from.

If your Ameritron product was purchased used or is out of its original warranty, the product will need to be sent to Ameritron production facility prepaid shipping for evaluation.

**Call 1-662-323-8211.** Use the chart (right) to order a one year or two year extended warranty plan.

**For full** details of the warranty plan, call Ameritron direct, 1-662-323-8211.

Customer must

contact Ameritron factory before shipping.

**Ship to address:** Ameritron, 116 Willow Road, Starkville, MS 39759.

| Amp Model # | 1 Year ext. Warranty | 2 Year ext. Warranty |
|-------------|----------------------|----------------------|
| AL-1500     | \$198.00             | \$360.00             |
| AL-1200     | \$198.00             | \$360.00             |
| AL-82       | \$192.00             | \$346.00             |
| AL-572      | \$145.00             | \$240.00             |
| AL-80B      | \$145.00             | \$240.00             |
| AL-800      | \$145.00             | \$240.00             |
| AL-800H     | \$198.00             | \$359.00             |
| AL-811      | \$119.00             | \$198.00             |
| AL-811H     | \$132.00             | \$225.00             |
| ALS-1300    | \$225.00             | \$333.00             |
| ALS-1306    | \$260.00             | \$386.00             |
| ALS-600     | \$119.00             | \$199.00             |
| ALS-600S    | \$126.00             | \$210.00             |
| ALS-500M    | \$92.00              | \$153.00             |
| ATR-30      | \$65.00              | \$99.00              |
| ATR-20      | \$46.00              | \$69.00              |

**For Technical Information or parts order: Call (662) 323-8211**

**For service, return amplifier with letter of explanation to:**

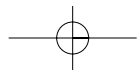
**AMERITRON, 116 Willow Road, Starkville, MS 39759, USA.**

**email: go to: [www.ameritron.com](http://www.ameritron.com)**

*All products manufactured by AMERITRON have a one year limited warranty. Ameritron's AL-80B amplifier carries a two year limited warranty. \*All transmitter tubes are warranted by the tube manufacturers. Prices and specifications subject to change without notice or obligation. \*Except as noted. (c) 2016 AMERITRON.*

## AMERITRON is an authorized Eimac<sup>®</sup> Tube Distributor . . .

- Eimac<sup>®</sup> 3CX1200A7 - \$1995
- Eimac<sup>®</sup> 3CX1200Z7, \$1895
- Eimac<sup>®</sup> 3CX1500A7/8877 - \$1795
- IMPORT 3CX1500A7/8877, \$795
- GRAPHITE 3-500GZ - \$219
- Eimac<sup>®</sup> 3CX800A7 - \$1495
- IMPORT 3CX800F, \$695
- 572B (1) - \$79.95
- 811A - (1) - \$29.95; (2 match) - \$64.95; (3M) - \$94.95; (4M) - \$124.95

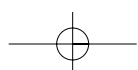


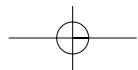
**Cushcraft**  
Amateur Radio Antennas

**2017 Ham Catalog**

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look great in your backyard too*

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# Cushcraft R-6000 Multiband HF Vertical **6-20 Meters**

## Multi-band 6-20 Meters, No Radials, No Tuning, Handles 1500Watts

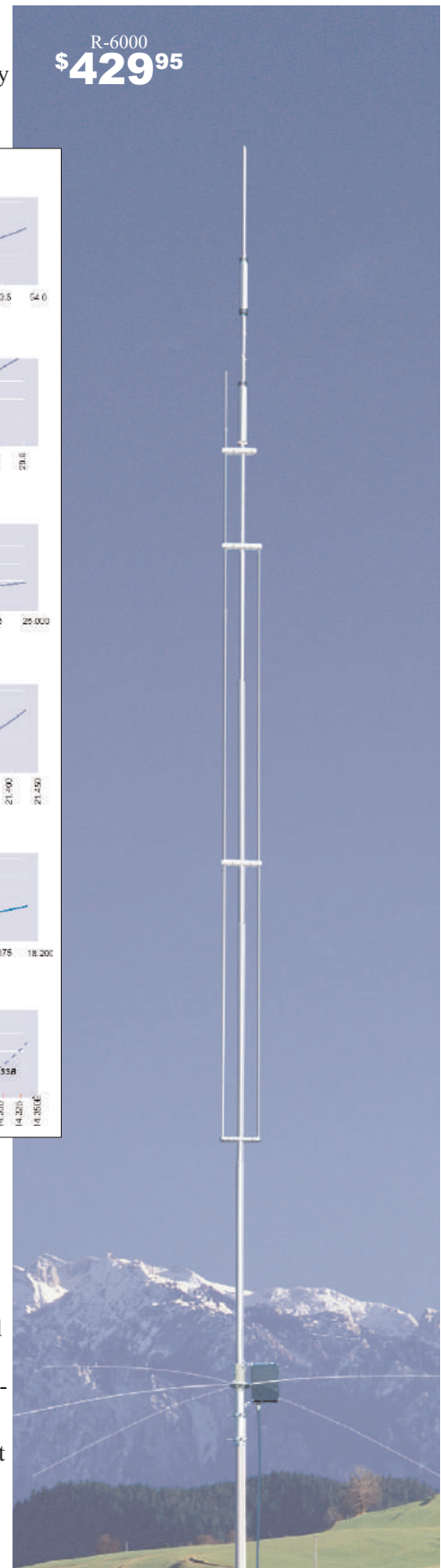
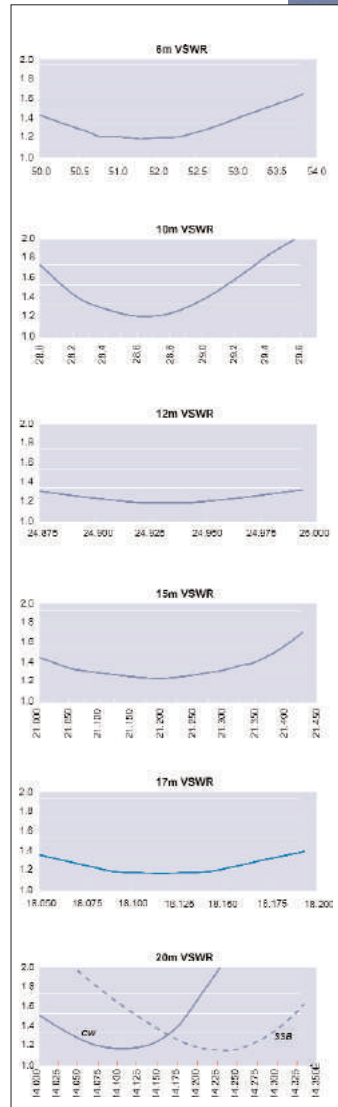
The R-6000 is a 6 through 20 meter, no ground radial antenna. It includes many of the features of the R8, R7 and R5 antennas. R-6000 means excellent performance, easy installation and use, slim silhouette and high reliability. There are no traps used on 6, 10 and 15 meters for maximum efficiency and power handling.

R-6000  
**\$429<sup>95</sup>**

- **EASY INSTALLATION**  
For typical use, tuning is not required
- **INSTANT BAND CHANGING**  
To any band 6 through 20 Meters
- **SLIM SILHOUETTE**  
Gain favor of family and neighbors with the slim, low profile of the R6000
- **6 METER OPERATION**  
Join the fun of the "Magic Band" and take advantage of the new HF/50 MHz transceivers
- **AFFORDABLE PRICE**  
Cushcraft delivers the best quality and performance at a price no one else can match

**Cushcraft**

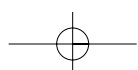
|                          |  |
|--------------------------|--|
| Specifications:          | R-6000   |
| Frequency, meters        | 6, 10, 12, 15, 17, 20  |
| Gain (dBi)               | 3  |
| VSWR at resonance        | 1.2:1 typical  |
| 2:1 bandwidth, KHz       | 6m >1300<br>10m >1700<br>12m >100<br>15m >450<br>17m >100<br>20m 300 |
| Power Watts PEP (FM)     | 1500 (500)   |
| Radiation angle, deg.    | 16   |
| Horizontal rad, deg.     | 360  |
| Height, ft (m)           | 20.5 (6.25)  |
| Mast size range, in (cm) | 1.5 -1.75 (3.8-4.4)  |
| Wind load, ft2 (m2)      | 1.5 (.14)  |
| Weight, lb (kg)          | 16 (6.25)  |
| Shipping Dimensions      | 7"x 4.5" x 63"   |



The R-6000 employs quarter wavelength stubs on 10 and 15 Meters to replace standard trap coils. The result is lower loss and wider bandwidth. The R-6000 covers all bands 6 through 15 meters at a VSWR under 2:1. On 20 meters you can select the top 300 KHz or bottom 300 KHz of the band.

The R-6000 weighs only 12-1/2 pounds (5.6 kg). It is lightweight and easy to mount for portable or permanent installations. Machined aluminum clamps and UV stable insulators guarantee years of reliable service. The R-6000 comes with the standard warranty of one year from purchase - plus the industry's leading technical support team stands behind each antenna.

The R-6000 makes an excellent diversity antenna to complement even the most complete stations, or pack up the R-6000 for a trip to the DX location of your dreams.





# Cushcraft HF Vertical Antennas

## 6-80 Meters

*Cushcraft R8 and R9 cover 6, 10, 12, 15, 17, 20, 30, 40 Meters ... and the new R9 expands coverage to .... 80 Meters!*

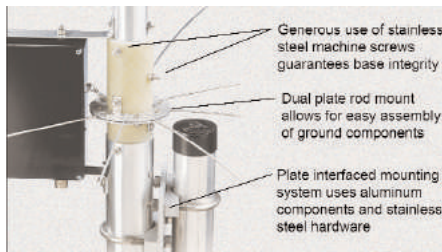
- **NO GROUND RADIALS NEEDED**
- **RUGGED CONSTRUCTION**
- **INSTANT BAND CHANGING**
- **SLIM, LOW PROFILE SILHOUETTE**

### 6-40 Meters



**R-8**  
**\$539<sup>95</sup>**  
**6-40M**

**R-8/R-9 Rugged Design**

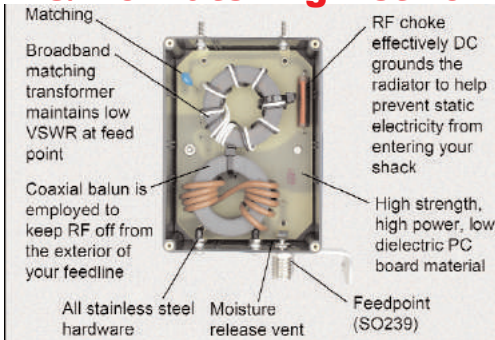


Generous use of stainless steel machine screws guarantees base integrity

Dual plate rod mount allows for easy assembly of ground components

Plate interfaced mounting system uses aluminum components and stainless steel hardware

### R-8/R-9 Matching Network



Matching

Broadband matching transformer maintains low VSWR at feed point

Coaxial balun is employed to keep RF off from the exterior of your feedline

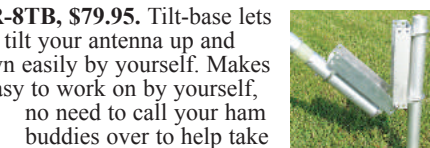
All stainless steel hardware

Moisture release vent

RF choke effectively DC grounds the radiator to help prevent static electricity from entering your shack

High strength, high power, low dielectric PC board material

Feedpoint (SO239)



**R9** is 31.5 feet tall, 25 lbs. Mounting mast 1.25 to 2 inches. Wind surface area is 4 square feet. Wind survivability is 60 MPH.

**R8, \$539.95.** Like R9, but less 75/80 Meters.

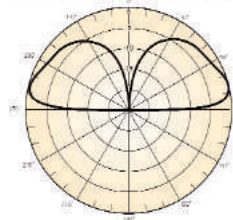
**R-8TB, \$79.95.** Tilt-base lets you tilt your antenna up and down easily by yourself. Makes it easy to work on by yourself, no need to call your ham buddies over to help take it down and lift back up.

**R-8GK, \$59.95.** 3-point guy kit for vertical antenna or antenna mast.

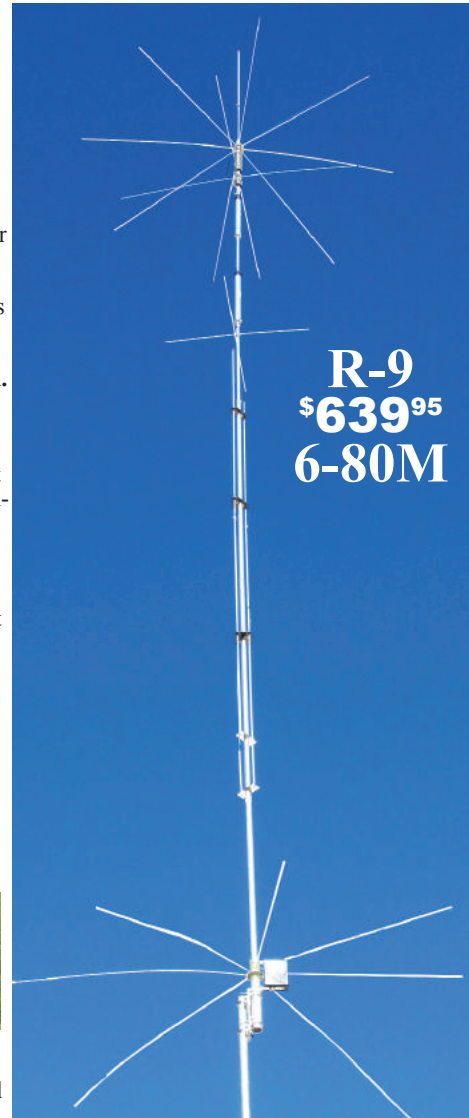
Consists of guy brackets, thimbles, galvanized steel stakes, 150' Danscord rope.

Everything needed to secure your antenna/mast safe in high winds.

Typical elevation radiation pattern



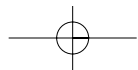
The R-8 AND R9 provide 360 degree (omni) coverage on the horizon and a low radiation angle in the vertical plane for a better DX.



**R-9**  
**\$639<sup>95</sup>**  
**6-80M**

**Cushcraft**

| Specifications          | R8   | R9   |
|-------------------------|--|--|
| Frequency Meters        | 6,10,12,15,17,20,30,40   | 6,10,12,15,17,20,30,40,80  |
| Gain (dBi)              | 3  | 3  |
| VSWR at resonance       | 1.3:1 typical  | 1.3:1 typical  |
| VSWR 2:1 bandwidth, KHz | 40M(150) 30M(>50) 20M(>350) 17M(>100) 15M(>450) 12M(>100) 10M(>1500) 6M(>1500) | 80M(35) 40M(150) 30M(>50) 20M(>350) 17M(>100) 15M(>450) 12M(>100) 10M(>1500) 6M(>1500) |
| Power Watts PEP (FM)    | 1500 (500)   | 1500 (750)   |
| Radiation angle, deg.   | 16   | 16   |
| Horizontal rad., deg.   | 360  | 360  |
| Height, ft. (m)         | 28.5 (8.7)   | 31.5 (10.7)  |
| Mast size range, in(cm) | 1.25-2" (3.18-5.1)   | 1.25-2" (3.18-5.1)   |
| Wind load, ft2 (m2)     | 1.5 (.14)  | 1.5 (.14)  |
| Wind surface area       | 2.5 sq. ft(0.23m)  | 4 sq. ft.(0.33m)   |
| Weight, lb.(kg)         | 23 (10.5)  | 25 (12.5)  |
| Shipping Dimensions     | 3.75x5.25x84.5"  | 3.75x5.25x84.5"  |



# Cushcraft Restricted-Space HF Verticals **6-20 Meters**

## MA-5VA Five-Band Restricted-Space Vertical Antenna

The MA-5VA delivers superb HF multi-band performance while maintaining a neighbor-friendly low profile. Perfect for roof-mounts, patios, small backyards, condos, and motor homes, this 6.5-pound bantam-weight installs quickly without the “heavy lifting” required of larger antennas. Whether you install it permanently or take it down between operating sessions, you’ll appreciate special features like the MA-5VA’s gust-absorbing fiberglass base, resin-sealed resonator coils, aluminum mast blocks, and all-stainless hardware. Best of all, the MA-5VA is solidly engineered-its “no-radial” OCFD design delivers low SWR and high performance without using exotic matching networks or tuners. Simply connect a radio and you’re ready to work the world! The MA-5VA is the perfect restricted-space DX solution for 20, 17, 15, 12, and 10 meters!

- **Light-weight rugged construction**
- **Rapid breakdown for storage or transport**
- **No exotic matching networks or tuners**
- **Advanced “no radial” OCFD design**

**MA5V6M, \$49.95. Six Meter Add-on Kit for MA5VA.**

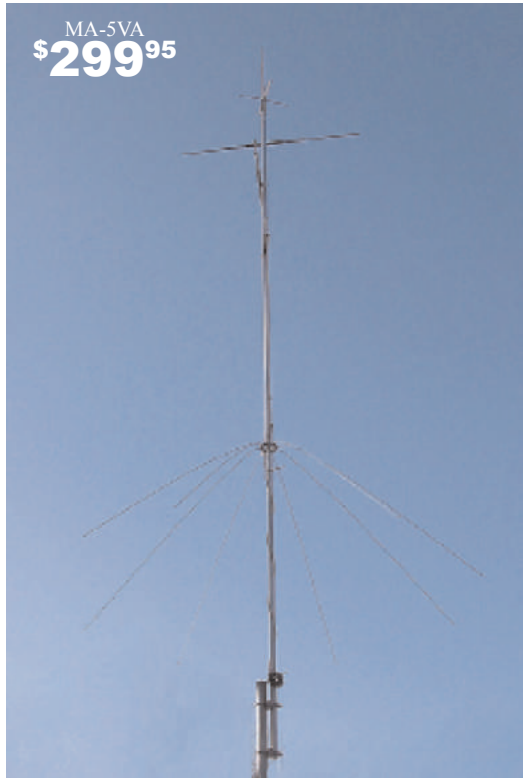
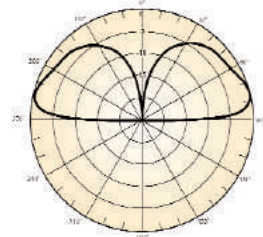
| Specifications:       | MA5VA                                      | MA6VA                                      |
|-----------------------|--|--|
| Frequency meters      | 10, 12, 15, 17, 20                         | 6, 10, 12, 15, 17, 20                      |
| Gain (dBi)            | 1-2  | 1-2  |
| VSWR at resonance     | 1.2:1 All bands                            | 1.2:1 All bands                            |
| Wind surface area     | .82 ft <sup>2</sup> (.076 m <sup>2</sup> ) | .82 ft <sup>2</sup> (.076 m <sup>2</sup> ) |
| Wind Survival, mph    | >80  | >80  |
| Power Watts PEP, (FM) | 250 W (100W)                               | 250 W (100W)                               |
| Height, ft (m)        | 14.7 (4.48)                                | 14.7 (4.48)                                |
| Weight, lb (kg)       | 6.5 (2.95)                                 | 6.9 (3.13)                                 |
| Shipping Dimensions   | 3"x 3"x 80"-1/2"                           | 3"x 3"x 80"-1/2"                           |

## MA-6VA Six-Band Restricted-Space Vertical Antenna

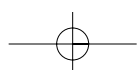
Made for today’s expanded-coverage radios, Cushcraft’s MA-6AV provides the same great versatility and performance of the MA5VA- with the addition of 6 Meters. Enjoy congestion-free FM-repeater operation and explore the world of exotic seasonal band openings on 50 MHz CW and SSB. It’s a great way to add amateur radio’s “magic band” to your operating repertoire!

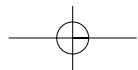
- **Neighbor-friendly low profile**
- **Rugged light-weight construction**
- **Air-baggage transportable (longest tube is 54")**
- **Robust mounting hardware included**
- **New bandwidth enhancing 8-rod counterpoise**
- **New low loss balun**

Typical elevation radiation pattern



**Cushcraft**



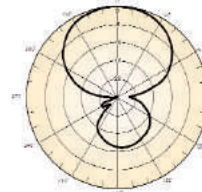


# Cushcraft Compact HF Multi-Band Beam **10-20 Meters**

## The MA-5B, Compact HF Multi-Band Beam <sup>MA-5B</sup> \$499<sup>95</sup> Small Footprint -- Big Signal

MA-5B, Cushcraft's multiband HF antenna provides 5-Band operation in a package small enough to mount to a tripod. The MA-5B is a design that does not sacrifice ruggedness, performance and power handling for size and ease of installation.

| Specifications:           | MA5B                                   |  |  |  |  |
|---------------------------|--|--|--|--|--|
| Frequency,Bands           | 10                                     | 12                                     | 15                                     | 17                                     | 20                                     |
| Elements per Band         | 2                                      | 1                                      | 2                                      | 1                                      | 2                                      |
| Gain, dBi                 | 5.3                                    | 2                                      | 4.8                                    | 2                                      | 3.6                                    |
| Front to Back Ratio, dB   | 10                                     | 0                                      | 12                                     | 0                                      | 22                                     |
| Side Lobe Atten. dB       | 25                                     | 20                                     | 25                                     | 20                                     | 25                                     |
| VSWR 2:1 Bandwidth, KHz   | 655                                    | >10                                    | 225                                    | >100                                   | 90                                     |
| Longest Element, in (cm)  | 17.1'(52m)                             | 17.1'(52m)                             | 17.1'(52m)                             | 17.1'(52m)                             | 17.1'(52m)                             |
| Turning Radius, ft (m)    | 8.8'(2.7m)                             | 8.8'(2.7m)                             | 8.8'(2.7m)                             | 8.8'(2.7m)                             | 8.8'(2.7m)                             |
| Boom Length, ft (m)       | 7.3'(2.2)                              | 7.3'(2.2)                              | 7.3'(2.2)                              | 7.3'(2.2)                              | 7.3'(2.2)                              |
| Boom Diameter, ft (m)     | 1.5"(3.8cm)                            | 1.5"(3.8cm)                            | 1.5"(3.8cm)                            | 1.5"(3.8cm)                            | 1.5"(3.8cm)                            |
| Max. Wind Surface Area    | 3.22ft <sup>2</sup> (3m <sup>2</sup> ) | 3.22ft <sup>2</sup> (3m <sup>2</sup> ) | 3.22ft <sup>2</sup> (3m <sup>2</sup> ) | 3.22ft <sup>2</sup> (3m <sup>2</sup> ) | 3.22ft <sup>2</sup> (3m <sup>2</sup> ) |
| Max. Power Watts PEP (FM) | 1200W (400W)                           | 1200W (400W)                           | 1200W (400W)                           | 1200W (400W)                           | 1200W (400W)                           |
| Weight, lb (kg)           | 26.5 (12)                              | 26.5 (12)                              | 26.5 (12)                              | 26.5 (12)                              | 26.5 (12)                              |

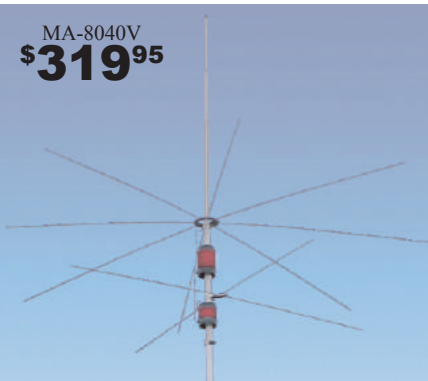


**High Front to Back Ratio on 10/15/20 M**

# Cushcraft Low Frequency Verticals **160 and 80/40 Meters**

## MA-8040V 3.5-7.3 MHz Vertical Antenna

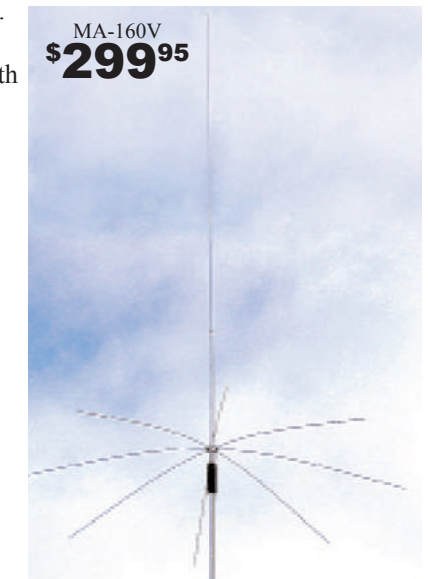
MA-8040V is a compact self-supporting HF vertical that delivers excellent DX-hunting performance on 80 and 40 Meters. Only 27 feet tall and weighing in at less than nine pounds, it is small and light enough for one person to handle easily without assistance. Once installed, the MA-8040V virtually disappears against a backdrop of trees and foliage. Parallel resonators use a combination of inductive and capacitive top loading to deliver automatic band switching, high efficiency, and rock-bottom SWR on both bands. Designed to handle maximum legal power and built to last year after year, it's the perfect DX solution when the sunspots silence the higher bands. Radial kit included.



**MA-8040V \$319<sup>95</sup>**

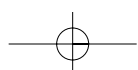
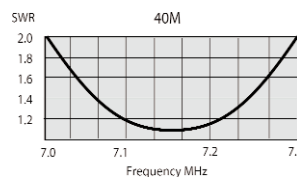
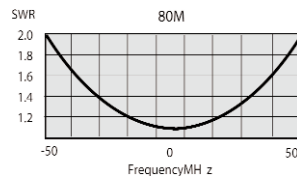
## MA-160V 160-Meter Vertical Monopole Antenna

MA-160V is a compact efficient vertical especially designed for working top-band DX from an average-size house lot. A low launch angle and deep overhead null combine to pull in distant stations while rejecting local QRM. The MA-160V features a heavy-duty high-Q copper loading coil plus a wide 100-inch diameter stainless capacitive hat for high efficiency, resiliency and 1500-Watt power handling. An adjustable stinger provides coverage on any 40-kHz segment across the 1.8-2.0 MHz band. Weighing only 12-pounds, the MA-160V installs easily and blends in with backyard trees and vegetation. Each antenna comes with a 400-foot spool of ground-radial wire plus a Danscord™ insulated guying kit.



**MA-160V \$299<sup>95</sup>**

| Specifications:                | MA8040V                        | MA160V          |
|--------------------------------|--------------------------------|-----------------|
| Frequency MHz                  | 3.5-7.0 (80M)                  | 1.8-2.0         |
| (MA8040V Tunable)              | 7.0-7.3 (40M)                  |                 |
| Gain, dBi (radial / dependant) | 0 (80M), 2 (40M)               | 0               |
| Minimum VSWR                   | 1.1:1                          | 1.1:1           |
| Bandwidth (2:1 SWR)            | 100 KHz (80M)<br>300 KHz (40M) | 40 KHz          |
| Polarization                   | Linear Vertical                | Linear Vertical |
| Power Handling PEP             | 1500 W                         | 1500 W          |
| Vertical Height (m)            | 23'-27'(7-8.2)                 | 30'-36'(12-14)  |
| Weight (antenna only) lbs.(kg) | 9.0 (4.1)                      | 12 (5.4)        |
| Mount Style                    | Mast                           | Mast            |
| Ground Radials                 | 8 Recommended                  | 8 Recommended   |

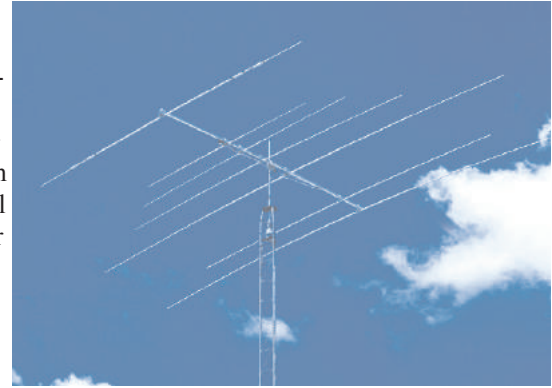


# Cushcraft HF Yagis and Log Periodics **10-20 Meters**

## **X-7 BIG THUNDER TRIBANDER YAGI**

The X-7 Triband Yagi is geared to set new standards in both radiating performance and mechanical reliability. The product development team has employed the latest computer modeling technology to achieve a superior electrical design as well as elegant new mechanical hardware and assembly techniques. Each mechanical component was designed to 100+ MPH wind survival with a 1.25 safety factor. Traps were eliminated from the high current driven elements and reflectors using the new 4L Log Cell design, which yields virtual monoband performance and maximum power handling capability. Traps are employed only in the lower current directors for increased gain and sharper pattern. The result is a truly high performance antenna which will easily handle the legal limit.

- **New High Efficiency Computer Optimized Design for Maximum Gain and Ultra Clean Radiating Pattern**
- **100+ MPH Construction for Best Reliability and Long Life**
- **NEW 4L Log Cell Driven Elements for better VSWR Bandwidth**
- **Trapless Driven Elements and Reflectors for Reliable Power Handling**

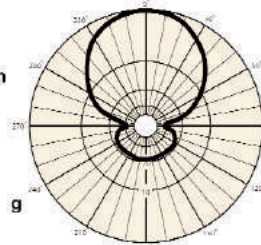


X-7  
**\$1099<sup>95</sup>**

**Cushcraft**

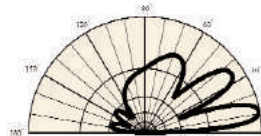
| Specifications:                             | X-740        | X7  | ALS2010       |
|---|--------------|---|---------------|
| Frequency Coverage                          | 40 Meters    | 10, 15, 20 (Meters)                                   | 13.5-32 MHz   |
| Number of Elements                          | 1            | 7   | 8             |
| Gain, dBi                                   | 2            | 12.5 (20m) @14°<br>13.0 (15m) @12°<br>12.9 (10m) @12° | 6.4           |
| Front to Back Ratio, dB                     | 30           | 20  | 15-20         |
| SWR 2:1 Bandwidth                           | 100 KHz      | 600 KHz (20m)<br>750 KHz (15m)<br>1700 KHz (10m)      | 18.5 MHz      |
| Longest Element, in (cm)                    | 41 (12.5)    | 37.2' (11.33)   | 38 (11.58)    |
| Turning Radius, ft (m)                      | 20.0' (6.09) | 20.0' (6.09)  | 19.25' (5.86) |
| Boom Length, ft (m)                         | 18' (5.48)   | 18' (5.48)  | 18' (5.48)    |
| Wind Load ft <sup>2</sup> (m <sup>2</sup> ) | 9.9 (.92)    | 7.9 (.73)   | 10.1 (.93)    |
| Max. Power Watts PEP                        | 1500W        | 1500W   | 1500W         |
| Weight, lb (kg)                             | 80 (36.3)    | 60 (27.2)   | 55 (25.5)     |

**X7**

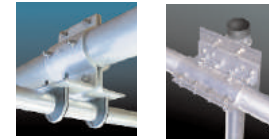


**Azimuth**

Typical radiation patterns.  
Height: One wavelength.  
Frequency: 20 M



### **40-Meter Add-On Kit for X-7 Antenna**



X-740  
**\$369<sup>95</sup>**

Add this X-740 kit to your X-7 antenna to get 40-Meter coverage. Step-by-step instructions, quick and easy modification for more band coverage.

## **LOG PERIODIC**

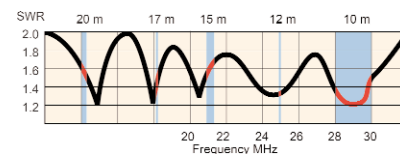
### **Skylog ASL-2010, 13 - 32 MHz**

The ASL-2010 log periodic antenna is the most cost effective, high gain, five band antenna solution on the market today. Skylog offers continuous operation from 13.5 to 32 MHz. Antenna gain and beamwidth are constant for uniform coverage from 10 through 20 meters. The ASL-2010 is rated for continuous duty at full legal power. Skylog is designed for maximum gain on a manageable 18 foot boom with only 10.1 square feet of wind surface area. All stainless steel hardware and rugged element design are only some of the many features that provide years of superior antenna performance. Skylog ASL-2010 is the smart choice for multiband HF operation.

- **Continuous five band coverage 13.5-32 MHz**
- **Constant over entire frequency range**
- **6.4 dBi gain, 65 degree beamwidth**
- **18 foot boom and 19.5 foot turning radius**
- **High efficiency design, antenna stays cool and VSWR steady**



ASL-2010  
**\$999<sup>95</sup>**



## Cushcraft VHF/UHF Yagis

### 6-2 Meters, 440 MHz



A6270-13S  
\$279<sup>95</sup>

#### A6270-13S 6 Meter / 2 Meter / 70 CM

Cushcraft's multiband directional yagi is designed to provide hobbyists who have limited tower or mast space with directional antenna performance on three of the most popular bands. The A6270-13S combines 6 meters, 2 meters and 70 centimeters on one boom. The 2m and 70cm interlaced Yagis are designed to share a common feed line. An independent feed line drives the 6m portion.

- **Outstanding performance thanks to Cushcraft's unmatched multiband design technology and experience.**
- **Rugged stainless steel mounting hardware is easy to install and maintain.**

| Specifications:                             | A627013S     |              |              |
|---|--------------|--------------|--------------|
| Frequency MHz                               | 50-54        | 144-148      | 430-450      |
| Number of Elements                          | 3            | 5            | 5            |
| Gain, dBi                                   | 8            | 10           | 10           |
| Front to Back Ratio dB                      | 20           | 20           | 18           |
| SWR 1.2:1 Typical                           | >1           | >4           | >10          |
| 2:1 Bandwidth, MHz                          |              |              |              |
| Longest Element, in (cm)                    | 117 (300)    | 117 (300)    | 117 (300)    |
| Turning Radius, ft (m)                      | 6.16' (1.87) | 6.16' (1.87) | 6.16' (1.87) |
| Boom Length, ft (m)                         | 8.66 (2.66)  | 8.66 (2.66)  | 8.66 (2.66)  |
| Wind Load ft <sup>2</sup> (m <sup>2</sup> ) | 2.52 (0.23)  | 2.52 (0.23)  | 2.52 (0.23)  |
| Max. Power Watts PEP                        | 1000W        | 350W         | 350W         |
| Weight, lb (kg)                             | 9.5 (4.3)    | 9.5 (4.3)    | 9.5 (4.3)    |

## Cushcraft HF Monobander

### 40 Meters



XM-240  
\$999<sup>95</sup>

#### XM-240 Big Thunder Monobander

Cushcraft's XM-240 monobander utilizes rugged Big Thunder hardware that combined with high strength aluminum tubing affords the antenna outstanding wind survivability. Phillystran boom trusses are used in the XM-240 design for extra boom stability. Unique feed system is a 50 ohm direct feed VSWR is flat across the band. A high power 1:1 balun is included. The XM-240 is field-proven or reliability and performance. Excellent front-to-back ratio and gain makes the XM-240 the right choice for DX and for stacking as well.

**Cushcraft**



Element Hardware



Boom-to-Mast

| Specifications:                | XM240      |
|--------------------------------|------------|
| Frequency MHz                  | 7.0 - 7.3  |
| Number of Elements             | 2          |
| Gain, dBi                      | 6          |
| Front to Back Ratio, dB        | 20-25      |
| Side Lobe Atten, dB            | >35        |
| VSWR Typical Minimum           | 1.1:1      |
| Longest Element, in (cm)       | 43 (13.1)  |
| Turning Radius, ft (m)         | 24.3 (7.4) |
| Boom Length, ft (m)            | 22 (6.7)   |
| Wind Surface Area sq ft (sq m) | 5.5 (.51)  |
| Wind Load @ 80 mph, lbs (kg)   | 142 (64.4) |
| Max. Power Watts PEP           | 1500W      |
| Weight, lb (kg):               | 55 (25)    |

## Cushcraft 2, 6 and 10 Meter "SQUALO" Antennas



Cushcraft ASQ-2  
\$119<sup>95</sup>

Cushcraft's *SQUALO* is a full half-wave, horizontally polarized omnidirectional antenna. Outstanding all-around performance is achieved through a 360 degree pattern with no deep nulls. The square shape allows full electrical length in compact dimen-

sions. Direct 52 Ohm *Reddi-Match* feed provides ease of tuning and broad band coverage. *Squalo* is well suited for horizontally polarized mobile or fixed operation on SSB, CW, and legacy AM. The omni-directional pattern is great for DX beacons and spotting, and elements may be stacked for added gain. *Squalo* is completely universal for mounting anywhere. A horizontal mast support is included for mast or tower mounting. Cushcraft *Squalos*

are ideal for net-control, monitoring or as a general



ASQ-10 \$159<sup>95</sup>

Mast-mounted ASQ-10 Squalo

coverage antenna. Minimum SWR. Handles 200 Watts PEP CW/SSB.

| Model # | Band     | Size (LxW)   | Price    |
|---------|----------|--------------|----------|
| ASQ-2   | 2-Meter  | 10x10 inches | \$119.95 |
| ASQ-6   | 6-Meter  | 30x30 inches | \$139.95 |
| ASQ-10  | 10-Meter | 50x50 inches | \$159.95 |
| ASQ-15  | 15-Meter | 65x65 inches | \$189.95 |
| ASQ-20  | 20-Meter | 100x100 in.  | \$229.95 |

[www.cushcraftamateur.com](http://www.cushcraftamateur.com)

# Cushcraft Multiband HF Yagis

## 10 - 40 Meters

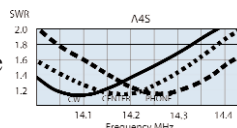
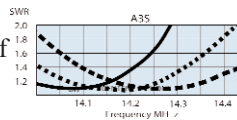
### A-4S Four Element Beam - 10, 15 & 20 Meters

A-4S is the true, high performance tribander. Precisely tuned high-power traps, carefully selected element lengths, and proper spacing combine to make the A-4S the preferred antenna for your HF work! This is the premium antenna with all the features that you want. High gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps and hardware are stainless steel. A-4S has pinned boom sections and formed aluminum brackets to keep elements straight in all conditions. Our solid construction keeps the A-4S on the tower! Add 40 meters with A744 kit.



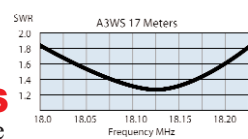
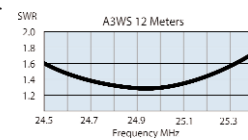
### A-3S Three Element Beam - 10, 15 & 20 Meters

A-3 World Ranger, our top selling tribander, has become the A-3S with all stainless steel hardware. It's a real power-house in a small space and lets you work the pile-ups with confidence. All you need is a lightweight tower and rotator to enjoy the benefits of the A-3S. It's a proven performer in DX-peditions and contests. Handles full power from your amp. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware. When space is a premium, but you want benefits of a full-size tribander, A-3S is right for you! Add 40M with A743 kit.



### A-3WS WARC Bands 3 Element, 12 & 17M

Enjoy the excitement of the WARC bands with this popular beam. A-3WS gives full performance on 12/17 meters. With the addition of our easy-to-use A-103 add on kit, it will also cover 30 meters. A-3WS needs only a lightweight tower and rotator or mount it above an existing tribander. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware.



Cushcraft

### 30/40M Add Kits for A-3S/A-4S/A-3WS

40 meters will come alive by adding one of these kits to the dipole of your A-3S or A-4S. Kits include high power traps with heavy wall fiberglass insulator and all hardware. A simple adjustment allows 30 meter operation. For our newest beam, the A3WS, we have a 30 meter add on kit, the A-103.

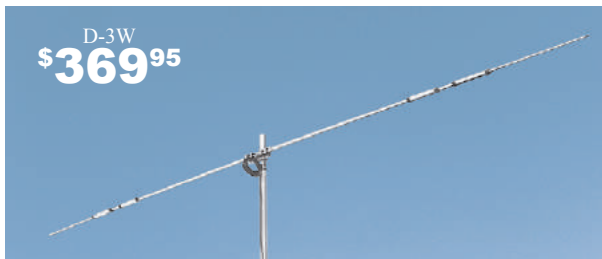
**A-743, \$199.95.** 7 MHz/10 MHz kit for A-3S;  
**A-744, \$199.95.** 7 MHz/10 MHz kit for A-4S;  
**A-103, \$199.95.** 10 MHz kit for A-3WS.

| Specifications:      | A-743/A744                                | A-743/A744                        | A-103         |
|----------------------|---|-----------------------------------|---------------|
| Band                 | 7 MHz (40 m)                              | 10 MHz (30m)                      | 10 MHz (30m)  |
| Adapter kit, ft (m)  | 33.19 min.<br>35.33 max.<br>(10.12-10.77) | 27.12<br>28.4 max.<br>(8.27-8.66) | 32.1<br>(9.8) |
| Windloading ft2 (m2) | .58 (.05)                                 | .27 (.03)                         | .45 (.04)     |
| Bandwidth, KHz       | 125                                       | 150                               | 250           |
| Power Rating, Watts  | 1500 PEP                                  | 1500 PEP                          | 1500 PEP      |
| Side Rejection, dB   | 20  | 20                                | 20            |
| Weight, lb (kg)      | 3.44 (1.56)                               | 2.29 (1.04)                       | 3.25 (1.47)   |

| Specifications:                              | A4S                      | A3S                      | A3WS                     |
|--|--------------------------|--------------------------|--------------------------|
| Frequency MHz                                | 28, 21, 14               | 28, 21, 14               | 24, 18                   |
| Number of Elements                           | 4                        | 3                        | 3                        |
| Gain, dBi                                    | 8.9                      | 8.0                      | 8.0                      |
| Front to Back Ratio, dB                      | 25                       | 25                       | 25                       |
| SWR 1.2:1 Typical, 2:1 Bandwidth, MHz        | >500                     | >500                     | >300                     |
| 3 dB Beam Width, Deg E Plane                 | 58                       | 60                       | 60                       |
| Longest Element, in (cm)                     | 32 (9.75)                | 27.75 (8.45)             | 25.1 (7.66)              |
| Turning Radius, ft (m)                       | 18.4 (5.49)              | 15.5 (4.72)              | 14.4 (4.4)               |
| Boom Length, ft (m)                          | 18 (5.48)                | 14 (4.27)                | 14 (4.27)                |
| Wind Load, ft <sup>2</sup> (m <sup>2</sup> ) | 1.80 (0.17)              | 4.36 (0.40)              | 4.1 (0.38)               |
| Mast Size Range, in (cm)                     | 1.25-2.00<br>(3.18-5.08) | 1.25-2.00<br>(3.18-5.08) | 1.25-2.00<br>(3.18-5.08) |
| Max. Power Watts PEP(FM)                     | 1500W (1500)             | 1500W(1500)              | 1500W(1500)              |
| Weight, lb (kg):                             | 37 (16.8)                | 27 (12.9)                | 22.5 (10.2)              |

### Rotatable Dipoles

The World Ranger Dipoles give bi-directional patterns and rotatable convenience. You can mount them high and away from the trees for better performance than a wire dipole. These single and multi-band dipoles feature high-performance traps, heavy wall tubing, and rugged hardware for years of enjoyment.



| Specifications:                       | D40 \$399.95  | D4 \$419.95   | D3 \$369.95   | D3W \$369.95  |
|---------------------------------------|---------------|---------------|---------------|---------------|
| Frequency MHz                         | 7             | 28,21,14,7    | 28,21,14      | 24,18,10      |
| SWR 1.2:1 Typical, 2:1 Bandwidth, KHz | 40>125        | >350          | >500          | >200          |
| Power Rating Watts PEP (CW)           | 1500 (500)    | 1500 (500)    | 1500 (500)    | 1500 (500)    |
| Length ft (m)                         | 42.25 (12.88) | 35.8 (10.92)  | 25.8 (7.86)   | 34.0 (10.37)  |
| Mast Size, in(cm):                    | 1.5-2 (3.8-5) | 1.5-2 (3.8-5) | 1.5-2 (3.8-5) | 1.5-2 (3.8-5) |
| Wind Load, ft2 (m2)                   | 1.3 (.12)     | 1.3 (.12)     | .9 (.08)      | .9 (.08)      |
| Weight, lb (kg):                      | 12 (5)        | 13 (6)        | 9 (4)         | 11 (5)        |

# Cushcraft Dual Band Ringos & Yagis

# 2M/440 MHz

## AR-270B 5.5/7.5 dB Dual Band Ringo

This model gives very high gain with a low angle of radiation and it is only 7.7 feet (2.35 m) high. The AR-270B is computer optimized with two 5/8 wavelength collinear elements on 2 meters and four 5/8 wavelength elements on 70 cm. It is broadbanded for minimum SWR on both bands. It is easy to assemble with three rugged aluminum tubing sections, a durable mast mount and factory sealed coils for best performance.

## AR-270 3.0/ 5.5 dB Dual Band Ringo

The "Dual Wonder" AR-270 is only 3.75 feet (1.1 meters) high. It has great performance for its size, making it the most popular 2m/70 cm base antenna.

| Specifications:                       | AR270            |         | AR270B           |         |
|---------------------------------------|------------------|---------|------------------|---------|
| Frequency MHz                         | 144-148          | 430-450 | 144-148          | 430-450 |
| Gain, dBi                             | 3.0              | 5.5     | 5.5              | 7.5     |
| SWR 1.2:1 Typical                     | >4               | >15     | >4               | >15     |
| 2:1 Bandwidth, MHz                    |                  |         |                  |         |
| Horizontal Radiation Pattern, Degrees | 360              | 360     | 360              | 360     |
| Height, ft, (m)                       | 3.75 (1.13)      |         | 7.7 (2.3)        |         |
| Mast Size Range, in                   | 1.25-2 (3.2-5.1) |         | 1.25-2 (3.2-5.1) |         |
| Radial Length, in (cm)                | 6.75 (17.1)      |         | 6.75 (17.1)      |         |
| Wind Load, ft2 (m2)                   | 0.27 (0.03)      |         | 0.47 (0.044)     |         |
| Power, Watts FM                       | 250              |         | 250              |         |
| Weight, lb (kg)                       | 2 (0.9)          |         | 2.4 (1.09)       |         |



**Cushcraft**

## A270-10S and A270-6S 10 and 7.8 dB Dual Band Yagis

Increase your range by selecting one of the new Cushcraft dual band Yagis on 2 meters and 70 cm. You can point the antenna at stations while you are in QSO with them. This will direct more of your output power when transmitting at the same time reducing interference and increasing signal strength when receiving. These antennas are perfect for packet applications. Assembly is a snap with our fully illustrated assembly manuals.

| Specifications:          | A270-10S         |      | A270-6S          |      |
|--------------------------|------------------|------|------------------|------|
| Frequency                | VHF              | UHF  | VHF              | UHF  |
| Number of Elements       | 5                |      | 3                |      |
| Forward Gain, dBi        | 10               |      | 7.8              |      |
| Front to Back Ratio, dB  | 20               | 18   | 20               | 18   |
| SWR 1.2:1 Typical        | 3.4              | 3.10 | 3.4              | 3.20 |
| 2:1 Bandwidth, MHz       |                  |      |                  |      |
| Power Rating, Watts PEP: | 350              |      | 350              |      |
| 3dB Beamwidth, Degrees   |                  |      |                  |      |
| E Plane:                 | 52               |      | 66               |      |
| H Plane:                 | 60               |      | 108              |      |
| Longest Element, in (cm) | 40.3 (102.4)     |      | 41 (104.1)       |      |
| Turning Radius, ft (m)   | 6 (1.8)          |      | 2.8 (.85)        |      |
| Boom Length, ft (m)      | 6.17 (1.9)       |      | 2.8 (.85)        |      |
| Mast Size Range, in (cm) | 1.25-2 (3.2-5.1) |      | 1.25-2 (3.2-5.1) |      |
| Wind Load, ft2 (m2)      | .725 (.07)       |      | .3 (.02)         |      |
| Weight, lb (kg):         | 1.8 (.81)        |      | 1.7 (.8)         |      |



# Cushcraft Ringo Ranger 2 Meters, 220/440 MHz

## Ringo Ranger II, Ringo Ranger, Ringo

### Ringo Ranger II

The Ringo Ranger II has more gain, less windload, and more mechanical integrity than other two meter antennas. You'll quickly appreciate the benefits of this amazing antenna! Based on the original WIBX Ringo, the Ringo Ranger II is the latest design featuring three 5/8 wave radiating elements and an adjustable 1/8 wave phasing stub. The result is a very low angle of radiation over your coverage area. The Ringo Ranger II has built-in lightning protection, UV-stabilized insulators, heavy wall tubing, improved decoupling radials to eliminate feedline radiation, and all-weather performance.

| Specifications:                             | ARX2              | ARX2B               | ARX220B             | ARX450B            |
|---|-------------------|---------------------|---------------------|--------------------|
| Frequency MHz                               | 135-160           | 135-160             | 222-225             | 435-450            |
| SWR 1.2:1 Typical                           | >6                | >3                  | >5                  | >5                 |
| 2:1 Bandwidth, MHz                          |                   |                     |                     |                    |
| Gain, dBi                                   | 5.5               | 7.0                 | 7.0                 | 7.0                |
| Power Rating, Watt FM                       | 1000              | 1000                | 500                 | 500                |
| Radiation Angle, Deg.                       | 16                | 7                   | 7                   | 7                  |
| Horizontal Radiation Pattern, Degrees       | 360               | 360                 | 360                 | 360                |
| Radiator Base Dia, in (cm)                  | 5 (12.7)          | .75 (1.9)           | .75 (1.9)           | .50 (1.2)          |
| Height, ft. (m)                             | 12.5 (3.8)        | 14 (4.3)            | 9.3 (2.8)           | 4.9 (1.5)          |
| Mast Size Range, in (cm):                   | 1-1.25 (2.54-3.2) | 1.0-1.25 (2.54-3.1) | 1.0-1.25 (2.54-3.1) | .75-.88 (1.9-2.22) |
| Wind Load ft <sup>2</sup> (m <sup>2</sup> ) | .33 (.03)         | 0.5 (0.05)          | 0.3 (0.03)          | .2 (.02)           |
| Radial Length, in (cm)                      | 20.5 (52.1)       | 20.5 (52.1)         | 13.1 (33.7)         | 6.75 (17.1)        |
| Weight, lb (kg)                             | 4 (1.8)           | 6 (2.7)             | 5 (2.3)             | 1 (.45)            |

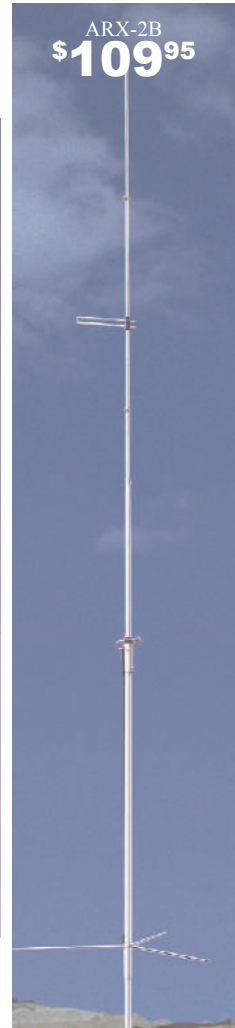
**Cushcraft**

ARX-450B  
**\$99<sup>95</sup>**

ARX-220B  
**\$114<sup>95</sup>**

ARX-2  
**\$79<sup>95</sup>**

ARX-2B  
**\$109<sup>95</sup>**



### Ringo

These are the original WIBX F M Ringos. If you want a combination of compact size, wide bandwidth, a low radiation angle, these economical antennas are just for you. Since radials are not needed, you can even use our Ringos indoors. Our Ringos are 1/2 wave and include built-in lightning protection. Put up one of these easily installed antennas and start enjoying FM!

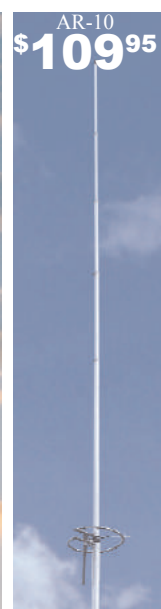
| Specifications:                              | AR2       | AR6        | AR10        | AR450     |
|--|-----------|------------|-------------|-----------|
| Frequency MHz                                | 135-160   | 50-54      | 28-29.7     | 440-460   |
| Gain, dBi                                    | 3         | 3          | 3           | 3         |
| Radiation Angle, Deg.                        | 16        | 16         | 16          | 16        |
| Horizontal Radiation Pattern, Degrees:       | 360       | 360        | 360         | 360       |
| SWR 1.2:1 Typical.                           | 10        | 2          | >1.5        | 20        |
| 2:1 Bandwidth, MHz                           |           |            |             |           |
| Ring Diameter, in (cm)                       | 5 (12.7)  | 13 (33)    | 13 (33)     | 3.5 (8.9) |
| Radiator Base Dia, in(cm):                   | .75 (1.9) | 1 (2.5)    | 1 (2.5)     | .5 (1.3)  |
| Height, ft. (m):                             | 3.9 (1.2) | 10.1 (3.1) | 17.6 (5.36) | 1.4 (.43) |
| Mast Size Range, in (cm)                     | 1-1.25    | 1-1.25     | 1-1.25      | .75-.88   |
| Wind Load, ft <sup>2</sup> (m <sup>2</sup> ) | .21 (.02) | .37 (.03)  | 1.68 (.16)  | .1 (.01)  |
| Max. Power Watts PEP                         | 1000W     | 1000W      | 1000W       | 500W      |
| Weight, lb (kg):                             | 1.5 (.68) | 2.5 (1.1)  | 4 (1.8)     | 1 (.45)   |

AR-450  
**\$47<sup>95</sup>**

AR-2  
**\$64<sup>95</sup>**

AR-6  
**\$99<sup>95</sup>**

AR-10  
**\$109<sup>95</sup>**





# Cushcraft VHF/UHF Yagis **2 Meters, 220/440 MHz**

## **A148-20T** **2 Meter Hi-Lo Cross Yagi**

Here's the antenna that solves multi-mode problems! Ten vertically polarized and ten horizontally polarized elements provide 11.1 dBi gain covering 144-148 MHz. The horizontal elements handle your CW and SSB needs, while the vertical elements cover FM. Hardware is stainless steel. Separate coax feeds allow polarization changes.



## **A224WB** **220 MHz Widebands**

This 222 MHz 4 element beam is perfect for Packet, FM repeaters, or sideband/CW. It can be mounted for vertical or horizontal polarization.

| Specifications:                   | A224WB           | A14820T          |
|-----------------------------------|------------------|------------------|
| Frequency MHz                     | 222-225          | 144-148          |
| Number of Elements                | 4                | 10/10            |
| Forward Gain, dBi                 | 10.2             | 13               |
| Front to Back Ratio, dB           | 20               | 24               |
| SWR 1.2:1 Typical                 |                  |                  |
| 2:1 Bandwidth, MHz                | >5               | >4               |
| Power Rating, Watts PEP (FM)      | 1500 (750)       | 1000 (500)       |
| 3dB Beamwidth, Degrees            |                  |                  |
| E Plane                           | 60               | 45               |
| H Plane                           | 88               | 50               |
| Side Lobe Attenuation, dB E Plane | 40               | 40               |
| Boom Length, ft (m)               | 3 (.91)          | 11 (3.4)         |
| Electrical Wavelength             | 0.5              | 1.6              |
| Longest Element, in (cm)          | 26.7 (68)        | 40.6 (103)       |
| Turning Radius, ft (m)            | 3 (.91)          | 7.5 (2.3)        |
| Mast Size Range, in (cm)          | 1.25-2 (3.2-5.1) | 1.25-2 (3.2-5.1) |
| Wind Load, ft2 (m2)               | .23 (.021)       | 0.39(0.11)       |
| Weight, lb (kg)                   | 1.7 (.77)        | 7 (3.15)         |

## **A449-6S/A449-11S** **440 MHz Beams**

Use one of these 440 MHz beams for your FM/ Packet needs. Both work great for vertical or horizontal polarization.



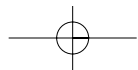
**Cushcraft**

| Specifications:             | A719B \$249.95   | A430H1S \$119.95   | A4496S \$79.95     | A44911S \$119.95   |
|-----------------------------|------------------|--------------------|--------------------|--------------------|
| Frequency MHz               | 430-450          | 430-440            | 440-450            | 440-450            |
| Number of Elements          | 19               | 11                 | 6                  | 11                 |
| Forward Gain, dBi           | 15.5             | 13.2               | 10.5               | 13.2               |
| Front to Back Ratio, dB     | 25               | 20                 | 18                 | 20                 |
| SWR 1.2:1 Typical           |                  |                    |                    |                    |
| 2:1 Bandwidth, MHz          | 20               | >10                | >10                | >10                |
| Power Rating, Watts PEP     | 2000             | 350                | 350                | 350                |
| 3dB Beamwidth, Degrees      |                  |                    |                    |                    |
| E Plane                     | 24               | 48                 | 60                 | 48                 |
| H Plane                     | 19               |                    |                    |                    |
| Side Lobe Atten.,dB,E Plane | 60               | 40                 | 30                 | 40                 |
| Boom Length, ft (m)         | 13.5 (4.1)       | 4.6 (1.39)         | 2.9 (0.89)         | 4.4 (1.35)         |
| Connector Type              | N                | UHF                | UHF                | UHF                |
| Longest Element, in (cm)    | 13.75 (34.9)     | 14 (35)            | 13 (33)            | 13 (33)            |
| Turning Radius, ft (m)      | 7.25 (2.2)       | 2.8 (.85)          | 2.9 (.89)          | 2.8 (.85)          |
| Mast Size Range, in (cm)    | 1.25-2 (3.2-5.1) | 1.25-1.5 (3.2-3.8) | 1.25-2.0 (3.2-5.1) | 1.25-1.5 (3.2-3.8) |
| Wind Load, ft2 (m2)         | 1.2 (.11)        | 0.42 (0.04)        | 0.30 (0.03)        | 0.39 (0.04)        |
| Weight, lb (kg)             | 5.6 (2.55)       | 4 (1.8)            | 3 (1.4)            | 4 (1.8)            |



## **A719B** **FM, CW and SSB 15.5 dBi**

Looking for an antenna to enhance performance on all modes of the 70 CM band? The 13.5 foot long 719B is the right choice. Mount it vertical for FM or horizontal for CW and Sideband. The A-719B joins the 2 meter A-13B2 as a classic for improved performance.



# Cushcraft Boomer Sideband VHF/UHF Yagis **2 Meters**

## A13B2 -13 Element Wideband Boomer

The A13B2 is as versatile as the A-17B2 is specialized. A13B2 will be your choice for high performance across the entire 2 meter band. New and experienced hams will enjoy 15.8 dBi gain on FM, packet, CW, or sideband across the 4 MHz operating range. The A13B2 is easily mounted vertically or horizontally for maximum performance on your favorite mode. Its optimum boom length makes it a popular antenna that fits just about anywhere. The new UltraMatch balanced feed on the A13B2 provides a 50 Ohm match via a standard SO-239 UHF female connector. Model A13B2N has N connector.



## A17B2 - 17 Element CW/SSB Boomer

The serious two meter operator who is interested in EME, aurora, scatter, SSB, CW, tropo etc, will choose the A17B2. It has 17 elements on a 4.5 wavelength boom. Our computer-aided design supported by precise test range data and the latest manufacturing technology gives you a cleaner pattern and 18 dBi gain in this long boom design. Significant enhancement is provided by the new UltraMatch balanced feed system with N-connector.



The UltraMatch is a modified T-match system that provides a balanced current distribution on your Boomer. It uses UltraLink Teflon<sup>®</sup> dielectric cable allowing for low loss high power applications. UltraMatch is completely enclosed for weather proofing. UltraMatch features an N-connector on the A17B2 and UHF SO239 on the A13B2. When all-weather performance is important, you will choose the new UltraMatched Boomers every time.



## A26B2 - 26 Element Wideband Boomer

This antenna offers the highest gain of any 2 meter FM antenna in the world. The A26B2 includes 2 complete A-13B2 antennas, stacking boom and phasing harnesses.



## A124WB - 4 Element Wideband Boomer

This is the right choice for packet systems and other applications requiring a dedicated directional antenna.



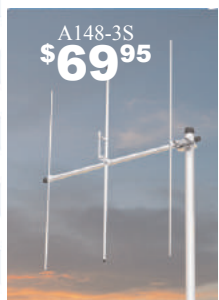
## A148-10S & A148-3S 2M Yagis

These antennas are the newest computer optimized models of our 2 meter Yagis. We have improved both the pattern and gain to give you better FM coverage. The A148-3S is the low priced quality leader for Packet, FM or even portable use. It is easily rear mounted. A148-10S is one of our best value designs with excellent gain and front-to-back ratio. Use it for long range FM or full band 2 meter operation.



**Cushcraft**

| Specifications:                             | A13B2       | A17B2         | A124WB      | A26B2       | A1483S     | A14810S      |
|---|-------------|---------------|-------------|-------------|------------|--------------|
| Frequency MHz                               | 144-148     | 144-145       | 144-148     | 144-148     | 144-148    | 144-148      |
| Elements per Band                           | 13          | 17            | 4           | 26          | 3          | 10           |
| Gain, dBi                                   | 15.8        | 18.0          | 10.2        | 17          | 7.8        | 13.2         |
| Front to Back Ratio, dB                     | 26          | 26            | 19          | 26          | 18         | 24           |
| Side Lobe Atten. dB                         | >60         | >60           | 40          | >60         |            |              |
| SWR 1.2:1 Bandwidth MHz                     | >4          | >2            | 4           | >4          | >5         | 3.4          |
| Longest Element, in (cm)                    | 39.75 (101) | 40.75 (103.5) | 40.75 (104) | 39.75 (101) | 41 (104.1) | 40.3 (102.4) |
| Turning Radius, ft (m)                      | 8.9 (2.7)   | 17.25 (5.26)  | 4 (1.22)    | 10.4 (3.18) | 2.8 (.8)   | 6 (1.8)      |
| Boom Length, ft (m)                         | 15 (4.57)   | 31 (9.45)     | 4 (1.22)    | 15 (4.57)   | 2.8 (.85)  | 12 (3.6)     |
| Electrical Wavelength                       | 2.2         | 4.5           | .5          | 2.2         |            |              |
| Wind Load ft <sup>2</sup> (m <sup>2</sup> ) | 1.8 (.17)   | 3.9 (.36)     | .34 (.034)  | 4.84 (.45)  | .27 (.02)  | 1.21 (.11)   |
| Max. Power Watts PEP                        | 1500W       | 1500W         | 1500W       | 1500W       | 1000W      | 1000W        |
| Weight, lb (kg)                             | 6.7 (.31)   | 15.75 (7.14)  | 3 (1.36)    | 21.5 (9.75) | 1.5 (.7)   | 6 (2.7)      |



## Power Divider Harness for Boomers

Our power dividers make it a snap to stack Cushcraft Boomers. Just add equal lengths of 50-Ohm coax to each of the antenna feed points.

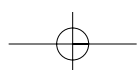


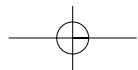
**PD-2, \$69.95.** For two A13B2 beams.  
**PD-4, \$89.95.** For four A13B2 beams.  
**PD-2N, \$79.95.** For two A17B2 beams.  
**PD-4N, \$99.95.** For four A17B2 beams.

## Stacking Kits for Cushcraft Boomers

Make stacking your Cushcraft Boomers easy. Choose the Boomer Stacking Kits for your installation. Each stacking kit includes: Stacking Aluminum boom, Power Dividers wire harness and mounting hardware.

**Order P/N: A26B2-VPK, \$169.95** for two A13B2 Boomers.  
**Order P/N: A26B2N-VPK, \$189.95** for two A17B2 Boomers.  
**Order two kits for stacking 4 Boomers.**





# Cushcraft 6 and 10 Meter Yagis

## 6-10 Meters

### 6 Meter Yagis - SSB/CW/FM

Computer-aided modeling and test range techniques were used by Cushcraft engineers to further optimize the performance of our popular 6 meter Yagis. This process means more gain and cleaner patterns with excellent front-to-back ratios. S-models have very broad bandwidth so they will not detune in bad weather. They feature stainless steel hardware for long trouble-free life. Enjoy the new popularity and exciting contacts on the 6 meter band with one of the S-series Laird Yagis. The A50-3S, A50-5S and A50-6S may be mounted vertically for FM use.



**Cushcraft**

### TEN-3 10 Meter Yagi

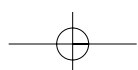
Looking for a lightweight, economical alternative to the 10 meter big boys? Choose the TEN-3. Although it's popular with novices and technicians, this antenna is for any ham who wants more gain with a good front to back ratio on 10 meters. This antenna has an 8 foot boom (2.4m) making it easy to install on a very simple mount with only a light rotator. The matching system is our proven Reddi-Match for 50 Ohm no balun feed and SO-238 connector. Make more positive contacts with the TEN-3.



| Specifications:                              | A503S                                  | A505S                                  | A50-6S                                 | TEN3                                   |
|--|--|--|--|--|
| Frequency MHz                                | 50-54                                  | 50-54                                  | 50-54                                  | 28-29.7                                |
| Number of Elements                           | 3                                      | 5                                      | 6                                      | 3                                      |
| Gain, dBi                                    | 8                                      | 10.5                                   | 11.6                                   | 8                                      |
| Front to Back Ratio, dB                      | 20                                     | 24                                     | 26                                     | 25                                     |
| Side Lobe Atten. dB                          | 25                                     | 25                                     | 25                                     | 25                                     |
| SWR 1.2:1 Typical.<br>2:1 Bandwidth, MHz     | >1                                     | >1                                     | >1                                     | >1.5                                   |
| Longest Element, in (cm)                     | 117 (300)                              | 123 (312)                              | 119 (302)                              | 18 (5.49)                              |
| Turning Radius, ft (m)                       | 6' (1.8)                               | 7.8' (2.37)                            | 11.5' (3.5)                            | 9.8' (3.0)                             |
| Boom Length, ft (m)                          | 6' (1.8)                               | 12' (3.7)                              | 20' (6.1)                              | 8' (2.44)                              |
| Wind Load, ft <sup>2</sup> (m <sup>2</sup> ) | 1.80 (0.17)                            | 2.9 (0.273)                            | 4.46 (.41)                             | 2.0 (.20)                              |
| Max. Wind Surface Area                       | 3.22ft <sup>2</sup> (3m <sup>2</sup> ) | 3.22ft <sup>2</sup> (3m <sup>2</sup> ) | 3.22ft <sup>2</sup> (3m <sup>2</sup> ) | 3.22ft <sup>2</sup> (3m <sup>2</sup> ) |
| Max. Power Watts PEP                         | 1000W                                  | 1000W                                  | 1000W                                  | 1500W                                  |
| Weight, lb (kg):                             | 7 (3.2)                                | 11 (5.0)                               | 18 (8.2)                               | 9.9 (4.45)                             |

### Cushcraft Amateur Information

Cushcraft antennas are designed to survive 80 MPH winds unless otherwise noted. Stainless steel hardware and high-grade seamless 6063-T832 tubing are used in all antennas. Cushcraft antennas are distributed by many fine dealers worldwide. For dealers in the USA, Canada and other countries, please contact Cushcraft.  
**Sales:** Cushcraft Amateur Antennas, 308 Industrial Park Road, Starkville, MS 39759 USA.  
**Phone:** 662-323-9538. **Fax:** 662-323-5803.  
**Email:** [cushcraft@mjenterprises.com](mailto:cushcraft@mjenterprises.com)  
**Warranty:** Cushcraft antennas carry a one year limited warranty.  
**Information:** Visit our website: [cushcraftamateur.com](http://cushcraftamateur.com) for additional information. FREE download of Instruction manuals.  
**Service:** Return product to: Cushcraft Antennas, 308 Industrial Park Road, Starkville, MS 39759 USA.  
**Replacement Parts:** To purchase or obtain warranty replacement parts, contact the Cushcraft factory at above address and phone/fax numbers.



# Genuine Hy-Gain Rotator Replacement Parts

## Rotator Potentiometer

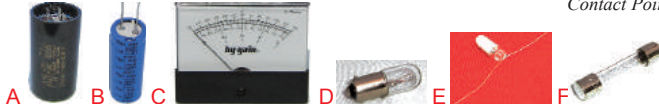
This potentiometer fits Hy-gain T2X, HAM-II, III, IV, V, and CD45II Hy-gain rotators. Has silver plated contact point that makes for smooth traveling, longer lasting and more reliable contact between pot strip and wiper arm. **RPM-1, \$39.95** 500 Ohms, for most Hy-gain rotators. **RPM-2, \$39.95.** Same as RPM-1, 1000 Ohms for AR-40.

RPM-1  
**\$39<sup>95</sup>**



Silver plated Contact Point

## Motor Capacitors/Meters/Fuses



| Figure | Part No.           | Price    | Description   |
|--------|--------------------|----------|---|
| A      | 5151501            | \$7.60   | Motor start Capacitor for CD45, HAM-II, III, IV, V, T2X                               |
| B      | 5094300            | \$13.80  | Motor start Capacitor for AR40 Rotator.   |
| C      | 5147702            | \$130.00 | Panel meter for CD45/HAM-IV, T2X with "North" scale. Uses external meter lamp.        |
| C      | 400-2678L          | \$36.40  | Meter with internal LED lamp for "Plus" series CD45, HAM-IV, T2X, had "North" scale.  |
| D      | 5089501            | \$1.43   | Incandescent light bulbs, 28 V for controller with external meter lamp. Bayonet base. |
| E      | 355-2678           | \$1.95   | Incandescent light bulbs, 28 V, for "Plus" controller meter with built-in lamp.       |
| F      | 5056300            | \$1.44   | 1/8 Amp meter circuit fuse. For CD-45, HAMIV, T2X.                                    |
| F      | 755-0103 (1034403) | \$0.40   | For HAM-III, HAM-IV, T2X, 3 Amp power fuse for CD45, Ham-II, III, IV, V, T2X          |

## Terminal board & Pigtail cable conversion kits



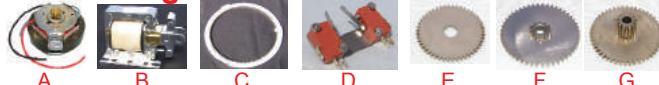
| Figure | Part No. | Price   | Description  |
|--------|----------|---------|--|
| A      | 5146510  | \$12.95 | 8-screw terminal board. Fits CD-45II, HAM-II, HAM-III, HAM-IV and T-2X. Also replaces 4 screws terminal board for AR-40.   |
| B      | 870852   | \$49.95 | 8-Pin AMP circular connector cable conversion kit. Convert 8-Pin terminal board to 8-Pin AMP water tight circular connectors cable assembly. Easy, detachable. Secured twist-and-lock. Fits CD-45II, HAM-II, HAM-III, HAM-IV and T-2X. |

## Rotator Mast Plates and U-Bolts



| Figure | Part No. | Price                   | Description   |
|--------|----------|-------------------------|---|
| A      | 5011500  | \$11.66                 | Mast Mounting plate for HAM-IV, 3/16" Zinc plated steel.  |
| A      | 5137000  | \$14.96                 | Mast mounting plate for T2X, 3/16" Zinc plated steel.   |
| B      | 5011800  | \$8.78                  | Mast mounting plate for CD45II/AR40, 3/16" Aluminum.  |
| C      | 5141610  | \$9.66                  | HAM-IV (2 sets) U-bolt with nuts, lock washers, stainless.  |
| C      | 5142310  | \$11.04                 | T2X (2 sets) U-bolt with nuts, lock washers, Stainless.   |
| C      | 5042610  | \$11.80                 | CD45II & AR40 (4 sets) U-bolt with nuts, lock washers, Zinc plated steel.   |
| D      | 5141510  | \$26.20                 | HAM-IV Rotator mounting kit, complete with mast plate, 2 sets U-bolts, nuts & bolts, 4 each tower mounting bolts. |
| E      | 5142210  | \$39.10                 | T2X Rotator mounting kit: mast plate, 2 sets U-bolts, nuts and bolts, 6 each tower mounting bolts.                |
| F      | 5042510  | \$32.80                 | CD-45II, AR40 Rotator mounting kit: mast plate, 4 sets U-bolts, nuts and bolts, 4 each tower mounting bolts.      |
| G      | 5142510  | \$15 <sup>43</sup> /SET | T2X rotator to tower stainless mounting bolts/washers (6).  |
| H      | 5141810  | \$7 <sup>65</sup> /SET  | HAM/CD45/AR40 rotor to tower mounting bolts/washers (4).  |
| I      | 5105700  | \$0.49/EA               | Rotator bottom casting to top bell housing mounting bolts.  |

## Motors/Ring Gears/Gears/Solenoid

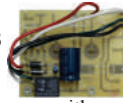


| Figure | Part No.  | Price   | Description  |
|--------|-----------|---------|--|
| A      | 5037406   | \$59.95 | Rotator Motor CD-45II and AR-40.   |
| A      | 5137600   | \$69.95 | Rotator Motor for HAM-IV and T2X.  |
| B      | 5009900   | \$47.68 | Brake Solenoid for HAM-IV and T2X.   |
| C      | 5136101   | \$14.95 | Ring Gear, Steel, for HAM-IV and T2X.  |
| C      | 5031310   | \$9.95  | Ring Gear, Aluminum cast for CD-45II and AR-40.  |
| D      | 5008410   | \$12.50 | Limit Switch Assembly for all Hy-Gain Rotators.  |
| E      | 5010700-1 | \$16.40 | Spur Gear, Stainless Steel, HAM-IV, T2X, Require 2 per rotator.                              |
| F      | 5011200-1 | \$33.40 | Gear/Pinion Assembly, Stainless Steel, has short pinion, HAM-IV, T2X, Require 3 per rotator. |
| G      | 5011100-1 | \$30.44 | Gear/Pinion Assembly, Stainless steel, has long pinion, HAM-IV, T2X. Require 1 per rotator.  |

## 5-Second Brake Delay Kit

Allows automatic 5-seconds brake delay for your Hy-Gain rotator. This delay insures that the rotator is fully stopped before the brake is engaged. Avoid accidentally engaging the brake while the rotator is in motion. For use with HAM-II, HAM-III, HAM-IV, HAM-V, and T2X rotators. Easy to install inside the controller. Kit includes pre-assembled PCB & mounting hardware.

RBD-5  
**\$29<sup>95</sup>**



## Rotator Connectors



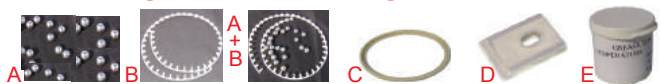
| Figure | Part No. | Price   | Description   |
|--------|----------|---------|---|
| A      | 870597   | \$19.95 | 8-Pin Amp Circular Female Connector Kit (connector shell and 8 female pin) for T2X. |
| B      | 870596   | \$14.78 | 8-Pin Amp Circular Male Connector Kit (connector male and 8 male pin) for T2X.      |
| C      | 650082   | \$0.96  | Amp Circular Connector Female Pin   |
| D      | 650083   | \$0.78  | Amp Circular Connector Male Pin   |
| E      | 640076   | \$6.36  | Rotator Controller Chassis Mount Female 8-Pin Jones.                                |
| F      | 640077   | \$6.72  | Rotator Controller 8-Pin Male Jones Chassis Plug.                                   |

## Rotator Cables & Mast Supports



| Figure | Part No.   | Price           | Description  |
|--------|------------|-----------------|--|
| A      | 878-1608   | \$0.85 ft.      | 8 conductors PVC cable, 6 conductors 18 AWG plus 2 conductors 16 AWG. For Hy-gain rotator with 8 wire connections.   |
| A      | 878-2004   | \$0.43 ft.      | 4 Conductors, 20 AWG PVC cable for Hy-gain AR303/500 and Alfa rotators.  |
| B      | 13-8075-T2 | \$147.85 (75")  | Pre-assembled cable for T2X. Wired one end with Jones male connector and one end with AMP circular female. Water tight connectors with Twist-and-lock for secure connection. Other lengths not listed are available. |
| B      | 13-8100-T2 | \$181.95 (100") |  |
| B      | 13-8125-T2 | \$216.05 (125") |  |
| B      | 13-8150-T2 | \$250.15 (150") |  |
| B      | 13-8006-T2 | \$39.95         | Bench Test Cable for T2X. 6 ft. pre-wired assembly. 8 pin Jones male to 8 pin AMP female.  |
| C      | MSHD       | \$109.95        | Heavy duty mast support for T2X, HAM-IV, HAM-V. Accepts 1 7/8"-2 3/8" OD. Centers on 2 1/2"  |
| D      | MSLD       | \$69.95         | Light duty mast support for CD-45II, AR-40. Accepts 1 7/8"-2 3/8" OD. Centers on 2 1/2".   |

## Ball Bearings/Shim/Brake Wedges/Low Temp Grease



| Figure | Part No. | Price   | Description   |
|--------|----------|---------|---|
| A      | 5033502  | \$5.50  | Ball Bearings (50 pack)   |
| B      | 5011300  | \$5.14  | Ball Bearing Retainer, 49 slots. Require 2 pieces for HAM-IV, CD-45II and 3 pieces for T2X.                         |
| A+B    | 5131000  | \$9.95  | Kit includes one bearing retainer and 50 ball bearings. Requires 2 kits for HAMS, CD45II & AR40 and 3 kits for T2X. |
| C      | 5039700  | \$4.87  | Rotator Bottom Shim for HAMIV.  |
| D      | 380828   | \$14.52 | Brake Wedge for all HAM rotators. Stainless steel.  |
| D      | 5151401  | \$15.60 | Brake Wedge for T2X. Stainless steel.   |
| E      | 5149710  | \$12.77 | Low Temperature Rotator Lubricant, 1 ounce.   |

## Replacement Rotators and Controllers



| Figure | Part No. | Price    | Description   |
|--------|----------|----------|---|
| A      | HAM-HVC  | \$329.95 | HAM-II, III, IV & T2X Controller. Supplied with 8-pin Jones male chassis mating connector. 110 VAC.               |
| A      | CD-45IIC | \$259.95 | CD-45II Controller. Supplied with 8-pin Jones male chassis mating connector. 110 VAC.                             |
| B      | AR-40C   | \$169.95 | AR-40 Controller. 110 VAC.  |
| C      | HAM-IVR  | \$499.95 | HAM-II, III, IV Rotator with Amp male plug. Complete with mounting kits. (5141510).                               |
| D      | T-2XR    | \$599.95 | T2X Rotator with AMP circular male connector. Complete with mounting kit (5142210).                               |
| E      | CD-45IIR | \$349.95 | CD-45II Rotator with 8-pin terminal board. Complete with mounting kit (5042510). Lower mast support not included. |
| F      | AR-40R   | \$179.95 | AR-40 Rotator. Complete with mounting kit (5042510). Lower mast support not included.                             |

**Hy-Gain can repair or rebuild your rotator.**  
Call Hy-Gain for quote & other replacement parts not listed.  
1-662-323-9538 email: [hygain@mjenterprises.com](mailto:hygain@mjenterprises.com)

hy-gain

# hy-gain® 2017 Ham Catalog

## Hy-Gain<sup>®</sup> Multi-Band **PATRIOT** Vertical Antennas **9-band vertical covers 80/40/30/20/17/15/12/10/6 Meters** • No radials • No traps • No ground • No tuning • Handles 1500 Watts

hy-gain's **PATRIOT** HF vertical antennas are the best built, best performing and best priced multiband verticals on the market today. Make full use of your sunspot cycle with **PATRIOT's** low angle signal.

Instead of typical traps, hy-gain's resonators are placed in parallel not in series. End loading of the lower HF bands allows efficient operation with a manageable antenna height.

Introducing the new Hy-Gain **PATRIOT-PLUS** AV-680 with a fully tunable 3.5-4.0 MHz coverage!

With the AV-680, you get the same great traditional performance of the AV-640 on 6 through 40 Meters plus *top-to-bottom* capability on 80 and 75 Meters.

It's a great way to join new local nets and roundtables, explore the 75-Meter DX window, or add exciting digital frequencies to your operating repertoire.

Simply pick the band segment you wish to use, set the 80/75 Meter resonator, and you're in business.

- **No ground or radials needed** -- Effective counterpoise replaces radials, end fed with broadband matching unit.
- **Automatic bandswitching** -- Single coax cable feed, each band is individually tunable, wide VSWR bandwidth.
- **Sleek and low-profile** -- Low wind surface area, small area required for mounting, mounts easily on decks, roofs and patios.
- **Built-to-last** -- Hy-gain's *Patriot series* antennas boast a high wind survival due to its sleek, but sturdy frame. The matching unit is made from all *Teflon*<sup>®</sup> insulated wire.
- **Top Loading:** Parallel resonators -- best vertical-element efficiency
- **Full ground independence:** No unsightly wire add-on radials
- **Top-to-bottom 3.5 to 4.0 MHz coverage:** Pin-point fine-tuning accuracy for rock-bottom SWR on any frequency you choose.
- **Single coax feed . . .** and with 100% automatic band selection!
- **Low profile:** Most compact ground-independent antenna available!
- **Legal-limit 1500-Watt PEP:** Power handling on SSB and CW\*

Adding 75/80 Meter coverage without compromising the *Patriot's* classic performance, ground independence, and tiny footprint was no small task. Yet, the AV-680 size, weight, and wind loading are nearly identical to the AV-640 with no unsightly radial extensions, traps, or top-heavy vertical structures to render it less attractive or unsafe.

Band selection remains fully automatic, all components handle maximum legal power, and you won't need a tuner with your solid-state rig.

The AV-680's *Expanded-Frequency Matchbox*<sup>™</sup> circuit ensures low SWR readings on every band, along with an upgraded balun design that concentrates all of your power in the antenna where it belongs!

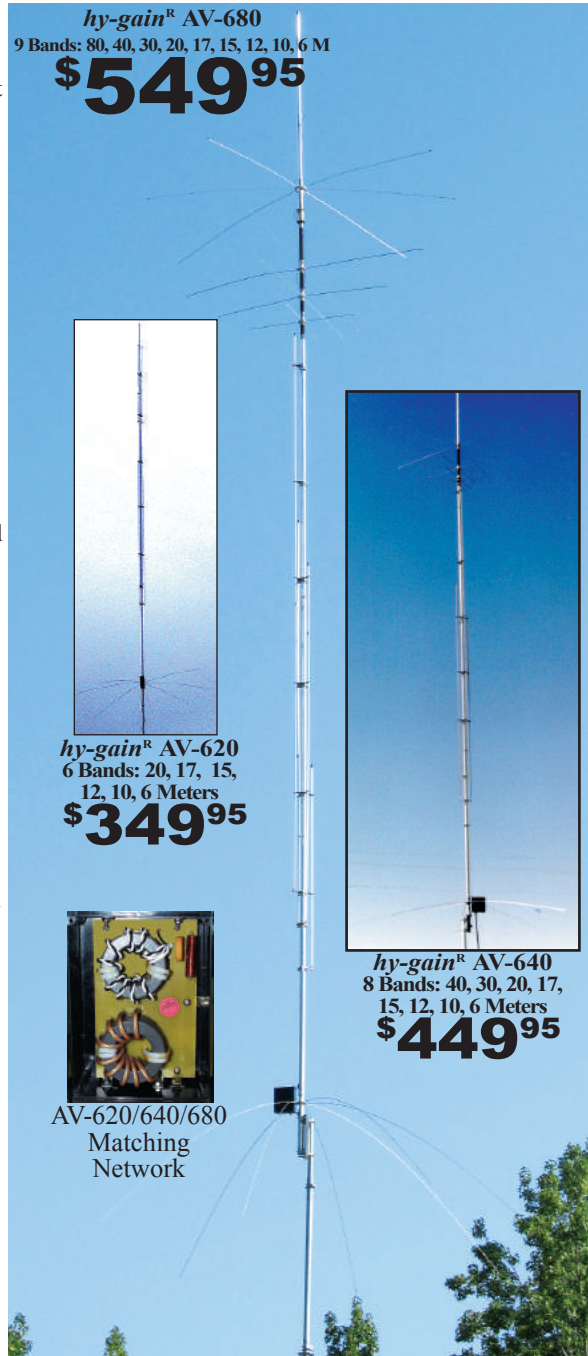
If space is a premium at your QTH and appearance matters, let Hy-Gain<sup>®</sup> open the door to one of ham radio's *most attractive and popular bands* with the new AV-680. This is your best choice for unparalleled versatility and band coverage from 6-80 Meters!

**AV-640, \$449.95.** Like AV-680 vertical antenna but just 25.5 feet tall and weighs only 17.5 lbs. It covers all bands 6 through 40 Meters with no traps, no coils, no radials yielding an uncompromised signal across all bands. AV-640 uses 1/4 wave stubs on 6, 10, 12 and 17 meters and efficient end loading coil and capacity hats on 15, 20, 30 and 40 meters.

**AV-620, \$349.95.** Like Hy-Gain's famous AV-640 Vertical Antenna but just 22.5 feet tall, weighs only 10.5 lbs. Covers all bands 6 thru 20 Meters with no traps, no coils, no radials yielding an uncompromised signal across all bands.

**Optional Guy Wire Kit, AGK-8, \$59.95.**

\*Intermittent duty CW.



hy-gain<sup>®</sup> AV-680  
 9 Bands: 80, 40, 30, 20, 17, 15, 12, 10, 6 M  
**\$549<sup>95</sup>**

hy-gain<sup>®</sup> AV-620  
 6 Bands: 20, 17, 15,  
 12, 10, 6 Meters  
**\$349<sup>95</sup>**

hy-gain<sup>®</sup> AV-640  
 8 Bands: 40, 30, 20, 17,  
 15, 12, 10, 6 Meters  
**\$449<sup>95</sup>**

AV-620/640/680  
 Matching Network

| Model # | Bands         | Max Power | Height    | Weight    | Wind Surv. |
|---------|---------------|-----------|-----------|-----------|------------|
| AV-620  | 6 Bands, 6-20 | 1500W     | 22.5 feet | 10.5 lbs. | 75 MPH     |
| AV-640  | 8 Bands, 6-40 | 1500W     | 25.5 feet | 17.5 lbs. | 70 MPH     |
| AV-680  | 9 Bands, 6-80 | 1500W*    | 26 feet   | 18.5 lbs. | 65 MPH     |

# hygain Antenna Rotators

## T2X TAILTWISTER SERIES II

... for large medium antenna arrays up to 20 square foot wind load



T-2X with standard controller **\$799<sup>95</sup>**  
 T-2XD2 with DCU-2 **\$899<sup>95</sup>**  
 T-2XD3 with DCU-3 **\$949<sup>95</sup>**  
 T-2XD with DCU-1 **\$1229<sup>95</sup>**

**Tailtwister** is the most popular rotator in the world. It has been the standard to what competing rotators try to match up to for well over many years. Ask a ham who owns one.

The T2X Tailtwister Series II Rotator is for large medium antenna arrays up to 20 sq. ft. wind load. Wind load with mast adapter is 10 sq. ft. It has 1000 inches - pounds in turning power and 9000 inches-pounds in brake power. The effective movement in the tower is 3400 feet - lbs.

A new automatic 5-second brake delay insures that the rotator is fully stopped before the brake is engaged. No more accidentally engaging the brake while the rotator is in movement.

T2X features a new low temperature grease which permits normal operation to -30° F. New alloy ring gear has tensile strength of 100,000 psi for max reliability.

**Water-tight AMP detachable twist-and-lock connectors** at the rotator base and an 8-pin plug at the control box make it easy to hook up. Rotator has a triple bearing race with 138 ball bearings for large load bearing strength. Electric locking steel wedge brake prevents wind induced antenna movement.

**Control box** features a North or South center of rotation scale on meter and low voltage control for safe operation.

**Clamp plate**, stainless steel mounting hardware included. Use 2 1/16 inch maximum mast. Use 110 VAC. Order T-2XX for 220 VAC. Optional lower mast, **MSHD, \$109.95.**

**T2XD, \$1229.95** has DCU-1 Pathfinder. DCU-1 features automatic operation of brake and rotator, computer control RS-232 passthrough with 1 degree heading accuracy.

**Compatible** with many logging/contest programs and has six pre-sets for favorite beam headings. Has automatic 8-sec-

ond brake delay and 360 degree choice for center of rotation. Use 110 VAC. Order T-2XDX for 220VAC operation.

**T-2XD, \$1229.95.** Has DCU-1 automatic controller.  
**T-2XD2, \$899.95.** Has DCU-2 digital controller.  
**T-2XD3, \$949.95.** Has DCU-3 programmable digital controller.

### New! T2X and HAM-IV Pulse Rotator Improvement



T-2XD3P Pulse Rotator with DCU-3 controller **\$999<sup>95</sup>**

HAM and T2X series of rotators have been improved adding a digital pulse counter to the rotators and digital controllers. Older rotators used a specially designed expensive potentiometer to determine antenna heading. Over time the pot wiper contacts get intermittent and noisy. This new design uses a special high temperature rare earth magnet and a reliable reed switch to count the rotations of one of the gears in the drive assembly. DCU-2 and DCU-3 have circuitry built-in to count the pulses and accurately determine the heading of the rotator to +/- 1 degree with repeatable accuracy. With the new pulse mode the noise and intermittent pot problems are no longer an issue. Older rotators can be retrofitted with the new gear and pulse board. Older DCU2 and DCU3 controllers will need a modification to the wiring and a firmware update that can be done in the field. The pulse mode is not compatible with the DCU-1 or the older controllers that have analog meters in them. **Call Hy-Gain for more details! 662-323-9538.**



T-2XD2P Pulse Rotator with DCU-2 controller **\$949<sup>95</sup>**



### TAILTWISTER Rotator Specifications

|                                    |                                   |
|------------------------------------|-----------------------------------|
| Wind load capacity (inside tower)  | 20 square feet                    |
| <b>Wind Load (w/ mast adapter)</b> | <b>10 square feet</b>             |
| Turning Power                      | 1000 in.-lbs.                     |
| <b>Brake Power</b>                 | <b>9000 in.-lbs.</b>              |
| Brake Construction                 | Electric Wedge                    |
| <b>Bearing Assembly</b>            | <b>Triple race/138 ball brngs</b> |
| Mounting Hardware                  | Clamp plate/steel U-bolts         |
| <b>Control Cable Conductors</b>    | <b>8</b>                          |
| Shipping Weight                    | 31 lbs.                           |
| <b>Effective Moment (in tower)</b> | <b>3400 ft.-lbs.</b>              |

## CD-45II ... for arrays up to 8.5 square feet

For antenna arrays up to 8.5 sq. feet mounted inside tower or 5 sq. ft. with mast adapter. Low temperature grease good to -30°F.

**New Test/ Calibrate** function. Bell rotator design gives total weather protection, dual 58 ball bearing race gives proven support.

**Die-cast** ring gear, stamped steel gear drive, trouble free gear train, North center scale, lighted directional indicator, 8-pin plug/socket on control unit, snap-action control switches, low volt-

|                                    |                                 |
|------------------------------------|---------------------------------|
| Wind load capacity (inside tower)  | 8.5 square feet                 |
| <b>Wind Load (w/ mast adapter)</b> | <b>5.0 square feet</b>          |
| Turning Power                      | 600 in.-lbs.                    |
| <b>Brake Power</b>                 | <b>800 in.-lbs.</b>             |
| Brake Construction                 | Disc Brake                      |
| <b>Bearing Assembly</b>            | <b>Dual race/48 ball brings</b> |
| Mounting Hardware                  | Clamp plate/steel U-bolts       |
| <b>Control Cable Conductors</b>    | <b>8</b>                        |
| Shipping Weight                    | 22 lbs.                         |
| <b>Effective Moment (in tower)</b> | <b>1200 ft.-lbs.</b>            |

age control, safe operation, max mast size 2 1/16". MSLD, light duty lower mast support included.

**Turning** power is 600 inches-lbs. Capable of turning smaller beams, hex beams, squalos, etc.

**Brake** power is 800 inches-lbs. Disc brake construction with dual race 48 ball bearings.

**U-bolts**, clamp plate included for mounting in your tower.

Use 110 VAC or order CD-45IIX for 220 VAC operation.

A great choice for the hy-gain TH-3JRS, lightweight 20-15 Meter beam antenna.



CD-45II **\$449<sup>95</sup>**



# the first choice of hams worldwide!

## HAM-IV . . . The most popular rotator in the world!

. . . for medium communication arrays up to 15 sq. ft. wind load . . .



**HAM-IV**  
with standard controller  
**\$649<sup>95</sup>**

**HAM-V**  
with DCU-1  
**\$1099<sup>95</sup>**

**HAM-VI**  
with DCU-2  
**\$749<sup>95</sup>**

**HAM-VII**  
with DCU-3  
**\$799<sup>95</sup>**

HAM-IV is the most popular rotator in the world for obvious reasons. Solidly constructed, time-tested, proven for over twenty years and is a *heckuva* buy at only \$649.95!!!

HAM IV is for medium communications arrays up to 15 sq. feet wind load area (7.5 sq. ft. with mast adapter).

800 inches-lbs. turning power, 5000 inches-lbs. brake power. **Automatic** 5-second brake delay insures rotator fully stops before brake is engaged. No accidentally engaging the brake while the rotator is in movement.

**Test/Calibrate** function

allows you to check system. Low temperature grease permits normal operation down to -30° F. Alloy ring gear gives extra strength to 100,000 PSI for maximum reliability.

**Detachable** 8 pin latching Cinch connectors make easy removal at rotator and 8 pin plug at controller. Dual 98 ball bearing race for load bearing strength and electric locking steel wedge brake prevents wind induced antenna movement. North or South center of rotation scale on meter, low voltage control, max mast size 2 1/16". 110 VAC.

**Optional** lower mast support, **MSHD, \$109.95.**  
**HAM-IV, \$649.95.** HAM-IV rotator with standard analog controller. Order HAM-IVX for 220 VAC operation.  
**HAM-V, \$1099.95.** Like HAM-IV rotator but with DCU-1 plasma display controller. Order HAM-VX for 220 VAC operation.  
**HAM-VI, \$749.95.** Like HAM-IV but has DCU-2 automatic controller which has many of the same features of the DCU-3, but no programmable memories. Order HAM-VIX for 220 VAC.  
**HAM-VII, \$799.95.** Like HAM-IV, but has DCU-3 digital automatic controller with six programmable memories, point and shoot and manual control. Order HAM-VIIX for 220 VAC operation.

**Mast Support:** MSHD, \$109.95.  
Heavy duty mast support for T2X, HAM-IV, HAM-V. Accepts 1 7/8 to 2 3/8 inch OD pipe. Centers on 2 1/2".



### New! T2X and HAM-IV Pulse Rotator Improvement



**HAM-VIIP**  
**\$849<sup>95</sup>**  
Pulse Rotator with DCU-3 controller

HAM and T2X series of rotators have been improved adding a digital pulse counter to the rotators and digital controllers. Older rotators used a specially designed expensive potentiometer to determine antenna heading. Over time the pot wiper contacts get intermittent and noisy. This new design uses a special high temperature rare earth magnet and a reliable reed switch to count the rotations of one of the gears in the drive assembly. DCU-2 and DCU-3 have circuitry built-in to count the pulses and accurately determine the heading of the rotator to +/- 1 degree with repeatable accuracy. With the new pulse mode the noise and intermittent pot problems are no longer an issue. Older rotators can be retrofitted with the new gear and pulse board. Older DCU2 and DCU3 controllers will need a modification to the wiring and a firmware update that can be done in the field. The pulse mode is not compatible with the DCU-1 or the older controllers that have analog meters in them. **Call Hy-Gain for more details! 662-323-9538.**

**HAM-VIP**  
**\$799<sup>95</sup>**  
Pulse Rotator with DCU-2 controller



|                                    |                                   |
|------------------------------------|-----------------------------------|
| Wind Load capacity (inside tower)  | 15 square feet                    |
| <b>Wind Load (w/mast adapter)</b>  | <b>7.5 square feet</b>            |
| Turning Power                      | 800 in.-lbs.                      |
| <b>Brake Power</b>                 | <b>5000 in.-lbs.</b>              |
| Brake Construction                 | Electric Wedge                    |
| <b>Bearing Assembly</b>            | <b>dual race/98 ball bearings</b> |
| Mounting Hardware                  | Clamp plate/steel U-bolts         |
| <b>Control Cable Conductors</b>    | <b>8</b>                          |
| Shipping Weight                    | 26 lbs.                           |
| <b>Effective Moment (in tower)</b> | <b>2800 ft.-lbs.</b>              |



## AR-40 . . . for compact arrays up to 3.0 square feet



**AR-40**  
**\$349<sup>95</sup>**

**For compact antenna arrays and large FM/TV up to 3.0 square feet wind load area.** Dual 12 ball bearing race. Automatic position sensor never needs resetting. Fully automatic control -- just dial and touch for any desired location. Solid state, low voltage control, safe and silent operation. 2 1/16 inches maximum mast size. MSLD, light duty lower mast support included. Use 110 VAC. Order AR-40X for 220 VAC operation.

|                                    |                                   |
|------------------------------------|-----------------------------------|
| Wind load capacity (inside tower)  | 3.0 square feet                   |
| <b>Wind Load (w/ mast adapter)</b> | <b>1.5 square feet</b>            |
| Turning Power                      | 350 in.-lbs.                      |
| <b>Brake Power</b>                 | <b>450 in.-lbs.</b>               |
| Brake Construction                 | Disc Brake                        |
| <b>Bearing Assembly</b>            | <b>Dual race/12 ball bearings</b> |
| Mounting Hardware                  | Clamp plate/steel bolts           |
| <b>Control Cable Conductors</b>    | <b>5</b>                          |
| Shipping Weight                    | 14 lbs.                           |
| <b>Effective Moment (in tower)</b> | <b>300 ft.-lbs.</b>               |

## UHF/VHF/6-Meter, MFJ-1886 Rotator/Controller and Remote



**AR-500/X**  
**\$129<sup>95</sup>**

**For use of small VHF/UHF, 6M, TV, FM, the MFJ-1886 wide band receiving loop and other light-weight ham antennas.**

**Rotator** is built in a weather-proof one

piece cast aluminum housing with precision metal gears, steel thrust bearings. Includes rotator, controller, remote, clamps, and all hardware.

**AR-500** remembers up to 12 directions even after a power outage! Use remote control or direct console. Displays location and relative position.

**Order "X" for 220VAC, AR-500X.**

# hy-gain® Digital Rotator Controllers

## Hy-Gain Digital Automatic Controllers for HAM-IV and Tailtwister

### DCU-3 Programmable Rotator Controller

6 Programmable memories; Point & shoot and manual control!



DCU-3  
\$449<sup>95</sup>



back of DCU-3

DCU-3 Digital Controllers feature six presets for beam headings, 1 degree accuracy and gives you fully automatic or manual control of your HAM or Tailtwister Rotators. Dial in your beam heading and press the rotate button or let Ham Radio Deluxe (or other) control your DCU-3. Your antenna automatically rotates to desired direction precisely and safely. First, DCU-3 makes sure your antenna is free and safely unlocked before turning begins and then turns off your motor before your antenna reaches its final destination. Your antenna gently coasts to a stop before the brake locks. Greatly reduces potentially damaging overshoot. Fine tuning and full manual control is effortless with automated Left and Right direction buttons - no more worrying about manually releasing and relocking the brake. Brake automatically releases before fine tuning begins and relocks after fine tuning is completed. Bright blue LCD displays actual, dial-in beam, and computer controlled beam headings in one degree increments and your call sign. *AutoBrake Release* - no need to remember to release brake or release too soon - release time is auto-matic 0-8 seconds. *Coast* feature allows antenna to gently stop before brake locks. Adjustable coast delay (0-10 degrees) turns off motor before antenna reaches its final des-

### DCU-1 Automatic Digital Controller

Hy-Gain's DCU-1 Pathfinder automatic digital controller unit has a gas plasma display. The DCU-1 provides automatic operation of brake and rotor and calibration, and is computer-controlled with RS-232 pass-through and compatible with many logging and contest programs. Features 6 presets for beam headings, 1 degree accuracy, auto 8-second brake delay, 360 degree choice for center location, plus much more. Order DCU-1X for 220 VAC operation.



DCU-1  
\$749<sup>95</sup>

### DCU-2 Digital Rotator Controller

tionation to reduce potentially damaging overshoot. *AutoJog*

DCU-2  
\$399<sup>95</sup>



unlocks and frees antenna before turning -- great for older rotators with "sticky" brakes. It jogs rotator backwards slightly to ease brake pressure enough to release. Offset feature allows you to calibrate display to show actual beam heading. USB/RS-232 ports. Adjustable LCD sleep time. Field upgradeable. 8.5Wx4.3Hx9D". 110 VAC. DCU-3X for 220 VAC. DCU-2, \$399.95. Similar to DCU-3, but does not have programmable memories. 110 VAC. Order DCU-2X for 220 VAC.

## Replace your YAESU Rotator Controller

New!

Hy-gain YRC-1 gives more features and a much more robust controller that is far less prone to lightning damage. YRC-1 costs less than repairing your original Yaesu controller! YRC-3 has all features of the YRC-1 plus it gives you 6 programmable memories!



YRC-1  
\$329<sup>95</sup>



YRC-3  
\$399<sup>95</sup>

Easy-to-use -- dial in your beam heading and tap GOTO button. Exclusive 180 degree *AutoReversal™* for fast longpath operation.

YRC-1 has all features of the DCU-2. Bright blue LCD shows current, dialed-in, computer controlled beam headings and your call. USB port for computer control. Extra heavy-duty AC power supply.

Variable DC motor speed for minimizing damaging antenna overshoot and fast operation. Intuitive menu for calibrating, off-setting, or changing parameters. Field upgradeable firmware. Use with Yaesu G-800/1000/2800/G450/650. For AC or DC motors.

YRC-3 like YRC-1, but adds six programmable memories.

## HDR-300A ... for King-sized antenna arrays up to 25 square feet wind load

The HDR-300A is for king-sized antenna arrays up to 25 square feet wind load area (inside tower). It has a 5000 inches - pounds turning power and a 7500 inches - pounds brake power.

HDR-300A  
\$1499<sup>95</sup>

Brake construction is a solenoid operated locking brake and the bearing assembly is bronze sleeve with rollers built to handle huge loads.

Control cable connector with hardened stainless steel output shaft, North or South centered calibration.

Ferrite beads on potentiometer wires reduce RF susceptibility, longer output shaft keyway adds reliability.

Self-centering steel clamp and hardware included. Display is accurate to 1°.

Machined steel output. Mounting hardware, stainless steel bolts included. Use 110 VAC. Weighs 61 lbs.

UPS shippable. Order HDR-300AX for 220 VAC operation.

| HDR-300A Rotator Specifications   |                           |
|-----------------------------------|---------------------------|
| Wind load capacity (inside tower) | 25 square feet            |
| Wind Load (w/ mast adapter)       | not applicable            |
| Turning Power                     | 5000 in.-lbs.             |
| Brake Power                       | 7500 in.-lbs.             |
| Brake Construction                | solenoid operated locking |
| Bearing Assembly                  | bronze sleeve w/rollers   |
| Mounting Hardware                 | stainless steel bolts     |
| Control Cable Conductors          | 7                         |
| Shipping Weight                   | 61 lbs.                   |
| Effective Moment (in tower)       | 5000 ft.-lbs.             |





# hy-gain AlfaSpid Azimuth & Elevation Rotators

**Super heavy-duty Rotators . . . Super strong Double Worm Gear Drive, Self-Braking, Extremely Quiet Motors, One Degree Position Resolution, Automatic Digital Controller. Up to . . . 38 sq. ft. wind load . . . 8000 in./lbs. turning torque . . . 24,000 in./lbs. brake torque . . . 700 lbs. vertical load**

These *super heavy-duty* RAK Rotators are designed with a simple *double worm gear* drive. This results in a super-strong ultra-reliable rotator system with inherent self-braking. Each includes a precision automatic digital controller.

**Turning** is powerful, smooth, precise and extremely quiet. The inherent self-braking action of its double worm gear drive positively stops it every time -- *won't move!*

**It's fast!** A high-torque DC gear motor rotates your antenna 360 degrees in just 60 seconds with 24 Volts AC or DC. The higher the voltage the higher the torque and the faster the turning speed -- *unique RAK feature.*

**RAK-1R, \$749.95.** RAK-1 Rotator only.

| RAK-1 Specs            | RAK-1 @ 12 V         | RAK-1 @ 18 V         | RAK-1 @ 24 V         |
|------------------------|----------------------|----------------------|----------------------|
| Wind Load Area         | Approx. 30 sq. feet  | Approx. 30 sq. feet  | Approx. 30 sq. feet  |
| Turning Torque, in-lbs | 1400 in-lbs.         | 1800 in-lbs.         | 3240 in-lbs.         |
| Brake Torque, in-lbs.  | 14,000 in-lbs.       | 14,000 in-lbs.       | 14,000 in-lbs.       |
| Brake Construction     | Double Worm Gears    | Double Worm Gears    | Double Worm Gears    |
| Vertical Load          | 550 lbs.             | 550 lbs.             | 550 lbs.             |
| Rotation Speed/360 deg | 120 seconds          | 90 seconds           | 60 seconds           |
| Precision              | 1 degree             | 1 degree             | 1 degree             |
| Rotation Range         | 720 degrees          | 720 degrees          | 720 degrees          |
| Rotator Weight         | 16 lbs.              | 16 lbs.              | 16 lbs.              |
| Position Sensor        | Reed Switch          | Reed Switch          | Reed Switch          |
| Max size               | 2.0/2.6 in. Top/Bot. | 2.0/2.6 in. Top/Bot. | 2.0/2.6 in. Top/Bot. |

RAK-1 (RAK)  
**\$999<sup>95</sup>**  
Includes RAK-1CU controller



Plate adaptor, mouse not included

**It's simple to mount!** Pipe mast mount on both ends allow coax cables to pass through the center of the rotator and prevents cable tangling and damage. Optional adaptor plate mounting. *See accessories section below.*

**It's precise!** The included RAK-1C controller has one degree resolution and a large 3/4 inch 4-digit *easy-to-read* soft green LED digital readout. Sealed reed switch sensor technology gives reliable all-weather operation and super tight tolerances with minimal play.

**Tough & durable!** Heavy-duty construction uses 3/16" thick-wall steel pipe, ultra-durable steel housing.

**RAK-2R, \$1195.95.** RAK-2 Rotator only.

RAK-2 (BIG RAK)  
**\$1449<sup>95</sup>**  
Includes RAK-1CU controller



Plate adaptor, mouse not included

| RAK-2 Specs            | RAK-2 @ 12 V         | RAK-2 @ 18 V         | RAK-2 @ 24 V                 |
|------------------------|----------------------|----------------------|------------------------------|
| Wind Load Area         | Approx. 38 sq. ft.   | Approx. 38 sq. ft.   | Approx. 38 sq. ft.           |
| Turning Torque, in-lbs | >5000 in-lbs.        | >8000 in-lbs.        | Contact Hy-Gain <sup>®</sup> |
| Brake Torque, in-lbs.  | 24,000 in-lbs.       | 24,000 in-lbs.       | 24,000 in-lbs.               |
| Brake Construction     | Double Worm Gears    | Double Worm Gears    | Double Worm Gears            |
| Vertical Load          | >700 lbs.            | >700 lbs.            | >700 lbs.                    |
| Rotation Speed/360 deg | 120 seconds          | 90 seconds           | 60 seconds                   |
| Precision              | 1 or 0.5 degree      | 1 or 0.5 degree      | 1 or 0.5 degree              |
| Rotation Range         | 720 degrees          | 720 degrees          | 720 degrees                  |
| Rotator Weight         | 24 lbs.              | 24 lbs.              | 24 lbs.                      |
| Position Sensor        | Reed Switch          | Reed Switch          | Reed Switch                  |
| Max size               | 2.6/2.6 in. Top/Bot. | 2.6/2.6 in. Top/Bot. | 2.6/2.6 in. Top/Bot.         |

## Econo AlfaSpid Rotator

AlfaSpid's smallest rotator is a step up from mainstream rotators and provides excellent support for direct round mast mounting. Incorporates elevation rotator to provide full EL/AZ capability. Ideal for light duty 3-4 element antennas, short boom 6-Meter beams and 2 Meter/70 cm beam antennas.

**RAU-1R, \$439.95.** RAU Rotator only.

RAU-1  
**\$699<sup>95</sup>**  
Includes RAK-1CU controller



Hy-gain offers RAS-1 and BIG RAS (RAS-2) super heavy-duty *Azimuth-Elevation Rotators.* Same heavy-duty design as RAKs and includes the RAS-2C Digital Controller.

**RAS-2** has same specifications as RAS-1 below but with these super-specs. *Turning Power:* 5,000 in-lbs. torque@12V; 8000 in-lbs. torque@18V; *Brake Torque:* 24,000 in-lbs. at all voltages; *Vertical Load:* greater than 700 lbs; RAS-2 weighs 44 lbs.

**RAS-1R, \$1359.95** RAS-1 rotator. **RAS-2R, \$1979.95.** RAS-2 rotator.

RAS-1  
**\$1799<sup>95</sup>**  
Includes RAS-2CU Controller.



Plate adapters not included.  
RAS-2  
**\$2399<sup>95</sup>**

## Elevation Rotator

*Elevation* rotator has all specifications of the popular RAK-1 but is for moving antennas 180 degrees up or down. Package includes RAK-1CU controller.

**REAL-1R, \$749.95.** REAL Controller only.

REAL-1  
**\$999<sup>95</sup>**  
includes controller



## MDS RC-1 Econo Digital Rotator Controller for Hy-gain HamII, IV, T2X, Yaesu and many other common rotators

You get **ALL** these features at half the cost of similar digital controllers!

The RC-1 is a *direct replacement* control box for Yaesu rotators and SA & DXA models and others.

It is priced *well below* the repair cost of many factory control boxes.

RC-1 uses slave power from existing Ham series, AC controllers (RC1-G, RC1-H). It is emergency and battery-power compatible for DC models.

You get *automatic* brake control on Ham series rotators and *automatic* speed control on DC powered rotators.

A graphic LCD screen is large and *bright blue* for easy visibility. Huge

beam heading digits!

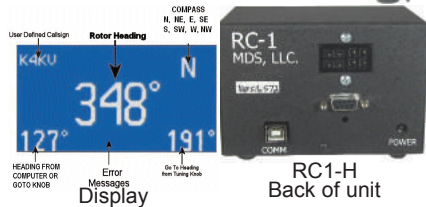
The "Go-to" button gives you the reciprocal heading for quick changes.

**Computer-controlled** operation via the included USB (for RC1-Y) or serial ports let you use your favorite software programs. *Field upgradeable* firmware is updated via the serial port.

**Rugged** aluminum enclosure for maximum RF shielding is a compact 5 1/4 W x 3 1/2 H x 4 1/8 D inches.

**Order** RC1-Y for Yaesu; RC1-E for Emotor; RC1-P for Alpha Spid; RC1-G and RC1-H for Hygain rotators.

RC-1  
**\$229<sup>95</sup>**  
Ship Code A



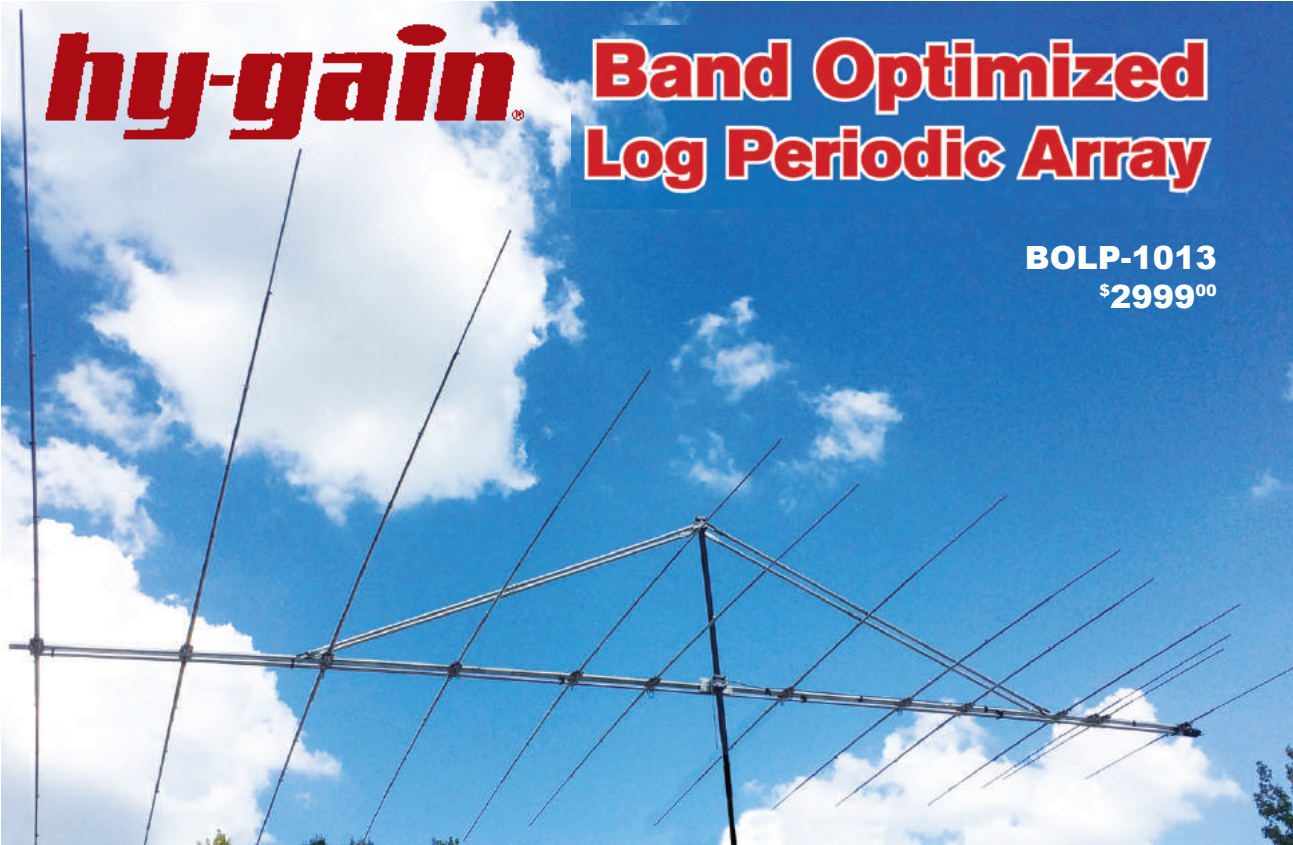
RC1-H Back of unit

**Designed and Made in the U.S.A.**

**hy-gain**®

# Band Optimized Log Periodic Array

**BOLP-1013**  
\$2999<sup>00</sup>



**Get 20-6 Meter monoband performance from the world's first Band-Optimized Log Periodic Array (BOLPA) designed by highly renowned G0KSC of InnovAntennas™.**

**This revolutionary antenna consists of 6 trapless monoband logs on a single 30' boom and 13 full size elements.**

**Computer optimization** gives full monoband gain and front-to-back ratio on every band.

**Exceptional flat in-band impedance** eliminates transmitter re-tuning.

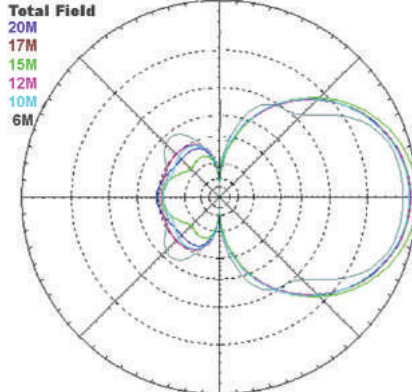
**Operate six bands:** 20, 17, 15, 12, 10 and 6 Meters with a single *direct 50 Ohm feed*. Easily handles far more than the full legal power limit.

**No 4:1 balun, no matching devices, no traps, no coils -- super low losses.**

**At least 3 full size elements** are active on each band. 24 ft. turning radius, 30 ft. boom, 36 ft. longest element. 116 lbs.

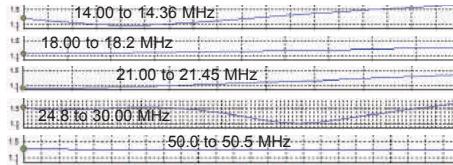
**Operate 6 bands simultaneously.** Perfect for multiband SDR receivers.

**BOLP-1011, \$2999.00**, like LP-1013 but 6M is replaced by an extra 10M with enhanced gain and front-to-back ratio on 10/12M.



**Gives monoband performance, no sidelobes.**

**Full specifications at [www.hy-gain.com](http://www.hy-gain.com)**

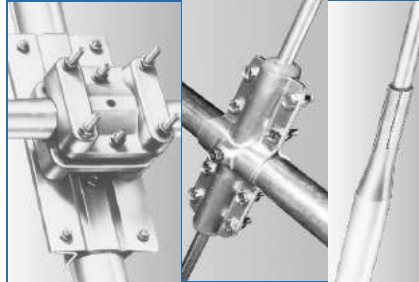


**New!**

**Designed by G0KSC and built by Hy-gain!**

- **New** series of 50, 70, 144, 222 MHz antennas.
- **New** LFA (Loop Fed Array) Yagis and OWL (Optimized Wide Band Low Impedance).
- **New** computer optimized trapless HF and VHF mono and multi-band yagis.

**Tooled Manufacturing . . . Highest Quality Materials**



**1. Hy-gain's famous super strong toolled die cast Boom-to-Mast Clamp**

**2. Toolled Boom-to-Element Clamp**

**3. Thick-wall swaged aluminum tubing**

**Tooled manufacturing** is the difference between Hy-Gain antennas and the others -- they just don't have it, it's too expensive!

**Die-cast** aluminum boom-to-mast bracket and element-to-boom compression clamps are made with specially *tooled* machinery.

**Hy-Gain** antennas feature *tooled* swaged tubing that is deburred and cleaned for smooth, easy and secure assembly.

**Durable** precision injection molded parts.

**Hy-gain** antennas are stronger, lighter, have less wind surface area, better wind survival, need no adjustments, look professional and last years longer.

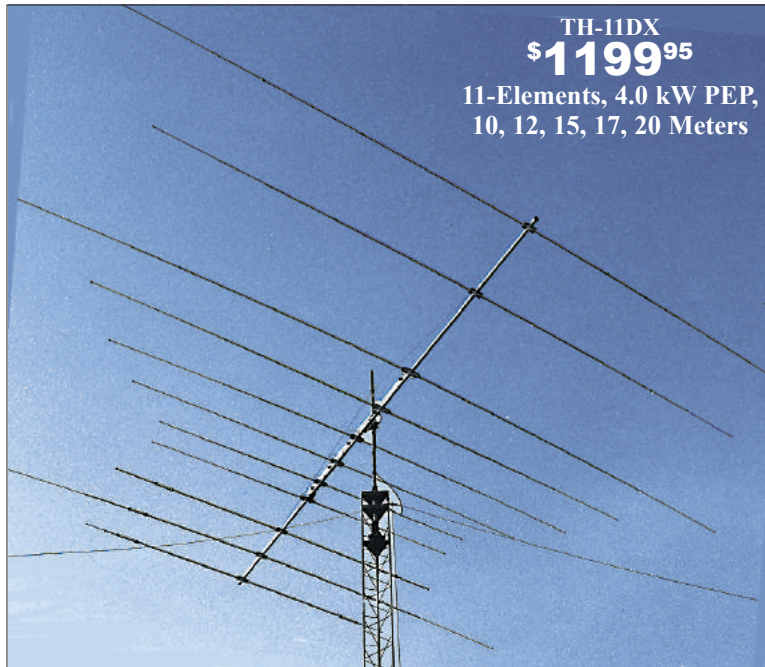
**hy-gain**

**hy-gain**

**Antennas, Rotators & Towers** 308 Industrial Pk. Rd., Starkville, MS 39759 USA  
Sales/Tech: (662) 323-9538 • FAX: (662) 323-5803 **Open** 8-4:30 CST, Mon.-Fri.  
Add shipping. Prices and specifications subject to change. (C) Hy-Gain 2017

# hy-gain HF BEAMS...

... are stronger, lighter, have less wind surface and last years longer



**TH-11DX**  
**\$1199.95**  
 11-Elements, 4.0 kW PEP,  
 10, 12, 15, 17, 20 Meters

**TH-11DX, \$1199.95. 11-element, 4.0 kW PEP, 10,12,15,17,20M**

The choice of top DXers. With 11-elements, excellent gain and 5-bands, the super rugged TH-11DX is the "Big Daddy" of all HF beams! Handles 2000 Watts continuous, 4000 Watts PEP.

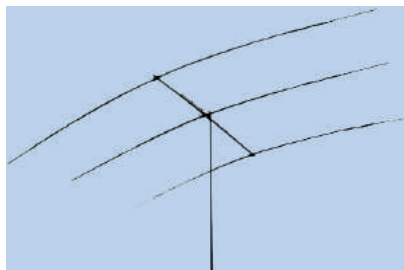
Every part is selected for durability and ruggedness for years of trouble-free service.

Features a low loss log-periodic driven array on all bands with monoband reflectors, BN-4000 high power balun, corrosion resistant wire boom support, hot dipped galvanized and stainless steel parts.

Stainless steel hardware and clamps are used on all electrical connections.

**Compact 3-element  
 10, 15, 20 Meter Tri-Bander**

For limited space... Installs anywhere... 14.75 ft turning radius... weighs 21 lbs... Rotate with CD-45II, HAM-IV



Fits on light tower, suitable guyed TV pole, or roof tri-pod.

**TH-3JRS, \$379.95.**

Hy-Gain's most popular 3-element 10, 15, 20 Meter tri-bander fits on most lots!

Same top performance as the full power TH3MK4 in a compact 600 watt PEP design.

Excellent gain and F/B ratio let you compete with the "big guns".

Tooled manufacturing gives you Hy-Gain durability with 80 MPH wind survival.

**TH-7DX, \$899.95.**

7-element, 1.5 kW PEP, 10,15,20 Meters

7-Elements gives you the highest average gain of any Hy-Gain tri-bander! Dual driven for broadband operation without compromising gain. SWR less than 2:1 on all bands. Combined monoband and trapped parasitic elements give you an excellent F/B ratio. Hy-Gain's diecast aluminum, rugged boom-to-mast clamp, heavy gauge element-to-boom brackets, BN-86 balun. For high power, use BN-4000.

**TH-5MK2, \$789.95.**

5-element, 1.5 kW PEP, 10,15,20 Meters

The broadband five element TH5-MK2 gives you outstanding gain. Separate air dielectric Hy-Q traps let you adjust for maximum F/B ratio on each band. Has Hy-Gain's exclusive BetaMATCH™, stainless steel hardware and compression clamps and BN-86 balun.

**TH-3MK4, \$499.95.**

3-element, 1.5 kW PEP, 10,15,20 Meters

The super popular TH-3MK4 gives you the most gain for your money in a full-power, full-size durable Hy-Gain tri-bander! Impressive average gain and whopping average front-to-back ratio. Handles 1.5 kW PEP. 95 MPH wind survival. Fits on average lot -- turning radius is just 15.3 feet. 4-piece boom is ideal for DXpeditions. Choose CD-45II or HAM-IV rotator. Hy-Gain BetaMatch™ for DC ground, full power Hy-Q™ traps, rugged boom-to-mast bracket and mounts on standard 2" O.D. mast. Stainless steel hardware. BN-86 balun recommended.

**TH-2MK3, \$389.95.**

2-element, 1.5 kW PEP, 10,15,20 Meters

The 2-element TH-2MK3 is Hy-Gain's most economical full power (1.5kW PEP) full size tri-bander. Increase your effective radiated power and hear far better! Ruggedly constructed, top-performing, compact 6 foot boom, tight 14.3 foot turning radius. Installs almost anywhere. Rotate with CD-45II or HAM-IV. Use BN-86 balun.

**EXP-14, \$629.95.**

4-element, 1.5 kW PEP, 10,15,20 Meters

Revolutionary 4-element compact tri-bander can add 40 or 30 Meters! 14 foot boom and tight 17.25 feet turning radius. Fits on roof tri-pod, mast or medium duty tower. Hy-Gain's patented broadbanding ParaSleeve gives you less than 2:1 VSWR. 1.5kW PEP. BetaMATCH™ provides DC ground to eliminate static. Has BN-86 balun.

**QK-710, \$179.95.**

30/40 Meter option kit for EXP-14.

**DB-1015, \$449.95.**

7-element, 1.5 kW PEP, 10 & 15 Meters

This dual band beam for 10 and 15 Meters incorporates Hy-Gain's superior mechanical design and has been computer optimized and range-tested for max performance. DB-1015 features a 14 foot boom in 4 sections. Handles full legal power and has Hy-Gain's rugged boom-to-mast clamp. DB-1217, \$449.95. Similar to DB-1015, but is dual band coverage for 12 and 17 Meters.

| Model No. | Retail Price | No. of elements | avg gain dBi | avg F/B gain | MaxPwr watts PEP | Bands Covered  | Wind sq-ft. area | Wind Survival (mph) | Boom (feet) | Longest Elem. (ft) | Turning radius(ft) | Weight (lbs.) | Mast dia O.D.(in.) | Recom. Rotator |
|-----------|--------------|-----------------|--------------|--------------|------------------|----------------|------------------|---------------------|-------------|--------------------|--------------------|---------------|--------------------|----------------|
| TH-11DX   | \$1199.95    | 11              | 8.6          | 25           | 1500             | 10,12,15,17,20 | 12.5             | 100                 | 24          | 37                 | 22                 | 88            | 1.9-2.5            | T2X            |
| TH-7DX    | \$899.95     | 7               | 8.7          | 22           | 1500             | 10, 15, 20     | 9.4              | 100                 | 24          | 31                 | 20                 | 75            | 1.5-2.5            | HAM-IV         |
| TH-5MK2   | \$789.95     | 5               | 8            | 22           | 1500             | 10, 15, 20     | 7.4              | 100                 | 19          | 31.5               | 18.42              | 57            | 1.5-2.5            | HAM-IV         |
| TH-3MK4   | \$499.95     | 3               | 8            | 25           | 600              | 10, 15, 20     | 4.6              | 95                  | 14          | 27.42              | 15.33              | 35            | 1.9-2.5            | CD-45II        |
| TH-3JRS   | \$379.95     | 3               | 8            | 25           | 1500             | 10, 15, 20     | 3.35             | 80                  | 12          | 27.25              | 14.75              | 21            | 1.25-2.0           | CD-45II        |
| TH-2MK3   | \$389.95     | 2               | 5.5          | 15-20        | 1500             | 10, 15, 20     | 3.25             | 80                  | 6           | 27.3               | 14.3               | 20            | 1.25-2.5           | CD-45II        |
| EXP-14    | \$629.95     | 4               | 8            | 27           | 1500             | 10,15,20 30/40 | 7.5              | 100                 | 14          | 31.5               | 17.25              | 45            | 1.9-2.5            | HAM-IV         |
| DB-1015   | \$449.95     | 7               | 7.4          | 25           | 1500             | 10, 15         | 6.7              | 115                 | 14          | 29.5               | 16.3               | 36            | 1.9-2.5            | HAM-IV         |
| DB-1217   | \$449.95     | 5               | 7.4          | 25           | 1500             | 12, 17         | 6.7              | 115                 | 14          | 29.5               | 16.3               | 36            | 1.5-2.5            | HAM-IV         |



# Hy-Gain Long Johns HF Monobanders

**LJ-105CA, \$289.95.** 10 Meters, 5 elements, Exclusive 50 Ohm *BetaMatch*<sup>™</sup>. Excellent DC Ground. Stainless steel hardware and clamps. BN-4000 Balun recommended.

**LJ-155CA, \$429.95.** 15/12 Meters, Five Elements, Exclusive 50 Ohm *BetaMatch*<sup>™</sup>. Excellent DC Ground. Stainless steel hardware and clamps. Includes 12 Meter setting. BN-4000 Balun recommended.

**LJ-205CA, \$769.95.** 20/17 Meters, Five Elements. Exclusive 50 Ohm *BetaMatch*<sup>™</sup>. Excellent DC Ground. Stainless steel hardware and clamps. BN-4000 Balun recommended. Manual has setting for both bands.

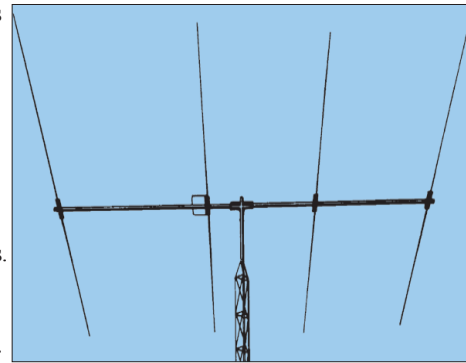
**LJ-204BA, \$539.95.** 20/17 Meters, Four Elements. Exclusive 50 Ohm *BetaMatch*<sup>™</sup>. The LJ-204BA has a tiltable cast aluminum boom-to-mast clamp, heavy gauge

machine-formed element-to-boom brackets and stainless steel hardware and clamps. BN-4000 Balun is recommended. Manual has setting for both bands.

**LJ-103BA, \$179.95.** 10 Meters, Three Elements. Feeds with 50 Ohm coax, comes factory pre-tuned with Hy-Gain's exclusive *BetaMatch*<sup>™</sup>. BN-86 balun recommended. Includes stainless steel hardware and clamps.

**LJ-153BA, \$229.95.** 15 Meters, 3 elements. Feeds with 50 Ohm coax, *BetaMatch*<sup>™</sup>, 5.7 dBd gain. BN-4000 Balun recommended. Stainless steel hardware and clamps.

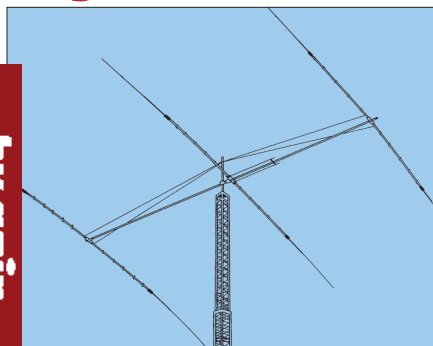
**LJ-203BA, \$329.95.** 20 Meters, Three elements on a 16 foot boom. The LJ-203BA feeds with 50 Ohm coax, factory pre-tuned with Hy-Gain's exclusive *BetaMatch*<sup>™</sup>.



BN-4000 Balun is recommended. Stainless steel hardware and clamps. Tilttable, cast aluminum boom-to-mast bracket.

| Model #  | Gain (dBi) | F/B Max | Max Power  | Boom Size      | ele. length    | turn Radius    | Mast diam.    | Surface      | Wind       |
|----------|------------|---------|------------|----------------|----------------|----------------|---------------|--------------|------------|
| LJ-105CA | 10.8 dBi   | 36 dB   | 1500 W PEP | 24 feet        | 18 feet        | 15 feet        | 1.9-2.5 in.   | 3.9 sq. feet | 100 m.p.h. |
| LJ-155CA | 9.8 dBi    | 25 dB   | 1500 W PEP | 26 feet        | 25 feet        | 17 feet, 6 in. | 1.9-2.5 in.   | 5.2 sq. feet | 88 m.p.h.  |
| LJ-205CA | 8.7 dBi    | 30 dB   | 1500 W PEP | 34 feet        | 36 feet        | 25 feet        | 1.9-2.5 in.   | 9.0 sq. feet | 99 m.p.h.  |
| LJ-204BA | 8.2 dBi    | 28 dB   | 1500 W PEP | 26 feet        | 36 feet, 6 in. | 22 feet, 6 in. | 1.9-2.5 in.   | 7.3 sq. feet | 100 m.p.h. |
| LJ-103BA | 7.9 dBi    | 24 dB   | 1500 W PEP | 8 feet         | 18 feet, 7 in. | 10 feet, 2 in. | 1.625-2.0 in. | 2 sq. feet   | 107 m.p.h. |
| LJ-153BA | 7.9 dBi    | 25 dB   | 1500 W PEP | 12 feet        | 24 feet, 11"   | 14 feet, 3 in. | 1.9-2.5 in.   | 3 sq. feet   | 80 m.p.h.  |
| LJ-203BA | 7.3 dBi    | 23 dB   | 1500 W PEP | 16 feet, 6 in. | 37 feet        | 20 feet        | 1.9-2.5 in.   | 5.4 sq. feet | 80 m.p.h.  |

# Hy-Gain Discoverer Series Antennas



**DISCOVERER 71, \$369.95.** Covers 40/30 Meters.

This rotatable dipole of low weight and wind surface area so easily fits most existing beam installations. Tuned to 30 or 40 Meters with a front-to-side ratio of 30 dB for a fast, expansion of band capability. Feeds with 50 Ohm coax. Pre-formed mast clamp.

**DISCOVERER 72, \$799.95.** Covers 40 Meters.

This two-element 40 Meter beam has a unique hairpin loading system. It delivers superior performance. Feeds with 50 Ohm coax and comes factory pre-tuned with Hy-

Gain's exclusive *BetaMatch*<sup>™</sup>. Tilttable boom-to-mast bracket and stainless steel hardware is included. Hy-Gain high power BN-4000 balun is recommended.

**DIR-73K, \$549.95.**

**Add-On 30/40 Meter Director Kit**

Converts the Discoverer 72 into a three-element beam. Amazingly, it's all on a 35 foot boom, outperforming the other brands that are much larger. Discoverer 72 with director Kit fits on medium duty towers such asHG-52SS, saving both cost and space. HyGain offers wide bandwidth and Hy-Q efficiency without coils. Handle legal power limits.

| Model # | Gain (dBi) | F/B Max | Max Power  | Boom size | element size | turn Radius | Mast diam.  | Surface      | Wind       |
|---------|------------|---------|------------|-----------|--------------|-------------|-------------|--------------|------------|
| DIS-71  | 6.5 dBi    | 35 dB   | 1500 W PEP | 2.7 feet  | 45 feet      | 22.5 feet   | 1.9-2.5 in. | 2.7 sq. feet | 100 m.p.h. |
| DIS-72  | 6.5 dBi    | 15 dB   | 1500 W PEP | 22.6 feet | 44.8 feet    | 25 feet     | 1.9-2.5 in. | 6.0 sq. feet | 80 m.p.h.  |
| DIR-73K | 7.5 dBi    | 26 dB   | 1500 W PEP | 35 feet   | 45.7 feet    | 28.9 feet   | 1.9-2.5 in. | 9.0 sq. feet | 80 m.p.h.  |

# Hy-Gain HF Log Periodic Antennas

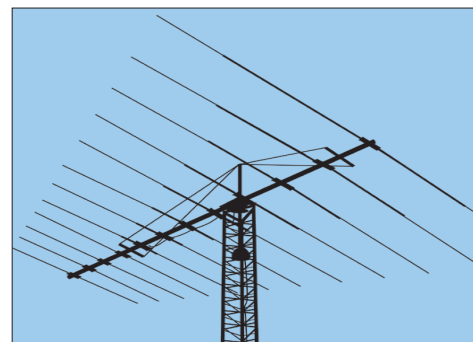
**LP-1009A, \$1999.95.** LP-1009A for UHF connector. LP-1009AN for "N" connector. Covers 10/12/15/17/20 Meters

Covers the complete 13-30 MHz HF spectrum under a 2:1 VSWR. Built to commercial specifications, it is used by MARS, monitoring stations, marine and government radio stations around the world and now it's available to Hy-Gain amateur customers. The discerning ham operator will appreciate its performance and ease of use. Just imagine all that spectrum coverage and only one feedline. Exclusive 2KW BN-4000 current type

balun included. Use T2X Tailtwister or HDR-300A rotators.

**LP-1010A, \$2399.95.** LP-1010A for UHF connector. LP-1010AN for "N" connector. Covers 10-30 MHz (10, 12, 15, 17, 20, and 30 Meters)

There are only a few antennas that offer as much HF frequency coverage as the LP-1010A. Like the LP-1009A, this antenna is built to commercial standards using stainless steel hardware and having a wind survivability of 93 mph. Rotatable with use of T2X or HDR-300A rotators.



| Model #    | Gain (dBi) | F/B Max | Max Power  | Boom size | ele. length | turn Radius | Mast diam.  | Surface       | Wind       |
|------------|------------|---------|------------|-----------|-------------|-------------|-------------|---------------|------------|
| LP-1009A/N | 7.3 dBi    | 22 dB   | 1500 W PEP | 27 feet   | 39 feet     | 22.5 feet   | 1.9-2.5 in. | 12.5 sq. feet | 103 m.p.h. |
| LP-1010A/N | 7.0 dBi    | 22 dB   | 1500 W PEP | 36 feet   | 48 feet     | 28.5        | 1.9-2.5 in. | 16 sq. feet   | 93 m.p.h.  |

# hy-gain® Low Noise 6M Loop Fed Array

Low Noise 6 Meter LFAs designed for Hy-Gain by world renowned Justin Johnson, G0KSC

hy-gain's computer optimized third generation G0KSC Loop Fed Array (LFA) yagis are specifically designed for low noise -- hear weak signals that others can't!

Highly suppressed side lobes eliminate unwanted noise and signal pickup from sides making your desired signal pop out!

See and hear for yourself how signals pop out from a low-noise G0KSC LFA as compared to a top performing yagi at [www.hy-gain.com/LFA-6M5EL.php](http://www.hy-gain.com/LFA-6M5EL.php)

Wide-spaced LFA yagis have lower SWR, higher gain, better front-to-back and more broadbanded than dipole fed yagis.

hy-gain's direct 50-Ohm feed has no lossy matching network that lim-

All of our LFA's are SUPER LOW NOISE and HEAVY DUTY with 2-inch diameter booms and rated to 5KW+!

LFA-6M5EL  
\$499<sup>95</sup>



its power handling. hy-gain LFAs handle 5,000 Watts. Your actual operational power is limited by your coax, connectors and other accessories.

hy-gain LFAs are also computer optimized for maximum mechanical

strength using hy-gain's exceptionally strong tooled parts to give you years of reliable service.

All hy-gain 6-Meter LFAs have heavy duty 2-inch dia-meter double walled booms, 5/8" fully insulated elements and

7/16" outer tip sections. Climb the tower only once!

See [www.hy-gain.com](http://www.hy-gain.com) for full specifications including SWR curves, pattern plots, gain, wind loading, wind survival, front-to-back, and more.



LFA-6M4EL, \$369<sup>95</sup>



LFA-6M7EL, \$799<sup>95</sup>



LFA-6M8EL, \$999<sup>95</sup>



### Who is G0KSC?

Justin Johnson is a world-renowned antenna expert and the owner of InnovAntennas. He is the author of the VHF/UHF chapters for the 2017 ARRL Antenna Handbook.

### 6-Meter Antenna Performance

| Model#  | LFA-6M4EL             | LFA-6M5EL           | LFA-6M7EL           | LFA-6M8EL             |
|---|-----------------------|---------------------|---------------------|-----------------------|
| Gain:   | 10.7 dBi@50.15        | 11.88dBi@50.15      | 13.5 dBi@50.15      | 14.09dBi@50.15        |
| F/B:  | 35.24 dB@50.15        | 27.35 dB@50.15      | 23.8 dB@50.15       | 23.81 dB@50.15        |
| Peak Gain:  | 10.76 dBi             | 11.91 dBi           | 13.5 dBi            | 14.15 dBi             |
| Peak F/B:   | 44.78 dB              | 28.01 dB            | 26.23 dB            | 26.27 dB              |
| Power Rating:   | 5kW*                  | 5kW*                | 5kW*                | 5kW*                  |
| SWR:  | < 1.5:1 50-50.4       | <1.5:1 50-50.3      | <1.5:1 50-50.4      | <1.5:1 50-50.4        |
| Stack Distance:   | 17.6 feet recommended | 20 feet recommended | 24 feet recommended | 26.6 feet recommended |
| 2 Stacked Gain:   | 13.59@17.6 ft.        | 14.78 dBi           | 16.28 dBi           | 16.94 dBi             |
| 2 Stacked F/B:  | 25.04 dB              | 36.02 dB            | 25.19 dB            | 25.80 dB              |
| Boom Length:  | 13 feet               | 21 feet             | 33.6 feet           | 42 feet               |
| Weight:   | 8 lbs.                | 17 lbs.             | 37 lbs.             | 39 lbs.               |
| Turning Radius:   | 6' 11"                | 11' 4"              | 17' 8"              | 21' 4"                |
| Wind Loading:   | TBA                   | TBA                 | TBA                 | TBA                   |
| Wind Survival:  | 120 MPH               | 118 MPH             | 108 MPH             | 100 MPH               |
| * Power handling is limited only by operating station accessories such as coax. |                       |                     |                     |                       |

# hy-gain<sup>®</sup> Low Noise 2M Loop Fed Array

Low Noise 2 Meter LFAs designed for Hy-Gain by world renowned Justin Johnson, G0KSC



**New!**

**LFA-2M9EL**  
**\$279<sup>95</sup>**

*All of our LFA's are SUPER LOW-NOISE and HEAVY DUTY with large diameter booms and rated to 5KW+!*

9-Element 2-Meter Loop Fed Array



**LFA-2M12EL**  
**\$349<sup>95</sup>**

12-Element 2-Meter Loop Fed Array




**LFA-2M14EL**  
**\$399<sup>95</sup>**

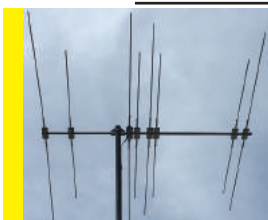
14-Element 2-Meter Loop Fed Array



**LFA-2M16EL**  
**\$449<sup>95</sup>**

*See [www.hy-gain.com](http://www.hy-gain.com) for full specifications including SWR curves, pattern plots, gain, wind loading, wind survival, front-to-back, and more.*

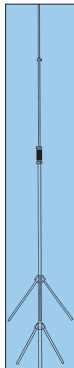
16-Element 2-Meter Loop Fed Array




## Hy-Gain<sup>®</sup> 4/6M Yagi Antenna World's First!!! **DB-46M8EL, \$299<sup>95</sup>**

Hy-gain<sup>®</sup> has the first 4/6 Meter, 50MHz/70MHz single feed point dual band Yagi! 8 elements (4 elements each band) on a compact 7 foot boom.


## Hy-Gain VHF Vertical Antennas




**V-2R** 2 Meter  
**\$109<sup>95</sup>**  
 Covers 138-175 MHz  
 derived from the famous extended double zepp antenna design. Radiating elements are two collinear 5/8 waves fed in phase. 2 sets of 1/4 wave radials properly decouple lower radiator from the mast. SO-239, handles 500 Watts. 9 ft.



**V-4R** UHF vertical with 5.2 dBi gain derived from double zepp antenna design. Type N, handles 500 Watts, 4 foot.  
**\$109<sup>95</sup>**  
 Covers 400-475 MHz  
**V-3R** 1 1/4 Meter vertical w/5.2 dBi gain, double zepp design. SO-239, handles 500 Watts. 6ft., 9 in.  
**\$119<sup>95</sup>**  
 Covers 216-225 MHz



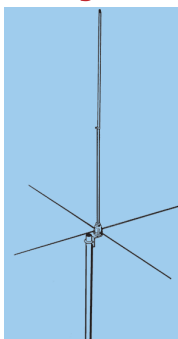
**V-42R** V-42R is independently tunable at 143-153, and 436-455 MHz. Fed through one coax cable, it has sets of 1/4 wave radials which properly decouple 5/8 wave radiators from the mast. Gives 5 dB gain UHF and 3 dB gain on VHF. Type N, handles 200 Watts. 9 ft.  
**\$169<sup>95</sup>**  
 Covers 143-153, and 436-455 MHz



**V-6R** V-6R antenna is based on 2 collinear 5/8 wave radiators. 500 Watt enclosed coil and 2 sets of 1/4 wave radials provide complete mast decoupling and optimum pattern and gain. Rugged design for severe weather, also DC ground lightning protector. 25 ft., 3 in., UHF female connect, handles 500 Watts.  
**\$204<sup>95</sup>**  
 Covers 51-54 MHz

| Model# | Frequenc         | Gain dBi        | Pwr Input            | Wind    | Max Mast | Height       | Weight    |
|--------|------------------|-----------------|----------------------|---------|----------|--------------|-----------|
| V-2R   | 138-175          | 5.2 dBi         | 500 Watts            | 105 mph | 2 in. OD | 9 foot       | 6 pounds  |
| V-42R  | 143-153, 436-455 | 7.2 UHF 5.2 VHF | 200 Watts continuous | 100 mph | 2 in. OD | 9 foot       | 6 pounds  |
| V-3R   | 400-475          | 5.2 dBi         | 500 Watts            | 130 mph | 2 in. OD | 4 foot       | 4 pounds  |
| V-6R   | 51-54            | 5.2 dBi         | 500 Watts            | 80 mph  | 1.5-2.25 | 25 ft. 3 in. | 15 pounds |

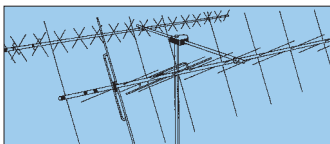
## Hy-Gain VHF Ground Planes



**GPG-2B** GPG-2B is a 5/8 Wavelength Ground Plane for two meters is omni-directional and tunable from 142-185 MHz. It delivers an omni-directional gain of 3.2 dBi. Handles 100 Watts. Measures 4 feet, max mast mount accepted is 1.625 in O.D. Wind area is .30 sq. ft.  
**\$49<sup>95</sup>**  
 Covers 142-185 MHz

**GPG-1B** GPG-1B is a 1/4 Wavelength ground plane similar to the GPG-2B. It has unity gain, covers 144-148 MHz.  
**\$39<sup>95</sup>**  
 Covers 144-148 MHz

## Oscar Link 435 MHz • 145.9 MHz



**VB-216SAT** **\$229<sup>95</sup>**  
 Covers 144-148 MHz

**UB-7030SAT** **\$229<sup>95</sup>**  
 Covers 432-438 MHz

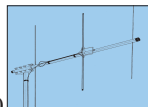
**FB-217SAT** **\$119<sup>95</sup>**  
 Crossboom Assembly only

Hy-Gain's *Oscar Link* antennas are complete with the necessary phasing lines, relays and hardware. Left and right circularity switching reduces fading. True RF switching elements are rated at 200 Watts and improved VSWR for higher efficiency. Feed points are encapsulated, weather protected for long life. The fiberglass crossboom maintains the integrity of the circularity pattern. **DB-218SAT, \$559.95.** The complete 2 Meter/ 440 MHz *Oscar Link* antenna system with crossboom assembly with necessary phasing lines, relays and hardware.

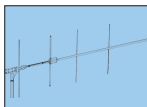
| Model#     | F/B ratio | Gain dBi | Pwr Input | # Element | Boom       | Wind        | Weight |
|------------|-----------|----------|-----------|-----------|------------|-------------|--------|
| VB-216SAT  | 25 dB     | 13.7 dBi | 200 W PEP | 16        | 168.75 in. | 1.1 sq. ft. | 7 lbs. |
| UB-7030SAT | 25 dB     | 16.2 dBi | 200 W PEP | 30        | 134 inches | .7 sq. ft.  | 4 lbs. |

## VHF-FM Beam Antennas

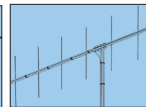
These 2 Meter FM beam antennas include Hy-Gain's exclusive *Beta Match™* to provide exceptional Front-to-Back ratio and maximum obtainable gains. VB-23FM (8.3 dBi gain), VB-25FM (11.2 dBi gain), VB-28FM (14 dBi gain), and VB-214FM (15.2 dBi gain). Threaded stub for feedpoints. Accepts up to 2 inch mast.



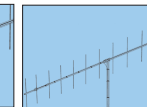
**VB-23FM** **\$49<sup>95</sup>**



**VB-25FM** **\$59<sup>95</sup>**



**VB-28FM** **\$89<sup>95</sup>**



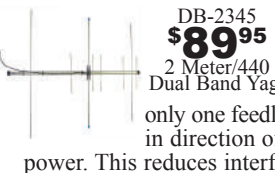
**VB-214FM** **\$99<sup>95</sup>**

## Feedpoint Pig Tail Cable

**APT-2, \$12.95.** Optional 2-foot length for connecting between antenna and coax. SO-239 on one end and 2 (#10) ring terminals on other. Fits *VB series* beams.




## Dual Band Yagi Antenna



**DB-2345** **\$89<sup>95</sup>**  
 2 Meter/440 MHz Dual Band Yagi  
**DB-2345** gives a whopping 8 dBi gain on 2-Meters and 6 dBi gain on 440 MHz. Has 3-elements on two meters and 5-elements on 440 MHz. Requires only one feedline for true *dual band* performance. Point in direction of your QSO for more direction of output power. This reduces interference and increases signal strength.

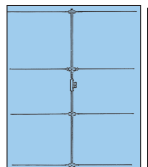
## TriBand 2M/440MHz/6M Yagi



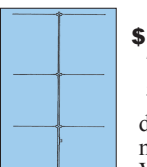
**VHB-246** **\$259<sup>95</sup>**  
 2 Meter/440/6M Tri-Band Yagi  
**VHB-246** Tri-beam has 3 elements on 6M/2M and 5 elements on 440 MHz. 144/440 MHz are mounted at right angles to the 6M beam -- lets antenna be oriented for optimum 6M SSB/CW and 2M/440 MHz. Coax feed points for 6M and 2M/440 MHz.

| Model#      | F/B MAX | Gain dBi | Pwr Input | Long el    | Boom         | Mast dia. | Weight    |
|-------------|---------|----------|-----------|------------|--------------|-----------|-----------|
| VB-23FM     | 20 dB   | 8.3 dBi  | 500 Watts | 40.25 in.  | 43.5 in.     | 2.0 in.   | 2 pounds  |
| VB-25FM     | 20 dB   | 11.2 dBi | 500 Watts | 39.625 in. | 75 in.       | 2.0 in.   | 3 pounds  |
| VB-28FM     | 20 dB   | 14 dBi   | 500 Watts | 40.25 in.  | 148.75 in.   | 2.0 in.   | 4 pounds  |
| VB-214FM    | 20 dB   | 15.2 dBi | 500 Watts | 39.5 in.   | 15 ft. 6 in. | 2.0 in.   | 6 pounds  |
| DB-2345-2M  | 17 dB   | 8 dBi    | 500 Watts | 40.5 in.   | 45 in.       | 1.5 in.   | 2 pounds  |
| DB-2345-440 | 10 dB   | 6 dBi    | 500 Watts | 40.5 in.   | 45 in.       | 1.5 in.   | 2 pounds  |
| VHB-246-6M  | 20 dB   | 8 dBi    | 500 Watts | 119 in.    | 144 in.      | 2.0 in.   | 28 pounds |

## 6-Meter DX Beam Antennas



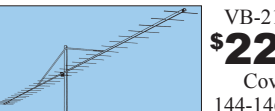
**VB-64DX** **\$144<sup>95</sup>**  
 50-54 MHz



**VB-66DX** **\$264<sup>95</sup>**  
 Covers 50-54 MHz  
 The VB-64DX and VB-66DX feature a concept in beam construction that provides actual delivered performance equalling maximum theoretical gain. The 4-element VB-64DX generates an impressive 10.4 dBi gain and the 6-element VB-66DX increases the gain to an unprecedented 12.5 dBi.

| Model#    | Frequenc | Gain dBi | Pwr Input | wind area    | #Element | Boom       | Weight     |
|-----------|----------|----------|-----------|--------------|----------|------------|------------|
| UB-7031DX | 420-438  | 19.8 dBi | 2 kW PEP  | 1.9 sq. ft.  | 31       | 24.06 ft.  | 9.25 lbs.  |
| VB-215DX  | 144-146  | 16.4 dBi | 2 kW PEP  | 2.75 sq. ft. | 15       | 27.88 ft.  | 13.56 lbs. |
| VB-64DX   | 50-54    | 10.4 dBi | 500 Watts | 1.1 sq. ft.  | 4        | 12 ft.     | 10 lbs.    |
| VB-66DX   | 50-54    | 12.5 dBi | 1.5kWPEP  | 1.8 sq. ft.  | 6        | 24.575 ft. | 17 lbs.    |

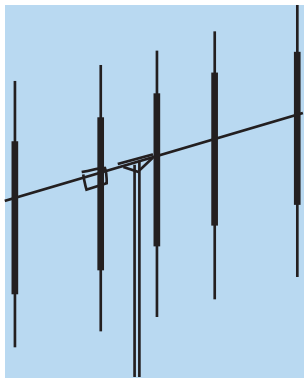
## VHF/UHF DX Beam Antennas



**VB-215DX** **\$229<sup>95</sup>**  
 Covers 144-146 MHz  
 Hy-Gain's DX-Series VHF/UHF Beams are based on the DL6WU element length and spacing and were further refined on Hy-Gain's antenna test range and by computer modeling. Both beams feature encapsulated weatherproof feedpoints with type N connectors for excellent VSWR and power handling. High quality mechanical construction is assured by heavy wall booms and boom supports made of 6063-T832 aluminum tubing, stainless steel hardware, UV stabilized thick-shoulder element insulators and PTFE coaxial baluns.

## Hy-Gain LongJohn 10/12 Meter Beams

LJ-115 ... 5-Elements ... 9.7 dB Forward Gain ...



The Hygain LJ-115 is a five element 10/12 Meter beam antenna designed to give maximum performance.

It has a *whopping* forward gain of 9.7 dB and a great front-to-back ratio of 25 dB.

LJ-115 is constructed of the best quality aluminum tubing and uses a new *swaged* (tapered) design for maximum strength and lightest weight. It boasts an 80 MPH wind survivability.

This powerful beam features Hy'Gain's exclusive *Beta-Match™* system which matches the antenna to a 50

Ohm feedline and puts the driven element at DC ground for *noise-free* operation and lightning protection.

LJ-115 is easily rotated with a Hygain rotator for 360 degree coverage. See popular Hygain models AR-40 and CD-45II on page 119. Feed this antenna with any standard 52 Ohm coaxial cable.

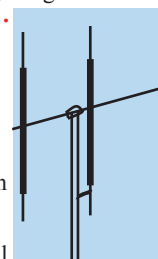
Expect a 1.05:1 SWR at resonance if the antenna is mounted in the clear and care is taken in attaching the feedline. The SWR will remain below 1.5:1 over the entire 10 Meter frequency range.

### LJ-113 ... 3-Elements ... 8.2 dB Forward Gain ...

| ANTENNA SPECIFICATIONS      |  | LJ-115     | LJ-113              |
|-----------------------------|--|------------|---------------------|
| Forward Gain                |  | 9.7 dB     | 8.2 dB              |
| Power Multiplication Factor |  | 9.3        | 6.6                 |
| Front-to-Back Ratio         |  | 25 dB      | 20 dB               |
| Typical SWR                 |  | 1.05:1     | 1.05:1              |
| Coaxial Feedline            |  | 52 Ohms    | 52 Ohms             |
| Boom Length                 |  | 18 feet    | 8 feet              |
| Longest Element             |  | 18 feet    | 18 feet             |
| Mast Diameter               |  | 1 1/8 inch | 1 1/4 to 1 5/8 inch |
| Maximum Wind Survival       |  | 80 MPH     | 80 MPH              |
| Net Weight                  |  | 18.9 lbs.  | 6.8 lbs.            |

### LJ-113, \$169.95.

Similar to LJ-115 but has three elements and a much smaller boom, 8 feet. It still delivers an amazing 8.2 dB forward gain and great front-to-back ratio.



## Hy-Gain 20/15/10/6 Meter Rotatable Dipole

hy-gain



TH-1 is a full-size *high-efficiency* 26', 20-15-10-6 Meter full legal limit rotatable dipole that is super low-profile -- almost invisible from across the street! With a 13-foot turning radius and tiny 9 lb. weight, it fits on small roofs, apartments and condos -- easily turned by a lightweight TV rotator like Hy-Gain<sup>®</sup> AR-35.

Mount in the attic for antenna restricted neighborhoods. *But it is no wimp!* Its bidirectional pattern can help reduce QRM and/or noise while maximizing your signal in the directions that you want -- so you can work some real DX. Handles up to a full 1500 Watts SSB/CW on all HF bands and Six Meters.

### Hy-gain 6M Add-On Dipole Kit

Adds 6-Meter capability to most HF yagis or rotatable dipoles. MK-6 \$39.95 UPS Shippable

Mounted to driven element of most HF rotatable dipoles or HF single-band/multi-band beams without affecting antenna's performance. Handles 1.5 kW. Adds less than 1 lb. weight and essentially no increase in wind-loading to the existing antenna. HF beam must be direct-fed with coax, or a 1:1 balun that handles 1.5 kW. Power may be limited by the power handling of the installed balun on HF beam.



## Hy-Gain 5/8 Wave 10/12 Meter Super-Penetrator™ Vertical Antenna

This fantastic *true full-size* 5/8 Wave 10/12 Meter vertical antenna from Hy-Gain was a *legend in the 70's* ... now it's back to prove its legendary status once again!

A Full-size radiator with lower radiation angle concentrates power closer to the ground, where you want it. Measures 22 foot, 9.5 inches. Larger diameter, heavy wall ply-tubular construction makes the new *Super-Penetrator™* the absolute top omnidirectional antenna around! Four full-length radials and special machine-formed brackets give extra talk-power and overall strength.

Electrical performance has been increased to a new standard by the use of a longer radiator and *double-matching tuning* with linear phasing techniques that provide low SWR and more radiated energy. The *double-matching* also provides a DC path to ground to drain off precipitation static, giving an extremely low noise antenna capable of high power.

SPT-500 is specifically designed to accept AM-FM-SSB-DSB signals with low loss. Handles 1.5 kilowatts. This antenna is illegal for 11 Meters use.

SPT-500 \$149.95



| SPT-500 ANTENNA SPECIFICATIONS |                             |
|--------------------------------|-----------------------------|
| Gain (dB)                      | 5.3 dB                      |
| SWR (at resonance)             | Less than 1.2:1             |
| Nominal input impedance        | 52 Ohms                     |
| Lightning Protection           | DC Ground                   |
| Height                         | Twenty-two feet, six inches |
| Radial Length                  | Eight feet nine inches      |
| Wind (Survival)                | 80 MPH                      |
| Accepted mast size             | 1 1/4 to 1 5/8 inches OD    |

## Hy-Gain HyTower-Jr™

Stands 39 feet tall ... Full 1/4 Wave on 40, 20, 15, 10 Meters ... Cage loading on 80 Meters ... World's Second Best\* Vertical Antenna ...

Standing a tall 39 feet with *full-size* elements and rated at 5 KW, the AV-18JR Hy-gain HyTower-Jr.™ is the world's *second best\** performing vertical! AV-18HTJr. *best\** performing vertical! \$349.95 Stub-decoupling is used to give *full-size* quarter wave radiators on 40, 20, 15, 10 Meters with super efficient cage loading on 80 Meters.

HyTower-Jr.™ has almost no losses -- ground system determines your efficiency.

It is automatic bandswitching, fed with 50 Ohm coax and has low SWR over an exceptionally wide bandwidth with SWR less than 1.2 at resonance.

The main radiator is aircraft high-strength, heavy walled, 2-inch aluminum tubing swaged at the top. Self-supporting in winds up to 40 MPH.

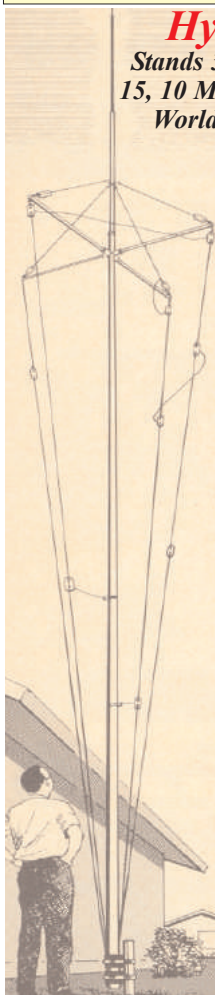
Mounts on 1 1/4 inch plumber's pipe. Heavy duty components will give you years of trouble-free operating pleasure.

Requires good ground system.

\*The famous 53 foot Hy-gain HyTower™ is legendary. It's the premier, best performing vertical in the world -- bar none!

At less than half the price with nearly the same performance and based on the same principles, the HyTowerJr.™ is the poor man's version of its father HyTower.

Of course, Junior™ doesn't have its father's rugged hot-dipped galvanized steel tower and construction! But it is a super performer for sure at half the price!

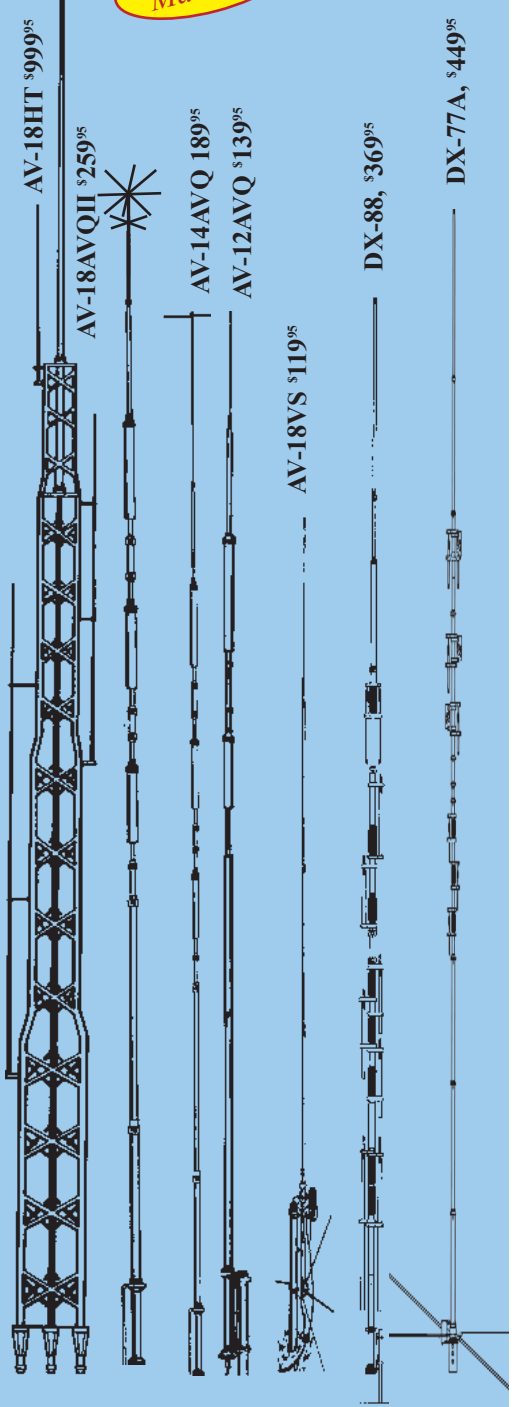




# hy-gain HF VERTICALS

Self-supporting -- no guys required . . . remarkable DX performance -- low angle radiation, omnidirectional . . . 1500 Watts . . . Low SWR . . . 2 year limited warranty

Free Manuals!



All hy-gain multi-band vertical antennas are entirely self supporting -- no guys required. They offer remarkable DX performance with their extremely low angle of radiation and omnidirectional pattern.

All hy-gain vertical antennas handle 1500 Watts PEP SSB, have low SWR, automatic band-switching (except AV-18VS) and include a 12-inch heavy duty mast support bracket (except AV-18HT). Heavy duty, slotted, tapered swaged, aircraft quality aluminum tubing with full circumference compression clamps is used for radiators. Includes all stainless steel hardware. Recessed SO-239 prevents moisture damage.

Hy-gain verticals go up easily with just hand tools and their cost is surprisingly low. All hy-gain Verticals feature a two year limited warranty.

## AV-18HT, \$999.95.

10/12/15/20/40/80 M

### 17 & 160 Meters optional

**Standing** 53 feet tall, the famous *Hy-Gain HyTower* is the world's best performing vertical! The AV-18HT features automatic band selection achieved through a unique stub-decoupling system which effectively isolates various sections of the antenna so that an electrical 1/4 wavelength (or odd multiple of a 1/4 wavelength) exists on all bands. Approximately 250 kHz bandwidth at 2:1 VSWR on 80 Meters. With the addition of a base loading coil LC-160Q or MK-160A, it also provides exceptional 160 Meter performance. The 24 foot tower is all rugged, hot-dip galvanized steel and all hardware is iridized for corrosion resistance. Special tilt-over hinged base for easy raising and lowering. 53 feet, 114 lbs. **MK-17, \$89.95.** 17M add-on Kit. **LC-160Q, \$109.95.** 160 M loading coil. **MK-160A, \$119.95.** 160M 1500W kit.

## DX-88, \$369.95.

10/12/15/17/20/30/40/80M

### 160 Meters optional.

All bands are *easily* tuned with the DX-88's *exclusive* adjustable capacitors. 80 and 40 Meters can even be tuned from the ground without having to lower the antenna. Super heavy-duty construction. 25 feet, 18 pounds. **DX-88 OPTIONS:** **KIT-160-88, \$199.95.** 160 M add-on kit. **GRK-88, \$99.95.** Ground Radial System. **RRK-88, \$99.95.** Roof Radial System.

## DX-77A, \$449.95.

10/12/15/17/20/30/40 M

*No ground radials required!* Off-center-fed Windom has 55% greater bandwidth than competitive verticals. Heavy-duty tiltable base. Each band independently tunable. 29 feet, 25 pounds.

## AV-18AVQII, \$259.95.

10/15/20/40/80 Meters

The classic is back with improved design including three separate air dielectric Hy-Q™ traps for 10 through 80 Meters --1.5 kW PEP. A loading coil and an effective radiator is used for 80 Meters --1kW PEP.

## AV-14AVQ, \$189.95.

10/15/20/40 Meters

The Hy-Gain AV-14AVQ uses the same trap design as the famous Hy-Gain Thunderbird beams. Three separate air dielectric Hy-Q traps with oversize coils give superb stability and 1/4 wave resonance on all bands. 18 feet, 9 pounds.

**MK-80, \$79.95.** 80 Meter add-on kit for AV-14AVQ. Easy to install. In-cludes pre-wound loading coil, hardware.

## AV-18VS, \$119.95.

10/12/15/17/20/30/40/80 M

High quality construction and low cost make the AV-18VS an exceptional value. Easily tuned to any band by adjusting feed point at the base loading coil. Roof mount with Hy-Gain AV-14RMQ kit, \$89.95. 18 feet, 4 pounds.

## AV-12AVQ, \$139.95.

10, 15, 20 Meters

The AV-12AVQ also uses Thunderbird beam design air dielectric traps for extremely Hy-Q performance. This is the way to go for inexpensive tri-band performance in limited space. 13 ft., 9 lbs. Roof mount with AV-14RMQ kit, \$89.95.

## AV-14RMQ, \$89.95

### Roof Mounting Kit

The AV-14RMQ roof mounting kit provides rugged support for Hy-gain models AV-18VS, AV-14AVQ and AV-12AVQ. Kit includes base plate, mast, radial/guy wires and mounting hardware.

### Hy-Gain Tower Bases

Specially designed for Hy-gain crank-up towers. Complete with base hinge and foundation welded steel-cage. Specify tower model. \***Must** be shipped by truck, call for quote.



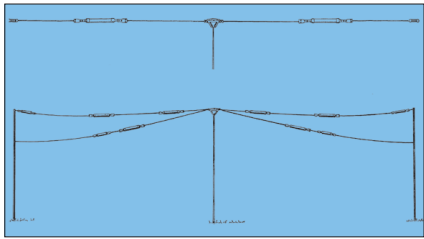
| Model# | Tower   | Price    | Weight    |
|--------|---------|----------|-----------|
| TB-37  | HG-37SS | \$299.95 | 50 lbs.*  |
| TB-52  | HG-52SS | \$299.95 | 80 lbs.*  |
| TB-54  | HG-54HD | \$299.95 | 90 lbs.*  |
| TB-70  | HG-70HD | \$349.95 | 102 lbs.* |

| Model #    | Price    | Bands          | Max Power  | Height  | Weight     | Wind Surv.    | Rec. Mast  |
|------------|----------|----------------|------------|---------|------------|---------------|------------|
| AV-18HT    | \$999.95 | 10,15,20,40,80 | 1500 W PEP | 53 feet | 114 pounds | 75 MPH        | -----      |
| AV-14AVQ   | \$189.95 | 10,15,20,40    | 1500 W PEP | 18 feet | 9 pounds   | 80 MPH        | 1.5-1.625" |
| AV-12AVQ   | \$139.95 | 10/15/20 M     | 1500 W PEP | 13 feet | 9 pounds   | 80 MPH        | 1.5-1.625" |
| AV-18VS    | \$119.95 | 10 - 80 M      | 1500 W PEP | 18 feet | 4 pounds   | 80 MPH        | 1.5-1.625" |
| DX-88      | \$369.95 | 10 - 80 M      | 1500 W PEP | 25 feet | 24 pounds  | 75 mph no guy | 1.5-1.625" |
| DX-77A     | \$449.95 | 10 - 40 M      | 1500 W PEP | 29 feet | 25 pounds  | 60 mph no guy | 1.5-1.625" |
| AV-18AVQII | \$259.95 | 10,15,20,40,80 | 1500WPEP   | 18 feet | 12 pounds  | 70 mph guy    | 1.5-1.625" |

Hy-Gain . . . Antennas, Rotators and Towers!



## HF Multiband Hy-Q trap DOUBLETS



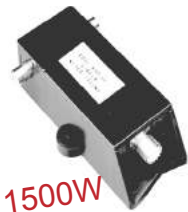
DP-2BDQ DP-5BDQ  
\$139<sup>95</sup> \$259<sup>95</sup>  
40/80 Meters 10-80 Meters

DP-2BDQ is a multi-band Hy-Q trap doublet for 40/80 Meters, 101 feet maximum length of dipole.

DP-5BDQ, \$259.95.

80-10 Meters, maximum length of dipole is 94 feet. The Hy-Gain DP-2BDQ and DP-5BDQ are Hi-Q trap doublets designed for horizontal or inverted "V" rated at legal power. Both feature individually pretuned matched traps for each band. 50 Ohm feed. Coaxial cable not included. Both handle 2 kW PEP.

## Heavy Duty HY-GAIN BALUNS



BN-86  
\$79<sup>95</sup>  
1.5 kW

BN-86 is a broadband 50 Ohm ferrite balun. It is useable from 3-30 MHz.

Rated at 1500 Watts. The BN-86 is recommended for all HF Yagi antennas. Provides improved front-to-back ratio.

Includes clamp to bolt to boom, has SO-239 connector.



4000W

BN-4000 series are broadband 50 Ohm Beam current baluns. They are potted to seal out moisture. Each handles 4000 Watts. Range is 1 MHz to 54 MHz. SO-239 connector.

BN-4000D, \$109.95. For Dipoles.

BN-4000B \$109<sup>95</sup> BN-4000N, \$119.95.  
4000 Watts With "N" connector.

## Hy-gain Antenna Feedpoint Pig Tail

Hy-gain's Antenna Feedpoint Pig Tail cable has 2-foot length for connecting between antenna and your coaxial feedline. Has SO-239 connector on one end and 2 (#10) ring terminals on the other end. Provides an easy and reliable connection for your feedline with PL-259 connector to your antenna feed point.



APT-2  
\$12<sup>95</sup>

Use this for Hy-gain *VB series* beams and other antennas without an SO-239 connector feed point.

## Hy-Gain Lightning Surge Protector

Safe-guard your expensive equipment from static electricity and lightning induced surges on 50 Ohm coaxial line.

Hy-Gain's Guardian Angel™ Lightning Surge Protector has an Ultra-fast gas discharge tube that safely shunts up to 5000 amps of peak impulse current harmlessly to an independent ground.

SWR less than 1.1:1. Less than 0.1 dB loss. Use up to 1000 MHz. LA-2 handles 1.5 kW PEP. LA-2 does not protect against a direct lightning hit. MFJ-97H, \$17.95. Replace gas discharge tube.

LA-2  
\$39<sup>95</sup>



1.5kWatts

## Hy-Gain<sup>®</sup> Guy-Wire Gripper

Hy-gain's Guy-Wire Gripper turns the horrendous job of tightening guy wires into a easy one man operation. This wonder tool works together with a "come-a-long" cable puller to hold/stretch guy wire or cable. Spring loaded for easy operation. Use for guy wire or cable up to 1/4" diameter.



GWH-1  
\$24<sup>95</sup>

## Hy-Gain<sup>®</sup> Arrowpoint Anchor

Hy-gain's Arrow Point Anchor is made of high quality 13 gauge steel.

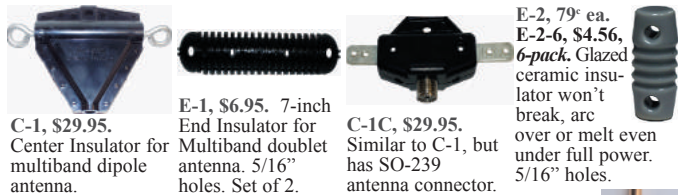
This 3 inch Arrow Point Anchor has a 36 inch integral swiveling 1/8" steel cable. Superior pullout resistance up to 2000 lbs.

Use this ArrowPoint anchor to secure antennas, towers, tarps, treeports, flagpoles and much more.



APA-3  
\$14<sup>95</sup>

## HY-GAIN INSULATORS FOR MULTIBAND DIPOLE ANTENNA



C-1, \$29.95.  
Center Insulator for multiband dipole antenna.

E-1, \$6.95. 7-inch End Insulator for Multiband doublet antenna. 5/16" holes. Set of 2.

C-1C, \$29.95.  
Similar to C-1, but has SO-239 antenna connector.

E-2, 79¢ ea. E-2-6, \$4.56, 6-pack. Glazed ceramic insulator won't break, arc over or melt even under full power. 5/16" holes.

## Hy-Gain 4 Foot Ground Rod

Durable 4' copper bonded steel earth ground rod is a tough 3/8 in. diameter. Sharp pointed end makes it easy to drive it into the ground. Special screw-clamp makes it easy to attach ground wires. GR-1 will help you bleed off static, RFI and prevent RF hot spots. Use several to form RF ground for long wire antennas.

GR-1  
\$9<sup>95</sup>

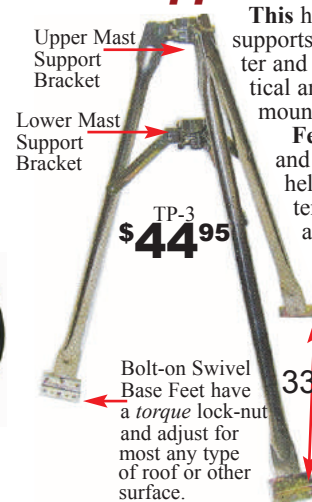
## Water pipe/tower leg ground clamp

Clamps securely onto water pipe or ground rod. Fits pipe/rod 1/2 to 1". Ground wire hole accepts wire size to 9/32 in diameter. Swiveled 1/2 section allows easy removing. UL/CUL listed.



GC-1  
\$4<sup>95</sup>

## Self-Supporting Ant. Mast Tripod



TP-3  
\$44<sup>95</sup>

This heavy-duty three-foot tripod self-supports masts up to 1.75 inches diameter and will support most Hy-Gain vertical antennas. Great for ground/roof mounting. TP-3 doesn't include mast.

Features a universal mast clamp and bottom support bracket that helps stabilize your antenna system. TP-3 will fold for easy storage and travel.

Bolt-on swivel feet adjust to most any type roof or other surface. It is quick and easy to put up your antenna system using screws in the three base feet. And... be assured that your tower is securely anchored for trouble-free service. A torque lock-nut is used for the bolt-on feet.

TP-3 is hot-dip galvanized for long-lasting protection from the outdoor elements. Get your antenna up-in-the-air where it belongs!



HG-5, \$39.95. Five Ft. Galvanized Mounting Pipe 2 inches OD, 16 gauge Galvanized Steel Mast Pipe. Use for ground mount pipe or rotator mast.

AGK-8, \$59.95. 3-Point Guy Wire Kit For vertical antenna or antenna mast. Consists of guy brackets, thimbles, galvanized steel stakes and 150' Danscord rope. Everything needed to secure your antenna/mast safely for high winds.



## Pipe-to-Pipe Mast Mount Kit

PTP-150 Heavy Duty extruded-aluminum clamp assembly with 3/16x6" SS bolts secures tubing either in-line or at 90-degrees. Support large Yagis without drilling the boom, attach masts to railings, extend support tubes, or add cross-sections to verticals for extra bands. Includes eight clamps and stainless steel hardware. Fits mast pipe 1" to 2 in. Max combined pipe size 4". Hold up to 10 lbs., 5 ft. from center.



New!

PTP-150  
\$39<sup>95</sup>

## Hy-Gain Antenna Rope

A nylon Wire Antenna Installation Rope. Select MFJ Nylon or Polyester dacron rope for your wire antenna installations. Black and UV resistant.

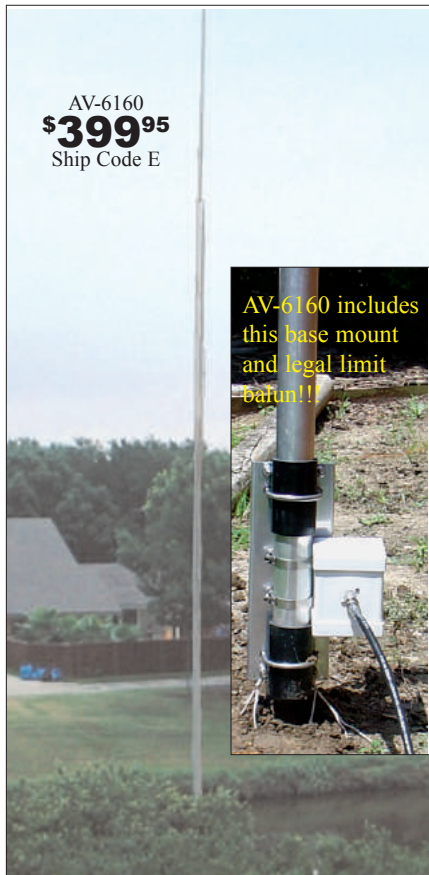
A. RPA-100, \$9.95. 100 feet, 3/32 inch nylon rope.

B polyester A. RPA-250, \$18.95. 250 feet, 3/32 inch nylon rope.

B. RPC-100, \$12.95. 100 ft, 3/16 inch polyester rope.

B. RPC-250, \$29.95. 250 ft., 3/16 inch polyester rope.

# Hy-Gain<sup>®</sup> 160-6 Meters Self-Supporting Vertical Antenna Full 1500 Watts, 43 feet, includes base mount, great for stealth



AV-6160  
**\$399<sup>95</sup>**  
Ship Code E

**Operate all bands 160-6 Meters at full 1500 Watt with this self-supporting, 43 feet high performance vertical!**

**It assembles in less than an hour and its low profile blends in with the sky and trees -- you can barely see it . . .**

**Exceptional Performance**

The entire length radiates to provide exceptional low angle radiation 160-20 Meters and very good performance on 17-6 Meters.

You can shorten it by telescoping it down for more effective low angle radiation on higher bands.

**Just talk with automatic tuner!**

A wide-range automatic or manual antenna tuner at your rig easily matches this antenna for all bands 160-6 Meters.

There's no physical tuning adjustments on the antenna -- you

simply put it up! **Includes** ATB-65 base mount. See below.

An optimized balun design allows *direct coax feed* with negligible coax loss (typically less than 1/2 dB 60-6 Meters and less than 1 dB 160-80 Meters with good quality, low-loss coax).

**Extremely low wind loading**

With just 2 square feet wind load, the AV-6160 has the lowest wind-loading and lowest visibility of any vertical antenna! Its 2-inch O.D. and .120 inch thick walled tubing bottom section makes it incredibly strong.

Just 20 lbs., uses super-strong 6063 aircraft aluminum tubing. Stainless steel hardware.

**Assembles in an hour**

Ground mounting lets you hide antenna base in shrubbery. Requires ground system -- at least one radial. More extensive ground systems work even better. Optional GRK-6160, \$34.95. All-band ground radial kit. See bottom right.

**Stealth Operation**

Low profile. Hide behind trees, fences, buildings, bushes. Use it as a flagpole. It easily telescopes down during the day.

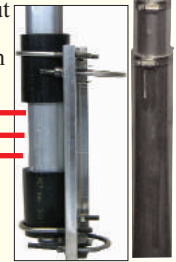
**64', 11-Sect. Telescopic Aluminum Mast**

Includes one size of each slitted tube listed above and ten hose clamps. This is a *super-strong* heavy duty telescoping MAST, not a flimsy pole! Mast is made of .120 inch *thick wall* aluminum tubing. ATM-65 is 64 feet fully extended and 6 feet collapsed without clamps. Guying is required if mast is extended beyond 30 feet. Top section is .625" OD. Bottom section is 2 inches OD x .120 wall.

ATM-65  
**\$199<sup>95</sup>**  
Ship Code D

**Base Mount for Fiberglass and Aluminum Masts**

ATB-65, \$69.95. Complete base assembly kit with mounting plate, insulators, hardware, SO-239, etc. for fiberglass and aluminum masts. Fits up to 2.0" OD masts.



**1.5kW 80/160M high-efficiency Matching Network**

AV-6110 improves efficiency on 160 and 80 Meters for the popular new 43-foot all band vertical antennas by eliminating SWR-related coax and unun mismatch losses. When fed with a 1:4 unun, the 43' antenna has a reasonable compromise SWR on 60-10 Meters. However, at 160/80 Meters it is virtually impossible to match this antenna because of the low radiation resistance. If you are using low loss coax, you will lose much power in the coax and unun due to bad antenna mismatches. Installed at the base of the 43' vertical, AV-6110 will significantly eliminate these losses and put 160 and 80 Meters back within the tuning range of the tuner inside the shack. Includes high-voltage insulated base tube, remote power injector with switch for 160, 80 Meters and off positions. Handles 1.5kW. Matching box mounted in a rugged, weather-resistant PVC housing. Fits at forty-three foot antenna base, just 3Wx16Hx3D inches.

**New! 600 Watts 80/160 Meter Matching Network**

AV-6108, \$249.95. Has all features of the AV-6110, but handles 600 Watts on 80 and 300 Watts on 160M. 3Wx11Hx3D".

AV-6110  
**\$299<sup>95</sup>**  
Ship Code B



**Universal Vertical Tilt Base**



ATB-75  
**\$79<sup>95</sup>**  
Ship Code B

A unique design allows this tilt base to fit most vertical antennas with or without base bracket. Pre-punched

hole makes it easy to mount many different type of verticals. Fits Hygain's AV18VS/14VS/18AVQ/680/640/620/AV-6160, Cushcraft R8/R9, MFJ-1796/1798/2990 and others with tube bases or masts up to 2 1/4" OD. Mount one side of the tilt base to the mast and the other to the base. *No climbing a ladder -- raise antenna up/down easily before severe weather by yourself -- just walk it up or walk it down.* Ground radial holes also provided. 1/8" thick aluminum. Includes (4) 2 1/4" U-bolts, (4) 1 1/2" U-bolts, mast saddles and stainless steel nuts/bolts.



**160 Meter Tuner Range Extender for 43' Verticals**

AV-6104 43" vertical antennas are very popular. However, on 160M, these antennas have a very high reactance and high voltage at the feedpoint. Tuning with a tuner results in maximum efficiency 80-10M, but conditions at 160M present a challenge for most tuners. To get around this problem, add the range extender to the base of the antenna to increase 160M matching capabilities. Reduces reactance and puts antenna in range of the auto or manual tuner. Damaging high-voltage currents are reduced -- preventing tuner damage. 1.5 kW. Weather-resistant PVC, ceramic feedthroughs for input/output. 3 1/2"Wx3 1/2"Hx11D". Use MFJ-998RT/MFJ-994BRT or other tuners.

AV-6102, \$59.95. Like AV-6104, 300 Watts, 5-way binding posts for in/out. 3 1/2"Wx3 1/2"Hx7D". Use with MFJ-926B/927/993BRT auto tuners or manual tuners.

AV-6104  
**\$79<sup>95</sup>**  
Ship Code B



**All-band Ground Radials**

All-band ground radial system for the AV-6160 and other verticals requiring a radial system. Convenient and effective, it provides the necessary return path for ground currents to reduce ground losses. Consists of 2 sets of 4 radial wire assemblies giving a total of eight 14' radial wires. Each 1/4" ring lug for attaching to the antenna ground point. Each end of the radial wires has a solder lug for staking the wire end.

GRK-6160  
**\$34<sup>95</sup>**  
Ship Code A





# MIRAGE

## 2017 CATALOG

### VHF/UHF Solid State Amplifiers

## MIRAGE . . . 160 Watts on 2 Meters!

Turn your mobile, base or handheld into 160 Watt powerhouses and talk further, longer, clearer . . . All modes: FM, SSB, CW . . . Superb GaAsFET preamp . . . Has exclusive Active-Bias™ system for crisp, clear voice in SSB mode . . . True push-pull circuitry and clean RF layout for excellent stability . . . Overdrive and high SWR protection . . . Remote controllable with RC-2 . . .

MIRAGE's most popular amplifier gives you 160 Watts of output power for just 25 W in from your base/mobile rig!

B-2518-G  
**\$439<sup>95</sup>**  
Suggested Retail

The B-2518-G is ideal for your 20 to 60 Watt 2 Meter mobile or base station.

You'll talk further, longer, clearer on all modes -- FM, SSB, CW -- hear weak signals better than you've ever heard before!

You get a low noise 20 dB GaAsFET preamp with an excellent 1 dB noise figure for pulling out weak signals.

B-2518-G is fully protected with features found in expensive commercial amplifiers.

High SWR or excessive input power can damage your amplifier. Protection circuits automatically bypass your amplifier to prevent damage and an LED lights to warn you.

**Active-Bias™ gives crisp, clear voice in SSB mode!**

New! An Active-Bias™ System keeps SSB voice crisp and clear for fantastic operation. Other amplifiers using conventional bias methods tend to produce splatter and distortion as power level changes. This amp with Active-Bias™ doesn't exhibit the problem.

Adjustable time delay gives you smooth transmit/receive switching. Remote external keying. You can remotely control your B-2518-G and place it out of the way. An RC-2, \$49.95, Remote Control turns Power on/off, Preamp On/Off and select SSB/FM. Extra heavy duty custom heatsink spans the entire cabinet. Draws 17-22A from 13.8 VDC. Compact 12x3x5.5 inches.

### Amp Remote Control

Remotely control your B-2518-G/B-5018-G/B-1018-G and place it out of the way. An RC-2, \$49.95,



**MIRAGE RUGGED!**



Remote Control lets you turn power on/off, preamp on/off, select SSB/FM. Other Mirage amps use RC-1. Call Mirage for positive compatibility.

### More 160 Watt, 2-Meter Amplifiers

**B-5018-G, \$439.95.**

For 20 to 60 Watt mobile or base stations. 160 Watts output for 50 Watts input.

**B-1018-G, \$489.95.**

160 Watts output for 8 Watts input. For 0.25-15 Watt rigs.

### Power Curve -- typical output power in Watts

|                 |      |     |     |     |     |     |     |     |     |     |    |
|-----------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| <b>B-1018-G</b> | 25   | 50  | 140 | 150 | 160 | 160 | --  | --  | --  | --  | -- |
| <b>B-2518-G</b> | 5    | 7   | 40  | 60  | 80  | 100 | 125 | 160 | --  | --  | -- |
| <b>B-5018-G</b> | --   | 2   | 15  | 25  | 40  | 50  | 70  | 100 | 130 | 160 | -- |
| <b>Watts In</b> | 0.25 | 0.5 | 3   | 5   | 8   | 10  | 15  | 25  | 35  | 50  | -- |

# MIRAGE . . . 6 Meter Amplifier

**Bust through 6 Meters with 150 Watts of brute power and work exotic DX!**  
**Low Noise GaAsFET Preamp**

A built-in low noise GaAsFET receive preamp gives you 20 dB gain -- lets you dig out weak signals and score exotic DX on sporadic E!

A-1015-G  
**\$399<sup>95</sup>**  
 Suggested Retail

FCC Type Accepted



The A-1015-G is the world's most popular all mode FM/SSB/CW 6 Meter amplifier.

**Bust through 6 Meters with 150 Watts of brute power and work exotic DX!** Power Curve chart shows typical output power.

The A-1015-G is ideal for your 1 to 15 Watt transceiver, mobile or base station.

You'll talk further, longer and clearer on all modes -- FM, SSB or CW. Hear weak signals better than you've ever heard before! Get up to 150 powerful Watts!

Extra heavy-duty heatsink spans entire length of cabinet.

Draws 18-22 amps at 13.8 VDC. Weighs just 5 pounds, measures a compact 12x3x5.5 inches.

**Power Curve -- Typical A-1015-G Output Power in Watts.**

|           |     |    |    |    |    |    |     |     |     |
|-----------|-----|----|----|----|----|----|-----|-----|-----|
| Watts Out | 6   | 22 | 42 | 63 | 84 | 98 | 122 | 142 | 150 |
| Watts In  | .25 | 1  | 2  | 3  | 4  | 5  | 7   | 9   | 10  |

## MIRAGE 420-450 MHz AMPLIFIERS



D-1010-N  
**\$449<sup>95</sup>**  
 Suggested Retail

D-3010-N  
**\$419<sup>95</sup>**  
 Suggested Retail

All UHF models feature all modes: FM, SSB, CW, adjustable delay for SSB and remote control outlet.

They also have a heavy duty heatsink that spans entire length of cabinet, 50 Ohm impedance input and output, 13.8 VDC voltage.

D-3010-N -- 100 W out/30W in. For 5 to 45 Watt mobile/base.

D-1010-N -- 100 Watt/10W in. For handhelds or mobile/base.

### RC-1 - Remote Control Head Use with Most Models

RC-1  
**\$49<sup>95</sup>**  
 Suggested Retail



#### FEATURES

- Easy remote operation with most models
- Preamp on/off
- Switch for SSB/FM operation
- 18 foot cabling included - Available in long lengths with special order
- Size: 3 1/2"Wx2 1/4"Dx1 1/2"H inches
- Mod required for some models

•Compatible with all Mirage amps except for the following amplifiers: B-XX18-G, B-24-G, B-34, B-34-G, B-310-G, B-320-G, BD-25, BD-35, B-510-G, C-22-G, D-15-N, D-26-N, M-120-G, PAC-1070-B, PAC-15-100C, PAC-30-130-B.

**MIRAGE D-Series Specifications**

| Model #  | Price    | Input    | Output  | Current |
|----------|----------|----------|---------|---------|
| D-1010-N | \$449.95 | .30-15 W | 5-110 W | 20 amps |
| D-3010-N | \$419.95 | 5-45 W   | 7-100 W | 20 amps |

## MIRAGE Amateur Television Amplifiers

*Specially designed for Amateur Television, 420-450 MHz*



D-1010-ATVN  
**\$469<sup>95</sup>**  
 Suggested Retail

D-100-ATVN  
**\$479<sup>95</sup>**  
 Suggested Retail

**D-1010-ATVN, \$469<sup>95</sup>**  
 10W In-52W Out (ATV-AVG)  
 10W In-82W Out (ATV-PEP)  
 10W In-100W Out (SSB/FM)

**D-100-ATVN, \$479<sup>95</sup>**  
 2W In-52W Out (ATV-AVG)  
 2W In-82W Out (ATV-PEP)  
 2W In-100W Out (SSB/FM)

| SPECIFICATIONS    | D-1010-ATVN           | D-100-ATVN            |
|-------------------|-----------------------|-----------------------|
| RF POWER IN.....  | 1 Watt to 15 Watts    | 500 mWatts to 5 Watts |
| RF POWER OUT..... | 100W(SSB/FM) 52W(ATV) | 52 Watts              |
| CURRENT.....      | 20 Amps               | 20 Amps               |
| SIZE.....         | 12x3x5.5 inches       | 12x3x5.5 inches       |
| WEIGHT.....       | 6 pounds              | 6 pounds              |

## Commercial Grade Amplifiers



**PAC-30-130B \$359<sup>95</sup>**  
 Suggested Retail  
 Commercial Amplifiers are available for 150-174, 450-470 MHz and VHF marine bands, 70-100 Watts out. Most feature over-temperature sensing that bypasses amplifier when safe operating temperatures are exceeded; heavy duty heatsinks finned on 3 sides; and wide input power range. These amps were designed for two-way radio signal commercial, mobile, or fixed location use. All are FCC type accepted.

**MIRAGE Commercial Amplifier Specifications**

| Model     | Price    | Input   | Output  | Preamp | Range   |
|-----------|----------|---------|---------|--------|---------|
| B34GC     | \$159.95 | .5-3 W  | 10-30 W | Yes    | 150-162 |
| Pac15100C | \$429.95 | 5-25 W  | 5-100 W | No     | 450-475 |
| Pac30130B | \$359.95 | 10-30 W | 1-100W  | No     | 150-174 |

MIRAGE

# Mirage 2-Meter/440 MHz Amplifiers for HTs!

**Boost your dual band HT to 45 Watts on 2 Meters or 35 W on 440 MHz!**



BD-35  
**\$229<sup>95</sup>**  
Suggested Retail

**D\*STAR  
Compatible!**

- 45 Watts Output on 2 Meters • 35 Watts output on 440 MHz
- **New! D\*STAR COMPATIBLE!**
- Reverse Polarity Protection
- Free Mobile Bracket Included
- Works with all major brand Handhelds up to 8 Watts
- Auto RF sense T/R switch

Add this MIRAGE BD-35 dual band amp and boost your handheld to a much more powerful mobile or base -- 45 Watts on 2 Meters or 35 Watts on 440 MHz! Get 35 Watts out with just 4 Watts in! **BD-35 is now D-STAR compatible!**

MIRAGE's exclusive *FullDuplex Amp™* lets you talk on a band and listen on another band at the same time -- just like a phone conversation (requires compatible HT).

**Features** auto band selection, reverse polarity protection, on-air leds, single connector for dual band radios/antennas, free mobile bracket and more!

**Works** with HTs to 7 Watts. Super compact 5Wx1½Hx5D inches. Draws 7 Amps at 13.8 VDC.

## Power Curve -- typical Mirage BD-35 output power

| Watts Out (2 meters) | 10  | 18  | 30 | 40 | 45 | 45 | 45 | 45+ | 45+ | 45+ |
|----------------------|-----|-----|----|----|----|----|----|-----|-----|-----|
| Watts Out (440 MHz)  | 4   | 10  | 16 | 26 | 32 | 35 | 35 | 35+ | 35+ | 35+ |
| Watts In             | .25 | 0.5 | 1  | 2  | 3  | 4  | 5  | 6   | 7   | 8   |

## MIRAGE 2-Meter Amplifiers for HTs



B-34-G  
**\$159<sup>95</sup>**  
Suggested Retail

B-34  
**\$139<sup>95</sup>**  
Suggested Retail

Add this MIRAGE amp to your 2 Meter handheld and get 35 Watts output . . . talk further, longer, clearer . . . *It's the best HT amplifier \$159.95 can buy!*

**Here's why:  
First-class strip-line**

techniques and modular construction gives superb RF performance and unsurpassed reliability . . .

**Custom** wrap around heatsink provides excellent heat distribution -- runs cool for extra long life. Reverse polarity protection can save your amp and your pride if you connect power backward . . .

**Automatic** RF sense transmit/ receive switch makes operation super easy. Low input SWR keeps your handheld safe from overheating. Individual pushbutton switches lets you select FM/SSB operation, receive preamp on/off and power on/off.

**LEDs** show On-Air, receive preamp on and power on. 5¼x1¾x4¾". Free mobile mount bracket, hardware.

**B-34, \$139.95.** Like B-34-G but FM only, less preamp, mobile bracket. Super tiny 3¼x1¾x4¼ inches.

## Power Curve -- typical Mirage B-34-G amplifier output power

| B-34-G Watts Out | 8   | 12  | 18 | 30 | 33 | 35 | 35 | 35 | 35 | 35 |
|------------------|-----|-----|----|----|----|----|----|----|----|----|
| B-34-G Watts In  | .25 | 0.5 | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  |

## MIRAGE B-320G . . . 200 Watts on 2 Meters with HT or Transceiver!

Add this amp to your 2 Meter HT or mobile radio and get 200 Watts brutal output. Talk further, longer, clearer!

**Has** 15 dB GaAsFET preamp, works all modes FM/SSB/ CW. Fully protected by high SWR protection. Includes mobile mounting bracket. An input level switch selects proper input power from your HT or mobile radio. Low power input for hand-held radios, 250 mW to 10 Watts. 1/4 Watts in gives 132 Watts output. 3 Watts input from your HT gives full power output.

**High** power input for mobile radios, 10 Watts to 50 Watts. 10

## Power Curve -- typical B-320-G output power

| Watts Out Mobile Amp | 1.5 | 4   | 32  | 95 | 165 | 186 | 193 | 200 |
|----------------------|-----|-----|-----|----|-----|-----|-----|-----|
| Watts Out HT Amp     | 132 | 165 | 200 | -- | --  | --  | --  | --  |
| Watts In             | .25 | 0.5 | 3   | 10 | 25  | 35  | 40  | 50  |

## B-310-G . . . 100 W on 2 Meters

*Reach distant repeaters . . . Log onto faraway packet bulletin boards . . .*

This rugged Mirage B-310-G amplifier operates all modes: FM, SSB and CW. It's the perfect match for all HTs up to 8 Watts and multi-mode SSB/CW/FM 2 Meter rigs.

**Built-in** low noise GaAsFET receive preamp gives you 15 dB gain -- lets you dig out weak signals. SWR and Reverse Polarity Protection.

**Mirage's** integrated *HeatsinkCabinet™* and whisper quiet fan gets heat out fast!

**The results?**

An ultra-compact 4¾x1¾x7¾ inch 2½ pound amplifier that delivers a super powerful 100 Watts.

**Free** 3 foot handheld to B-310-G coax cable and mobile bracket!

**Automatic** RF sense Transmit/Receive switch. Remote keying jack. LEDs monitor "On-Air", high SWR, pre-amp, power.

**Push** buttons select SSB/FM, pre-amp, power. Draws 15 Amps at 12-15 VDC.

**Full one year MIRAGE warranty**

With MIRAGE's legendary ruggedness, you may never need our superb warranty.



B-310-G  
**\$279<sup>95</sup>**  
Suggested Retail

## Power Curve -- typical Mirage B-310-G amplifier output power

| B-310-G Watts Out | 25  | 50  | 75 | 95 | 100 | 100 | 100 | 100+ | 100+ | 100+ |
|-------------------|-----|-----|----|----|-----|-----|-----|------|------|------|
| B-310-G Watts In  | .25 | 0.5 | 1  | 2  | 3   | 4   | 5   | 6    | 7    | 8    |

Watts input gives 95 Watts output. 50 Watts input gives full power output.

B-320-G  
**\$519<sup>95</sup>**  
Suggested Retail

**Custom** wrap-around heatsink gives excellent heat dissipation.

**Superb** Mirage Warranty.



## SMA/BNC Cables/Adaptors

**A.** Release strain on your HT's antenna connector! Choose SMA or BNC. Flexible, mini coax, 3 feet.

**MFJ-7716, \$4.95 each.** SMA female to BNC male adaptor.

**MFJ-7718, \$4.95 each.** SMA male to BNC female adaptor.

**MFJ-7719, \$4.95 each.** SMA male to SO-239 adaptor.

**A. MFJ-5612S, \$14.95.**

**B. MFJ-5612SF, \$14.95.** SMA Female to SO239 for Wouxun/Baofeng.

**C. MFJ-5612B, \$14.95.** BNC Male to SO-239 adapter cable.

**MIRAGE**

# MIRAGE HF/VHF/UHF PREAMPLIFIERS

KP-1  
**\$149<sup>95</sup>**  
 Suggested Retail



KP-2  
**\$199<sup>95</sup>**  
 Suggested Retail



**High gain ultra low noise GaAsFET preamps** for receiving weak signals. Select-able gain prevents receiver intermod. 15-22 dB gain. Auto RF switching to 160W. Choose In-shack (details below) or Mast-Mount models (right).

**MODEL KP-1**

- A. KP-1/10M
- B. KP-1/6M
- C. KP-1/2M
- D. KP-1/220MHz
- E. KP-1/440MHz

**In-Shack Model Features:**

- Automatic RF Switching, SO-239
- GaAsFET boosts weak signals, SO-239 SO-239
- In-Line design for easy operation, N-type
- High or Low switchable gain, N-type

**FREQUENCY**

- A. 28-30 MHz
- B. 50-54 MHz
- C. 144-148 MHz
- D. 220-225 MHz
- E. 430-450 MHz

**KP-1 In-Shack Model Features:**

- Gain: from 15 dB to greater than 25 dB
- Noise: less than 1 dB
- Power Handling: 100 Watts
- Size: 4<sup>1</sup>/<sub>4</sub>Wx2<sup>5</sup>/<sub>16</sub>Hx1<sup>3</sup>/<sub>16</sub>D inches

**MODEL KP-2**

- A. KP-2/10M
- B. KP-2/6M
- C. KP-2/2M
- D. KP-2/220MHz
- E. KP-2/440MHz

**Mast Mount Model Features:**

- Automatic RF Switching, SO-239
- GaAsFET boosts weak signals, SO-239
- Mast mount design reduces loss, SO-239
- In-Line design for easy operation, N-type
- High or Low switchable gain, N-type

**FREQUENCY**

- A. 28-30 MHz
- B. 50-54 MHz
- C. 144-148 MHz
- D. 220-225 MHz
- E. 430-450 MHz

**KP-2 Mast Mount Model Features:**

- Gain: from 15 dB to greater than 25 dB
- Noise: less than 1 dB
- Power Handling: 100 Watts
- Voltage: 12-15 VDC
- Size: 4<sup>1</sup>/<sub>4</sub>Wx2<sup>5</sup>/<sub>16</sub>Hx1<sup>3</sup>/<sub>16</sub>D inches

# MIRAGE VHF/UHF Repeater Amplifiers

*Dedicated Repeater Amplifiers for **Continuous Duty Service***



selected by proper interfacing to the repeater controller. Either a relay contact or a TTL logic can be used to select the bypass mode or amplified mode of operation.

relay release time can be selected with built-in switches. The operational MIRAGE RC-1 remote control box can be used to switch these functions up to 18 feet away from the amplifier.

**440 MHz and ATV Models FEATURES**

**Cool Running** - A 10" high by 19" wide full finned rack-mounted heatsink keeps the transistor temperatures low for long life. The chassis cover is perforated so air convection will keep the circuit board area cool. The RF board is low loss Teflon<sup>®</sup> for minimum dielectric heating.

**Reliable** - The RF change-over relay has been eliminated on this model to provide the highest order of reliability.

**Teflon<sup>®</sup>** connectors are standard on this well-designed unit.

**Protection** - The amplifier will shut off if conditions cause the heatsink temperature to rise to an unsafe level of operation.

**All Mode Operation** - Class AB linear operation is rated for FM, SSB, CW and ATV operation.

**1 YEAR WARRANTY ON ALL REPEATER AMPLIFIERS**

**Warranty** - Mirage repeater amplifiers are guaranteed for one year against failure due to defective workmanship or materials.

**MIRAGE**

**10 models to choose from** -- continuous duty all mode FM/SSB/CW repeater amplifiers for 6, 2, 450 MHz, and ATV service.

**50, 144 and 220 MHz Models FEATURES:**

**Cool Running** - A 10" high by 19" wide full finned rack-mounted heatsink keeps the transistor temperatures low for long life. Chassis cover is perforated so air convection will keep the circuit board area cool.

**Dual Protection** - The amplifiers have two temperature sensors; one on the heatsink and one on the circuit board. If conditions cause either to overheat, the amplifier will shut off until it cools down to a safe temperature.

**Bypass Mode** - These models will feed the exciter output straight through to the antenna in an over-temperature condition.

The bypass mode can also be remotely

**Reduced Relay Wear** - The amps have a selectable long release time (adjustable up to 5 seconds) for the RF change-over relay. This prevents unnecessary action during repeater operation.

**On-site Control** - The bypass mode and

**MIRAGE Repeater Amp Specifications**

| Model#        | Price    | Input   | Max Out | MHz     |
|---------------|----------|---------|---------|---------|
| A-1015-R      | \$579.95 | .25-5 W | 98 W    | 50-52   |
| B-1018-R      | \$709.95 | .25-3 W | 130 W   | 145-148 |
| B-2518-R      | \$679.95 | .5-10 W | 111 W   | 145-148 |
| D-1010-NR     | \$719.95 | .25-4 W | 80 W    | 440-450 |
| D-3010-NR     | \$689.95 | 1-15 W  | 75 W    | 440-450 |
| D-100-ATVN-R  | \$689.95 | .25-1 W | 52 W    | 420-450 |
| D-1010-ATVN-R | \$689.95 | .25-4 W | 80 W    | 420-450 |



# VECTRONICS

## 2017 HAM RADIO CATALOG

### Vectronics 2 kW Roller Inductor Antenna Tuner

The Vectronics HFT-1500 Roller Inductor Tuner has three continuously variable components -- two 4.5 kV capacitors and a roller inductor controlled by a precision crafted crank handle and a gear driven 5-digit counter.

**Tune ANY Real Antenna!**

The HFT-1500 will tune ANY real antenna . . . verticals, dipoles, inverted vees, beams, long wires, SWL antennas . . . ANYTHING! And its huge components make the tuning ARC-FREE!

You can tune your SWR down to the absolute minimum from 1.8 to 30 MHz, including MARS and the WARC bands. Handles 2 kW SSB PEP amplifier input power.

**21-Segment Bargraph for SSB Power**

The bargraph is a 21 segment display that makes analyzing SSB power amazingly easy. This LED meter shows your peak

HFT-1500  
**\$479<sup>95</sup>**

Ship Code D

reading and has fully adjustable level and delay controls.

A lighted dual movement D'Arsonval Cross-Needle

SWR/Wattmeter displays SWR, forward and reflected power simultaneously at a glance. RF directional coupler is fully shielded for even greater accuracy.

The meter measures peak and average power in the 300/3000 Watt scales. Bargraph display and meter lamp require 12 VDC adapter, included.



Antenna selector switch is a 6-position ceramic. Coax 1 is for tuned and tuner bypass; Coax 2 is for tuned and tuner bypass, bypass and balanced antenna.

The HFT-1500 measures 5.5Hx12W x12.5D inches and is housed in a beautiful RF-tight aluminum cabinet. Weighs 10 lbs.

### VC-300DLP . . . World's most versatile HF Antenna Tuner

Get everything you've ever wanted . . . precise inductance control that rivals roller inductors and the ability to match any real antenna!

VC-300DLP gives you full 1.8-30 MHz coverage, peak reading backlit Cross-Needle Meter, 8 pos. antenna switch, built-in 50 Ohm dummy load, finest components and world class quality.

VECTRONICS' custom inductor switch was designed to withstand the extremely high RF voltages and currents developed in your tuner. *Built-to-last.*

Tune any real antenna 1.8-30 MHz, including all MARS/WARC bands. Verticals, dipoles, yagis, quads, long-wires, G5RVs...



Has 4:1 balun for balanced line antennas. Handles up to 300 Watts SSB PEP, 200W continuous (150W, 1.8 MHz).

A backlit Cross-Needle Meter displays SWR, forward and reflected power simultaneously. Reads both peak and average

VC-300DLP  
**\$179<sup>95</sup>**

Ship Code B

power on 30/300 Watt scales. Lamp has front panel switch and uses 12 VDC or 110 VAC with optional AC-12 **\$15.95.**

An 8-position antenna switch selects 2 coax fed antennas, random wire/balanced line or built-in dummy load for use through your tuner or direct to your transceiver. Bypass position keeps your Cross-Needle SWR meter in line.

Use the built-in dummy load for testing and repairing your rig, setting power level, adjusting your mic gain and more.

Chemically treated aluminum case has durable baked-on paint and scratch-proof color Lexan front panel. Measures a compact 10Wx9.5Dx3.5H inches.

### VECTRONICS Deluxe 300 Watt Antenna Tuner with 21 Segment SSB Bargraph



VC-300D, \$219.95. Similar to VEC-300DLP, but has 21-segment bargraph that makes analyzing SSB power amazingly easy. LED meter shows peak reading and has fully adjustable level and delay controls.

### Vectronics 300 Watt Mobile Tuner

VC-300M  
**\$129<sup>95</sup>**

Ship Code B



The VC-300M Mobile AntennaTuner is compact, lightweight, easy-to-operate and is our most economical tuner. It's compatible with any mobile antenna and any mobile HF transceiver and is small enough to fit the most compact car.

Use at your home base station with dipoles, vees, verticals, beams or quads fed by coax. Backlit dual movement meter simultaneously monitors power and SWR.

Covers 18 to 30 MHz. Handles 300 Watts SSB PEP, 200 Watts continuous, (150 Watts on 1.8 MHz).

Measures 7.25Wx8.75Dx3.6H inches. Weighs just 3.4 pounds.

### VECTRONICS SWR/Power Meters

PM-30, \$89.95.

For 1.8 to 60 MHz. Displays forward and reflected power and SWR simultaneously on dual movement Cross-Needle Meter. True shielded directional coupler assures accuracy. Backlit meter displays peak or average power in 300/3000W ranges. Measures a compact 5.3x5.75x3.5 inches. Has quality SO-239 connectors.



PM-30UV, \$99.95.

For 144, 220 and 440 MHz ranges. Covers 144/220/440 MHz. Has 30 and 300 Watt ranges. Quality SO-239 connectors.

PM-30UVN, \$99.95.

Similar to PM-30UV but has Type N antenna connector.

PM-30UVB, \$99.95.

Similar to PM-30UVN but has BNC antenna connector.



## VECTRONICS HF/VHF/UHF Dry Dummy Loads

### 1500 Watts HF/VHF/UHF Dry Dummy Load

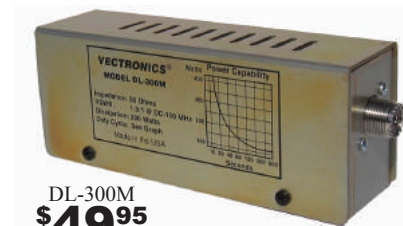
**DL-650M, \$79.95.** Handles 100 Watts continuous, 1500 Watts for 10 seconds to 650 MHz. Ceramic resistor. SWR lower than 1.3:1. Has SO-239 Connector.

**DL-650MN, \$84.95.** Like DL-650M but has N-type connector.



DL-650M  
**\$79.95**  
Ship Code A

### 300 Watts Dry Dummy Loads



**DL-300M, \$49.95.** Handles full 300 Watts for thirty seconds. Air-cooled, non-inductive resistor in a perforated metal housing. Has SO-239 connector. Silk-screened derating curve. SWR below 1.1:1 to 30 MHz.

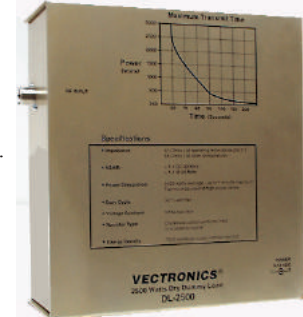
**DL-300MN, \$54.95.** Like DL-300M but with N connector.

DL-300M  
**\$49.95**  
Ship Code A

### 2500 Watts Fan-cooled Dry Dummy Load

**DL-2500, \$219.95.** 2500 Watts dry dummy load is fan cooled. DC to 150 MHz. Can dissipate 2500 Watts average power for one minute on, ten minutes off. Detailed power curve.

**DL-2500N, \$229.95** with N connector.



DL-2500  
**\$219.95**  
Ship Code B

## VECTRONICS Low Pass TVI Filters

### 1500 Watts Low Pass TVI Filter

**LP-30, \$89.95**  
Ship Code A

Use between Transmitter and Antenna or Tuner. Reduces TV interference (TVI) radiated by transmitters operating below 30 MHz. Suppresses harmonics appearing in the TV bands. Additional attenuation to TV IF frequencies above 40 MHz. Low loss to 30 MHz. 9-pole inverse Chebyshev design.

**SPECIFICATIONS:**  
**Passband:** 0-30 MHz **Cutoff freq:** 35 MHz **Attenuation:** 42.17 MHz (Color IF), -70 dB 45.75 MHz (Video IF), -70 dB 52.25 MHz (Channel 2 Video), -60 dB; **Worst case at 65 MHz, -60 dB** **Power Capacity:** 1500 W Key Down - 50% Duty **Impedance:** 52 Ohms **Insertion Loss:** 0.25 dB @ 30 MHz **VSWR:** Less than 1.5:1 **Dimensions:** 8.75Wx3Dx2.75H inches.

### Tuned Active SWL Antenna

**AT-100, \$99.95**  
Ship Code A



**AT-100, \$99.95.** This portable compact antenna is perfect for indoor use by itself or with an external antenna. **Tunes** from 300 KHz to 30 MHz including VLF, AM broadcast, all shortwave and ham radio bands. Great for SWL!

### 2500 Watts Low Pass TVI Filter

Use between your Transmitter and Antenna or Tuner. Reduces TV interference (TVI) radiated by transmitters operating below 30 MHz. Suppresses harmonics appearing in the TV bands. Additional attenuation to TV IF frequencies above 40 MHz. Low loss to 30 MHz. 9-pole inverse Chebyshev.

**SPECIFICATIONS:**  
**Passband:** 0-30 MHz; **Cutoff freq:** 35 MHz; **Attenuation:** 52.25 MHz (Channel 2 Video), -60 dB; **Worst case at 65 MHz, -60 dB** **Power Capacity:** 2500 W Key Down - 50% Duty **Impedance:** 52 Ohms; **Insertion Loss:** 0.25 dB @ 30 MHz; **VSWR:** Less than 1.5:1; **Dimensions:** 9.5Wx4.25Dx2.38H in. **Weight:** 2.5 lbs.

### Deluxe Iambic CW Keyer



**CK-200, \$99.95.** Speed, weight, tone, volume controls, tune, iambic A/B switch, 3 types of keying output, speed control 6-50 wpm, self-complete dots/dashes. Use 9V battery/110 VAC.

### Deluxe Iambic CW Paddle

**KP-200, \$89.95.** Iambic Key Paddles complete with 1/4" plug and cable. KP-200, chrome base or KP-200B, black base.



## High Pass TVI Filters

**Installs** between VCR and TV and cable TV or antenna lead-in cable. Eliminates or reduces interference caused by nearby HF transmitters operating below 30 MHz. Low loss in the TV pass-band 52-550 MHz. Unique shield breaking circuit prevents cable from acting like an antenna. **SPECIFICATIONS:** **Passband:** 52-550 MHz; **Cutoff Freq:** 50 MHz; **Attenuation:** More than -60dB at 10 MHz; More than -55 dB at 20 MHz; More than -40 dB at 30 MHz **Impedance:** 75 Ohms; **Insertion Loss:** Less than 0.5 dB @ 52-550 MHz; **Connectors:** CATV (Type F) 75 **Dimensions:** 3.25Wx1.5Dx2H inches.

**HPF-1, \$29.95**  
Ship Code A



### HPF-2 Deluxe High Pass Filter

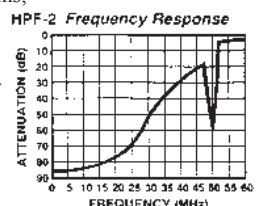
Use between Cable and VCR/TV set. Reduces TV interference (TVI) from nearby radio transmitters (like broadcast, commercial, two-way, amateur, and CB below 30 MHz. Unique common-mode rejection (RF current on the shield of coax cable) using a toroid ferrite core.

**SPECIFICATIONS:**  
**Passband:** 52-550 MHz; **Cutoff Freq:** 50 MHz **Attenuation:** More than 80dB: 1-14 MHz; More than 70 dB: 14-25 MHz; More than 50 dB: 25-30 MHz **Impedance:** 75 Ohms;

**Insertion Loss:** Less than 0.25 dB @ 52-550 MHz; **Connectors:** CATV (Type F) **Dimensions:** 3.625Wx1.12Dx2H inches.

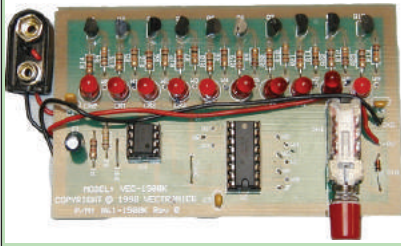


HPF-2  
**\$44.95**  
Ship Code A



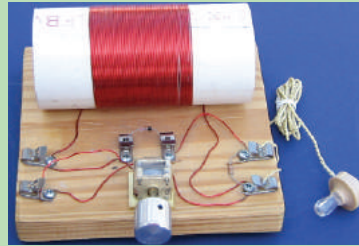
# Vectronics high-performance electronic kits ... fun to build and use!

## Comprehensive Soldering Course Kit



Designed for schools and individuals. Includes detailed instruction and study guide, theory, surface mount technology, quizzes, PC board and components for soldering practice. Used & endorsed by engineering schools in several universities, vo-tech schools, businesses and others. No kit case. **Order VEC-1500K, \$29.95.**

## Old-Fashioned Crystal radio set Kit



**Relive the experience of early radio pioneers!** This baby really works! Wind your own inductor, wire up the earliest radio circuit without soldering a thing and listen to the magic of radio that needs no power. Put up an antenna, connect ground. Stations come in amazingly loud and clear. 1 3/4 x 5 x 6 1/2". Has antenna wire, earphone. Great boy or girl scout lesson, school project or fun grandchild project weekend!!! Great way to start to elmer a new young ham! *Simple level.* **Order VEC-121K, \$24.95.**

**Full featured CW Keyer Kit** is the best bargain in radio! Self-completing dot-dashes and dot-dash memory forgive timing errors. Front volume, speed (3-65 wpm) controls. Weight adjusts 25-75%. Sidetone (300 -1000Hz). LM386 audio amp for ext. speaker. Iambic A/B, fully auto or semi-auto "bug" mode. Sleep Mode battery saver. Use 9V. 1 3/4 x 4 x 3 1/2". *Simple level.* **Order VEC-201K, \$24.95.**

**CW Memory Keyer Kit** stores 512 characters in four 128 character non-volatile EEPROM message memories. Carry on entire QSOs by just pressing memory message buttons. True sinewave sidetone with soft rise and fall time eliminates harsh keyclicks. Has all features of VEC-201K CW Keyer Kit. 1 3/4 x 6 3/4 x 5 1/4 in. *Simple.* **Order VEC-221K, \$69.95.**

**Tunable SSB/CW Audio Filter Kit** has sharp four pole peak and notch filters. Zero in with frequency control & adjust bandwidth for best response. Tune frequency from 300-3000 Hz. Notch is an outstanding 50 dB. 1 Watt amplifier. Speaker/Phone jacks. 12 VDC at 300 mA. 1 3/4 x 4 3/4 x 5 1/4 in. *Intermediate skill level.* **VEC-841K, \$34.95.**

**Super CW Audio Filter Kit** gives you three bandwidths: 80, 110, 180 Hz. Eight poles gives super steep skirts with no ringing. Pull CW QSOs out of terrible QRM! Plugs into phone jack to drive phones. QRM down 60 dB one octave from center frequency (750 Hz) for 80 Hz bandwidth. Improves S/N ratio 15 dB. Use 9V battery. 1 3/4 x 4 x 3 1/2 in. *Simple.* **VEC-820K, \$19.95.**

**Super CW filter/ amplifier Kit** has powerful 1 watt audio amplifier to drive speaker. 8 poles active IC filtering uses cascaded low-Q stages. 3 bandwidths: 80,110, 180 Hz. Center frequency: 750 Hz. Up to 15 dB. Use 9-18VDC, 300 mA max. 1 3/4 x 4 x 3 1/2 in. *Simple skill level.* **Order VEC-821K, \$29.95.**

**Super SSB Audio Filter Kit** improves readability with 8 poles, optimizes audio bandwidth, reduces SSB splatter, low, hi-pitched interference, hiss, static crashes, background noise. Use 9 Volt battery. 1 3/4 x 4 x 3 1/2 inches. *Simple skill level.* **Order VEC-830K, \$19.95.**

**Ni-Cad/Ni-MH Battery Charger Kit** safely quick charges expensive batteries - no overcharging -- many in less than an hour. HTs, cell phones, camcorders, lap top. 1 3/4 x 4 3/4 x 5 1/4 in. *Moderate.* **VEC-412K, \$49.95.**

**Portable CD/MP3 Amp Kit** has 4 Watt per channel amplifier. Plug in a portable CD player and a pair of 8 Ohm speakers. Fill your room with music. 12V battery/12 VDC. *Simple.* **VEC-1604K, \$19.95.**

Cases available for most kits listed above, \$14.95. Add "C". **Example: VEC-201KC, \$14.95.**

**SCA Decoder Kit** lets you discover interesting programming hidden in many standard FM broadcast signals. Commercial-free background music, all news programs, weather reports, stock quotes, digital data, ethnic programs, reading services for the blind, etc. Tune entire SCA band from 50 to 100 KHz. Connect 422K to detector output of your FM receiver. 1 3/4 x 6 1/2 x 5". *Simple level.* **VEC-422K, \$27.95.**

**Aircraft Receiver Kit** tunes entire voice aircraft band 118-136 MHz -- air traffic 100 miles away. Track incoming/outgoing traffic in your area, advanced weather information, discover how National Air Traffic System works. Great way to learn about aviation. Use 9V battery. Drives external speaker/phones. 1 3/4 x 4 x 3 1/2 in. *Intermediate.* **VEC-131K, \$29.95.**

**Shortwave Converter Kit** converts AM or AM/FM radios to shortwave receivers at a push of a button. Choose 2 1 MHz bands between 3 and 22 MHz. Popular 13,16,19, 25, 31, 41, 49 and 60 Meters international bands. On/off bypass, NE-602/612 mixer-oscillator IC and tuned input circuit. 9 V battery. 1 3/4 x 4 x 3 1/2". *Intermediate.* **VEC-101K, \$27.95.**

**Voice Activated Recorder Switch Kit** can remotely and auto record conversations, speeches. Don't waste tape by not recording silence. Plug in remote recorder jack and it activates when it hears speech. Built-in mic, on/off. Use 9V battery. *Simple.* **VEC-483K, \$19.95.**

**QRP Transceiver Kits for 80/40/30/20 Meters** give you VFO frequency control, broadbanded transmitter circuitry, solid one Watt plus output, shaped keying, .3 uV sensitivity, direct conversion receiver. In-cludes crystal for popular QRP frequency. 1 3/4 x 4 1/2 x 5 1/2". *Intermediate skill level.* **Order VEC-1380K (80 Meters), VEC-1340K (40 Meters), VEC-1330K (30 Meters), VEC-1320K (20 Meters), \$59.95 each.**

**Counter Surveillance Monitor Kit** lets you search out and remove electronic bugs! Highly sensitive wideband receiver detector. Higher pitch audio occurs when bug is near. 9 V batt. *Moderate.* **VEC-8218K, \$39.95.**

**The Giant Book of Electronic Projects** **VEC-1901, \$19.95.** Includes 19 kits on this page. Building tips, complete parts lists, parts placement, PC board layouts, test/alignment, more.

**Shortwave Receiver Kit** lets you listen to the world! Covers 75/80, 49, 40, 30, 31, 20, 25, 22, 19, 17, 16, 15 and 13 Meter bands. Explore AM, SSB, CW, WVV, RTTY and Packet signals. Explore a great weekend with a grandchild by building this receiver and teaching them about radio waves. Vernier reduction drive, smooth regeneration control, RF stage. Includes all metal cabinet, knobs, buttons. 2 ear-phone jacks. Use 9V battery. 2 1/2 x 7 x 6 in. *Intermediate skill level.* **Order VEC-102K, \$79.95.**

**20/30/40/80 Meter Receiver Kits** give high performance! Covers entire band or tailor to cover desired portion. Copy CW/SSB/AM. NE602/ 612 mixer-oscillator, LM386 high gain audio amplifier. 1 3/4 x 4 3/4 x 5 1/4 in. *Moderate skill level.* **Order VEC-1120K (20 Meters), VEC-1130K (30 Meters), VEC-1140K (40 Meters), VEC-1180K (80 Meters), \$29.95 ea.**

**20/30/40/80 Meter QRP CW transmitter Kits** have variable crystal oscillator tuning, front panel switch selects 1 of 2 crystals. 1 crystal included. Transmit and Receive switch. Connect receiver. 1 3/4 x 4 x 3 1/2 in. *Intermediate skill level.* **Order VEC-1220K (20 Meters), VEC-1230K (30 Meters), VEC-1240K (40 Meters), VEC-1280K (80 Meters), \$29.95 each.**

**AM Radio Transmitter Kit** lets you set up your own AM station and broadcast crystal clear programming from your studio with you as the disc jockey. Choose clear frequency from 530-1750 KHz. Standard line level or microphone input. Easy connection. Audio level adjustment. 1 3/4 x 4 x 3 1/2 inches. *Simple skill level.* **Order VEC-1290K, \$29.95.**

**FM Stereo Transmitter Kit** lets you connect your MP3/CD player, tape or other source and broadcast clear stereo programming on the FM band! Realistic grand movie theater sound! Use to assist hard-of-hearing. Frequency adjusts 88-108 MHz. 9V battery or 5-15 VDC. *Moderate.* **VEC-1292K, \$39.95.**

**144/220/440 MHz Low-Noise Preamp Kits** soup up your antenna system, pull in weak signals. Great low-noise performance, immunity from damaging electrostatic discharge. 1 x 1 1/2". *Simple.* **VEC-1402K (144 MHz), VEC-1422K (220 MHz), VEC-1444K (440 MHz), \$17.95.**

**VECTRONICS**

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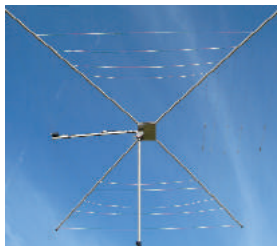
**Over  
50  
New Products  
inside!**

**Our  
45th  
Year!**

**MFJ**

**2017 AMATEUR RADIO CATALOG**

**New! MFJ Cobweb Antennas**



For restricted spaces, 5-Bands: 20/17/15/12/10 Meters, flat 9x9x1/2 feet square, just 8 lbs. 300W and 1500W Models! \$219.95-\$249.95.

**See Page 83!**

**New! MFJ EndFed Horizontals**



Full HF coverage, no tuner needed for most frequencies. Fast setup and takedown, stainless hardware, UV resistant materials throughout!

**See Page 76!**

**New! MFJ-4230 Power Supplies**



Two new *MightyLite*<sup>TM</sup> 30A power supplies. MFJ-4230MPF, \$119.95 has *PowerPoles*<sup>(R)</sup>

installed on front panel. MFJ-4230DMP, \$139.95 digitally shows Amps and Voltage on a backlit LCD. *PowerPoles*<sup>(R)</sup>.

**See Page 38!**

**New! 600 Watt Hamsticks**



75, 40, 20, 17, 15 and 10 Meters. 75M stick is almost 8 feet tall! Get *real* height and *real* power to give you the best single frequency mobile antenna around! Super thick fiberglass rod and stainless steel whip will give you years of service. \$39.95, \$49.95, \$59.95! **See Page 66!**

**New! Digital SWR/Wattmeter**

3.5" bright orange LCD display shows SWR, forward and reflected power in a single glance, 1.5-525 MHz, HF/VHF switch, 200 Watts. MFJ-849, \$169.95.



**See Page 27!**

**New! Precision Power Analyzer**

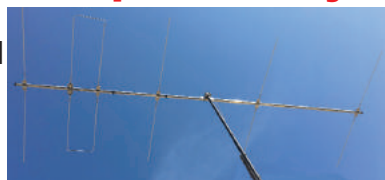


Displays Amps, Volts and Watts continuously from 4.8-60V. Measure current, peak current, power and peak power. *PowerPoles*<sup>TM</sup>, backlit LCD display. \$34.95

**See Page 37!**

**New! Hy-Gain Loop Fed Arrays**

G0KSC designed LFA Yagis for 2 and 6 Meters, super low noise, big gain and front-to-back, robust 2" booms, 5 kW plus!



**See Page 133-134!**

**New! Hy-Gain Pulse Rotators**



HAM and T2X rotators now have digital pulse circuitry. New design uses a special high temperature rare earth magnet and special reed switch to count rotations of gears in the drive assembly.

**See Page 126-127!**