

# MFJ 2019 Ham Catalog

## ... the World Leader in Amateur Radio Accessories!

### MFJ-1234 ... Remotely operate your transceiver from anywhere in the world!



Look-up calls using included FCC database or optional QRZ XML subscription.  
**Monitor** DX spots, watch for unworked or unconfirmed calls.  
**Design**, maintain multiple logs. Up-load ADIF logs to ARRL LoTW server.  
**Send** CW from a mobile device, keyboard or paddle.  
**32** programmable macros gives great control flexibility.  
**Single-click** updating.  
**I/Q** Input for SDR radios.  
**Onboard** VoIP server gives outstanding 2-way audio.  
**Includes** email, word processing, spreadsheet programs.

<https://www.mfjenterprises.com/Product.php?productid=MFJ-1234>

Apple iPhone connected to RigPi Station Server from anywhere via the Internet.  
RigPi trademarked, Howard Nurse, W8HN. Raspberry Pi is a trademark of the Raspberry Pi Foundation.

MFJ-1234  
**\$299.95**  
 Ship Code A

**Remotely operate using any web browser on mobile phones, iPad, tablet, laptop, even a Kindle!**

Use nearly any transceiver with CAT control, old or new, no computer or computer knowledge needed.

Operate all modes SSB, CW, FM, digital -- any transceiver mode.

Control your station from anywhere via the internet using any browser -- radio, rotor, CW keying, VoIP, digital modes, logging, spot monitoring, call-book lookups and much more.

**Here's what else you can do:**

Operate digital modes including FT8 and RTTY. WSJT-X, Fldigi are installed.

Thousands of Linux programs, including many for ham radio.  
**Modify** and program RigPi Station Server features using a text editor.

**Multi-Operators, Multi-Radios**

Use any internet browser on Windows, Mac, Chromebook, Android, iOS, Linux computers, laptops, tablets and phones.

You can open as many web pages as you like on one or more devices (iphone, tablets, laptops, etc.).

One browser can control a radio while a second can control another radio, etc.

Two or more hams from different places can operate different radios at the same time using one MFJ-1234.

In addition to using a browser, you can use these apps: CommCat Mobile for iOS and CommCat for Windows.

#### What is the RSS?

**RigPi™ Station Server (RSS)** is a computer system that controls your station and handles on-the-air activities.

It's a radical new way of station control using a server. It allows multiple users and radios to interact simultaneously using any internet browser.

#### HARDWARE

RSS is a Raspberry Pi™ computer running Linux and RigPi Keyer and RigPi Audio boards. RigPi Keyer board uses the K1EL WinKeyer3 integrated circuit for keyboard or paddle input. RigPi Audio board is used for VoIP for remote operations, digital modes and I/Q spectral display (Panadapter).

#### RADIO/ROTOR SOFTWARE

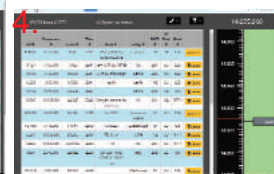
RSS radio/rotor control uses Hamlib, a library of over 200 radios and 30 rotors. Update as new ones are added.

#### OPTIONS

- MFJ-1234MB, \$159.95. RigPi box with OS firmware installed.
- MFJ-1234KB, \$69.95. Keyer board only.
- MFJ-1234AB, \$69.95. Audio board only.
- MFJ-1234SD, \$39.95. SD Card only.
- MFJ-1305RP, \$17.95. 5V, 3A Power Supply for MFJ-1234.
- MFJ-5168, \$14.95. Keyer to rig cable.
- MFJ-5262, \$9.95. CAT-5 Cable, 7 foot.
- MFJ-5431, \$5.95. USB to Micro USB.
- MFJ-5429, \$29.95. Serial-USB adapter.
- MFJ-564/B, \$99.95. Iambic CW paddles. Radio interface cables available, Pg. 52.

#### TECH HELP

- RigPi forum is <https://rigpi.groups.io>
- RigPi website is <https://rigpi.net>



1. **Tuner:** RigPi Tuner window with KX3 tuned to 14.025.000 CW.
2. **Keyer:** RigPi Keyer controlling on-board K1EL WinKeyer3. Special CW Macros fill first 2 button rows.
3. **Log:** RigPi Log shows worked QSOs.
4. **Spots:** RigPi Spots using the K1TTT Telnet site as a source. Graphic Bandspotter is on the right.
5. **RigPi Web:** Data about W1AW from QRZ XML subscription service. Rig-Pi also has onboard FCC database.

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@mfjenterprises.com](mailto:mjfcustserv@mfjenterprises.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 are subject to change without notice or obligation. MFJ will not be held responsible for printing errors.

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### Alaska

Peninsula Electronics  
Phone: 907-479-7422  
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Fairbanks, AK 99709

### Alabama

GigaParts, Inc.  
Phone: (866) 535-4442  
1426-B Paramount Dr.  
Huntsville, AL 35806  
[www.gigaparts.com](http://www.gigaparts.com)

HAM WORLD INC.  
Phone: 800-735-5363  
309 EAST STREET NORTH  
TALLADEGA, AL 35160  
[www.hamworldinc.com](http://www.hamworldinc.com)

JMR SALES  
Phone: 1-866-315-5348  
226 SCENIC DRIVE  
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[www.jmrsales.net/](http://www.jmrsales.net/)

Mike Hartman Electronics  
Phone: 251-689-9553  
9048 Howells Ferry Rd.  
SEMMES, AL 36575

### Arizona

Ham Radio Outlet  
Phone: (800)-444-9476  
10613 N 43rd Ave  
Phoenix, AZ 85029  
[www.hamradio.com](http://www.hamradio.com)

### California

Ham Radio Outlet  
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2210 Livingston St.  
Oakland, CA 94606  
[www.hamradio.com](http://www.hamradio.com)

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5375 Kearny Villa  
San Diego, CA 92123  
[www.hamradio.com](http://www.hamradio.com)

Ham Radio Outlet  
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933 N. Euclid St.  
Anaheim, CA 92801  
[www.hamradio.com](http://www.hamradio.com)

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1525 W. Magnolia Blvd  
Burbank, CA 91506  
[www.hamradio.com](http://www.hamradio.com)

Ham Radio Outlet  
Phone: (800)-854-6046  
510 Lawrence Expressway  
Sunnyvale, CA 94086  
[www.hamradio.com](http://www.hamradio.com)

HAMCITY.COM  
Phone: 310.390.8003  
13700 Cimarron Ave. Suite D  
Gardena, CA 90249  
[www.hamcity.com](http://www.hamcity.com)

### Colorado

Ham Radio Outlet  
Phone: (800)-444-9476  
8400 E. Illif Ave #9  
Denver, CO 80231  
[www.hamradio.com](http://www.hamradio.com)

### Connecticut

Lentini Communications  
Phone: (800)-666-0908  
221 Christian Ln #A  
Berlin, CT 06037  
[www.lentinicomm.com](http://www.lentinicomm.com)

### Delaware

Ham Radio Outlet  
Phone: (800)-644-4476  
1509 N Dupont #7  
New Castle, DE 19720  
[www.hamradio.com](http://www.hamradio.com)

### Florida

Mike's Electronics  
Phone: (800)-427-3066  
1069 NW 53rd St.  
Ft. Lauderdale, FL 33309

WC4H.COM  
Phone: 786-228-9646  
PO Box 161155  
Miami, FL 33116-1155  
[www.wc4h.com](http://www.wc4h.com)

### Georgia

Ham Radio Outlet  
Phone: (800)-444-7927  
6071 Buford Hwy  
Atlanta, GA 30340  
[www.hamradio.com](http://www.hamradio.com)

### Illinois

Amateur Accessories  
Phone: (217) 352-1725  
P.O. Box 7333  
Champaign, IL 61822  
[www.amateuraccessories.com](http://www.amateuraccessories.com)

### Indiana

The Ham Station, Inc.  
Phone: (800)-729-4373  
220 N Fulton  
Evansville, IN 47710  
[www.hamstation.com](http://www.hamstation.com)

### Kansas

Associated Radio  
Phone: 800-497-1457  
8012 Conser  
Overland Park, KS 66204  
[www.associatedradio.com](http://www.associatedradio.com)

B&H Sales  
Phone: (316)-326-6314  
120 N. Washington  
Wellington, KS 67152

B&H Sales  
Phone: (316)-788-4225  
707 N. Baltimore  
Derby, KS 67037

Revcom Electronics  
Phone: (316)-872-2625  
1104 S Main  
Scott City, KS 67871

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T.A.W. Radio Equipment  
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1001 Rough Creek Rd  
London, KY 40744

Walker Communications  
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1428 Grapevine Road  
Madisonville, KY 42431-3515

### Louisiana

Bamcom Communications  
Phone: 985-637-0541  
4110 Hwy 1  
Raceland, LA 70394  
[www.bamcom.com](http://www.bamcom.com)

### Missouri

Alpha Ham  
Phone: 636-323-9992  
7340 Mexico Road  
Saint Peters, MO 63376

Gateway Electronics Corp.  
Phone: (314)-427-6116  
2220 Welsch Industrial Court  
ST LOUIS, MO 63146

WB0W Inc.  
Phone: (800)-626-0834  
PO Box 8547  
St. Joseph, MO 64508

### New Hampshire

Ham Radio Outlet  
Phone: (800)-444-0047  
224 N. Broadway, D #12  
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[www.hamradio.com](http://www.hamradio.com)

### New Jersey

ADVANCED SPECIALITIES  
Phone: 201-843-2067  
114 Essex Street  
LODI, NJ 07644  
[www.advancedspecialties.net](http://www.advancedspecialties.net)

KJI Electronics  
Phone: (973) 364-1930  
610 Pompton Avenue  
CEDAR GROVE, NJ 07009  
[www.kjielelectronics.com](http://www.kjielelectronics.com)

### Nevada

GigaParts, Inc.  
Phone: 702-508-3152  
3021 S. Valley View Blvd  
Suite 101  
Las Vegas, NV 89102  
[www.gigaparts.com](http://www.gigaparts.com)

### New York

RW ANTENNA STORE  
Phone: 716-434-9216  
6150 Crosby Road  
Lockport, NY 14094  
[www.rwantennastore.com](http://www.rwantennastore.com)

### Ohio

DX Engineering  
Phone: (800)-777-0703  
1200 Southeast Avenue  
Tallmadge, OH 44278  
[www.dxengineering.com](http://www.dxengineering.com)

R&L Electronics  
Phone: (800)-221-7735  
1315 Maple Ave  
Hamilton, OH 45011  
[www.randl.com](http://www.randl.com)

Universal Radio, Inc.  
Phone: (800) 431-3939  
6830 Americana Parkway  
Reynoldsburg, Ohio 43068  
[www.universal-radio.com](http://www.universal-radio.com)

### Oregon

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Phone: (800)-854-6046  
14405 SW Pacific Hwy  
Portland, OR 97224  
[www.hamradio.com](http://www.hamradio.com)

### Tennessee

Aero-Smith Amateur Radio  
Phone: 931-456-3690  
325 Netherton Ln  
Crossville, TN 38555  
[aero-smith.net/cart/](http://aero-smith.net/cart/)

CT Morgan  
Phone: (423)-629-7911  
2300 East 34th St.  
Chattanooga, TN 37407

The Ham Shop  
Phone: (931) 607-3563  
P.O. Box 42  
Summitville, TN 37382  
[www.thehamshop.com](http://www.thehamshop.com)

### Texas

Gentry Electronics  
Phone: (903)-643-7418  
1053 Gardiner Mitchell  
Parkway  
Longview, TX 75603

Ham Radio Outlet  
Phone: 972-424-6219  
701 E. Plano Parkway, Suite  
406 Plano, TX 75074  
[www.hamradio.com](http://www.hamradio.com)

Main Trading Company  
Phone: 903-737-0773  
2246 Bonham St  
Paris, TX 75460  
[www.mtrcradio.com](http://www.mtrcradio.com)

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

### Virginia

Ham Radio Outlet  
Phone: (800)-444-4799  
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Radio Works  
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3207 Dogwood Dr  
Portsmouth, VA 23703

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### INTERNATIONAL

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

# 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 . . . Compact!

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

Ship Code D

**MFJ-998 Full Legal Limit 1.5kW 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

MFJ-998 instantly matches impedances from 12-1600 Ohms using MFJ's exclusive IntelliTune™, Adaptive-Search™ 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) 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 ampli-



nal MFJ-912, \$69.95, 1.5 kW 4:1 balun.  
**MFJ-998** is the smallest full legal-limit automatic antenna tuner in the world! Just 13Wx4Hx15D inches will fit easily into your ham station. Weighs just 8 pounds -- giving great portability!

er stays bypassed to provide automatic SWR protection 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 -- best power range 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 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 combos to remember!

### MFJ VirtualAntenna™ Memory

MFJ 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, Upgrade Remotely

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

### Plus Much More!

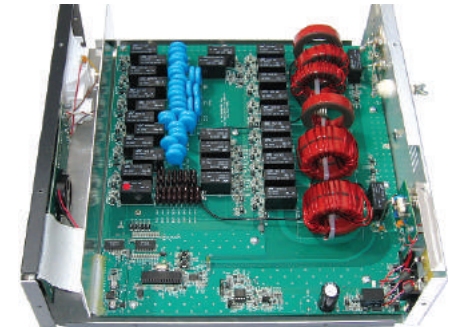
**Built-in** radio interface provides control of most amateur transceivers.

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

**Use** balanced line antennas with exter-



Back view of MFJ-998



An Inside view of MFJ-998 Requires 12-15VDC at 1.4A maximum or 110 VAC, optional MFJ-1316, \$24.95.

### 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, \$21.95.** Prewired Interface cable for Kenwood TS-590 and compatibles.

**MFJ-5114I, \$21.95.** Prewired Rig Interface cable for Icom and compatibles.

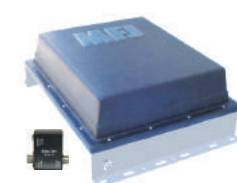
**MFJ-5114Y, \$21.95.** Prewired Rig Interface cable for Yaesu FT-450, FT-950, FT-847, FT-DX-3000, FT-891 and other compatibles.

**MFJ-5114Y3, \$21.95.** Prewired MFJ-998 to FT-1000MP, FT-9000 Yaesu rigs.

**MFJ-5114Y4, \$21.95.** Prewired MFJ-998 to FT2000 and 5000 Yaesu rigs.

**MFJ-5114YL, \$29.95** For FT-857/897/891/991 and others with only one amp/atu port. RCA phono "y" for amp relay jack.

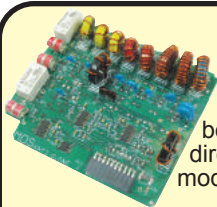
### MFJ 1.5 kW Remote Automatic Antenna Tuner



MFJ-998RT  
**\$819<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 but truly remote-able.



MFJ-950K3  
**\$249<sup>95</sup>**  
 Ship Code A



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

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"H x1 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. . .



**World's First dual power level 300/150 Watts SSB/CW Tuner -- \$279<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 and 4:1 current balun for balanced lines.

**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, MFJ 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 4 antenna memory banks for each of 2 connectors. Select up to 4 antennas on each connector. Each has 2500 memories, 20,000 total.

**Intelligent ultra fast tuning**

MFJs InstantRecall™ first checks its memory to see if you have used 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

MFJ-993B  
Ship Code C minimize SWR -- you're ready to operate. 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 component values are determined. Only those values are searched for ultra-fast tuning.

For even faster searches, set the target SWR to 2 (settable 1.0-2.0).

**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, reflected power at a glance.

**Audio SWR** lets you *hear* the tuned SWR when you can't see/read meters.

**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.

MFJ-993B is a compact 10Wx2¼ Hx9D inches. Use 12 -15 VDC/1 amp or 110 VAC with MFJ-1316, \$24.95.

**Tune any Antenna**

Tune any antenna — dipoles, verticals, beams, phased arrays, inverted vees, quads, random wires, mobile antennas and 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, \$44.95**, remote control and use your tuner elsewhere remotely.

**Pre-wired Interface Cables**

**Allows** automatic tuning of your MFJ-991B/993B/994B IntelliTuner™ with your radio and these interface cables.

MFJ-5124I, \$21.95, ICOM. IC-706, 707, 718, 725, 728, 736, 746, 756, 765, 775, others supporting AH-3/AH-4.

MFJ-5124A, \$21.95, ALINCO.

Supports DX-70, DX-77 and others.

MFJ-5124K, \$64.95, KENWOOD. TS-50S, 450S, 570S, 690S, 850S, 870S, 2000, others supporting AT-300.

MFJ-5124Y, \$64.95, YAESU. Supports FT-100D, FT-450, FT-857D, FT-897, FT-950, FT-DX-3000, others.

MFJ-5124Y3, \$21.95, Supports YAESU FT-1000MP and compatibles.

MFJ-5124Y4, \$21.95, Yaesu

FT2000, FTDX-5000, others

MFJ-5124YL, \$21.95. Yaesu Y split

cable for MFJ tuner, ALS-1306.

**Dual 300/150 Watt Automatic Tuner**

**World's only dual power Tuner --**



**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 feed-back, antenna switch or 4:1 current balun.

MFJ-991B  
\$244<sup>95</sup>  
Ship Code C

## 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.

<http://www.mfjenterprises.com>

# 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 . . .

MFJ



MFJ-929  
\$249<sup>95</sup>  
Ship Code B

**Highly intelligent, ultra-fast tuning!** Don't be fooled by competitors claiming fast searching -- if you have 1/4 of the matching solutions, of course it takes less time but it's *not* faster.

MFJ's faster speed comes from advanced technology and software algorithms *not* from fewer solutions. MFJ's IntelliTuner-Compact™ actually *measures* complex impedance -- (R/X) of your antenna, computes the L-network values needed and snaps in the components to give *instant* matches.

If the load is out of measurement range, *AdaptiveSearch™* determines the *smaller* sub-set 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!*

**Read inductance and capacitance directly** in uH and pF. Makes you an expert *L-network designer!* Match your load, read the resulting L/C values, then use them to build your fixed L-network. Or, knowing the L/C values you can determine R and X of load impedance.

### Plus Much More!

**StickyTune™** mode gives you one-hand tuning by locking TUNE button -- transmit to tune regardless of SWR.

**Has** audio SWR meter and audio feed back. Competing products don't.

**Built-in** 50 MHz frequency counter. **Built-in** radio interface lets you use a simple cable to compatible rigs. Others require a cable with expensive circuits.

**Binding** post random wire. Self-test.

**Highly** efficient L-network. 10A, 1000V relays, RF duty silver mica capacitors. 6 1/2"Wx2 7/8"Hx8 3/8"D". 2.4 lbs. 12-15 VDC/1Amp or 110 VAC, MFJ-1316, \$24.95.

### Pre-wired Rig Interface Cables for MFJ-929 series

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

**MFJ-5114K, \$21.95.** Prewired Rig Interface cable for Kenwood TS-590, other compatibles.

**MFJ-5114I, \$21.95.** Prewired Rig Interface cable for Icom and other compatibles.

**MFJ-5114Y, \$21.95.** Prewired Rig Interface cable for Yaesu FT-950, FT-450, FT-847, FT-891 and other compatibles.

**MFJ-5114Y3, \$21.95.** Prewired MFJ-929 to FT-1000MP, FT-9000 Yaesu rigs.

**MFJ-5114Y4, \$21.95.** Prewired MFJ-929 to FT2000, FTDX-5000, other Yaesu rigs.

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. Matches 6-1600 Ohms (SWR up to 32:1) -- that's a 50% wider matching range at a higher power level than lesser competing products.

Get a *digital* SWR/Wattmeter with a backlit LCD, antenna switch for 2 antennas, built-in radio interface and internal *BiasTee* for remote tuner operation.

**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.

Select up to 4 antennas on each connector. Each has 2500 memories.

### 4 Times the Solutions!

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



### 2-Year No Matter What™ Warranty

MFJ-939/K/Y/A **Plug & Play! You won't even know it's there.**

**\$159<sup>95</sup>** MFJ-939 automatically tunes your antenna as you tune the rig. SWR is 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* antenna's complex impedance (R, X), computes the L-network and snaps in need-

## Plug & Play Auto Tuner

for Icom, Yaesu, Kenwood, Alinco and others

ed components for *instant* matching. **AdaptiveSearch™** determines a subset of all solutions that can provide a safe match and searches *only* that subset giving 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 competitors claim-

ing fast search times -- if you have 1/4 of 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: 10A/1000V relays, RF duty silver mica caps won't burn up. 200 Watts SSB/CW operation.

**As Small as Your Radio** Tiny 6 1/2"Wx1 5/8"Hx7 1/2"D". 2.4 lbs. SO-39s, random wire ant. & ground posts.

**Never Obsolete . . . Super Versatile Truly Plug & Play!** No settings, *only one cable (included).* MFJ-939I, Icom; MFJ-939K, Kenwood; MFJ-939Y, Yaesu, MFJ-939A, Alinco. **Never Obsolete!** If you get a new rig, simply order a new cable, \$21.95 each.

**Super Versatile!** Works with *ALL* older rigs, classic transmitters, Flex, Elecraft, Tentec, QRP and others. Auto tune antenna -- touch tune for any rig.



# MFJ 1500 Watt Remote Auto Tuner

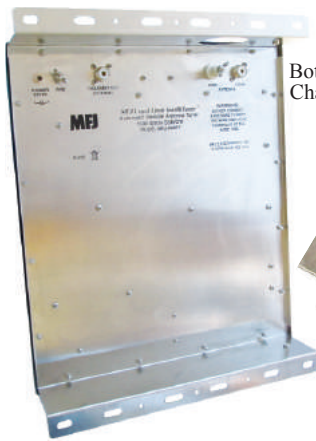
Place this MFJ-998RT remote tuner *at* your antenna to match high SWR antennas/long coaxes -- greatly reduce losses for high efficiency

... 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 ...

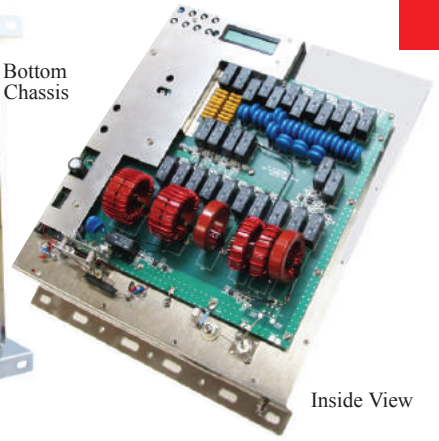
MFJ



MFJ-998RT  
**\$819<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-

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, \$24.95. Weighs 9.5 lbs. 13¼Wx6¾Hx17½D 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, 9¼Wx3Hx 14¼D inches, 4 lbs.

**Includes** MFJ-4117 BiasTee Power Injector.

MFJ-994BRT  
**\$429<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 9¼Wx3Hx14¼D inches.

**Weights** just 4 pounds. Includes MFJ-4117 BiasTee Power Injector.

MFJ-993BRT  
**\$319<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 9¼Wx3Hx14¼D inches.

**Weights** just four pounds.

MFJ-926B  
**\$309<sup>95</sup>**  
 Ship Code C

# MFJ-989D 1500W legal limit Antenna Tuner

The World's most popular legal limit antenna tuner is the best -- You get better efficiency, lower losses, and a new true peak-reading meter. Full 1500 Watts SSB/CW, 1.8 to 30 MHz

MFJ



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

Made in the U.S.A.

The world's most popular legal limit antenna tuner gives you . . . better efficiency, lower losses and a 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. Match dipoles, verticals, inverted vees, random wires, beams, balanced lines, coax, mobile whips, shortwave -- nearly any antenna.

## 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 -- 160-10 Meters. Larger, more attractive capacitor knobs with easy-to-

MFJ-989D  
\$439<sup>95</sup>

Ship Code D

see dials make tuning super precise.

## MFJ AirCore™ Roller Inductor

MFJ's 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. 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 Cross-Needle 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. Use 9-V battery and/or 12 VDC or 110 VAC with MFJ-1312D, \$17.95.

## MFJ High Voltage Current Balun

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 wired in parallel. Extra wide spaced, heavy duty contacts handle extreme voltages and currents. We've never burned one up! Select two coax antennas (directly or through tuner), balanced line/random wire, or built-in dummy load. A full-size 300 Watt non-inductive 50 Ohm dummy load is built-in. It's handy for transmitter tuning, testing/repairing rigs, setting power level, adjusting mic gain & more.

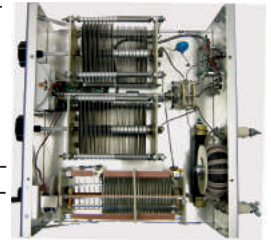
Roomy cabinet helps maintain components' high Q.

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. 12⅞Wx6Hx11⅝D inches.

The MFJ-989D has a 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.



# MFJ KW Differential-T™ Antenna Tuner



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/WARC.

MFJ's exclusive AirCore™ Roller

MFJ-986  
\$389<sup>95</sup>

Ship Code E

Inductor gives absolute minimum SWR -- something tapped inductors just can't do. 3-digit turns counter plus a spinner knob gives precise inductance control.

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

MFJ's TrueCurrentBalun™ for balanced lines minimizes feedline radiation that causes field pattern distortion, TVI and RF in your shack. Ceramic feedthroughs for balanced lines withstand high voltages and temperatures.

Replacing two variable capacitors with a single differential capacitor gives

wide range T-network tuning with just two controls -- a capacitor and inductor.

Simple 2-knob tuning makes it easier than ever. Get minimum SWR at only one setting and a broadband response that ends constant retuning. 10⅜x4⅜x15 inches. Wide-spaced tuning capacitor plates let you run high power without arcing or overheating.

New TrueActive™ peak reading SWR/ Wattmeter lets you read true peak or average power on all modes. Large, easy-to-read super-bright LED Cross-Needle SWR Wattmeter lets you read SWR and forward/reflected (2000/200W ranges) power at a single glance. Use 9V battery and/or 12 VDC or 110 VAC with MFJ-1312D, \$17.95. Lamp on/off switch.

# MFJ Compact Tuner for Amplifiers

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



**. . . handles Ameritron AL-811H!**

your SWR down to an absolute minimum. Get extremely wide matching range from 1.8 to 30 MHz *continuously*, including MARS/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 TrueActive™ 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.

One glance reads SWR, forward and reflected power in two power ranges. Meter LED uses 12 VDC or 110 VAC with MFJ-1312D, \$17.95.

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.

MFJ-962D

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

**\$339<sup>95</sup>**

Ship Code C

**Why settle** for a mere 300 Watt antenna tuner when a *few* extra dollars lets 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 AL-811H or 600 Watt AL-811 amplifiers.

Features MFJ's AirCore™ Roller Inductor, new aluminum-skirted knob set including a weighted deluxe spinner knob, compact size (10<sup>3</sup>/<sub>8</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

## 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  
**\$244<sup>95</sup>**

Ship Code C

Wattmeter reads SWR, *true* peak forward and average reflected power simultaneously on 300/30 Watt ranges.

Lamp has on/off switch and uses 12 VDC or 110 VAC with MFJ-1312D, \$17.95. ActivePeakReading Circuit™ can also use a 9 volt battery.

8-positions let you select two coax fed antennas, random wire/balanced line or built-in dummy load for use through 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 -- No QRM. Pre-tuning into a dummy load makes tuning your actual antenna quick and easy!

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 gain, etc.

The tough aluminum case has a scratch-proof multi-colored Lexan front panel. 3<sup>1</sup>/<sub>2</sub>Hx10<sup>1</sup>/<sub>2</sub>Dx9<sup>1</sup>/<sub>2</sub>W inches.

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 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**

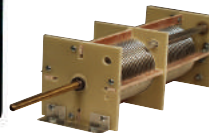
Match dipoles, verticals, inverted vees, random wires, beams, mobile whips, SWL receiving antennas -- nearly any antenna.

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

**True Peak Reading Cross-Needle Meter**

MFJ's new ActivePeak Reading Circuit™ accurately reads *true* peak forward power -- an MFJ exclusive.

MFJ's lighted Cross-Needle SWR/



### 4 Foot Ground Rod

Durable 4-foot cop-  
per bonded steel earth  
ground rod is a tough  
3/8" diameter that lasts.

MFJ-1934  
**\$10<sup>95</sup>**

Ship Code B

Pointed end makes it easy to drive into ground. 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.



# Ham Radio's Most Popular 300 Watt Tuner

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



MFJ-949E lines. Heavy duty 4:1 balun. **\$199.95**

Ship Code B

### 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, random 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, \$17.95. **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 helps 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<sup>9</sup>/<sub>16</sub> X 3<sup>1</sup>/<sub>2</sub> X 7 inches.

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

### MFJ-948 Tuner

**MFJ-948, \$179.95.** Has all the features of the MFJ-949E except for a built-in dummy load.



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<sup>R</sup> 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

## Pre-made Premium Coax Patch Cables



- Weather resistant
  - 50-Ohm coax patch cables
  - Pre-soldered 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.**



MFJ-5803BJ  
**\$21.95**  
RG-58  
Balun Jumper  
3 feet  
with PL-259  
connectors.

length	RG-58	Price	RG-8X	Price	RG-213 (H)	Price
3 ft.	MFJ-5803	\$7.95	MFJ-5803X	10.95	MFJ-5803H	\$14.95
					MFJ-5803NH	15.95
6 ft.	MFJ-5806	10.95	MFJ-5806X	12.95	MFJ-5806H	16.95
					MFJ-5806NH	18.95
9 ft.	MFJ-5809	12.95	MFJ-5809X	14.95	MFJ-5809H	18.95
12 ft.	MFJ-5812	13.95	MFJ-5812X	15.95	MFJ-5812H	20.95
18 ft.	MFJ-5818	15.95	MFJ-5818X	17.95	MFJ-5818H	26.95
25 ft.	MFJ-5825	19.95	MFJ-5825X	23.95	MFJ-5825H	41.95
50 ft.	MFJ-5850	26.95	MFJ-5850X	31.95	MFJ-5850H	62.95
100 ft.	MFJ-58100	41.95	MFJ-58100X	52.95	MFJ-58100H	105.95
50 ft.	MFJ-5850E	20.95	RG-58, 50 ft. open end, PL-259 on one end.			

### Antenna Tuner/Artificial Ground



MFJ-934  
**\$229.95**  
Ship Code B

### MFJ Artificial RF Ground



MFJ-931  
**\$119.95**  
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 electrically 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 can 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. Continued right...**

### Coax Cutter/Stripper tools

**MFJ-7402, \$21.95.** 9". Cuts cable without crushing it. Aluminum up to 4/0 gauge, copper up to 2/0 gauge stranded. Carbon steel, hardened blade oxide finish.

**MFJ-7404, \$21.95.** 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.

**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>Wx3<sup>1</sup>/<sub>2</sub>H x7D in. RF tight aluminum cabinet.

# MFJ Compact Mobile HF Antenna Tuner

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

**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 it 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.

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**, \$17.95.

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

The bypass switch lets you bypass

the tuner (connecting your antenna and transmitter 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 \$7.95. Add \$2.00 shipping for the bracket if ordered separately.

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

MFJ-945E  
**\$149<sup>95</sup>**

Ship Code B

## 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 matches coax-fed antennas, balanced feedlines, 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.



MFJ-971  
**\$139<sup>95</sup>**

Ship Code B

The meter lamp may be powered by an external 12 VDC source if you desire (**MFJ-1312D**, \$17.95).

**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 \$5.95.**

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

**SO-239** connectors. Binding posts for balanced line; random wire binding post; ground post; 12 VDC input jack for meter lamp; and low/high power range switch on back panel. **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: select 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**, \$17.95).

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

MFJ-941E  
**\$159<sup>95</sup>**

Ship Code B



power out. Uses 1000 Volt capacitors.

Aluminum cabinet has a durable scratch-proof multi-color Lexan front panel. 10<sup>5</sup>/<sub>8</sub>Wx2<sup>7</sup>/<sub>8</sub>Hx7D inches.

### Our Smallest VERSA TUNER



MFJ-901B  
**\$109<sup>95</sup>**  
Ship Code B

**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.

### HF Random Wire Tuner



MFJ-16010  
**\$74<sup>95</sup>**  
Ship Code A

**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. 3<sup>1</sup>/<sub>2</sub>Wx2<sup>1</sup>/<sub>4</sub>Hx5<sup>1</sup>/<sub>4</sub>D inches.

## MFJ-941EK Antenna Tuner Kit



MFJ-941EK  
**\$139<sup>95</sup>**  
Ship Code B

Ever wish to build your own? But then you realize the time and effort to put one

together and find out 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 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 . . .*

Get 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!

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 drive, 3-digit turns counter, extra large knobs and more!

**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 not ordinary! It's edge wound from thick .06" *silver-plated* solid copper strap. It can carry huge circulating RF currents and withstand extreme heat that'll 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

MFJ-9982  
**\$739<sup>95</sup>**

Ship Code F

2500 Watts -- a feat *only* MFJ has achieved.

**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 2½ inch cores, 12-gauge *Teflon*™ wire. Run balanced lines at full 2500 Watts SSB/CW continuous, 24/7.

**Balanced Line Feed-Thru Insulator**

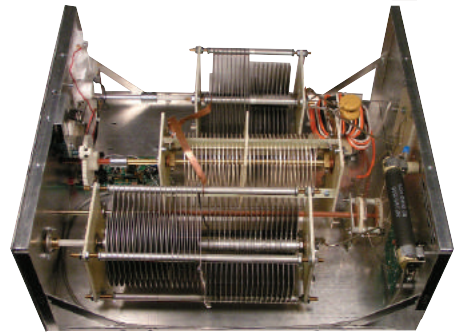
Allows massive antenna currents to flow directly to the antenna capacitor without passing to lossy screws/ bolts.

**TrueActive™ Peak Reading Circuit**

*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 minutes,



1.5kW for 10 seconds.

**Roomy** cabinet maintains high Q. Vent holes. Heavy gauge, .08 inch aluminum braced chassis. Non-stripping PEM nuts, heavy 10-gauge or copper strap wiring throughout. Robust 13¼Wx7Dx16¼D inches. 15 pounds.

# 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!*



**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 including 600 Ohm open wire line, 450/

MFJ-976  
**\$529<sup>95</sup>**

Ship Code E

300 Ohm ladder lines, 300/72 Ohm twin lead, (shielded or unshielded). Also tune random wires/coax fed antennas.

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

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.

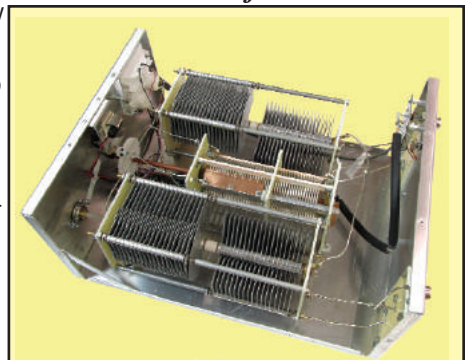
Heavy duty 1:1 current balun gives *superb* balance, stays cool at 1.5kW.

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.

**Super-bright** LED meter light. Use 12 VDC or 110 VAC with MFJ-1312D, \$17.95. Robust all metal cabinet is 12Wx6Hx15¾D inches.

*An inside view of the MFJ-976*





# 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 . . .

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

MFJ-974HB  
**\$244<sup>95</sup>**  
Ship Code C



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

### Everything You Need

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

Tuning is fast and easy - - just 3 controls. Adjust for highly efficient broadband low-Q operation or use higher Q when you see extreme loads.

A large 3-inch lighted Cross-Needle

SWR/Wattmeter lets you read SWR, peak or average forward and reflected power all at once on 300/30W ranges.

A ground post is provided to ground one output terminal so you can also tune random wires and coax fed antennas. 7½Wx6Hx8D" fits anywhere.

### 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 feedline radiation that can cause trou-

blesome TVI and RFI, painful RF bites, mysterious RF feedback problems and radiation pattern distortion.

### Excellent Balance, Design

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 80-10M and separate inductors for 6/160 Meters. The tuning components are mounted symmetrically to insure electrical balance.

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

### Balanced = 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 operation when fed with balanced lines.

### 6-80 Meter Balanced Line Tuner

MFJ-974B, \$229.95. Similar to MFJ-974HB but for 6-80 Meters only.

# 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  
**\$209<sup>95</sup>**  
Ship Code B

MFJ-935B  
**\$229<sup>95</sup>**  
Ship Code B

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' wire formed into a loop operates 30-20 Meters (4' for 17-10M; 7' for 20-15M; 28' for 60-40M). Tune any shape loop -- circle, square, rectangle, etc. A 1/4 wavelength wire shaped as a circle is 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.

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

MFJ-936B, \$289.95. Home/portable stations. Relative RF antenna current meter with sensitivity and 30/300W selectable range, Cross-Needle SWR/Wattmeter. Carry handle for portable. 9¼Wx5½Hx9½D inches.

MFJ-935B, \$229.95. Portable/home stations. Smaller, lighter. Relative RF current meter with sensitivity control. 6¼Wx5½Hx9½D inches.

MFJ-933, \$209.95. Same as MFJ-935B less RF current meter. 6¼Wx5½Hx9½D inches.

## Wire Loops and Mounts

MFJ-57B, \$34.95.

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

MFJ-58B, \$54.95. Has

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

### Butterfly Tuning Capacitors

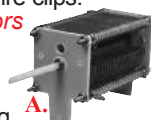
The heart of MFJ Loop Tuners is extremely low loss butterfly tuning capacitors with no rotating contacts. Each handles 1500 Volts RMS and has a ¼" dia. by 2½" shaft.

A. MFJ-19, \$74.95.

12 to 67 pF. 6Dx3Wx3½H inches.

B. MFJ-23, \$99.95.

18 to 136 pF. 10Dx3Wx3½H inches.



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

QRPocket™ Loop Antenna MFJ-9232, \$64.95. QRPocket™ Loop Antenna makes portable operation truly portable and fun! No ground needed! High-efficiency loop covers 40-10M with included flexible wire loop. 25 Watts. BNC Connector for transmitter, wing nut posts for loop wires. Durable, plastic cabinet, 2¼Wx4Hx2¼D inches.

MFJ-9234, \$64.95. Right. Like MFJ-9232 but connects directly to your favorite QRP rig with built-in PL-259-to-PL-259.



# MFJ tiny Travel Tuners

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-

## 6-Meter Antenna Tuners

**MFJ-906, \$109.95.**

Low SWR with most any 6-Meter coax fed antenna. 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, 30/6 Watt ranges. MFJ-1312D, \$17.95 for meter lamp. Built-in bypass, handles 100 Watts FM, 200W SSB PEP. Works with solid state and tube rigs, 50-60 MHz. 8Wx2½Hx3D inches.

**MFJ-903, \$74.95.** Like MFJ-906. Less meter/bypass. 5Wx2½Hx3D".

## RF Bypass Switches

**MFJ-1705 \$21.95**  
300 Watts  
Ship Code A

**MFJ-1705H \$34.95**  
1500 Watts  
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. 300 Watt and 1500 Watt models. 3Wx1½Hx2½D inches.

## Mobile AntennaMatcher Mobile Ant. C-Matcher AutoTuner Extender™ RF Sampling Module

**MFJ-910 \$34.95**  
Ship Code A

**MFJ-910 \$34.95**  
Ship Code A

Matches HF mobile antennas 10 through 80 Meters. 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 3½Wx3Hx1¼D inches.

**MFJ-909 \$49.95**  
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 an L-network with your antenna. 11 values of switchable capacitance 30 pF-2000 pF. Handles 600 Watts. SO-239 connectors. 3½Wx3Hx1¼D inches.

**MFJ-914 \$84.95**  
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 6Wx4Hx2½D inches.

**MFJ-806 \$34.95**  
Ship Code A

This RF sampler allows you to safely and accurately monitor output signals from transmitters and other high-power RF generators. Sampled output port is DC isolated from the RF source, attenuated by -50 dB and fed to a 50 Ohm BNC output. Handles 600 Watts. SO-239s for input/output.

**MFJ-902B \$119.95**

Ship Code A

to-wall antenna or a motel room with a wire dropped from a window or from a mountain 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. Tiny enough to slide in your hip pocket! 4½Wx2¼Hx2¾D in.



## MFJ Tiny Tuner with 4:1 Balun



**MFJ-902H, \$129.95.** Similar to MFJ-902 but has a 4:1 balun with binding posts

for tuning balanced line antennas. 5¾Wx2¼Hx2¾D inches.

## Tiny Tuner with Cross-Needle SWR/Wattmeter and 4:1 balun

**MFJ-904H, \$159.95.**

Like MFJ-902 but has a large 1.5 inch Cross-Needle SWR/Wattmeter and 4:1 balun for tuning balanced lines. 7¼Hx2¼Hx2¾D in.

**MFJ-904, \$139.95.** Like MFJ-904H. Has Cross-Needle SWR/Wattmeter, but no balun. 7¼Hx2¼Hx2¾D inches.

## 144/220 or 440 MHz Tuner

**MFJ-921, \$99.95.**

Dual Band VHF tuner covers 2 Meters and 220 MHz. Built-in SWR/Wattmeter measures SWR in 2 power ranges: 300/30 Watts. Meter is usable for both 144 MHz and 220 MHz bands. Low SWR with practically any antenna. Handles 200 Watts. Matches a wide range of impedances for both mobile/base operation. SO-239 input/output connectors, wing nut post ground. Black aluminum, 8x2½x3".

**MFJ-924, \$99.95.** Like MFJ-921, covers 440 MHz band only.



## Dual Band 144/440 Tuner

**MFJ-923, \$219.95.**

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: 300/30 Watts. Meter is usable for both bands. Handles 200 Watts. Matches a wide range of impedances for both mobile and base operation. Single input/output SO-239s. Wing nut post for ground, black aluminum cabinet, compact at 9½Wx4½Hx2¾D".



## Variable RF Transformer



**MFJ-907 \$69.95**  
Ship Code A

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-239s.

## Mobile Antenna L-Matcher



**MFJ-908 \$49.95**  
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. Compact 4Wx3¾Hx1¾D".



# 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!

EMW



**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!**

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 pF at actual operating frequencies.

### Tunable Analyzer Filter

MFJ-731 Exclusive MFJ \$109<sup>95</sup> tunable RF filter allows accurate SWR and impedance measurements 1.8-30 MHz in presence of strong RF fields. Has virtually no effect on measurements by analyzer. Works with all analyzers.

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

MFJ-259C Includes frequency counter, RF Generator, SWR Analyzer™, RF Resistance and Reactance Analyzer, Coax Analyzer, Capacitance/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, verticals for lowest SWR at your favorite frequency.

Adjust your Yagi, quad, loop and other antennas, change antenna spacing and height. 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 rig 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 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 resonant frequency, Q of traps, stubs, transmission lines, RF chokes, tuned circuits and baluns.

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, \$17.95. Rugged, compact all-aluminum construction is a handheld size 4Wx6<sup>3</sup>/<sub>4</sub>Hx2D inches.

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

### MFJ Analyzer Dip Coils

MFJ-66C MFJ-66C, \$29.95. \$34<sup>95</sup> Plug these MFJ dip meter coupling coils into any Antenna Analyzer™ and turn it into a sensitive and accurate band switched dip meter. 2 coils cover 1.8-230 MHz, depending on Analyzer™.

### SWR Analyzer Accessories

MFJ-29D, \$34.95. 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, \$74.95. Carry pouch, dip coil adapters, MFJ power supply.

MFJ-99C, \$49.95. MFJ-1312D, 110/220 VAC supply, 10 Ni-MH batteries.

MFJ-29DABC, \$109.95. Deluxe Accessory Pack has 10 Ni-MH batteries, MFJ-1312D power supply, MFJ Carrying pouch, dip coils. Save \$7!

MFJ-92AA10, \$34.95. 10-pack MFJ NiMH AA rechargeable batteries.

MFJ-5510C, \$12.95. 12 VDC cigarette lighter adapter -- use your SWR Analyzer on-the-road to make quick adjustments to HF/VHF/UHF mobile antennas! 18 inch retracted curl cord, 60" full stretch. Easily fits in glove compartment.

### Adapters for your MFJ-259C

MFJ-7737, \$6.95. PL-259 to BNC Female Adapter.

MFJ-7727, \$6.95. PL-259 to SMA Female Adapter.

### MFJ-249C SWR Analyzer™

Save a few bucks! MFJ-249C is \$279<sup>95</sup> like MFJ-259C, but less analog meters. Reads SWR, true impedance magnitude and frequency on LCD module. Has nicd/nimh charging circuit, can use MFJ-259C accessories.



### Analyzer Current Balun

1:1 Current balun lets you use your MFJ Antenna Analyzers on balanced line antennas and other loads. 1.8-30 MHz. 2Wx3<sup>3</sup>/<sub>4</sub>Hx1<sup>1</sup>/<sub>2</sub>D in. SO-239 for analyzer input. MFJ-7702, \$4.95. PL-259 to PL-259 barrel connector.



# 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 2-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, signal source for testing/alignment.

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

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

**Super** easy to use! Set the bandswitch and tune the dial -- just like on your rig.

### 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.

**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) -- **an 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 -- **an 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

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



dipoles, verticals, 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. Easy-to-read LCD *logarithmic* SWR bargraph/meter for quick tuning.

### Take it anywhere

**Fully** portable, take it on remote sites, up towers, on DX-peditions. Built-in "N" connector. Includes *Free* N-to-SO-239 adaptor. Use 10 AA Ni-MH or Ni-Cd or alkalines (not included -- alkalines cannot be charged internally) or 110-240 VAC with MFJ-1312D, \$17.95.

### 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.

**MFJ-269C PRO™ Analyzer**  
MFJ-269CPro, \$429.95. 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, \$34.95.

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™ inside the pouch.

### MFJ-269C SWR Analyzer Accessories

**MFJ-99C, \$49.95.** MFJ-269C Power Pack. 10-Pack SuperCell™ Ni-MH batteries, and 10/220 VAC Power supply.

**MFJ-39DAC, \$74.95.** MFJ-269C Accessory Pack. MFJ-39D custom Carry Pouch, MFJ-1312D power cube, and MFJ-66C dip meter adapter coils.

**MFJ-39DABC, \$109.95.** Complete pack: pouch, batteries, coils, power cube.

**MFJ-92AA10, \$34.95.** 10-Pack AA rechargeable Ni-MH batteries.

**MFJ-66C, \$34.95.** Dip coil set 1.8-230 MHz. Turns MFJ-269C into a *dip meter*.

**MFJ-5510C, \$12.95.** 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, \$6.95.** (Left). N-Male to SMA Female Adapter.

**MFJ-7731, \$6.95.** (Right). N-Male to BNC Female Adapter.



## MFJ High Capacity 3000mAh AA & 800mAh AAA Ni-MH SuperCell™ Batteries



MFJ-92AAA01  
**\$2<sup>19</sup>** each  
Ship Code A

MFJ-92AA01, \$3.95 each.  
**Double AA Ni-MH, 3000 mAh MFJ SuperCells™**  
MFJ-92AAA01, \$2.19 each.  
**Triple AAA Ni-MH, 800 mAh MFJ SuperCells™**

MFJ-92AA01  
**\$3<sup>95</sup>** each  
Ship Code A

MFJ-92AAA04  
**\$7<sup>95</sup>** each  
(4-Pack)

**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  
(10-Pack)  
**\$34<sup>95</sup>** each



**MFJ-92AA10, \$34.95.** 10-Pack of 3000 mAh MFJ SuperCells™, perfect for your MFJ-259B and MFJ-269 Analyzers!

**MFJ-92AAA04, \$7.95.** 4-Pack of 800 mAh MFJ SuperCells™, for MFJ-225 graphical SWR Analyzer.

# 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-226 introduces the MFJ Times Technology™ series of advanced Antenna Analyzers! Ground-breaking VNA antenna analyzer -- MFJ-226 Antenna Expert™ -- delivers OSL calibration and true reactance including its sign from 1- 230 MHz with 1-Hz frequency resolution!

MFJ-226  
**\$359<sup>95</sup>**  
 Ship Code B

**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.

### 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 1/4" W x 6 1/2" H x 1D 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

MFJ-227, \$359.95.

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, \$34<sup>95</sup>

The Set includes a 50 Ohm, .1W (+/-1%), open and short calibration loads.

Available in N, UHF or BNC connectors. Select B (BNC), N (N-type) or U (PL-259).

Calibrate your antenna analyzers with MFJ's Precision Calibration Loads.

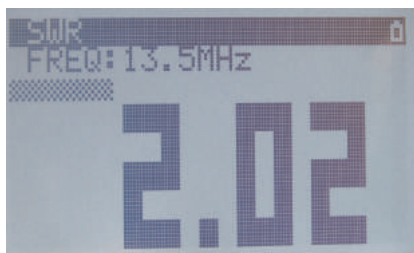
These non-inductive loads are useable up to 1 GHz.

The Set includes

### Here's a few Screen Shots



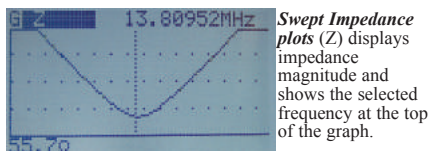
Main Menu selects these modes: Single Frequency, Swept Frequency, Calibration Screen (manages OSL calibrations), Settings Screen (basic analyzer setup) and PC Mode (dumps data in computer).



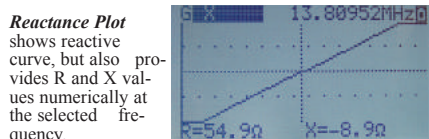
Single Frequency Mode. First screen shows SWR in BIG 3/4 inch digits and the Frequency reading in a single glance.



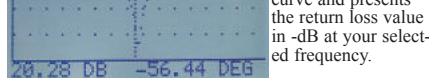
Smith Chart plot. Moveable cross-hair tracks plot over any frequency span. Displays S11 magnitude, phase angle at any frequency.



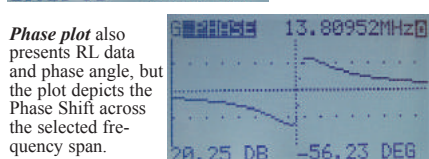
Swept Impedance plots (Z) displays impedance magnitude and shows the selected frequency at the top of the graph.



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



Return Loss plot (RL) shows shape of curve and presents the return loss value in -dB at your selected frequency.



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

## 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 **\$319<sup>95</sup>** a compact completely self-contained handheld analyzer.

MFJ-225

Ship Code A

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

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

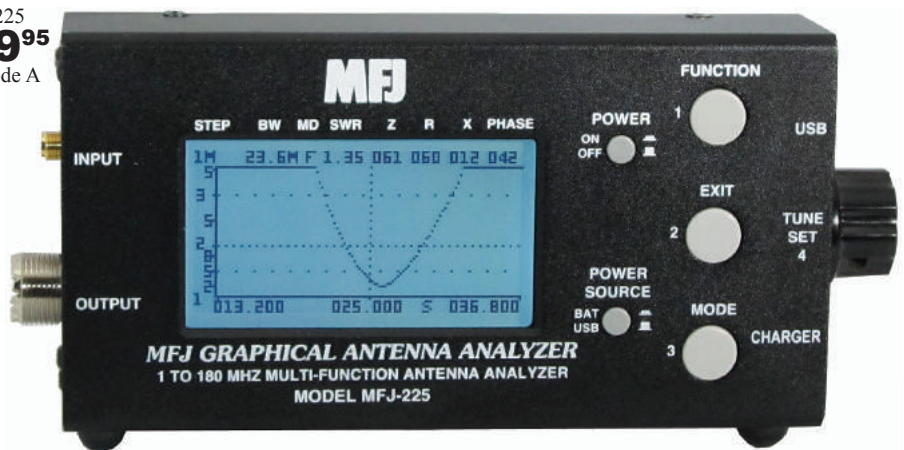
MFJ-225 simultaneously compiles and displays all important parameters on a single screen, giving you a wider range of results at-a-glance. You'll work faster and smarter without the inconvenience of scrolling through menus or making conversions to get your data.

### What the MFJ-225 Measures:

- SWR (1:1 to 9.9:1)
- Complex Impedance (R+X)
- 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-

it places more information at your fingertips without 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. 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, \$17.95 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, \$4.95.

### Self-Calibrating

In order to maintain out-of-the box accuracy, all analyzers require periodic calibration -- a potentially time-consuming operation that may require special RF loads and unique procedures. 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, \$17.95. PC interface requires a USB Type-B cable.

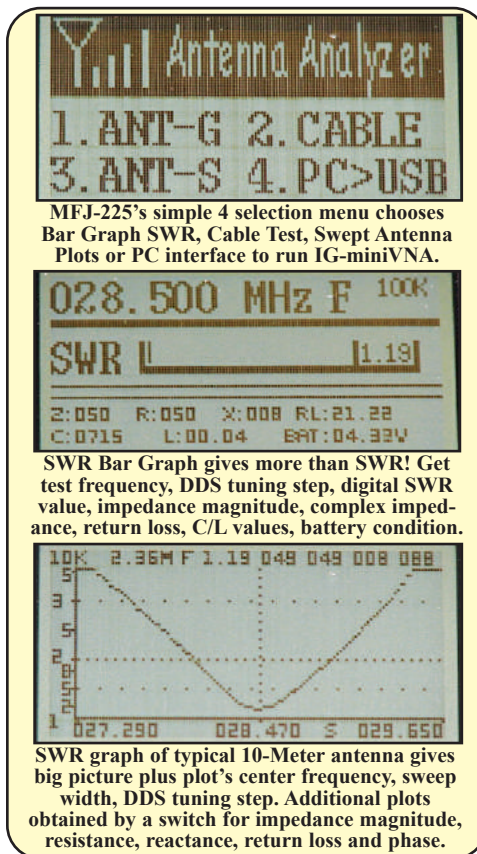
Analyzer's OUT port is SO-239. IN port is SMA-female. 3<sup>3</sup>/<sub>32</sub>Wx6<sup>1</sup>/<sub>8</sub>Hx1<sup>1</sup>/<sub>2</sub>D".

### Accessories

MFJ-92AAA04, \$7.95. 4-Pack of Ni-MH rechargeable batteries.

MFJ-7719, \$5.95. SMA Male to SO-239 adaptor for VNA port.

MFJ-95, \$34.95. Accessory Package includes all of the above accessories. Save big dollars when you purchase the entire package!



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.

power measurements, essential for optimizing filters, diplexers, matching networks, etc. It bridges the gap between a simple scalar analyzer and true vector-analysis performance.

### Ergonomic Operation

"Advanced features" conjure visions of greater complexity and more buttons to push. Not true for MFJ! The graphic display is "advanced" because

# 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 bargraph display or sharply defined swept-frequency plots.

Continuous DDS frequency coverage with 100-Hz resolution. Full selection of tuning steps, sweeps.

Movable marker calls up alphanumeric data for any point on any plot -- memory captures 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:**

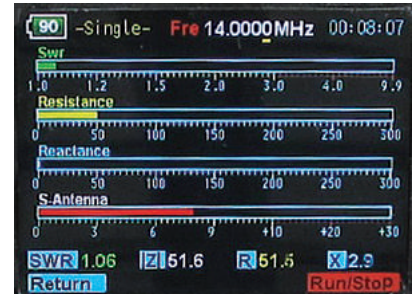
- Single-frequency and swept-frequency operating modes
- Truly accurate SWR, R, X, Z measurements
- Seamless DDS coverage w/100-Hz resolution from 1-60 MHz
- Smooth "skip-free" encoder tunes

MFJ-223  
**\$319<sup>95</sup>**  
Ship Code A



- Shown actual size  
fast or slow without missing a step
- Powerful +5-dBm stimulus generator overrides local interference
  - Field-strength meter measures

**Multi-bargraph Display:**



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

- local signals, detects interference
- DDS generator precision signal source
- Vivid 1600-pixel/inch color graphics on 2x2" non-glare TFT
- High-lumen output, easy-to-read
- Easy setup, 4 control switches
- Personalized ID function programs call or name in display
- Built-in 3.7-V 1800-mAH lithium-polymer battery, charge internally
- Status Indicator and Auto Shut-off.

MFJ-5431, \$5.95. Micro USB-USB Charge Cable.

- Charge % always shown, LED monitors 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 HF SWR Analyzer 1-60 MHz



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

**\$214<sup>95</sup>**  
Ship Code B

Displays SWR, complex impedance, and impedance magnitude simultaneously -- all on easy-to-read LCD. Check capacitance, inductance, field strength, frequency, generate test signals. 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.

**HF Analyzer™**

MFJ-207, \$119.95. This HF SWR Analyzer helps you build the antennas you need for quality DX work. Plug in your coax to measure the SWR of any HF antenna from 160 through 10 Meters. Has jack for external frequency counter. Use with 9VDC battery or 110VAC with MFJ-1312D, \$17.95. Hand-held size 7<sup>1</sup>/<sub>2</sub>Hx2<sup>1</sup>/<sub>2</sub>Wx2<sup>1</sup>/<sub>4</sub>D".

**HF/VHF Analyzer™**

MFJ-209C, \$209.95. HF/VHF Analyzer™ reads SWR from 530 KHz to 230 MHz quickly on a single analog meter. Tune knob, frequency control make quick, easy tests. Use 10 AA cells or 110 VAC with MFJ-1312D, \$17.95. 4x2<sup>1</sup>/<sub>2</sub>x6<sup>3</sup>/<sub>4</sub> inches.

**VHF Analyzer™**

MFJ-208, \$109.95. This VHF SWR Analyzer™ finds your SWR on a calibrated dial from 138-156 MHz -- a must-have for VHF antenna builders! Has jack for external frequency counter -- helps in testing VHF rigs. Compact 7<sup>1</sup>/<sub>2</sub>Hx2<sup>1</sup>/<sub>2</sub>Wx2<sup>1</sup>/<sub>4</sub>D". Use 9 Volt battery or 110 VAC with optional MFJ-1312D, \$17.95.

**MFJ Antenna Bridge**  
MFJ-204B, \$109.95.

Test if your antenna is too long or short, check resonant frequency and resistance to 500 Ohms. Easiest, most convenient way to check antenna parameters. Resistance bridge, null meter, tunable oscillator-driver 1.8-30MHz. 9 VDC /110 VAC. MFJ-1312D, \$17.95. 7<sup>1</sup>/<sub>2</sub>Hx2<sup>1</sup>/<sub>2</sub>Wx2<sup>1</sup>/<sub>4</sub>D".



**MFJ RX Noise Bridge**  
MFJ-202B, \$84.95.

Adjust any antenna for max performance, 1-100 MHz. Lengthen/shorten antenna for minimum SWR. Measure resonant frequency, feedpoint resistance, reactance. Resistance scale, expanded capacitance range, built-in range extender. 4<sup>1</sup>/<sub>4</sub>Wx2Hx4D". Use 9V battery.



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

MFJ-201, \$159.95. In the vacuum tube days the grid dip meter was owned by every ham. This version is smaller, lighter, and vastly more versatile than its ancestor. Use as dip meter to find a coil's resonant frequency,



couple to an antenna/coax to get electrical length, or use it as an absorption wavemeter for measuring transmitter output, neutralizing tank circuits, or field strength meter. Covers 1.5-250 MHz in 6 bands, thumb wheel tuning, color readout, 6 coils, ear-phone jack and battery check. Use 9V battery. 2Wx2<sup>1</sup>/<sub>2</sub>Dx7H" including coils.

# 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 you come across.

After all, inductors and capacitors are fundamental building blocks for RF design. Build and test virtually any popular HF configuration in minutes without ever turning a soldering iron on or lifting it!

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
- Antenna Tuners
- more!

MFJ-5904  
**\$159<sup>95</sup>**  
 Ship Code A

Reliable portability, compact molded case and high-quality jacks and controls.

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 are RF-isolated from the aluminum front panel for your safety.

Packed with loads of information and 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 RF tuned circuits work.

Why spend hours soldering and



lashing prototype circuitry together?

Let the MFJ RF-Design Box do it all for you in a matter of minutes. Compact 7Wx3Hx5½D inches, super lightweight construction.

## MFJ White Noise Generator



**MFJ-5014, \$49.95.** Check IF/HF sensitivity, tune/ adjust filters/networks and more. Combine with directional coupler to measure return loss. Requires 9V battery. BNC/SO239s.

## Variable Resistance/Capacitance Sub Box



**MFJ-5902, \$44.95.** 10-K potentiometer and two section 300-pF variable capacitor into one handy package. Insulated terminal posts accept standard probes/cables.

## Variable Resistor Sub Box



**MFJ-5900, \$79.95.** Six standard-value potentiometers with calibrated scales, universal terminal posts accept standard probes/patch cables. Great for design work or service bench. 7Wx3Hx5½D inches.

## 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.

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, 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

MFJ-200A  
**\$84<sup>95</sup>**  
 Ship Code A

source with a mini-USB plug.

Should you forget and leave power on, a shut-down 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 inches.

**MFJ-200ASC, \$11.95**

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 Doppler Direction Finder



MFJ-5005  
**\$479<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-868B *World's largest SWR/Wattmeter has giant 6½" meter*

**World's largest HF+6M SWR/Wattmeter measures a giant 6½ inches diagonally across meter scale!** Covers 1.8-54 MHz.

**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.

**Meter** needle position and motion gives you an accurate indication for what's going on *quickly* without actually reading the scale -- like a 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

## Giant Automatic SWR/Wattmeter



## Giant 6½" Meter!!! Covers 1.8 to 54 MHz!

**MFJ-869 Fully-automatic auto ranging MFJ-869 has a giant 6½ inch meter.**

**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.

**Has an Amplifier Bypass Control™** and *Control Relay* for high SWR.

**Field-upgradeable** firmware. Has high SWR Audio and Visual Alarms to warn you of imminent danger to your expensive electronic equipment.

**Covers 1.8-60 MHz.** All-new micro-processor design gives years of use. Seven LED indicators. All-metal black cabinet measures 7Wx5½Hx5D".

MFJ-868B  
**\$159.95**  
Ship Code B

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, \$17.95. Cabinet measures 7Wx5½Hx5D inches.

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

**MFJ-867, \$169.95.** MFJ-867 is similar to MFJ-868B giant wattmeter but covers 144/220/440 MHz frequencies. Handles 400 Watts, has 400/200/20 Watt ranges.



## MFJ HF QRP Wattmeter and SWR Bridge

MFJ-813  
**\$44.95**  
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-239s. Rugged black aluminum, 4½Wx2¼Hx3D inches.



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

**Large 3⅝ inch meter . . . Read forward/reflected power and SWR at a glance . . . Individual Meter scales for each power range . . . LED backlighting . . . 3-color scale . . . True directional coupler . . . Low bias Schottky Diode detectors for increased linearity low to high power . . .**

**MFJ Giant SWR/Wattmeter** series have large 3⅝ 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.

**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 **MFJ-891 \$119.95** designer-styled plastic injection molded front panel. Handsome black speckled finish and gray molded front panel aesthetically compliments today's modern transceivers. Has super quality input/output SO-239s. 7¼Wx4½Hx4½D inches.

**Select** from the following models:

### MFJ-891, \$119.95.

**HF** model covers 1.6 to 60 MHz. Handles 2 kW in three power ranges: 20/200/2000 Watts. MFJ-891 has the precision *TrueActive™* PEP Circuit for SSB operation. You get true PEP readings when in SSB mode.

### MFJ-892, \$119.95.

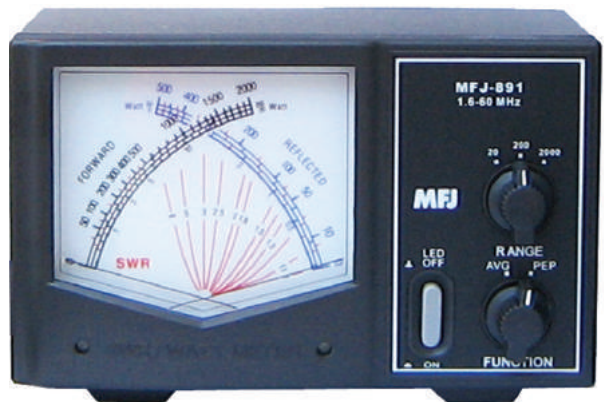
**HF/VHF** model covers 1.6 to 200 MHz. Handles 200 Watts in three power ranges: 2/20/200 Watts.

### MFJ-893, \$119.95.

**VHF/UHF** model covers 125-525 MHz. Handles 200 Watts in three power ranges: 2/20/200 Watts.

### MFJ-894, \$139.95.

**HF/VHF/UHF** model has two input sensors. Covers 1.6-60 and 125-525 MHz. Use two RF sensors for HF or VHF/UHF operation. Handles 200 Watts in three ranges: 2/20/200 Watts.



# MFJ Compact HF, VHF, UHF SWR/Wattmeters

MFJ



MFJ-860  
**\$64.95**

Ship Code A

MFJ-862  
**\$74.95**

Ship Code A

MFJ-864  
**\$109.95**

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, \$109.95, 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. Power range for each band is individually calibrated. Schottky diodes used for best accuracy.

**Single knob operation makes it easy**

to use and the meter is lighted for easy reading. Uses 12 VDC or 110 VAC with optional adapter, MFJ-1312D, \$17.95.

All black aluminum cabinet. You won't find a tougher, longer lasting finish anywhere. **MFJ-864** measures a compact 7 1/4 Wx2 1/2 Hx2 1/4 D inches.

**MFJ-862, \$74.95**, similar to MFJ-864 but covers 144/220/440 MHz. 30/300 Watts forward, 6/60 Watts reflected ranges. 5 3/4 x 2 1/2 x 2 1/4 inches. Has one sensor for all 3 bands.

**MFJ-860, \$64.95**, similar to MFJ-864 but for 1.8-60 MHz only. Push button selects 30/300 Watts forward, 6/60 Watts reflected. Tiny 4 1/2 x 2 1/4 x 3 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 then these are for you.

You get a large 3 1/4 x 1 1/4 inch precision illuminated meter for easy wide angle viewing. Highly visible black and red meter scale on a white background makes it easy to read SWR, forward or

reflected power. Meter lamp requires 13.8 VDC or 110 VAC operation.

**Functional**, simple front panel layout lets you select power ranges, bands or make SWR readings intuitively.

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

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

**Each** is housed in an all metal cabinet with rubber feet and protected by durable speckled black paint. Designer injection molded gray front panel matches any transceiver. 7 1/2 Wx3 1/8 Hx4 1/4 D".

**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 Models:**

**MFJ-870, \$84.95.** HF, 1.6 to 60 MHz. 30, 300, 3000 Watt power ranges.

**MFJ-872, \$84.95.** HF/VHF, 1.8 to 200 MHz. 5, 20, 200W power ranges.

**MFJ-873, \$84.95.** VHF/UHF, 125-525 MHz. 5, 20, 200W power ranges.

**MFJ-874, \$119.95.** HF/VHF/UHF, 1.8-525 MHz. 5, 20, 200W ranges.

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



MFJ-815D  
**\$99.95**

Ship Code A  
Covers 1.8-60 MHz

MFJ-817C  
**\$109.95**

Ship Code A  
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 SSB/CW readings over wide frequency range.

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

**1.8 to 60 MHz.** MFJ-817C covers 144/220/440 MHz. Mechanical adjustment for accurately zeroing the meter.

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

*Continued below right . . .*

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

MFJ-845  
**\$104.95**

Ship Code A  
Covers 1.6-60 MHz

MFJ-847  
**\$104.95**

Ship Code A  
Covers 125-525 MHz



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

**Large 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, handles 0-120 Watts.

**Super compact 4Wx3Hx1D inches.**

MFJ-812B  
**\$44.95**

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 1/2 Wx2 1/4 Hx3 D inches.

### Econo HF SWR/Wattmeter

MFJ-816  
**\$44.95**

Ship Code A



**This HF SWR/Watt-**meter 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 all-black aluminum cabinet. SO-239 connectors. 2-color meter scale. Compact 4 1/2 Wx2 1/4 Hx3 D inches -- makes it ideal for portable use, camping, backpacking.

*Continued from left . . .*

**MFJ-815D** has 3000 and 300 Watts forward and 600/60 Watts reflected power ranges. **MFJ-817C** has 2 power ranges: 300/30 and 60/6W. Read SWR from 1:1 to 8:1. Use 12 VDC or 110 VAC with MFJ-1312D, \$17.95.

**TrueActive™** Peak Reading Circuit can use 9 Volt battery. Metal all-black aluminum cabinet measures a compact 6Wx3 1/2 Hx4 1/2 D inches.



## 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/reflected Watts, SWR, frequency can be 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.

Has 3 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.

TrueActive™ peak reading circuit

gives 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 QRP rigs.

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

MFJ-826B  
\$189<sup>95</sup>  
Ship Code B



LCD display. Use 12 VDC or 110 VAC with MFJ-1312D, \$17.95. Black metal cabinet, 6 1/2 Wx2 5/8 Hx6 D inches.

MFJ

## Digital and Cross-Needle SWR/Wattmeter



MFJ-828  
\$249<sup>95</sup>  
Ship Code B

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, three inch lighted Cross-Needle SWR/Wattmeter and Amplifier Bypass Control™ (protects amplifier during high SWR events), and a Control Relay with normally open and closed connections that toggles when SWR is above a pre-set limit. Field-upgradeable firmware on MFJ website.

## MFJ VHF/UHF SWR Mobile Power Meter



MFJ-844  
\$74<sup>95</sup>  
Ship Code A

Covers 144 and 440 MHz. Insertion loss is 0.3 dB or lower with 50 Ohm

impedance. SO-239s. Its tiny size lets you put it just about anywhere in your operating position. 3 1/4 Wx3 Hx1 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  
\$64<sup>95</sup>  
Ship Code A

Compact HF/VHF and VHF/UHF SWR/Wattmeter.

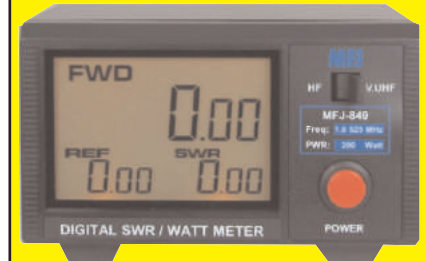
Has huge 3"

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 inches.

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

## HF/VHF Digital SWR/Wattmeter



MFJ-849  
\$179<sup>95</sup>  
is like MFJ-884 (below left). Has a super large 3.5" bright orange LCD display that reads SWR, forward and reflected power digitally in a single glance. 1.5-525 MHz, HF/VHF switch, 200 Watts. Compact 5 1/2 Wx3 1/8 Hx5 D inches.



MFJ-849 is like MFJ-884 (below left). Has a super large 3.5" bright orange LCD display that reads SWR, forward and reflected power digitally in a single glance. 1.5-525 MHz, HF/VHF switch, 200 Watts. Compact 5 1/2 Wx3 1/8 Hx5 D inches.



MFJ-819, \$169.95. Flat mount 1.8-60 MHz Mobile SWR/Wattmeter with remote sensor and 25 feet flexible cable. Handles 1500 Watts. Use 9V battery or 12 VDC. 5 Wx3 1/4 Hx1 5/8 D".

## Ruggedized flat Mobile/portable MFJ SWR/Wattmeters



MFJ-818  
\$89<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. 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. MFJ-5510, \$12.95. Tiny all-metal cabinet, 5 Wx3 Hx2 D inches.

## MFJ 3-inch Cross-Needle SWR/Wattmeters



MFJ-883  
\$99<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. Precisely factory calibrated for super accuracy. Air-Di-electric SO-239s are gold plated center pins for performance beyond 525 MHz.

Functional, 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 gray panel matches any rig. Super compact 5 1/2 Wx3 1/8 Hx5 D inches.

## Four models to choose from . . .

MFJ-880, \$99.95. HF, 1.6-60 MHz, Power: 0-2000W. Range: 20/200/2000.

MFJ-882, \$99.95. HF/VHF. 1.8-200 MHz. Power: 0-200W. Range: 2/20/200.

MFJ-883, \$99.95. VHF/UHF, 125-525 MHz. Power: 0-200W. Range: 2/20/200.

MFJ-884, \$119.95. HF/VHF/UHF, 1.8-525 MHz, Power: 0-200 Watts. Range: 2/20/200 Watts. Separate HF and VHF/UHF power sensors with SO-239 connectors.

# 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**

MFJ-834  
\$84<sup>95</sup>  
Ship Code A

**Coax In-Line RF Ammeter** connects between antenna and tuner/transmitter/amplifier and measures 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 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 -- increases feedline current, improves power transfer to get 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. Tuner or lossy coax may be dissipating power and you may not get peak output even if the tuner/amplifier are properly tuned.

Use to determine best antenna tuner settings and to compare various tuners.

**Calculate feedpoint impedance** by dividing applied power by square of feedpoint current. **Continued right ...**



**MFJ-836 all-in-one RF Ammeter/SWR/Wattmeter**

MFJ-836  
\$149<sup>95</sup>  
Ship Code A

**An all-in-one RF Ammeter/SWR/Wattmeter!** Quickly determine feedpoint impedance, monitor antenna for changes under power.

**Read RF current**, 3 calibrated ranges -- 1/3/10 Amperes. 3-inch lighted easy-to-read **Cross-Needle** meter reads SWR, forward (300/3000W) and reflected power (60/600W) **simultaneously**.

**Exclusive TrueActive™** circuit gives you true peak/average power readings. SO-239 connectors. Use 9 Volt battery and/or 12 VDC or 110 VAC with MFJ-1312D, \$17.95. 6Wx3½Hx4½D inches.

**MFJ-836H, \$159.95.** Like MFJ-836 but 3, 10, 30 Amps high current ranges.



**MFJ-835 Balanced Line RF Ammeter**

MFJ-835  
\$139<sup>95</sup>  
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.

**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 needles **cross in center** -- no matter 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 feeder wires minimize feedline radiation, reduces pattern distortion, RFI, TVI and wasted power. You could lose up to 10% of power.

**Imbalance** is due to feedline not being perpendicular to antenna, runs close to metal or is closer to ground.

**Solve** all your unbalanced problems.

**Heavy-duty** 5-way binding posts for balanced feedlines. Use 12 VDC or 110 VAC with MFJ-1312D, \$17.95. 6Wx3½Hx4½D inches.

... Continued from left

**Antennas** change when you apply power. Insulators break down, traps heat up, capacitors leak, and feedpoint impedance may be drastically different from SWR Analyzer measurements.

**MFJ RF ammeters** read accurately 1-30 MHz in 3 linear ranges: .3, 1, 3 A.

**Large** 3-inch lighted meter. Use 12 VDC or 110 VAC with MFJ-1312D, \$17.95. SO-239s. 6Wx3½Hx4½D".

**MFJ-834H, \$94.95.** Like MFJ-834, but had 3, 10, 30 Amps high current ranges.

## Calibrated Clamp-On RF Ammeter



**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** antenna feedpoint impedance, radiated power, losses and efficiency. Track down RFI-causing currents on

coax, rotator, guy, telephone/television cables.

MFJ-854  
\$129<sup>95</sup>  
Ship Code A

**Five calibrated** ranges to 3 Amperes including sensitive 30 mA range with linearity compensation to assure accuracy at low currents. Sensitive enough to use an 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. 1-30 MHz. ½ inch diameter cables. 2½ Wx5½Hx1½D in.

## Calibrated mini Clamp-On RF Ammeter



MFJ-853  
\$64<sup>95</sup>  
Ship Code A

**Calibrated 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. 0.3, 1, 3 Ampere ranges. Small 2¼Wx3¾Hx1D inches.

**MFJ-853H, \$74.95.** Like MFJ-853, but has 3, 10, 30 Ampere high-current ranges.

## MFJ Super-Sensitive RFI Sniffer



MFJ-805  
\$109<sup>95</sup>  
Ship Code A

**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 your shirt pocket. Use 9 Volt battery. Usable from VLF to VHF. Gain is adjustable over 50 dB range.

## Find Power Line Noise Fast!



Choose the highly directional 3 element **Yagi (MFJ-856, \$169.95)** for pinpoint accuracy or the compact telescoping **dipole (MFJ-852, \$129.95)** 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, hear noise you're tracking or use a tape recorder. 2Wx4Hx1.5D".

**Ultra-sensitive** pocket-sized RFI Detector tracks down RFI caused by radiating wires. It'll tell exactly the wire radiating RFI so you can eliminate it with a 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, \$84.95.** Add this 3-element beam to 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. 100 KHz-500 MHz.

**MFJ-802B \$54.95**  
Ship Code A  
**40" Dipole Field Strength Meter MFJ-802B,**

**\$54.95.** 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 remote RF sensing head (pictured)



**MFJ-802BR, \$39.95.** 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 W x 3 5/8 H x 1 D in.

**MFJ-802BX, \$79.95,** MFJ-802B field strength meter and MFJ-802BR, sensor comb. Saves \$!

### Telescoping Whip Field Strength Meter



**MFJ-801 \$34.95**  
Ship Code A

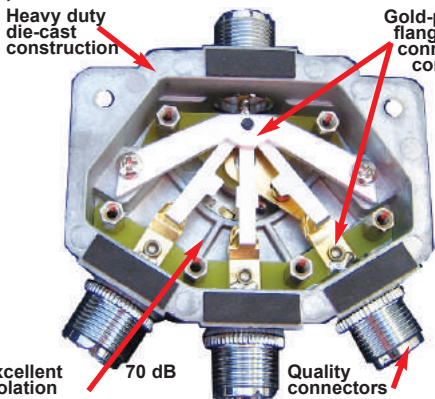
Take quick field-strength readings from 100 KHz to 500 MHz with this compact telescoping whip field strength meter. 1.75 inch meter. Sensitivity control. 20 inches (extended) monopole. Finger contact on side increases sensitivity when needed. 2 3/8 x 3 1/8 x 1 inches.

## MFJ Rhinos™ 2, 3, 4 Position Antenna Switches

Built tough, built to last and built to work for a long lifespan!



MFJ's Rhinos™ are tough, durable 2, 3, or 4 position antenna switches. Gold plated flanges, connector contacts -- low VSWR, low insertion loss. Rock-solid, sturdy, die-cast design gives up to an excellent 70 dB isolation. They're built like a rhino, tough inside and out! Superior internal design lets them work for a long lifespan. They handle power 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.



**Eight models to choose from . . .**  
**MFJ-2702, \$34.95.** 1 GHz, 2 positions, SO-239. 2 3/4 W x 3 1/2 H x 1 3/4 D inches.  
**MFJ-2702N, \$49.95.** 3 GHz, 2 pos., N.  
**MFJ-2703, \$69.95.** 800 MHz, 3 positions, SO-239. 3 1/8 W x 3 1/2 H x 1 3/4 D inches.  
**MFJ-2703N, \$79.95.** 1.5 GHz, 3 pos., N.  
**MFJ-2704, \$99.95.** 900 MHz, 4 positions, SO-239. 4 1/4 W x 4 H x 1 3/4 D inches.  
**MFJ-2704N, \$109.95.** 1.5 GHz, 4 P, N.  
**MFJ-2704M2, \$109.95.** 900 MHz, 4P, Inputs are SO-239, outputs are two each: SO-239, N-type, 4 1/4 W x 4 H x 1 3/4 D".  
**MFJ-2704N2, \$109.95.** 1.5 GHz, 4 pos., Inputs are N-type, outputs are two each: SO-239, N. 4 1/4 W x 4 H x 1 3/4 D in.

Inside View of MFJ-2703, \$69.95

### MFJ Rhino™ Series Antenna Switch Specifications

Model No.	MFJ-2702	MFJ2702N	MFJ-2703	MFJ2703N	MFJ-2704	MFJ2704N	MFJ2704M2	MFJ2704N2
Price	\$34.95	\$49.95	\$69.95	\$79.95	\$99.95	\$109.95	\$109.95	\$109.95
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
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-2704 \$99.95**  
SO-239, 900 MHz  
Ship Code A

**MFJ-2704N \$109.95**  
N-type, 1.5 GHz  
Ship Code A



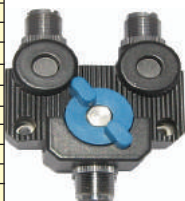
**MFJ-2704M2 \$109.95**  
239/N, 900 MHz  
Ship Code A

**MFJ-2704N2 \$109.95**  
N/239, 1.5 GHz  
Ship Code A



**MFJ-2703 \$69.95**  
SO-239  
800 MHz  
Ship Code A

**MFJ-2703N \$79.95**  
N-type  
1.5 GHz  
Ship Code A



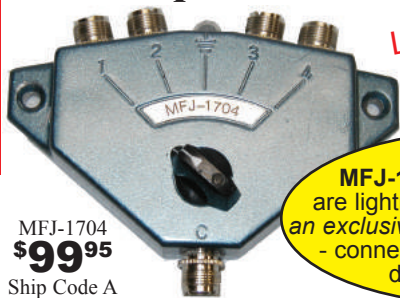
**MFJ-2702 \$34.95**  
SO-239,  
DC-1 GHz  
Ship Code A

**MFJ-2702N \$49.95**  
N-type,  
3 GHz  
Ship Code A



# Lightning Protected Heavy Duty Coax Switches

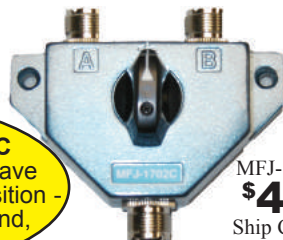
*MFJ gives you a center ground position, automatic grounding of unused positions, handles 2.5 kW PEP and works to over 500 MHz!*



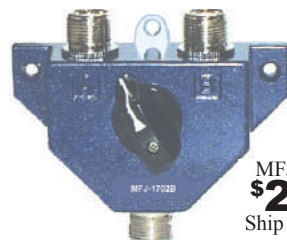
MFJ-1704  
**\$99.95**  
Ship Code A

Lightning  
Surge  
Protection

**Protected!**  
MFJ-1704 and MFJ-1702C  
are lightning protected and have  
an exclusive center ground position -  
connects antennas to ground,  
disconnects radio.



MFJ-1702C  
**\$44.95**  
Ship Code A



MFJ-1702  
**\$21.95**  
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, \$104.95.** 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. MFJ-1702C has a heavy cavity type construction and uses SO-239 connectors. Handy mounting holes. 3Wx2Hx2D in.

**MFJ-1702CN, \$49.95.** Like MFJ-1702C, with "N" type connectors. Covers DC to 1.1 GHz.

**MFJ-1702, \$21.95.** Like MFJ-1702C, less surge protection, center ground.

## MFJ Six Position Antenna/Transceiver and Antenna Switches



MFJ-1700C New MFJ-1700C adds lightning surge protection and boasts a much better isolation between connectors/wires internally. **\$129.95** Ship Code B

High power Antenna and Transceiver Switch lets you select one of 6 antennas and one of 6 different transceivers in any combination. You can have dedicated radios/antennas

doing select ham radio activities.

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 a compact 4 3/4"Wx6 1/2"Hx3D inches.

## 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. 2 kW PEP SSB, 1 kW CW, 50-75 Ohm loads. 10Wx3Hx1 1/2"D inches.



MFJ-1701  
**\$89.95**  
Ship Code B

## MFJ 12-Position Coax Patch Panel

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.

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 equip-



MFJ-4706  
**\$84.95**  
Ship Code A



MFJ-4704  
**\$74.95**  
Ship Code A

ment) to coax connectors inside the 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.

**8-Pos. Coax Patch Panel MFJ-4704, \$74.95.** Similar to MFJ-4706 but for 8 coax-fed devices.



MFJ-1706  
**\$119.95**  
Ship Code B

Use 1 of 6 different balanced feedlines 1.8 to 30 MHz. Handy, versatile 5-way binding posts. Handles 1500 Watts PEP SSB. Silk-screened label positions. 9Wx3 1/4"Hx6 1/4"D inches. **MFJ-1706H, \$129.95,** similar, but high-voltage glazed ceramic feedthru insulators instead of 5-way posts.

## MFJ Biastee with built-in Transmit/Receive Switch

**MFJ-4113TR** has an on/off position to switch between transmit or receive for different T/R antennas. SWR is less than 1.5:1 below 150 MHz and 1.16:1 below 230 MHz. MFJ-4113TR lets you power an active antenna with an amplifier at the antenna; power a remote tuner on one port and switch to another antenna on the other port; switch between a receive antenna like MFJ-1886 low noise loop and a transmit antenna (beam or vertical). Power to DC-Pass port is grounded through a 100 Ohm resistor.



MFJ-4113TR  
**\$99.95**  
Ship Code A

## HF/VHF/UHF BiasTee DC Power Injectors

Send up to 1 Amp DC/50 Volts DC through your 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 1-60 MHz. Has SO-239 connectors.

MFJ-4116  
**\$34.95**  
1-60 MHz  
Ship Code A

MFJ-4119N  
**\$44.95**  
1-440 MHz

**MFJ-4119N** covers HF, VHF and UHF. Has N-type connectors. Measures a super-compact 2 3/4"Wx2 1/2"Hx1 1/4"D inches.

**MFJ-4116P, \$59.95,** pair of MFJ-4116.

**MFJ-4117, \$39.95.** Like MFJ-4116, but with switch to turn remote equipment on/off.

**MFJ-4118, \$49.95.**

Like MFJ-4116, but provides both +12VDC and -12VDC. Has three switched position settings: +12VDC, OFF and -12VDC.

# MFJ SDR T/R Protection Switches

Turn your SDR into a panadapter to see entire bands on frequency/waterfall displays . . .



**MFJ-1708B-SDR**  
**\$109.95**  
 Ship Code A

**An inexpensive wide-band SDR dongle receiver lets you see entire bands on frequency/waterfall computer displays!**

If you want to know where the activity is, who's generating splatter, what's in the DX window, how wide your audio is or what frequencies are clear, it's all right there! While receiving on your transceiver, MFJ-1708B-SDR switches the SDR to the antenna showing the

entire band. On transmit SDR is switched out and grounded to protect your SDR. PTT and a fail-safe RF sensor switches MFJ-1708B-SDR. HF/VHF/ UHF. Monitor multiple bands with multiple SDRs and a multi-coupler.

**MFJ-1708B-SDR-S, \$115.95.** SMA connector for SDR.

**MFJ-1708SDR, \$89.95.** Original model for HF/VHF.

## New B series improvements . . .

The original MFJ-1708 series used one relay and wires to connect the SO-239s. The new B-series uses four relays and connectors on a single pc board. This gives you > 50 dB isolation

at 300 MHz and > 68 dB at 50 MHz. SWR < 1.16:1 at 50 MHz and < 1.75:1 at 450 MHz at the transmit port. Mute output is a selectable short or open to ground. Use "boat anchors" or modern receivers or key a linear amplifier. Receiver input protection prevents over-

load from nearby high power signals and from receive to transmit. A hybrid splitter on SDR models reduces loading effect and gives > 15 dB isolation between the SDR REC and XCVR ports to reduce interference. The original MFJ-1708 series is still available.



**MFJ-1708B**  
**\$109.95.**

**MFJ RF Sense Transmit/Receive Switch**  
 Switches your antenna from receiver to transmitter using a relay. Shorts your receiver to ground during transmit. Use RF sensing with adjustable delay or PTT line. Has selectable open/short mute.



**MFJ-1707B**  
**\$109.95.**

**Auto switch XCVR between 2 antennas**  
 Automatically switches separate transmit and receive antennas on transceivers with only one antenna port. Example: Efficient 75M dipole for XMIT and low noise MFJ loop for receive -- no static crashes!

## New! MFJ Dual Antenna Quad Radio Multi-coupler



**MFJ-8504NB**  
**\$159.95**  
 Ship Code A

**MFJ-8504NB** lets you hook up to four SDR radios, shortwave receivers or transceivers to two receive antennas! AM notch filter prevents noise from strong broadcast stations.

This lets you monitor several signals at once -- an amazing receiving post!

This broadbanded radio multi-coupler has excellent performance from 300 kHz to above 850 MHz, 30dB IP3.

Reverse polarity protection, internal fuse, BNC input/output. Unused ports automatically terminated. Rugged, fully shielded aluminum, 6Wx1 3/4 Hx3 3/4 D in. Use 9-15 VDC @ 150 mA nominal or 110 VAC with MFJ-1312D, \$17.95.

**MFJ-8504NS, \$159.95.** Like MFJ-8504NB, but with SMA input/output.

**MFJ-8504, \$139.95.** Like MFJ-



**8504NB**, no AM notch filter. BNC in/out. Inputs can be split by frequency

range using these optional dual filters.

**MFJ-8504AN, \$29.95.** Add an AM Notch filter to your MFJ-8504.

**MFJ-8504LP, \$19.95.**

Low pass 30 MHz.

**MFJ-8504HP1, \$19.95.**

High pass, 30 MHz.

**MFJ-8504HP2, \$19.95.**

High pass, 1.7 MHz.

## MFJ Transceiver/Antenna RF Safety Switch



**MFJ-1703B**  
**\$34.95**  
 Ship Code A

**Keeps your expensive transceivers safe from transmitting into absolutely nothing! No more burning up your radio because you forgot to change your antenna switch! 1.8 to 54 MHz.**

Your transceiver is always hooked up to one of two antennas! Connect two rigs and two antennas and switch to different combinations. Handles 300 watts PEP SSB, handles 150 watts CW. Handy mounting tabs for wall mounting. All metal construction, switches 50-75 Ohm unbalanced lines.

## MFJ 2-Position Remote Antenna Switch



**MFJ-4712**  
**\$84.95**  
 Ship Code B

**2-position remote antenna switch** uses a single coaxial feed-line to feed 2 antennas, DC power and control signals -- no power/control cable needed. Perfect for switching from HF to VHF -- no more unplugging coax just to switch frequencies. 1.8 MHz-150 MHz, 1500W, 50-75 Ohms. 4Wx2 5/8 Hx1 1/2 D" Outside Box fully enclosed, weather protected. SO-239s for XCVR, antennas. Stainless 1 1/2" tall bracket with U-bolt fits masts to 1 1/2" O.D. Inside remote control is 2 1/4 Wx2 1/2 Hx1 1/4 inches.

## Desktop/Remote 6 & 4 position Antenna/Transceiver Switches



**MFJ-4716**  
**\$99.95**  
 Ship Code B

**A simple rotary switch** lets you select 1 of 6 antennas. All unused



(back of unit)

inputs are grounded. You can connect a sense line to your radio so when it's off, all inputs are automatically grounded. Ultra-fast gas discharge lightning surge protector protects rig and safely shunts static electricity and lightning induced surges to ground. Does not protect against a direct hit. SO-239s. 1500 Watts/50-75 Ohm load, 1-60 MHz. Useable to 150 MHz. Use CAT 5 cable, (not included) to connect. Use 12 VDC/110 VDC with MFJ-1312D, \$17.95. 8Wx2 3/4 Hx4 1/4 D".

**MFJ-4716RC, \$44.95.** Remote Control for MFJ-4716. Tiny 2 3/4 Wx3 3/4 Hx1 D".

**MFJ-4714, \$84.95.** Like MFJ-4716, but four antennas.

**MFJ-4714RC, \$44.95.** Remote Control for MFJ-4714.



**MFJ-4726**  
**\$169.95**  
 Ship Code B

**Select 2 of 6 antennas** and 1 of 6 transceivers in any combination. Plug in antenna tuner, SWR/Watt-

meter or other into common ports, so it's always connected to the antenna and radio. Unused inputs are grounded. In OFF position, all inputs are grounded or control is by remote. Lightning surge protector protects transceivers and shunts surges to ground. SO-239s. 1500 Watts into 50-75 Ohm load 1-60 MHz. Useable to 150 MHz. Use 12 VDC or 110 VAC with MFJ-1312D, \$17.95. For indoors, not weather protected. 8Wx5Hx4 1/4 D".

**MFJ-4726RC, \$64.95.** MFJ-4726 Remote control.

**MFJ-4724, \$149.95.** Like MFJ-4726, but four rigs/ant.

**MFJ-4724RC, \$64.95.** MFJ-4724 Remote Control

**MFJ-5262, \$9.95.** 7-foot CAT-5 cable with connectors.

**MFJ-5265, \$25.95.** 25' CAT-5 cable with 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. C use independently!

MFJ-267  
**\$169<sup>95</sup>**  
 Ship Code B

*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*.

**Instantly** switch to your antenna and read SWR, forward, reflected power.

**Use** for testing/tuning transmitters, transceivers, amplifiers, tuners, baluns, transformers, filters, matching networks, coax, stubs, and antennas.

### 1500Watt Dry Dummy Load

**50-Ohm** dry dummy load works DC to 60 MHz. SWR is below 1.3:1 at 30 MHz. Can 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.

**Made** with copper flanges and BeO ceramic for an 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. 1 3/4"Wx4 3/4"Hx1 1/2"D inches.



MFJ-262BN  
**\$74<sup>95</sup>**  
 With N male DC to 3 GHz  
 Ship Code A

MFJ-262B  
**\$64<sup>95</sup>**  
 With PL-259 DC to 1 GHz

### 500 MHz, 100W Dry Load

**Connects** directly to your rig or test equipment with a PL-259. Use with MFJ-259B SWR Analyzer™ or MFJ-261N for MFJ-269.

**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. 1 1/8" round by 3" long.

**MFJ-261N, \$44.95** Like MFJ-261, but has N-male connector.



MFJ-261  
**\$29<sup>95</sup>**  
 With PL-259 DC to 500 MHz  
 Ship Code A



**Cross-Needle SWR/Wattmeter**  
 Large 3-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. 4 1/2"Wx3 1/2"Hx10 1/2"D". Uses 12 VDC or 120 VAC with MFJ-1312D, \$17.95.

### 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.

## MFJ wide-band 3GHz, 300 Watt Dry Dummy Load



**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.

**Also** produces incredibly low and flat SWR across 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.

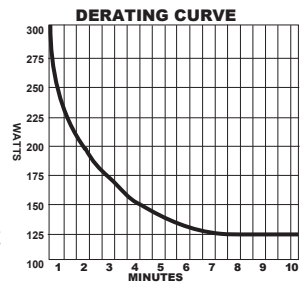
The MFJ-263 has a custom heavy-duty finned heatsink that spans the entire length of the cabinet and keeps operation safe and cool.

**Strong**, lightweight, all-aluminum construction is super-durable and will give years of continuous service.

**Derating** curve is permanently silk-screened into the bottom chassis for quick, easy reference. See below right.

**Measures** 10<sup>3</sup>/<sub>4</sub>W x2 1/4"Hx5 1/4"D inches. Weighs just 3.5 pounds.

**MFJ-263** is protected by MFJ's famous one year *No Matter What™* limited warranty. We'll repair or replace (at our option) your dummy load for one full year from your receipt purchase date.



## MFJ Analyzer Precision Calibration Load set



**MFJ-252B/N/U, \$34<sup>95</sup>**

**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-type connectors, or MFJ-252U for SO-239 (UHF) connectors. Set of three loads each.

## MFJ 2500W fan-cooled Dry Load



MFJ-265  
**\$234<sup>95</sup>**  
 Ship Code C

**2500 Watt fan cooled** load handles legal limit amps, DC- 6

Meters. Dissipates 2500W average power for 1 minute on, ten minutes off, 300W continuous. SWR <1.25 to 1 below 30 MHz, <1.4 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, 10kV per inch! Detailed power curve is permanently silk-screened on cabinet. 12 VDC/110 VAC. 8 1/4"Wx4"Hx9 1/2"D inches. SO-239s. 5 lbs.

## MFJ Switchable RF Dummy Load



MFJ-251  
**\$159<sup>95</sup>**  
 Ship Code B

**Get 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. All-aluminum cabinet, 4 1/2"Wx2 1/4"Hx6 1/2"D inches. Optional 12 VDC/110 VAC adaptor, MFJ-1312D, \$17.95.

# MFJ UHF/VHF/HF Dummy Loads



## MFJ VersaLoad™ kW Dummy Load MFJ-250X

VersaLoad™ kW dummy load runs 1KW CW or 2 KW PEP for 10 minutes. 1/2 KW CW or 1 KW PEP, 20 minutes. Continuous duty: 200W CW or 400W PEP. Derating curve. 50-ohm non-inductive resistor.

MFJ-250X  
\$54.95  
Ship Code A

Use transformer oil (not included). Low VSWR to 400 MHz. Under 1.2:1, 30 MHz; 1.5:1, 30-300 MHz; 2:1, 300-400 MHz. SO-239, vent/cap, carry handle. 7 1/2"H6 5/8"W".

MFJ-250, \$74.95. Includes transformer oil (no PCB). Ship Code D.  
**Industrial Grade Transformer Oil**  
MFJ-21, \$31.95. 1 gallon of 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  
\$79.95  
Ship Code A

SWR below 1.3 to 650 MHz and below 1.1 at 30 MHz. Handles 100 Watts for 10 minutes, 1500 Watts for 10 seconds.

Strong lightweight aluminum construction. 3Wx3Hx9D inches. Has MFJ's famous *No Matter What™* one year limited warranty.  
MFJ-264N, \$94.95. 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.

SO-239 connector. Full load for 30 seconds. Silk-screened derating curve to 5 minutes.

Handles 300 Watts. SWR 1.1:1 to 30 MHz, 1.5:1 from 30 to 650 MHz. 2 1/4"x2 1/4"x7".

MFJ-260CN, \$54.95. Similar to MFJ-260C but with type "N" connector.

**Coax Patch Cables**  
MFJ-5803, \$7.95. 3-foot RG-58 coaxial line with PL-259 connectors.  
MFJ-5806, \$10.95. 6-foot RG-58.  
MFJ-5809, \$12.95. 9-foot RG-58.  
MFJ-5812, \$13.95. 12' RG-58. Available in RG-8X and RG-213.



MFJ-260C  
\$44.95  
Ship Code A

## AC Digital Line Voltage Meters



New!  
MFJ-DM55-1U  
\$21.95  
Ship Code A

Handy digital 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"! Plugs into your wall outlet, consumes less than 1 Watt every kW hour. Accuracy +/- 1.5%. 2 1/8"Wx1 1/2"Hx1 1/2"D".

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-DM55-1E  
\$21.95  
Ship Code A



MFJ-7780, \$10.95. Euro to NEMA 6-20P adaptor.

MFJ-7782, \$10.95. Euro/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 earth ground. Fast, nano-second over-voltage protection. Provides inductive isolation, capacitive decoupling, RFI rejection, overvoltage protection of common mode, differential signals. Rejects/shunts undesired signals to ground. Four 3-wire, 15 Amp, 120 VAC outlets spaced for large adapters. 25A/3000W maximum. Fuse, 5 1/2' cord, nut ground. Mount holes. 12Wx3 1/2"Hx2"D".



MFJ-1164B  
\$89.95  
Ship Code B

## Transceiver Surge Protector

MFJ-1163, \$74.95. Protects expensive rig/equipment from damaging surges. Capacitive decoupling, ultra-fast 120 VAC /25A/3000W MOVs protect. (4) 3-prong grounded AC outlets.

## MFJ A/C On/Off Switch Control

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. Easy installation. Plug in equipment to be controlled in MFJ-1172 AC socket and DC control line from a remote control like MFJ's *Remote Shack™*. Requires control voltage 4.5-12 VDC. Output: 110 VAC at 15A. 64" cord and AC plug. 3Wx4Hx2 1/2"D in. AC input 110V.

MFJ-1174, \$169.95. Like MFJ-1172, but for 220 VAC input, output is 220V/15A. Has 6-15P plug.



MFJ-1172  
\$149.95  
Ship Code A



## MFJ Emergency PowerReady™ Toolbox

Great for charging batteries and taking your rig on-the-go! MFJ's PowerReady™ Toolbox is ready for random travel trips, Emcomm service, or when all else fails! Dual power pole 35A contacts, binding posts, low voltage cigarette lighter, 5V 2.1A USB port, green LED digital voltage meter. Use group 24-30 size batteries. Carrying strap.

MFJ-4452  
\$94.95  
Ship Code D



## 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.

Often, noise is coming outside the door from power lines. Power companies are 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 in locating the noises generated by corona discharge and arcing components. An acoustic receiver is tuned to ultrasonic range of 40 KHz -- hear ultrasonic noises generated by arcing connections and corona discharge.

18-inch diameter plastic dish gives a narrow beamwidth to pinpoint noise sources less than 12 inches at 50 feet. A short focal point makes the overall front-to-back depth just 7". The handle is mounted close so the center of gravity reduces fatigue on the hand from the weight pulling down in front.

Ultrasonic transducer mounted in a sturdy metal support reduces dish bending/warping. Target holes in dish are aligned with the beam helps pinpoint noise sources on 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"Wx19 1/2"Hx7"D inches. Weighs 2.5 pounds.

MFJ-392B, \$34.95. MFJ's Communication Headphones are a perfect companion for MFJ-5008. Works in stereo mode with 3.5 mm plug. Works mono with 1/4 inch adapter.

Not only can you use the 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. Sit in your backyard and enjoy nature.



MFJ-5008  
\$189.95  
Ship Code B

## Safeguard expensive gear from static electricity and lightning surges

*MFJ Lightning Surge Protectors handle 400 Watts PEP or 1500 Watts PEP*



electricity and lightning induced surges on your 50 Ohm coaxial line.

MFJ's Guardian Angel™ Lightning Surge Protector has an Ultra-fast gas discharge tube that safely shunts up to

MFJ-270  
**\$21.95**  
Ship Code A

**Safe-guard** your expensive equipment from static

5000 amps of peak impulse current harmlessly to an independent ground. SWR < 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, \$21.95.** SO-239 to SO-239.  
**MFJ-270MF, \$31.95.** SO-239-PL-259.  
**MFJ-270N, \$31.95.** Low-loss N-type.  
**MFJ-97, \$7.95.** Replacement gas discharge tube for MFJ-270.

MFJ-272  
**\$34.95**  
Ship Code A

**MFJ-272, \$34.95.** SO-239-SO-239.

**MFJ-272N, \$39.95.** N Connectors.  
**MFJ-272MF, \$39.95.** SO-239-PL-259.  
**MFJ-97H, \$18.95.** Replacement Gas Discharge tube for MFJ-272.



1.5kWatts

## Reduce Harmonics, Avoid TVI with MFJ Filters

### Low Pass TVI Filter Handles Full Legal Power

MFJ-704  
**\$99.95**  
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 harmonics are causing TVI problems, MFJ-704 can keep your neighbors happy while having fun with radio!



Nine Chebyshev poles, exclusive Teflon Dielectric 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 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 is 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  
**\$39.95**  
Ship Code A

Be a good neighbor.

Put this Low Pass TVI filter between transmitter and antenna or tuner and reduce transmitter harmonics by 50 dB! Harmonics are a source of interference to your neighbor's TV, radio, VCR, telephone, etc. SWR below 1.5 to 30 MHz into 50 Ohms. Perfect for barefoot rigs -- handles 200 Watts with less than 0.5 dB insertion loss. Attenuation is 50 dB at 54 MHz. SO-239s. 3x2x1.5 inches.



MFJ-705  
**\$149.95**  
Ship Code B

Suppress TV interference at the source with the MFJ-705 Low Pass Filter. 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 frequen-

### MFJ 2500 Watts Low Pass TVI Filter

Suppress TV interference at the source with the MFJ-705 Low Pass Filter. Use

cies above 40 MHz. Low loss to 30 MHz. Nine-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.

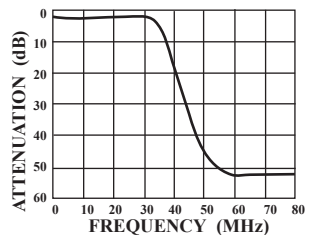
**Power Capacity:** 2500 W Key Down.

- 50% Duty. **Impedance:** 52 Ohms.

**Insertion Loss:** 0.25 dB @ 30 MHz.

**Size:** 9½Wx4¼Hx2½D inches.

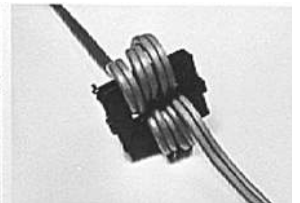
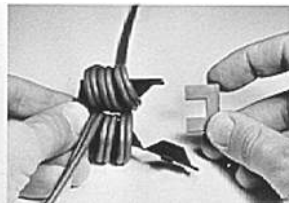
MFJ-705 Frequency Response



### MFJ RFI Free Choke Kit for RFI Suppression

It's easy to eliminate common RFI problems. Simply wind offending cable around an RFI suppressing toroid. Four square ferrite toroids are formulated especially for eliminating RFI 0.5 to 200 MHz. Wind on all kinds of cable, computer ribbon, TV coax, power, telephone, etc.

MFJ-701  
(Set of 4)  
**\$27.95**  
Ship Code A



### Ferrite RFI Suppression Chokes

RFI snap-on chokes 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 station. Isolate RFI on feedlines to your station. 2-piece design, snap and lock securely around cable. Install end-to-end along rigid cable or loop multiple turns with smaller soft cable. Select four sizes: .25 inch ID to .75 inch ID.

Model # - Price each	Model# - Price 4-Pk	Hole Size	Typical Cable Use
MFJ-700A, \$2.95	MFJ-700A4, \$11.95	.275 inches diameter	RG58/59/6U/8X
MFJ-700B, \$3.95	MFJ-700B4, \$14.95	.402 inches diameter	RG213/6X
MFJ-700C, \$5.95	MFJ-700C4, \$19.95	.528 inches diameter	RG11/8U
MFJ-700D, \$6.95	MFJ-700D4, \$24.95	.750 inches diameter	LMR600
MFJ-700P9, \$34.95	Combination Pack of 9;	consists of 4-A, 2-B, 2-C and 1-D RFI chokes.	



Ferrite RFI Suppression Chokes



## Pocket-size Frequency Counter 300 Hz - 2.8 GHz



MFJ-886B  
\$139<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 handheld unit is a tiny 2<sup>3</sup>/<sub>8</sub>Wx3<sup>1</sup>/<sub>4</sub>Hx1<sup>1</sup>/<sub>8</sub>D".

**Truly pocket-sized** MFJ-886B has a large *easy-to-read* 2Wx<sup>3</sup>/<sub>4</sub>H 10-digit backlit LCD and 11-segment RF Signal Strength Bargraph.

**Low** power consumption. Internal lithium battery (800 mAh). **Has** low battery indi-

cator. Run for about 12 hours on a single charge! Auto-sleep mode.

**Includes** built-in lithium battery, 12 VDC, 1A power adaptor/charger for 110 VAC and telescoping BNC antenna.

**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. 45 degree flip stand makes 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 **This** \$109<sup>95</sup> 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 continuously from 1 Hz to well over 150 KHz in 3 ranges. 4Hx3Wx1D inches. Frequency range switch, external power jack, 5-way binding posts. Use 9V battery.

**MFJ-5000** 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 continuously from 1 Hz to well over 150 KHz in 3 ranges. 4Hx3Wx1D inches. Frequency range switch, external power jack, 5-way binding posts. Use 9V battery.

## 81 dB Step Attenuator



MFJ-762  
\$99<sup>95</sup>  
Ship Code A

**ham shack accessory!** Usable to 500 MHz. 250mW maximum input. BNCs. Shielded stages.

Connect between receiver and antenna. Use an S-meter as a precision calibrated field strength meter. 50 ohms.

**Prevent** receiver blocking, cross-modulation. Determine gain/loss. Ideal for fox hunting. Evaluate linearity. Measure input/output level differences. Isolate circuits. Extend range of sensitive equipment. 6<sup>1</sup>/<sub>2</sub>Wx2<sup>1</sup>/<sub>2</sub>Hx1<sup>1</sup>/<sub>2</sub>D".

**This** will be your most useful

## Safely tune your amp with this MFJ AmplifierSaver™ Interface



MFJ-214  
\$74<sup>95</sup>  
Ship Code A

**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 amps, tuners, and dummy loads.

**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  
\$84<sup>95</sup>  
Ship Code A

**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<sup>1</sup>/<sub>2</sub>Wx1<sup>1</sup>/<sub>2</sub>Hx4D inches.

## 1-50 MHz Precision Antenna Phase Meter



MFJ-222  
\$159<sup>95</sup>  
Ship Code A

**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 analyzer or other generator that will supply at least 1V peak output into load. Built-in switchable 50-Ohm load (250 mW max). No need for an external load or BNC TEE --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. Simple set-up. Plug in the signal generator to IN, connect the Reference OUT to input of network and output of network to UNKNOWN IN. Turn on and read the phase shift and frequency. A bright 2-line LCD 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, \$17.95. Compact 4<sup>1</sup>/<sub>4</sub>Wx4<sup>1</sup>/<sub>4</sub>Hx2D in.

## Professional Function Generator

MFJ-5004  
\$159<sup>95</sup>  
Ship Code A



**Gives** precision sine, square and triangular wave forms from 1 Hz to 1 MHz in six decade ranges. Amplitude is adjustable 0-12 volts peak-to-peak. DC offset is also adjustable -6 to +6 VDC. Output is short circuit protected with an output impedance of 400 Ohms. Sturdy black all metal cabinet. Use 110 VAC or 12 VDC with MFJ-1312D, \$17.95.

## 2-Meter FM Signal Analyzer



MFJ-224  
\$194<sup>95</sup>  
Ship Code A

**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. 4Wx2<sup>1</sup>/<sub>2</sub>Dx6<sup>3</sup>/<sub>4</sub>H inches. Use 9V battery.

## MFJ Portable Signal Tracer-Injector

**Portable Signal Tracer-Injector** quickly finds defective stages in all kinds of signal amplifiers, radio receivers and transmitters.

**Search** home theaters, hi-fi amplifiers, public address systems, guitar amplifiers, AM/FM/TV transceivers, phones, scanners, shortwave, etc.

**Find** opens and shorts in cables and wires, identify and locate individual wires in multi-conductor cables.

**Has** AM detector and variable gain audio amplifier. 3Wx4Hx1D inches.



MFJ-5012  
\$109<sup>95</sup>  
Ship Code A

## Tune-Up Matchmaker™



MFJ-212  
\$109<sup>95</sup>  
Ship Code A

**Adjust** your antenna tuner for 1:1 SWR without transmitting!

**Avoids** overheating/arcing caused by high SWR, long tune-ups. Inserts between rig and tuner. Simply tune your transceiver to your desired frequency, then power-up the MatchMaker™. Adjust your tuner for a null in the pulsing "white noise" from 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<sup>1</sup>/<sub>2</sub>x1<sup>1</sup>/<sub>4</sub>x4". Use MFJ-1312D, \$17.95.

# 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  
\$89.95  
Ship Code A



MFJ-1116  
\$64.95  
Ship Code A



MFJ-1112  
\$49.95  
Ship Code A



MFJ-1117  
\$69.95  
Ship Code A



**MFJ-1118, \$89.95.** 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 x 2 3/4 x 2 1/2 in.  
**MFJ-1117, \$69.95.** For powering four HF/VHF radios (two at 35 Amps, two at 35A combined) simultaneously. 8x2x3".  
**MFJ-1116, \$64.95.** Similar to MFJ-1118. No 35 amp posts. Has "ON" LED and 0-25 VDC voltmeter. 15 amps total.  
**MFJ-1112, \$49.95.** 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 carries up to 40 amps. Fuse each outlet as needed to protect accessories or transceiver. The main fuse is 40 amps.

**Standard** color coded fuses simply plug in from outside. They are widely available ATC/ATO automobile fuses and used for 6, 12, 24 VDC systems.

**Heavy duty** DC input cable is built-in – you don't have to pay extra 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. Color coded Red and Black.

**Extra PowerPoles®** and fuses are included at no extra cost -- unlike 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 wing nut ground.

### All PowerPoles®



**MFJ-1128, \$115.95.** 12 outlets. Installed fuses: three 1A, four 5A, four 10A, one 25A, one 40A.  
Ship Code B

**Built-in 0-25 VDC Voltmeter.** ON/OFF switch controls outlet 4-12, handles 20 Amps total. Outlet 1, 2-3 are unswitched, handle 40A total. Includes 12 pair of Anderson PowerPole® 24 30A contacts, 10 fuses (2 each: 1,5,10,25,40A). 12Wx1 1/4xHx2 3/4D".



**MFJ-1126, \$89.95.** 8 outlets. Factory installed fuses: two 1A, three 5A, two 10A, one 25A, one 40A. Includes 6 pair of Anderson PowerPole® 12 30A contacts and 5 fuses: (1 ea. 1,5,10,25,40). 9Wx1 1/4xHx2 3/4 inches.  
Ship Code B

### PowerPoles® AND 5-Way Binding Posts



**MFJ-1129, \$125.95.** 10 outlets. Installed fuses: two 1A, three 5A, three 10A, two 25A, one 40A.  
Ship Code B

Outlets 1, 2, 4-8 are PowerPoles®. Outlet 3 is 35A high current binding post; outlet 9-10 are 15A 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 30A contacts, 10 fuses (2 ea, 1,5,10,25,40). 12 1/2 Wx1 1/4 x Hx2 3/4 D inches.

**MFJ-1124, \$69.95**  
Ship Code B

**MFJ-1124, \$69.95.** 6 outlets. Fuses: one 1A, one 5A, two 10A, two 25A, one 40A. Outlets 1-4 PowerPoles®, 5-6 are 35A high current posts. Includes 4 pair PowerPole® 8 30A contacts, 5 fuses (1ea, 1,5,10,25,10) 8Wx1 1/4xHx2 3/4 D".

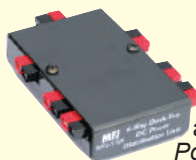
### Anderson 30/45 Amp PowerPoles®

**MFJ-11C06, \$7.95, 6 pr. 30A.**  
**MFJ-11D06, \$9.95, 6 pr. 45A.**  
**MFJ-11C12, \$14.95, 6 pr. 30A.**  
**MFJ-11D12, \$19.95, 12 pr. 45A.**  
**MFJ-11C25, \$29.95, 25 pairs. 30A.**  
**MFJ-11C100, \$109.95, 100 pr. 30A.**  
**MFJ-7602, \$19.95.** Tool for crimping PowerPoles®.

### Banana Plugs for binding posts

**A. MFJ-7713, \$6.95.** 1 red, 1 black high-current plugs. Solderless, thumb Screw. Fits 10-12 gauge wire.  
**B. MFJ-7709, \$7.95.** High-current dual plugs, Black/Red polarity rings. Solderless, thumb screw. .75" standard spacing -- fits 10-12 gauge wire.  
**C. MFJ-7700P, \$7.95.** Six red and six black solderless banana plugs.  
**MFJ-11F20, \$12.95.** 10 ATO Fuse pack. 2 each: 1, 5, 10, 25, 40 amp.

## MFJ 6-Way Desk-Top DC Power Distribution Unit



**MFJ-1106, \$44.95**  
Ship Code A

**Compact,** low profile DC distribution box is designed for your operating desk. 7 Anderson Power Poles™ are connected in parallel, permitting 1 DC input to be shared by 6 DC outputs. 7 sets mating connectors included. Connectors may be used as an input or output. Total current capability is 30-amps. 2 1/4 Wx1 Hx3 3/4 D".

## Four Connector PowerPole™ Splitter

splitter gives 1 input and 3 outputs. Handles 30 Amps total. Input (30A) and each output is fused (25, 10, 5A). Has open fuse indicator. 2 3/4 Wx3 1/4 Hx1 1/2 D".

**MFJ-1104, \$49.95**  
Ship Code A



## DC Line RFI Filtered Outlet

**Filtered** DC outlet goes between rig and DC power. Reduces RFI, hash, transients, motor noise, alternators, fuel pump whine, power windows, RF transmitters. 12V/24V DC power. 5-way binding posts, PowerPoles® in/out. 3Wx2 3/4 Hx4 3/4 D".



**MFJ-1142, \$64.95**  
Ship Code A

## MFJ DC Distribution Box

**This new** power distribution box has 40 Amp binding post inputs to four (40A total) PowerPole™ outputs, plus two 2.1 mm center positive power jacks. PowerPoles™ individually fused. 4Wx2 1/4 Hx2 1/4 D inches.

**MFJ-1107, \$54.95**  
Ship Code A



# 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-4416C  
**\$189<sup>95</sup>**  
 Ship Code A

volts down to 12V after a short time. Coupled with voltage drops in cables and you have a problem.

**Eliminates** low voltage problems by boosting input as low as 9 Volts to 13.8 volts at up to 30A peak with a typical efficiency of close to 90%.

**Includes** PowerPoles™ and high-current 5-way posts for both the DC input and regulated output. An internal 30-amp input fuse protects the unit from excess output current demands.

**Selectable** limits on the minimum voltage that the unit will accept: 9V, 10V, and 11-volts. Protects from over-discharging a battery and damaging it. Includes output over-voltage crow-bar protection should regulation be lost.

**External** boost enable Input allows remote enabling of MFJ-4416C. 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.

**Second** efficiency enhancement feature is a user-adjustable output voltage control which lets you set output

voltage between 12- and 13.8-volts.

**When** setting output at 12-volts, input voltages greater will pass through, but efficiency of the regulator is higher. And lower input voltage means your transceiver will run cooler!

**Typically** save over 30W in heat dissipation during transmit, and even 3-4 watts during receive. So it can actually be good to let the voltage sag to 12V, then MFJ-4416B protects from lower voltages. 7<sup>3</sup>/<sub>4</sub>Wx4Hx2<sup>1</sup>/<sub>8</sub>"D", 1.3 lbs.

**Battery Booster Remote Control**



**MFJ-4416BRC, \$84.95.**

Monitor output, turn on/off, low battery alert on/off, boost/low battery LEDs. Mount holes. Cat-5 cable connects booster. 5Wx2Dx3H inches.

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 mobile use, low voltage is caused in two ways:

**First.** Even low resistance DC wiring can result in a noticeable voltage drop. For a 100W 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 the car is off, battery voltage drops from around 13.8

## New! Deluxe Super Battery Booster



MFJ-4418  
**\$229<sup>95</sup>**  
 Ship Code A

Like MFJ-4416C but

has an on-board microprocessor to give more intelligent features and protection. Power switch allows load to be isolated from input, protecting from over current/voltage greater than 15V from boost supply or improper input. MFJ-4418 monitors input and will not

turn on if it is not greater than 10V and less than 14.5V. Programmable value enables or shuts down booster supply as needed. Allows auto operation without keying connections to the radio. Programmable electronic fuse allows protection in 1A steps 5-30A. Use fast blow 100 mS or slow blow 100-700 mS. Ignition *HoldOff*™ timer allows MFJ-4418 to continue to supply output for a programmable period even if ignition is off. Settings are software-driven via the USB port. 9<sup>1</sup>/<sub>2</sub>Wx3<sup>1</sup>/<sub>8</sub>Hx5<sup>1</sup>/<sub>4</sub>D".

## MFJ-4403 Transceiver Voltage Conditioner



MFJ-4403  
**\$129<sup>95</sup>**  
 Ship Code A

Provides

reverse, over-voltage, voltage transient and short circuit protection. Superb noise, ripple filtering and power supply buffering. If you accidentally reverse voltage, it protects against instant destruction and alerts with a warning LED. Once DC polarity

is corrected, MFJ-4402 recovers and operates normally. Heavy-duty *transient suppressor* handles peak current up to 200A. Protects from vehicle and poorly regulated supply voltage spikes. Four *Farads* of ultra high-value capacitors filters off virtually all noise and ripple. Provides power supply buffering so even underrated, marginal power supplies will run an HF transceiver to full capacity. *Powerpoles*™ used for DC input/output. 4Wx3Hx2D inches.

## MFJ Mobile Transceiver Protector



MFJ-4402  
**\$84<sup>95</sup>**  
 Ship Code A

Protects

rig from unseen operating problems found in vehicles. Built-in surge protection diode reduces chances of a high voltage spike due to alternator failure or jumping off from other vehicles. Reverse polarity protection. Sagging voltages on vehicle start-up can cause your radio to not power correctly, lose memory channels and corrupt service

and set-up menus in the radio. When the vehicle is 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 cuts your radio off if voltage gets too low for proper vehicle operation. Delay timer controlled off ignition sense line insures that your rig doesn't turn on until the vehicle starts and normal voltage is reached. *Power Poles*™ for high-current lines and bayonet lug to ignition sense line. Over-current/reverse protection. 2<sup>7</sup>/<sub>8</sub>Wx4Hx1<sup>1</sup>/<sub>2</sub>".

## MFJ Mobile Digital DC Voltage Monitors

Is the car battery giving proper voltages to power mobile rigs?



Low voltages distort signals and cause expensive rigs to reset or even shut down. Voltage monitors show car battery voltage at all times. Three 3/8" tall bright red LEDs are easily seen day/night. Plug into a cigarette lighter and monitor! Use 12V or 24V batteries, 8-30 VDC, accuracy is +/- 1.2 VDC. Built-in fuse.

**A. MFJ-4431, \$14.95.** Mounted display, adhesive, 2' wire, 2<sup>5</sup>/<sub>8</sub>Wx1<sup>3</sup>/<sub>8</sub>Hx5<sup>5</sup>/<sub>8</sub>D".

**B. MFJ-4432, \$14.95.** All-in-one plug/module, 1<sup>1</sup>/<sub>2</sub>Wx1Hx2<sup>3</sup>/<sub>4</sub>D".

**MFJ-4434, \$16.95.** 12VDC Cigarette Lighter Socket to red/black binding posts adaptor. Fused. 1.5Wx.75Hx4D inches.

## 4.5-30 VDC/30A Digital Volt/Amp Panel Meter with built-in Current Shunt



MFJ-4422  
**\$44<sup>95</sup>**  
 Ship Code A

Connect in-line to monitor voltage/current of mobile radio or accessories. Displays voltage and current simultaneously with .01 to .1V resolution. Dual .28" red/blue LED digits. Built-in current shunt, input/output *PowerPoles*™. Handles to 30A. Reverse polarity protection. 3Wx2Hx1D".

**MFJ-4421, \$11.95.** Snap-in Volt Panel Meter, 0-30 VDC. .56" digits. 1.9Wx1.1Hx.87D".

**Precision Wattmeter/Power Analyzer**



Displays Amps, Volts and Watts continuously from 4.8-60V. Measure current, peak current, power and peak power. *Power-Poles*™, backlit LCD display. 3.25Wx1.75H inches.

MFJ-4424  
**\$39<sup>95</sup>**  
 Ship Code A

# MightyLite™ 30A Meter Switching Power Supplies

## Super-Compact 5Wx2½Hx6D” with meter, adjustable voltage . . .



Amps or Volts as you wish to read them. **Excellent** 75% efficiency and extra low ripple and noise, <100 mV. Fan cools by convection and **forced** air.

**Normal** air-flow around power supply is continuous and a sensor increases the fan speed when the temperature rises above 70 degrees celsius.

**Features** over-voltage and over-current protection systems and has a quiet internal cooling fan with “fan on” LED.

**5-way** binding posts on back panel for output. Use with HF/VHF/UHF rigs.



MFJ-4230MV  
**\$94.95**  
Ship Code B  
**World's smallest** switching supply is an incredible value! Has an Amp/Volt meter and adjustable voltage.

Back of MFJ-4230MV supply is an incredible value! Has an Amp/Volt meter and adjustable voltage.

**Just** 5Wx2½Hx6D”, it weighs only 3 lbs. -- the perfect *pack-n-go* power supply for field day, DXpeditions, camping, hiking, business or vacation.

**Gives** 25 Amps continuously or 30A surge at 13.8 VDC. Voltage is front-panel adjustable 4-16 V. **Selectable** input voltage: 120/240 VAC @47-63 Hz.

**Simple** front-panel push-button switch lets you choose either Ampmeter or Voltmeter -- allows you to select

MFJ-4230MVP  
**\$104.95**  
with PowerPoles®  
Ship Code B



MFJ-4230MVP,  
**\$104.95.**

Like MFJ-4230MV, but adds a pair of **PowerPoles™** on back of the unit. Convenient five-way binding posts are on the front.



**MFJ-4230DMP, \$149.95.**

Like

MFJ-4230-MVP but has bright orange digital LCD display that shows Amps and Voltage simultaneously on a backlit screen. Binding posts on front, **Power Poles®** on back of unit.



MFJ-4230MPF,  
**\$99.95.**

Like MFJ-4230MVP but **PowerPoles®** are installed on the front panel, binding posts on back.



### MightyLite™ 28 Amp Switching Power Supply



MFJ-4128  
**\$89.95**  
Ship Code B

**Power** HF, VHF,

or UHF rigs with an output of 28 Amps max and 25 Amps continuously at 13.8 VDC.

**Five** way binding posts for high cur-

rent rigs, quick connects for low current accessories. Low 7A cigarette lighter plug is perfect for small accessories.

**Super** lightweight 4 lbs. Sleek 7Wx2¼Hx7½D”. Features over-voltage, over-current protection systems and has a quiet internal cooling fan with “fan on” LED. Selectable AC input voltage 85-135 VAC or from 170-260 VAC.

### MFJ Portable Variable Power Supply

**Portable** size fits in any toolbox, 3Wx4Hx1D”. Light, so carry it anywhere. Fixed 5 VDC output with a variable 1.5-12 VDC output. Total is 500 mA. Output terminals/ground are 5-way binding posts. Voltage setting, input 110 VAC.



MFJ-4105  
**\$109.95**  
Ship Code A

#### HF Power Cords



**A. MFJ-5535, \$16.95.** 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, \$21.95.** Same as MFJ-5535 but with **Anderson PowerPoles®**.

**C. MFJ-5535C, \$21.95.** Same as MFJ-5535 HF power cord but has cigarette lighter plug. No fuse/holder.

**D. MFJ-5538, \$21.95.** 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, \$29.95.** Same as MFJ-5538 but with **Anderson Powerpoles™**.

**F. MFJ-5538C, \$29.95.** Same as MFJ-5538 but with Cigarette lighter plug.

#### VHF/UHF Power Cords



**A. MFJ-5512, \$14.95.** Two *super-flex*, 14 ga., 15' multi-strand, soft wires. *In-line* fuse/holder. T-connector. Yaesu, Icom, Kenwood, Alinco.

**B. MFJ-5512M, \$19.95.** Same as MFJ-5512 but with **Anderson Powerpoles™**.

**C. MFJ-5515C, \$16.95.** VHF/UHF power cable. Cigarette lighter for car, T-connector for rig. Built-in 20A fuse, 3 feet.

**D. MFJ-5515M, \$21.95.** Lighter plug & **PowerPoles™**. Auto DC ou. 20A fused, 2-flex 12 ga. multi-strand, soft wires, 3'.

#### DC Accessory Cables

**1. MFJ-5510C, \$12.95.** Lighter plug w/2.1 mm coaxial. Power 12VDC accessories. 3A fused, 3 foot.

**2. MFJ-5510M, \$16.95.** Lighter plug to **Anderson Power Poles™**, 3A fused, 3'.

**3. MFJ-5511M, \$21.95** like #2, 30A, 5'.

**4. MFJ-5513M, \$5.95.** 2.1 mm, and **PowerPoles™**, DC output, 12VDC.

**5. MFJ-5513, \$2.95.** 3 foot, 2.1 mm pigtail powers most popular MFJ keyers, tuners, analyzers, and accessories.

#### PowerPole® Adaptor Cables



**PowerPole®** cables are *super-flex*, 12 ga. multi-strand soft red/black zip cord.

**A. MFJ-5514M, \$14.95.** #10 ring lugs to **PowerPoles®** connect to power supply binding posts. No shorting out. 35 A, 3'.

**B. MFJ-5541M, \$16.95.** Red/black bananas to **PowerPoles®**, 15A, 3 feet.

**C. MFJ-5542M, \$17.95.** Dual binding post to **PowerPole®** adaptor. Fits standard 11/16” post spacing. 30A, 3 feet.

**D. MFJ-5544M, \$16.95.** **PowerPole** to **PowerPole®** extension cable, 35A, 3'.

**E. MFJ-5543M, \$11.95.** **Powerpole®** cable with pre-tinned wires. 35A, 3 feet.

#### PowerPoles® with 30A/45A contacts

MFJ-11C06, \$7.95. 6 pair, 30 Amps.

MFJ-11D06, \$9.95. 6 pair, 45 Amps.

MFJ-11C12, \$14.95. 6 pair, 30 Amps.

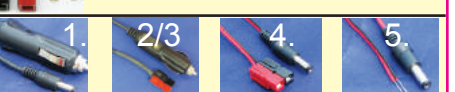
MFJ-11D12, \$19.95. 12 pr, 45A.

MFJ-11C25, \$25.95. 25 pair. 30 Amps.

MFJ-11C100, \$109.95. 100 pr. 30A.

MFJ-7602, \$19.95.

Tool for crimping **PowerPoles®**.



# MFJ Switching Power Supplies

**MFJ**

**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 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. Our 25 Amp *Mighty-Lite™* is 3.7 lbs. -- 5 times lighter than conventional power supplies. Compact 5 1/4"Wx4 1/2"Hx6"D". Our 45A is 8 times lighter, 5.5 lbs! Just 7 1/2"Wx4 3/4"Hx9"D".

**No RF hash!**

Your buddies won't hear any hash on your signal! None in your receiver either! Some competing switching 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 25/45 amp full load. Load regulation is better than 1.5% under full load.

**Fully Protected**

You won't burn up our power supplies! Fully protected with Over Voltage and Over Current protection circuits.

## 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, cigarette socket.

5-way binding posts for high current radio connects and a pair of speaker 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

## Ultra-Compact 0-24 VDC Switching Power Supply



MFJ-4218MV  
**\$104<sup>95</sup>**  
0-24 VDC  
Ship Code B

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 0-24 VDC.

24 VDC output setting lets you power your marine radio and accessories. Voltage adjustment control can easily set voltage at 13.8 VDC.

Large lighted dual meters continue monitoring output voltage and current.

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. 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  
**\$104<sup>95</sup>**

Ship Code B

MFJ-4245MV  
45 Amp, LED lighted  
**\$159<sup>95</sup>**

Ship Code C

**Worldwide Versatility**

*MightyLites™* can be used anywhere in the world! Switchable AC input voltages. Work from 85 to 135 VAC or 170 to 260 VAC. Replaceable fuse.

**MightyLites™ . . . Mighty Features**

Front-panel voltage control 9-15 Volts DC. Highly regulated voltage output.

Easy access front-panel, 5-way binding posts for heavy duty use and lighter socket for accessories. MFJ-4245MV has 2 sets quick-connects on rear.

Large 3-inch dual meters are illuminated to make it easy to monitor load voltage/current. Whisper quiet internal

**NO RF HASH!**



Now with LED lights!

MFJ's Exclusive HashFILTER™ Filtering System eliminates RF hash that plagues other manufacturer's switching power supplies.

fan cools your power supply for long life.

**New models with PowerPoles®**

MFJ-4225MVP, \$119.95

MFJ-4245MVP, \$174.95

About MFJ-4225MV, QST (Jan 2000) said, "its external control for varying the voltage is very handy for the test bench," and "overall, noise generated by this supply is very low".

MFJ-4125  
**\$89<sup>95</sup>**

Ship Code B

**NO RF HASH!**

MFJ-4125P  
with 2-pair Anderson  
PowerPole® connectors

**\$99<sup>95</sup>**

Ship Code B



## Ultra-Compact 15 Amp Switching Power Supply



MFJ-4115  
**\$74<sup>95</sup>**

Ship Code A

Super-compact, perfect for traveling on vacations, camping or business trips -- weighs 1.5 lbs. 3 3/4"Wx2 1/4"Hx7 3/4"D".

Tiny supply will 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.

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.

Features one set of 5-way binding post 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.

keep components cool.

Switchable AC input voltage. 110 VAC @47-62 Hz, 220 VAC @47-63 Hz.

Super regulation. AC input versatility allows 85-135 VAC or 170-260 VAC.

Weighs 3.5 lbs. An unbelievable 5 1/2"Wx2 1/2"Hx5 3/4"D"-- it's the smallest and lightest power supply in ham radio!

MFJ-4125P Like above. Adds 2-pair of Anderson PowerPoles™.

## MightyLite™ 15 Amp Switching Power Supply

MFJ-4215MV  
**\$74<sup>95</sup>**

Ship Code B

Power your VHF/UHF

mobile radio with 13 Amps continuous and 15 Amps surge. Variable voltage control from 4.0-16 Volts with 1% voltage regulation. It has less than 9 mV peak-to-peak ripple at the rated load.

Exclusive HashSQUASH™ Filtering System eliminates RF hash that plagues other manufacturer's supplies.

Easy-access front panel has 5-way binding posts, cigarette lighter socket and Voltage Adjustment. 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. Just 2.9 lbs., 5Wx3 3/4"Hx7D inches.



# 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  
**\$274<sup>95</sup>**  
 Ship Code D

With Anderson PowerPoles™!

Heavy duty 75 Amp switching power supply is excellent for powering your HF mobile amplifier or your HF and VHF/UHF rigs and accessories.

Great for Ameritron's ALS-500M Solid State Mobile HF Amplifier and others with a power requirement of up to 75 Amps.

MFJ-4275MV delivers 75 amps maximum and 70 amps continuously without even flexing its muscles. Input selec-

table voltage 110 VAC or 220 VAC.

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 4.0-16 VDC. Front-panel meters with backlight monitor voltage/current simultaneously.

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.

MFJ's Exclusive HashFilters™ Filtering System eliminates RF hash that plagues other manufacturer's switching power supplies.

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 a compact 9 3/4"Wx5 1/2"Hx9 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 75 Amp switching power 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!

Features switchable AC input 90-125 or 200-240 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



MFJ-4235MV  
**\$139<sup>95</sup>**  
 Ship Code C

simultaneously. Has power on and Fault LED indicator for quick warning sign of any trouble that might come your way.

Output connectors feature one pair 5-way binding posts for your rig, a low amperage cigarette lighter socket and quick connect terminals for 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, camping or business trips.

Measures 7Wx4 1/4x8 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 . . .

Heavy duty power supply is excellent for powering your rig/accessories.

Massive 19.2 lb. 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.

Adjustable voltage 1-14 VDC with detent set at 13.8 VDC. Front-panel meters monitor voltage/current.

3 sets output terminals include pair of 5-way binding posts for HF/VHF rigs.

Two pair quick-connects for accessories, covered cigarette lighter socket is used for your mobile accessories.

Panel fuse holder. Fan speed

MFJ-4035MV  
**\$159<sup>95</sup>**  
 Ship Code F

increases as load increases -- keeps cool.



Measures 9 1/2"Wx6Hx9 3/4"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	\$17.95	100-240 VAC	13.8 VDC	500 mA*
B	MFJ-1312DX	\$17.95	230 VAC	12 VDC	500 mA
C	MFJ-1316	\$24.95	120 VAC	12 VDC	1.5 Amp
D	MFJ-1318	\$34.95	120 VAC	16 VDC	500 mA
E	MFJ-1317	\$39.95	100-240 VAC	13.8 VDC	2.9 Amp*
F	407-1072	\$17.95	120 VAC	12 VAC	1 Amp
B	407-1072X	\$17.95	230 VAC	12 VAC	1 Amp
G	407-1075	\$24.95	120 VAC	16 VAC	1 Amp
H	407-1109	\$34.95	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!

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-422E  
\$209<sup>95</sup>  
Ship Code B



tight cabinet. 9 volt battery or 110 VAC with optional MFJ-1312D, \$17.95.

MFJ-422EX  
\$129<sup>95</sup>  
Ship Code A



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 MFJ-564/B.

Paddles to use with MFJ-422E/422EX: MFJ-564 Black or Chrome, \$99.95 (see page 42).

MFJ's most popular keyer is small but big in features! You get 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 or semi-auto/tune modes.

Keys solid state or tube transmitters. Fully shielded, RF

## MFJ Curtis Iambic Keyer has Dot, Dash Memory



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 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. Lets you send characters such as C, K, and R with a single squeeze. Turns an inexperienced fist into a professional.

Use *automatic* mode with single or dual paddle. You automatically generate dots and dashes by pressing the paddle.

Switch into a *semi-automatic "bug"* mode to generate dots automatically and dashes manually. Or 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.

### MFJ Nano-size Keyer/Paddle Combination



MFJ-402  
\$74<sup>95</sup>  
Ship Code A

Ham radio's tiniest electronic keyer has a built-in iambic paddle! It's just 2x3x1", weighs 3 1/2 oz! Fully-enclosed paddle has a "bug" feel for smooth CW.

Precision formed, resilient phosphorous bronze. It's easy-to-use. Just set one button. Send one letter to change keyer settings -- speed 5-65 WPM, weight 25%-75%, iambic mode A/B, normal/"bug" mode, reverse.

Screwdriver adjustment for easy speed change. Tune mode for tuning antenna tuner or transmitter. RF proof. 4 ft. 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.

Select Type A or B keying to match your sending style. Weight control lets you adjust dot-dash space ratio to make your signal sound distinctive to bust 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/tube transmitters. Use 9V battery or 110 VAC with MFJ-1312D, \$17.95. Black cabinet, 5 3/4 x 1 3/4 x 4 3/4".

### MFJ/Curtis ECONO Keyer™

MFJ-401E is like MFJ-407E except weight and tone are adjusted internally, doesn't have tune switch.

MFJ-401E  
\$84<sup>95</sup>  
Ship Code A



Use 9 volt battery or 110 VAC with MFJ-1312D, \$17.95. 4x1 3/4 x 3 1/4 inches.

Build Your Own Keyer with this Curtis Chip Revolutionary Curtis Chip. Choose 28 pin skinny DIP or SMT SOIC package. MFJ-8045ABM, \$31.95.



### Pre-Wired Keyer to Rig Cables

MFJ-5164, \$14.95. Keyer to radio keying cable. Phono on keyer end fits MFJ keyers and 3.5 mm with 1/4" phone adaptor fits most transceivers.

### Pocket Travel Keyer has Built-in Paddle



MFJ-403P  
\$84<sup>95</sup>  
Ship Code A

Full-featured CW keyer has a built-in iambic paddle. Ultra-compact 3 3/4 W x 1 H x 2 1/4 D" is perfect

for traveling or home use with QRP. Put it in your briefcase along with an 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 3-60 WPM. Pitch adjustable 300-1000 Hz. Weight adjustable 25% to 75%. Tune mode, RF proof, Battery Saver. Select iambic mode A/B, fully auto or semi-auto "bug" mode. Use 9 Volt battery, not included. Direct output keys solid state.

MFJ-403, \$64.95. MFJ CW Travel Keyer only.

### MFJ Miniature Iambic Paddle



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 keyers. Great for any QRP or QRO rig! The paddle is precision formed from special phosphorous bronze spring material with an A150 temper. 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-561  
\$29<sup>95</sup>  
Ship Code A

MFJ-561K, \$21.95. Build your own! MFJ iambic paddle kit with instructions, cord, hardware needed to build your paddle.

### CWMorse Micro Telegraph Keys



MFJ-566M  
\$31<sup>95</sup>  
Black with Metal Base

Ship Code A

MFJ-566P  
\$24<sup>95</sup>  
Black plastic



MFJ-566M is a Red/Black Micro Morse Code Key with an aluminum base. It has liquid smooth and shielded steel ball bearings, a hardened steel pin rotation and stainless steel screws. It has solder connections and solid brass contacts. Includes 3/8" thick aluminum base and micro-grip feet.

MFJ-566P is all black, like MFJ-566M but on a black plastic base with micro-grip feet.

# MFJ Millenium™ CW Memory Keyer

**MFJ-495** combines latest millenium 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 let you set all keyer functions with easy push buttons. Keyer functions also are changed from paddle, keyboard or computer. LCD shows messages as it's sent from memory or live from your paddle, keyboard or computer.

**32-message** memories of 256 characters each. Repeat messages continuously, insert timed pauses within messages, insert auto-incrementing serial number, messages call other messages, insert embedded commands to change speed, weight, automatically.

## Menu Memory Keyer/Bencher Paddle

**MFJ Menu Driven Memory Keyers™** are the easiest to operate. No keypad, no complex sequence, nothing to remember. Select a menu by pressing a button. LED lights indicate what is active. Menu is clearly printed on top panel. Save and play messages, decrement serials, set speed, weight, sidetone, lambic, semi-auto, handkey, message queue, paddle command modes, turn sidetone on/off, transmitter tune, and set keying output on/off. lambic A/B, reverse, Morse trainer, and store serial number for contests. Bypass function, tells status in CW. Adjust speed, 5-100 wpm. Farnsworth or normal mode.

**Contest** serial numbering (0-9999) with auto-increment,



**MFJ-495**  
\$184<sup>95</sup>  
Ship Code B  
**Supports**  
direct and  
grid-block.

Port for optional remote control. PTT output, speaker, sinewave sidetone.

### Features include:

**lambic** keyer with dot/dash memories; auto, semi or hand-key mode.

**Keyboard** uses any AT keyboard for type ahead buffer. All commands and memories are keyboard controlled.

**Message** editing capability.

**Input** queue stored multiple messages.

**Auto-incrementing** contest serial numbering from 001 to 9999.

**Digital/linear** analog speed control from 5 to 99 wpm (3:1 to 20:1 speed range)

**Farnsworth**, speed from 10 to 99 wpm  
**Ultra** speed messages up to 990 wpm  
**Adjustable** weight 25% to 75%  
**Adjustable** sidetone from 300-1000 Hz  
**Keying** output delay up to 20 ms  
**Push-to-talk** (PTT) hang time to 5 sec.  
**Direct** (pos.) or grid-block (neg.) keying  
**Timed** tune for XMTR adjustment  
**Timed** pauses, messages loops  
**Internal** speaker, adjustable volume  
**Supports** Qwerty/Dvorak keyboards  
**190 characters** type-ahead keyboard buffer with low buffer warning  
**Dual** user mode. 6 1/4"Wx2 1/2"Hx6 1/4"D". 12 VDC or 110 VAC. **MFJ-1312D, \$17.95.**

### RFI-Suppressed Keyboard

**MFJ-551, \$39.95.** RFI suppressed key-

board. **Remote Control Unit**

**MFJ-70, \$34.95.** Full function wired remote control for MFJ-495.

## Super Menu Driven Memory Keyer

sidetone, speaker, volume control, adjust 300-3000 Hz tone.

Auto, semi-auto, bug or

handkey modes, reverse dot/dash paddles, weight 5-95%, compensates radio distortion, key direct or grid-block. MARS characters.

**Memory Keyer™** has 192 character (8K) memories divided into 4 soft sectors. 9V battery (not included) or 110 VAC with **MFJ-1312D, \$17.95.** Memories backed up by lithium battery.

**MFJ-490E, \$264.95,** Memory Keyer/lambic paddle combination, 5X3X5 1/2 in. **MFJ-490EX, \$169.95,** is the keyer only.

**MFJ-492, \$119.95,** stand alone keyer, 6 1/2 X 2 1/2 X 6 3/4 inches.

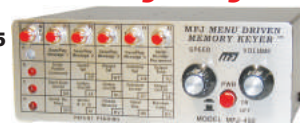
**MFJ-492X, \$134.95** (MFJ-492 with 8K memory installed),

**MFJ-80, \$21.95,** (8K additional memory for MFJ-492 only).

**MFJ-78, \$34.95,** full function wired remote control.



**MFJ-490E**  
\$264<sup>95</sup>  
Ship Code B



**MFJ-492**  
\$129<sup>95</sup>  
Ship Code B

## MFJ Deluxe Code Practice Oscillator & key



**MFJ-557**  
\$44<sup>95</sup>  
Ship Code B



**MFJ-550**  
Telegraph key only  
\$16<sup>95</sup>  
Ship Code A

**Deluxe Code Practice Oscillator** is a Morse straight key on a non-skid heavy steel base -- stays put and doesn't move around while sending.

**Practice** sending code at home, work, in your car -- anywhere. Volume adjusts barely audible to full sound.

**Practice** without bothering anyone. **Tone** control for wide adjustment, from high "squeaky" to low "booming" tones. Earphone jack.

**Use** external speaker (**MFJ-281, \$13.95**) for high classroom volume.

**Uses** 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 MFJ-550 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

**Deluxe Wood Base** Telegraph features a Morse Code straight key on a non-skid, beautifully stained wood base. A Steel under-plateing makes it stay put on your table,

doesn't move around while sending! Designed by KA5MAN, this key lets you send code at home, work, riding in your car -- practically anywhere. Pre-wired 3' cable with 3.5 mm plug. Hook-up the key to your rig and go on-the-air sounding like you were born for CW! A handsome addition to any shack.



**MFJ-553**  
\$34<sup>95</sup>  
Ship Code A

## Micro CW Telegraph Keys



**MFJ-566M**  
\$31<sup>95</sup>  
Black with Metal Base  
Ship Code A

**MFJ-566M** is red and black on a 3/8" thick aluminum base. Liquid smooth, shielded steel ball bearings,

hardened steel pin rotation, stainless steel screws. Solder connections, solid brass contacts, micro-grip feet.

**New!**



**MFJ-566P**  
\$24<sup>95</sup>  
Black plastic

**MFJ-566P** Like MFJ-566M but on a black plastic base.

## Classroom Code Oscillator

**World's** finest code practice oscillator is for demanding classroom use. Gives a true pure *sinewave* sidetone with no trace of harsh keyclicks. Hear the clearest, sweetest sounding CW you have ever heard. Delivers 1W into built-in 3" speaker -- fills entire room. Low distortion -- < .2% total harmonic distortion from its BTL (Bridge-Tied-Load) amplifier. Volume control, 400-1000 Hz tone, on/off switch, power LED, 'A' key jack, 3.5 mm speaker jack, use 12 VDC. 4 3/4 X 1 1/2 X 5 in.

**MFJ-554X, \$129.95.** Includes MFJ-554, MFJ-281 and MFJ-550.

**MFJ-554**  
\$109<sup>95</sup>  
Ship Code A



## Classroom Morse Code Tutor

**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.

**MFJ-414**  
\$234<sup>95</sup>  
Ship Code B





# 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 . . .

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 QSOs from all over the world. It's a universal language that's understood the world over.

## Automatic Speed Tracking

**AutoTrak™** automatically locks on, tracks, displays CW speed to 99 WPM.

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 entire line is displayed on top until bottom refills -- makes reading text easy! Auto 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.

## MFJ Instant Replay

140 characters can be instantly replayed. Re-read or check copy if

MFJ-461  
**\$99<sup>95</sup>**  
 Ship Code A



you're copying along side MFJ-461.

## High-Contrast LCD Display

2-line LCD display shows 32 1/4 inch high-contrast characters.

## High Performance Modem

Consistently get solid copy from MFJ's high performance PLL (phase-lock 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

Serial port lets you display CW text full screen on a computer monitor -- use computer port, terminal program.

## More Features

When it's too noisy for its mic pick-up, connect it to your radio with a cable.

Battery saving feature puts MFJ-461 to sleep during inactivity. It wakes up and decodes when it hears CW.

Uses 9 Volt battery (not included).

## True Pocket Size

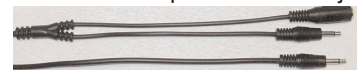
Fits in your shirt pocket with room to spare -- smaller than a pack of cigarettes. MFJ-461 is a tiny 2 1/4"Wx3 1/4"Hx1D inches. 5 1/2 ounces.

## Accessories

**MFJ-26B, \$11.95.** Soft leather protective pouch for MFJ-461. Clear plastic overlay for display, push button opening, strong, durable pocket or belt clip secures MFJ-461 to your person.

**MFJ-5161, \$17.95.** MFJ-461 to computer serial port cable (DB-9).

**MFJ-5162, \$9.95.** Connects MFJ-461 to radio external speaker 3.5 mm jack.



**MFJ-5163, \$14.95.** 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. Learned sets are combined with new sets to reinforce all you have learned.

Practice copying, then instantly replay to check copy on the LCD.

## Custom Character Sets

Having trouble with certain characters? Build and save 3 custom sets of 16 characters for practice -- exclusive.

Practice copying realistic on-the-air style plain English QSOs. Get ready to pass your FCC test and upgrade. Also builds confidence that first real contact.

## MFJ Word Recognition Mode™

MFJ's Word Recognition Mode™ gives hundreds of common 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, prosigns, random call signs, words, QSOs or combo sets -- 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 -- for beginners!

Select normal/Farnsworth spacing.

MFJ-418  
**\$99<sup>95</sup>**  
 Ship Code A



Farnsworth makes it easier to learn entire words. Stop counting individual dots and dashes that slows learning! Adjusts 10 to 60 WPM.

Use fixed length or realistic random length groups (up to 8 characters).

Change speed on-the-fly while playing a session 3 to 60 words-per-minute.

## SettingSaver™

Settings automatically saved, ready to use next time -- turn on and replay.

Check copy, select from menus and program characters, words on 2-line LCD with 32 huge 1/4" high-contrast

characters -- a powerful learning tool!

Only MFJ gives you SilkySmooth Sidetone™ with TruTone™ sinewave and SoftStart™ dots/dashes -- concentrate on learning without distracting, harsh keyclicks. Use earphones for privacy or built-in speaker. Volume control. Variable pitch 300-1000 Hz.

Fits in your shirt pocket -- smaller than a pack of cigarettes. Tiny 2 1/4"x3 3/4" x1 in., weighs less than 5 1/2 ounces. Uses 9 volt battery (not included).

Tapes play tsame boring stuff over and over. Unlike tapes, you'll never memorize MFJ's random sessions.

## Pocket Tutor Accessories

**MFJ-26B, \$11.95.** Soft leather protection for MFJ-418 with pocket/belt clip.

**MFJ-281,**

**\$13.95.**

Speaker for group practice. Loud, powerful audio! 3 3/4"x3x2 1/4 inches.

## More MFJ Morse Tutors

**MFJ-417, \$74.95.**

Similar to MFJ-418, but no LCD. Most software features.

**MFJ-413, \$54.95.** Similar to MFJ-417, less random words, QSOs, SettingSaver™.

# Morse Code Reader has Built-in Memory Keyer

**Is your CW rusty? Relax...** Use this MFJ Morse Code Reader and built-in keyer. Watch CW turn into solid text messages as they scroll across an easy-to-read LCD. Working high speed CW is 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 pass a code test!

**MFJ-464** gives everything you need for an ultimate CW Station: sends and reads 5-99 WPM . . . Auto speed tracking . . . Large 2-line LCD shows send/receive messages . . . single or iambic paddle or keyboard operation . . . 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™** auto locks on, tracks and displays CW to 99 wpm. Simply plug in MFJ-464 to your receiver speaker until lock LED flashes in time with the CW.

### High performance modem

**Consistently** get solid copy from a high performance PLL (phaselock loop) modem. Digs out weak signals. Even tracks slightly drifting signals. Nothing can clean up a sloppy fist, especially in weak signals with lots of QRM/QRN.

### Built-in keyer features

**MFJ-464** combines latest millenium microprocessor technology with non-volatile EEPROM memory for a full featured, low cost, high reliability design. Send CW, load messages using a paddle, keyboard or computer serial port.

**Easy-to-use** menus and LCD display let you set all keyer functions merely by push buttons. Keyer functions can also be changed from keyboard or computer.

**The LCD** also shows the message as it's being sent from memory or live from your paddle, keyboard or computer.

**It has 4 message memories** of 256 characters each. Repeat messages continuously, insert timed pauses within messages, insert an auto-incrementing serial number, have messages call other messages or embed commands to change speed, weight, automatically.

### Sinewave Sidetone . . . More!

**Supports** Direct keying output. Has



MFJ-464

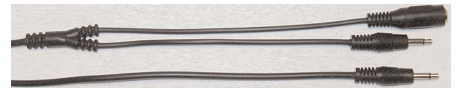
**\$219<sup>95</sup>**

Ship Code B

(Keyboard, paddle not included)



### MFJ-464 Accessories



**MFJ-5161, \$17.95.** MFJ-464 to computer serial port cable (DB-9).

**MFJ-5162, \$9.95.** Connects MFJ-464 to radio's external speaker 3.5 mm jack.

**MFJ-5163, \$14.95.** Connects MFJ-464 and another accessory to your radio speaker.

**MFJ-5164, \$14.95.** 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, \$29.95.**

**RFI suppressed keyboard,** a must for ham operators to avoid RFI problems in the shack when operating high speed CW keyboard mode.

PTT output, built-in speaker, sinewave sidetone, more! Iambic keyer with dot/dash memories; auto, 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, speed 10-99 wpm.

**Ultra** speed sets 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 adjust.

**Timed** pauses in messages.

**Internal** speaker, 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** metal case, 6 1/4"Wx2 1/2"Hx6 1/4"D". 12VDC/110VAC, MFJ-1312D, \$15<sup>95</sup>.

## MFJ Deluxe Iambic Paddles



MFJ-564 Chrome

MFJ-564/B  
**\$99<sup>95</sup>**

Ship Code B

**Deluxe** iambic paddles feature full range adjustments in tension contact spacing, self-

adjusting nylon and steel bearings, contact points that never need cleaning, precision machined frame, non-skid feet, heavy base. Use with MFJ-422E/490E/X.



MFJ-564B Black

**MFJ-5166, \$14.95.** 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.

## Super CW Keyboard -- No Computer Required!



MFJ-452  
**\$169<sup>95</sup>**  
Ship Code B

MFJ-452X  
**\$139<sup>95</sup>**  
Ship Code A  
No Keyboard

**Super CW Keyboard** lets you send effortless CW as soon as you turn it on -- no computer boot, no program to load -- just start typing.

### Standalone MFJ CW

Keyboard includes an RFI suppressed keyboard, a two line 16 character LCD display, eight 250 character nonvolatile 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, \$17.95.

### MFJ-452X, No keyboard.

Use **MFJ-5164, \$14.95,** 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 MFJ-451X  
**\$139<sup>95</sup> \$119<sup>95</sup>**  
Ship Code B Ship Code A  
No Keyboard

# Save Your Voice with the MFJ Contest Voice Keyer

Use 8-pin modular or 8-pin round microphone plug!

MFJ Contest Voice Keyer™ calls CQ, send calls and makes contest exchanges for you in your natural voice!

**Store** frequently used phrases like "CQ Contest this is AA5MT", "You're 59" . . . "QTH is Mississippi". Contest pressing buttons, save your voice.

**Record** and play back five natural messages in 75 seconds. EEPROM technology keeps them stored for up to 100 years -- no battery backup needed.

**Repeat** messages continuously, vary repeat delay 3-500 seconds. It's a great voice beacon and calling CQ is so easy. Receive audio jack for record and play back off-the-air signals -- great help if you didn't get it right the first time!

A playing message can be halted by pressing Stop, your PTT mic button



or by your VOX PTT line. A closure to ground via remote control or computer also halts messages.

**Remote** jack for computer control (using CT, NA, TR or other program). Lets you select, play, cancel messages.

It is transparent to your mic -- your mic's characteristics do not change with MFJ-434B in line. Dual controls

MFJ-434B  
**\$219<sup>95</sup>**  
Ship Code B

tailor audio level to match your voice.

**Audio** lines RF filtered to eliminate RFI, feedback and distortion. Audio isolation Xformer eliminates hum/distortion caused by loops.

**Just** plug in an 8 pin mic cable and plug the MFJ cable into your rigs mic connector. Customize for Icom, Kenwood, Yaesu, Alinco or others. Use station/built-in mic for recording.

**Built-in** speaker lets you monitor stored messages. 3.5 mm speaker. Headphone jack. Use 9V battery, 9-15 VDC or 110 VAC with MFJ-1312D, \$17.95. 6 1/2"Wx2 1/2"Hx6 1/2"D inches.

**MFJ-73, \$39.95.** 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

**High-sensitivity** ceramic mic element (10.5" with FlexNeck™) bends and stretches to your a comfortable operating position. Fine mesh metal grill helps to eliminate background noise.

**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 built-in graphic equalizer with center frequencies of 270, 540, 1000, 2000 Hz. Best audio for FM mode and max efficiency for SSB.

**On-Air** indicator, volume control. Blinks on /off when receiving and will light up continuously when transmitting.

**Equipped** PTT momentary/lock switches: allow switching between long wound and fast two-sided QSOs.

**Frequency** up/down switches let you operate your rig at your microphone. 4 4Wx1 1/2"Hx6D". 11" flex-boom. Use 2 "AA".

**Output** meter adjusts output level, NOT to exceed 0 dB.

**Triple** radio socket makes it easy to install: Icom, Yaesu, Kenwood, etc. **See chart below.**

**Battery** check circuit shows level with power voltage.



MFJ-299  
**\$109<sup>95</sup>**  
Ship Code B

### MFJ-297 Desk Mic

For HF or VHF/UHF Transceivers

**Speech** frequency tailored mic cuts through noise/QRM. Switch for powerful SSB punch or full range broadcast quality FM/AM. **SibilantSoundShield™**, momentary/locking PTT switch, On-Air LED, frequency up/down button, output control.



MFJ-297  
**\$74<sup>95</sup>**  
Ship Code A

### GooseNeck™ Microphone Holder

- Heavy-duty metal base stays put!
- **GooseNeck™** for super flexibility - move mic where you want it!
- Tough, Durable plastic microphone clip holds tight! Turns your favorite microphone into a super attractive desktop mic!



MFJ-390  
**\$16<sup>95</sup>**  
Ship Code A

## MFJ Professional Boom-Mic Headphones

MFJ-393 I/K/Y  
**\$64<sup>95</sup>**  
Ship Code A

For Icom, Yaesu and Kenwood!

**Professional** grade Boom-Mic Headphone set for contesting, DXing, traffic nets.

Comfort designed leatherette padding lets you operate for hours at the rig.

**Superb** 3/4 inch padding on each ear and head. Super lightweight, you won't even know they're there!

**Headband** adjusts for perfect fit to keep out external noise. Frequency response enhanced to bring out speech fidelity you never knew existed. Signals never sounded so clear!

**Flexible** mic boom lets you position it comfortably, optimum distance minimizes sibilant sounds. Frequency tailored mic element busts through noise and QRM! Six foot cable.

**Casual** operators will appreciate the superbly crafted Boom-Mic headphones for hands-free operating and DXing at an incredibly low MFJ price.

**MFJ-393 I/K/Y, \$64.95.** With pre-wired adapter cable. **MFJ-393I** for 8-pin round Icom, **MFJ-393Y** for Yaesu 8-pin round, **MFJ-393K** for Kenwood 8-pin round. **MFJ-393MI** Icom modular, **MFJ-393MY** Yaesu, **MFJ-393MK** Kenwood. **MFJ-393, \$34.95.** Headphones only.



\$19 <sup>95</sup> ea	8 Pin Round HF Mic Plug			8 Pin Modular HF Mic Plug			8-pin Mod VHF/UHF Radios			
	MFJ Desk Mic	ICOM	Kenwood	YAESU	ICOM	Kenwood	YAESU	Icom/Kenw	Yaesu	Won/Pof/Any
MFJ-297	MFJ-5397I	MFJ-5397K	MFJ-5397Y	MFJ-5397MX	MFJ-5397MX	MFJ-5397MX	MFJ-5397MX	MFJ-5397MY	MFJ-5397MC	
MFJ-299	MFJ-5397I	MFJ-5397K	MFJ-5399Y 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

**Deluxe Hybrid Phone Patch** gives crisp, clear, hum-free audio. What phone patching is all about. Jumper selectable for Kenwood, Icom, Yaesu, Alinco rigs with 8 pin mic connectors.

**Use** VOX or push-to-talk. RF pi-filters and PC board eliminates RF feedback. VU meter monitors line levels preventing cross talk. Adjust null depth for maximum isolation between rig. Separate XMTR /receiver gain controls eliminate

MFJ-624E  
**\$169<sup>95</sup>**  
Ship Code B

readjusting after patching.

**Null** control, standard phone connection, RJ-11. Speaker jacks, audio in/audio out. 8x2x6". 12VDC, 9V battery or 110 VAC with **MFJ-1312D, \$17.95.**

**Includes** radio cables to connect with 8 pin round or 8 pin modular mics.



## MFJ PTT Foot Operated Switch

**Keeps** your hands free for logging, computer operation and tuning.

Reduces fatigue and improves efficiency -- the difference between winning or losing contests. Normally open switch. 2 1/2"Wx3 1/2"Dx1 1/4"H". Non-skid pad. 1/4 in. phone. 10 ft. cord.



MFJ-1709  
**\$21<sup>95</sup>**  
Ship Code A

# Switch any two Mics to any two Rigs

**MFJ-1263 Microphone Control Center** lets you mix and match any two microphones to any two radios.

**Mics** or rigs can have 8-pin round or 8-pin modular connectors. You don't have to change connectors or rewire -- just push buttons.

**Your microphones** will never become obsolete. You can use your favorite microphone with your present or new rig by pushing a button.

**Instantly** switch from hi-fi ragchewing mic to hard-hitting DX mic when needed. Plug in PTT foot switch (MFJ-1709, \$19.95) or let your computer or voice keyer (MFJ-434B, \$199.95) control the PTT line for contesting/DXing.

**Plug** in a boom mic/headset to save the day during noisy field day or multi-operator contesting. Plug in your headphones or external speaker.

**Headphone** volume control eliminates need to readjust your rig's volume when you switch the speaker on.



Headphones are always active. A push button turns the speaker on or off. **MFJ-1263**  
**\$129<sup>95</sup>**  
 Ship Code B

When you want to use your desk/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 or modular microphone jack. Internal jumpers configure the



**MFJ-1261, \$109.95.** Like MFJ-1263 but one mic input, two radio outputs. 1 MFJ-5398, MFJ-5397MX included. **MFJ-1261**  
**\$119<sup>95</sup>**  
 Code A



**MFJ-1260, \$99.95.** Like MFJ-1263 but two microphone inputs, one radio output. 1 MFJ-5398 and one MFJ-5397MX radio cable included. **MFJ-1260**  
**\$109<sup>95</sup>**  
 Code A

MFJ-1263 for your radio -- your mics never become obsolete! 6Wx1 1/2 Hx5D inches. Includes one MFJ-5398 and one MFJ-5397MX radio cables.

**ORDER Extra Radio Cables!**

**MFJ-1261/1260/1263 to transceiver cables, \$19.95.** Order MFJ-5398 for 8-Pin Round microphone; MFJ-5397MX for 8-Pin Modular microphone.

## MFJ Equalizer/Conditioner



**MFJ-655B**  
**\$239<sup>95</sup>**  
 Ship Code B **All-in-one** audio console gives ProAudio processing to make your audio professional.

**Gives** all the capabilities you'll ever need . . . 8-Band Equal-izer, 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 it. All they hear is your outstanding audio that brings unsolicited compliments.

MFJ uses Analog Device SSM2166 for 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.

**Included:** MFJ-5398 for 8-pin round and MFJ-5397MX for 8-pin modular.

**Use** 12 VDC or 110 VAC with MFJ-1312D, \$17.95. Compact, slim 10 3/4 Wx3 1/4 Hx5D 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**  
**\$34<sup>95</sup>**  
 Code A

**Example:** Use your Yaesu FT-2000 8-pin round microphone with an Icom rig. Or you got a modular soundcard interface, but now have an 8 pin round rig. Don't buy a new mic or accessory! Save money by using what you already have!

**Internal jumpers** set any microphone to match any transceiver. Supplied with one 8-pin round and one 8-pin modular output cable to transceiver.

## SpeechArticulator™ improves intelligibility



**MFJ-653**  
**\$159<sup>95</sup>**  
 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 to 16 dB. Remove low frequencies with little intelligence. Cutoffs: 1.1 kHz, 500 Hz.

### hamProAudio™ Equalizer/Conditioner



**MFJ-654**  
**\$219<sup>95</sup>**  
 Ship Code B **More compact** and has everything that MFJ-655B has except for the built-in VU meter. Measures 9Wx3 1/4 Hx5D inches.

**SSM-2166** broadcast speech IC syllabic compressor adjusts 15 to 1 ratio -- doubles RF power and low distortion.

**Highly** effective noise gate smoothly removes annoying noise picked up during speech pauses. Be heard and understood. Powerful, intelligible speech slices through DX clutter! 5Wx1 3/4 Hx4 3/4 D". Output cables included. MFJ-1312D, \$17.95 power cube.

### hamProAudio™ transmit audio Conditioner



**MFJ-651**  
**\$139<sup>95</sup>**  
 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 case. 9Wx2 1/4 Hx5D in.



**MFJ-640**  
**\$54<sup>95</sup>**  
 Ship Code A

**Combine** or select audio from 2 different receivers. Great for operating "split", DXing, or cross-band VHF/UHF satellite. Connect audio output of 2 receivers to 3.5mm audio connectors on back of unit. Plug in headphones and you're ready to go. 1/4" and 3.5mm stereo headphone jacks. 4 3/4 Wx2 1/8 Hx5D inches.

### hamProAudio™ transmit audio Equalizer



**MFJ-652**  
**\$139<sup>95</sup>**  
 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. 7 1/4 Wx2 1/4 Hx5D inches.

# MFJ Speech Intelligibility Enhancer

...makes barely understandable speech highly understandable!



MFJ-616  
**\$209<sup>95</sup>**  
 Ship Code B  
 overlapping octave ranges centered at 300, 600, 1200 and 2400 Hz.

If you don't have high frequency hearing loss, you'll still improve your ability to understand speech.

QST for April, 2001 said ... "expected subtle effect at best, but astonishingly results were clean, understandable speech without hissing, ringing, other strange effects..."

RFI immune. Phone jack, on/off speaker, 2 inputs, bypass switch. 10Wx2 1/2Hx6D". Needs 12 VDC.

MFJ-1316, \$24.95. For 110 VAC operation. Provides 12 VDC/1.5 Amps.

MFJ-72, \$69.95. MFJ-616/618 Accessory Pack. Phones, speakers and MFJ-1316 power supply. **Save \$7!**

**"What did you say?" Can you hear but . . . can't always understand?**

As we get older, high frequency hearing loss reduces our ability to understand speech. **Here's why . . .**

**Research** shows nearly half speech intelligibility is in 1000-4000 Hz, but contains a miniscule 4% of speech energy. However, low frequencies, 125-500 Hz have most speech energy 55% but contribute little to intelligibility, 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.

MFJ splits the audio band into 4

Boost/cut each nearly 20 dB. **Balance** control and separate 2 1/2 Watt amplifiers equalize perceived loudness to each ear -- both ears help.

By boosting high and cutting low frequencies and adjusting the balanced control, barely understood speech becomes highly understandable!

## Dual Channel Speech Intelligibility Enhancer

MFJ-618 has all of the features of MFJ-616 and gives you separately adjustable frequency channels for left and right ears.

Lets you compensate for deficiencies in hearing that may be different for each ear. By equalizing the frequency response of both ears, you vastly improve speech intelligibility.

**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. 10Wx3Hx 6D". 12VDC or 110 VAC with MFJ-1316, \$24.95.



## MFJ ClearTone™: Our most Popular Speaker



MFJ-281  
**\$13<sup>95</sup>**  
 Ship Code A

Bring out speech fidelity that you never knew existed. Restore the smooth sound of sinewaves

that CW naturally generates and make it easy to understand and copy.

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-inch 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 has a powerful booming sound!

## MFJ CyberEAR™!



MFJ-388  
**\$11<sup>95</sup>**  
 Ship Code A

Tiny but powerful MFJ CyberEar™ plugs in and loops over ear

to capture and amplify sounds by 12 dB! Extends hearing range, helps you hear every word at hamfests, club talks -- even on the back row! Great for eyeball QSOs. Volume control, on/off. Left or right ear. 3 washable ear plugs. Flesh color is hardly noticeable. Weighs 10 grams with battery! Includes batteries. 30 day money back if not absolutely delighted.

**Super CyberEAR™**

Hear everything! Capture and amplify sounds up to 50 dB! Left or right ear plugs, volume control, extremely small.



MFJ-389  
**\$11<sup>95</sup>**  
 Ship Code A

## MFJ Amplified Mobile Speaker

MFJ-383 is perfect for the rigorous mobile environment.

You get great clarity and clear tones on CW and SSB.

MFJ-383 has an excellent swivel mounting bracket! It also has a fused plug for a cigarette lighter socket on the base power supply.

Large 2 3/4" speaker has a 3-inch fine metal mesh grill that helps reduce undesirable noise, static, and hum.

You get 6 Watts output, 8 Ohms impedance. 8' cord, 3.5 mm mono jack with 13' cord, on/off power, gain control.

Requires 12 VDC at 2A for max volume, max 1W audio source. Compact 4 3/4Wx3 1/2Hx1 3/4 inches.



MFJ-383  
**\$34<sup>95</sup>**  
 Ship Code A

## MFJ Compact Mobile Speaker

Enjoy superb audio with this economical mobile speaker. Matches 8/4 Ohm impedances. 3 Watts. 30" cord, tiny 2 1/2x2x3". Tough ABS plastic cabinet built-to-last.



MFJ-280  
**\$21<sup>95</sup>**  
 Ship Code A

## MFJ Amplified ClearTone™ Speaker



MFJ-382  
**\$44<sup>95</sup>**  
 Ship Code A

This MFJ ClearTone™ communication speaker is an excellent 1-watt amplified base station or mobile speaker. It has great clarity and clear tones on CW and SSB.

MFJ-383 gives a superb, loud and powerful ClearTone™ audio. The speaker baffle is a whopping three inches in diameter. Great for classroom use!

The volume is adjustable from barely audible to high classroom booming volume. It is mounted in a sturdy, compact metal cabinet with no-skid rubber feet. Compact 3 1/2x1 3/4x4 1/2 inches fits anywhere.

Use 9V battery or 110 VAC with optional MFJ-1312D, \$17.95.

# MFJ Noise-Canceling Filters Wipe Out Interference

MFJ-1026  
**\$219<sup>95</sup>**

Ship Code B

**Wipe out noise & interference before it gets to 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, com-

puters, TV birdies, lightning, electric drills, motors, industrial processes.

**More** effective than a noise blanker because interference much stronger than a desired signal can be completely removed without affecting the signal.

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** as adjustable phasing network. Combine 2 antennas to give you various directional patterns.

**Null** out a strong interfering signal or peak a weak one -- 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 low noise. To peak, push reverse.

**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, \$17.95.** Measures 6½x1½x6¼ inches. **MFJ-1025, \$179.95.**



MFJ-1025  
**\$189<sup>95</sup>**  
 Ship Code B

**MFJ-1025** is like MFJ-1026 but less built-in active antenna, use external antenna. Same size, power requirements.

# MFJ Tunable, Programmable Brick Wall DSP Filter

**Tunable super DSP filter** automatically eliminates heterodynes, reduces noise, interference simultaneously -- SSB, AM, CW, packet, AmTOR, PACTOR, RTTY, SSTV, WeFAX, FAX, weak signal VHF, EME, satellite.

MFJ's tunable FIR linear phase filter minimizes ringing, prevents data errors and has "brick wall" filter response with up to 57 dB attenuation 75 Hz away.

**You** get 5 tunable DSP filters. Tune each lowpass, highpass, notch, and bandpass filter including optimized SSB /CW filters. 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 auto notch filter searches for and eliminates multiple heterodynes.

**Advanced** adaptive noise reduction silences background noise and QRM so 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 tunable FIR bandpass filters.

**Tune** center frequency from 300 to 3400 Hz, vary the bandwidth from 30 Hz to 2100 Hz -- from super-tight CW filters to wide razor-sharp Data filters.

**Use** two tunable filters together. For



MFJ-784B  
**\$299<sup>95</sup>**  
 Ship Code B

example, tune one to mark, one to space and set bandwidth tight for a super sharp RTTY filter.

**Tune** lower cutoff frequency 200-2200 Hz and upper cutoff frequency 1400-3400 Hz. Create custom filters for voice, data and other modes. Signals just 75 Hz away literally disappear -- they are reduced 57 dB!

### Automatic notch filter

**Auto** notch filter searches for and eliminates multiple heterodynes in milliseconds. It's fast! Even interfering CW and RTTY signals can be eliminated. Selectively remove unwanted tones using two manually tunable notch filters -- 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.

**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** 15 pre-set filters. Use on SSB, AM, CW, packet, AmTOR, Pactor, RTTY, SSTV, WeFAX, FAX, any mode.

**If** you don't like our pre-set filters,

program your own -- an MFJ exclusive! Save center frequency/bandwidth, lowpass/highpass cutoffs, auto/manual notch, noise reduction -- all settings -- in 10 programmable filters.

### More MFJ DSP Filter Features

**Tunable Spotting Tone™** -- accurately tunes narrowest CW.

**Adaptive Tuning™** -- tuning rate automatically is finer as you narrow bandwidth -- makes narrow filters super easy-to-use.

**Exclusive FilterTalk™** sends precise settings in Morse code.

**Automatic** notch, variable aggressiveness, quiet 2½W audio amplifier, speaker switch keeps phones active.

**Manual/auto** notch can be used together. Noise reduction, auto notch & custom filter is saved in memory.

**Accurate** easy-to-use input level indicator, improved manual notch in CW, adjustable line level, more Mark-Space frequencies, baud rates for data filters and auto bypass during transmit for monitoring CW sidetone, voice/data.

**Push-button** bypasses your filter -- hear the entire unfiltered signal. 2½W amplifier, volume control, level control, speaker jack, PTT sense line, line level output. Compact 9½x2½x6 inches.

**Plugs** between Xcvr or receiver and external speaker/headphones. 12 VDC or 110 VAC w/**MFJ-1312D, \$17.95.**

### Cable Pack, MFJ-5184, \$14.95.

**Includes** receiver cable, DC cable, 2 open-end TNC cables and power plug.



MFJ-752D,  
**\$129.95.** All

mode dual tunable filter zeroes in, pulls out stations and notches out interference at the same time. Two independently tunable filters peak and notch low/high pass signals to eliminate heterodynes and interference even on crowded bands. Tune both 300-3000 Hz. Vary bandwidth 40 Hz to flat. Notch depth to 70 dB. Use any rig. 2W speaker. Inputs

# MFJ's SSB/CW Audio Filters

for 2 rigs. Switchable limiter for impulse noise through clipper removes background. OFF bypasses. 9-18 VDC or 110VAC. MFJ-1312D, \$17.95. 10x2x6". **MFJ-751B, \$99.95.**

Zero in SSB/CW with tunable peak and notch filters.

Tune 300-3000 with a 50 dB notch.

Compact 4¾x1¾x5D".



**MFJ-722B, \$109.95.** "Optimizer" switch selectable SSB/CW filter has razor sharp filtering with 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, 2W amp, phone jack. Use 9-18 VDC or 110 VAC, MFJ-1312D, \$17.95.

# Multireader™ Taps Into Secret Signals



MFJ-462B

**Ever wonder** what those mysterious chirps, whistles, and buzzing sounds are on the shortwave bands?

**\$219<sup>95</sup>**  
Ship Code B

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** into your shortwave receiver's earphone jack. Watch mysterious signals turn into exciting text as it scrolls across an easy-to-read LCD. No computer, interface, cables needed.

**Eavesdrop** on the latest breaking news as press agencies from all over the world relay them on RTTY -- it's like a private wire service! Copy RTTY

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, amateurs 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 to keep you fascinated . . . can't read unless decoded.

**Printer monitors 24 hours a day TelePrinterPort™** monitors any station 24 hours a day and prints transmissions. Use Epson compatible printer 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 a high performance PLL (phaselock loop) *modem*. Digs out weak signals buried in noise and even tracks slight drifts. Mark and space tones are copied to

give greatly improved decoding.

### Easy to use, tune and read

**Select** modes and features from a menu. Precision tuning indicator makes tuning quick and easy.

**2-line** 16 character LCD has contrast adjustment. One line comes in at speed of signal, second line is delayed to catch every exciting word!

**Copy** most standard shifts and speeds in all modes. *AutoTrak™* Morse 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, \$17.95. MFJ-462B measures 6 1/4"Wx2 1/2"Hx6 1/4"D".

**MFJ-5162, \$9.95.** Receiver cable connects MFJ *MultiReader™* to your radio's external speaker (3.5mm jack).

**MFJ-5412, \$12.95.** Printer Cable is 25-pin cable for Epson compatibles.

**MFJ-5163, \$14.95.** Speaker "Y".

**MFJ-5300, \$9.95.** 3', 3.5 mm stereo extension with volume control. Use for mono radio output to set audio level to externals. Pocket clip for portable use.

## MFJ Shortwave Regenerative Receiver Kit

**Remember** hunching over your receiver for hours with headphones pressing uncomfortably against your ears?

MFJ-8100K  
**\$84<sup>95</sup>**  
Kit  
Ship Code B

**You** could hear just about anything that fancy superhets could hear. Sure, you had to play around with regeneration control and have a steady hand but you could hear 'em.

**Don't** you wish you could relive some of this fun and excitement of your youth -- share it with your kids and grandkids? You can -- with the MFJ-8100 World Band Shortwave Radio Kit.

**Spend** a fun evening with your child or grandchild and help put this simple kit together. When you finish, watch the glow of excitement as you tune the



world bands -- just like you did. You might inspire a career in electronics.

**RF stage** really picks up the weak ones and it goes into regeneration smoothly without pops or dead spots. Stations the world over will come in loud and clear with just a 10' antenna strung outside or across the room.

**You'll** be amazed at what you can hear! International shortwave broad-

casts, hams on SSB and CW, WWV, RTTY, packet, more. Covers all or part of 75/80, 49, 40, 30, 31, 20, 25, 22, 19, 17, 16, 15, 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.

**Vernier** reduction drive, bandswitch, volume/gain controls, use 9V battery.

**2** earphone jacks let you and your grandchild listen together with earphones or speakers. 7Wx6Hx2 1/2"D".

**MFJ-8100K, \$84.95.** Shortwave regenerative receiver kit. You stuff the components, solder and assemble!

**MFJ-8100W, \$119.95.** Receiver wired and tested, *ready-to-operate!*

## MFJ Shortwave Radio Communication Headphones

**MFJ-392B** is perfect for amateur radio and shortwave radio listening. All modes -- SSB, FM, AM, data and CW. Each earphone has volume control. Superb padded headband and *ear cushions* makes listening comfortable. **You'll** forget they're even on as you listen to stations all over the world!

**High-performance** driver unit reproduces enhanced sound. Signals never sounded so *clear!* Free 1/4 inch phono adaptor. Gold plated plug, 9' cord. Weighs just 8 ounces.

**MFJ-392B** handles 450 mW and has a frequency 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 in mono mode with

1/4 inch phone adapter.

MFJ-392B  
**\$34<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.

MFJ-956  
**\$74<sup>95</sup>**  
Ship Code A

**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 with stay-put rubber feet.

**Input** and Output are SO-239 connectors.



## MFJ Receiver Antenna Tuner/Preamp

**Don't** miss rare DX due to signal power loss between your receiver and antenna.

MFJ-959C  
**\$139<sup>95</sup>**  
Ship Code A

The MFJ-959C provides proper impedance matching to transfer maximum signal from antenna to receiver. Covers 1.6 to 30 MHz. 20 dB pre-amp 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, \$17.95.**



# 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.

**Why?** Because MFJ has made continuous improvements where others have not.

**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 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's unique

MFJ-1020C  
**\$109<sup>95</sup>**  
Ship Code A



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**, **\$17.95**. 6Wx2Hx5D inches. Includes telescoping whip.

## 54" Active Outdoor Antenna

MFJ-1024  
**\$169<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".

**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**, **\$17.95**.

## Compact 0.3 to 200 MHz antenna

Your ham band only antenna does great on the ham bands . . . but this 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, others.

**Improves** weak noisy scanner radio reception from high to low band VHF -- hear signals you couldn't hear before.

**J-310 FET** handles strong signals and noiseless feedback circuit gives excellent low noise reception. 4.5 GHZ MRF-901 transistor receives weak signals well into VHF.

**On/off** switch, power on LED, SO-239 coax connector and detachable 20-inch telescoping antenna. Use 9 Volt battery or 110 VAC with optional **MFJ-1312D**, **\$17.95**. Measures a compact 3Wx1 1/4Hx4D inches.

MFJ-1022  
**\$74<sup>95</sup>**  
Ship Code A



# High Dynamic Range Passive Preselector Can't Overload



MFJ-1046  
**\$129<sup>95</sup>**  
Ship Code A

**MFJ's new Passive Preselector has extremely high dynamic range!** Improves performance of any transceiver. Vastly improves most expensive receivers. Especially helpful to broadband front-ends prone to overload.

**Protects** sensitive receivers from damage from very strong signals: multi-transmitter, multi-band ops -- contests, field-day, hams, CBers, TV/FM/AM.

**Eliminates** phantom signals by suppressing out-of-band signals causing

intermod, blocking, cross modulation. Eliminates 2nd order intermod.

**MFJ's** unique Hi-Q series tunable circuit gives you superb performance. **Tunable** series tuned circuit works into a very low impedance formed by broadband toroid transformers.

**Narrow** bandwidth, excellent stop-band attenuation, very low loss, constant bandwidth, gain over each band.

**Excellent** attenuation in adjacent bands. 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** a compact 7 1/2x2 1/2x3 1/4 inches.

## Preselector with T/R Relay



MFJ-1048  
**\$149<sup>95</sup>**  
Ship Code A

**Like MFJ-1046** but adds RF sense transmit, receive switch with adjustable time delay to auto 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**, **\$17.95**.

## All-Band Transceiver Preselector

MFJ-1040C  
**\$129<sup>95</sup>**  
Ship Code A



**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. Compact 6 1/2Wx2 1/2Hx4D inches. Use 9-18 VDC or optional 110 VAC, 300 mA adaptor **MFJ-1312D**, **\$17.95**.

## All-Band Receiver Preselector

MFJ-1045C  
**\$94<sup>95</sup>**  
Ship Code A



**MFJ-1045C**, **\$94.95**, 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 3/4D inches.



MFJ-281  
**\$13<sup>95</sup>**  
Ship Code A

**3-inch** 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 has a powerful booming sound!



# MFJ-890 DX Beacon Monitor

Get up-to-the-minute worldwide DX band conditions in minutes on 14, 18, 21, 24, 28 MHz using the International Beacon Network of 18 transmitters around the world!

MFJ-890  
**\$129<sup>95</sup>**  
Ship Code A

**MFJ's DX Beacon Monitor** shows which beacon you're hearing on your transceiver -- an LED lights on a 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 activate across the world. For DXers, contesters, ragchewers and SWLers.

**International Beacon Network** provides a reliable source for determining HF propagation 24 hours a day.

**Consists** of 18 beacons around the world. Each transmits on 14.1, 18.11, 21.150, 24.93 and 28.2 MHz. Transmit sequence moves westward 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.

More info: see Oct/Nov, 94, Sept, 97 QST and Jan 1999, Sept/Dec 2001, Jan 2002 *Practical Wireless* of U.K.

The more you hear, the more open

the band is to 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 lights on a world map to show 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).

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, \$17.95. No antenna/radio connection required.

MFJ-890UK, \$129.95 (for England).

MFJ

# MFJ Micro ATV Transmitter

## Transmits Live Pictures on Cable TV Channels



MFJ-8708  
**\$169<sup>95</sup>**  
Ship Code A

**Tiny Micro ATV Transmitter™** lets you transmit a high quality Amateur Television video signal on 433.97 MHz (cable channel 58, 59, or 60). Just plug in an antenna and a video source -- camcorder, camera, VCR or other.

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.

MFJ-8708 puts out a solid 50-100 mW signal, capable of transmitting up to 1.8 miles with a 3-element beam. Using a suitable UHF power amplifier and high-gain antenna, you can enjoy two way ATV communications over many miles with fellow ATV hams.

To transmit video simply connect video to the RCA phono connector and antenna to the BNC and connect a 9 volt battery or other 9 VDC source.

Use any standard NTSC or PAL composite video (1V pk-pk) source.

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-8704  
**\$129<sup>95</sup>**  
Ship Code A

MFJ-8708, \$169.95. Four channel: cable channels 58, 59, 60 and test channel. Just 1<sup>1/2</sup> ounces, less battery. Has audio and video inputs.

MFJ-8704, \$129.95. MFJ-8704 is for 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  
**\$219<sup>95</sup>**  
Ship Code A

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 accomplished by a 12-bit digitally controlled DAC-digital to analog controller. Specially embedded software controls the modulation depth and pre-distortion level to deliver an ultra-clean signal to the final RF amp.

High power transmitting over 0.5

Watt output requires an external heatsink, it 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: 12-13.5V Max, +/-100mV

Current Draw: 2.2 Amps @max output

Frequency control: XTAL ref. 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 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:** User-friendly radio sets up in seconds -- no micro-processor 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, noise to the max.

**Smooth, 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 signals you want to hear -- it never locks onto strong signals outside the audio bandpass. *Instant Recovery AGC™* snaps the receiver back at full gain after transmitting.

**Built-in 3" speaker:** driven by 100 mW of audio for great volume.

**Rugged Transmitter:** Motorola power amplifier transistor delivers full QRP, tolerates opens, accidental shorts without damage.

**Sinewave Sidetone:** Pure 700 Hz CW sidetone makes sending

MFJ-9040/9030/9020  
MFJ-9017/9015  
**\$229<sup>95</sup>**  
Each. Choose band.  
Ship Code B



as much fun as receiving!

**Semi-QSK:** Adjustable hold transmit/receive switch for normal sending speed or set or full QSK for contests.

**Power:** Uses little power -- only 50 mA average receive and 1.2 amp peak on transmit. Perfect for battery operation in remote locations!

**Rugged:** MFJ CW radios are built on G-10 double-sided plate-through PC boards. All-metal, brushed stainless steel front panel.

### Frequency Coverage:

Choose your favorite band! 40 & 15 Meter models cover all your favorite band segments -- makes a perfect "first radio" for new upgrades.

**Integrated CW Station**  
Radio, tuner, power pack fasten together to form a tiny 6X6.5X8.5-in. integrated CW station.

\$409.95 buys a complete CW station. Includes CW transceiver, \$229.95; MFJ-971 tuner, \$139.95; MFJ-4114 power pack, \$84.95; portable antenna, \$44.95 . . . order: MFJ-9140B, 40M; MFJ-9130B, 30M; MFJ-9120B, 20M; MFJ-9117B, 17M; MFJ-9115B, 15M. <sup>\$489<sup>95</sup></sup> if purchased separately.  
MFJ-27, \$7.95, carry handle. **Save \$!**



- MFJ-9040 covers 7.000-7.150 MHz.
- MFJ-9030 covers 10.100-10.150.
- MFJ-9020 covers 14.000-14.075.
- MFJ-9017 covers 18.068-18.110.
- MFJ-9015 covers 21.000-21.200.

## Great SSB/CW Accessories for your 90 Series MFJ Transceivers

Now with 6 Meters!

**MFJ-902B, \$119.95.** Tiny Travel Tuner, 4 1/2x2 1/4x3 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, \$139.95.** 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, \$29.95.** Miniature lightweight iambic paddle is just 1 3/4Wx3/4Hx1 3/4D inches and weighs just 2 1/2 ounces -- tiny enough to fit in an Altoids® tin (cord and all!) -- great for traveling with QRP or "big" rigs!

## Hip-pocket size QRP Cub CW transceiver



MFJ-93XXX  
**\$109<sup>95</sup>**  
Kit, Ship Code A  
**MFJ QRP-Cub™** rigs

use SMT to achieve big performance.

The kit version has all SMT parts mounted and soldered. You just insert and solder the "through-hole" parts like connectors, inductors and trimmer caps.

Designed by QRP-ARCI hall-of-famer K1BQT for real world low-power operating conditions. Buy all or choose 80, 40, 30, 20, 17, or 15 Meters.

Specify band in "XX" of model number.

**Hot receiver,** 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, 1W, 15/17M.

**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 3/4Wx1 1/2Hx4 1/2D". Wired unit has *No Matter What™* warranty.

**MFJ-93XXW, \$159<sup>95</sup>.** Wired & tested cub transceiver. Specify band in "XX" portion of model #.



**MFJ-402, \$74.95.** 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.

## Portable and QRP Power Supplies and Accessories

**MFJ-4110, \$64.95.** Portable AC power supply connects to MFJ rigs. LED shows when power is applied. Output is 13.8 VDC at 1.2 amps.



**MFJ-416, \$54.95.** CW option kit for your MFJ-9406 six meter and your MFJ-9402 two meter adventure transceivers.

**MFJ-726, \$59.95.** Narrow audio filter built for MFJ CW transceivers.

**MFJ-4114, \$84.95.** AC Power supply/ Battery Pack uses Ni-Cd D cells or alkaline D cells (not included). Matches MFJ rigs. Output is 13.8 VDC at 1.2 amps. Voltage regulated. Ni-Cd charge circuit.



**MFJ-412, \$54.95.** Curtis Chip Iambic Keyer Module for MFJ 90 Series rigs. Use MFJ paddles with the MFJ-412 and your rig for *complete CW fun!*

## Folded Dipole Portable Antennas

Single band, light-weight, folded dipoles are perfect for MFJ QRP rigs. Low SWR, direct coax feed, 200 Watts.



**\$44<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

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 -- transceiver, mic, power supply, and antenna easily fit in a briefcase or carry-on bag.

**Simple operation:** No microprocessor mumbo-jumbo -- on air in minutes!

**Great sensitivity:** 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 chatter and focuses power where needed.

**Smooth VFO:** No synthesizer jump or obscure keypad commands! Effort-less tuning, custom reduction-drive ball-bearing capacitor.

**Powerful audio:** even in noisy loca-

MFJ-9415/MFJ-9417

MFJ-9420

MFJ-9440/MFJ-9475

**\$279<sup>95</sup>**

\$289.95 with mic  
Ship Code B

tions from a special Signetics audio chip and rugged 3" speaker. One Watt audio output at 10% THD.

**Low Current Requirements:** No heavy supply for this radio.

**Rugged Transmitter:** Output transistor runs cool, tolerates 3:1 VSWR and feedline shorts or opens.

**Built to last:** Plate-through PC board, tough metal case. 50-100 mA receive, 1.2A peak on transmit @13.8 VDC. 2 1/2"x6 1/2"x6 in.

MFJ-9415 covers 21.200-21.400.

MFJ-9417 covers 18.08-18.17.

MFJ-9420 covers 14.150-14.350.

MFJ-9440 covers 7.150-7.300.

MFJ-9475 covers 3.750-4.000.

MFJ-415B, \$54.95. CW module for MFJ-9420/9440. Provides semi-QSK break-in and sidetone, a must for DX.

## MFJ SSB Adventure Radios



MFJ-9402

**\$329<sup>95</sup>**

(\$349.95 with MFJ-290 mic)  
Ship Code B

MFJ-9406/9410/9412

**\$299<sup>95</sup>**

(\$309.95 with MFJ-290 mic)  
Ship Code B

... take on mountain tops, down cool streams, overseas, on your bicycle trip, etc. . . .

**Choose 2/6/10/12 Meters!**

**MFJ-9406** for 6 Meters -- the magic band -- can economically open 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 bicycle trips, campgrounds, etc.

**MFJ Adventure Radios** 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, (optional) CW with 7W output, 144.0-144.3 MHz.

**MFJ-9410**, 10 Meters packs 20 Watts SSB PEP. Be amazed with the clarity of its receiver. 28.3-28.6 MHz.

**MFJ-9412**, Adventure for 12 Meters. 20 Watts SSB and CW PEP output and covers 24.890-24.990 MHz.

**Adventure radios** are easy, 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 feature single-conversion superhet receivers with a low-noise front end and double-balanced mixer to fight intermod, dig deep, and a 2.3 kHz crystal ladder filter.

All Adventure radios include a built-in low pass filter to help avoid TVI.

Real analog S-meters double as speech processing level monitors, analog tuning with no unexpected rate shifts or stair-stepping, powerful one-half watt audio from their 3 1/2 inch top-mount speakers, and a solid-state FET switch to key an external amplifier.

Energy efficient, operating from a 2A AC supply (3A for 9410) or from a 12V battery.

**MFJ-416**, \$54.95. CW optional module for Adventure radios.

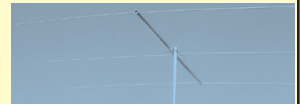
**Built-to-last** conservative design, premium quality, plate-through PC boards, quality components, handsome silkscreened aluminum faceplate and tough cabinets.

Fit an Adventure Radio just about anywhere: each is just 2.5X6.5X6 inches.

## MFJ Adventure Accessories

**MFJ-1762, \$109.95.** 3-element 6 Meter yagi quadruples effective radiated power over a 1/2 wave dipole. 6', 2 lbs. Use TV rotator/mast. 300W PEP SSB.

Mount vertical/horizontal. Balun decouples feedline.



**MFJ-1756, \$109.95.** Omni-directional low-angle vertical works plenty of DX, gets out even at low power. *GroundIsolated™* radials eliminate common mode current paths. Reduces undesirable feedline, supporting structure radiation. 55" strong aluminum radiator.

**MFJ-1896, \$74.95.** 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 7' on a 34" boom with turning radius under 4'. Winter-storm tough but extremely lightweight, under 5 lbs. 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, \$34.95.** Hang a 6M J-pole in the clear. Omni-directional full-size 1/2 wave with low angle radiation beats 1/4-waves.

**MFJ-1776B, \$44.95.** Low SWR 6-Meter folded dipole. **MFJ-1770B, \$44.95.** (10 Meters).



**MFJ-906, \$109.95.** 6M tuner with lighted cross-needle meter (MFJ-1312D, \$17.95).

100 Watts FM, 200W SSB PEP. **MFJ-903, \$74.95.** Like MFJ-906, less meter.

**Mirage A-1015-G, \$419.95.** 150 watt output 6-meter amplifier has built-in 20 dB GaAs FET receiver preamp. All modes: FM/SSB/CW. 1-15 Watts input power.



**MFJ-290** dynamic handheld mic for all MFJ SSB Adventure Rigs™, \$34.95 ordered separately.

**MFJ-4110, \$64.95.** Portable AC power supply 13.8 VDC @ 1.2A.



**MFJ-4114, \$84.95.** Rechargeable AC Power Supply with battery pack uses Ni-Cad D or alkaline D (not included). Selectable AC/batteries. 13.8VDC, 1.2A.



# MFJ USB-to-Radio Multimode Interface

MFJ

Sign up for the digital revolution! Explore a whole new ham radio world using MFJ's universal USB radio interface!

MFJ-1204 is exceptionally easy to setup and use. However, simplicity doesn't mean compromised performance. Here's 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 patch cords to get started. 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 are emerging all



## Plug & Play!

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, \$21.95

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	MEJ-5745J	For RJ-45 Mic Connector
MEJ-1204D5	MEJ-5705D	For 5-Pin DIN Data / Accessory Port Connector
MEJ-1204D8	MEJ-5708D	For 8-Pin DIN Data / Accessory Port Connector
MEJ-1204D13I	MEJ-5713DI	For ICOM 13-Pin DIN Accessory Port Connector
MEJ-1204D13K	MEJ-5713DK	For Kenwood 13-Pin DIN Accessory Port Connector
MEJ-1204D13K1	MEJ-5713DK	Kenwood 140/450S/850/870/950/57D/590S/660/2000
MEJ-1204D13K2	MEJ-5713DK	Kenwood TS-440/690
MEJ-1204D13K3	MEJ-5713DK	Kenwood TS-940
MEJ-1204MD6	MEJ-5706MD	For 6-Pin mini DIN Data / Accessory Port Connector
MFJ-1204K3	MEJ-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-1204P4	MFJ-5704P	For USB to rig sound card interface with 4 pin

## 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.

For radios with 8-pin round (MFJ-1275/1279), 8-pin modular (MFJ-1275M/1279M) 4-pin rmd (MFJ-1275T/1279T).

Audio isolation transformers and relays eliminate ground loops, audio hum, noise, distortion. 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

MFJ-1279/M/T  
**\$149<sup>95</sup>**

Ship Code B

radio to override/interrupt digital transmissions. VOX Control -- lets you use VOX when not 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, \$119.95.

Basic

soundcard interface. Like MFJ-1279 but no headphones, footswitch jack, direct CW keying or auxiliary input jack.



### Clearstone™ Communication Speaker

MFJ-281, \$13.95.

Bring out speech fidelity you never knew existed. Restore smooth sound of sinewaves that CW naturally generates, makes it easy to understand.

Improves intelligibility of speech in the frequency range of 600 to 4000 Hz.



### MFJ RS232 to USB Adapter and others

MFJ-5429, \$29.95. DB9 Male RS-232 Serial 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-5428, \$29.95. Same as MFJ-5427, but has USB and Centronics 36 Male. Driver included.



# TNC-X -- An Inexpensive TNC for VHF Packet and APRS!

**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. Works with any packet software program supporting KISS mode. That makes it compatible everything in packet radio. 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. 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. No need to provide a separate power connection. For those who want to use it with older computers, it also supports a separate conventional serial port. Switch back and forth between USB and serial if you like. 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 turnaround 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 on the client side. Just specify KISS mode in

TNC to Radio  
Prewired Cables  
**\$19<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.

MFJ-1270X  
**\$139<sup>95</sup>**  
Ship Code B



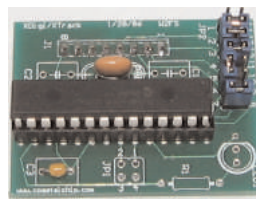
MFJ

your PaLink MP or RMS software and you're ready to roll! ... or better yet ...

**TNC-X** is perfect for APRS™. Fully supported by virtually every APRS™ mapping program in use today. Provides a low cost mechanism for mapping locations of other radio stations.

**TNC-X** contains an expansion header that allows you to add daughter boards to provide entirely new capabilities. Add 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. Don't pay for features you'll never use. Super compact 5 1/8" W x 1 1/2" H x 3 1/4" D inches.

**Plug-and-play** ... compatible with all MFJ TNC to radio cables as well as MFJ's A to B USB cable.



**MFJ-1270DG, \$34.95.** X-Digi is an inexpensive board that plugs into TNC-X's expansion header and makes it into a stand-alone full-featured digipeter. Supports WIDEN-N paradigm for APRS™, 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 4 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.

**X-Digi** will never be obsolete. Firmware upgrades available free by the internet. No equipment required to flash the updated code into your X-Digi.



**MFJ Cigarette Lighter Cable**  
Plug in your favorite MFJ accessories or others and operate them off of your automobile's 12 VDC cigarette lighter socket with a 3 Amp fuse. Has a 2.1 mm center positive DC coaxial plug.

Or operate direct from your power supply in the hamshack! Provides power to your MFJ analyzer, keyer, meter or tuner lamp, etc.

Make quick adjustments to HF/VHF/UHF mobile antennas with your analyzer in hand! 18" retracted curly cord, 60" fully stretched.

TNC TYPE	All MFJ TNCs and Multimodes	KAM VHF <sup>2/</sup> / KAM HF <sup>3/</sup> / KPC3 <sup>3/</sup> / KPC9612 <sup>5</sup>	PK-232	PK900/PK96/ PK12/DSP232 /PacComm/ other TNC-2 compatibles
Alinco <sup>1</sup> /Strd HT	MFJ-5022	MFJ-5022YV	MFJ-5022X	MFJ-5022
Icom <sup>1</sup> /Yaesu/ RadioShack HTs	MFJ-5024	MFJ-5024YV	MFJ-5024X	MFJ-5024B
Kenwood <sup>1</sup> 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/ MFJ-5080YH	MFJ-5080X	MFJ-5080
Icom <sup>1</sup> 8-pin	MFJ-5084	MFJ-5084YV/ MFJ-5084YH	MFJ-5084X	MFJ-5084
Kenwood/Alinco 8-pin	MFJ-5086	MFJ-5086YV/ MFJ-5086YH	MFJ-5086X	MFJ-5086
Yaesu 8-pin modular	MFJ-5080M	MFJ-5080MYV	MFJ-5080MX	MFJ-5080M
Icom <sup>4</sup> 8-pin modular	MFJ-5084M	MFJ-5084MYV	MFJ-5084MX	MFJ-5084M
Kenwood 8-pin modular	MFJ-5086M	MFJ-5086MYV	MFJ-5086MX	MFJ-5086M
Radio Shack 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 Kantonics 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 ... \$24<sup>95</sup>

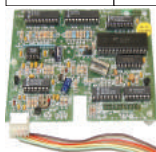
TNC TYPE	MFJ TNC/MMC PK900/PK12/DSP232 /PacComm/TNC2s	KAM VHF KAM HF KPC3	KPC-9612
ICOM HF 8 Pin DIN	MFJ-5063	MFJ-5063YH	-----
ICOM VHF 8 Pin DIN	MFJ-5064	MFJ-5064YV	MFJ-5064YV
ICOM 706 13-Pin DIN	MFJ-5065	MFJ-5065YH/ MFJ-5065YV	MFJ-5065YV
KENW/YAESU, AZDEN VHF 6-Pin mini DIN	MFJ-5060	MFJ-5060YV/ MFJ-5060YQ	MFJ-5060YV
KENW HF 13-Pin DIN	MFJ-5066	MFJ-5066YH	-----

## Open End Cables with Radio Connectors

MFJ-5082, \$19.95. 8 pin round mic.  
MFJ-5106, \$9.95. 6 pin mini DIN.  
MFJ-5205, \$9.95. 5-pin DIN. MFJ TNC.  
MFJ-5208, \$9.95. 8 pin DIN. Acc. Port.  
MFJ-5213, \$14.95. 13-pin DIN, Acc port.  
MFJ-5220, \$9.95. Yaesu FT-500R cable.  
MFJ-5222, \$9.95. Split conn. Alinco.  
MFJ-5224, \$9.95. IC/YA/AL/RS HTs.  
MFJ-5226, \$9.95. Kenwood Handhelds.  
MFJ-5268, \$9.95. 8 pin modular mic.

## MFJ Computer Printer, Serial & USB Cables

MFJ-5412	\$12.95	Printer Cable, 36-Pin Centronics to DB-25 male, 6 feet
MFJ-5414	\$12.95	Serial Cable, DB-25 male to DB-9 female, 6 feet
MFJ-5413	\$12.95	Serial Cable, DB-25 male to DB-25 female, 6 feet
MFJ-5409	\$12.95	Serial Cable, DB-9 male to DB-9 female, 6 feet
MFJ-5408	\$12.95	Serial Cable, DB-9 female to DB-9 female, 6 feet
MFJ-5419	\$12.95	Serial Y-cable, (1) DB-9 female to (2) DB-9 male, 8 inches
MFJ-5430	\$4.95	USB A Male to USB B Male, 6 foot cable, beige.



## MFJ TNC2 2400 Baud Modem

**MFJ-2400, \$11.95.** 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 24/12 Hour Clocks



## Dual Displays: 24 and 12 Hour Clock

MFJ-108B  
\$24<sup>95</sup>  
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 make it easy to read from across the room. Mounted in an attractive solid brushed aluminum frame with a sloped face for easy viewing. Synchronizable to UTC for split-second timing. Quartz controlled for excellent accuracy. Long life button batteries included. Desk top 4 1/2" W x 1 D x 2 H inches. MFJ 1 year limited *NoMatterWhat™* warranty.

## DXer's 24Hr. Wall Clocks



**MFJ-115, \$29.95.** Set this 24 hour Quartz clock to UTC/ GMT and you'll determine 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 zones. 12" face. Seconds.

indicate time zones.



**MFJ-105D, \$29.95.** 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 let you read it from across the room.

Gold colored hour, minute, seconds hands. Looks great on any hamshack or other wall!



**MFJ-126B, \$29.95.** 12 hour Quartz movement gives 12 hour time on inner dial and 1200 to 2400 hour time on its outer dial. Attractive clean, white face is highly visible. Handsome black trim shows 24 hour time in 12/24 hour format, looks great in any decor.



**MFJ-131RC, \$44.95.** Read 24/12 hour time at a single glance on dual time displays! 12-inch diameter atomic wall clock can be seen from across the room! Liven up any hamshack and automatically receive WWVB.

Red second hand. Clean, white, real glass face is highly visible, improves the decor.

## Hi-Contrast LCDs



**MFJ-107B, \$13.95.** 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.

## 14" Atomic Wall Clock

MFJ-137RC,  
\$34.95.

**HUGE 14"** twelve (12) hour clock is a monster! It's why many are used in hospitals and schools across the USA! MFJ-137RC automatically sets itself and is accurate to the second! DST mode can be disabled. Handsome black with white face is great in a hamshack, office, hospital, etc. AA battery, not included. Can also manually set.



## Huge 2.5" LED Clock



**MFJ-117, \$27.96.** 12/24 hour clock has the biggest and brightest LEDs of any clock

we have ever seen! Giant 2.5" super bright LEDs are the width of a 2-Meter HT -- see them from across the street, day/night! Perfect for decreasing eyesight. 12/24 hour switch. Wall/desk mount. Handsome black cabinet, 12Wx7 1/2"H". Use 9V battery for backup. Hour/min. set buttons. 110 VAC, 60 Hz.

**MFJ-113, \$21.95.** Switchable 12/24 hour with HUGE 1.8" red LEDs. Absolutely shines across the room. Super compact 3 1/2"H x 9W x 2 1/2"D". 9 min. ID timer, alarm, 9V battery back-up. Use 110 VAC, 60 Hz. Great for the sight impaired!



## Wireless Projection 24/12 Atomic Alarm Clock -- indoor temp, moon phase

**MFJ-158RC, \$54.95.** Wireless Projection Alarm Clock features 24/12 hour radio-controlled time, date, and indoor temperature on a colorful, display with 1 1/8" digits.

**Backlight** is momentary when operating under battery power or constant when using the included AC adapter.

**Time and Indoor Temperature** alternately project in easy-to-read red digits onto the ceiling or wall of a darkened

room. Includes alarm with snooze function and even updates for daylight savings time and leap year!

**Integrated USB charging port** lets you charge devices when plugged in an outlet.

**Features:**  
• Radio-controlled time and date



- Hour and minute display
- Weekday and date display
- Indoor temperature (°F or °C)
- Daily time alarm with Snooze
- Low battery indicator for receiver
- Current moon phase (8 phases)
- USB charge port, mobile devices
- Free standing

**Time zones:** Atlantic, Eastern, Central, Mountain, Pacific, Alaskan, Hawaiian.

**New!**

# 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, 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!**

**JUMBO LCD** clock boasts giant 4" digits, MFJ exclusive TrueUTC™ time!

**Jumbo 4" digits!**



**Display is 15 1/2"Wx10 3/4"Hx3/4"D inches.** 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.

Indoor thermometer and hygrometer tell you indoor temperature/humidity.

MFJ-139RC **\$89<sup>95</sup>**  
Ship Code B

**Displays** month, date and day of week. Everything is displayed in one simultaneous look at this clock. Beautiful metallic tan and bright LCD display looks great anywhere.

**Unbelievable features** at such a low price! HUGE 1-inch high digits, auto-controlled for pin-point accuracy, 24/12 hour selectable, DST on/off, dual alarms, 5-min. ID (snooze), fabulous blue backlight, month/date display, indoor thermometer (32-122 degrees F), moon-phase, uses just two AAA 1.5V batteries (not included) 3 1/2"Wx4Hx1 1/4"D in.



MFJ-122RC **\$15<sup>95</sup>**  
Ship Code A

**MFJ Dual Time Display Travel Atomic Clock**

**MFJ-133RC LCD** travel clock shows 2 time zones at once. Show UTC, local or other dual time format! 24/12 hour.



MFJ-133RC **\$39<sup>95</sup>**  
Ship Code A

Atomic-controlled for pin-point accuracy! HUGE 1 1/8" high-contrast numerals easily read 6 feet away... but super compact 4Wx3Hx3/4"D". Attractive silver clock folds up and slides in your shirt pocket for great travelability.

## In/Out Temp/Cal/Weather Atomics



**High-tech 24/12** hour clocks feature in and wireless outdoor temp sensors, calendar and monster size 2 1/4" time

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"Wx5 1/4"Hx1"D" durable plastic. Hardware included for easy mounting.

MFJ-144RC **\$44<sup>95</sup>**  
Forecast Icons Ship Code B

MFJ-134RC **\$44<sup>95</sup>**  
Moonphase Ship Code B

digits! Select moon-phase or weather forecast icons.

**They 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

**These** indoor clocks are 12Wx7 3/4"H inches in a handsome dark wood frame with black display.

**Solar Atomic Clock never needs batteries**

**Solar-powered 24/12** Hour atomic clock never needs batteries, large LCD (time digits 1 5/8"x2 1/4") and gives precision accurate time from WWVB. Handsome desktop size. Alarm. Compact 3Wx4 1/4"Hx1 1/2"D inches.



MFJ-136RC **\$34<sup>95</sup>**  
Ship Code A

## Large Display Wall Mount Atomic 24/12 Hour Clocks

**24/12 Time/Calendar Temp Atomic Clock**

**Dual Time Atomic Clock with UTC Zone**

**Solar Powered Eternity Atomic Clock**



**MFJ-130BRC** is a 24/12 hour wall/desk mount atomic clock. It has HUGE 1 7/8" digits that can be seen across your room. Handsome



See in the dark!  
MFJ-121B **\$89<sup>95</sup>**  
Ship Code B

**Read both** UTC and local time at-a-single-glance. Dual atomic



MFJ-123B **\$54<sup>95</sup>**  
Ship Code B

**MFJ's** exclusive solar powered Eternity Atomic

MFJ-130BRC **\$29<sup>95</sup>**  
Ship Code B

silver and black base with a bright green LCD 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.

clock 24/12 hour time, independently set. Auto backlight every day at preset time for 8 hours. Mounted in a handsome silver-metallic, hard-plastic frame. HUGE, 1Wx2H" LCD numerals, exclusive UTC zone, running seconds display. 11 3/8"W x 7 1/4"Hx1"D". Wall or desk mount. Daylight savings can be disabled in each clock. 4 AA batteries.

**Clock™** works for an "eternity"! No need for batteries or to set time! Receives WWVB. Whopping 3 1/2"Hx6 1/4"W" with huge 2" time digits. 24 or 12 hours, indoor temp, running seconds, month/date and day-of-week displays. 9 1/2"Wx 6 1/4"Hx1"D". Attractive silver metallic. Power on/off switch when not in use.

# MFJ Radio-Controlled 24/12 Hour Dual clock

With ID Timer!



MFJ-148RC  
**\$64<sup>95</sup>**  
 Ship Code A

MFJ-148RC is specially designed for amateur radio. Two independent atomic 24/12 hour clocks with exclusive UTC time zone and dedicated Station ten minute ID timer. Uses single time base to keep both clocks perfectly synchronized. Radio control keeps perfect time. Each clock is independently set for 12 or 24 hours, 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 inches.

## Radio-Controlled Wrist Watch

Global World Time Atomic Wristwatch



MFJ-188BRC  
**\$44<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, 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. In Russia, set the time to Moscow zone, it searches for the signal and keeps you on time. When in Japan, set to Tokyo. Super bright LED is at the 12 o'clock position. Black leather band, reception success/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.

## 24/12 Atomic Wall Clock with In/Out Temp sensors



MFJ-155RC  
**\$39<sup>95</sup>**  
 Ship Code D

Receives WWVB in 24/12 hour time, indoor/outdoor temperature sensors with trend indicator, alarm with snooze button, Day, Month and Date displayed, 7 time zone settings, low battery warnings for station and sensors. Over 300 feet wireless range. Handsome black and silver finish is in a compact 11Wx8.5Hx.5D" frame.

## Professional Wireless Weather Station

Stand-alone or Remote Monitoring with your Smartphone, Tablet or Computer



MFJ-199C  
**\$179<sup>95</sup>**  
 Ship Code D

*LaCrosse View™ Take it with you!*

Weather Station Network! Works as a stand-alone or remote monitoring from a smartphone, tablet or computer.

Download the free LaCrosse View™ free phone app! Take your personalized weather data with you! You get enhanced on-the-go home monitoring. Check current indoor/outdoor readings, view history charts, graphs and more!!!

It is completely wireless. Has two sensors with over 330 foot wireless range. A Thermo-hygro Swiss precision sensor allows for appropriate placement and more accurate readings. An integrated solar panel extends the sensor's battery life.

Look at all these features . . .

- 12/24 Hour Time and Calendar
- FULL Color Display 8Wx5.75"
- Manual Set time or Internet time
- Forecast Icons with tendency

- Indoor/Outdoor Temperatures With Min/Max and date records
- Indoor/Outdoor Temp/Humidity With Min/Max and date records
- Wind Chill down to -40 degrees F
- Relative Air pressure, history graph
- Wind Speed, 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 to 330 feet Transmits at 915 MHz
- LCD contrast setting
- Stores 1750 sets Weather records
- Wall Mount or Free Standing
- Station power 3C batteries (not incl.)
- Easy Set-up. No wires/software use
- MFJ's famous 1 year warranty.

## Full-color Atomic wireless weather stations

MFJ-154RC/MFJ-156RC LaCrosse Wireless Color Weather Stations give you precision Atomic time and real-time indoor and outdoor weather data straight from your home location.

These weather stations feature dynamic color forecast icons that change based on weather conditions.

With a wireless remote sensor easily monitor forecast/temperature trends, indoor/outdoor temps, high/low temperature alerts and other data -- on an 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".  
 MFJ-156RC is 6 1/4 Wx4 1/8 Hx2 D".



MFJ-154RC



MFJ-154RC or MFJ-156RC  
**\$64<sup>95</sup>**  
 Ship Code A

MFJ-156RC

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, Trend
- Minimum/Maximum Temperatures, Humidity Records
- Moon Phase (154RC)
- Mold Risk Indicator (156RC)
- Heat Index, Dew Point (156RC)
- Alarm/Snooze Icons
- Signal Strength for Sensor
- Adjustable Back Light
- Low Battery Icon for Indoor/Outdoor Sensors
- Up to 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, Y)  
Fits Yaesu, Icom, Kenwood  
Wouxun and compatibles.  
**\$19.95**  
Ship Code A

**Top** quality hand-held speaker mic fits snugly in your hand! It's perfect for new Yaesu, Icom, Radio Shack, Kenwood, Alinco, ADI and compatible HTs.

**Gives** booming receive audio so you can monitor stations while mic is attached



MFJ-296 MFJ-296R  
(I, K, Y) for VX7R  
**\$24.95 \$29.95**  
Ship Code A 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.

## Replacement HF Radio Handheld Microphones



MFJ-290K/Y/I/T/E  
MFJ-290MK/MI/MY  
MFJ-290K4/Y4/I4/T4  
**\$29.95**  
Ship Code A

**Dynamic** HF replacement hand microphones are for HF base and mobile transceivers.

**Replace** your old, beat-up Icom, Kenwood, Yaesu, Alinco, or TenTec antiquated mics.

**Gives** PTT and quality mic audio. Heavy-duty construction, extra long, spiral flexible cord.

**Specify** MFJ-290K/Y/I/T/E for 8-pin round. K is Kenwood, Y is Yaesu, I is Icom, T is Tentec, E is Elecraft.

**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.



MFJ-295R  
Fits Yaesu VX-7R  
series only  
**\$21.95**  
Ship Code A

to your lapel -- no more holding the speaker up to your ear! Compact 2Wx3Hx1 1/4 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. MFJ-295 is 8 Ohm impedance.

**Includes** a built-in 3.5 mm ear-phone jack lets you continuously monitor receive audio and it lets you hear your radio in a loud, noisy environment (see MFJ-301, \$795 or MFJ-302, \$10.95,

## MFJ Deluxe Speaker/Mic has Volume control

**MFJ-296** has a 360 degree rotating lapel clip, a first-rate electret microphone element and a full-size speaker that gives you superb booming 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 and vice versa!*

**Also** has 3.5 mm earphone jack (see

## Wouxun/Baofeng Accessories from MFJ

**A. MFJ-1717SF, \$21.95.** 15 3/4", 1/2 Wave on 440 MHz, 2.15 dBi gain. Full-size 1/4 wave antenna on 2-Meters. Factory low SWR. High-Q, rugged! SMA female screws into HT.

**B. MFJ-1717SFZ, \$24.95.** Like MFJ-1717SF but "bendable".

**C. MFJ-293K, \$29.95.** Secure, comfortable tiny earbud/boom mic with rubber flex earloop. 5 inch flex boom, PTT, 6 ft. cord.

**D. MFJ-295K, \$19.95.** HT mic fits snugly in hand! Booming transmit/receive audio. 3.5 mm earbud jack. PTT sw., lapel clip, 3 1/2 ft cord.

**E. MFJ-1719SF, \$15.95.** *Small-Wonder™* HT antenna, 1" tall. Transmit 144/440 MHz, receive 1200 MHz. Great for monitoring 2-M activity.

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, \$19.95** is for newer Yaesu single prong plugs like Yaesu VX5R and Icom single pins like Q7A.

**MFJ-295I, \$19.95** is for Icom, Radio Shack, Alinco, ADI and compatibles.

**MFJ-295K, \$19.95** is for Kenwood, Wouxun, Alinco and other compatibles.

**MFJ-295R, \$21.95** fits new Yaesu VX-7R handheld radios.

**MFJ-301/MFJ-302 right)**, for monitoring, a momentary PTT switch, and a retractable cord.

**MFJ-296I, \$24.95,** fits Icom, Radio Shack, older Yaesu, other compatibles.

**MFJ-296Y, \$24.95,** for Yaesu FT50R, VX5R series rigs.

**MFJ-296K, \$24.95,** for Kenwood, Wouxun, Alinco and other compatibles.

**MFJ-296R, \$29.95,** fits Yaesu VX7R handheld series only.

## MFJ HandyPal™ HT Mic Earphones

**This** MFJ ear-piece 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-301  
**\$795**  
Ship Code A



**MFJ-302** is like MFJ-301 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 long cord.

## Identify your MFJ speaker/microphone model

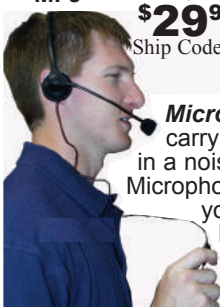


**MFJ** uses the letters I, K, Y and R to denote what connector is on the speaker mic. **I** is for **Icom**, some Yaesu, Radio Shack and most Alinco. **K** is for most **Kenwood** and Wouxun. **Y** is for **Yaesu** VX5R series and Icom Q7A. **R** is for the new Yaesu VX7R series.

# MFJ Deluxe Headset Microphone™ adds professionalism

MFJ MFJ-288 (K, I, Y, R)  
**\$29<sup>95</sup>**  
 Ship Code A

*This deluxe headset microphone gives hams the professional look they deserve -- great for public service*



**Deluxe Headset Microphone™** lets you carry on a private QSO in a noisy environment. 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™

*Rubber flex earloop design -- security and comfort and 5-inch boom mic*

MFJ-293I  
**\$29<sup>95</sup>**  
 Ship Code A



**KD5UBG**

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 HT speaker mics!* 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 (monitor) what is going on on your favorite 2-Meter repeater.

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 HT!

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 were like a robot was on the other end. MFJ-283 lets only your natural-sounding voice to be transmitted.

MFJ-283I, K, Y, R  
**\$24<sup>95</sup>**  
 Ship Code A



PTT switch has velcro for attaching to wool clothes or your belt.

Two clips on cord let you position and secure the earpiece/PTT to your body comfortably and 42" durable cord lets you snake it around how you want.

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 HTs, 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 I (Icom)  
**\$19<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



**KC3NSZ**

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, a government spy or just

some kind of weirdo!

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-292I is for Icom, Alinco handhelds, older Yaesu and compatibles.

## MFJ BoomMic/FM Scan

MFJ-284, \$39.95. Like 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** for Icom, Alinco, older Yaesu and compatibles.



## MFJ Neckset Microphone doesn't mess up your hair!

MFJ-282, \$29.95.

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.



# MFJ HT Rubber Duck & telescopic antennas



**A. MFJ-1717, \$21.95.** **World's best selling HT antenna!** While other rubber ducks give you noise, you'll enjoy super dependable QSOs with MFJ-1717. Only 15 3/4" in length, it's a halfwave on 440 MHz with a hearty 2.15 dBi gain. On 2M, get an efficient full-size 1/4 wave for full size performance. Precisely factory tuned 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 tug-

ging 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, \$21.95.** Like MFJ-1717, but has male SMA connector. **B. MFJ-1717SF, \$21.95.** Like MFJ-1717S, has female SMA. Fits new, popular Wouxun HTs.

**C. MFJ-1717SZ, \$24.95.** Like 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 or 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 antenna.

**MFJ-1717SFZ, \$24.95.** SMA female connector, Wouxun/Baofeng HTs. **D. MFJ-1716, \$15.95.** Dual band 144/440 MHz Flexible duck like MFJ-1717, but only 7 1/2" length, 1/4 wave on 440 MHz and loaded 1/4 wave on 2-Meters. Tough, durable. BNC. **MFJ-1716S SMA male. MFJ-1716SF, \$15.95.** For Baofeng/Wouxun handhelds. Has SMA female connector.

## MFJ SuperFlex ThinDucks™

**A. MFJ-1715, \$21.95.** Tie it in a knot . . . when you use it, it'll bounce back in shape -- no 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 -- hearty 2.15 dBi gain. On 2M it's a full size 1/4 wave antenna. Safety tip, durable synthetic rubber. "S" for SMA male. "SF" for SMA female, Baofeng/Wouxun. **B. MFJ-1713, \$17.95.** 5 1/2". Like MFJ-1715 except no 440 gain. 1/4 on 440 MHz and 2M. "S" for SMA, "SF" for Baofeng/Wouxun, female.

## MFJ Triple Band FlexiDucks™

**A. MFJ-1720S, \$34.95.** MFJ's Tri-band 2M/6M/440 HT FlexiDuck™ antenna is 19" -- 5/8 Wave on 440 MHz to for 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. 10W. SMA male. **B. MFJ-1718S, \$29.95.** MFJ Triple Band 2M/220/440 MHz HT FlexiDuck™. 17". SMA male. **B. MFJ-1718SF, \$29.95.** SMA Female.

## MFJ Telescopic Handheld Antenna Range Extenders



**A. MFJ-1714, \$17.95.** For really long range 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, \$17.95.** Like above, is SMA male. **MFJ-1714SF, \$17.95.** For Baofeng/Wouxun HTs, has SMA female.

**B. MFJ-1712, \$16.95.** This telescopic Dual Band (144/440 MHz) is a 1/4 wave on 2M, 5/8 wave with gain on 440 MHz. 4 1/2" collapsed. Rubber duck. 16" ext. for superior performance. **MFJ-1712S, \$16.95.** Like MFJ-1712, but has SMA male. **MFJ-1712SF, \$16.95.** Baofeng/Wouxun HTs. SMA female.

**C. MFJ-1710, \$11.95.** PocketLinear™ is a pen-sized 3/8 wave for 2M! Carry this antenna in your shirt pocket like a pen with a clip. When your rubber ducky just won't receive well, pull it out, extend to 24" and carry on your QSO. BNC. 5 1/4" collapsed. **MFJ-1710S, \$11.95.** Like MFJ-1710 but with SMA male.

## SmallWonder™ Flexi-Antenna



**MFJ-1739S, \$19.95.** 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.

## SmallWonder™ HT Antenna



**MFJ-1719/MFJ-1719S/SF, \$15.95.** 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. **MFJ-1719SF** has SMA female connector, fits Wouxun Handhelds.

## MFJ 2-Meter Pocket Roll-up



**MFJ-1730, \$34.95.** Roll up this 1/2 wave 2M antenna and stick it in your pocket. Vacations, camping, etc. Get home station performance on-the-go!

75" long. Hang in a tree, plug into your HT and enjoy some great QSOs. Omnidirectional, significant gain over a 1/4 wave. Doesn't need a ground plane so it's convenient for indoors. 200 Watts.

**MFJ-1731, \$34.95.** 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, \$29.95.** Plug into a 2M/440 MHz mobile/base rig. Not a 10-element yagi but it'll get out in a hurry! Fold-over, flexi-duck, PL-259. 2 dBi gain on 440 MHz, full-size 1/4 wave 2M. Hi-Q, low loss construction. 16 1/2", safety tip. Handles 25 Watts PEP. **MFJ-1717P, \$29.95.** Like MFJ-1717PL, but no fold-over. Has straight PL-259.

## MFJ "Long-John" HT Antenna Foldover Telescopic HT antenna

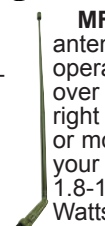


**MFJ-1818, \$29.95.** "Long-John" HT antenna gives a whopping gain on 2-Meters! Get 2.15 dBi gain in a 1/2 Wave, super efficient antenna. 9" collapsed and 38 1/2" fully extended. FlexSpring™ base prevents your connector from breaking. Tough, durable and well-protected for years of dependable service. 50 Ohms, BNC connector. Handles maximum 10 Watts.



**MFJ-1812, \$21.95.** 144/440 MHz HT antenna combines telescopic and foldover features in a one antenna. Extends to improve range plus it folds over to get out of the way. MFJ-1812 is just 6" collapsed and 16" extended. High Q low loss construction, super durability for years of use.

## MFJ Scanner/Receiver Antenna



**MFJ-1811, \$15.95.** Dedicate this antenna to your Scanner or Receiver operations. Has telescopic and fold-over attributes. Folds-over to create right angle connection to back of base or mobile, and telescopes/collapses for your HT. 24" extended, 7" collapsed. 1.8-1800 MHz, has 2.15 dB gain. 10 Watts, 50 Ohms. BNC. VSWR 1.5:1.

## MFJ Compact Magnet Mounts



Put your flexible duck on the roof of your car! Tiny but powerful magnet is 2 3/4" dia. -- strong! **MFJ-332S, \$15.95.** SMA female. 12 feet of tough, flexible RG-58AU coax with SMA male end. **MFJ-332B, \$15.95.** Like MFJ-332S but BNC female with BNC male coax.

# FT-817, KX3, other QRP rig Accessories

## MFJ Walkabout Antenna 80 through 6 Meters

MFJ-1899T  
**\$89<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.

MFJ-1899T has ten sections, 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 band socket on the base coil antenna.

Fine tuning is done by adjusting the telescopic whip up and down.

Has BNC connector. Use MFJ adapter for SO-239, won't harm your radio connector.

## Single Band Walkabouts 6/10/12/15/17/20/30/40/80

6/10,12,15,17,20 M 30/40/80 Meters

**\$29<sup>95</sup>** **\$39<sup>95</sup>**

Ship Code A Ship Code A

Highly efficient single band Walkabout antennas for FT-817, 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, \$8.95. Reinforced elbow for less stress on radio connector.

- MFJ-1806T (6M) \$29.95
- MFJ-1810T (10M) \$29.95
- MFJ-1812T (12M) \$29.95
- MFJ-1815T (15M) \$29.95
- MFJ-1817T (17M) \$29.95
- MFJ-1820T (20M) \$29.95
- MFJ-1830T (30M) \$39.95
- MFJ-1840T (40M) \$39.95
- MFJ-1880T (80M) \$39.95

## 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 9/16 X 1 3/8" and weighs just 10oz., including power cord, connector. Output DC cable, standard coaxial DC power connector (2.1 mm ID, 5.5 mm OD).

Sturdy adapter cable included for Yaesu radios.

MFJ-4103 has excellent specs and out performs all other power supplies made for the FT-817. Perfect for QRP rigs 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  
**\$59<sup>95</sup>**  
Ship Code A

### Pocket™4:1 Balun

MFJ-9211, \$24.95.



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. Tiny 2Wx3Hx1D".

### Pocket™Ground

MFJ-9231, \$64.95.



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

Leave and retrieve messages with your friends and family.

Program custom access codes and security codes so you decide who uses your *Radio voice mail* -- private, portable repeater.

Provides emergency communications when repeaters are down. Test your own signal quality by repeating your transmission through another radio. Auto repeat recorded message continuously for foxhunting and public service.

Non-volatile memory -- up to 2 full minutes of voice messages. Keypad can be used for remote operation with Morse code verification of functions.

Use 9V battery or 9-15 VDC or 110 VAC with MFJ-1312D, \$17.95. 4Wx3 1/2 Dx 1 1/2 H". Use radio with PTT or mic closure sensing.

### MFJ QRP SWR/Wattmeter

**New!**

MFJ-9218, \$54.95.

This new MFJ QRPocket™ SWR/Wattmeter has 5, 30 or 100 Watt power ranges on a calibrated meter scale. Tune/Bypass switch, BNC input and output connectors. Covers 1.8 to 50 MHz. Measures a super compact 4 1/2 Wx 2 1/4 Hx 2 3/4 D inches.



### QRP WattMeter/Dummy load

MFJ-9214, \$34.95. Check *true* QRP

output with this sensitive QRP Wattmeter. Built-in 50 Ohm load for testing rig.

Reads 5W full scale 1.8-150 MHz. BNC male fits directly to your HT. 2Wx2 1/4 H x 1 1/2 D". Fits in pants pocket! MFJ-7737,

\$6.95. BNC female to PL-259 adaptor.



### QRPocket™ Antenna Tuner

MFJ-9201, \$54.95. 80-10 Meters, 25 Watts. Custom 12-position inductor switch, tune/bypass switch, antenna, transmitter capacitors, BNC feedpoints for antenna/transmitter. Tiny 4Wx2 5/8 H x 1 1/2 D" 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, \$64.95.

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 1/4 Wx 4 Hx 2 1/4 D inches.



### QRP SWR/Wattmeter

MFJ-9213, \$44.95.

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, insures uniform accuracy, 1.8-50 MHz, BNC in/out. 4 1/2 Wx 2 1/4 Hx 2 3/4 D inches.



### QRP Pocket™ Loop Antenna, direct to radio

MFJ-9234,

\$64.95. Like MFJ-9232 but connects directly to the back of your favorite QRP transceiver. PL-259 to PL-259 connector included. Banana plug posts for loop wire connection. Tiny 2 1/4 Wx 4 Hx 2 1/4 D inches.



# MFJ VHF/UHF MAGNET MOUNT MOBILE ANTENNAS

## Magnet Mount Dual Band 144/440 MHz Mobile



**MFJ-1724B** **MFJ-1724B** is the world's best selling dual band 2 Meter/440 MHz magnet mount mobile antenna! Perfect for your dual band mobile or HT. Free BNC handheld adapter. MFJ's powerful 3/2 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. 300 Watts PEP. 12 feet coax, PL-259.

## MFJ 5/8 Wave 2/6 Meter Magnet Mount Mobile



**MFJ-1728B** **MFJ-1728S/M/T** **MFJ's** 5/8 wave on 2M gives maximum possible theoretical gain of any single element antenna, no matter how much others cost. On 6M, it's a high performance full 1/4 wave. It's an excellent companion for MFJ-9406 or other 6 Meter mobile or HT. Gives great "magic band" signals used mobile or base. Perfect for mobile or HT. **Free BNC** adapter. 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.

**Order** the popular MFJ-1728B without a magnet mount and set it on your existing mount. **Order MFJ-1728S** for **SO-239** connector, **MFJ-1728M** for **NMO** connector, and **MFJ-1728T** for **3/8-24** HF style threaded connector.

## MFJ UltraLite™ Mag Mounts

**MFJ-1721** **MFJ-1721**, (left) is an **UltraLite™** Mobile magnet mount antenna. 12 ft. RG-174U coax. 1/4 wave 2-M. Less than 2 oz. 1/8" rare earth magnet. Thin 20" 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-15, \$15.95.** Durable HT pocket, elastic cord and velcro closure fits on belt -- keeps radio secure.

**MFJ-6200, \$21.95.** 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 Mobile Antenna Ground Plane Kit

**Converts** most mobile antennas into a ground plane base station antenna. 200 W. Accepts VHF/UHF antennas with PL-259 connector. Includes stainless steel mounting hardware, two U-bolts, allen wrench, and four 20.5 inch radials. Easy installation: 6 1/4" tall bracket fits on any 1.5-inch pipe with clamps or mounting holes.



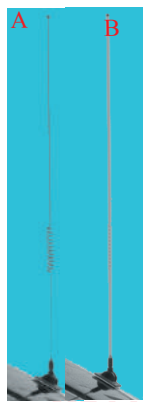
**MFJ-1401** **\$34.95**  
Ship Code B

## 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. Whopping 2.6 dB on 2-Meters and 6.3 dB gain on 440 MHz. Perfect for dual band mobiles or HTs. Free BNC adapter. 300 Watts PEP. 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, \$44.95.** 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. **\$49.95**  
Ship Code B  
**B MFJ-1738** **Excellent** gain on 440 MHz and 2 Meters. Low SWR lets your transceiver deliver full power safely. **\$39.95**  
Ship Code B  
**Exclusive** 26" stainless steel radiator minimizes wind vibration for less SWR flutter. Gives you much longer range and better readability. Handles 50 Watts. 12 feet of tough coaxial line with PL-259 connector, and all mounting hardware.  
**MFJ-1738, \$39.95.** Similar to MFJ-1734 but 2 Meter mobile glass mount antenna.  
**MFJ-94, \$5.95.** Remount Kit for Glass Mounts. Avoid factory tint placement.

## MFJ Handheld Antenna Window Mount



**MFJ-310/MFJ-310S/** **Handheld** Antenna Window Mount gets your antenna *outside* where it can radiate freely -- takes away auto shielding effect and gives increased signal strength and reception. Use 144/440 MHz HT with BNC or SMA connector. 10 ft. mini RG-58 coaxial line. Indoor portion of the mount 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, \$16.95.** SMA Male to SO-239 adaptor.  
**B. MFJ-5612SF, \$16.95.** SMA Female to SO-239 adaptor for Wouxun/Baofeng.  
**C. MFJ-5612B, \$16.95.** BNC Male-SO-239 adaptor.  
Release strain on your HT's antenna connector! Choose SMA or BNC. Flexible, mini coax, 3 foot.

**MFJ-7716, \$5.95.** SMA female to BNC male.  
**MFJ-7718, \$5.95.** SMA male to BNC female.  
**MFJ-7719, \$5.95.** SMA male to SO-239 adaptor.

## MFJ Coffee Mug



**MFJ-9-102, \$4.95.** Porcelain Coffee Mug. MFJ, 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  
\$29.95  
Ship Code A



MFJ-916BC  
\$54.95  
Ship Code A

**MFJ HF/6M/VHF/UHF 200/600W Duplexers**



MFJ-4916S  
\$64.95  
Ship Code A

MFJ-4906S  
\$64.95  
Ship Code A

MFJ-4956S  
\$39.95  
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, 600 Watts PEP.

**MFJ-4956S, \$39.95.**

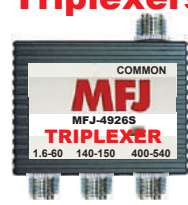
SO-239 connectors, handle 500 watts HF/6M, 300 Watts on 144/440 MHz.

**MFJ-4916S/4906S, \$64.95.**

These units have SO-239 connectors and handle 600 Watts PEP.

Model #	MFJ-916B	MFJ-916BN	MFJ-916BC	MFJ-4916S	MFJ-4906S	MFJ-4956S
Price	\$29.95	\$34.95	\$54.95	\$64.95	\$64.95	\$39.95
Freq (MHz)	1.6-225 350-540	1.6-225 350-540	1.3-225 350-540	1.6-60 140-470	1.6-30 50-54	1.3-60 140-540
Output	SO-239	N-Female	Pigtail/259	SO-239	SO-239	SO-239
Output	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

**HF/VHF/UHF/1.2 GHz 200/500/800 Watt Triplexers**



MFJ-4926S/N  
\$64.95  
Ship Code A



MFJ-4926C  
\$74.95  
Ship Code A

Use HF, 6M, 2M, 440 MHz and 1.2 GHz antennas with rigs without a built-in triplexer. Or use 3 different radios with one HF/VHF/UHF/1.2 GHz antenna. Heavy-duty diecast, low pass networks separate/combine HF/6M, 144/440 MHz and 1.2 GHz signals. Ports are 50 Ohms, 200, 500 and 800 Watts PEP.

**MFJ-4926S, SO-239s, 800 Watts.**

**MFJ-4926N, N-type.**

**MFJ-4926C, 12" coax PL-259 pigtails.**

**MFJ-4936S, SO-239s, 500 Watts.**

Model #	MFJ-4926SN	MFJ-4926C	MFJ-4936S
Price	\$64.95	\$74.95	\$74.95
Frequency MHz	1.6-60 110-170 350-570	1.6-60 110-170 350-570	1.6-150 220-225 400-550
Output	SO-239	Pigtail PL259	SO-239
Output	SO-239	Pigtail PL259	SO-239
Input	SO-239	Pigtail PL259	SO-239
Input	N-Female	SO-239	SO-239
Power Watts	800/500/500	800/500/500	500/500/500
Insertion Loss	.20/.20/.20	.20/.20/.20	.23/.23/.30
VSWR	< 1.2	< 1.2	< 1.2
Isolation	> 55 dB	> 55 dB	> 55 dB
Impedance	50 Ohms	50 Ohms	50 Ohms

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 2 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, 200W PEP.

**MFJ-916BN, \$34.95.** Like MFJ-916B but has type N connectors for low loss.

**Duplexer with coax pigtails MFJ-916BC, \$54.95.** Like MFJ-916B, has 3 ft. coax w/PL-259s, duplex sects.

## Mast Mount Duplexer

**MFJ-916BM, \$64.95.**

Like MFJ-916B but for outdoors. Save coax, reduce losses. Tower leg or mast mount near your antennas.

Heavy-duty weather protected PVC, mounting bracket. U-bolt fits up to 1 1/2" diameter mast or pipe. Measures 3 1/2 W x 3 1/2 H x 5 D inches.

**MFJ-916BMN, \$74.95, N connectors.**

## Compact HF Mobile SWR/Wattmeters

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



MFJ-819  
\$169.95  
Ship Code A

Just 1 5/8" thick -- easily mounts on dashboard for easy viewing. Flat mount on wall or shelf in ham shack for best viewing angle.

Remote sensor with 25' thin, flexible cable lets you place sensor and coax out-of-the-way. 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. "High SWR" LED. Flat-mount SWR/Wattmeter is 5 W x 3 1/4 H x 1 5/8 D"; remote sensor is a tiny 3 1/2 W x 2 3/4 H x 2 3/4 D". Use 9V battery or 12 VDC.

**Ruggedized flat Mobile/portable SWR/Wattmeter**



MFJ-818  
\$89.95  
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. Fully enclosed in all metal 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 3" lighted Cross-Needle Meter. 30/300 Watt ranges, 1.8-30 MHz, SO-239. 12 VDC for meter lamp or plug into cigarette plug with MFJ-5510, \$12.95. Rubber feet, 5 W x 3 H x 2 D inches.

**Compact Cross-Needle SWR/Wattmeters**



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. Measures a super compact 3 1/4 W x 3 1/4 H x 3 1/4 D inches.

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

# MFJ RuffRider™ High Gain Mobile Antennas

Use any SO-239 or NMO mount. **FREE NMO adapter!**

Choose Black or Chrome!



A. B. C. D. E. F. G. H. Shown on magnet mounts, not included.

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™**. \$34.95 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, \$34.95. Black.**  
**B. VHF/UHF RuffRider High Power™.** Just 40" long MFJ-1412 handles full 200 **\$34.95** Watts. Great for high power mobile amp. 1/2 Wave, 3 dB gain on 2 Meters, 3/8 Wave, 5.5 dB gain on 440 MHz.  
**MFJ-1412B, \$34.95. Black.**  
**C. VHF/UHF RuffRider High Gain™.** 41 1/2" long antenna gives extra gain with little height increase. **\$39.95** 150 Watts. 1/2 wave, 3.2 dB gain on 2 M, 5/8 Wave, 5.7 dB, 440 MHz.  
**MFJ-1422B, \$39.95. Black.**  
**D. VHF/UHF RuffRider Hyper Gain™.** This 62 1/2" brute gives a whopping 5 dB gain on 7/8 Wave 2-Meters, 5/8 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, \$59.95. Black.**

**E. Tri-Band VHF/220/UHF RuffRider Triple ThreatII™.** Slim MFJ-1436 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-1436B, \$64.95. Black.**  
**F. RuffRider Triple Threat™.** 59" of stacked elements with high-Q phasing coils give a whopping 7.2 dB gain on 440 MHz, 4.5 dB on 2M, 2.15 dB on 6M. 150 W. **MFJ-1434B, \$84.95. Black.**  
**G. VHF/UHF/6M/10M RuffRider QuadBand™.** MFJ-1438 52", 7.2 dB - 440 MHz, 4.5 dB - 144, 2.15 dB on 6. Go **\$109.95** HF! 150 W. **MFJ-1438B, \$109.95. Black.**  
**H. HF/2M/440 RuffRider™** Covers 40/20/15/10/6/2 M & 440 MHz! Use up to 4 coils at one time. Tri-magnet mount highly recommended. **MFJ-1456 \$159.95**



## MFJ Truck Bed Mount SO-239, NMO, 3/8-24

MFJ-349 \$21.95 Ship Code A

Mount this 5Wx5Dx1H" by .120 thick aluminum triangle bracket in any corner of your truck bed and get a super-strong HF or VHF/UHF antenna mounting. 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 feet coax.



## MFJ Heavy Duty Balcony Antenna Mount

MFJ-1907 \$44.95 Ship Code A



Safely, 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. High-strength .1" aircraft aluminum. Extends 14" out away from guttering or metal roofs. Mount vertically or horizontally. Use HF style (3/8-24 threaded connector) or VHF/UHF (SO-239 connector). 1/2" U-bolts are included.

## MFJ 5/8 Wave 2/6 Meter Mobile Antenna

MFJ-1728S/M/T \$29.95 Ship Code B

MFJ's 5/8 wave on 2 M gives maximum possible theoretical gain of any mobile antenna, no matter how much they 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. 300 Watts PEP. Low SWR lets your transceiver deliver full power safely. Pick your style:  
**A. MFJ-1728M, for NMO.**  
**B. MFJ-1728S for SO-239.**  
**C. MFJ-1728T for HF-style 3/8-24 thread connector.**

## HT SWR/Power Meters



MFJ-840 \$34.95 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. 2Wx2 1/4 Hx1 1/2 D inches can go with you anywhere.

## 3/8-24 HF Antenna Adaptors



A	MFJ-7710	\$17.95	3/8-24 to PL-259 Adaptor
B	MFJ-7725	\$7.95	3/8-24 Quick Connector
C	MFJ-7735	\$12.95	3/8-24 Fold-over adaptor
D	MFJ-7707	\$7.95	3/8-24 to NMO Adaptor
E	MFJ-7748	\$6.95	SO-239 to 3/8-24 Female Adaptor
F	MFJ-7714	\$5.95	3/8-24 Chassis mount with insulating washer
G	MFJ-7715	\$5.95	3/8-24 male, .20" hole whip ferrule
H	MFJ-7712	\$5.95	3/8-24 male, .10" hole whip ferrule
I	MFJ-7764	\$21.95	3/8-24 HD barrel SS spring, 4"L. for 60" antennas
J	MFJ-7763	\$12.95	3/8-24 SS spring, 3"L. for 60" antennas
K	MFJ-7762	\$8.95	3/8-24 SS spring, 2"L. for 24" antennas



MFJ-841 \$54.95 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. 2Wx2 1/4 Hx1 1/2 D inches.

## MFJ Vise-Grip Antenna Mount



MFJ-351T, \$11.95. Vise-grip 3/8 -24 antenna connection for quick, anywhere placement. Grip to 1.25" mast. SO-239.

## 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 \$24.95 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  
**\$44<sup>95</sup> each**  
 MFJ-2620T - 20 Meters  
 MFJ-2640T - 40 Meters  
**\$54<sup>95</sup> each**  
 MFJ-2675T - 75 Meters  
**\$64<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, \$37.95.** Tri-magnet mount for 600W HS.

**MFJ-2675T**, 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

- \$17<sup>95</sup> Each** 6-17 Meters  
**\$19<sup>95</sup> Each** 20-40 Meters  
**\$27<sup>95</sup> Each** 60-75 Meters  
 Ship Code B

**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™ 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 37-85"!

**\$21<sup>95</sup> Each** MFJ "Short" HF Hamsticks let you mount an HF antenna with just a 5" magnet mount going mobile.

**No** need to drill holes or make special hard mounts on your car to get on HF! Get a magnet or trunk lip mount and you are ready to go!

**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. Made like MFJ's 250W hamsticks but some stand only 36" tall. Most collapse 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.

Your Choice:	Lengths:	Base	Whip	Total
MFJ-2375T - 75 Meters	36"	49"	85"	
MFJ-2360T - 60 Meters	36"	14"	50"	
MFJ-2340T - 40 Meters	36"	14"	50"	
MFJ-2330T - 30 Meters	25"	12"	37"	
MFJ-2320T - 20 Meters	25"	14"	39"	
MFJ-2317T - 17 Meters	25"	14"	39"	
MFJ-2315T - 15 Meters	25"	12"	37"	
MFJ-2312T - 12 Meters	25"	14"	39"	
MFJ-2310T - 10 Meters	25"	12"	37"	
MFJ-2306T - 6 Meters	25"	14"	39"	

**Choose** any band 75-Meters through 6-Meters. Use 5" magnet mount, MFJ-335BT, \$16.95. Trunk lip mount, MFJ-345T, \$44.95 or the MFJ-348T, \$49.95. Other style MFJ mounts available in this catalog.

Mount is not included



## 4 1/2 Foot Extender Mast

**MFJ-1600T, \$21.95.**

**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 telescopic in this catalog.



# MFJ Magnet, Mirror & Trunk Lip Mobile Antenna Mounts

## MFJ 5" Magnet w/Coax

MFJ-335BS  
SO-239

Each

MFJ-335BM  
NMO

**\$16<sup>95</sup>**

Ship Code B

MFJ-335BT  
3/8 - 24  
For HF sticks

5" 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.

## Trunk/Hatch Lip Mounts

**RuffRider™** Mounts feature extra-wide 4" lip and large reinforcing tabs on each side safely distributes load over your vehicle's lip. Each can rotate 360 degrees to allow you to put your antenna in every possible configuration. 2 large set screws on each end locks your mount into place. Scratch-proof rubber guard protects your car. Secures large VHF/UHF and medium size HF antennas. Adjustable angles. Perfect for MFJ's large RuffRider™ VHF/UHF Antenna series or MFJ hamsticks. 10 feet of low loss coaxial line and terminated with a PL-259 connector. Allen wrenches included. Weather caps for SO-239 models also.

MFJ-345S  
SO-239

**\$39<sup>95</sup>**

Ship Code A

MFJ-345T  
3/8x24

**\$44<sup>95</sup>**

Ship Code A

MFJ-345M (NMO)

**\$44<sup>95</sup>**

Ship Code A

MFJ-345M, **\$44.95.** Has VHF/UHF NMO connector.

## MFJ Hard Mount Coax

**\$21<sup>95</sup>**

Ship Code A

Permanent antenna mount positions, select:

**A. MFJ-341S,** SO-239 on antenna end and PL-259 for radio end. 17 feet coax.

**B. MFJ-341SS,** SO-239 for antenna and SMA male for radio end. 3' coax.

**C. MFJ-341M,** NMO on antenna end and PL-259 for radio end. 17 feet coax.

## MFJ Triple Magnet Mount

**GOLIATH**

**ULTIMATE STRENGTH**

MFJ-336S  
SO-239

MFJ-336M  
NMO

MFJ-336T  
3/8x24

**\$37<sup>95</sup>**

Each Ship Code C

3 super-strong 5" Magnets make up this MFJ Goliath™ Tri-Magnet Mount. 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.

## MFJ Deluxe Lip Mounts

**Deluxe** Trunk/Hatch-back Lip Mounts are heavy-duty -- each has a wide 3.3" lip and reinforcing tabs on each side to safely distribute antenna load. 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 overhangs -- several position detents in either direction. Scratch-proof rubber guard protects your vehicles finish. Each includes 10 feet coaxial line terminated with a quality PL-259 connector. MFJ-348 will secure large VHF/UHF antennas and medium size HF antennas including HF sticks. Allen wrenches included. Weather caps for SO-239s also included.

MFJ-348S  
SO-239

**\$47<sup>95</sup>**

Ship Code A

MFJ-348T  
3/8x24

**\$49<sup>95</sup>**

Ship Code A

MFJ-348M  
NMO

**\$49<sup>95</sup>**

Ship Code A

MFJ-348S, **\$47.95.** SO-239 connector.

MFJ-348T, **\$49.95.** HF style 3/8-24 threaded connector.

MFJ-348M, **\$49.95.** NMO connector.

## Mini Trunk Lip Mounts

MFJ-346M/T NMO or 3/8-24 mini lip mounts are stainless, include 17' coax terminated with PL-259 connector. Rubber cushion protects surface from scratches. Order MFJ-346M (NMO) or MFJ-346T (3/8-24).

MFJ-346M/T

**\$29<sup>95</sup>**

Ship Code A

## GumDrop™ 3/8-24 Mount

Tough 3/8-24 antenna hard mount for HF antennas. Durable plastic, rubber seal protects vehicle. Drill small hole for SO-239 bottom.

MFJ-343

**\$11<sup>95</sup>**

Ship Code A

## 3-Inch Magnet Mount

Each

**\$12<sup>95</sup>**

Ship Code A

MFJ-333BS  
SO-239

MFJ-333BM  
NMO

3" black magnet mounts have 17' coax with PL-259. SO-239 (BS) or NMO (BM). Lightweight antennas.

## Connector Protective Caps

**A. MFJ-7720,** \$1.95. Screw-on SO-239 brass chrome plate.

**B. MFJ-7756,** \$2.95. Screw-on NMO, PVC, black.

**C. MFJ-7758,** \$1.04. 5-pack, push-on SO-239/N, vinyl, black.

**D. MFJ-7750,** \$1.04. Push-on N/SO-239, black PVC, retaining strap.

## 2 1/2" HT Antenna Mag Mounts

Get your HT antenna outside of the vehicle!

MFJ-332S, **\$15.95.** HT Antenna Magnet, SMA each end. 12' flex RG-58AU coax.

MFJ-332B, **\$15.95.** Like above but has BNC.

## Mirror/Rack/Pipe Mounts

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 auto's mirror, luggage rack or other. 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, like 342T, but has SO-239, includes 17' coax with PL-259. Mount up to a 1" pipe.

MFJ-344, like 342T, but is a vertical mount for 3/8-24 threaded HF antennas. Mount up to a 1" pipe.

MFJ-342T

**\$11<sup>95</sup>**

Ship Code A

MFJ-342S

**\$15<sup>95</sup>**

Ship Code A

MFJ-344

**\$11<sup>95</sup>**

Ship Code A

## Deluxe Mirror/Pipe Mount

MFJ-340S/M SO-239

**\$37<sup>95</sup>**

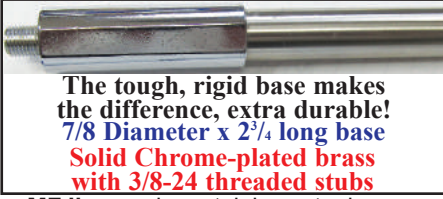
Ship Code A

**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 diameter). 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. Convenient thumb/finger turn knob. 10' coax with PL-259. 17' 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.

# 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.

4 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. MFJ-1979, \$64<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, \$24.95.** 230 uH loading coil, 10 turns/inch.

**B. MFJ-1977, \$49<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 Meters.

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, \$44<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" diameter by 2 3/8 inches long chrome plated brass base. 7/16 inch bottom, .10 inch top section with 5/16 inch diameter round ball tip.

**10 feet** fully extended. Has seven sections. Collapses to 20 inches for easy storage and travelability.

**D. MFJ-1974, \$39<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, \$15<sup>95</sup>**

**4.5-foot** stainless steel telescopic whip. Great for mobile or base/fixed operation. Covers 2 and 6 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. 22" collapsed.

**MFJ-1963, \$11.95**

**6' SuperStik™** Stainless steel telescopic whip. Great for building antenna projects -- use as a tuning "stinger" on verticals, top section for center-loaded or base-loaded QRP antenna, or use two for a "trick-stick" style dipole. 1.2 oz. 6' extended, 14" collapsed. 6 sect., 9/32" bottom, 7/64" top. 10-32 stub mount.

**MFJ-7749, \$5.95.**

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 3/8x24 threaded connectors.

**A. MFJ-1966, \$29.95.** 108 inches.

**B. MFJ-1964, \$24.95.** 72 inches.

A B C D E

B A

## 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).

Extra long 10' (19" collapsed) whip lets you get out and work rare DX! 4 1/2" (23" collapsed) stainless steel whip for mobile. Each has 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. Movable sleeve adjusts frequency. Nylon-tipped thumb-screw locks sleeve. Wing nut to connect a matching capacitor or inductor for 1:1 SWR. 3/8x24 mount. 200W. Add coax, ground/counterpoise.

### Portable Screwdriver Antennas

**MFJ-1661** covers 40-2M with 10 foot whip. Covers 6-20 Meters with 4 1/2 foot whip. 12 long by 2" diameter. One pound.

**\$149<sup>95</sup>**

MFJ-1661 Ship Code C

**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" diameter. Just 1.8 pounds.

**MFJ-1664** covers 80-6M with 10 foot whip. Covers 6-40 Meters 4 1/2 ft. whip. 24 long by 2" diameter. Just 1.8 pounds.

**MFJ-22, \$6.95.** Shunt matching coil with solder lugs. For use at base of mobile and screwdriver antennas with high SWR.

### Mobile Screwdriver Antennas



**MFJ-1662** covers 40-2M with 4 1/2 foot mobile or 10 foot fixed operation telescoping whip. Continuously adjustable loading coil is 15 long by 2" diameter, 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 long by 2" diameter, 2.6 lbs.

**\$189<sup>95</sup>**  
MFJ-1668 Ship Code D

# Tarheel Antennas *Without a doubt... the best built, best looking, best performing screwdriver antennas in the world!*

## Screwdriver Antennas and Controllers



**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 6' whip. Ship Code D

**TH-100A-HP** provides continuous coverage from 3.4 to 28 MHz with 6' whip. This is, without a doubt, the *best built, best looking, best performing and highest power motorized antenna* for its size and design in the world.

Pre-installed sensors lets you add auto controllers (below).

All CNC machined components are either aircraft aluminum or stainless steel and blue-printed -- (take 100 antennas apart, mix them up and reassemble them and they will all work the same!).

**Get the Package!**  
**TH-100A-HPKG** ... \$795.95  
 100A-HP, whip, MT-1 w/quick disconnect, coax, seal, control cable, manual switch, ferrite decoupling core, coil, holder/fuse, 3/8-24 stud, silicone dielectric.

Coil form is 2" diameter, made of fiberglass. Antenna builders know fiberglass is better but they choose not to use it because of expense and machining difficulty.

14-gauge wire used for high power capability, wound at eight turns an inch for maximum efficiency. Decoupler is CNC machined for tight tolerances with custom fingerstock designed to contact three turns of coil with over 25 lbs. of combined contact pressure. Run 1.5 kW PEP *trouble-free*.

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

windows. Uses *Powder Coat Paint System* -- Folks this is not spray paint in a can. Get a finish that looks glossy and lasts as long as a newly painted car!

That's just some of the effort in a Tarheel. You won't be disappointed -- **GUARANTEED!**

TH-MT1, \$152.95. Stainless steel mounting bracket with SO-239 connector and 3 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!

Little Tarheel, when properly installed on your vehicle, will provide continuous coverage from 7.0-54 MHz with 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!*

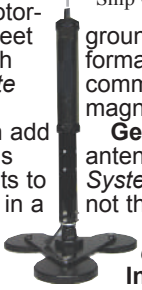
Sensors preinstalled so you can add an auto controller (below). Tarheels are designed for the ham who wants to enjoy HF mobile but not interested in a monster antenna on the car.

Don't let the small size fool you. Designed to be mounted higher on

the vehicle. Mounted higher you get less ground losses which equal better performance. You can also use a more common mount like the MFJ-336T trimagnet mount or MFJ-345T lip mount.

Get the same great look as our other antennas with our *Power Coat Paint System* and *Lexan™ Weather Shield* -- not the flimsy stuff that others use.

Little Tarheel uses the Pittman commercial 12-Volt gear motor. Included standard with the Little



Tarheel screwdriver is the whip, 20 feet of plug-n-play control cable, manual switch 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

### MFJ Truly Automatic Screwdriver Controller



Works 160-6 M! No cables needed! RF sensor reads frequency data and moves antenna to nearest program setting. Save 8 settings per band.

Tune command tunes antenna automatically to lowest VSWR. LCD shows frequency, VSWR, count and motor current.

Use up/down buttons 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 overhangs. Adjustable current limit prevents motor damage, stall-outs.

Meter port for AWM-35B/H SWR/Wattmeter. 3 1/2"Wx3 1/4"Hx1 1/4"D". 4-pin molex matches most screwdrivers.

MFJ-1928  
**\$244.95**  
 Ship Code A

### Programmable Screwdriver Controller



Save 10 favorite antenna positions in memory and quickly return to saved positions.

Up/Down buttons manually move antenna to desired position. 4-digit counter gives precise position. *AutoPark™* automatically bottoms antenna for parking in the garage. *Resets and calibrates* each time -- stops antenna slippage, count errors. *Dead-OnSTOP™* auto reverses motor briefly before it stops--eliminates overshoot.

*Stall-Protector™* auto detects motor stall, shuts off power to motor. Use with single and dual magnetic sensors. Requires 12 VDC. 3 1/2"Wx3 1/4"Hx1 1/4"D".

MFJ-82, \$34.95. Magnetic Sensor for High Sierra screwdriver antennas.

MFJ-83, \$11.95. Hi-Q magnet sensor.

MFJ-1924  
**\$149.95**  
 Ship Code A

### Automatic Screwdriver Antenna

For Kenwood, Icom or Yaesu rig equipped with CI-V interface. Plug controller to rig and the MFJ-1927 receives frequency data and will automatically tune your screwdriver. All features of MFJ-1924. Includes radio interface cable. 3 1/2"Wx3 1/4"Hx1 1/4"D".



MFJ-1927 K.I.Y.  
**\$179.95**  
 Ship Code A

### MFJ Digital Screwdriver Controller



Tells exactly where antenna is positioned! Retune fast, no guess. *Bright* .40" high-intensity 4-digit LED, precision controller counts -999 to +999. On/off/re-set switch. Easy calibration. 3 1/2"Wx3 1/4"H x1 1/4"D inches.

**Rig Interface Cables Available ...**

RJ-DB9KY, \$27.95. Kenwood, Yaesu rigs with DB9 serial port, com port.

RJ-8MY2, \$27.95. For Yaesu 8-pin mini Din rigs with a Cat/Linear port.

CB-35, \$5.95. Icom rigs, 3.5 mm remote.

MFJ-1922B  
**\$115.95**  
 Ship Code A

## MFJ 10-band HF/VHF Mobile Antenna

MFJ-1699S/T  
**\$74<sup>95</sup>**  
 Ship Code C

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 49.5".

**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. 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 trunk storage. Easy-on, easy-off 3/8x24 stud. Use as a center loaded antenna with a bottom mast to improve efficiency.

MFJ-2420T  
 (20 Meters)  
**\$34<sup>95</sup>**

MFJ-2440T  
 (40 Meters)

## HF/VHF/UHF Mobile

MFJ-1456  
**\$159<sup>95</sup>**  
 Ship Code C

Free NMO Adapter!

This new mobile antenna lets you operate all of your favorite HF/VHF/UHF bands as a base station antenna or as a mobile.

**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 screwdriver 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-1456  
 HF Loading  
 Coils



## 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  
**\$99<sup>95</sup>**  
 Ship Code C

**It** only takes minutes to attach a trunk lip mount (MFJ-345T, \$44.95), mirror or luggage mount (MFJ-342T, \$11.95) or tri-magnet mount (MFJ-336T, \$37.95).

**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!



## MFJ HF Hi-efficiency Mobile

Continuous Wide Band Coverage: 40-2 or 20-2 Meters

MFJ-1652  
**\$89<sup>95</sup>**  
 20-2 Meters  
 Ship Code B

MFJ-1654  
**\$99<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 position to change the band you

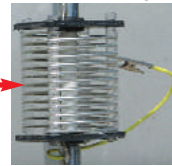
want to hear quickly.

**It** is super-easy-to-install, both 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.

**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, \$64.95.**

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, \$74.95.**

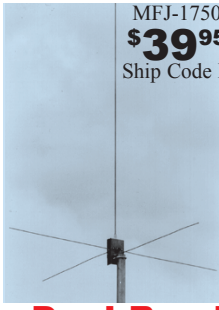
Hi-Q air-wound loading coil only for 40-2 Meters, as used on MFJ-1654. 2 inches diameter by 6 inches length. This is the same coil used in our popular big ear and big stick antennas.



# MFJ 5/8 Wave 2M Ground Plane

MFJ

For an incredible \$39.95, 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  
\$39.95  
Ship Code B

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. **Shunt-fed matching network** gives lowest possible SWR over entire 2M band. It also bleeds off unwanted static. You get MFJ's **RapidTuneRadiator™** for quick accurate tuning. **Ceramic** insulator gives low RF loss. Result? Maximum power is achieved. **Easy** installation to any 1 to 1½ 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 MatterWhat™** one year limited warranty. **Just** \$39.95 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, \$39.95.** 2-Meter 5/8 Wave. **MFJ-1752, \$39.95.** Like MFJ-1750 but covers 220 MHz, 5/8 Wave.

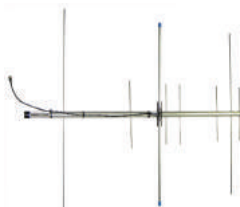
## Dual Band 144/440 Ground Plane



MFJ-1754  
\$44.95  
Ship Code A

**Dual band 144/440 ground plane** antenna is small, lightweight and super easy to mount to any 1 to 1½" mast, (not included) with a single included U-bolt -- you'll have it up and operating anywhere in just minutes. Great for backpacking. Mount inside to get on-the-air quickly. Extra long range on 440 MHz with high gain halfwave over quarter wave antenna and solid 1/4 wave performance on 2M. 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.

## MFJ Dual Band 144/440 MHz Yagi



MFJ-1760  
\$99.95  
Ship Code B

A whopping 8 dBi gain on 2-Meters and 6 dBi gain on 440 MHz. 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. Longest element is 40.5 inches and the boom is 45 inches. Mast diameter is 1.5", 2 pounds.

## Improved 1/4 Wave Ground Plane



MFJ-1740  
\$34.95  
Ship Code A

For \$34.95, 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. 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.

## MFJ 7 element 144/440 MHz Yagi



MFJ-1768  
\$109.95  
Ship Code C

Get 7 elements on 440 MHz and 4 elements on 2 Meters. Exclusive dual band balanced feed with *Ferrite Choke™* decoupling prevents pattern skewing-- gives low SWR. 1/4" 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/Package or horizontally for SSB with single included U-bolt on 1-1½" mast/tower. Includes 5", 1½" diameter boom, two pounds. Elements are electrically isolated from boom.

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 1½" mast. Can be cut for 220 or 440 MHz. A cutting chart is included.

## Portable 3-element 2-Meter beam



MFJ-1763  
\$59.95  
Ship Code B

**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. Center mount to use vertically on FM or horizontally for SSB. By rotating it you can minimize QRM. Also mounts vertically or horizontally on the leg of a tower . . . great for Packet and *Packet-Cluster™*. Compact 2¾' boom gives 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 reflector. 2 lbs. 30½"x1¾"x1½" boom. Mounts easily to mast or tower with single included U-bolt. Mast not included.

## MFJ 2-Meter wide-band Yagi

Covers the entire 2-Meter Band from 144-148 MHz

Our versatile six-element 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!



MFJ-1852  
\$74.95  
Ship Code C

Whether working weak-signal CW, SSB, digital, satellites, or FM, you'll appreciate MFJ-1852's 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.

## Stacked 2-Meter 5/8 Wave

**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. Excellent 6 Meter full half-wave centerfed antenna. Mounts vertically for FM/package or horizontally for SSB. U-bolt (included) to any 1 to 1½ inch mast or tower leg.

**MFJ-1766, \$134.95.** Gives you *four* times the gain of a single 5/8 wave. Two MFJ-1764 antennas, phasing cables. Get double the gain on 6 Meters. **MFJ-1765, \$44.95.** Includes phasing cables for 2 MFJ-1764s.

MFJ-1764  
\$64.95  
Ship Code B



# MFJ Pulsar™ 6M/VHF/UHF/1.2 GHz Base Antennas

**MFJ's Pulsar™ Base/Repeater Antennas** are 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 - \$159.95.** Pulsar ULTRA MightyGain™. Dual Band 144/440 MHz Base/Repeater Antenna. is our highest gain Pulsar™. 8.3 dB on 2-Meters and 11.7 dB on 440 MHz. 17 ft., 3 sections. SO-239, 200 Watts.

**MFJ-1526N - \$164.95.** Same as MFJ-1526, has "N" connector.

**MFJ-1524 - \$129.95.** 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 ship code C.

**MFJ-1521, \$64.95.** Pulsar Mini is a limited space VHF/UHF Antenna. 4.5 feet tall but gives BIG gain, 3dB on 2M, 5.5dB on 440 MHz. Perfect for balconies, attics, limited spaces.

**MFJ-1522 - \$74.95.** 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 Watts.

**MFJ-1516 - \$109.95.** 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 - \$129.95.** 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 one section. SO-239 Connector. Handles 200W.

**Quadbander covers 6 M and 144/220/440 MHz**

**MFJ-1538 - \$134.95.** Pulsar VHF Quad-Bander™. Like MFJ-1536, but covers 6M/144/220/440 MHz.

**MFJ-1532N - \$109.95.** 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. 5½ ft. "N" connector. 200 Watts.

## MFJ 6-Meter Antennas

### MFJ 6-Meter Moxon Ant

MFJ-1896  
**\$74.95**  
Ship code B

Handles  
1 kW

**6-Meter Moxon** for limited space has low SWR

and broad cardioid pattern with 5.5-dBi forward gain, high front-to-back ratio. Element span is 7 feet on a 34" boom with turning radius of under 4'. Winter-storm tough but extremely lightweight, 5 lbs. SO-239 pigtail feedpoint. It's a perfect choice for getting on the "magic" band as sun spot count rises and legendary band openings return. It's your best choice to take on those exciting mountain-topping and rover adventures!

### MFJ 6-Meter Yagi

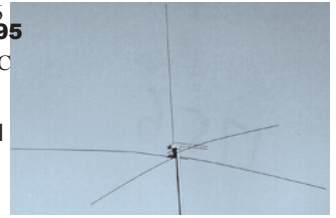


**Super** lightweight 6 Meter Yagi will quadruple your effective radiated power over a 1/2 wave dipole. 6-foot boom, 3-elements. Just 2 lbs. Handles 300 Watts PEP SSB. Mounts vertically or horizontally. Gives a great front-to-back ratio. It's the perfect match for your MFJ-9406 6-Meter Adventure Radio™.

MFJ-1762  
**\$109.95**  
Ship code C

### MFJ 6-Meter Vertical

MFJ-1756  
**\$109.95**  
Ship code C



**Omnidirectional low-angle vertical** 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  
**\$89.95**  
Ship code B

Handles  
1kW!

MFJ-1895  
**\$111.95**  
Ship code B

**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, 10-Meters spans a mere 12' on a lightweight 50" boom. Just 8 lbs. 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

hardware. SO-239 pigtail. MFJ-1895 for fifteen meters spans 16' 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  
**\$34.95**  
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 . . .**

**10-Meters is Wide Open!** 11-ft. vertical lets you work all the DX you can handle! Features lightweight 11-foot radiator and two 6' 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 -- attach it to an existing mast or pole with ease!

**MFJ-1790** covers entire 10-meter band (28.0-29.7 MHz), 300W PEP SSB. **MFJ-9410X, \$309.95.** Ten Meter Adventure Radio with microphone.

MFJ-1790  
**\$74.95**  
Ship Code B



### Scanner-Discone Antenna receives 25-1300 MHz, transmits 50-1300 MHz



MFJ-1868  
**\$74.95**  
Ship code C

**Ultra wide-band antenna** receives 25-1300 MHz.

Perfect for scanners. Transmit 50-1300 MHz. Handles 200 Watts. Ideal for 6/2/1¼ Meters, 70/33/23 CM ham bands. Test various transmitters on single coax. Includes SO-

239 connector, 50 feet coax, stainless steel elements and mounting hardware.



MFJ-1866  
**\$54.95**  
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

MFJ

## NEW! MFJ-897 for Yaesu FT-897D Rig!!!

MFJ-706/7000/897 are *Emergency Communications (EmComm)* boxes that turn your ICOM IC-706, IC-7000 or Yaesu FT-897D into an instant and fool-proof portable/mobile emergency communications center. Cover HF, VHF and UHF 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.

**Exclusive PeakPowerBoost™** circuit delivers instantaneous SSB/CW power peaks using several Farads of super capacitance.

**Built-in**, full range automatic antenna tuner turns any random wire or other antenna into a highly effective antenna. Simple foolproof automatic tuning is done with a single push of a button.

3/8-24 antenna mount gives you the

### IC-706™ Presentation Stand



MFJ-361  
\$39<sup>95</sup>

Ship Code A

IC-706, mic not included.

**Blend** an entire radio Station into your living room! *Icom™* 706 detached panel and speaker displayed on an attractive compact stand. Put 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 view. Optimized for highly intelligible speech and CW, MFJ-281 speaker can tilt for best sound. Large rubber feet. Hard-ware included to mount your IC-706 detached panel (*must be mounted on Icom MB-63 bracket*). 12Wx1<sup>1</sup>/<sub>4</sub>Hx4<sup>1</sup>/<sub>8</sub>D inches.



MFJ-706  
\$429<sup>95</sup>  
Ship Code D

706/mic not incl.

MFJ-7000  
\$429<sup>95</sup>  
Ship Code D

MFJ-897  
\$429<sup>95</sup>  
Ship Code D

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.

**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 put in the trunk, or on floor or backseat of your vehicle.

### MFJ Truck Trailer Hitch

#### Antenna Mount

**Slides** into trailer hitch slot and a bolt locks it in place. 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. Measures 2Wx2Hx10<sup>1</sup>/<sub>4</sub>D inches.



MFJ-2822  
\$44<sup>95</sup>  
Ship Code B

### MFJ Stainless steel License Plate Antenna Mount

**Replace** your license plate with MFJ-2820 and remount your license plate. Gives a convenient *no-hassle* sturdy mount for most HF/VHF/ UHF antennas -- great for low garages! Holes for 3/8-24 HF or SO-239/NMO VHF/UHF antennas. Braced *stainless steel* construction. Antenna is offset 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  
\$54<sup>95</sup>  
Ship Code B



MFJ-1925/I2  
\$89<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/I2 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** operates anywhere -- apartment, campsite, resort hotel, even the beach. Work 40-10M using included 54" telescoping whip. Mounted on a sturdy, 6x3x6" cabinet. Features *built-in* antenna tuner, field strength meter, 50' RG-58 coax. 200W PEP SSB. It's a



MFJ-1621  
\$109<sup>95</sup>  
Ship Code B

complete portable multi-band antenna -- use it in anywhere. 3/8x24 threaded connector disengages easily, collapses to 22" for easy portability. Place in any electrically clear location, set bandswitch, tune the capacitor for maximum field strength and operate!

MFJ-1644  
\$169<sup>95</sup>  
Ship Code B

### Whip Tuner/Artificial Ground gives instant 80-10M, 150 Watt Antenna

**Add** a short whip and counterpoise and get an effective portable 150W *all-band* 3.5-30 MHz antenna.

Simple-to-use for emergencies. **High** power, hi-Q 3-core variable loading coil efficiently resonates short whip or wire. Identical inductor tunes counterpoise. 30-10M with included 12' telescoping whip and counterpoise.

**Add** longer whip/random wire and external loading coil for more efficient operation especially on 80-30M. 12' whip, hamstick, Hustlers work great.

**Tune** for low SWR with built-in reversible L-network. *Current balun*

decouples radiating elements.

**Tune** for maximum current on *RF Meter* to give 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.

3/8x24 female connector for whip antennas and wing-nut for counterpoise. SO-239. 7<sup>1</sup>/<sub>4</sub>Wx2<sup>1</sup>/<sub>4</sub>Hx2<sup>1</sup>/<sub>2</sub>D".

**MFJ-63, \$44.95.** High-efficiency air-wound 80/40M loading coil with 3/8x24 male/female.

**MFJ-1642, \$139.95.** Like MFJ-1644, 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 . . .

## Two and Four Element Arrays

**Single** band two half-wave element collinear array gives you nearly **2 dB gain** -- about 150% power gain -- **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.

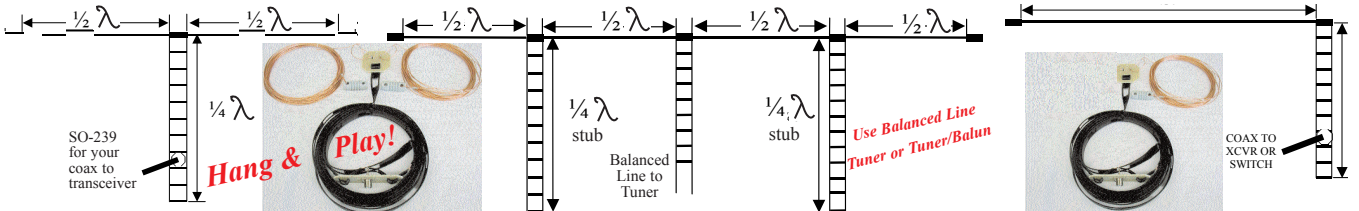
With larger capture area and power gain, you'll hear & work more DX than ever before!

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 is desirable or when a center-fed is not possible or convenient, **hang and play™** end-fed Zepps provide excellent no-compromise performance. The Zepp is a **completely assembled** single band half-wave antenna. Designed for **direct coax feed** and handles a full 1500 Watts with low SWR. Just follow easy installation instructions -- no cutting, soldering, tuning, or trimming. They radiate in a wide broadcast pattern. Feedline/stub can be "bent" at bottom, pulled away at an angle. Super-strong fiberglass feed point insulator, glazed ceramic insulator, heavy-duty 7-strand, 14 gauge hard copper wire, strong solderless crimped-construction. Super-strong custom fiberglass SO-239 mount provides stress-relief for ladder line.



### 2-Ele. Collinear Array, 4 models

- MFJ-6215, \$49.95. 15M, 46' hor., 10' vert.
- MFJ-6217, \$54.95. 17M, 54' hor., 12' vert.
- MFJ-6220, \$54.95. 20M, 70' hor., 16' vert.
- MFJ-6230, \$59.95. 30M, 96' hor., 22' vert.
- MFJ-6240, \$69.95. 40M, 136' hor., 30' vert.

Coax feedline is not included.

All are Ship Code B.

### 4-Element Collinear Array, 3 models

- MFJ-6415, \$109.95. 15M, 92' hor., 10' vert.
- MFJ-6417, \$114.95. 17M, 108' hor., 12' vert.
- MFJ-6420, \$124.95. 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, \$39.95. 15M, 23' hor., 10' vert.
- MFJ-6117, \$44.95. 17M, 27' hor., 12' vert.
- MFJ-6120, \$44.95. 20M, 35' hor., 16' vert.
- MFJ-6130, \$49.95. 30M, 48' hor., 22' vert.
- MFJ-6140, \$59.95. 40M, 68' hor., 30' vert.

Coax feedline not included. Ship code B.

## MFJ W9INN Balun Box

Converts unbalanced coax to balanced ladder transmission line. **Giant** 2-core 4:1 balun wound with **Teflon®** wire. 3 1/4 x 2 1/4 x 7". Heavy duty ceramic feed-thrus. 1500W full legal limit. SO-239. Ground post, mount holes.



MFJ-912  
**\$74.95**  
Ship Code B

## Switchable 1:1 or 4:1 Current Balun/Unun

Switchable 1:1 or 4:1 current balun/unun.

**Transmission line transformer** uses low-permeability ferrite cores to give an amazingly flat response 1.8-30 MHz. Transforms 200/50 ohm balanced or unbalanced loads to 50 ohms. Ground post. 300 Watts. 2 1/2 W x 4 3/4 H x 1 D".

MFJ-911H  
**\$39.95**  
Ship Code A



## 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. 2 low-permeability ferrite cores. 300 Watts. Ground post. 2 1/2 W x 4 3/4 H x 1 D inches.



MFJ-911  
**\$29.95**  
Ship Code A

## Yagi Boom-Mounted Balun

MFJ-2911 1:1 current-choke balun. Ship Code A mounts on the boom of your HF or 6-Meter Yagi to transition from unbalanced (coax) to the balanced driven element. Prevents unwanted pattern distortion from imbalance, radiation from outer surface of coax, element de-tuning, RFI to consumer electronics and noise transfer to the rig's receiver. Toroid style transmission line choke rated for maximum power on SSB/CW delivers an impressive 35 dB of thru-transmission (S21) common-mode isolation. Molded case, SO-239 connector. 5 1/2 W x 2 H x 3 D in.



MFJ-2911  
**\$44.95**

## MFJ Wall-Mounted Balun

MFJ-2912 1:1 current-choke balun. Ship Code A mounts on exterior wall of your shack to keep RF out of your operating position and away from internal house wiring. Prevents electrical noise generated in your location from migrating up to the feedpoint and raising your radio's noise floor. Toroid-style transmission-line choke is rated for maximum legal power on SSB/CW. Delivers an impressive 30+dB of thru-transmission (S21) common-mode isolation on 80-10M. Disconnect point for lightning protection. Stainless hardware, rugged components. SO-239. 4 W x 2 1/8 H x 2 3/4 D".



MFJ-2912  
**\$44.95**

## MatchMaker™ Feed Network

MFJ-2975H 4:1 current balun. Ship Code A. **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".



MFJ-2975H  
**\$44.95**  
Ship Code A

MFJ-29100H, \$44.95. 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  
**\$64<sup>95</sup>**  
Ship Code B



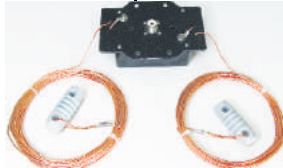
**MFJ-2010 Ultra-Lite™** for 40/20/10/6M, 300 Watts PEP. Perfect for low-profile portable and QRP operation. Weighs less than two pounds and pulls high in the air with lightweight cord.

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 DX on these bands. If you hear it, you'll work it -- even QRP!

**MFJ-2013, \$84.95.** 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 30 Meters. Brings a whole new meaning to 30-Meter QRP. 86 feet long.

40/20/10/6M  
1.5 kW  
MFJ-2012  
**\$84<sup>95</sup>**  
Ship Code B



**MFJ-2012 Power-Lite™** for 40/20/10/6M, 1500 Watts PEP CW/SSB. 67' long. Long leg is 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. Pulled to 200 pounds.

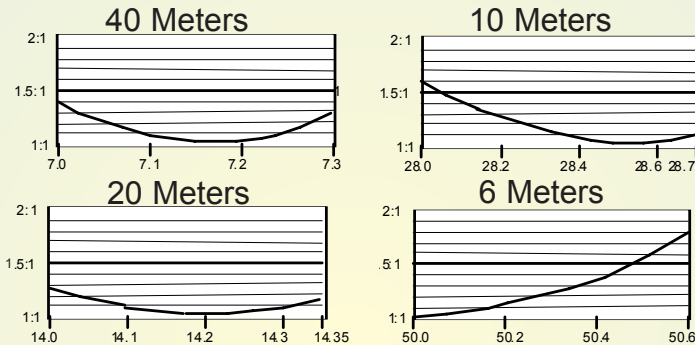
75/40 Meters  
1.5 kW  
MFJ-2014  
**\$109<sup>95</sup>**  
Ship Code B



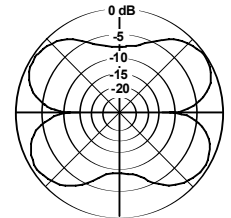
**MFJ-2014 Power-Lite™** for 75/40M, 1.5 kW PEP CW/SSB. Replace your old 75-M dipole and add 40M coverage with up to 9-dBi of powerhouse gain! Rugged 122' long. Great for foreign broadcast and 7-MHz! Long leg is 90' 6", short leg (coil) is 30'.

**MFJ-2016, \$139.95.** Power-Lite™ for 160/75/40 Meters, 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 ft.

## MFJ-2010/2012 VSWR Graphs

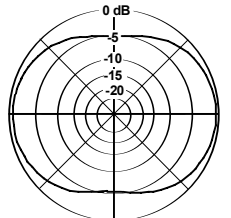


40-Meter Pattern, MFJ-2014  
20-M Pattern, MFJ-2010/12



Outer Ring 9.1 dBi

75-Meter Pattern, MFJ-2014  
40-Meter Pattern, MFJ-2010/12



Outer Ring 6.5 dBi

## New! MFJ QuikStik™ Spike Mount -- Push into ground, screw on an antenna!

For hams on-the-go to their next adventure or for those at home needing something QUICK and easy-to-hide!

MFJ's QuikStik™ Antenna system consists of a durable 4 ft. 3/8" diameter copper bonded steel earth ground rod, 3/8-24 threaded HF antenna pipe mount with SO-239 for your coax run, and twenty-five feet of counterpoise wire for coupling to the ground rod.

It's super efficient and a very QUICK set-up. Just set the mount, push the rod into the ground, add your antenna, counterpoise, coax and operate!!! Use hamsticks, tele-



MFJ-1936T  
**\$39<sup>95</sup>**  
Ship Code B

scopic 20-6 Meter whips, solid whips, screwdrivers, even motorized screwdriver antennas if you wish.

The copper ground rod is tough and will last for years of superior service. A pointed end makes it easy to push into the ground. Helps bleed off static and RFI and prevent RF hot spots. A wire coupler is built onto the ground rod, just unscrew and screw back for QUICK wire adjustment.

The mount is tough aircraft quality

aluminum and will hold up to a 1" pipe. SO-239 gold-plated connector has lock washer under the 3/8-24 connector.

MFJ includes your 25 ft. coated wire for your counterpoise. All you need to do is add your antenna and coax!!!

### Add an Antenna!

**MFJ-1936TW, \$94.95.** Saves \$10! QuikStik™ antenna system with MFJ-1979 17 foot telescopic whip antenna.

**MFJ-1936TWC, \$144.95.** Saves \$10! QuikStik™ antenna system with MFJ-1979 17 foot telescopic whip antenna and a 40-6 Meter MFJ-67 loading coil.

## MFJ Apartment Antennas . . . Mount indoor or outdoor, windows, balconies . . .



**MFJ-1622**  
**\$109<sup>95</sup>**  
Ship Code C

Operate 40-10M on HF, 6/2M VHF with a single antenna and 300 Watts! Universal mount/clamp attaches to windows, balconies and railings. 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 gets out! Radiator collapses to 2 1/2 ft. for easy storage. 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, \$189.95.** Like MFJ-1625, but covers 6-30 Meters.  
**MFJ-63, \$44.95.** High-efficiency air-wound 80/40M loading coil with 3/8x24 male and female connectors. For whips, verticals.



MFJ-1625  
**\$219<sup>95</sup>**  
Ship Code C

The ultimate portable HF vertical antenna!

In this kit, you get a 2.5" dia., 5" 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  
**\$59<sup>95</sup>**  
Ship Code B

# MFJ 4-Band Octopus Antenna

Choose any 4 bands: HF/VHF/UHF

**Octopus antenna hub turns your hamsticks into four fully balanced dipole antennas in minutes!**

Mix and match any four HF/VHF/UHF bands.

**Example:** screw-in 80, 40, 20 Meter hamsticks and a dual band 2M/440 MHz whip (two on each band) on opposite sides. Now you have an automatic bandswitching 5-band dipole! Rotate it for maximum signal and minimum QRM and noise with a small rotator like **Hy-Gain AR-500, \$159.95.**

**Works** at any height, low for local NVIS and high for DX. At a fixed height, (say 20-30 feet) use 80-Meters for NVIS and 20-Meters for low-angle DX.

**Mounts** on masts up to 1-inch diameter. Just use a fiberglass pole on a tripod and you're on the air!

**Perfect** for casual portable operation, limited space, HOAs, field day, camping, ARES during disasters.

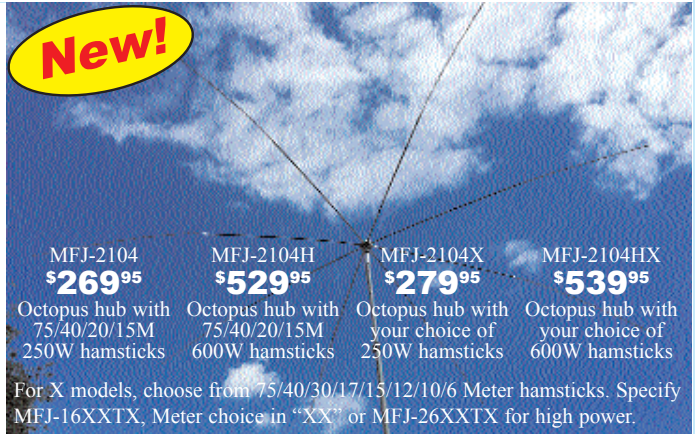
**Single** coax feed, built-in balun.

**Interaction** between bands is minimized because the ends are spaced apart at a large angle.

**You don't** need an antenna tuner if you carefully tune each dipole. An easier way is to just set each dipole approximately on frequency and use an awesome automatic antenna tuner like the MFJ-993B to operate and to widen the bandwidth.

**Lightweight**, 14-foot diameter. Hamsticks break down to about four feet for easy storage.

**New!**



MFJ-2104 <b>\$269<sup>95</sup></b>	MFJ-2104H <b>\$529<sup>95</sup></b>	MFJ-2104X <b>\$279<sup>95</sup></b>	MFJ-2104HX <b>\$539<sup>95</sup></b>
Octopus hub with 75/40/20/15M 250W hamsticks	Octopus hub with 75/40/20/15M 600W hamsticks	Octopus hub with your choice of 250W hamsticks	Octopus hub with your choice of 600W hamsticks

For X models, choose from 75/40/30/17/15/12/10/6 Meter hamsticks. Specify MFJ-16XXTX, Meter choice in "XX" or MFJ-26XXTX for high power.

## Tough Octopus Hub

**Eight** 3/8-24 threaded connectors for hamsticks. Super strong fiberglass filled ABS base insulator. Your Octopus hub will give you years of trouble-free service!

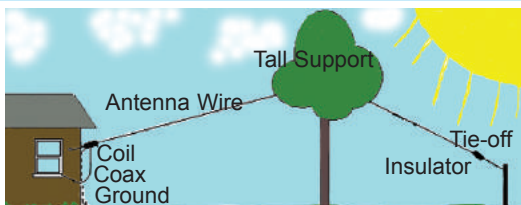
## Super Octopus Deals

**MFJ-2104, \$269.95.** Octopus Hub and 75/40/20/15 Meter (2 each) 250W sticks. Saves \$20!  
**MFJ-2104H, \$529.95.** Hub with 75/40/20/15 Meter (2 each) 600W hamsticks. Saves \$20!



# 80-10M End-Fed Half-waves

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!

**MFJ-1982HP, \$99<sup>95</sup>**

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 limb for an inverted-V, raise 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, \$54.95.** 30 Watts QRP, 80-10 Meters. 132 feet
  - MFJ-1984LP, \$44.95.** 30 Watts QRP, 40-10 Meters. 66 feet.
  - MFJ-1982MP, \$74.95.** 300 Watts Restricted space, 80-10M, 132 ft.
  - MFJ-1984MP, \$64.95.** 300 Watts Restricted space, 40-10M, 66 ft.
  - MFJ-1982HP, \$99.95.** 800 Watts, high power, 80-10 Meters. 132 ft.
  - MFJ-1984HP, \$84.95.** 800W, high power, 40-10 Meters. 66 feet.

## 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's famous G5RV antenna is the most popular ham radio antenna in the world!** Strong signals from G5RVs day or 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. 32.5 ft. ladder line matching section ends in an SO-239 for your coax feedline.

MFJ-1778  
**\$59<sup>95</sup>**  
Ship Code B

Use as Inverted Vee or Sloper, and it's even more compact and needs just one support.

With an antenna tuner 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, \$49.95.** Half-size, 52 foot G5RV JUNIOR covers 40-10 Meters with tuner. Handles 1500 Watts.

## MFJ All Band Doublet

102 foot all band doublet antenna 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. Handles 1500 Watts.



MFJ-1777  
**\$69<sup>95</sup>**  
Ship Code B

MFJ

## Folded Dipole Portable Antennas

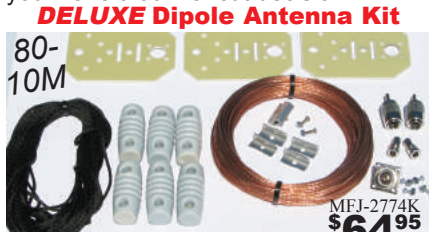
Single band, light-weight, portable folded dipoles. Low SWR, direct coax feed, 200 W.



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 needed to one 80-10M dipole or up to 3 different dipoles for 40M and up. 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-2772K** is like MFJ-2772K plus 3 multi-purpose center insulators, 100' of 1/8" nylon rope, 2 PL259s, 2 RG-58 reducers, SO-239, stainless steel screws/nuts, 6 ceramic insulators. Make G5RV, doublet or dipole. Center plates have pre-punched holes to secure and relieve stress of feedline weight. Use ladder or coax. Pre-punched hole for SO-239.

**Optional feedlines available below.**  
MFJ-18H050, \$24.95. 50' 450 Ohms.  
MFJ-18H100, \$39.95. 100' 450 Ohms.  
MFJ-5850, \$26.95. 50' RG-58, PL259.  
MFJ-58100, \$41.95. 100' RG58, PL259.  
Other Coax, lengths available.

## Dipole Center Insulators

**A. MFJ-16D01, \$7.95.** Super strong custom fiberglass stress relieving center insulator for 450 Ohm ladder line. . . Continued right

## MFJ Single Band Dipole Antennas



MFJ-1779A 265 ft., 160M Ship Code C **\$74<sup>95</sup>**  
MFJ-1779B 135 ft., 80-40M Ship Code C **\$54<sup>95</sup>**  
MFJ-1779C 35 ft., 20-6M Ship Code C **\$34<sup>95</sup>**

Ultra high quality center-fed dipoles give trouble-free operation. Custom injection-molded UV-resistant center insulator, built-in SO239, hanghole. 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 with cutting chart.

## 20 Meter Extended Double Zepp

90', 20M Extended Double Zepp gets a Whopping 3 dB gain -- doubles your power! 80-10M with tuner. 100' ladder line, glazed ceramic end insulators, ladder line stress relief fiberglass center insulator, 7-strand, #14 ga. hard copper wire. 1500W. Requires tuner/balun.



MFJ-1742  
**\$89<sup>95</sup>**  
Ship Code B

## Dual Band HF Dipole Antennas



Short 95 ft. long dual band 80/40 Meter dipole antenna is full-size 40M, ultra-efficient end-loading on 80M. 1.5 kW. Super-strong injection-molded center insulator, built-in SO239, hanghole. Solderless, crimped construction. 7-strand, #14 ga. hard copper wire. Connect coax directly, no tuner needed.

**40/20 Meter Dipole Antenna**  
MFJ-17754, \$64.95. Like MFJ-17758, 42' 40/20M dipole. Full-size 20M, 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.



MFJ-1748  
**\$89<sup>95</sup>**  
Ship Code B

## MFJ Compression Ceramic Insulators

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, \$9.95.** Feed line stress relieving insulator has pre-punched holes to secure, relieve stress of your feedline weight. Can be used with 450 Ohm ladder line or coax feedline. Pre-punched holes for SO-239 connector.

## Aluminum or Fiberglass Mast Guy Rings

Fits standard aluminum, fiberglass tubing from 3/4"-1 1/4" dia. OD. Strong aircraft grade aluminum is 1/8" thick and 2 1/2" OD. Fiberglass are 1/8" thick FR4. Five 3/8" holes punched for 3 or 4 point guy lines. Holes are chamfered which provides for a smooth surface for guy line connection. Buy aluminum-type, MFJ-2830A, B or C, \$2.95 each or a set-of-three, MFJ-2830X, \$7.95. Buy fiberglass-type, MFJ-2840A, B or C, \$3.95 each or a set-of-three, MFJ-2840X, \$8.95.

Model#	Price	Description
MFJ-2830A	\$2.95	2 1/2" OD alum. Guy ring for 3/4" tube.
MFJ-2830B	\$2.95	2 1/2" OD aluminum Guy ring for 1" tube.
MFJ-2830C	\$2.95	2 1/2" OD alum. Guy ring for 1 1/4" tube.
MFJ-2830X	\$7.95	Set of 3 alum. guy rings, has all 3 above.
MFJ-2840A	\$3.95	2 1/2" OD fiberglass Guy ring, 3/4" tube.
MFJ-2840B	\$3.95	2 1/2" OD fiberglass Guy ring for 1" tube.
MFJ-2840C	\$3.95	2 1/2" OD fiberglass Guy ring, 1 1/4" tube.
MFJ-2840X	\$8.95	Set of 3 fiber guy rings, has all 3 above.

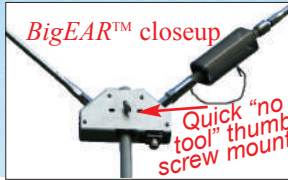
# BigEAR™ 8-Band Portable Dipole

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 is tough, simple and really gets out! Efficiency is the key to launching a big signal in remote areas and MFJ's BigEAR™ does it so well you might forget you just left the hamshack!

## 34' of Radiating Elements! 7.0 - 55.0 MHz!!!

MFJ-2289  
**\$194.95**  
Ship Code C



the feed assembly. Proven to be highly effective across the full tuning range.

**Heavy-duty** components keep it up. 1kW PEP power. Sturdy aluminum and stainless-steel. Includes U-bolt for up to 1 3/4" masts.

**MFJ-1919EX, \$169.95.** Tripod with 18' telescopic fiberglass mast.

**MFJ-1918EX, \$99.95.** Tripod with 9.5' telescopic fiberglass mast.



**MFJ-6204, \$54.95.** BigEAR™ Bag, 5Wx7Hx42L" packs big ear and MFJ-1918EX tripod/mast to the field. Burlap, padding, snaps, zipper, protection pockets, carry handles/carry strap.  
**MFJ-2289PKG, \$319.95.** BigEar™, tripod/mast, carry bag combination.

# Big Stick 8-Band Vertical Antenna

For Top Portable Performance, Carry a "Big Stick"! Like our BigEar™, this portable monopole is a rugged 17' stainless-steel whip paired with an adjustable high-Q air-wound coil. **MFJ-2286 \$109.95** 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 18' long fully extended, but breaks down quickly to 28" in seconds. Fits most any size packs!

**Light Weight:** Just over 2 lbs., you'll hardly know your packing it!!!

**Versatile:** Has MFJ-342T pipe mount -- quickly and easily mounts to a 1/4 or 1/2" 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!

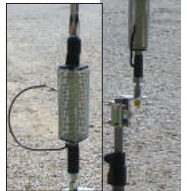
**Rugged Construction:** All aluminum, stainless steel construction ensures years of excellent performance. 1 Killowatt rated.

**Counterpoise kit included:**

Ensures low SWR, high efficiency, maximum site safety.

**BigStick™** is for Ham radio operators on the go and hungry for the great QSO anywhere, anytime!

**MFJ-2286PKG, \$194.95.** BigStick™, carry bag and 25 feet coax.



# 20M to FM Broadcast Multiband Portable Telescopic Dipole Antenna

MFJ-2299 is a rugged continuously adjustable stainless-steel dipole that covers FM broadcast band thru 20M. Sets up quickly and makes a great temporary antenna for apartments, motels, RVs, mountain topping, and boating. Great for field day!

**Full-size 1/2 Wave** element delivers high-efficiency you need to work QRP, DX or monitor distant shortwave broadcasts from any location. Frequency coverage is continuous. Optimum length may deviate slightly depending upon factors such as height

above ground, proximity to nearby objects, etc. Simply adjust for 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 complete kit instead of parts.



# MFJ "HF Stick" mini-Dipole Mount

Build your own 80-6M mini-dipole using two HF mobile whips! Mast mount to 1 1/4" OD. Super heavy-duty solid aluminum construction. Exclusive, isolated dipole elements let you insert balun or coil up coax to isolate feedline. True balanced dipole prevents RF on coaxial shield, eliminates pattern distortion, reduces noise pickup and RFI radiation from coax and provides deep dipole end-nulls for nulling out interference.



# 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 mini-dipole mount.



Your Choice:  
MFJ-2275 - 75M, \$69.95  
MFJ-2260 - 60M, \$69.95  
MFJ-2240 - 40M  
MFJ-2230 - 30M  
MFJ-2220 - 20M  
MFJ-2217 - 17M  
MFJ-2215 - 15M  
MFJ-2210 - 10M  
MFJ-2212 - 12M  
MFJ-2206 - 6M

# Portable Tripods

**MFJ-1919EX, \$169.95** Black steel w/18' ext. mast

**Black steel** strong braced equilateral triangles on a side. Non-skid feet, strong, mast locks.

**MFJ-1918EX, \$99.95** w/9.5' ext. mast

**MFJ-1918, \$59.95** Ship Code C

**MFJ-1919, \$99.95,** 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" diameter. 9 3/4 lbs.

**MFJ-1919EX, \$169.95.** Tripod plus fiberglass mast with Quick-Clamps™. 18' ext. 5' collapsed. 1/8" wall, 3/4" dia. top, 1 1/2" dia. bottom. 15lbs.

**MFJ-1918, \$59.95,** holds 66 lbs. of antenna steady. 6' extended. 1" dia. 38" collapsed, 4" dia. 6 3/4 lbs.

**MFJ-1918EX, \$99.95.** Adds fiberglass mast, extends 9 1/2', Quick-Clamps™. 3.8 ft. collapsed. 3/4" top, 1" bottom. 6.5 lbs.



## 1/2 Wave, 6/9 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 . . .



**WARC Band Version  
 Now Available!**

MFJ-1775 MFJ-1789  
**\$339<sup>95</sup> \$404<sup>95</sup>**  
 Ship Code D Ship Code D  
 6-Bands: 40, 9-Bands: 40/30/  
 20, 15, 10, 6, 2 20/17/15/10/6/2

switching and uses highly efficient end-loading with its entire length radiating.

**You'll hardly see this mini 14' rotatable dipole!**  
**Tiny 7' turning radius fits on smallest roofs -- perfect for apartments and condos.**

MFJ-1775 is inconspicuous and low profile -- not much bigger than a TV antenna and easily turned by a lightweight TV rotator.

**It's no Wimp!** Directivity reduces QRM/noise, lets you focus your signal in the direction you want -- work some real DX.

**Operate 40/20/15/10/6 and 2 Meters -- and run a full 1500 Watts SSB/CW on all HF bands!**  
 Features automatic band

It's ham radio's most versatile rotatable dipole!

Each HF band uses a separate, efficient end-loading coil wound on fiberglass with Teflon™ wire, and capacitance hats at each end (no lossy traps). 6/2M are full-length halfwave dipoles.

**Incredibly** strong solid rod fiberglass center insulator and 6063 T-6 aircraft strength radiator. Assembles in an afternoon. Adjusting one bands has little effect on other bands.

**MFJ-1775W, \$339.95.** WARC band version, 12/17/30/60M only.

## MFJ 20/15/10/6 Meter Rotatable Dipole

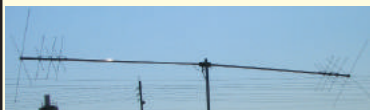
Full-size high-efficiency 26', 20/15/10/6M full legal limit rotatable dipole is super low-profile -- almost invisible from across the street! 13' turning radius, tiny 9 lb. weight fits on small roofs, apartments and condos -- easily turned by a lightweight rotator like Hy-Gain's® AR-303/500. Mount in 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! 1500 Watts SSB/CW. MFJ-1761, \$34.95. 6-Meter add-on kit.



MFJ-1769  
**\$299<sup>95</sup>**  
 Ship Code D

## 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  
**\$424<sup>95</sup>**  
 Ship Code E

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.

Focus your signal in your desired direction so you can work some real DX! Small, low profile.

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, \$369.95.

## MFJ Pipe-to-Pipe Mast Kit

Allows mounting of vertical antenna or mast to tripods (MFJ-1919/1918). MFJ-1909  
**\$44<sup>95</sup>**  
 Ship Code B

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, \$21.95.**  
 Built-in SO-239, super strong, UV resistant, custom injection molded, hang hole for inverted vees, wire tie points, lightweight.

**Center Insulator for Dipole Antennas MFJ-16G01, \$31.95.**  
 Strong, UV resistant, custom injection molded, hanghole, multi-band dipole ends. Accepts 1/4 or 3/8" diam. coax.

**End Insulator for Multi-Band Dipole Antennas MFJ-16H02, \$7.95.** Two for multi-band doublets. 7", (178 mm). Heavily serrated end insulators with 5/16" holes. Aluminum tube inserts in end holes for max loads.

## Tripod Anchor Foot Braces

MFJ-1905  
**\$29<sup>95</sup>**  
 Ship Code A

Hold your tripod extra sturdy with these stainless steel anchor foot braces. 3-pack, stainless hardware fits MFJ or others. Ground secure with two spikes (not included). For high winds or unlevel ground areas for safety. Fits any tripod leg up to 1 1/2" dia. Drilling holes in tripod legs may be necessary.



**MFJ Glazed Ceramic Center/End Insulator MFJ-16C01, \$0.99 each. MFJ-16C06, \$5.45. Six Pack.**  
 Authentic glazed ceramic insulator is extra-strong -- won't break with long antennas, won't arc over or melt even under full legal limit.

Molded ridges give extra-long path to prevent high-voltage breakdown. 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, \$0.99 each. MFJ-16A06, \$4.95. Six Pk.**  
 Authentic glazed ceramic egg insulator, 7/16" holes, 9/64 dia. by 2 1/8" length. High power, will not melt like plastic ones do.



**Ladder Line Center Insulator MFJ-16D01, \$7.95.**  
 Fiber-glass, 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, \$9.95.**  
 Fiberglass ladder line middle insulator. High-strength SO-239 coax connection at midpoint. Quadruple weave-thru ladder line stress relief.

**Ladder Line End Insulator MFJ-16E01, \$10.95.** Strong fiberglass, 450 Ohm end insulator. Double weave, SO-239 coaxial connector.



## 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" dia. Adjustable thumb screws have protective tips.

Huge 8" diameter is great for holding massive antennas or big masts sturdy, safely. Base minimum height is 50", can be set to a max height of 78".

Each leg has independent height adjustment 0-18" with thumbscrew and locking pin -- prevents slipping -- use on uneven ground surfaces.

Non-skid rubber feet, can use anchor foot braces.

MFJ-1921's frame is constructed with black 1 3/8" super strong steel pipes.

**Collapses** fast, easy carrying size of just 7Wx69Hx7D inches. Weighs just 14 lbs. -- true portability.

Optional anchor foot braces, MFJ-1905, \$29<sup>95</sup>. Set of three, see left.



**New!**  
 Mast not included.

Adjustable and locking telescopic legs  
 MFJ-1921  
**\$179<sup>95</sup>**  
 Ship Code F

# MFJ Telescopic Fiberglass Masts

## Lightweight Telescopic Portable Masts -- 20-43 feet!

Pull out each section, twist to lock. Portable, temporary telescopic fiberglass masts extend to the sky! Select from 20 to 43 feet, 5 models.

Each mast collapses for true portability. 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 while traveling, camping, 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 in minutes. 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, \$89.95. 33 ft., light duty top tie ring.
- B. MFJ-1911, \$99.95. 20 ft., light duty top tie ring.
- B. MFJ-1913, \$99.95. 28 ft., light duty top tie ring.
- C. MFJ-1915, \$149.95. 25 ft., for heavy duty use.
- C. MFJ-1916, \$169.95. 34 ft., for heavy duty use.
- C. MFJ-1917, \$179.95. 43 ft., heavy duty top ring.

Model No.	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 21 Feet	MFJ-1904HD 24 Feet	MFJ-1906H 33 Feet	MFJ-1906HD 38 Feet	MFJ-1908H 41 Feet	MFJ-1908HD 48 Feet
\$149.95	\$169.95	\$199.95	\$234.95	\$244.95	\$274.95
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! Made of .125" thick wall fiberglass tubing. Support "real" weight including

small yagis, verticals, loops, full-size dipoles, more.

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 come with military quality UV protected QuickClamps™.

MFJ-1906, \$149.95/MFJ-1906H, \$199.95. 33 feet extended, 6 ft. collapsed, six 6-ft. sections, 13 lbs.

MFJ-1908, \$189.95/MFJ-1908H, \$244.95. 41 feet extended, 7.75-ft. collapsed, six 7.75-ft. sect., 16 lbs.

MFJ-1908HD, \$274.95. 48' ext., 7.75' collapsed, 2 1/2" OD bottom, 1" OD top, seven 7.75-ft. sect., 24 lbs.

MFJ-1906HD, \$234.95. 38' ext., 6' collapsed, 2 1/2" OD bottom, 1" OD top, seven 6' sect., 24 lbs.

MFJ-1904HD, \$169.95. 25' ext., 4' collapsed, 2 1/2" OD bottom, 1" OD top, seven 4 ft. sect., 14 lbs.

MFJ-1904H, \$149.95. 22' ext., 5' collapsed, 9 lbs.

MFJ-1902H, \$129.95. 10' extended, 38" collapsed, weighs 5 lbs., true portability!

MFJ-1900, \$74.95. Mast base mount. See left.

MFJ-13, \$64.95. Set of 5 QuickClamps™. Fits

1/2"-2" OD. Use with fiberglass or aluminum masts.

MFJ-13HD, \$84.95. Extra clamps, 1/2"-2 1/2" OD.



Left: Stainless Steel Hose Clamps (use nut/screwdriver). Fiberglass is slotted.



Right: Military UV protected Quick-Clamps. Guy 2 levels when fully extended.

## 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 \$34.95 forces equal antenna currents in dipoles for superior performance.

Reduces coax feedline radiation and field pattern distortion -- your signal goes where you want it! Reduces TVI, RFI and RF hot spots in your shack. MFJ 1:1 baluns use hi-permeability ferrite beads on high-quality

RG-58 coax. Handles 1.5 kW, 1.8-54 MHz. Has Teflon™ connectors, stainless hardware with direct 14-gauge stranded copper wire connector to antenna. 1:1, 4:1 or 9:1 for dipole antenna uses.

For Center-fed Dipoles . . .

Made of heavy-duty weather protected PVC with Teflon™ SO-239 connector, stainless steel eye bolts.

- MFJ-918, \$34.95. 1:1 balun, 2" diameter by 6 inches length.
- MFJ-2919, \$54.95. 4:1 balun, 2" diameter by 11 inches length.
- MFJ-2920, \$74.95. 9:1 Bead balun, 1.8-30 MHz, 1.5 kW.

For portable uses . . .

Made of heavy-duty weather protected PVC. Pair of red and black 5-way binding posts and Teflon™ SO-239.

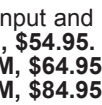


MFJ-918BP \$39.95 Ship Code A

- MFJ-918BP, \$39.95. 1:1 balun, 2" dia. x 6" long.
- MFJ-2919BP, \$54.95. 4:1 balun, 3 1/2" x 3 1/2"
- MFJ-2920BP, \$74.95. 9:1, binding posts.

For Wall mount uses . . .

ABS weather-proof cover with mounting bracket for tower, mast or wall. 7Wx3Hx5 1/2 D in. Teflon™



- MFJ-918WM, \$54.95. 1:1 Balun.
- MFJ-2919WM, \$64.95. 4:1 Balun.
- MFJ-2920WM, \$84.95. 9:1 Balun.

MFJ-918WM \$54.95 Ship Code A



### True 4:1 Current Balun/Center Insulators



MFJ-913 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

MFJ-919 handles 1500 Watts, 3 1/2" W x 3 1/2" H x 2 1/2" D.



### 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 RF "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 is just 5"Wx2" diameter. Handles 1.5 kW, 1.8-30 MHz.

# MFJ Antennas for Restricted Areas

MFJ



MFJ's tiny 36" diameter loop antenna lets you operate 10-30 MHz *continuously* -- including the WARC bands!

**Ideal** for limited space -- apartments, small lots, motor homes, attics, mobile homes. Enjoy DX and local contacts mounted vertically. Get low angle radiation for excellent DX and high angle radiation for local contacts. 150 watts.

**40/30/20/17/15/12/10 Meter ground mounted Vertical**



MFJ-1794  
**\$269.95**  
Ship Code E

**High performance**, low cost, low profile, ground mounted. 7 bands: 40, 30, 20, 17, 15, 12, 10 Meters, 1500 W.

**Permanent** or temporary for restricted spaces.

**Full 11'** collapses to 7 feet. Easily hidden.

**Automatic** bandswitching, low radiation angle for DX, omni-directional. Highly efficient end-loading.

Entire length radiates. Low SWR.

**Ground** or roof mount with radials, ground rod.

**Hardware**, U-bolts included.

**MFJ-1795, \$214.95.** Like MFJ-1794 but covers 40/20/15/10M.

**MFJ-1795W, \$214.95.** Like MFJ-1795 but for 12, 17, 30, 60M.

**MFJ-1901P95, \$254.95.** MFJ-1795 and MFJ-1901 combination.

## MFJ Portable Ground-Coupled Antenna Base



MFJ-1901  
**\$119.95**  
Ship Code E

A stable way to mount verticals, provides an effective ground. Place base in a desired location, push legs firmly into the ground. Attach radials for improved performance. Easily set-up or take down for stealth operation. Stainless steel 2x2' base has folded and tapered stainless legs on corners. Supports 18 foot verticals. Two u-bolts included plus SO-239 and 3/8-24 threaded connectors.

## MFJ Super High-Q Loop™ Antennas

**Super easy-to-use!** 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.

**Welded construction**, no mechanical joints, butterfly capacitor, no rotating contacts, 1.050" diameter round radiator -- not a lossy thin flat-strip -- gives you *highest possible efficiency*.

**Each plate** of the tuning capacitor is welded for low loss, polished. Prevents high voltage arcing. Welded to radiator, nylon bearing, anti-backlash, limit switch, continuous no-step DC motor -- smooth precision tuning.

**Heavy duty** thick ABS plastic has



MFJ-1788/1786 butterfly capacitors



ultraviolet inhibitor protection.

**MFJ-1788, \$529.95.** Like MFJ-1786 but covers 40-15M continuous.

**MFJ-1782, \$434.95.** Like MFJ-1786, has fast/slow tune controller.

### Box Fan Portable Loop

**MFJ-1780, \$349.95.**

The MFJ box fan portable loop antenna is about the size (2x2') of a box fan, complete with handle. Covers 14-30 MHz. Includes MFJ-1782 remote control box with fast and slow tune buttons. Carrying handle.



Inside the MFJ-1780 box fan loop

## MFJ Compact Vertical Antennas 80/40/20/15/10/6/2/UHF



MFJ-2389  
**\$319.95**  
Ship Code D

Get 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 2M, 5/8 Wave with 5.5 dBi gain on 440 MHz.

**SWR** is 1.5:1 or less, 200 Watts PEP SSB, 150 Watts on 6M to 70CM on FM.

**Weighs** 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. SO-239 feedpoint connection.

## HF/6M Ground-Plane Vertical

**Broadband** vertical antenna with no ground radials is super easy to assemble. No tuning! SWR < 1.6:1, 3.5-54 MHz.

Receives 2.0-90 MHz. 250W SSB PEP. 23.5' and only 7 lbs, easily raise it up and down for stealth operation. Use 1 1/8 inch diameter mast. Wind survivability is 67 MPH. SO-239 for coaxial connection.

MFJ-2386  
**\$249.95**  
Ship Code D

## Feather-Lite™ 80-6 Meter Antenna

**Self-supporting** vertical antenna sets up in minutes, collapses to 3.8 feet -- perfect for RVs, vacations, field day.

This is more than a simple "flagpole", this antenna includes a base-loading coil, balun, and counterpoise wires.

**Stout** 1 3/4 inch base supports *twist-lock* fiberglass sections -- telescopes to a massive 31 feet in literally just seconds.

**Air-wound** high-efficiency loading coil is continuously tapped, 3.5 to 7 MHz. No guess work or ground rods needed, connect 4 insulated 12 foot radial wires at the base of the self-supporting antenna.

**Lab** rated Guanella balun gives 30-dB common-mode suppression.

**Use** conductive eyebolt at the top of the antenna mast to install wires for inverted "L" or "T" to enhance low frequency coverage.

**Operation** on 30/20/15/ 12/10/6M requires an ATU. 600 Watts PEP on SSB/CW.

**MFJ-2980, \$109.95.**

**Like** MFJ-2982, but covers 40 through 6 Meters, smaller matching box.

**MFJ-1919, \$99.95.** Portable heavy-duty tripod for mounting. Extra-wide base gives full support to 100 lbs.



# MFJ 160-6 Meter Antenna



MFJ-2990  
**\$379<sup>95</sup>**  
 Ship Code E

**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 Meters. 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

## MFJ All-band Ground Radial Kit

All-band ground radial system kit for the MFJ-2990 and

MFJ-1932  
**\$39<sup>95</sup>**  
 Ship Code A



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.

## 1.5kW 80/160M high-efficiency Matching Network

Improves efficiency on 160/80M for popular 43-foot all band vertical antennas by eliminating SWR-related coax and unun mismatch losses. Fed with a 1:4 unun, 43' antennas have a reasonable compromise SWR on 60-10 Meters. However, at 160/80M it is virtually impossible to match because of the low radiation resistance. If you are using low loss coax, you'll lose power in coax and unun due to bad mismatches. Installs at base of the vertical. Significantly eliminate these losses and put 160/80M back within the tuning range of the tuner. Includes high-voltage insulated base tube, remote power injector with switch for 160/80M and off positions. 1.5kW. Matching box mounted in rugged, weather-resistant PVC. Fits at forty-three foot antenna base, just 3Wx16Hx3D inches.

**600 Watts 80/160 Meter Matching Network MFJ-2908, \$269.95.** Like AV-6110, but handles 600 Watts on 80, 300 Watts on 160M. 3Wx11Hx3D inches.

## 160 Meter Tuner Range Extender for 43' Verticals

MFJ-2904 **\$89<sup>95</sup>** 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. Get over this problem, add the range extender to base of antenna to increase 160M matching capabilities. Reduces reactance, puts antenna in range of the auto/manual tuner. Damaging high-voltage currents reduced -- preventing tuner damage. 1.5 kW. Weather-resistant PVC, ceramic feedthru for input/output. 3 1/2"Wx3 1/2"Hx11D". Use MFJ-998RT/MFJ-994BRT.

**MFJ-2902, \$69.95.** Like AV-6104, 300 Watts, 5-way binding posts for in/out. 3 1/2"W x 3 1/2"Hx7D". Use MFJ-926B/927/993BRT or manual tuners.

fully self-supporting MFJ-2990 -- no guy wires needed -- has the lowest wind-loading and lowest visibility of any vertical antenna! The key is the 6063 Aircraft strength aluminum tubing, it sways and flexes in strong winds 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!

**Weighs** 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.

## 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-2924R for outdoors. "Must have" additions to your RF tool kit!



MFJ-2924M  
**\$34<sup>95</sup>**  
 Ship Code A

MFJ-2924P  
**\$44<sup>95</sup>**  
 Ship Code A

## Universal Vertical Tilt Base

Unique design allows this tilt base to fit most verticals with or without base bracket. Pre-punched hole makes it easy to mount many types 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, masts to 2 1/4" OD. Mount one side of tilt base to the mast and the other to the base. Raise antenna up/down easily before severe weather by yourself -- just walk it up or down. Ground radial holes. 1/8" thick aluminum. Includes (4) 2 1/4" U-bolts, (4) 1 1/2" U-bolts, mast saddles, stainless steel nuts/bolts.

MFJ-1903  
**\$89<sup>95</sup>**  
 Ship Code B



## Ladder Line, Twin Lead, Copper Wire, Installation Rope

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><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/> <b>MFJ-18H050, 50 Ft., \$24.95</b><br/> <b>MFJ-18H100, 100 Ft., \$39.95</b><br/> <b>MFJ-18H250, 250 Ft., \$99.95</b><br/> <b>Additional per foot, \$0.40.</b></p> <p><b>B. 300 Ohm TV Twin-lead.</b> 20# stranded copper wire, insulated/ spaced by black polyethylene. For dipole, j-pole, low power uses.<br/> <b>MFJ-18T050, 50 Ft., \$29.95</b></p> | <p><b>C. Copper Antenna Wire.</b> Flexible 7-strand, 14#, solid-copper wire. Strong, lasts.<br/> <b>MFJ-18G100, 100 Ft., \$29.95</b><br/> <b>MFJ-18G250, 250 Ft., \$64.95</b><br/> <b>Additional per foot, \$0.30.</b></p> <p><b>D. Nylon or Polyester Rope.</b> Black nylon (D) or Polyester dacron rope for wire antenna installations, UV resistant.<br/> <b>MFJ-19A100, 100 Ft., \$11.95</b><br/> <b>MFJ-19A250, 250 Ft., \$21.95</b><br/> <b>MFJ-19C100, 100 Ft., \$14.95</b><br/> <b>MFJ-19C250, 250 Ft., \$34.95</b></p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



# MFJ Low-Noise Receiving Loops

Work DX and ragchew even through horrendous noise!

**Pull weak signals out of static crashes, atmospheric, man-made and power line noise!**

Hear 50 KHz to 30 MHz signals clearer than ever and stations you never knew were there. Power line noise and static just disappears.

**MFJ-1886** drastically reduces noise and interference by receiving the magnetic field and rejecting the electric field. Figure 8 pattern with deep null can be rotated to completely eliminate interfering signals or greatly peak desired.

**Excellent** antenna and preamplifier balance gives a very deep null. An inexpensive antenna ro-tator can position this null to eliminate interference.

**State-of-the-art** Gali MMICs in push-pull give you a preamp with extra wide dynamic range, low IMD and 25 dB of low noise gain. You'll get excellent performance on both strong and weak signals without overload.

**Fully protected** preamplifier -- magnetically coupled voltages to 40V and capacitively coupled voltages to 20V will not damage the preamplifier. The output is protected from transmission line surges induced by distant lightning.

**Use** it anywhere, inside or outside. Your 50 Ohm coax and included Bias-Tee provides signal and power.

**Ruggedly** built to withstand extreme weather. 1-inch OD diameter 6061 aluminum tubing. 36-inch loop diameter. 2½ pounds. SO-239 connector. Use masts up to 1¾ inches.

**MFJ-1886, \$269.95.**

Receive Loop Antenna.

**MFJ-1886TR, \$319.95.** Like MFJ-1886 but adds built-in T/R switch and Bias-Tee.

**New! MFJ-1888, \$419.95.** Like MFJ-1886, covers 50 KHz to 34 MHz (reduced gain to 80 MHz), adjustable gain 1 to 12 dB, and also includes MFJ-1888MC remote multi-coupler controller. +23 dB P1dB and +30dB IP3. Noise Figure: 1.7dB. Multi-coupler has four output ports and one input. +15dB IP3. Noise figure: 2dB. MFJ-1888 can work with MFJ-4113TR transmit/receive switch or biastee power injector.

**New! MFJ-1888MC, \$199.95.** Hook up to four SDR, shortwave or other receivers to one MFJ low noise receive loop antenna. You'll have an incredibly powerful listening station!

This enhanced receiving loop antenna controller has a four port multicoupler. +15dB IP3. Noise figure: 2dB. SO-239 inputs/output, power on/off switch and

MFJ-1886  
**\$269<sup>95</sup>**

MFJ-1886TR  
**\$319<sup>95</sup>**

with built-in Transmit/Receive switch

MFJ-1888  
**\$419<sup>95</sup>**

50 KHz to 34 MHz (reduced gain to 80 MHz) Receiving Loop with adjustable gain 1 to 12 dB and multi-coupler remote control

MFJ-1888MC  
**\$199<sup>95</sup>**

MFJ-1888 controller only

MFJ-1888 Loop Antenna

**New!**

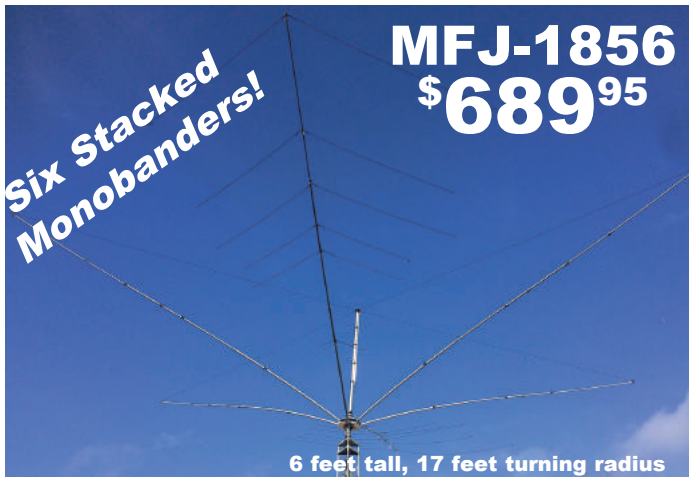
**New! MFJ-1888MC Multi-Coupler Controller**



Front and back of MFJ-1888MC controller.

power "ON" LED indicator. Use 12 VDC or 110 VAC with MFJ-1312D, \$17.95. RF tight all metal enclosure measures a compact 7¼"Wx1¾"Hx5D inches.

## MFJ HexBeam ANTENNA 3-ELEMENTS PER BAND! 6 BANDS: 20/17/15/12/10/6M . . . FULL SIZE ELEMENTS . . . 1.5kW +



Six Stacked Monobanders!

**MFJ-1856**  
**\$689<sup>95</sup>**

6 feet tall, 17 feet turning radius

**The only three element hexbeam in the world!**

**Run with the big guns and pay far less!**

**MFJ-1856** is 6 individually stacked monoband yagis -- on a single feedline!

**Each** yagi is optimized for maximum performance. You'll get the same high gain and nearly equal front-to-back ratio

at far, far less than half the price.

**Works** great as low as 20 feet.

**Full** size elements, no lossy traps or coils, wide bandwidth and low swr across each band gives best possible performance -- no tuner needed.

**Single** feedline lets you instantly jump to where the action is on any band! Never switch antennas or tune -- save time,

increases contest scores.

**QSO** on one band and monitor many other bands with multiple re-ceivers or SDRs and a multi-coupler!

It weighs only 30 pounds and has a short 17 foot turning radius.

**Small** windload, light weight and tiny footprint -- turn with *hy-gain's* CD-45II.

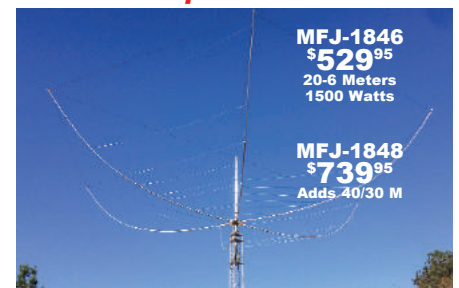
**Instead** of an expensive tower, all

you need is a guyed push-up-pole.

**Exceptionally** strong *symmetrical fiberglass construction* withstands harshest weather. Lessens the effect of rain, wind, snow and ice -- reliable DX.

**See** [www.mfjenterprises.com](http://www.mfjenterprises.com) for full performance specifications.

**2-Elements per band HexBeam**



**MFJ-1846**  
**\$529<sup>95</sup>**  
20-6 Meters  
1500 Watts

**MFJ-1848**  
**\$739<sup>95</sup>**  
- Adds 40/30 M

**MFJ-1846, \$529.95.**

6 Bands: 20/17/15/12/10/6 Meters, 2-elements per band, full legal limit. 25 lbs. Turning Radius: 11 feet.

**MFJ-1848, \$739.95.**

8 Bands: 20/17/15/12/10/6 Meters, 2-elements per band; 40/30 Meters are single elements, full legal limit. 28 lbs. Turning Radius: 14 feet.

# MFJ Cobweb Antenna

For restricted spaces, 6-Bands: 20/17/15/12/10/6 Meters...



Now Includes 6 Meters!!!

New! 40-6 Meters

MFJ-1836  
\$249<sup>95</sup>  
300W SSB/CW

MFJ-1836H  
\$279<sup>95</sup>  
1500W SSB/CW

MFJ-1838  
\$429<sup>95</sup>

## 40-6 Meter Cobweb Super Heavy-Duty, 1.5 kW

New! Super heavy-duty 40-6 Meter Cobweb Antenna. Built to survive harsh northern winters, heavy snow, ice and strong winds -- has super-strong large diameter fiberglass and heavy-duty 14 gauge stranded hard copper wire. 8-bands: 40, 30, 20, 17, 15, 12, 10, 6 Meters, 1500 Watts. 12 feet, 23 lbs.

**Restricted space spoiling your operating fun? MFJ Cobweb puts your call back on the map!**

**This** six-band (20, 17, 15, 12, 10, 6 Meters) full 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.

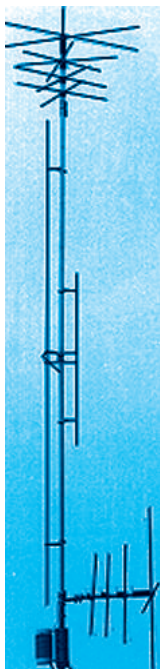
**Outstanding performance!** Horizontally polarized for less local noise pickup plus solid gain over verticals will allow you to work DX easily -- even on QRP. Omni-directional. No radials needed! Works great at low heights. Low SWR is due to MFJ's exclusive Spider-Match™ broadband network. Use lightweight TV hardware to chimney, balcony, mast mount.

**Low in cost, BIG on performance.** MFJ Cobweb Antenna turns your space problem into a huge stacks of QSLs from far away places.

**MFJ-1836HK, \$69.95.** Converts MFJ-1836 to MFJ-1836H to handle 1500 Watts.

**MFJ-1836HK34, \$129.95.** Add-on kit adds 40/30 Meters to MFJ-1835/1835H and MFJ-1836/MFJ-1836H cobweb antennas.

## 1/2-wave, 6-Band no radials Vertical



MFJ-1796 Only 12 feet high with tiny 24" footprint!  
Ship Code F

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, \$319.95.**

WARC version for 12/17/30/60M.

**MFJ-1792, \$204.95.**

80/40M, 33 ft. Requires guying/radials.

**MFJ-1793, \$224.95.** 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:  
80-2 Meters Ship Code F

MFJ-1799X \$369<sup>95</sup>  
40-2 Meters Ship Code F

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.** Incred-ibly 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<sup>®</sup> wire.

**MFJ-1799X, \$369.95.** Like MFJ-1799, but covers 40-2 Meters.

## 7-Band SkyMaster 40-10M Verticals



MFJ-1797 \$349<sup>95</sup>  
Ship Code F

**MFJ-1797, \$349.95,** 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, \$319.95.** 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!*



resistant to 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", 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, \$94.95**

**MFJ-4603, \$94.95. Universal Window Feedthru Panel.**

Four 50 Ohm Teflon<sup>®</sup> SO-239 coax connectors lets you feed HF/VHF/UHF antennas at full legal power limit.

A 50 Ohm Teflon<sup>®</sup> 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.

Pair of high-voltage ceramic feedthru insulators let you bring in 450/300 Ohm balanced lines directly to your tuner.

Has random/longwire antenna ceramic feedthru insulator. 5-way binding posts supply 50 Volts/15 Amps DC/AC power to your outside antenna tuners/relays/switches.

Stainless ground post bonds inside/outside stainless steel panels together and drains away static charges.

**Exclusive Adaptive Cable Feedthru™** brings in rotator/antenna cables, etc. without removing connectors (up to 1 1/4x1 5/8 in). Adapts for any cable size. Seals out rain, snow, adverse weather.



**MFJ-4602, \$74.95**

**MFJ-4602, \$74.95. Our most popular model.** 3 SO-239 Teflon<sup>®</sup> coax connectors feed HF/VHF/UHF antennas. High voltage ceramic feed-throughs bring 450/300 Ohm balanced lines into your hamshack. Has Ceramic feed-thru insulators for long random wire, Stainless steel ground post.

**MFJ-4601, \$64.95**

**MFJ-4601, \$64.95. For coax fed antennas.** 6 high quality Teflon<sup>®</sup> SO-239 connectors for HF/VHF/UHF coax fed antennas and a stainless steel ground post. 1.5 kW.

**MFJ-4601N, \$84.95.** Like MFJ-4601, with N connectors.

**MFJ-4600, \$84.95**

**MFJ-4600, \$84.95. Balanced Line/Coax Feedthru Panel.** 4 sets of ceramic feedthroughs and two SO-239 connectors.

**MFJ-4604, \$104.95**

**MFJ-4604, \$104.95. MFJ Weather-Sealed CableThru™ Window Panel.** 5 Adaptive Cable Feedthrus™, 2 for connectors up to 1 1/4x1 5/8" and 3 for UHF/N size connectors. Adapts to virtually all cables used in ham radio. Seals out weather.



**MFJ-4605, \$169.95**

**MFJ-4605, \$169.95. All-Purpose FeedThru/CableThru™ Window Panel.** Combines MFJ-4603 and MFJ-4604! Gives every connection you'll ever need without drilling holes!

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

## MFJ AdaptiveCable™ Wall Plates

6.95Wx12.1H inches



MFJ-4614 (Four Holes)

**\$39<sup>95</sup>**

Ship Code A

MFJ-4612 (Two Holes)

**\$29<sup>95</sup>**

Ship Code A

MFJ-4611 (Single Hole)

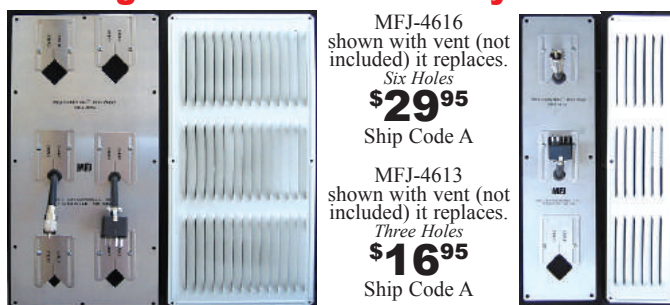
**\$16<sup>95</sup>**

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 1/4x1 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.

## Bring cables thru eave of your house



MFJ-4616 shown with vent (not included) it replaces.

Six Holes

**\$29<sup>95</sup>**

Ship Code A

MFJ-4613 shown with vent (not included) it replaces.

Three Holes

**\$16<sup>95</sup>**

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 1/4x1 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, \$29.95.** Full-size. For six cables.

**MFJ-4613, \$16.95.** Half-size. For three cables.

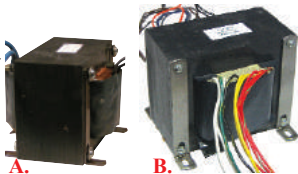




# Select MFJ hard-to-find Components for your Homebrew Projects

## 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.



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

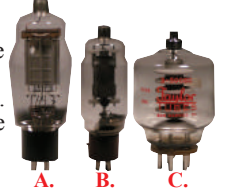


Fig.	Part No. #	Price	Pri. Voltage	SEC Voltg	Current	Dimensions	Weight
A	406-3800	\$34.95	120V	18V	30A	4Wx4Lx3 3/4"H"	11 lbs.
B	406-1109-2C	\$180.00	90-140, 205-250 w/buck boost winding	1. 1047Vac 2. 22 Vac CT 3. 5.2Vac CT	.1 Adc 1.5 Adc 15 Aac	6Wx6Lx5 1/2"H"	26 lbs.

## 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.

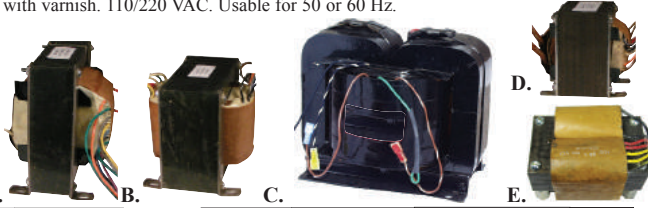


Fig.	Part No. #	Price	Pri. (Volt)	Sec. (Volt)	Dim./Applications	Weight
A	406-1532	\$105.50	110/220 w/buck-boost	1500VAC@.5A 12VAC@1A 6.5VAC@16A	5Wx4 1/4/Hx6 1/4/D 811A 4-tube amplifier	17 lbs.
B	406-1572	\$142.60	110/220 w/buck-boost	900V@.5A 12V CT@1A	6Wx5 1/2/Hx5 1/4/D 572B, 4-tube amp	23 lbs.
B	406-1248-1	\$247.00	110/220 w/buck-boost	868VAC@.5A 22VCT@1.5A 12.8V@5A	6Wx7 1/2/Hx5 1/4/D 3CX800A7 2-tube amp	33 lbs.
C	406-1418-1D <i>Hypersil</i> <sup>®</sup>	\$403.00	110/220 V	2570 Vac@.8A	8Wx7Hx7D 3CX1500A7 3CX1200A7/Z7 2x3-500G amps	32 lbs.
D	406-1419-1J	\$74.00	110/220 V	5.6V@30A 14V@2A	2 1/2 Wx3Hx3 3/4/D 3-500Z filament	5 lbs.
D	406-1419-2J	\$74.00	110/220 V	7.7V@21A 14V@2A	2 1/2 Wx3Hx3 3/4/D 3CX1200A7 Filam	5 lbs.
D	406-1419-3J	\$74.00	110/220 V	5.6V@15A 14V@2A	2 1/2 Wx3Hx3 3/4/D 3CX1500A7 Filam	5 lbs.
E	406-1620	\$49.00	120 V	50V@2A, 32V@1A	4Wx23/4Hx3D	4 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. 3/8" dia. by 7/16" thick.
B	750-0323	\$8.98	Plate cap for 3-500Z tubes. Finned aluminum heat sink with set screw. 1 1/8" dia. by 7/16" 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.



## Amplifier Plates and Filament Chokes

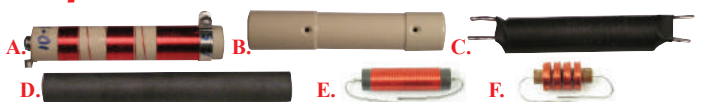


Fig.	Part No. #	Price	Description
A	10-15197	\$24.95	Complete plate choke covers 1.8-30 MHz, includes WARC bands, 225 uH, handles 1.5A, 4 kV. Wound on 1 1/2" dia. x 5 1/8" long glazed ceramic form. Used in Ameritron amps.
B	719F-7380C	\$7.95	Glazed ceramic plate choke form. 1 1/2" dia. by 5" long. Both ends tap for 1/4"-20 screw.
C	10-15115-1	\$19.95	Complete broadband filament choke. Use for 3-500Z, 3CX800A7, 3CX1200A7 and 3CX1500A7 tubes. Handles 30A, covers 1.8-30 MHz. 12 gauge enamel wire, bifilar wound on .5" dia. by 4" long Ferrite rod.
D	412-0109	\$9.00	Filament choke ferrite rod. 5" dia. by 4" long. Used in 10-15115-1.
E	401-4090-1	\$9.60	RF Choke, 90 uH, 1A, ferrite core, 3/8Dx1 1/2"
F	401-6250-1	\$11.95	RF Choke, 2.5 mH, 300 mA, phenolic core, 1/2Dx1 1/2"

## Non-Inductive Resistors ... Ideal for Dummy Loads



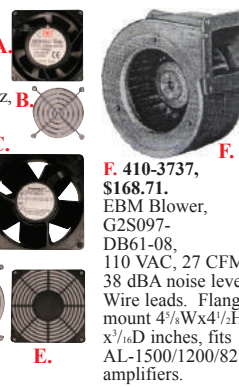
Fig.	Part No. #	Price	Resistance	Rating	Diameter	Length
A	113-1220	\$22.50	22 Ohm	35W cont.	3/4 inches	2.5 inches
A	113-1350	\$22.50	35 Ohm	35W cont.	3/4 inches	2.5 inches
A	113-1450	\$15.00	45 Ohm	35W cont.	3/4 inches	2.5 inches
A	113-2100	\$22.50	100 Ohm	35W cont.	3/4 inches	2.5 inches
B	115-1500	\$20.16	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.			

## Insulating Spacers Cooling Fans and Blowers

These spacers are used to properly isolate your dummy load resistor from the chassis. Withstands high power/frequencies.

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.
- D. 410-4600, \$33.34, Metal Fan Guards.
- E. 410-4586, \$99, plastic.



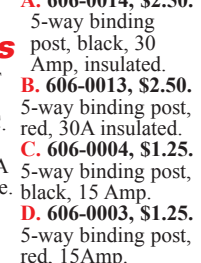
## Feedthru Insulators

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.



## HT Adapter Cables

- A. Release the strain on your HT antenna connector with these adapter cables. SMA or BNC. Flexible, mini coax, 3 feet.
- A. MFJ-5612S, \$16.95. SMA Male to SO-239 adapter cable.
- B. MFJ-5612SF, \$16.95. Female SMA to SO-239
- C. MFJ-5612B, \$16.95. BNC Male to SO-239 adapter cable.



## Select MFJ hard-to-find Connectors, Plugs, Adaptors...



Fig.	Part No.	Price	Description
A1	MFJ-7746	\$8.95 ea.	N Male Reverse to N Female Adaptor
B1	MFJ-7755	\$6.95 ea.	3/8-24 Female Coupler, 1 1/4" length
C1	MFJ-7760	\$5.95 ea.	BNC Male to BNC Female right angle
A	MFJ-7705	\$6.95 ea.	N-Male to SO-239 Adaptor
B	MFJ-7730	\$6.95 ea.	N-Male to SMA Female Adaptor
C	MFJ-7731	\$6.95 ea.	N-Male to BNC Female Adaptor
D	MFJ-7702	\$4.95 ea.	PL-259 to PL-259 Adaptor
E	MFJ-7703	\$8.95 ea.	PL-259 to BNC Female, Right Angle Adaptor
F	MFJ-7733	\$7.95 ea.	PL-259 to "T" SO-239 (2) Adaptor
G	MFJ-7734	\$5.95 ea.	PL-259 Right Angle Adaptor
H	MFJ-7732	\$4.95 ea.	PL-259 to RCA Phono Jack
I	MFJ-7727	\$6.95 ea.	PL-259 to SMA Female Adaptor
J	MFJ-7717	\$6.95 ea.	PL-259 to SMA Male Adaptor
K	MFJ-7737	\$6.95 ea.	PL-259 to BNC Female Adaptor
L	MFJ-7711	\$6.95 ea.	F Female to F Female Coupler, 1.75" length
M	MFJ-7701	\$5.95 ea.	SO-239 to SO-239 Coupler, 1.75" long.

Fig.	Part No.	Price	Description
D1	MFJ-7761	\$6.95 ea.	BNC T-Adaptor, BNC Male and two BNC Females
E1	MFJ-7752	\$8.95 ea.	Nx3 Female T Coupler
F1	MFJ-7754	\$7.95 ea.	SO-239x3 T Coupler
N	MFJ-7719	\$5.95 ea.	SO-239 to SMA Male Adaptor
O	MFJ-7729	\$5.95 ea.	SO-239 to SMA Female Adaptor
P	MFJ-7708	\$4.95 ea.	SO-239 to BNC Male Adaptor
Q	MFJ-7716	\$5.95 ea.	BNC Male to SMA Female Adaptor
R	MFJ-7736	\$5.95 ea.	BNC Male to SMA Male Adaptor
S	MFJ-7718	\$5.95 ea.	BNC Female to SMA Male Adaptor
T	MFJ-7728	\$5.95 ea.	BNC Female to SMA Female Adaptor
U	MFJ-7706	\$7.95 ea.	NMO to SO-239 Adaptor
V	MFJ-7738	\$6.95 ea.	SO-239 to RCA Male or Motorola made plug
W	MFJ-7739	\$6.95 ea.	N-female to N-female Barrel Coupler, 1.75" long.
X	MFJ-7743	\$5.95 ea.	SMA Female to SMA Female Coupler, 5/8" length
Y	MFJ-7744	\$4.95 ea.	SO-239 to SO-239 Coupler, 1 inch length.
Z	MFJ-7745	\$6.95 ea.	Right Angle N Male to N female Adaptor



Fig.	Part No.	Price	Description
1	MFJ-7707	\$7.95 ea.	NMO to 3/8x24 threaded Adaptor
2	MFJ-7710	\$17.95 ea.	3/8-24 to PL-259 Adaptor
3	MFJ-7725	\$7.95 ea.	3/8x24 Antenna Mount Quick Connect Adaptor
4	MFJ-7735	\$12.95 ea.	3/8x24 Antenna Mount Fold-Over Adaptor
5	MFJ-7714	\$5.95 ea.	3/8x24 Chassis Mount with insulating washer
6	MFJ-7748	\$6.95 ea.	SO-239 to 3/8x24 Male or Female adaptor
7	MFJ-7712	\$5.95 ea.	3/8x24 to .10 inch hole whip ferrules
8	MFJ-7715	\$5.95 ea.	3/8x24 to .20 inch hole whip ferrules
9	MFJ-7740	\$2.95 ea.	PL-259, Teflon <sup>®</sup> , nickel plated
10	MFJ-7741	.95 ea.	Coax Reducer for RG-58
10	MFJ-7742	.95 ea.	Coax Reducer for RG-8X
11	MFJ-7721	\$1.95 ea.	SO-239 4-hole Chassis Mount Teflon <sup>™</sup>
12	MFJ-7720	\$1.95 ea.	SO-239 screw-on Protector cover, metal
13	MFJ-7723	\$2.95 ea.	N-Female 4-Hole Chassis Mount, Teflon <sup>™</sup>
14	MFJ-7722	\$2.95 ea.	SO-239 Single Hole Mount, Teflon <sup>™</sup>
15	MFJ-7726	\$1.95 ea.	BNC Female, Chassis Mount

Fig.	Part No.	Price	Description
16	MFJ-7724	\$2.95 ea.	N-Female Single hole Mount, Teflon <sup>™</sup>
17	MFJ-7704	\$8.95 ea.	BNC to dual Binding Posts
18	MFJ-7709	\$7.95 ea.	Dual Banana Plugs, High Current
19	MFJ-7713	\$6.95 ea.	1 Red, 1 Black High Current Banana Plugs
20	MFJ-7700P	\$7.95 pk.	6 Red, 6 Black Banana Plugs / Pack
21	606-0014	\$2.95 ea.	5-Way Binding Post, Black, 30 Amps, insulated
22	606-0013	\$2.95 ea.	5-Way Binding Post, Red, 30A, insulated
23	606-0004	1.95 ea.	5-Way Binding Post, Black
24	606-0003	1.95 ea.	5-Way Binding Post, Red
25	606-1006	\$5.95 ea.	Feed-through Ceramic Insulator with hardware
26	MFJ-7750	\$1.95 ea.	Black PVC Protect Cap for SO-239 w/retaining strap
27	MFJ-11C06	\$7.95 ea.	35A Anderson PowerPoles <sup>™</sup> (6prs) Pg. 31, more info
28	MFJ-7756	\$2.95 ea.	NMO protective cap, rigid, screw-on. Black.
29	MFJ-7758	\$1.95 (5-pk)	N/SO-239 Connector protective cap, soft black vinyl.

### MFJ 2.4 GHz, WiFi Yagi Antenna

MFJ-1800  
**\$34<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 802.11b/g or 2.4 GHz device. Built-in N-type connector, tripod screw mount. Rear/bottom holes for wall or desk/shelf mounting. Use vertically/horizontally. Precision punched aluminum, 18Wx2 3/4 Hx1 1/4 D<sup>9</sup>, 2.9 oz.

#### WiFi Yagi Antenna-to-Computer Cable

MFJ-5606SR, \$29.95.  
Reverse SMA male to N-male, 6' RG-174 coax line.

### HDTV Outdoor Antenna System

MFJ-2608  
**\$84<sup>95</sup>**  
Ship Code D

Super active outdoor antenna gives high quality far-ranging (up to 120 miles) reception for UHF/VHF TV, FM radio. Parabolic receiver focuses reception, 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 output. Twist/lock mount, mast not included.

### 64 Feet, 11-Section Telescopic Aluminum Mast

MFJ-1965  
**\$209<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 light-weight 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. Bottom section is a hefty 2" ODX.120 wall. 24 lbs.

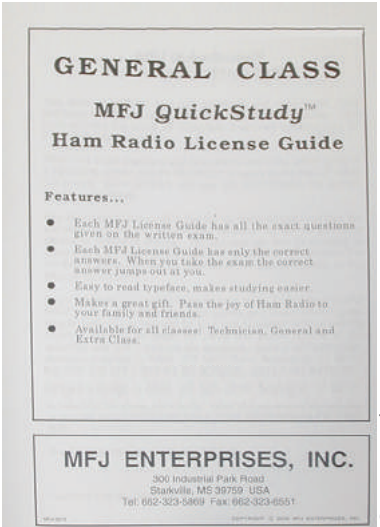
#### Base Mount for Fiberglass and Aluminum Masts

MFJ-1900, \$74.95.  
Complete base assembly kit includes mounting plate, insulators, hardware, SO-239, etc. for fiberglass and aluminum mast installations. Fit up to 2.0 inches OD masts. Perfect companion for your 64 foot aluminum telescopic mast -- it will hold it steady and safely.

# MFJ QuickStudy™ Ham Radio License Guides

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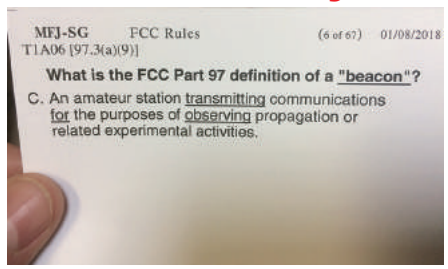


<b>MFJ-3211-Technician</b>	<b>MFJ-3213-General</b>	<b>MFJ-3215-Extra</b>
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MFJ-3211 Use  
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 money back\*.  
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 Study™** concept? The  
 objective is to pass the

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**Each MFJ license guide has all of the exact questions given on the written exam. Each question on the exam has a multiple choice answer. But why take the extra time to study the wrong answers? It'll just add to the confusion and doesn't help you pass the exam. MFJ gives you only the correct answers.**  
**When you take the exam the answer jumps out at you -- no confusion, nothing to clutter the mind. It's an instant correct answer because you only studied the right answer.**  
**Study the material thoroughly a few times, pass the test and enjoy the hobby of ham radio -- it couldn't be simpler.**  
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**MFJ-3211, Tech, MFJ-3213 General, MFJ-3215, Extra.**

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MFJ QuickStudy™ Flash Cards will take you from no license all the way to

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**MFJ highlights the KEY words in the question and answer. QuickStudy™ Flash Cards** come in a handy cardboard box that keeps your cards pressed and ready for the next study session. Just read the question and the right answer.  
**When you get ready to take a test,**

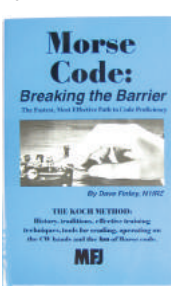
just turn them over and check yourself. The complete question and multiple choice of answers are on the back.  
**This is what you will see on the test.** And then you will understand how the answer just sticks out at you.  
**Technician . . . MFJ-3221, \$31.95**  
**General . . . MFJ-3223, \$35.95**  
**Extra . . . MFJ-3225, \$49.95**  
**General/Extra Set. . . MFJ-3226, \$74.95**  
**Best Deal!**  
**Buy all 3 sets . . . MFJ-3229, \$94.95**



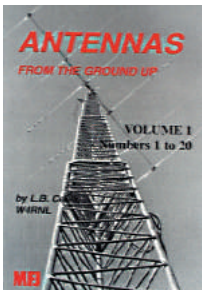
**MFJ-3507, \$21.95.** Doug DeMaw, W1FB, gives a wealth of info on circuits, including transmitter and receiver fundamentals, mixers, more.



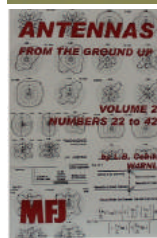
**MFJ-3506, \$21.95.** Legendary textbook from Doug DeMaw, W1FB, emphasizes the practical aspect of ferromagnetic core material.



**MFJ-3400, \$21.95.** Avid CW enthusiast David Finley, N1IRZ gives the first book to detail the Koch method and training techniques for fastest code proficiency.



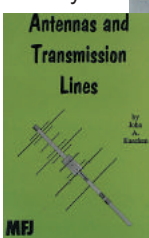
**MFJ-3306, \$21.95.** Practical level antennas from the ground up by L.B. Cebik, W4ARNL. Concise, clear chapters in Vol. 1



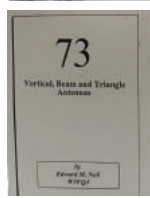
**MFJ-3307, \$21.95.** Volume two of Cebik's Antennas from the Ground Up picks up where Volume one left off. Has a bunch of All new antenna projects! Never run out of antenna building fun!



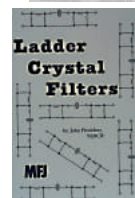
**MFJ-38, \$21.95.** Easy-Up Antennas by Ed Noll, W3FQJ. How to build and how to put up fantastic, fully-tested practical designs. Wire, dipoles, verticals, how and when to use a balun, etc. Great knowledge.



**MFJ-3305, \$21.95.** 320 pages, 37 concise chapters. This great book gives you the underlying theory, powerful antenna building techniques, special antenna building projects and much, much more!



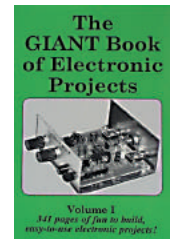
**MFJ-3303, \$15.95.** "73 Verticals, Beams, and Triangle Antennas". By Ed Noll, W3FQJ. Theory, building techniques. Learn from one of the great masters.



**MFJ-3509, \$21.95.** Ladder Crystal Filters are required in many different electronic applications. Generous references, John Pivnichny, N2DCH.



**MFJ-3302, \$15.95.** 73 Dipole & Long Wire Antennas by Ed Noll, W3FQJ. The Classics! Build, test, and play with these classic antenna designs.



**MFJ-3501, \$21.95.** 30 different electronic kit projects, schematics, part placement. Transceivers, receivers, filters, shortwave, spy equipment, ham toys, some kid friendly, etc.

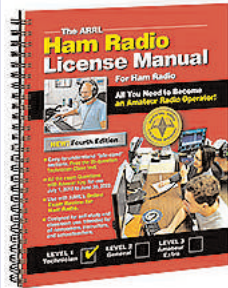
### MORE GREAT MFJ SELECTIONS

- MFJ-3502, \$16.95.** Solid State QRP Projects. By Ed Noll, W3FQJ.
- MFJ-3301, \$15.95.** Troubleshooting Antennas and Feedlines. Search it out! Ralph Tyrell, W1TF.
- MFJ-3504, \$21.95.** FET Principles, Experiments and Projects. By Ed Noll, W3FQJ.
- MFJ-3036, \$15.95.** PROH: Packet Radio Operators Handbook. By Buck Rogers, K4ABT.

**88 MFJ . . . The World Leader in Ham Radio Accessories**



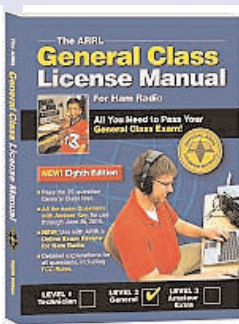
# ARRL License Study Guides & Books



**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. #0871

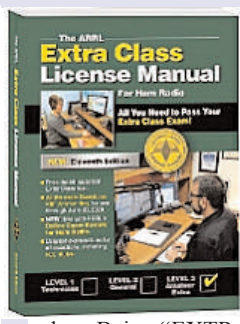
**ARRL-5977QA, \$17.95. Tech Q&A #0864.**



**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. 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-5919QA, \$17.95. General Q&A #0338**

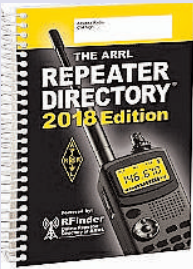


**ARRL-5920, \$29.95.** Achieve the highest level in Amateur Radio! Pass the 50-question Extra Class exam and be the toast of your ham club! All the exam questions with answer key are contained in this book. Detailed explanations for all questions including FCC

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-5920QA, \$17.95. Extra Q&A #0567**

## ARRL 2017-2018 Repeater Directory



**ARRL-5976, \$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. Handbook (6 7/8" x 9 1/4" 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! #0758

## 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

## HANDBOOK



**ARRL-5934, \$49.95.** ARRL Handbook is the most comprehensive guide to amateur radio electronics. Part reference and part applied theory. Has a handy equipment testing, and trouble shooting guide. #0710

## ANTENNA



**ARRL-5948, \$42.95.** The Ultimate reference for amateur Radio antennas, transmission lines and propagation. Antenna Book is the source for antenna theory and a wealth of how-to-build projects. #0444

## OPERATING



**ARRL-5960, \$24.95.** The ARRL Operating Manual is the most complete book about ham Radio. Explore new activities, find references, learn about emergencies, traffic, DX, Digital, more. #0598

## HF Digital



**ARRL-5916, \$19.95.** Everything you need to get started in digital radio.

How to set up and operate your equipment and software, make the best use of your HF digital station. Explore the new exciting modes! #0833

## Small Antenna



**ARRL-5993, \$19.95.** Antenna restrictions destroying your love for ham radio? Get the ideas you need to fool those HOA inspectors every time. Get practical advice to find just the right antenna design to fit your space. #0512

## EMERGENCY



Explore the various means of electric power generation, charging batteries to keeping the lights on. Prepare for the worst, does advanced thinking for you in the face of disaster. #6153

## SDR



**ARRL-5922, \$24.95.** How SDR works, distinctions among different types of software, guides to buying equipment, and information on over 60 SDR radios. Explore SDR with digital modes, more. #7203

## JT65 & JT9



**ARRL-5962, \$15.95.** Work the World with JT65 and JT9! No high power or large antennas needed. Shows you how to assemble an effective station and configure the software for best performance. #0437

## Morse Code



**ARRL-5914, \$15.95.** Everything you need to get into Morse code: how to increase your speed, using code for DX-contests, straight pump, modern keys/paddles and latest computer techniques, more. #0163

## Raspberry Pi 2



**ARRL-5961, \$30.95.** Covers Raspberry Pi 2 (model B). Full color throughout, widely illustrated, aimed at those new to Pi. Get various aspects of computing and programming. #1022

## PORTABLE



**ARRL-5962, \$19.95.** Grab your gear and head outdoors! New generation of full-featured, portable radios combined with modern battery technology make it easier than ever to operate in the great outdoors. #0802

## Portable Ant.



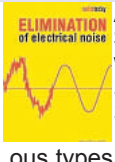
**ARRL-5942, \$19.95.** For amateurs unable to install permanent antennas at home or those who want to operate in nature. Get practical HOA ideas and projects to get you on the air from anywhere! #0345

## Magnetic Loop



**ARRL-5946, \$29.95.** This book describes several unique magnetic loop antennas including theory, plus independent evaluations of these loops by Amateur Radio operators. Get all the knowledge and information you need! #2002

## NOISE



**ARRL-5950, \$13.95.** Deal with the noise. Don't be forced off air! Learn the various types of noise hams experience, how it's generated and ways to deal with it. Guides you to take charge, makes radio fun again. #0036

## Grounding



**ARRL-5958, \$22.95.** Proper Station Grounding is Important! We show you how to make sure your station follows communications standards for lightning protection and National Electrical Code. #0659

# Xiegu

# X5105 - \$599<sup>95</sup>

**Built-in Automatic Tuner . . . 3800 mAH Battery Pack . . . 160-6 Meters!**



**X5105** is a complete "grab and go" QRP station in a ruggedly-stylish handheld enclosure. Fits comfortably in your hand, yet delivers the powerhouse features normally reserved for a full-sized HF transceiver. Just toss up an antenna and you're on the air!

Here are some of the X5105's advanced features:

- **Large** back-lit multi-function LCD display screen
- **Transmit** on all US bands, 160 through 6 meters including 5 MHz
- **Receive** with gap-free coverage from 500 kHz to 54 MHz
- **Operate** on all modes (USB, LSB, CW, AM, FM, and Digital)
- **Selectable** IF bandwidth (500-Hz CW, 2.4-kHz SSB, 6-kHz AM)
- **Built-in DSP**, noise blanker, and notch filter to suppress interference
- **Robust** 600-mW AF-output with high-pass and low-pass audio EQ

- **Deluxe** multi-function keypad-microphone included
- **Low-profile** controls, heat sink, and desktop stand all built in
- **Powerful** 3800-mAH battery for extended "off-the-grid" operation
- **More** antenna choices using the built-in auto-tuner (ATU)
- **Scan-feature** displays band activity and plots antenna SWR
- **Built-in** Data Modem with CAR and AFC tracking, onscreen display
- **Built-in** auto-keyer with three memory channels plus CW trainer
- **Adjustable** SSB with speech-processing compressor
- **Regular** firmware updates are free, on line, any time
- **6<sup>5</sup>/<sub>8</sub>Wx3<sup>5</sup>/<sub>8</sub>Hx1<sup>7</sup>/<sub>8</sub>D"**, 2.1lbs w/battery

**Back-lit** low-profile control switches conveniently spaced for fingers and a highly-visible 3.6" LCD display. A unique counter-sunk tuning knob with an unusually wide range of tuning rates make DX splits easy to set up.

**Wide-range** RIT has precision digital readout for surveying adjacent channels. Power adjustable 0.5 to 5 Watts in calibrated half-Watt increments is perfect for operating QRP, running mile-per-watt tests, or setting correct drive level on external amplifier.

You even get a built-in data modem with both CAR (carrier) and AFC (frequency) tracking, onscreen spectrum display. Also plots SWR graphically.

**Sensitive** pre-amp boosts weak signals, front-end attenuator reduces over-

load, noise blanking (NB) for impulse noise, digital noise reduction (DNR) for atmospheric noise, variable notch filtering (NF) for pesky heterodynes, adjustable AGC-Rate (AGC), built-in CW filter, plus variable high and low-pass audio-EQ filtering. There's lots of spare audio-power for driving an external speaker.

For CW get variable-speed automatic keying, 3 programmable message channels. For SSB contesting, adjustable speech processor scores extra points.

**Deluxe** electret keypad microphone. Mic also built-into for walkie-talkie use. Power X5105 from a regulated 9-15V 3A DC source or go "off grid" for up to 8 hours using a powerful built-in 3800-mAH Lithium-ion battery pack. Monitors battery condition, controls recharging.

**Factory** tested, complies with FCC rules, and has MFJ's one year warranty.

### X5105 Accessories



**XCE-19, \$29.95.** Data expansion add-on port for X5105 transceiver.



**XPA-125, \$549.95.** 125 Watts Amp, 1.8-54 MHz for Xiegu transceiver, other QRP rigs. FCC type accepted.



**MFJ-7760, \$5.95.** BNC-to-BNC right angle for MFJ-single and multi-band antennas on X5105.

**MFJ-7708, \$3.95.** BNC to SO-239 Adaptor.

**MFJ-1899T, \$79.95.** 80-6 Meter Antenna, 25 Watts. 52 inch telescopic whip unscrews from 12 inch base/coil.

# Xiegu

**New!**

# XG90 \$449<sup>95</sup>

**20 Watt All Mode transceiver with built-n ATU, 1.8" color LCD, SDR architecture . . .**



**New** Xiegu G90 is a truly portable all mode 20-Watt transceiver with a built-in automatic antenna tuner and an SDR architecture covering 0.5-30 MHz.

**Features** high-performance front-end narrowband ESC pre-selector, 1.8" high-contrast color TFT LCD with a +24K bandwidth spectrum and waterfall display.

**All Modes:** SSB/CW/AM/FM and a software defined narrow-band filter (SSB: 2.4 kHz, CW:

300 Hz). Detachable front panel that lets you flexibly put the transceiver out-of-sight while the display is still highly visible.

**Wide-range** built-in automatic antenna tuner lets you tune virtually any antenna to a low SWR fast. Initial tuning time is 12 seconds, return tuning is 2 seconds.

It is also a very diversified interface. The baseband I/Q output allows it to interface with any external device handling base-



band I/Q, including a sound-card or PC-based application such as a XDT1 panadapter.

**SDR** structure based on 24-bit data size at 48kHz sampling rate. Provides excellent transmit and receive performance. Highly configurable for an enjoyable time.

**Get** the new Xiegu G90 today and have a brand new extreme ham radio adventure!

### Specifications:

Sensitivity:	>0.25uV@12dB
Dynamic range:	90dB
Suppression:	60dB
Audio output:	.5W@40
Standby:	750mA@Max
Spurious suppr:	=50dB
Carrier suppr:	=50dB
Sideband suppr:	=50dB
Xmit current:	8A@Max
Voltage:	12-15V DC
Operating temp:	0-55C
Freq. Stability:	±2ppm (after 30 minutes on)
Size:	4 <sup>1</sup> / <sub>8</sub> Wx1 <sup>1</sup> / <sub>4</sub> Hx8 <sup>1</sup> / <sub>8</sub> D"
Weight:	2.3 lbs.

**Premier Coaxial Cable . . . Made with passion!**

**Messi & Paoloni Coax**

**MFJ**

**Exclusive distributor of**

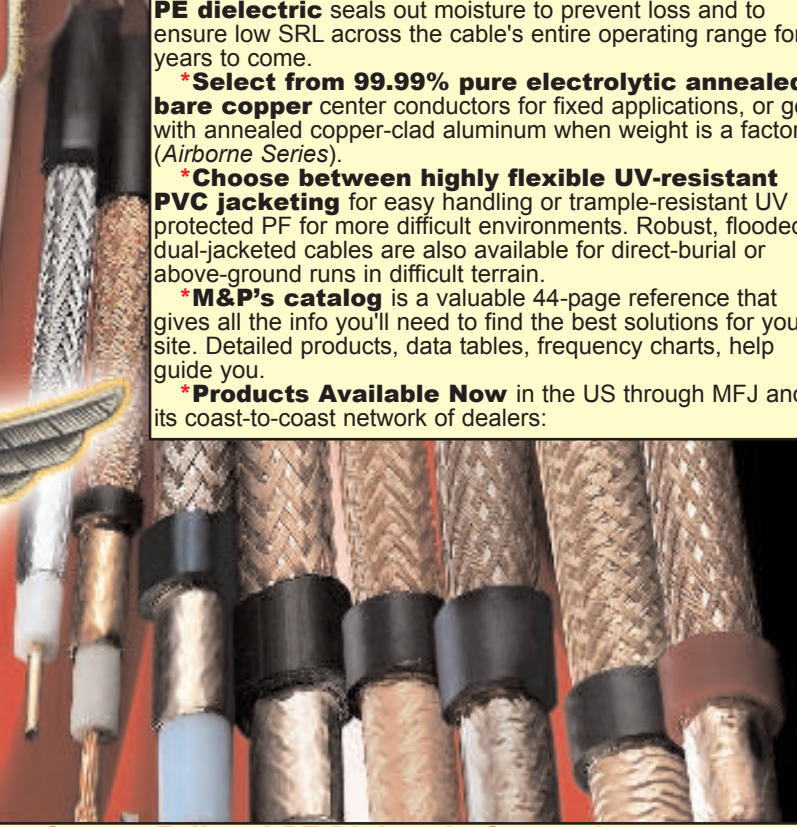


*M&P Pro grade connectors available*

**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:



**M&P versus LMR Isolation, Copper Foil and PE Dielectric Comparison**

<b>Isolation</b>	M&P Cables have greater than 105 dB of isolation shielding.	LMR <sup>®</sup> cables have greater than 90 dB of isolation shielding
<b>Copper Foil Shielding</b>	M&P uses 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 <sup>®</sup> 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>Polyethelene Dielectric</b>	M&P Foam PE Dielectric: High pressure dry nitrogen gas, physical injection dielectric allows high expansion, high velocity factor up to .87 and resists aging well. Foam between 2 protective layers, bonded Polyethylene greatly prevents moisture incursion.	LMR <sup>®</sup> Foam Dielectric: Closed cell, dry nitrogen. Multi-laminar aluminum composite tape bonded dielectric is a second moisture barrier unlike M&P's superior <i>triple layer skin foam skin dielectric</i> .

LMR<sup>®</sup> is a registered trademark of Times Microwave Systems.

# There is no equal to **Messi & Paoloni Premier Cable!** Here are just six examples . . . See more at [www.mfjenterprises.com](http://www.mfjenterprises.com)

Specification:	M&P HYF-5 vs LMR <sup>(R)</sup> 240UF	M&P UF-7 vs LMR <sup>(R)</sup> 300UF	M&P UF-7 vs STD. RG-213
Att.@30 MHz	1.27 dB	1.60 dB	0.91 dB
Att.@50 MHz	1.70 dB	2.10 dB	1.22 dB
Att.@450 MHz	5.18 dB	6.30 dB	3.75 dB
Core Conductor	19 Std BC .055"	19 std BC (.056)	19 Std BC .075"
Dielectric	Gas inj. Tri-lay fm	Gas inj. foam pe	Gas inj. tri-lay fm
Foil	Bare CU+Pe 100%	Alum. 100%	BareCU+PE,100%
Braid	Bare CU 88% 24 sp	Tin clad CU,16 sp.	Bare CU, 24 spools
Jacket Dia. OD	UV res.PE. .212"	UV res.PVC. .240"	Thrmoplastc .300"
Shielding Atten.	>105 dB	N/A	>105 dB
Velocity Ratio	87%	82-84%	83%

**Lighter!**



**Airborne-5**

Specification:	M&P AB-10 vs LMR <sup>(R)</sup> 400	M&P HYF-10 vs LMR <sup>(R)</sup> 400UF	M&P HYF-13 vs LMR <sup>(R)</sup> 600UF
Att.@30 MHz	0.59 dB	0.70 dB	0.61 dB
Att.@50 MHz	0.75 dB	0.90 dB	0.82 dB
Att.@450 MHz	2.32 dB	2.70 dB	2.62 dB
Core Conductor	Solid BCCA, 109"	Solid BCCA, 102"	19 Std BC 9 ga.
Dielectric	Gas inj. Tri-lay fm	Gas inj. foam pe	Gas inj. Tri-lay fm
Foil	Bare CU+Pe 100%	Alum. 100%	BareCU+PE, 100%
Braid	Bare CU 24 spools	Tin clad CU,16 sp.	CU Clad,78%,24 sp.
Jacket Dia. OD	UV res.PE. .400"	UV res. PVC. .400"	Termo plastic .400"
Shielding Atten.	>105 dB	>90 dB	N/A
Velocity Ratio	87%	85%	87%

**Stronger!**



**UltraFlex-7**

## M&P Premier Coaxial Cable Partial Pricing

Length Ft.	AB-5 \$0.59/Ft.	PL-259s \$33.65	HYF-5 \$0.64/Ft.	PL-259s \$38.65	UF-7 \$0.89/Ft.	PL-259s \$44.23	AB-10 \$1.09/Ft.	PL-259s \$49.23	HYF-10 \$1.49/Ft.	PL-259s \$59.23
25	AB5-025	\$33.65	HY5-025	\$38.65	UF7-025	\$44.23	AB10-025	\$49.23	HYF10-025	\$59.23
35	AB5-035	\$39.55	HY5-035	\$46.55	UF7-035	\$53.13	AB10-035	\$60.13	HYF10-035	\$74.13
40	AB5-040	\$42.50	HY5-040	\$50.50	UF7-040	\$57.58	AB10-040	\$65.58	HYF10-040	\$81.58
50	AB5-050	\$47.90	HY5-050	\$57.90	UF7-050	\$65.98	AB10-050	\$75.94	HYF10-050	\$95.74
75	AB5-075	\$62.40	HY5-075	\$72.40	UF7-075	\$87.98	AB10-075	\$102.91	HYF10-075	\$132.61
100	AB5-100	\$75.90	HY5-100	\$94.90	UF7-100	\$107.98	AB10-100	\$128.80	HYF10-100	\$168.00
125	AB5-125	\$90.15	HY5-125	\$113.90	UF7-125	\$129.48	AB10-125	\$155.51	HYF10-125	\$204.51
150	AB5-150	\$101.40	HY5-150	\$129.90	UF7-150	\$146.48	AB10-150	\$180.58	HYF10-150	\$238.78
175	AB5-175	\$115.15	HY5-175	\$148.40	UF7-175	\$167.23	AB10-175	\$207.01	HYF10-175	\$274.91
200	AB5-200	\$124.90	HY5-200	\$162.90	UF7-200	\$181.98	AB10-200	\$231.26	HYF10-200	\$308.06
250	AB5-250	\$148.90	HY5-250	\$193.90	UF7-250	\$221.98	AB10-250	\$280.86	HYF10-250	\$375.86

**More Versatile!**



**HyperFlex-10**

**Quite Simply . . .**

Length Ft.	UF-10 \$1.59/Ft.	PL-259s \$61.73	BP-50C \$1.49/Ft.	PL-259s \$59.23	HYF-13 \$2.99/Ft.	PL-259s \$105.65	UF-13 \$2.99/Ft.	PL-259s \$105.65
25	UF10-025	\$61.73	BP50-025	\$59.23	HYF13-025	\$105.65	UF13-025	\$105.65
35	UF10-035	\$77.63	BP50-035	\$74.13	HYF13-035	\$135.55	UF13-035	\$135.55
40	UF10-040	\$85.58	BP50-040	\$81.58	HYF13-040	\$150.50	UF13-040	\$150.50
50	UF10-050	\$100.69	BP50-050	\$95.74	HYF13-050	\$178.91	UF13-050	\$178.91
75	UF10-075	\$140.04	BP50-075	\$132.61	HYF13-075	\$252.91	UF13-075	\$252.91
100	UF10-100	\$177.80	BP50-100	\$168.00	HYF13-100	\$323.92	UF13-100	\$323.92
125	UF10-125	\$216.76	BP50-125	\$204.51	HYF13-125	\$397.18	UF13-125	\$397.18
150	UF10-150	\$253.33	BP50-150	\$238.78	HYF13-150	\$465.95	UF13-150	\$465.95
175	UF10-175	\$291.88	BP50-175	\$274.91	HYF13-175	\$538.45	UF13-175	\$538.45
200	UF10-200	\$327.26	BP50-200	\$306.06	HYF13-200	\$604.98	UF13-200	\$604.98
250	UF10-250	\$399.61	BP50-250	\$375.86	HYF13-250	\$741.03	UF13-250	\$741.03

**Made in ITALY with Passion!**



**HyperFlex-13**

**THE BEST!**

## Meet the Messi & Paoloni product line . . .

**Airborne-5, \$0.59/ft.**

.200" Double shielded, buriable. Can replace LMR<sup>(R)</sup>195, RG58C/U.

**Airborne-10, \$1.09/ft.**

.400" Double Shielded, lightweight. Can replace LMR<sup>(R)</sup> 400.

**BroadPRO50C, \$1.19/ft.**

.400" Double jacket, buriable. All copper, can replace LMR<sup>(R)</sup> 400UF, RG8X, RG213/U.

**Ultraflex-7, \$0.89/ft.**

.287" double shielded, flexible, lightweight. Can replace LMR<sup>(R)</sup> 3000UF, RG213, RG58C/U, RG8X.

**More M&P Cables Available . . .**

UF-7C, \$0.98/ft. UF-7 with clear jacket.  
UF-5C, \$0.89/ft. UF-5 with clear jacket.  
BroadPro50C-DJ, \$1.69/ft. Broadpro50C with double jacket.

**Hyperflex-10, \$1.49/ft.**

.400". Amazing flexibility. Top performances at high frequencies. Replaces LMR<sup>(R)</sup> 400UF, RG213.

**Ultraflex-10, \$1.59/ft.**

.400". Amazing flexibility, bare CU braid over CU foil. Can replace RG213/U, RG8X.

**Ultraflex-13, \$2.99/ft.**

.500" Lightweight, extremely flexible. Double shielded. Can replace LMR<sup>(R)</sup> 500UF.

**Hyperflex-13, \$2.99/ft.**

.500". Light, extremely flexible, double shield. Replaces LMR<sup>(R)</sup>600UF.



**M&P Connectors**

M&P Connectors are used for all jumper cables. Super high-quality connectors are weather-sealed, have very low SWR and will not alter the impedance of the cable. N-Male, N-Female and SO-239s are available. Refer to website for add'l selections.

Part#	Description	Price
ZMP-CS05M-U	PL-259, AB5, HYF5, RG58	\$6.95
ZMP-CS05M-N	N-Male AB5, HYF5, RG58	\$7.95
ZMP-CS07M-U	PL-259 for UF7, UF7C	\$7.95
ZMP-CS07M-N	N-Male for UF7, UF7C	\$7.95
ZMP-CS10M-U	PL-259 HF10/UF10/AB10/ BP50C/RG213	\$7.95
ZMP-CS10M-N	N-Male HF10/UF10/AB10/ BP50C/RG213	\$8.95
ZMP-CS13M-U	PL-259 for UF13, HYF13	\$12.95
ZMP-CS13M-N	N-Male for UF13, HYF13	\$14.95
ZMP-7608	Special coax cable cutter	\$24.95



**BroadPRO-50**

These are just a few samples of pricing for the **Messi & Paoloni product line**. There are many different coaxial cable products and super quality connectors. There are way too many to list here. Check our website: [www.mfjenterprises.com](http://www.mfjenterprises.com) to order your **free M&P Coax Hand-book** and full price sheet or by calling toll-free, 1-800-647-1800. There are numerous videos online regarding M&P cable also. **Thanks for your business!**

# YouKits

® THE QRP COMPANY  
SINCE 2009

MFJ is the North American  
exclusive distributor for  
sales and service.

YouKits

FREE Shipping on all YouKits products! See full specifications [www.mfjenterprises.com](http://www.mfjenterprises.com)

## New for 2018, the HB1B MK-4 QRP CW transceiver

Take QRP operating to the next level with full QSK break-in plus impressive hardware and firmware upgrades. The HB1B MK-4 is 100% "plug-and-play, comes fully assembled. FREE shipping on all YouKits!



**YHB-1B Specifications:**  
**\$299**

- Transmits on 40, 30, 20, 17\* and 15 Meters
- Receives CW/SSB/AM
- Continuous-coverage reception, 5.9 to 22 MHz
- Crystal filter with 400-Hz and 3-kHz passbands
- LCD screen shows frequency, S-units, Po, SWR, mode, voltage, and bandwidth.
- Rock-solid DDS VFO has 10-Hz, 100-Hz, 1-kHz, and 100-kHz tuning steps.
- Wide-range RIT with 10 and 100 Hz steps for working DX spits

- 4-5 Watts RF output power with 12-V external supply
- 30 memory channels
- Built-in CW auto-keyer selects straight key or paddle, 5-40 WPM
- 100-mW 8-Ohm AF output drives headphones or external speaker
- External supply voltage: 9-14 VDC
- Current: 70 mA receive, 800 mA transmit
- Compact case: 5<sup>9</sup>/<sub>16</sub>Wx3<sup>7</sup>/<sub>16</sub>Hx1<sup>1</sup>/<sub>2</sub>D in.
- Weighs only 13.3 oz (minus battery)
- Charger included. Lithium-ion battery option also available.

(\*expect reduced sensitivity on 17 Meters due to shared filtering)

Pocket-sized and fully self-contained, the upgraded HB1B MK-4 delivers big-rig CW performance you can hold in the palm of your hand.

Now is the time for road trips, camping and exploring the great outdoors.

Tuck one in your pack and make this year's vacation a special event!

### FG-02 Antenna Analyzer

FG01 has a larger color screen (3.6x3.1 cm), Impedance-scan, at half power consumption! Ultra-simple operation, up to 14 hours of operation (optional 18650 battery). 1-60 MHz, 10-channels memory captures, recalls data. Powerful +13 dBm test signal overrides local interference!



**YFG-01**  
**\$259**

**Specifications:** Displays: graphic SWR plots, impedance magnitude plus alpha-numeric data. **Functions:** Scanned plot or single-frequency. **SWR:** 1:1-5:1. **Range:** 0-300 Ohms. **Center-Frequency Steps:** 1, 10, 100 kHz, 1 MHz. **Scan Width:** 10 kHz-50 MHz in 12 steps. **Output:** +13 dBm. 3<sup>7</sup>/<sub>16</sub>Wx2<sup>5</sup>/<sub>16</sub>Hx1<sup>1</sup>/<sub>2</sub>D", .55 lbs.

### SK-1A 40-Meter QRP SSB/CW Transceiver

Cover 40-M phone and CW with a wide range of features including built-in auto keyer, wide-range RIT for DX splits, 5.9-8 MHz receiver, 5-W. Assembled.



**YSK-1A**  
**\$218**

**Specifications:** Screen: Backlit LCD, Displays: Frequency, Memory, WPM, Key Type, Mode, ±RIT. Transmit: 7.0-7.3 MHz, VFO: DDS, 10-Hz, 100-Hz, 1kHz, 100-kHz tuning steps. RIT: 10-Hz with 100-Hz steps. Output: 5W PEP @ 12V, 8-9W PEP @ 13.8V. Memory: 8 Ch, Keyer: 5-40 WPM man/auto, Sidetone: 700-Hz, Mic: Electret, PTT. Voltage: 10-15 VDC. Current: 60-mA. TX: .8-A @ 12-V. 3<sup>7</sup>/<sub>12</sub>Wx1<sup>1</sup>/<sub>2</sub>Hx4<sup>7</sup>/<sub>8</sub>D", .62 lbs.

### EK1C 3-Band QRP CW XCVR

Covers 40/30/20M with general coverage receive, 5W output. Ultra-compact "bullet-proof" case, fully assembled, ready QSO! Delivers "pro" quality CW

**YEK-1C** wherever you go!  
**\$218**

**Specifications:** Screen: Backlit LCD. Displays: Frequency, memory, WPM, Key type, ±RIT. Transmit: 7.0-7.3, 10.1-10.15, 14.0-14.35 MHz. Receives: 5.9-16. VFO: DDS, 10-Hz, 100-Hz, 1-kHz, 100-kHz steps. RIT: 10-Hz or 100 Hz steps. Output: 5W (12-V). Keyer: 5-40 WPM, man/auto. Sidetone: 700-Hz. Voltage: 9-15 VDC. Battery: Optional 18650. RX Current: 70-mA. TX: .9A @ 12-V. Size: 3<sup>7</sup>/<sub>12</sub>Wx1<sup>1</sup>/<sub>2</sub>Hx4<sup>7</sup>/<sub>8</sub>D". .62 lbs.

### CW-40 QRP 40-M XCVR

This high-tech 40-Meter CW transceiver packs a powerful 5-Watt punch. A true QRP rig, but has

**YCW-40**  
**\$129**

a high-contrast digital display with a super stable DDS VFO. All memory channels and a built-in automatic electronic keyer. All of this and more is packed on a tiny PC board, soldered, fully assembled, and tested to its specifications. You just provide your own special enclosure to make this a radio you will be proud to use at home, on-the-road or mountain-topping. Start your YOUKITS adventure today and make radio fun again.

### TJ-5A 20-Watt Four Band SSB/CW Transceiver

**YTJ-5A** This high-performance multimode QRP transceiver covers 80, 40, 20, and 15 Meters. You get a fantastic 20 Watts output power to really reach out and grab big time QSOs. A diode ring mixer handles super strong signals while delivering .3 uV sensitivity. You can also receive 2-30 MHz for solid copy. Start your ham radio SSB/CW adventure today with this outstanding transceiver from YOUKITS, the manufacturer of ham radio fun.

**YTJ-5F, \$49.** YTJ-5A 700 Hz CW Filter.

### DP-1 Digital QRP Power and SWR Meter

For the serious QRP operator. This YOUKITS YDP-1 Digital power/SWR Meter provides an alpha-numeric and graphic power output and SWR measurements from 1-60 MHz on a high-contrast LCD display. In the shack or on-the-go, it's ultra-compact and self-powered (optional). Measures 5-mW to 25W. Tiny handheld size makes it easy to carry to the field and doesn't take up much room at your operating position. Use it to make tests on your equipment in the shack or up on the mountain!



**YDP-1**  
**\$159**

# AMERITRON®

*... the World's High Power Leader!*

**From classic Tube Amplifiers ...**



**To modern Solid State Amplifiers ...**



**We are your world's high power leader!**

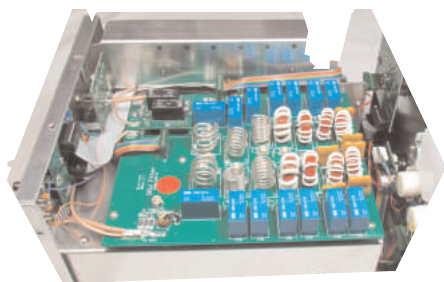
# Ameritron 600 Watt solid state 160-6 Meters!

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!



**New!** Ameritron's ALS-606S and ALS-606 Solid State FET 600 Watt amplifiers cover 160 through 6 Meters with automatic bandswitching from your transceiver.

**Fits on desktop.** 9 $\frac{3}{4}$ "x7Hx14 $\frac{1}{2}$ "D inches and weighs just 14.2 lbs., but is only 4 dB below 1500 Watts -- less than an S-unit! *Nobody can even hear the difference!*



**An Inside Peek . . .**



**Back of ALS-606S.**

ALS-606S  
**\$1999**  
with switching  
power supply

Suggested  
Retail

ALS-606  
**\$2099**  
Transformer Power  
Supply

**600 Watts PEP** and 500 Watts CW -- be heard, talk to anybody! No tubes to baby, no tuning, this is solid state rugged -- just turn it on, select your favorite band on your transceiver and sit back, relax and operate.

**ALS-606S** and ALS-606 are SWR/thermal protected and extremely quiet. Has large lighted peak reading Cross-Needle SWR/Wattmeter, front panel ALC control, an operate/standby switch, multimeter and much, much more! **Call your favorite dealer for a super low price!**

**Just don't take it from us . . . here's what "they" say about our solid state station amplifier:**

"... the amplifier faulted only when it was supposed to. It protected itself from our bone-headed, sleep-deprived band changing . . ."

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

"couldn't hear any noise at all from the SPS (switching power supply) on vertical or quad . . ."

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

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

All from QST Magazine, 2005.

## Operate your Ameritron Amplifier from anywhere! ARI-1306 Amplifier Remote Interface gives full control

ARI-1306 allows full control of the Ameritron ALS-1306 and ALS-606/ALS-606S amplifiers via USB or through the internet.

ARI-1306  
**\$579<sup>95</sup>**

**New!**

Lets you operate your amplifier from a remote location as if you were sitting right in front of it. Operate your amp on vacation, business trips, from exotic locations, even at work! Don't tell the boss about your fancy new contraption though.

Get full control of band selection (manual or automatic), standby/operate switch, ALC adjustment, power on/off and forward/reflected calibration.

Allows monitoring of digital forward and reflected power along with a bargraph, PA module's voltage, current and temperature, band selection,



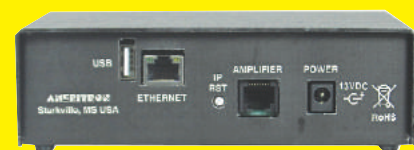
standby and operate switching, ALC voltage, power on and off and SWR/PA fault occurrences.

The ARI-1306 is divided into two units. One is installed inside of the amplifier. The second is a stand-alone interface box. This box will connect to the remote jack located on the rear of the amplifier. The interface box includes a firewall protection circuit and secured access to the station devices.

A single point of communications with the internet allows for secure and

safe operation. The interface can allow multiple users to have operating controls or "monitor only" access.

ARI-1306 has USB, ethernet, amplifier power ports, on/off switch, & power, ethernet and amplifier status LEDs. 6W x1 $\frac{3}{4}$ "x4 $\frac{1}{4}$ "D". Must be factory installed, call 1-662-323-8211 for details. .



Back of ARI-1306 shows USB and ethernet jacks and the amplifier input with the radio interface cable. The box is powered separately. Prewired interface cables are available in this catalog.

# 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 6 1/2Hx18D 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 bal-

ance 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 10Wx6 1/2Hx9 1/2D 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.

## 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, back of your motorhome or elsewhere and operate with just this tiny box at your station Works with ALS-500M amplifiers



ARI-500  
**\$129.95**  
Suggested Retail

with serial numbers above 13049 (below 13049 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... \$27.95

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)
RJ-USB6000, \$59.95	RJ45-USB Cable, Flex 6000

## Precision HF+6 Meter peak-reading SWR Wattmeters

### Flat Mount Mobile SWR/Wattmeter



AWM-35B/BH  
**\$169.95**  
Suggested Retail

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 watt-meter measures 5Wx3 1/4H x1 5/8D"; remote

sensor is tiny 3 1/2Wx2 3/4H x2 3/4D". 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

AWM-30B  
**\$159.95**  
Suggested Retail

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 4 1/2Wx4 1/2Hx5 1/2D inches.





# AMERITRON *no tune* Solid State FET Amplifier

No tuning, no fuss, no worries -- just turn on and operate . . . Incredibly low \$1799 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 . . .



ALS-600  
**\$1899**  
Suggested Retail  
(Includes AC Power Supply,  
ALS-600PS)

ALS-600S  
**\$1799**  
Suggested Retail  
(Includes Switching Power  
Supply, ALS-600SPS)

AMERITRON's revolutionary ALS-600/S are amateur radio's *only* linear amplifiers that use four rugged TMOS RF power FETs -- gives unequaled *no tune* solid state performance.

Get instant bandswitching, no tuning, no warm-up, no fuss! 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 forward or reflected power exceeds a safe level. 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 9½Wx6½Hx12D

inches -- takes up less space than your rig! Weighs just 12½ lbs.

LED illuminated Cross-Needle SWR/Wattmeter reads 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.

**Exclusive AMERITRON** feature lets you adjust your output power on the convenient front panel. You also get front panel Transmit, ALC, and SWR LED indicators. A 12 VDC output jack lets you power low current accessories. Enjoy 600W of *no tune* Solid State.

**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-600 to change bands automatically when you change bands on your transceiver? You have these options. A pair of RJ45 remote control interface jacks on the amplifier permits it to be controlled either manually by the ALS-500RC Remote Control Head, or automatically by the ARI-500 Automatic Band Switch. Automatic Band Switch reads band data from your transceiver and automatically changes the ALS-600 bands as you change bands on your rig. 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 9½Wx6½Hx12D 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 **\$649.95**.

**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 9Wx6Hx14½D inches. Great for portability! Purchase **ALS-600SPS** separately for **\$649.95**.

## Just don't take it from us . . . here's what "they" say about our solid state station amplifier:

" . . . the amplifier faulted only when it was supposed to. It protected itself from our bone-headed, sleep-deprived band changing . . ."  
"I found myself not worrying about damaging this amplifier. It seems quite capable of looking out for itself. . . . Kudos to Ameritron."  
"couldn't hear any noise at all from the SPS (switching power supply) on vertical or quad . . ."  
"I came to greatly appreciate the size, weight, reliability and simplicity of this solid state amplifier."  
"The ALS-600S makes it possible to pack a transceiver and a 600 Watt amplifier, that together weigh less than 30 pounds."  
All from QST Magazine, 2005.

## AMERITRON Inrush Current Protector stops damaging inrush current



ICP-120  
or ICP-240  
**\$84.95**  
Suggested Retail

**Protects your amplifier, tubes and power supply components . . .**

When you turn on an amplifier, a massive inrush current gushes in. House lights flicker as you hear a loud "thump" from it. Inrush current stresses all your power supply components. Your cold tube filament suffers abusive thermal shock. Eventually, this massive

inrush current will damage your amp. **Step-Start Inrush Current Protector™** stops damaging inrush current.

**Momentary** high-voltage "spikes" in AC line can cause damage to amps. ICP-120/240 has built-in varistors to absorb spikes before they cause damage. Works with nearly all amplifiers.

By starting your amplifier through a high power current limiting resistor and shorting the resistor with a relay, the

start-up sequence is easier on tube and power supply. All amplifiers have this critical protection -- now you can add this protection to your amp without complicated wiring -- never remove the cover!

**Ameritron ICP-120, \$84.95.** 120 Volt wired amplifiers. Limits current to 12A during heavy draw inrush period, 20A during continuous operating current.

**ICP-240, \$84.95**

For 240 Volt wired amps.

## Get power of 2 amplifiers with Ameritron's Splitter/Combiner!



Use ASP-200 and ACB-1000 together for a combined output power of 2 amps!

**ASP-200** splits radio's output into 2 outputs to drive 2 amps of equal power. **ACB-1000** combines outputs of two

amps for a *combined amplifier output*. Maintains 50 Ohm output for antenna.

**Amps** of equal power like two ALS-500M or two ALS-600 can be used.

**ASP-200, \$74.95.** Handles power to 200W. SO-239. 4Wx1¾Hx2¾D"

**ACB-1000, \$159.95.** Handles power to 1.5 kW. SO-239s. 6Wx3x4D".

## RF Filter reduces harmonics

Use with rigs or amps that are producing unwanted harmonics. Frequency select switches to 1 of 6 different ranges, 1.5-30 MHz. 1000W SSB input power, 600W CW or 400W RTTY. SWR <1.3:1 on all bands. SO-239s. 5½Wx3½Hx9½D in.



ARF-1000  
**\$169.95**  
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 band-switches ALS-500M amp . . . ALS-500RC Remote Head gives total remote control!



ALS-500M **\$949** Just turn on and operate -- no warm-up, no tuning, instant bandswitching. Compact.

Suggested Retail

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, \$34.95 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, \$189.95**, Remote kit for older ALS- 500Ms with serial # below 13049. Includes filter/relay board for amp, ALS-500RC Remote Head, cables, hardware, instructions.

**ARF-500K2, \$309.95**. Includes ARF-500K Remote kit for older ALS-500Ms **plus** ARI-500 Amplifier Radio Interface.

**New ARI-500, \$129.95**, 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, \$54.95**, 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 3/4x1D 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



ARI-500 requires the ARF-500K, **\$129.95** (see above). Suggested Retail

**Works** with all current ALS-600/ALS-600S amplifiers and older ALS-600/ALS-600S amplifiers with the remote A/B jacks on the front panel.

**Works** with all ALS-1300 amplifiers.

## ARI-500 Cables . . . \$27.95

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)
RJ-USB6000, \$59.95	RJ45-USB Cable, Flex 6000

## Base Operation Power Supply for your ALS-500M Amplifier



SPS-75MV **\$279.95** Suggested Retail

Has Anderson PowerPoles™

**AMERITRON's Exclusive HashFilters™** Filtering System eliminates RF hash that *plagues* other manufacturer's switching power supplies.

Manufacturer's switching power supplies. **Fully protected** -- SPS-75MV has Short-Circuit, Overload and Over-Temperature protections. Also has an auto restart after a fault. Has power on and Fault LED indicators.

**Front panel adjustable voltage 4.0-16 VDC.** 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 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 3/4x5 1/2x9 1/2 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.

**Great** for Ameritron's ALS-500M Solid State 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.

**Highly regulated.** 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 man-

# AL-811 . . . 600 WATTS . . . \$999!

*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 . . .*



AL-811  
**\$999**  
Suggested Retail

Ameritron's AL-811 linear amplifier gives you plenty of power to bust through QRM!

Get a quiet desktop linear 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 \$999!

**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 barefoot rig. That could mean the difference between hearing, "You're Q-5 arm-chair copy" and "Sorry, can't copy you, too much QRM."

Don't stand aside while the big guns steal your DX. You'll log those stations first.

**All band, all mode Coverage**

AL-811 covers all HF bands. No compromise on WARC and most MARS -- you get a 100% rated output.

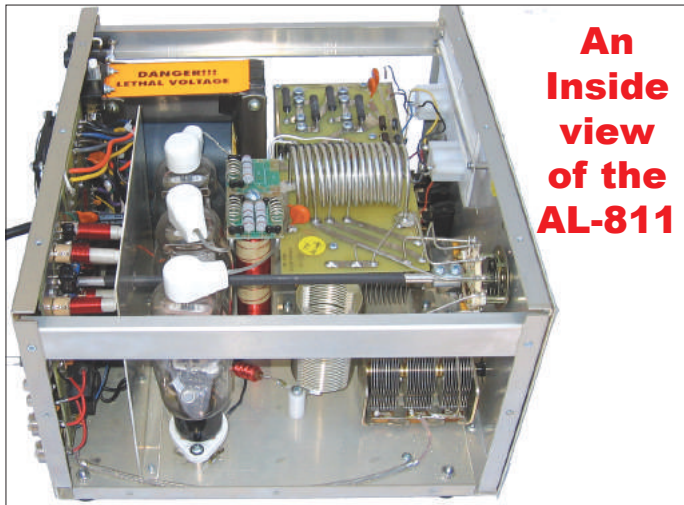
Operate AL-811 on all modes. Get 600 Watts output PEP SSB and 500W output CW. Get 300 Watts on continuous carrier modes like RTTY, SSTV, and FM.

The low cost 811A tubes resists 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 a mistake causes severe overload.

The Ameritron AL-811 is



excellent for newcomers because it's tough 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 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.

Low loss slug tuned coils -- tunable from the rear panel -- let you optimize performance. High quality low drift

tuning safe, precise, 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 a clear picture of operating conditions so you can tell right away if something is wrong. Long-lasting LEDs.

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, 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 amplifier lasts longer and gives peak performance -- regardless of 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 rig keying circuit. Shielded RF cabinet. One year limited warranty.

Compact 16Dx13<sup>3</sup>/<sub>4</sub>Wx8 H". 30 lbs. UPS shippable. Transformer installed, 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)

**AMERITRON...the world's high power leader!**

# AMERITRON® AL-811H

## 800 WATTS OUT . . . \$1109!

AMERITRON®



- **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, \$419.95.**
- **Attractive Lexan front decal**
- **One Year AMERITRON warranty.**
- **Dimensions:** 8 1/4"Hx13 3/4"Wx15 1/2"D".
- **Operating Weight:** 32 lbs.
- **Made in the USA.**

AL-811H  
**\$1109**  
 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 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.

**Get the AL-811HD with 572B tubes . . . \$1419**

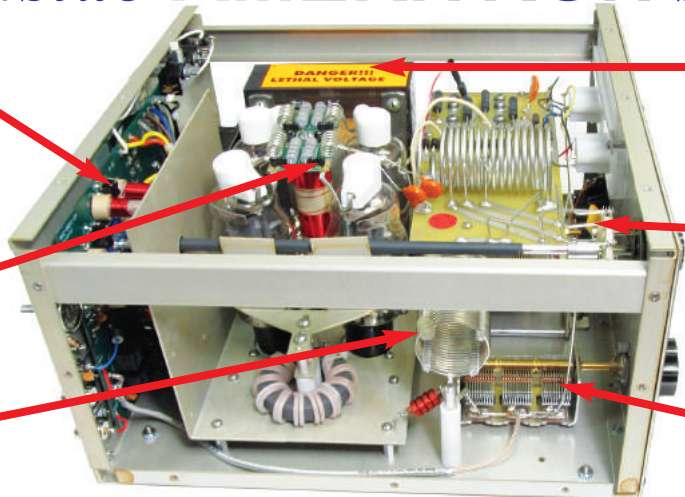
AL-811HD gives you the AL-811H with four 572B tubes installed. Get a higher power tank circuit and grid overload protection. Grid Overload Protection protects the tubes from excessive grid current due to mistuning and it protects against excessive drive power. Four 572B tubes give you more plate dissipation 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 bandswitch

Pi-network gives smooth tuning and excellent harmonic suppression.

# 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** AL-80B  
kilowatt output desktop linear doubles average SSB power output with high-level RF processing using our exclusive *Dynamic ALC™*.  
**\$1729**  
Suggested Retail

**Get cooler operation** because the AL-80B's exclusive *Instantaneous RF Bias™* completely turns off the classic 3-500G tube between words. Saves hundreds of watts wasted as heat.

**Get a full kW PEP output** from a whisper quiet desktop linear. It's a compact 8½Hx14Dx15½" 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 more!**

**Dynamic ALC™ doubles average SSB power**

**Exclusive Dynamic ALC™** gives high-level low-distortion RF processing. More than doubles average SSB power for up to 6 dB improvement in intelligibility, maximizing power without distortion.

**A convenient front panel control** lets you adjust output power level.

**AL-80B's exclusive Instantaneous RF Bias™** turns off the classic 3-500G tube (except filaments) between words and dots and dashes, eliminating hun-



dreds of watts wasted as heat for cooler operation and longer component life.

**The guts of AL-80B** is its heavy duty power supply. 26 lb. transformer uses a high silicone steel core, computer grade capacitors, heavy duty bleeders and ten 3A, 1000V power rectifiers give a stiff 2700V fully loaded. Many amps using two 3-500Gs use small supplies that deliver barely more power than AL-80B.

**The AL-80B** is built on a rugged steel chassis with a separate fully-shielded RF compartment to minimize RFI and TVI.

**Whisper quiet internal fan** draws in cool air over power components and pressurizes the 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!

**Carefully designed Pi/ Pi-L output network** use the optimum Q for each band to give exceptionally smooth tuning, wide match range, full band coverage, peak performance at all levels.

**Step-Start Inrush Protection™** stops damaging inrush current with a start up sequence that's easy on your tube and power supply parts.

**Exclusive Multi-Voltage Power Transformer™** lets you optimize for 14 different primary line voltages. High voltage secondary can be wired to reduce plate voltage for operation below 400W 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 operating 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 transceiver, and the grid current that starts ALC action -- get a clear picture of your AL-80B's overall performance.

**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 type transceivers; tough Lexan over-aluminum front panel. Ameritron 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.

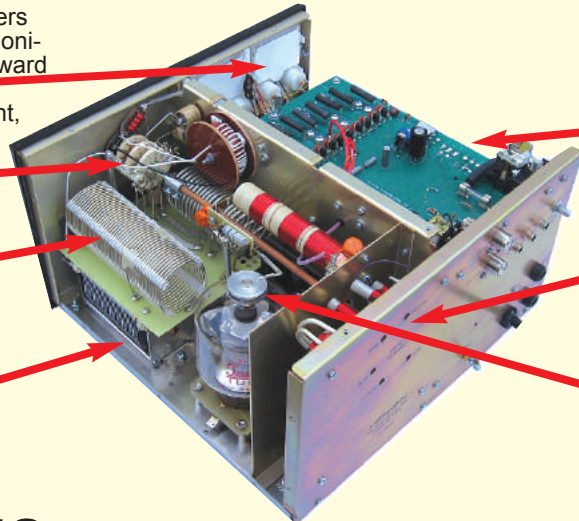
Tank coils spaced away from chassis for optimum "Q".

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:** 85W for 800W CW output. 10 dB gain.  
**Shipping Weight:** Amplifier, 54 pounds.; tube, 3 pounds.  
**Operating Weight:** 48 pounds.  
**Efficiency:** CW/SSB better than 66%.  
**Dimensions:** 14Wx8½Hx15¼D inches.

# AMERITRON'S four 572B tubes . . . 1300 Watts . . . \$1999!

*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 . . . No one will ever know the difference!*

**You get 1300 Watts PEP SSB nominal power output 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™, Parasitic Killer™, 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!**

**AL-572** gives 1300 Watts PEP SSB nominal power output on 160-15 Meters using 4 rugged 572B tubes with 3-second warm-up. This whisper quiet, desktop linear plugs into your 120 VAC outlet - no special wiring needed.

**Get** a heavy duty power supply, fully neutralized tubes, pressurized ventilation, multi-voltage transformer, ALC control, 6:1 vernier drives ... and more!

**Get** 1300 Watts PEP SSB, 1000 Watts CW continuous (typical) on all amateur bands from 160-15 Meters

**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 and amplifier lifetime.

**Heavy** duty power supply uses a high silicon steel transformer to deliver 2500 Volts at 0.7A, good regulation.

**Pi-Network** tuned input uses slug tuned coils to provide a good 50 ohm load for your rig. Quiet internal fan draws in cool air over power supply components and pressurizes the tubes.

**Grid** current, plate current and forward PEP output power are continuously monitored by large dual, lighted cross-needle meters.

**Fourth** scale switches among peak reflected power (and SWR), high voltage, ALC threshold, and output voltage.

**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

AL-572  
**\$1999**  
Suggested  
Retail



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.

**Optional** Ameritron electronic PIN diode QSK switch for lightning fast QSK operation. 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  
**\$2095**

Single Import tube

AL-800  
**\$2679**

One Eimac® tube

Suggested Retail

AL-800HF  
**\$2885**

Two Import tubes

AL-800H  
**\$4039**

Two Eimac® tubes

**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 850W CW with 85W 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 51 lbs.

**For** more power and headroom, the AL-800H uses a pair of 3CX800A7 tubes to easily provide 1500W PEP/CW with a typical drive level of 55 Watts.

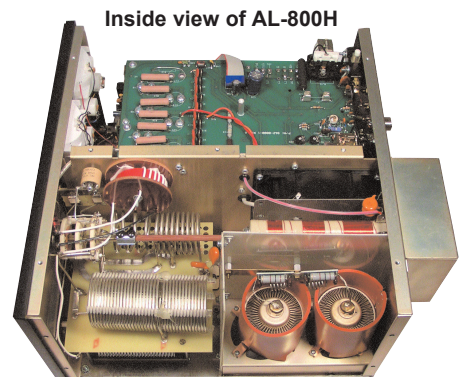
**AL-800H** draws 14 Amps peak current at 240 VAC (1500 Watts CW output) and weighs just 52 lbs. Other than power differences, these amplifiers are very similar in features and operation. Both cover 160-15 Meters, and modifiable to cover 12/10M with proof of your FCC license.

**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 **Dynamic Bias™** 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. Meters continuously measure grid and plate currents, and 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



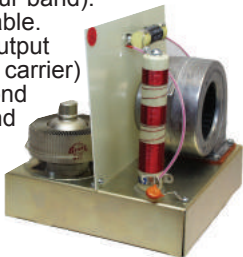
AL-1500F  
**\$3565**  
 Import tube  
 Suggested Retail  
 AL-1500  
**\$4720**  
 Eimac<sup>®</sup> tube

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. Tube is further protected by delay starting and auto over-current shutoff to remove power if amplifier is mis-tuned.

Get full legal power from a whisper quiet desktop linear. 17Wx10Hx18 1/2"D", covers all bands, 160-15 Meters, including WARC and MARS (80% of full output set to nearest amateur band). 10/12 Meters modifiable.

Get 1500 watts output (1/2 hour continuous carrier) and 2500W (30 second continuous carrier and 2500W - plus 30 minute PEP two-tone test). Get all this power plus, 65% efficiency, pi-network

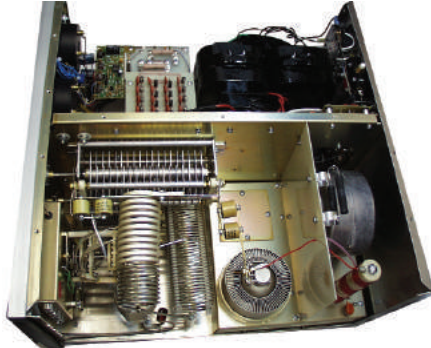


tuned input, Pi/Pi-L output, inrush current protection, multi-voltage transformer, QSK option, and a one year warranty.

AL-1500 has a heavy duty power supply. 32 lb. *Hypersil*<sup>®</sup> transformer with high silicone steel core, computer grade capacitors (33 mfd total), heavy duty bleeders and twenty 3A, 1000V power rectifiers give a stiff 3300V fully loaded.

AL-1500 is built on a rugged steel chassis with a separate RF compartment fully shielded to keep RF from leaking out, keeping RFI and TVI to a minimum.

Superb RF design and layout, Hi-Q



An inside look at the AMERITRON AL-1500

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 in-put 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 perform-

ance at all power levels.

AL-1500s grid overload circuit protects tube from excessive grid current. If 175 mA of peak grid current is reached, "OPR" LED will not light and amplifier will go into a bypass until reset by the op.

**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.

Two illuminated panel meters.

Grid Current meter provides continuous reading of critical grid current and indicates proper, safe operation.

The other meter reads Plate Voltage, Current, Peak RF Watts, or ALC. Selector switch chooses bias voltage for best linearity on SSB or lowest dissipation on CW. Operate/Standby switch, in Standby, maintains the tube's filament and plate voltages while allowing for "barefoot" operation.

Includes 12 volt DC auxiliary jack and an "XMT" LED.

**Power required:** 240 VAC, 15 Amps.

**Size:** 17Wx10Hx18 1/2"D". 77 pounds. UPS shippable, three boxes.

**Made in the USA.**

*Hypersil*<sup>®</sup> Transformer weighs 32 lbs.



**Slug Core Tuning Tool**

965-6204, \$3.00. Plastic tuning stick for adjusting slug cores. .1" hex end, 7 1/4" long. Fits Ameritron tube amplifier coils.



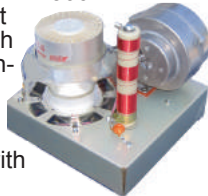
## Ameritron's 3CX1200Z7 Amplifier



Radio's toughest tube -- Eimac<sup>®</sup> 3CX1200Z7 is in the toughest amplifier! Has 50-Watt control grid dissipation. It also has the same super heavy duty power supply that's in our AL-1500 amplifier that

loafs at full power. The tough 3CX1200Z7 has lowest quantity history of field replacement of any modern transmitting tube. It has the ruggedness and power handling of ceramic tubes combined with the long-life of thoriated tungsten filaments.

AL-1200 Suggested Retail  
**\$4599**



## Ameritron's Dual 3-500G Amplifier



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. Most competing amplifiers using 3-500Gs can't deliver 1500W because their lightweight supplies can't use these tubes to their full potential. AL-82 amplifier uses the same *Hypersil*<sup>®</sup> power transformer used in the AL-1500/AL-1200 amplifiers -- powerful, just loafs at full power!

AL-82 Suggested Retail  
**\$3250**



## Rig Output Power Control



For rigs without output power control. Drive amp or tune an antenna tuner. Avoid over-driving amps/tuners. Use any rig/amp combo with external ALC. Front panel transmit and ALC control, in/out phone jacks for CW, Amp Key, ALC. 110 VAC. 5 1/4"Wx2 1/4"Hx3 1/2".

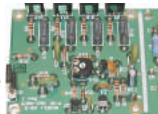
TPC-150

Suggested Retail  
**\$69.95**

## Add-on Electronic Bias for AL-82/1200/1500

Reduces heat by lessening quiescent current to low values when exciter output falls below 100 mW. Remote detector board for Ameritron.

EBS-1H, \$54.95, for other brand amplifiers. Call 662-323-8211 for more details.



EBS-1  
**\$44.95**

## Grid Overload Protect

Protects 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, 662-323-8211.



GOP-100  
**\$44.95**



# AMERITRON Amplifier-to-Transceiver Interface

Protects expensive radio from damage by keying line transients and steady state current and voltages



ARB-704  
INTERFACE BUFFER

**\$69<sup>95</sup>**

ARB-70412  
for IC-706 series radios  
(Includes PNP-13D)

age, voltage spikes, or excessive current on the relay control line. Such damage often appears as "stuck" or "sticky" transmit relays in excitors or shorted transistors on transmit control lines. In most cases where the radio is damaged, the system transmits normally but the external amplifier stays in "transmit" mode. This prevents receive signals from coming through the amp at normal levels in "ON"/"OPERATE" position.

**ARB-704** has many advantages over conventional relay buffers. It has no moving parts, switches instantaneously, noiseless, long life, and no dirty contacts. It operates with negative, AC, or positive amplifier relay control lines.

**Works** with any relay voltage (AC, positive, or negative) to 200 peak volts and any relay current up to 300 mA. Fully compatible with conventional amplifier relays. Especially suited for buffering vacuum relay QSK amps,

since it does not affect attack or release times in a deleterious manner.

**Use** with transmitters or transceivers that pull amplifier control lines to ground, or output a wide range of positive or negative control voltages. Only switches currents under 0.35 mA and has low voltages. 4 1/4"Wx1 3/4"Hx2 3/4"D".

**PLUG-AND-PLAY CABLES, \$19.95**

1 power connector cord, 3 phono (RCA) cords with connectors for relay, AL and amp control lines included.

**ARB-704** advanced interface is compatible with all radios and amplifiers even though radios and amplifiers do not have standardized voltages, accessory plugs, or wiring. Works with any amp/radio combo.

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 do you need the ARB-704 Amplifiers** can damage radios if they have too much relay control volt-

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-8D1	ICOM ACC JACK
PNP-7D1	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

**Transmit/Receive**

Switch uses electronic PIN diode switching to give you lightning fast QSK operation from any HF linear amplifier.



QSK-5

**\$419<sup>95</sup>**

Suggested Retail

**Use** your amplifier for high power QSK CW, packet, AMTOR, any mode requiring 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 makes your amplifier last longer and prevents TVI, RFI and key clicks.

**Exclusive AmpSaver™** (available in QSK-5PC) completely turns off your power amplifier tube current between dots, dashes and words! This 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™** hand-shaking 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,

QSK-5 is extremely quiet -- 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.

**2500 Watts PEP**, 2000W CW in normal service, SWR below 1.5:1. 750W on continuous carrier modes: RTTY, SSTV, FM. Optional cooling fan (CF-5, \$39.95) allows sustained operation at 1500W in any mode. Use with positive voltage keying to +25V. 9 1/2"Wx4Hx6D".

**Internal QSK Available** for AL-80B, AL-1500, AL-1200, AL-82, AL-800/AL-800H. *Contact Ameritron for installation details on the QSK-5PC internal switch.*

**Made in the USA!**

## Tune-up your linear amplifier perfectly! No over-heating, tube damage, power supply stress, arc over

**Amplifier Saver™** lets you safely tune up your linear amp perfectly for full power and best linearity. Deluxe tuning pulser has **Duty Cycle** and **Pulse Rate** Controls for easy testing of Wattmeters, QSK, etc.



ATP-102

**\$89<sup>95</sup>**

Suggested Retail

**Protects** expensive amplifier from overheating, tube damage, power supply stress and arc-over during tune-up. Prevents premature failure and costly component replacements.

**Innovative pulse tuning technology** tunes 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?" Well you can . . . but if you don't re-tune at high power you can create severe splatter and abuse tube

grids because of excessive grid current.

If a linear uses tubes that easily damaged by normal use, ATP-100 can extend tube life. **"Sniff-out"** RFI or TVI caused by rusty guys, 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, 3 1/4"Wx1 1/4"Hx4D". Use 9V battery.

**ATP-100, \$74.95.** Like ATP-102, but less Duty Cycle and Pulse Rate controls on front panel.



## Transceiver Front-end Protector



TRP-150

**\$74<sup>95</sup>**

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!



Fully extended 61"  
Collapsed 39"

SDA-100  
**\$599<sup>95</sup>**  
Ship Code D

**SDA-100** is the best built, best looking, best performing HF mobile screwdriver antenna in the world! Properly installed on your vehicle it 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 stain-less steel and blue-printed, 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 -- won't wear out, for 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 fingerstock designed to contact 3 turns of coil all the time with over 25lbs of combined contact pressure. You can run up to 1.2 KW PEP, trouble free. It's so superior to anything else on the market that we put our outstanding AMERITRON warranty behind it.

**Heavy duty Pittman commercial 12 volt gear motor** 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.

### SDA-100 includes:

**Up/Down switch;** 5' motor DC cable with detachable weather sealed connector; decoupling toroid match coils.

**SDA-100** is handsome black, using Dupont Basecoat/Clearcoat system.

### Optionals:

**SDM-100, \$139.95.** Stainless steel flange mount base bracket, with multiple pre-punched holes. Mounting rod is 1" pipe thread, 14" long. Code B.

**SWP-100, \$34.95.** 6-ft steel whip.

**SMC-100, \$5.95.** Shunt matching coil with solder lugs. Use at mobile/screwdriver antennas base to lower SWR.

### Combination Prices

**SDA-110, \$699.95.**

Combination of SDA-100 mobile screwdriver antenna, an SDC-100B auto-controller, and the SWP-100 stainless steel whip.

**SDA-112, \$749.95.**

Combination of SDA-100 screwdriver, SDC-102 controller and SWP-100.



## Ameritron Mobile Installation Accessories

### ALS-500M DC Power Wire Harness

**MIA-6, \$74.95.** Get an extra DC power harness for ALS-500M amp. Saves you from the hassle of moving your amp cable assembly. Assembled 8 foot cable, fuses and fuse holders included.



### In-Line Fuse Holder/Distribution Block

**MIA-1, \$7.95.** AGU in-line fuse holder; waterproof, handles 80A, 4-10 gauge wire, built-in bracket.



4-10 gauge wire, built-in bracket.

**MIA-2, \$15.95.** AGU in-line fused power distribution block has



one input for 4 gauge wire, two outputs for up to 8-gauge wires, plastic covered with mounting ears.

### Remote Power ON/OFF for Amplifier

**MIA-3, \$64.95.** 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, \$19.95.** 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, \$11.95.** Makes solid grounding for your mobile radio or screwdriver antenna installations. Made from ultra-fine tinned copper braid that is extremely flexible. 7/8-inch width, 13 inches long. 3/8 inch holes on each end.



## Truly Automatic Ameritron Screwdriver Controller

**SDC-105** works with all rigs 160-6 Meters! No interface cables needed! RF sensor reads frequency data and moves antenna to nearest programmed setting. 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 for quick adjustments, low for fine tuning. Home mode allows hands-free lowering of antenna. Adjustable current limit prevents motor damage or improper stall-outs.

**Meter port** allows use of AWM-35B/H SWR/Wattmeter. 3 1/2"Wx3 1/4"Hx1 1/4"D". 4-pin molex matches most screwdrivers.



SDC-105  
**\$244<sup>95</sup>**  
Ship Code A

## 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 positioning. Compact 3 1/2"Wx3 1/4"Hx1 1/4"D inches.



SDC-102  
**\$149<sup>95</sup>**  
Ship Code A

## Automatic Screwdriver Antenna Controller: Icom/Kenwood/Yaesu

For rigs equipped with a CI-V interface. **SDC-104 K,I, Y \$179<sup>95</sup>** Ship Code A

Receives frequency data and automatically tunes screwdriver antenna. Includes interface cable. 3 1/2"Wx3 1/4"Hx1 1/4"D inches.



### SDC-104 Rig Interface Cables

No need to get a new controller because you buy a different radio, additional interface cables available.

**RJ-DB9KY, \$27.95.** Kenwood and Yaesu transceivers with DB9 Serial COM port.

**RJ-8MY2, \$27.95.** For Yaesu transceivers with 8 pin mini DIN, CAT/Linear port.

**RJ-CB-35, \$5.95.** For all Icom transceivers with a 3.5 mm Remote port.

### Digital 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"Hx2D inches. Use 13.8VDC.



SDC-100B  
**\$119<sup>95</sup>**  
Ship Code A



**SRS-100, \$34.95.** Magnetic sensor kit for High Sierra to use SDC-100/102/104. Not compatible with High Sierra Sidekick™.

**SRS-1001, \$15.95.** Mag sensor kit for Hi-Q antennas to use SDC-100/102/104.

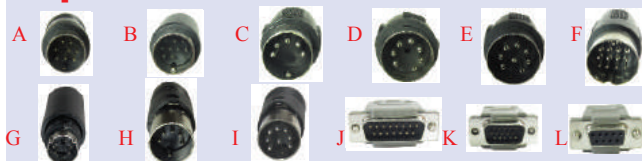


AL-811/AL-811H Specifications:	AL-800/AL-800H Specifications:	ALS-500M Specifications:	ALS-600/ALS-606 Specifications:	ALS-1300/ALS-1306 Specifications:
<p><b>Input:</b> Circuit type: Pi-network, slug tuned coils. Maximum VSWR at resonance: 1.3:1 Minimum 2:1 VSWR bandwidth: 15% Max. drive power permissible: AL-811: 80 Watts; AL-811H: 100 Watts. Typical drive rated output: AL-811: 60 Watts; AL-811H: 75 Watts <b>Output:</b> Typical SSB PEP voice operation: AL-811: 600 Watts, AL-811H: 800 Watts. Typical CW operation: AL-811: 400 Watts; AL-811H: 600 Watts. 1/2 hour PEP two tone test: AL-811: 500 Watts; AL-811H: 650 Watts. 1/2 hour continuous carrier (RTTY): AL-811: 300 Watts input; AL-811H: 400 Watts input. <b>Power Supply:</b> Circuit type: full wave bridge. No load voltage: 1700 Volts. Full load voltage: 1500 Volts. Full load current: AL-811: 550 mA; AL-811H: 650 mA. Regulation: 10%. Maximum draw at rated output: AL-811: 8 A; AL-811H: 10A. <b>AC Input:</b> 120 V, 50/60 Hz (AL-811/H) 240 V, 50/60 Hz (AL-811X/AL-811HX). <b>Tubes:</b> Type: (AL-811: 3) (AL-811H: 4) 811A vertically mounted. <b>Continuous dissipation:</b> 65 Watts per tube. <b>Warm-up time:</b> 5 seconds <b>Metering:</b> Multimeter: reads HV and plate current. Grid Meter: Reads PA grid current <b>ALC:</b> Negative going, 0-20 V, adjustable, phono jack *Efficiency SSB (envelope crest): greater than 70% <b>MARS/WARC:</b> Yes, set to the nearest band. <b>Connectors:</b> Relay: engages amplifier when grounded. +12 VDC open circuit and supplies 100 mA when grounded. A built-in back-pulse cancelling diode protects the exciter. <b>RF input:</b> SO-239, 50 Ohm input. <b>RF Out:</b> 50 Ohms with full power into any SWR below 3:1. <b>Power:</b> NEMA 5-15P, 120 Volts. <b>Dimensions:</b> 15 1/2 Dx 13 3/4 W x 8 1/4 H inches. <b>Operating Weight:</b> 32 pounds. <b>Shipping Weight:</b> 41 pounds. <b>Frequency Coverage:</b> 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. <b>Third Order IMD at Rated Output:</b> -33 dB.</p>	<p><b>Input:</b> Circuit type: Pi-network, resistor attenuated/slug tuned coils. Maximum VSWR at resonance: 1.3:1 or less. Minimum 2:1 VSWR bandwidth: within +20% or -40% of selected band/ within 20% of center frequency. Max. drive power permissible: 100 Watts. Typical drive for full power output: 70/55Watts. <b>Output:</b> Circuit type Pi/Pi-network output. Typical SSB PEP voice operation: 1250/1500+W Typical CW continuous operation: 1000/1500 W. 1/2 hour PEP two tone test: 1000/1500 Watts. 1/2 hour continuous carrier (RTTY): 750/1000 W. <b>Power Supply:</b> Circuit type: Full wave voltage doubler. No load voltage: 2600 Volts. Full load voltage: 2300/2250 V. Full load current: 1/1.2 A. Regulation: 12% "less/15%". Transformer: 32 lbs grain oriented EI lamination. Capacitors: 78/63 uFd total, high current computer grade. Maximum draw at rated output: 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. <b>AC Input:</b> 120V, 50/60 Hz. <b>Tubes:</b> Eimac® 3CX800A7. <b>Continuous dissipation:</b> 800W per tube, 1600W total. <b>Warm-up time:</b> 180 seconds. <b>Estimated life:</b> 6,000-8,000 hours ICAS. <b>Metering:</b> Multimeter: reads Peak forward power, Peak reflected power, SWR, ALC threshold output voltage, and high voltage. <b>Current Meter:</b> Reads plate and grid current. <b>ALC:</b> Negative going, 0-10 V, phono jack output, front panel adjustments. <b>Efficiency CW:</b> Approximately 65-66% or greater. <b>Eff. SSB (envelope crest):</b> Approx. 66% or greater. <b>MARS/WARC:</b> Yes, set to the nearest band. <b>Connectors:</b> Keying: Requires contact closure or sink of +12 VDC at 100 mA, back pulse protected, phono jack. <b>RF input:</b> SO-239, 50 Ohm input. <b>RF Out:</b> 50 Ohms with full power into any SWR below 3:1. <b>Power:</b> NEMA 5-15P, 120/240 Volts. <b>Dimensions:</b> 17 1/4 Dx 14 1/2 W x 8 1/2 H in. <b>Operating Weight:</b> 51/52 lbs. <b>Shipping Weight:</b> Unit, 59/60 lbs.; Tubes, 3/5 lbs. <b>Frequency Coverage:</b> Domestic model: 160, 80, 40, 30, 20, 17, 15 Meters. 10/12 Meters with modification. Must present FCC license. <b>Third Order IMD at Rated Output:</b> -35 dB.</p>	<p><b>Frequency Coverage:</b> (US) 1.5 to 22 MHz continuous; (Export) 1.5-30 MHz continuous. <b>Input: Circuit type:</b> Broadband, resistor swamped. Maximum VSWR at resonance: 1.5:1. Bandwidth: Broadband. Maximum drive power permissible: 100 Watts. Typical drive for rated output: 60 Watts. <b>Output: Circuit:</b> Broadband, low pass. Typical SSB PEP voice operation: 500 Watts PEP. Typical CW operation: 400 Watts. <b>Power requirement for amplifier:</b> 14-16 VDC, 80A (peak). <b>Output devices:</b> Transistor, (4) 2SC2879. <b>Metering:</b> Current meter, 0-100 A. <b>ALC:</b> None. <b>Efficiency CW:</b> 40%. <b>Efficiency SSB:</b> (envelope crest) 45%. <b>MARS/WARC:</b> Yes, continuous coverage. <b>Keying:</b> Relay closure or sinking to ground of +12 VDC at 100 mA, RCA phono jack. <b>Power Supply connector:</b> Beau multi-contact male chassis mount. <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. <b>RF Connectors:</b> SO-239 for input and output. <b>Dimensions:</b> 15 1/2 Dx 8 7/8 W x 3 7/4 H in. <b>Operating Weight:</b> 7.5 lbs. <b>Shipping Weight:</b> 12 lbs. <b>Third Order IMD at rated Output:</b> -35 dB PEP or better.</p> <hr/> <p style="text-align: center;"><b>ALS-600SPS Switching Power Supply Specs:</b></p> <p><b>Line Input:</b> 120 VAC/240 VAC. <b>Output:</b> 50 VDC, 25 Amps, +/-14 VDC, 1 A. <b>Metering:</b> Cross-needle for volt/amp. <b>Output Cable:</b> 6 foot prewired cable with Beau multi-contact connector to mate with ALS-600 amplifier. <b>Dimensions:</b> 12Dx9"/2Wx6H inches. <b>Operating Weight:</b> 9 lbs.* <b>Shipping Weight:</b> 15 lbs.* <b>AC Line Connector:</b> NEMA-5-15P.</p> <p><b>Note:</b> * Total Shipping weight for ALS-600 Amplifier and ALS-600SPS power supply is 33 lbs., shipped together.</p>	<p><b>Frequency Coverage:</b> (US) 1.5 to 22 MHz continuous; (Export) 1.5-30 MHz continuous. <b>Input: Circuit type:</b> Broadband, resistor swamped. Maximum VSWR at resonance: 1.5:1. Bandwidth: Broadband. Maximum drive power permissible: 100 Watts. Typical drive for rated output: 100 Watts. <b>Output: Circuit:</b> Broadband, low pass. Typical SSB PEP voice operation: 600 Watts PEP. Typical CW operation: 500 Watts. <b>Power requirement for amplifier:</b> 50 VDC, 25 Amps, +/-14 VDC, 1 Amp. <b>Output devices:</b> Power MOSFET (4) MRF-150. <b>Metering:</b> Amplifier-Cross-needle meter for VSWR, FWD, reflected true peak indicating wattmeter. <b>ALC:</b> Negative going 12 VDC, adjustable, RCA phono jack. <b>Efficiency CW:</b> 50%. <b>Efficiency SSB:</b> (envelope crest) 55%. <b>MARS/WARC:</b> Yes, continuous coverage. <b>Keying:</b> Relay closure or sinking to ground of +12 VDC at 100 mA, RCA phono jack. <b>Power Supply connector:</b> Beau multi-contact male chassis mount. <b>RF Connectors:</b> SO-239 for input and output. <b>Dimensions:</b> 9 1/2 W x 6 1/2 H x 12 D inches. <b>Operating Weight:</b> 12.5 lbs. <b>Shipping Weight:</b> 18 lbs. (amp only). <b>Third Order IMD at rated Output:</b> -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> <hr/> <p style="text-align: center;"><b>ALS-600/ALS-606PS Power Supply Specifications:</b></p> <p><b>Line Input:</b> 120 VAC/240 VAC. <b>Output:</b> 50 VDC, 25 Amps, +/-14 VDC, 1 Amp. <b>Metering:</b> Cross-needle for volt/amp. <b>Output Cable:</b> 6 foot prewired cable with Beau multi-contact connector to mate with ALS-600 amplifier. <b>Dimensions:</b> 9 1/2 W x 6 1/2 H x 12 D inches. <b>Operating Weight:</b> 32 lbs.* <b>Shipping Weight:</b> 37 lbs.* <b>AC Line Connector:</b> NEMA-5-15P.</p> <p><b>Note:</b> * 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. <b>ALS-1306 Frequency Coverage:</b> 1.5 to 54 MHz continuous (excluding 27 MHz). <b>Input: Circuit type:</b> Broadband, resistor swamped. Maximum VSWR at resonance: 1.5:1. Bandwidth: Broadband. Maximum drive power permissible: 100 Watts. Typical drive for rated output: 100 Watts. <b>Output: Circuit:</b> Broadband, low pass. Typical SSB PEP voice operation: 1200 Watts PEP. Typical CW operation: 1000 Watts. <b>Power requirement for amplifier:</b> 50 VDC, 50 Amps, +/- 14 VDC, 2 Amps. <b>Output devices:</b> Power MOSFET (8) MRF-150. <b>Metering:</b> Two Cross-Needle Meters for VSWR, FWD, REF true peak indicating wattmeter, ALC, high voltage PA1 and PA2. Constant current monitor PA1 and PA2. <b>ALC:</b> Negative going 12 VDC, adjustable, RCA phono jack. <b>Efficiency CW:</b> 50%. <b>Efficiency SSB:</b> (envelope crest) 55%. <b>MARS/WARC:</b> Yes, continuous coverage. <b>Keying:</b> Relay closure or sinking to ground of +12 VDC at 100 mA, RCA phono jack. <b>Power Supply connector:</b> Beau multi-contact male chassis mount. <b>Bandswitch:</b> ALS-1300, manual or use optional Radio Interface, ARI-500 and radio interface cable. <b>ALS-1306,</b> manual or automatic with built-in automatic bandswitch. Requires optional radio interface cable. <b>RF Connectors:</b> SO-239 for input and output. <b>Dimensions:</b> 18Dx10Wx6 1/2 H inches. <b>Operating Weight:</b> 22 lbs. <b>Shipping Weight:</b> 27 lbs. <b>Third Order IMD at rated Output:</b> -35 dB PEP or better.</p> <hr/> <p style="text-align: center;"><b>ALS-1300/ALS-1306 Included Switching Power Supply Specifications:</b></p> <p><b>Line Input:</b> 120 VAC @30 Amps 240 VAC @14 Amps (Default) <b>Output:</b> 50 VDC, 50 Amps, +/-14 VDC, 2 A. <b>Output Cable:</b> 6 foot prewired cable with Beau multi-contact connector to mate with ALS-1300/ALS-1306 amplifier. <b>Dimensions:</b> 9 1/2 Dx 10 W x 6 1/2 H inches. <b>Operating Weight:</b> 15 lbs.* <b>Shipping Weight:</b> 20 lbs.* <b>AC Line Connector:</b> NEMA-6-15P.</p> <p><b>Note:</b> * 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).

AL-80B Specifications:	AL-572 Specifications:	AL-82 Specifications:	AL-1200 Specifications:	AL-1500 Specifications:
<p><b>Input:</b> 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.</p> <p><b>Output:</b> 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.</p> <p><b>Power Supply:</b> 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.</p> <p><b>Metering:</b> 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.</p> <p><b>MARS/WARC:</b> Yes, set to the nearest band.</p> <p><b>Connectors:</b> Keying: Supplies 100 mA when grounded, built-in back-pulse cancelling diode, protects the exciter. 12 VDC open circuit.</p> <p><b>RF input:</b> SO-239, 50 Ohm input.</p> <p><b>RF Out:</b> 50 Ohms with full power into any SWR below 3:1.</p> <p><b>Power:</b> NEMA 5-15P, 120 Volts.</p> <p><b>Dimensions:</b> 15 1/2 Dx 14 1/4 W x 8 1/2 H inches.</p> <p><b>Operating Weight:</b> 48 lbs.</p> <p><b>Shipping Weight:</b> Unit, 54 lbs.; Tube, 3 lbs.</p> <p><b>Frequency Coverage:</b> 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 modification details.</p> <p><b>Third Order IMD at Rated Output:</b> -35 dB.</p>	<p><b>Input:</b> 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.</p> <p><b>Output:</b> 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.</p> <p><b>Power Supply:</b> 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.</p> <p><b>Metering:</b> 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.</p> <p><b>MARS/WARC:</b> Yes, set to the nearest band.</p> <p><b>Connectors:</b> Keying: Supplies 100 mA when grounded, built-in back-pulse cancelling diode, protects the exciter. 12 VDC open circuit.</p> <p><b>RF input:</b> SO-239, 50 Ohm input.</p> <p><b>RF Out:</b> 50 Ohms with full power into any SWR below 3:1.</p> <p><b>Power:</b> NEMA 5-15P, 120 Volts.</p> <p><b>Dimensions:</b> 15 1/2 Dx 14 1/4 W x 8 1/2 H inches.</p> <p><b>Operating Weight:</b> 40 lbs.</p> <p><b>Shipping Weight:</b> Unit, 54 lbs.; Tube, 3 lbs.</p> <p><b>Frequency Coverage:</b> 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.</p> <p><b>Third Order IMD at Rated Output:</b> -34 dB (below PEP rated output).</p>	<p><b>Input:</b> 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</p> <p><b>Output:</b> 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.</p> <p><b>Power Supply:</b> 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.</p> <p><b>Metering:</b> 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.</p> <p><b>MARS/WARC:</b> Yes, set to the nearest band.</p> <p><b>Connectors:</b> 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.</p> <p><b>RF input:</b> SO-239, 50 Ohm input.</p> <p><b>Power:</b> NEMA 6-15P, 240 Volts.</p> <p><b>Dimensions:</b> 18 1/2 Dx 17 W x 10 H inches.</p> <p><b>Operating Weight:</b> 76 pounds.</p> <p><b>Shipping Weight:</b> Unit, 50 lbs.; Tubes, 6 lbs.; Transformer, 35 lbs.</p> <p><b>Frequency Coverage:</b> 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.</p> <p><b>Third Order IMD at Rated Output:</b> -34 dB at 1500 Watts Output.</p>	<p><b>Input:</b> 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.</p> <p><b>Output:</b> Circuit type: Pi-L. 1/2 hour PEP two tone test: 1800 Watts. 30 second PEP two tone test: 1800 Watts plus.</p> <p><b>Power Supply:</b> 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.</p> <p><b>Metering:</b> 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%.</p> <p><b>MARS/WARC:</b> Yes, set to the nearest band.</p> <p><b>Connectors:</b> Keying: Engages amplifier when grounded, +12 VDC open circuit and supplies 100 mA when grounded, built-in back-pulse cancelling diode protects the exciter.</p> <p><b>RF input:</b> SO-239, 50 Ohm input.</p> <p><b>Power:</b> NEMA 5-15P, 240 Volts.</p> <p><b>Dimensions:</b> 18 1/2 Dx 17 W x 10 H in.</p> <p><b>Operating Weight:</b> 77 pounds.</p> <p><b>Shipping Weight:</b> Unit, 50 lb., Tube, 5 lb., Transformer 35 lb.</p> <p><b>Frequency Coverage:</b> 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.</p> <p><b>Third Order IMD at Rated Output:</b> -34 dB at 1500 Watts output.</p>	<p><b>Input:</b> 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.</p> <p><b>Output:</b> 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.</p> <p><b>Power Supply:</b> 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.</p> <p><b>Metering:</b> 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%.</p> <p><b>MARS/WARC:</b> Yes, set to the nearest amateur band.</p> <p><b>Connectors:</b> Keying: Engages amplifier when grounded, +12 VDC. 100 mA when grounded, built-in back-pulse cancelling diode protects the exciter.</p> <p><b>RF input:</b> SO-239, 50 Ohm input.</p> <p><b>Power:</b> NEMA 6-15P, 240 Volts.</p> <p><b>Dimensions:</b> 18 1/2 Dx 17 W x 10 H in.</p> <p><b>Operating Weight:</b> 77 pounds.</p> <p><b>Shipping Weight:</b> Unit, 50 lb., Tube, 3 lb., Transformer 35 lb.</p> <p><b>Frequency Coverage:</b> 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.</p> <p><b>Third Order IMD at Rated Output:</b> -36 dB.</p>

## 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, see pages in this catalog.

Figure	Item Number	Price	Description	Radio Compatibility
A	620-8068H	\$6.95	8-Pin Mini DIN, Male, 3 ft.	Kenwood TS-480 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



# 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 over 1.5 kW carrier
- High Current edge-wound silver plated Roller Inductor
- 500 pf tuning capacitors, 6:1 vernier reduction drives
- 3 core choke balun
- 6 position antenna switch
- True peak reading meter with LED Meter Light

ATR-30  
**\$629<sup>95</sup>**

Suggested Retail

antenna tuner -- variable transmitting capacitors give 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 3 core choke balun matches virtually any balanced feedline 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" thick aluminum cabinet gives highest efficiency, lowest loss. 13 1/4" W x 5 5/8" H x 17 1/2" D inches.

### Legendary After-Sale Service

Ameritron superb one year limited



warranty, legendary customer service.

### ATR-20 Antenna Tuner . . . ATR-20, \$489.95.



### Handles 1.2 kW PEP SSB.

Slightly less on 160 Meters. 13 1/2" W x 5 7/8" H x 13 1/4" D in. Roller inductor T-network, peak reading SWR/Wattmeter with super-bright LED. Covers 1.8-30 MHz, 6 position antenna switch, balun.

Perfect for Ameritron's widely popular, most trouble-free one kilowatt AL-80B Amplifier!

## Ameritron AC Digital Line Voltage Meters



ADM55-1U lets. Large 1.5Wx.75H" cool blue lighted LED.

Stay aware of brown-outs, over voltage or low power that causes harm to your amplifier. Huge 3/4" digits! Plugs directly into your wall outlet and consumes less than 1 Watt about every kilowatt hour. Accuracy is +/- 1.5%. 2 1/8" W x 1 1/2" H x 1 1/2" D".

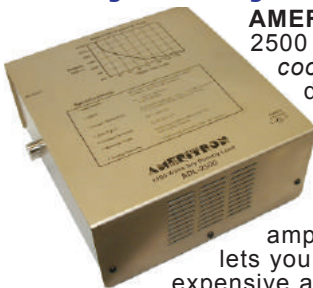
ADM55-1U measures AC 80 to 200 Volts. Has US 2-prong 110V plug.

ADM55-1E measures AC 130 to 300V, has Europlug 220V.

ADM-7780, \$11.95. US 2-prong to NEMA 6-20P Adaptor.

ADM-7782, \$11.95. Euro or US 2-prong to NEMA 6-15P.

## Fan Cooled Dry Dummy Load



AMERITRON's 2500 Watt fan cooled dummy load handles any legal limit

amplifier, and lets you tune-up expensive amplifiers fast and easy. Works with all amps, radios and transmitters DC through 6 Meters.

Dissipates 2500 Watts average power for 1 minute on, 10 minutes off. 300 Watts continuous. SWR is less than 1.25 to 1 below 30 MHz and less than 1.4 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. x8 1/4" W x 4H x 9 1/2" D". SO-239s. 5 lbs.

ADL-2500  
**\$234<sup>95</sup>**  
 Suggested Retail

## Legal Limit Oil-filled Dummy Load



ADL-1500X  
**\$59<sup>95</sup>**  
 Without Oil.  
 Suggested Retail  
 ADL-1500  
**\$79<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 1/2" H x 6 5/8" D inches. Detailed specifications and power curve.

Order ADL-1500 with industrial grade transformer oil. Order ADL-1500X without oil.

ADL-21, \$34.95. 1 Gallon Industrial Grade Transformer oil.

# AMERITRON RCS-4 Remote Coax Switch



RCS-4  
**\$179<sup>95</sup>**  
Suggested Retail

**Ameritron RCS-4** is a remote controlled coaxial switch that selects one out of four outputs by supplying all control voltages through the coaxial line.

**Elimination** of control cables gives you a fast, neat and inexpensive installation -- *only one coax line for all four of your antennas.*

You get two units -- the switching box (7Wx3Hx5<sup>3</sup>/<sub>8</sub>D inches) that can be tower, mast or wall mounted and the control console (5<sup>1</sup>/<sub>4</sub>Wx3<sup>3</sup>/<sub>8</sub>H6<sup>1</sup>/<sub>8</sub>D inches) that is located and controlled at the operating position.

The attractive indoor console has bright LED antenna selector indicators. A steel enclosure provides 100% shielding to prevent RFI and TVI interference.

**Switching** time is 50 milliseconds. Teflon<sup>®</sup> quality SO-239 connectors provide reliable connections.

The weatherproof switching box uses three heavy duty double pole 8 ampere hermetically sealed relays on a rugged G-10 fiberglass circuit board.

**Quality** components are used throughout both of the entire units to ensure maximum life for the sometimes

*Lightning Protected*  
model RCS-4L, \$219<sup>95</sup>

difficult-to-reach switching box up on the tower or elsewhere.

**RCS-4** operates 120 VAC. RCS-4X is for 220/240 VAC. RCS-4 allows safe operation with 14 Volts control voltage.

**Frequencies** 1.5 through 100 MHz are covered by this excellent station accessory. Handles over 2.5 kilowatts.

**Specifications:**

**4** positions.

**Loss** at 30 MHz less than 0.1 dB.

**VSWR** is low, under 1.25:1 from 1.5-60 MHz.

**Impedance:** 50 Ohms.

**Power:** >2.5 kilowatt PEP, 1.5 kilowatt average.

# RCS-8V HF to VHF/UHF Remote Coax Switch



RCS-8V  
**\$199<sup>95</sup>**  
Suggested Retail

**Ameritron's Remote Coax Switch** lets you remotely switch up to five separate antennas using one inexpensive

small control line (like standard telephone wire) -- **Eliminate** a tangle of troublesome coax and have a simple and neat installation -- with just one 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 all HF/VHF/UHF radio 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 source or RCS-8VX for 220/240 VAC. Use any 6 conductor control line (not supplied) and allows safe operation

*Lightning Protected*  
model RCS-8VL, \$239<sup>95</sup>

with 14V control voltage.

**RCS-8VN, \$209.95.** 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-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



RCS-10  
**\$199<sup>95</sup>**  
Suggested Retail

**RCS-10** remote coaxial switch selects one of eight antennas using an inexpensive three or four conductor control line (such as stan-

dard telephone wire).

**Eliminate** a tangle of troublesome coax and have a simple and neat installation -- with just a single coax feedline. Clears up space for other items or keeps it neat and tidy for comfort and proper operating

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 directly at your operating station for easy control.

**Outdoor Unit Features:**

**Inexpensive** and simple wiring

selects up to eight antennas using one four conductor telephone type control line. A whole antenna farm connected to one control box -- simply amazing!

**High Power Capability:** The RCS-10 relay box will handle over 5 kilowatts 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.

**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.

*Lightning Protected*  
model RCS-10L, \$229.95

**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.

**Inside Control Unit Features:**

**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 hardware, and U-V resistant cover.

**Easy-to-Read Antenna Indicators:** Eight wide-spaced LED's indicate the selected antenna.

**Size:** Inside Control Box is a compact 6<sup>1</sup>/<sub>4</sub>Wx3<sup>1</sup>/<sub>4</sub>Hx4<sup>5</sup>/<sub>8</sub>D inches.

# AMERITRON Automatic Remote Antenna Coax Switch

Automatically reads data from your transceiver and selects up to 8 pre-programmed antennas . . .

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.

**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. 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, the



RCS-12 will not let them make a switching mistake. 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

RCS-12C  
**\$249<sup>95</sup>**  
Suggested Retail

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 1/4" W x 2 1/4" H x 7"D. 1.5 lbs.

**RCS-12, \$329.95** 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, \$369.95** RCS-12 with lightning surge protection.

**RCS-12C, \$249.95.** Automatic Controller only. 110VAC, compatible with RCS-8V or RCS-10 outdoor relay boxes.

### ALS-1306/RCS-12 Rig Interface Cables, \$27<sup>95</sup>

DB-13D	Icom IC-706/7000/718 & others w/13P din
DB-7D1	Icom with ACC2 7-pin din
DB-DB7DK	Kenwood with DB9 except 480
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
DB-USB6000	\$59.95 DB9 to USB Cable for Flex 6000

## AMERITRON EXTENDED WARRANTY PLAN

**Ameritron's** extended warranty plan is the same as the original warranty, just extended for the amount of months you choose. 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

**Labor** done at Ameritron to repair the product back to specifications. Return shipping (within the USA at our choice) 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 service 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 was purchased used or out-of-warranty, it needs to be sent to us prepaid for evaluation.

**Call 1-662-323-8211.**

Use chart to order a 1 or 2 year extended warranty plan.

**For details,** call 1-662-323-8211. Must contact us before ship.

**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-606	\$129.00	\$209.00
ALS-606S	\$139.00	\$223.00
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) 2019 AMERITRON.*

## AMERITRON is an authorized Eimac<sup>(R)</sup> Tube Distributor . . .

- Eimac<sup>R</sup> 3CX1200A7 - \$1995
- Eimac<sup>R</sup> 3CX1200Z7, \$1995
- Eimac<sup>R</sup> 3CX1500A7/8877 - \$2095
- IMPORT 3CX1500A7/8877, \$1075
- GRAPHITE 3-500GT - \$259
- Eimac<sup>R</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

## 2019 Ham Catalog

*A Cushcraft Antenna  
would look great in  
your backyard too*

Cushcraft Amateur Radio Antennas  
308 Industrial Park Road  
Starkville, MS 39759  
1-662-323-9538  
[www.cushcraftamateur.com](http://www.cushcraftamateur.com)

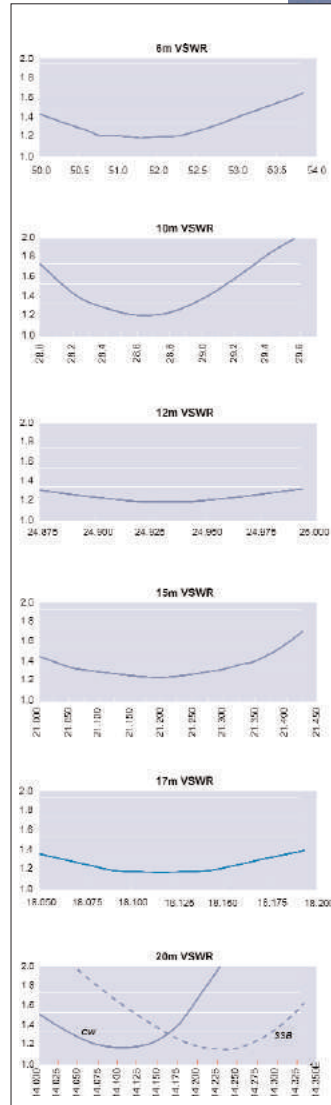
# Cushcraft R-6000 Multiband HF Vertical 6-20 Meters

## 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.

- **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 new HF/50 MHz transceivers
- **AFFORDABLE PRICE**  
Cushcraft delivers the best quality and performance at a price no one else can match

R-6000  
**\$459<sup>95</sup>**

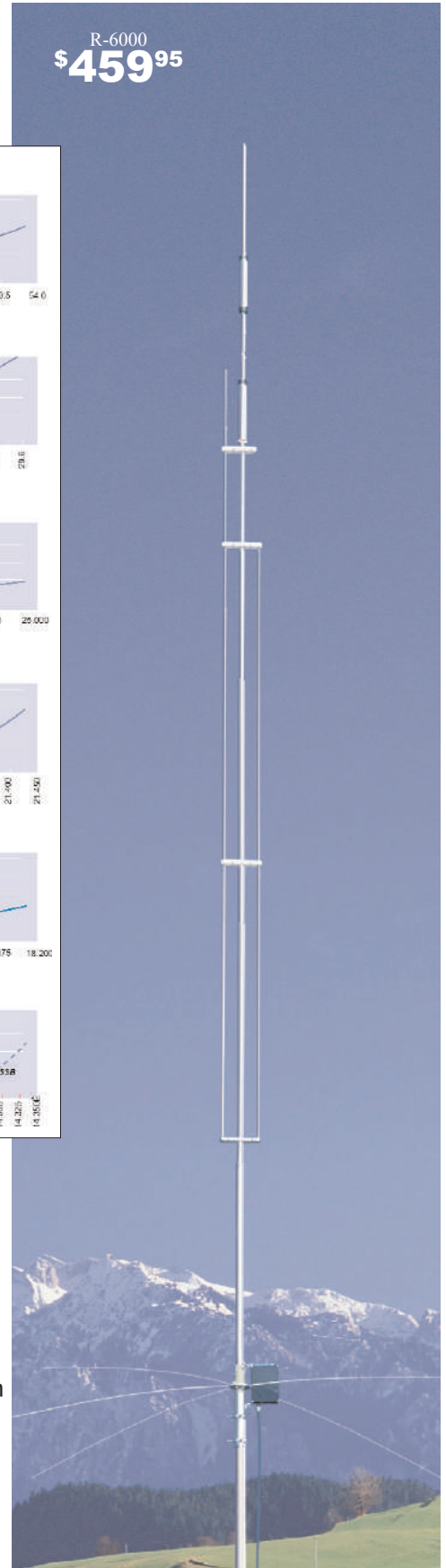


Specifications:	R-6000
Frequency, meters	6, 10, 12, 15, 17, 20
Gain (dBi)	3
VSWR at resonance	1.2:1 typical
2:1 bandwidth, KHz	6m >1300 10m >1700 12m >100 15m >450 17m >100 20m 300
Power Watts PEP (FM)	1500 (500)
Radiation angle, deg.	16
Horizontal rad, deg.	360
Height, ft (m)	20.5 (6.25)
Mast size range, 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



*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

**Big Brother R9** now includes 75/80 Meters for local ragchewing and worldwide low band DX *without radials!*

It's omni-directional low angle radiation gives you exciting and easy DX on all 9 bands: 75/80, 40, 30, 20, 17, 15, 12, 10 and 6 Meters with low SWR. QSY instantly -- no antenna tuner needed.

**Use full 1500 Watts SSB/CW** when the going gets tough to break through pileups and poor band conditions.

**The R9** is super easy to assemble, installs just about anywhere, and its low profile blends inconspicuously into the background in urban and country settings alike.

**Compact Footprint:** Installs in an area about the size of a child's sandbox -- no ground radials to bury with all RF-energized surfaces safely out of reach.

**Rugged Construction:** Thick fiberglass insulators, all-stainless steel hardware and 6063 aircraft-aluminum tubing is double or triple walled at key stress points to handle anything Mother Nature can dish out.

**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, \$569.95.** Like R9, but less 75/80 Meters.

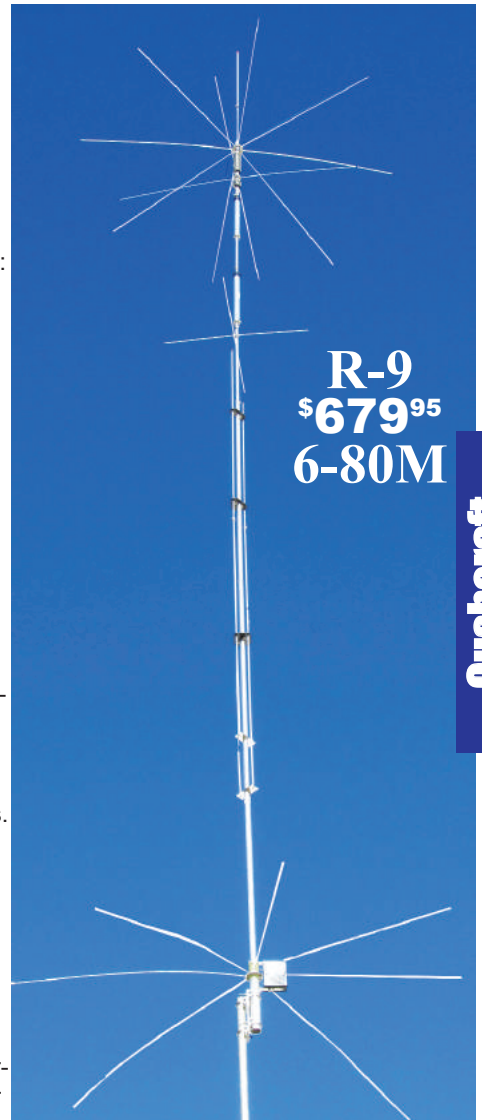
**R-8TB, \$89.95.** Tilt-base lets you tilt your antenna up and down easily by yourself. Makes it easy to work on by yourself, no need to call your ham buddies over to help take it down and lift back up.



## 6-40 Meters



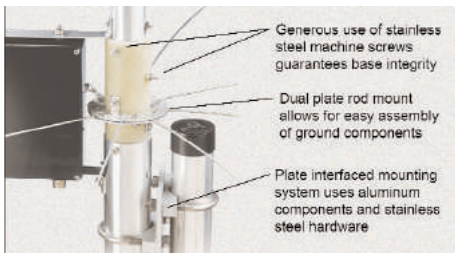
**R-8**  
**\$569<sup>95</sup>**  
**6-40M**



**R-9**  
**\$679<sup>95</sup>**  
**6-80M**

Cushcraft

## 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

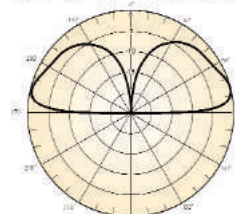


## R-8GK, \$69.95.

3-point guy kit for vertical antennas or antenna masts. Consists of guy brackets, thimbles, galvanized steel stakes, 150 feet

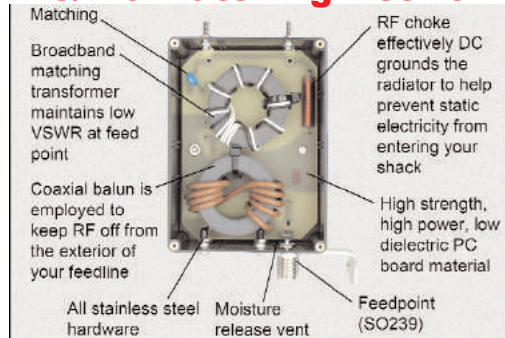
of Danscord rope. Everything needed to secure your antenna or mast safe in high winds.

Typical elevation radiation pattern



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-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

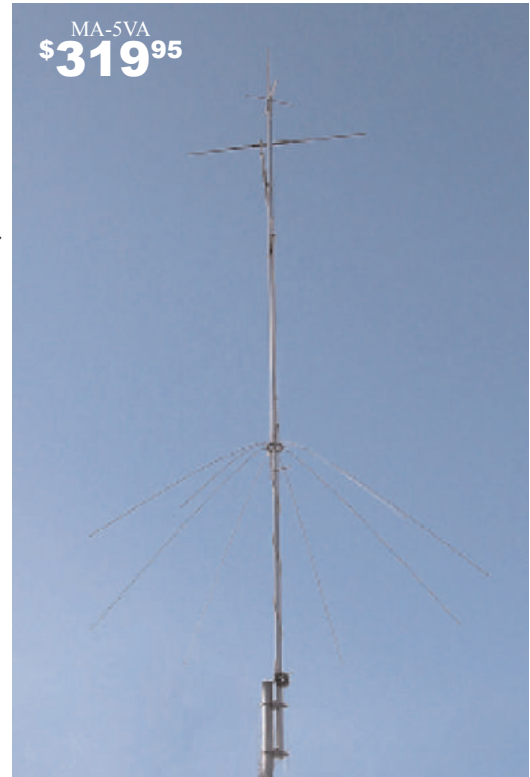
Feedpoint (SO239)

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"

## 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, \$59.95.** Six Meter Add-on Kit for MA5VA.

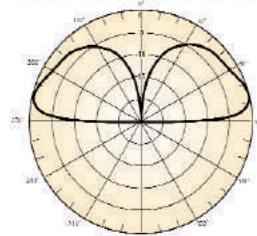
Specifications:	MA5VA	MA6VA
Frequency meters	10, 12, 15, 17, 20	6, 10, 12, 15, 17, 20
Gain (dBi)	1-2	1-2
VSWR at resonance	1.2:1 All bands	1.2:1 All bands
Wind surface area	.82 ft <sup>2</sup> (.076 m <sup>2</sup> )	.82 ft <sup>2</sup> (.076 m <sup>2</sup> )
Wind Survival, mph	>80	>80
Power Watts PEP, (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-6VA 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 Compact HF Multi-Band Beam

## 6-20 Meters

### MA-6B 6-Band Beam

**Small Footprint -- Big Signal 2-Elements on 20/17/15/12/10/6 Meters!!!**  
 Cushcraft's latest MA-6B gives you 2-elements on six bands! You get solid signal-boosting directivity in a bantam-size and weight. It mounts on your roof or mast using standard TV hardware. It's perfect for exploring exciting DX without the high cost and heavy lifting of installing a large tower and a full-sized array. Its 7 foot 3-inch boom



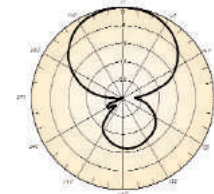
has less than 9 feet of turning radius. Contest tough -- handles 1500 Watts. The unique MA-6B is a two-element Yagi on 20/17/15/12/10/6 Meters. It delivers solid power-multiplying gain over a dipole on all bands. You get automatic band switching and a super easy installation in a compact 26-pound package. When working DX, what really matters are the interfering signals and noise you *don't hear*. That's where the MA-6B's impressive side rejection and front-to-back ratio really shines.



### The MA-5B, Compact HF Multi-Band Beam

**Small Footprint -- Big Signal**  
 MA-5B is Cushcraft's multiband HF antenna that provides 5-Band operation in a package small enough to mount on a tripod.

The MA-5B is a design that does not sacrifice ruggedness, performance and power handling for size and ease of installation.



**High Front to Back Ratio on 10/15/20 M**

Specifications:	MA5B/MA6B					
Frequency Bands	6	10	12	15	17	20
Elements per Band	2	2	1	2	1	2
Gain, dBi	2	5.3	2	4.8	2	3.6
Front to Back Ratio, dB	0	10	0	12	0	22
Side Lobe Atten. dB	20	25	20	25	20	25
VSWR 2:1 Bandwidth, KHz	>10	655	>10	225	>100	90
Longest Element, in (cm)	17.1	17.1' (52m)	17.1' (52m)	17.1' (52m)	17.1' (52m)	17.1' (52m)
Turning Radius, ft (m)	8.8	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	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"	1.5" (3.8cm)	1.5" (3.8cm)	1.5" (3.8cm)	1.5" (3.8cm)	1.5" (3.8cm)
Max. Wind Surface Area	3.2ft	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	1200W (400W)	1200W (400W)	1200W (400W)	1200W (400W)	1200W (400W)
Weight, lb (kg)	26.5	26.5 (12)	26.5 (12)	26.5 (12)	26.5 (12)	26.5 (12)

# Cushcraft Low Frequency Verticals

## 160 and 80/40 Meters

### MA-8040V 3.5-7.3 MHz Vertical Antenna

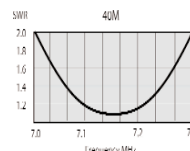
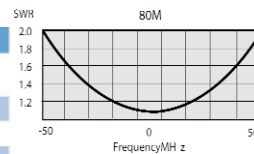
MA-8040V is a compact self-supporting HF vertical that delivers excellent DX-hunting performance on 80 and 40 Meters. Only 27 feet tall and weighing in at less than nine pounds, it is small and light enough for one person to handle easily without assistance. Once installed, the MA-8040V virtually disappears 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-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.



Specifications:	MA8040V	MA-160V
Frequency MHz (MA8040V Tunable)	3.5-7.0 (80M) 7.0-7.3 (40M)	1.8-2.0
Gain, dBi (radial / dependant)	0 (80M), 2 (40M)	0
Minimum VSWR	1.1:1	1.1:1
Bandwidth (2:1 SWR)	100 KHz (80M) 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

# 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.

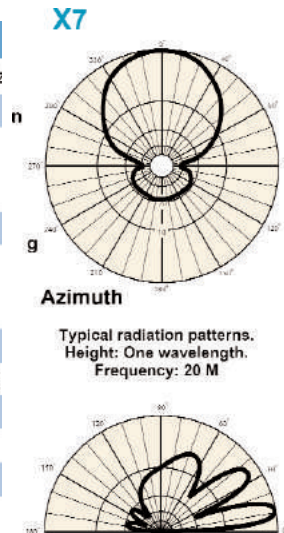


X-7  
**\$1159<sup>95</sup>**

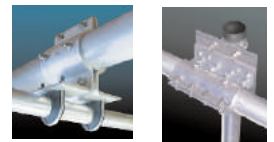
- **New High Efficiency Computer Optimized Design for Maximum Gain and Ultra Clean Radiating Pattern**
- **100+ MPH Construction for Best Reliability and Long Life**
- **NEW 4L Log Cell Driven Elements for better VSWR Bandwidth**
- **Trapless Driven Elements and Reflectors for Reliable Power Handling**

Cushcraft

Specifications:	X-740	X-7	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° 13.0 (15m) @12° 12.9 (10m) @12°	6.4
Front to Back Ratio, dB	30	20	15-20
SWR 2:1 Bandwidth	100 KHz	600 KHz (20m) 750 KHz (15m) 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)



### 40-Meter Add-On Kit for X-7 Antenna



X-740  
**\$389<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

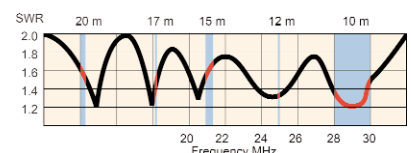
## Skylog ASL-2010, 13 - 32 MHz

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.



ASL-2010  
**\$1069<sup>95</sup>**

- **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**



# Cushcraft VHF/UHF Yagis

## 6-2 Meters, 440 MHz



**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 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.



**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**

## Cushcraft 2, 6 and 10 Meter "SQUALO" Antennas



Cushcraft's SQUALO is a full half-wave, horizontally polarized omni-directional 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 dimensions. 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 omnidirectional 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 coverage antenna. Minimum SWR. Handles 200 Watts PEP CW/SSB.



*Mast-mounted ASQ-10 Squalo*

Model #	Band	Size (LxW)	Price
ASQ-2	2-Meter	10x10 inches	\$134.95
ASQ-6	6-Meter	30x30 inches	\$149.95
ASQ-10	10-Meter	50x50 inches	\$174.95
ASQ-15	15-Meter	65x65 inches	\$204.95
ASQ-20	20-Meter	100x100 in.	\$249.95

# Cushcraft Multiband HF Yagis

# 10 - 40 Meters

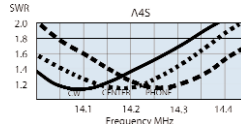
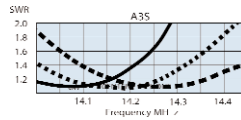
## A-4S Four Element Beam - 10, 15 & 20 Meters

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.



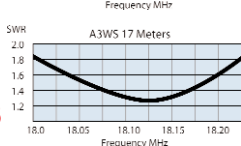
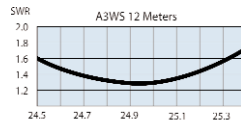
## A-3S Three Element Beam - 10, 15 & 20 Meters

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.



## 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, \$219.95.** 7 MHz/10 MHz kit for A-3S;

**A-744, \$219.95.** 7 MHz/10 MHz kit for A-4S;

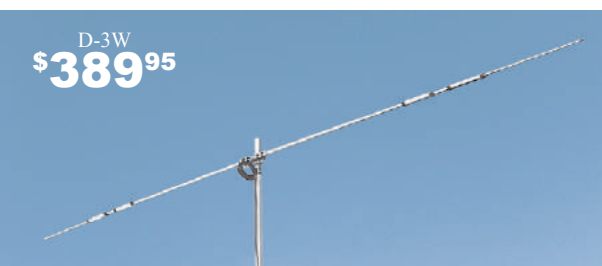
**A-103, \$219.95.** 10 MHz kit for A-3WS.

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 (3.18-5.08)	1.25-2.00 (3.18-5.08)	1.25-2.00 (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)

Specifications:	A743/A744	A743/A744	A103
Band	7 MHz (40 m)	10 MHz (30m)	10 MHz (30m)
Adapter kit, ft (m)	33.19 min. 35.33 max. (10.12-10.77)	27.12 28.4 max. (8.27-8.66)	32.1 (9.8)
Windloading ft <sup>2</sup> (m <sup>2</sup> )	.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)

## 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 \$429.95	D4 \$449.95	D3 \$389.95	D3W \$389.95
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, ft <sup>2</sup> (m <sup>2</sup> )	1.3 (.12)	1.3 (.12)	.9 (.08)	.9 (.08)
Weight, lb (kg):	12 (5)	13 (6)	9 (4)	11 (5)

## 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 broad-banded 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, ft <sup>2</sup> (m <sup>2</sup> )	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 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		A2706S	
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	<sup>3</sup> 4	<sup>2</sup> 10	<sup>3</sup> 4	<sup>2</sup> 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, ft <sup>2</sup> (m <sup>2</sup> )	.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 W1BX 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)

ARX-450B  
**\$109<sup>95</sup>**



ARX-220B  
**\$129<sup>95</sup>**



ARX-2  
**\$89<sup>95</sup>**



ARX-2B  
**\$119<sup>95</sup>**



## Ringo

These are the original W1BX 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)

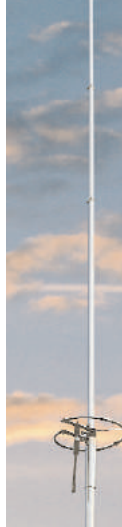
AR-450  
**\$54<sup>95</sup>**



AR-2  
**\$69<sup>95</sup>**



AR-6  
**\$109<sup>95</sup>**



AR-10  
**\$119<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	A148z0T
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.



Specifications:	A719B \$249 <sup>95</sup>	A430H1S \$119 <sup>95</sup>	A4496S \$79 <sup>95</sup>	A449-11S \$119 <sup>95</sup>
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 (3.2-5.1)	1.25-2.0 (3.2-5.1)	1.25-1.5 (3.2-5.1)
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.

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# Cushcraft Boomer Sideband VHF/UHF Yagis **2 Meters**

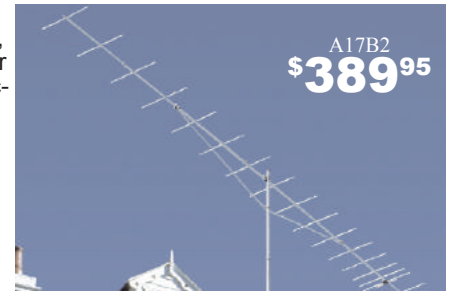
## A13B2 -13 Element Wideband Boomer

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.



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 has an N-connector on the A17B2 and UHF SO239 on A13B2. When all-weather performance is important, you'll choose the UltraMatched Boomers every time.



## A26B2 - 26 Element Wideband Boomer

This antenna offers the highest gain of any 2 Meter FM antenna in the world. 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.

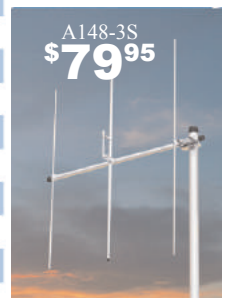


## A148-10S & A148-3S 2M Yagis

These antennas are computer optimized models of our 2 meter Yagis. We've improved 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.



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 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 antennas. Just add equal lengths of 50-Ohm coax to each of the feed points.  
**PD-2, \$74.95.** For two A13B2 beams.  
**PD-4, \$99.95.** For four A13B2 beams.  
**PD-2N, \$84.95.** For 2 A17B2 beams.  
**PD-4N, \$109.95.** For 4 A17B2 beams.



## Stacking Kits for Cushcraft Boomers

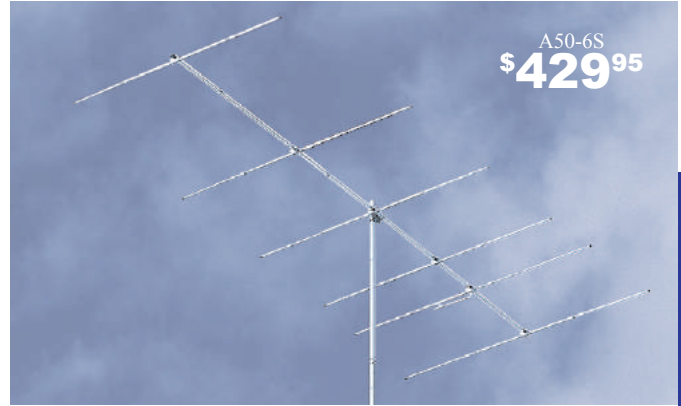
Make stacking your Cushcraft Boomers easy. Choose the Boomer Stacking Kits for your installation. Each stacking kit includes: Stacking Aluminum boom, Power Dividers wire harness and mounting hardware.  
**Order P/N: A26B2-VPK, \$189.95** for two A13B2 Boomers.  
**Order P/N: A26B2N-VPK, \$209.95** for two A17B2 Boomers.  
**Order two kits for stacking 4 Boomers.**

# Cushcraft 6 and 10 Meter Yagis

## 6-10 Meters

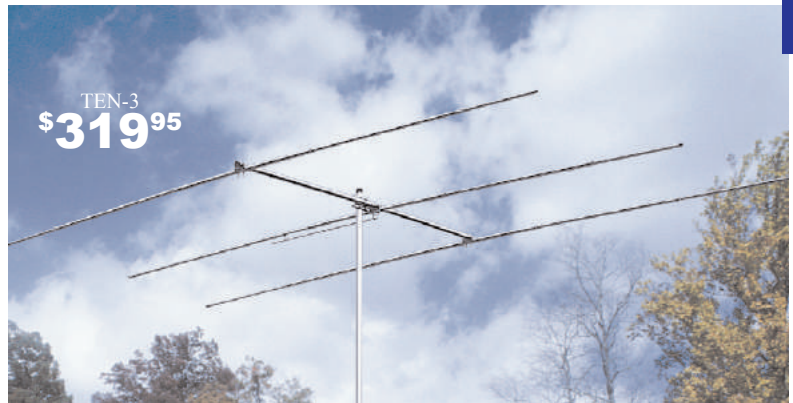
### 6 Meter Yagis - SSB/CW/FMI

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.



### 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-239 connector. Make more positive contacts with the TEN-3 and snag that rare DX.



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, 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@mfjenterprises.com](mailto:cushcraft@mfjenterprises.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 Cushcraft.

# Cushcraft Low Noise Amateur Radio Antennas 6M Loop Fed Array

Low Noise 6 Meter LFAs designed for Cushcraft by world renowned Justin Johnson, G0KSC

Cushcraft'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.cushcraft.com/LFA-6M5EL.php](http://www.cushcraft.com/LFA-6M5EL.php)

Wide-spaced LFA yagis have lower SWR, higher gain, better front-to-back and more broadband than dipole fed yagis.

Cushcraft's direct 50-Ohm feed has no

All of our LFA's are SUPER LOW NOISE and HEAVY DUTY with 2-inch diameter booms and rated to 5KW+!

LFA-6M5EL  
\$319<sup>95</sup>



lossy matching network that limits power handling. High-gain LFAs handle 5,000 Watts. Operational power is only limited by your coax, connectors and other accessories.

Cushcraft LFAs are also computer optimized

for maximum mechanical strength using Cushcraft's exceptionally strong tooled parts to give you years of reliable service.

All Cushcraft 6-Meter LFAs have heavy duty 2-inch diameter double walled booms, 5/8" fully

insulated elements and 7/16" outer tip sections. Climb the tower only once!

See [www.cushcraft.com](http://www.cushcraft.com) for full specifications including SWR curves, pattern plots, gain, wind loading, wind survival, front-to-back, and more.

Cushcraft



LFA-6M4EL, \$219<sup>95</sup>



LFA-6M7EL, \$529<sup>95</sup>



LFA-6M8EL, \$639<sup>95</sup>



## Who is G0KSC?

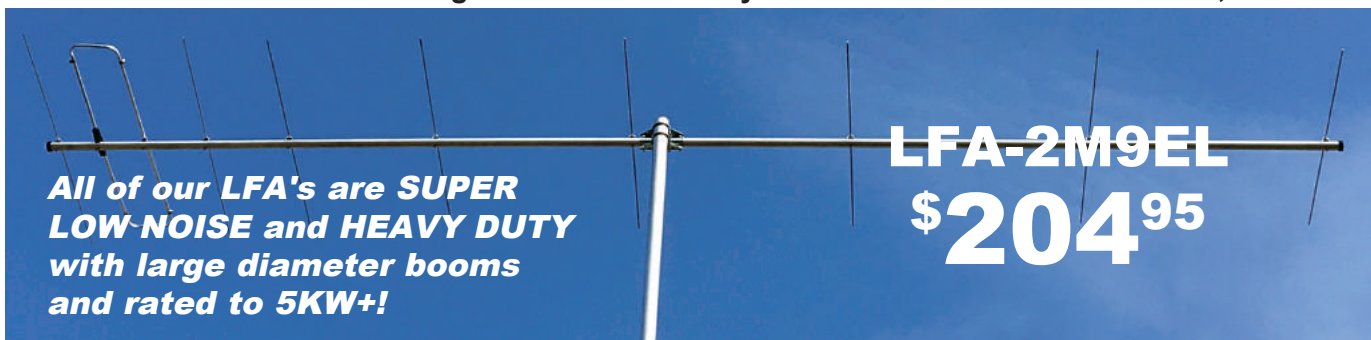
Justin Johnson is a world-renowned antenna expert and the owner of InnovAntennas. He is the author of the VHF/UHF chapters for the 2017 ARRL Antenna Handbook.

## 6-Meter Antenna Performance

Model#	LFA-6M4EL \$219	LFA-6M5EL \$319	LFA-6M7EL \$529	LFA-6M8EL \$639
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	6' 11"	11' 4"	17' 8"	21' 4"
Radius:	TBA	TBA	TBA	TBA
Wind Loading:	120 MPH	118 MPH	108 MPH	100 MPH
* Power handling is limited only by operating station accessories such as coax.				

# Cushcraft Low Noise Amateur Radio Antennas 2M Loop Fed Array

Low Noise 2 Meter LFAs designed for Cushcraft by world renowned Justin Johnson, G0KSC



All of our LFA's are SUPER LOW-NOISE and HEAVY DUTY with large diameter booms and rated to 5KW+!

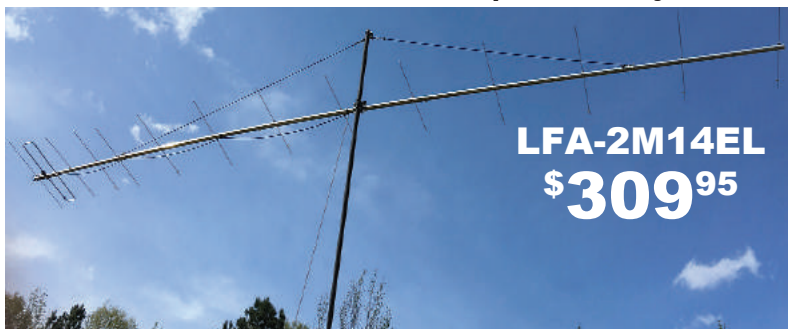
**LFA-2M9EL**  
**\$204<sup>95</sup>**

9-Element 2-Meter Loop Fed Array



**LFA-2M12EL**  
**\$259<sup>95</sup>**

12-Element 2-Meter Loop Fed Array



**LFA-2M14EL**  
**\$309<sup>95</sup>**

14-Element 2-Meter Loop Fed Array



**LFA-2M16EL**  
**\$369<sup>95</sup>**

16-Element 2-Meter Loop Fed Array



**Cushcraft<sup>(R)</sup> 4/6M Yagi Antenna**  
**World's First!!! DB-46M8EL, \$269<sup>95</sup>**

Cushcraft 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.

## 2-Meter Antenna Performance

Model#	LFA-2M9EL	LFA-2M12EL	LFA-2M14EL	LFA-2M16EL***
Gain:	14.04dB@144.100MHz	15.75dB@144.100MHz	16.58dB@144.100MHz	17.25dB@144.100MHz
Gain:	14.00dB@144.300MHz	15.80dB@144.300MHz	16.60dB@144.300MHz	17.27dB@144.300MHz
F/B:	28.38dB@144.100MHz	30.52dB@144.100MHz	31.29dB@144.100MHz	33.47dB@144.100MHz
F/B:	28.20dB@144.300MHz	28.73dB@144.300MHz	33.89dB@144.300MHz	37.53dB@144.300MHz
Peak Gain:	14.09 dBi	15.82 dBi	16.64 dBi	17.3 dBi
Peak F/B:	26.67 dB	30.53 dB	34.21 dB	38.02 dB
Power Rating:	3KW*	3KW*	3KW*	3KW*
SWR:	< 1.1:1 143.800 to 145.200 MHz	< 1.1:1 143.700 to 145.900 MHz	< 1.1:1 143.900 to 144.800 MHz	< 1.12:1 144.000 to 144.900 MHz
Boom Length	14.5 feet	23 feet	28 feet	35 feet
Weight	7.74 lbs	9.75 lbs	11.75 lbs	19.27 lbs
Turning Radius	7.36 feet	11.7 feet	14.06 feet	18.12 feet
Wind Loading	1.03 sq. feet	1.64 sq. feet	2.07 sq. feet	2.5 sq. feet
Wind Survival	173 MPH**	109 MPH**	83 MPH**	92 MPH**
Stack Distance Vertical	7-10 feet	7-10 feet	7-10 feet	7-10 feet
Stack Distance Horizontal	7-10 feet	7-10 feet	7-10 feet	7-10 feet
2-Stacked V	16.97dB@144.300MHz	18.90dB@144.300MHz	19.38dB@144.300MHz	20.18dB@144.300MHz
2-Stacked H	16.93dB@144.300MHz	18.81dB@144.300MHz	19.38dB@144.300MHz	20.16dB@144.300MHz
4-Stacked H	20.05dB@144.300MHz	21.74dB@144.300MHz	22.08dB@144.300MHz	23.18dB@144.300MHz
Sky Temp	239.2 K@144.100 MHz	221.6 K@144.100 MHz	214.9 K@144.100 MHz	213.4 K@144.100 MHz
G/T Figure	-3.73dB@144.100 MHz	-1.70dB@144.100 MHz	-0.85dB@144.100 MHz	-0.12dB@144.100 MHz

\* Power handling is limited only by operating station accessories such as coax.

\*\* Other options available if higher wind loading/survivability is required.

\*\*\* LFA-2M16EL requires a 1:1 choke balun.



**LFA-220M10EL** **\$159<sup>95</sup>**  
**220 MHz**

**LFA-440M10EL** **\$139<sup>95</sup>**  
**440 MHz**

A Cushcraft antenna would look great in your backyard too

# Cushcraft Band Optimized Log Periodic Array

**BOLP-1013**  
\$2199

**This revolutionary antenna consists of 6 trapless monoband logs on a single 30' boom and 13 full size elements.**

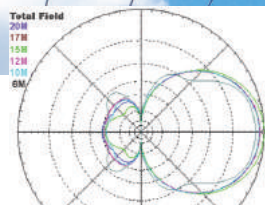
**Computer optimization** gives full monoband gain and front-to-back ratio on every band.

**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.

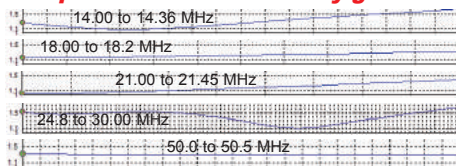
**At least 3 full size elements** are active on each band. 24 ft. turning radius, 30 ft. boom, 36 ft. longest element. 116 lbs.

**Operate 6 bands simultaneously.** Perfect for multiband SDR receivers.



Gives monoband performance, no sidelobes.

Full specifications at [www.hy-gain.com](http://www.hy-gain.com)



Get 20-6 Meter monoband performance from the world's first Band-Optimized Log Periodic Array (BOLPA) designed by highly renowned G0KSC of InnovAntennas™.

## Cushcraft 5-Band HF YAGI, 10/12/15/17/20 Meters

Cushcraft

**SR-5**  
\$1059<sup>95</sup>  
10/12/15/17/20M  
9-Elements, 5 kW

**SR-3**  
\$844<sup>95</sup>  
10/15/20 METERS  
6-Elements, 5 kW

SR-5 is a 9-element multi-Band HF Yagi covers 20/17/15/12/10 Meters with a single feed point!

Reduced in length by more than 30% but still gives the same great performance on all 5 HF bands.

SR-5, comes with a capacity loaded 20-Meter element option

and reduced turning radius too!

**Boom Length:** 11.5 feet

**Weight:** 61 lbs.

**Turning Radius:** 19.78 feet

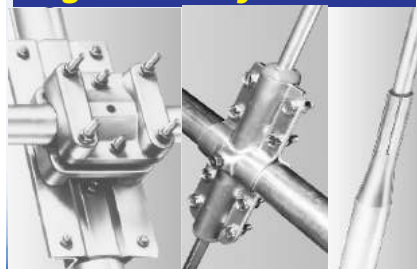
**Wind Loading:** 4 Square feet

**Wind Survival:** up to 124MPH

See full specifications at

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

**Tooled Manufacturing . . .  
Highest Quality Materials**



**1. Cushcraft'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.

**Cushcraft** antennas feature *tooled* swaged tubing deburred and cleaned for smooth, easy and secure assembly.

**Durable** precision injection molded parts.

**Cushcraft** antennas are stronger, lighter, have less wind surface area, better wind survival, need no adjustments, look professional and last years longer.

**Cushcraft** Amateur Radio Antennas 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) Cushcraft 2018

# hy-gain® 2019 Ham Catalog

## Hy-Gain® 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 HF vertical antennas are the best built, best performing and best priced multibanders on the market today. Make full use of your sunspot cycle with the 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® insulated wire.
- **Top Loading:** Parallel resonators -- best 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 100% automatic band selection!
- **Low profile:** Most compact ground-independent antenna!
- **Legal-limit 1500-Watt PEP:** Power handling on SSB/CW\*

**Adding 75/80 Meter coverage** without compromising its classic performance, ground independence, and tiny footprint was no small task. Yet, AV-680 size, weight, and wind loading are nearly identical to 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 legal power, and you won't need a tuner with your solid-state rig.

AV-680's Expanded-Frequency Matchbox™ circuit ensures low SWR 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® 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, \$479.95.** 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.

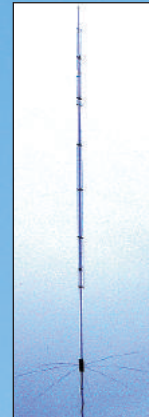
**AV-620, \$369.95.** Like Hy-Gain's famous AV-640 Vertical Antenna but just 22.5 feet tall, weighs only 10.5 lbs. Covers all bands 6 thru 20 Meters with no traps, no coils, no radials yielding an uncompromised signal across all bands.

**Optional Guy Wire Kit, AGK-8, \$69.95.**

\*Intermittent duty CW.

hy-gain® AV-680  
9 Bands: 80, 40, 30, 20, 17, 15, 12, 10, 6 M

**\$579<sup>95</sup>**



hy-gain® AV-620

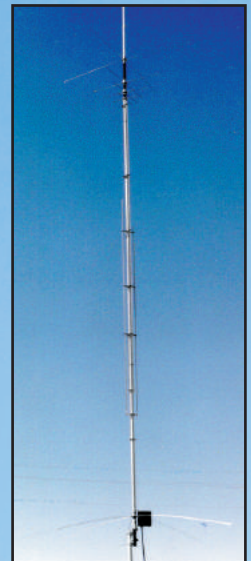
6 Bands: 20, 17, 15,  
12, 10, 6 Meters

**\$369<sup>95</sup>**



AV-620/640/680

Matching  
Network



hy-gain® AV-640  
8 Bands: 40, 30, 20, 17,  
15, 12, 10, 6 Meters

**\$479<sup>95</sup>**

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

# hy-gain Antenna Rotators

## T2X TAILTWISTER SERIES II

... for large medium antenna arrays up to 20 square foot wind load



T-2X  
with standard controller  
**\$844<sup>95</sup>**

T-2XD2  
with DCU-2  
**\$949<sup>95</sup>**

T-2XD3  
with DCU-3  
**\$1009<sup>95</sup>**

T-2XD  
with DCU-1  
**\$1299<sup>95</sup>**

Tailtwister is the most popular rotator in the world. It's the standard to what competing rotators try to match up to for well over many years. Ask any ham who owns one.

T-2X 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. 1000 inches-pounds in turning power and 9000 inches-pounds in brake power. The effective movement in the tower is 3400 feet-lbs.

**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-lock connectors at the rotator base and an 8-pin plug at the control box make it easy to hook up. Triple bearing race with 138 ball bearings for large load bearing strength. Electric locking steel wedge brake prevents wind induced antenna moving.

**Control** box has North/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, \$119.95.**

**T2XD, \$1299.95** has DCU-1 *Pathfinder* with 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-second brake delay and 360 degree choice for

center of rotation. Use 110 VAC. Order T-2XD for 220VAC operation.

**T-2XD, \$1299.95.** Has DCU-1 automatic controller.

**T-2XD2, \$949.95.** Has DCU-2 digital controller.

**T-2XD3, \$1009.95.** DCU-3 programmable digital controller.

### T2X and HAM-IV Pulse Rotator Improvement



T-2XD3P  
**\$1059<sup>95</sup>**  
Pulse Rotator  
with DCU-3P  
controller

HAM and T2X rotators are improved by adding a digital pulse counter to the rotators and digital controllers. Older rotators used a special potentiometer to determine antenna heading. Over time the pot wiper contacts get intermittent and noisy. 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° 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 662-323-9538 for details.**

T-2XD2P  
**\$1009<sup>95</sup>**  
Pulse Rotator  
with DCU-2P  
controller



### 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

### CD-45II Rotator Specifications

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>

gear train, North center scale, lighted directional indicator, 8-pin plug/socket on control unit, snap-action control switches, low voltage 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. Solid Disc brake construction, 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  
**\$479<sup>95</sup>**

CD-45D2  
**\$579<sup>95</sup>**

CD-45D3  
**\$639<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  
**\$689<sup>95</sup>**

HAM-V  
with DCU-1  
**\$1159<sup>95</sup>**

HAM-VI  
with DCU-2  
**\$789<sup>95</sup>**

HAM-VII  
with DCU-3  
**\$839<sup>95</sup>**

HAM-IV is the most popular rotator in the world for obvious reasons. Solidly constructed, time-tested, proven for over 20 years and is a heckuva buy at only \$689.95!!!

HAM IV is for medium communications arrays to 15 sq. ft 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 brake while rotator is in movement.

Test/Calibrate function allows system checks. Low temp grease permits normal operation down to -30° F. Alloy ring gear gives extra strength to 100,000 PSI for max 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, \$119.95.

**HAM-IV, \$689.95.** HAM-IV rotator with standard analog controller. Order HAM-IVX for 220 VAC operation.

**HAM-V, \$1159.95.** Like HAM-IV rotator but with DCU-1 plasma display controller. Order HAM-VX for 220 VAC operation.

**HAM-VI, \$789.95.** Like HAM-IV but has DCU-2 automatic controller which has many of the features of the DCU-3, but no programmable memories. Order HAM-VIX for 220 VAC.

**HAM-VII, \$839.95.** 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.

## AR-40 . . . for compact arrays up to 3.0 square feet



AR-40  
**\$369<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
Wind Load (w/ mast adapter)	1.5 square feet
Turning Power	350 in.-lbs.
Brake Power	450 in.-lbs.
Brake Construction	Disc Brake
Bearing Assembly	Dual race/12 ball bearings
Mounting Hardware	Clamp plate/steel bolts
Control Cable Conductors	5
Shipping Weight	14 lbs.
Effective Moment (in tower)	300 ft.-lbs.

**Mast Support: MSHD, \$119.95.** Heavy duty mast support for T2X, HAM-IV, and HAM-V. Accepts 1 7/8 to 2 5/8 inch OD pipe. Centers on 2 1/2 inches.



### T2X and HAM-IV Pulse Rotator Improvement



HAM-VIIP  
**\$899<sup>95</sup>**  
Pulse Rotator  
with DCU-3P  
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 special 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 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 with analog meters. Call Hy-Gain for more details! 662-323-9538.

HAM-VIP  
**\$849<sup>95</sup>**  
Pulse Rotator with  
DCU-2P controller



### HAM IV and HAM V Rotator Specifications

Wind Load capacity (inside tower)	15 square feet
Wind Load (w/mast adapter)	7.5 square feet
Turning Power	800 in.-lbs.
Brake Power	5000 in.-lbs.
Brake Construction	Electric Wedge
Bearing Assembly	dual race/98 ball bearings
Mounting Hardware	Clamp plate/steel U-bolts
Control Cable Conductors	8
Shipping Weight	26 lbs.
Effective Moment (in tower)	2800 ft.-lbs.

### UHF/VHF/6-Meter/TV/FM/MFJ-1886 Lightweight Rotator/Controller, Remote



AR-500  
**\$159<sup>95</sup>**

Selectable 110  
VAC or 220 VAC.

For use of small VHF/UHF, 6-Meters, TV, FM, the MFJ-1886 wide band receiving loops and other lightweight amateur radio antenna systems.

AR-500 is programmable to remember up to 12 directions even after a power outage! Use included remote control or direct console. Displays location and relative position. Unlike

other TV antenna rotators the Hy-Gain AR-500 Rotator is built in a weather-proof one piece cast aluminum housing with precision steel gears, steel thrust bearings. Includes rotator, controller, remote, clamps, and all hardware. User selectable 110 or 220 VAC.

# hy-gain<sup>®</sup> 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  
\$479<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 automatic 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 destination to reduce potentially damaging

### 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.



DCU-1  
\$789<sup>95</sup>

Order DCU-1X for 220 VAC operation.

ing overshoot. *AutoJog™* 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  
\$429<sup>95</sup>



**DCU-2**, \$429.95. Similar to DCU-3, but does not have programmable memories. 110 VAC. Order DCU-2X for 220 VAC.

**DCU-3P**, \$529.95. Like DCU-3 but for Pulse series rotators.

**DCU-2P**, \$479.95. Like DCU-2 but for Pulse series rotators.

## Replace your YAESU Rotator Controller

*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  
\$349<sup>95</sup>



YRC-3  
\$429<sup>95</sup>

Get rid of your old Yaesu controller that is prone to lightning damage and just doesn't have as many great features as these Hy-gain replacement controllers!

**Easy-to-use** -- dial in your beam heading and tap *GOTO* button. *Exclusive 180 degree AutoReversal™* for fast long-path 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, offsetting, or changing parameters. Field upgradeable firmware. Use with Yaesu G-800/1000/2800/ G450/650. For AC or DC motors.

**YRC-3**, \$429.95 is like YRC-1, but adds six programmable memories. Pick six beam headings for quick adjustment.

## 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 tremendous 7500 inches - pounds braking power.

**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 fantastic 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 A ROBUST 61 pounds.

**UPS** shippable. Order HDR-300AX for 220 VAC operation.

130

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.



HDR-300A  
\$1579<sup>95</sup>

hy-gain Antennas, Rotators & Towers

# hy-gain. /Spid 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**

**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 antenna 360° in just 60 seconds with 24V on motor. RAKs operate 12-24V AC/DC. Higher voltage the higher torque and faster turning speed -- a *unique RAK feature.*

**RAK-1R, \$739.95.** RAK-1 Rotator only.

RAK-1 (RAK)  
**\$999<sup>95</sup>**

Includes RAK-1CU controller



Plate adaptor, mouse not included

**Simple to mount!**

Pipe mast mount on both ends allow coax cables to pass through the center of rotator and prevents cable tangling, damage. Optional adaptor plate mounting. See *accessories section below.*

**It's precise!** 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, \$1159.95.** RAK-2 Rotator only.

RAK-2 (BIG RAK)  
**\$1369<sup>95</sup>**

Includes RAK-1CU controller



Plate adaptor, mouse not included

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
Mast size	2.0/2.6 in. Top/Bot.	2.0/2.6 in. Top/Bot.	2.0/2.6 in. Top/Bot.

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 <i>Hy-Gain</i> ®
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
Mast size	2.6/2.6 in. Top/Bot.	2.6/2.6 in. Top/Bot.	2.6/2.6 in. Top/Bot.

## Econo Spid Rotator

**Smallest rotator** provides excellent support for direct round mast mounting. Elevation rotator provides full azimuth capability. Ideal for light duty 3-4 element antennas, short boom beams and 2/6 Meter/70 cm beam antennas.

**RAU-1R, \$629.95.** RAU Rotator only.

RAU-1  
**\$899<sup>95</sup>**

Includes RAK-1CU controller



## 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, \$739.95.** REAL Rotator only.

REAL-1  
**\$999<sup>95</sup>**

includes controller



## Azimuth-Elevation Rotators

**RAS-1 and BIG RAS (RAS-2)** super heavy-duty *Azimuth-Elevation Rotators* are the same heavy-duty design as RAKs and includes the RAS-2C Controller.

**RAS-2** is like RAS-1 below but has these super specifications: **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; 44 pounds.

**RAS-1R, \$1309.95** rotator. **RAS-2R, \$1889.95.** RAS-2 rotator.

RAS-1  
**\$1679<sup>95</sup>**

Includes RAS-2CU Controller.



Plate adaptors not included.



RAS-2  
**\$2259<sup>95</sup>**

RAS-1 Specs	RAS-1 @ 12 V	RAS-1 @ 18 V	RAS-1 @ 24 V
Wind Load Area	Approx. 30 square feet	Approx. 30 square feet	Approx. 30 square 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 degrees)	120 seconds	90 seconds	60 seconds
Precision	1 degree, 29 lbs.	1 degree, 29 lbs.	1 degree, 29 lbs.
Rotation Range (Azi/Elev.)	360/180 degrees	360 azi/180 degrees	360/180 degrees
Position Sensor	Reed Switch	Reed Switch	Reed Switch
Mast size Bottom/Elevation	2.6 bottom/2.0 elevation	2.6 bottom/2.0 elevation	2.6 bottom/2.0 elevation



**RAK-1CU, \$319.95.** RAK RS232/USB Controller only.

**RAK-2CU, \$409.95.** RAS RS232/USB Controller only.

**PTP-6, \$69.95.** 6" pipe to flat plate adaptor for RAK, RAS.

**PTPB-6, \$69.95.** 6" pipe to flat plate adaptor for RAU.

## MDS RC-1 Econo Digital Rotator Controller

for Hy-gain HamII, IV, T2X, Yaesu and many other common rotators

**Get ALL these features at half 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 Hams, AC controllers (RC1-G, RC1-H). Emergency and battery-power compatible for DC models.

**Get automatic** brake control on Ham rotators and *automatic* speed control on DC powered rotators.

**Graphic** bright blue LCD is large for easy visibility. Huge beam heading digits! "Go-to" button gives reciprocal heading, quick changes.

**Computer-controlled** via included USB (for RC1-Y) or serial ports to use favorite software. *Field upgradeable* firmware via serial port.

**Rugged** aluminum enclosure for maximum RF shielding is a compact 5 1/2"Wx3 1/2"Hx4 1/8"D inches.

**RC1-Y** for Yaesu DC rotators, RC1-G for Yaesu AC, RC1-H for Hygain, RC1-P for Spid, Orion.

Made in USA!

RC-1  
**\$249<sup>95</sup>**

Ship Code A



Used Defined Callign: Rotor Heading



HEADING FROM COMPUTER OR GOTO KNOR Error Messages Display



RC1-H Back of unit

# Genuine Hy-Gain Rotator Replacement Parts

## Rotator 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, wiper arm. **RPM-1, \$44.95** 500 Ohms, for most Hy-gain rotators. **RPM-2, \$44.95.** Like RPM-1, 1000 Ohms for AR-40.

RPM-1  
**\$44.95**



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	5147702	\$130.00	Panel meter for CD45/HAM-IV, T2X with "North" scale. Uses external meter lamp.
B	400-2678L	\$36.40	Meter with internal LED lamp for "Plus" series CD45, HAM-IV, T2X, had "North" scale.
C	5089501	\$1.43	Incandescent light bulbs, 28 V for controller with external meter lamp. Bayonet base.
D	355-2678	\$1.95	Incandescent light bulbs, 28 V, for "Plus" controller meter with built-in lamp.
E	5056300	\$1.44	1/8 Amp meter circuit fuse. For CD-45, HAMIV, T2X.
E	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	\$15.95/SET	T2X rotator to tower stainless mounting bolts/washers (6).
H	5141810	\$7.65/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 Hy-Gain rotators. This insures that rotator is fully stopped before brake is engaged. Avoid accidentally engaging the brake while the rotator is in motion. Use with HAM-II, HAM-III, HAM-IV, HAM-V, and T2X. Easy to install inside controller. Includes pre-assembled PCB, mounting hardware.

RBD-5  
**\$34.95**



## 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.
	13-8100-T2	\$181.95 (100')	
	13-8125-T2	\$216.05 (125')	
	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	\$119.95	Heavy duty mast support for T2X, HAM-IV, HAM-V. Accepts 1 7/8"-2 1/8" OD. Centers on 2 1/2"
D	MSLD	\$79.95	Light duty mast support for CD-45II, AR-40. Accepts 1 7/8"-2 1/8" 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.

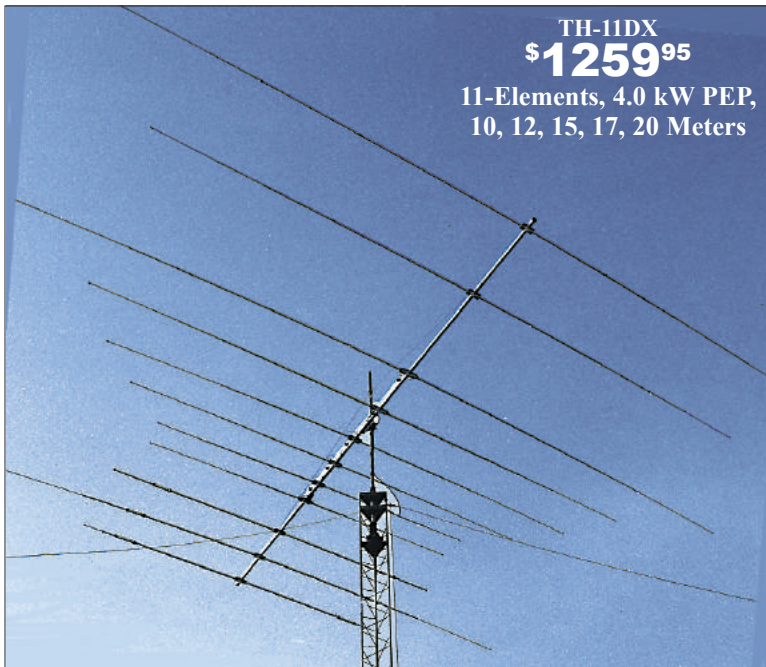
## Replacement Rotators and Controllers

Figure	Part No.	Price	Description
A	HAM-IVC	\$349.95	HAM-II, III, IV & T2X Controller. Supplied with 8-pin Jones male chassis mating connector. 110 VAC.
A	CD-45IIC	\$279.95	CD-45II Controller. Supplied with 8-pin Jones male chassis mating connector. 110 VAC.
B	AR-40C	\$219.95	AR-40 Controller. 110 VAC.
C	HAM-IVR	\$549.95	HAM-II, III, IV Rotator with Amp male plug. Complete with mounting kits. (5141510).
D	T-2XR	\$639.95	T2X Rotator with AMP circular male connector. Complete with mounting kit (5142210).
E	CD-45IIR	\$369.95	CD-45II Rotator with 8-pin terminal board. Complete with mounting kit (5042510) Lower mast support not included.
F	AR-40R	\$219.95	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@mfgenterprises.com](mailto:hygain@mfgenterprises.com)

# hy-gain HF BEAMS...

... are stronger, lighter, have less wind surface and last years longer



TH-11DX  
\$1259<sup>95</sup>  
11-Elements, 4.0 kW PEP,  
10, 12, 15, 17, 20 Meters

## TH-11DX, \$1259.95. 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.

## TH-7DX, \$949.95.

7-element, 1.5 kW PEP, 10,15,20 Meters

**7-Elements** gives 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, \$839.95.

5-element, 1.5 kW PEP, 10,15,20 Meters

**Broadband 5-element** 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, compression clamps and BN-86 balun.

## TH-3MK4, \$529.95.

3-element, 1.5 kW PEP, 10,15,20 Meters

**Super** popular! Gives *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. 1.5 kW PEP. 95 MPH wind survival. Fits on average lot -- turning radius is just 15.3 feet. 4-piece boom ideal for DXpeditions. Use CD-45II or HAM-IV rotators. *Hy-Gain BetaMatch™* for DC ground, full power Hy-Q™ traps, rugged boom-to-mast bracket and mounts on 2" O.D. mast. Stainless steel hardware. Use with BN-86 balun.

## TH-2MK3, \$419.95.

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. Increases effective radiated power, hear far better! Ruggedly constructed, top-performing, compact 6' boom, tight 14.3 ft turning radius. Installs anywhere. Rotate with CD-45II or HAM-IV. Use BN-86 balun.

## EXP-14, \$669.95.

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, tight 17.25 foot turning radius. Fits on roof tripod, mast or medium duty tower. *Patented* broadbanding *ParaSleeve™* gives less than 2:1 VSWR. 1.5kW PEP. *BetaMATCH™* provides DC ground and eliminates static. BN-86 balun is included.

**QK-710, \$189.95.** 30/40M option kit for EXP-14.

## DB-1015, \$479.95.

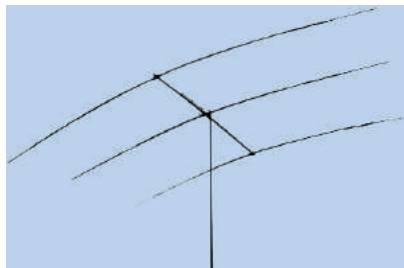
7-element, 1.5 kW PEP, 10 & 15 Meters

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, \$479.95.** Like DB-1015, but is dual band coverage for 12 and 17 Meters.

## 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, \$399.95.

**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.

Model No.	Retail Price	No. of elements	avg gain dBi	avg F/B gain	MaxPwr watts PEP	Bands Covered	Wind sq.ft. area	Wind (mph) Survival	Boom (feet)	Longest Elem. (ft)	Turning radius(ft)	Weight (lbs.)	Mast dia O.D.(in.)	Recom. Rotator
TH-11DX	\$1259.95	11	8.6	25	1500	10,12,15,17,20	12.5	100	24	37	22	88	1.9-2.5	T2X
TH-7DX	\$949.95	7	8.7	22	1500	10, 15, 20	9.4	100	24	31	20	75	1.5-2.5	HAM-IV
TH-5MK2	\$839.95	5	8	22	1500	10, 15, 20	7.4	100	19	31.5	18.42	57	1.5-2.5	HAM-IV
TH-3MK4	\$529.95	3	8	25	600	10, 15, 20	4.6	95	14	27.42	15.33	35	1.9-2.5	CD-45II
TH-3JRS	\$399.95	3	8	25	1500	10, 15, 20	3.35	80	12	27.25	14.75	21	1.25-2.0	CD-45II
TH-2MK3	\$419.95	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	\$669.95	4	8	27	1500	10,15,20 opt. 30/40M	7.5	100	14	31.5	17.25	45	1.9-2.5	HAM IV
DB-1015	\$479.95	7	7.4	25	1500	10, 15	6.7	115	14	29.5	16.3	36	1.9-2.5	HAM IV
DB-1217	\$479.95	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, \$309.95.** 10 Meters, 5 elements, Exclusive 50 Ohm *BetaMatch*<sup>™</sup>. Excellent DC Ground. Stainless steel hardware and clamps. BN-4000 Balun recommended.

**LJ-155CA, \$459.95.** 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, \$819.95.** 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.

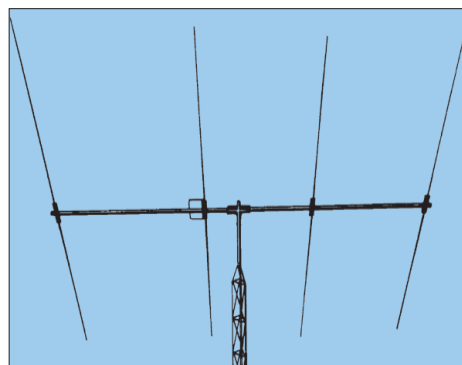
**LJ-204BA, \$569.95.** 20/17 Meters, Four Elements. Exclusive 50 Ohm *BetaMatch*<sup>™</sup>. The LJ-204BA has a

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, \$194.95.** 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, \$249.95.** 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.

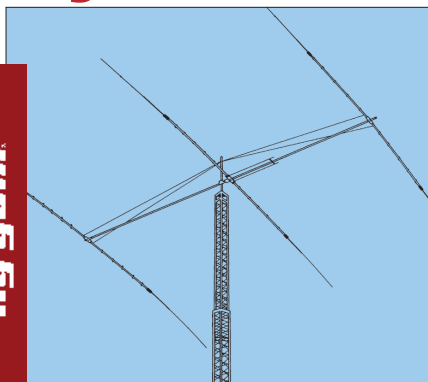
**LJ-203BA, \$349.95.** 20 Meters, Three elements on a 16 foot boom. The LJ-203BA feeds with 50 Ohm coax, factory



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, \$389.95.**

**Covers 40/30 Meters.** Rotatable dipole has low weight and wind surface area so it 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. Feed 50 Ohm coax. Pre-formed mast clamp.

**DISCOVERER 72, \$849.95.**

**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, \$579.95.**

**Add-On 30/40 Meter Director Kit**

**Converts the fantastic Discoverer 72 into a three-element beam.** Amazingly, it's still all on a 35 foot boom, outperforming the other brands that are much larger arrays. Discoverer 72 with the director kit installed fits easily on medium duty towers such as HG-52SS, saving both cost and space. HyGain offers wide bandwidth and Hy-Q efficiency without coils. Handles 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.

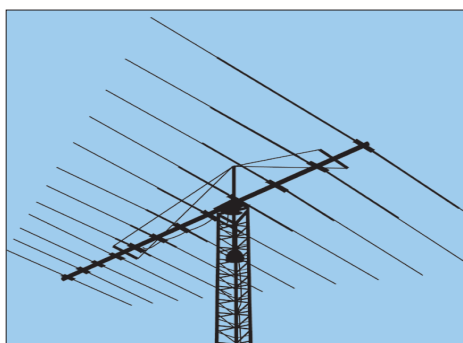
## Hy-Gain HF Log Periodic Antennas

**LP-1009A, \$2099.95.** LP-1009A for UHF connector. LP-1009AN for "N" connector. 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, marine and government radio stations around the world and now it's available to Hy-Gain customers. Discerning ham operators will appreciate its performance, ease of use. Imagine all that spectrum coverage with just one feedline. Exclusive 2KW BN-4000 current type balun included. Use

T2X Tailtwister or HDR-300A rotators.

**LP-1010A, \$2519.95.** 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.

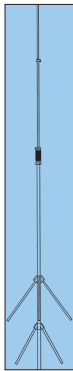


Model #	Gain (dBi)	F/B Max	Max Power	Boom size	ele. length	turn Radius	Mast diam.	Surface	Wind
LP-1009A/N	7.3 dBi	22 dB	1500 W PEP	27 feet	39 feet	22.5 feet	1.9-2.5 in.	12.5 sq. feet	103 m.p.h.
LP-1010A/N	7.0 dBi	22 dB	1500 W PEP	36 feet	48 feet	28.5	1.9-2.5 in.	16 sq. feet	93 m.p.h.

## Hy-Gain VHF Vertical Antennas

**V-2R** 2 Meter vertical with 5.2 dBi gain derived from the famous extended double zepp antenna design. Radiating elements are 2 collinear  $\frac{5}{8}$  waves fed in phase. 2 sets of  $\frac{1}{4}$  wave radials properly decouple lower radiator from mast. SO-239, 500 Watts. 9 ft.

**\$119<sup>95</sup>**




**V-4R** UHF vertical with 5.2 dBi gain derived from double zepp antenna design. Type N, 500 Watts, 4 foot.

**\$119<sup>95</sup>**

Covers 400-475 MHz

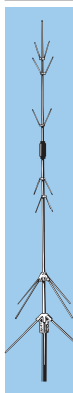
**V-3R** **\$129<sup>95</sup>** Covers 216-225 MHz

**1 1/4 Meter** vertical with 5.2 dBi gain, double zepp design. SO-239, handles 500 Watts. 6 foot, 9 inches.



**V-42R** V-42R is independently tunable at 143-153, and 436-455 MHz. Fed thru one coax cable, it has sets of  $\frac{1}{4}$  wave radials which properly decouple  $\frac{5}{8}$  wave radiators from the mast. Gives 5 dBd gain UHF and 3 dBd gain on VHF. Type N, 200 Watts. 9 foot.

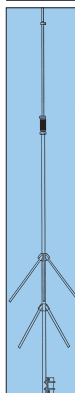
**\$179<sup>95</sup>**



**V-6R** V-6R is based on 2 collinear  $\frac{5}{8}$  wave radiators. 500 Watt enclosed coil and 2 sets of  $\frac{1}{4}$  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, 500 Watts. 15 lbs.

**\$219<sup>95</sup>**

Covers 51-54 MHz

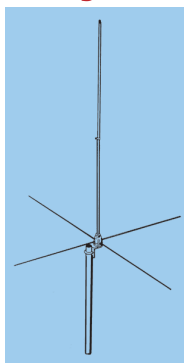


Model#	Frequenc	Gain dBi	Pwr Input	Wind	Max Mast	Height	Weight
V-2R	138-175	5.2 dBi	500 Watts	105 mph	2 in. OD	9 foot	6 pounds
V-42R	143-153, 436-455	7.2 UHF 5.2 VHF	200 Watts continuous	100 mph	2 in. OD	9 foot	6 pounds
V-4R	400-475	5.2 dBi	500 Watts	130 mph	2 in. OD	4 foot	4 pounds
V-3R	216-225	5.2 dBi	500 Watts	100 mph	2 in. OD	6 ft. 9 in.	5 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** **\$54<sup>95</sup>** Covers 142-185 MHz

**GPG-1B** **\$44<sup>95</sup>** Covers 144-148 MHz

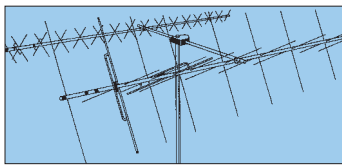


**GPG-2B** is a  $\frac{5}{8}$  Wavelength Ground Plane for two meters is omni-directional and tunable from 142-185 MHz. It delivers an omni-directional gain of 3.2 dBi. Handles 100 Watts. Measures 4 feet, max mast mount accepted is 1.625 in O.D. Wind area is .30 sq. ft.

**GPG-1B** is a  $\frac{1}{4}$  Wavelength ground plane similar to the GPG-2B. It has unity gain, covers 144-148 MHz.

**GPG-1**, \$44.95, like GPG-1B, but covers 162-174 MHz.

## Oscar Link 435 MHz • 145.9 MHz



Hy-Gain's *Oscar Links* are complete with necessary phasing lines, relays and hardware. Left and right circularity switching reduces fading. True RF switching elements are rated at 200 Watts and have an improved VSWR for higher efficiency. Feed points are encapsulated, weather protected for long life. The fiberglass crossboom maintains the integrity of the circularity pattern.

**VB-216SAT** **\$249<sup>95</sup>** Covers 144-148 MHz

**UB-7030SAT** **\$249<sup>95</sup>** Covers 432-438 MHz

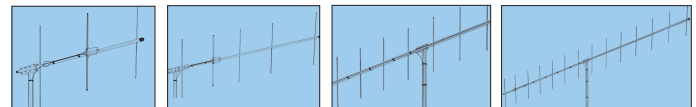
**FB-217SAT** **\$129<sup>95</sup>** Crossboom Assembly only

**DB-218SAT, \$589.95.** 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

2-Meter FM beam antennas include Hy-Gain's exclusive *Beta Match™* to provide exceptional Front-to-Back ratio, 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** **\$54<sup>95</sup>**

**VB-25FM** **\$64<sup>95</sup>**

**VB-28FM** **\$99<sup>95</sup>**

**VB-214FM** **\$109<sup>95</sup>**


## Feedpoint Pig Tail Cable

**APT-2, \$15.95.** Optional 2-ft length for connecting between antenna/coax. SO-239 on one end and 2 (#10) ring terminals on other. Fits *VB series* beams.



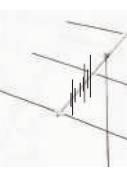
## Dual Band Yagi Antenna

**DB-2345** **\$99<sup>95</sup>** **DB-2345** gives a whopping 8 dBi gain on 2-Meters and 6 dBi gain on 440 MHz. 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. Reduces interference, increases signal strength.



## TriBand 2M/440MHz/6M Yagi

**VHB-246** **\$279<sup>95</sup>** **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.



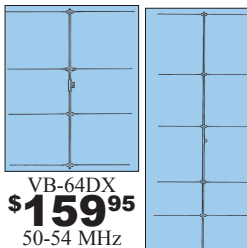
Model#	F/B MAX	Gain dBi	Pwr Input	Long el	Boom	Mast dia.	Weight
VB-23FM	20 dB	8.3 dBi	500 Watts	40.25 in.	43.5 in.	2.0 in.	2 pounds
VB-25FM	20 dB	11.2 dBi	500 Watts	39.625 in.	75 in.	2.0 in.	3 pounds
VB-28FM	20 dB	14 dBi	500 Watts	40.25 in.	148.75 in.	2.0 in.	4 pounds
VB-214FM	20 dB	15.2 dBi	500 Watts	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-66DX** **\$279<sup>95</sup>** Covers 50-54 MHz

**VB-64DX** **\$159<sup>95</sup>** 50-54 MHz

**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

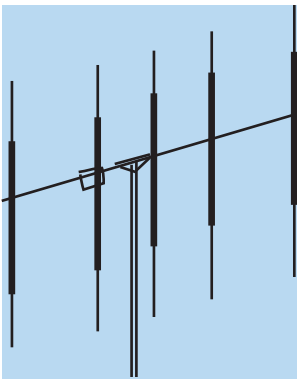
**VB-215DX** **\$249<sup>95</sup>** Covers 144-146 MHz

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. They 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 . . .



**\$319<sup>95</sup>** is a five element 10/12 Meter beam antenna designed to give maximum performance.

**Whopping** forward gain of 9.7 dB and, front-to-back ratio 25 dB.

**LJ-115** is constructed of the best quality aluminum tubing and uses a *swaged* (tapered) design for max strength, lightest weight. It boasts an 80 MPH wind survivability.

This powerful beam features our exclusive *Beta-Match™* which matches the antenna to a 50 Ohm feedline and puts driven element at

DC ground for *noise-free* operation, lightning protection.

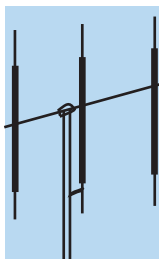
**LJ-115** is easily rotated with a Hygain rotator for 360 degree coverage. See popular Hygain models AR-40 and CD-45II. Feed this antenna with any standard 52 Ohm coaxial cable.

**Expect** 1.05:1 SWR at resonance if antenna is mounted in the clear and care is taken in feedline attachment. 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 7/8 inch	1 1/4 to 1 3/8 inch
Maximum Wind Survival	80 MPH	80 MPH
Net Weight	18.9 lbs.	6.8 lbs.

**LJ-113, \$184.95.** 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



**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-Gains®* AR-500.

**Mount** it in the attic for antenna restricted neighborhoods. *But it is no wimp!* Its bi-directional 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.

**TH-1 \$319<sup>95</sup>**  
UPS Shippable

## Hy-gain 6-Meter Add-On Dipole Kit

Adds 6-Meter capability to most HF yagis or rotatable dipoles. 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 1:1 balun handling 1.5 kW. Power handling may be limited by installed HF beam balun.

**MK-6 \$44<sup>95</sup>**  
UPS Shippable



## 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 increased to a new standard by use of longer radiator and *double-matching tuning* with linear phasing techniques to provide low SWR and more radiated energy. *Double-matching* provides DC path to ground to drain off precipitation static, gives an extremely low noise antenna that is capable of high power handling.

**SPT-500** is specifically designed to accept AM-FM-SSB-DSB signals with low loss. 1.5kW. Illegal for 11 Meters use.

**SPT-500 \$159<sup>95</sup>**



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 3/8 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!

**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 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.

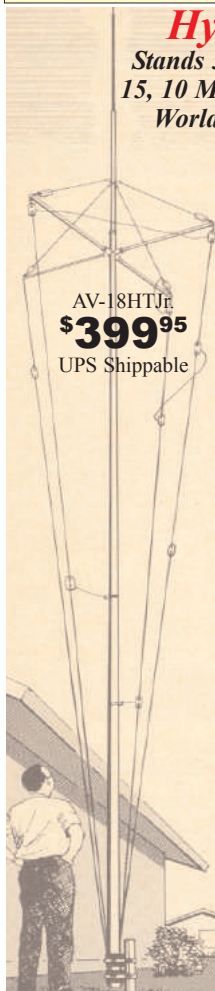
**Mounts** on 1 1/4 inch plumber's pipe. Heavy duty components will give you years of trouble-free operating pleasure.

**Requires** good ground system.

\*The famous 53' *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 *HyTower Jr.™* 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!



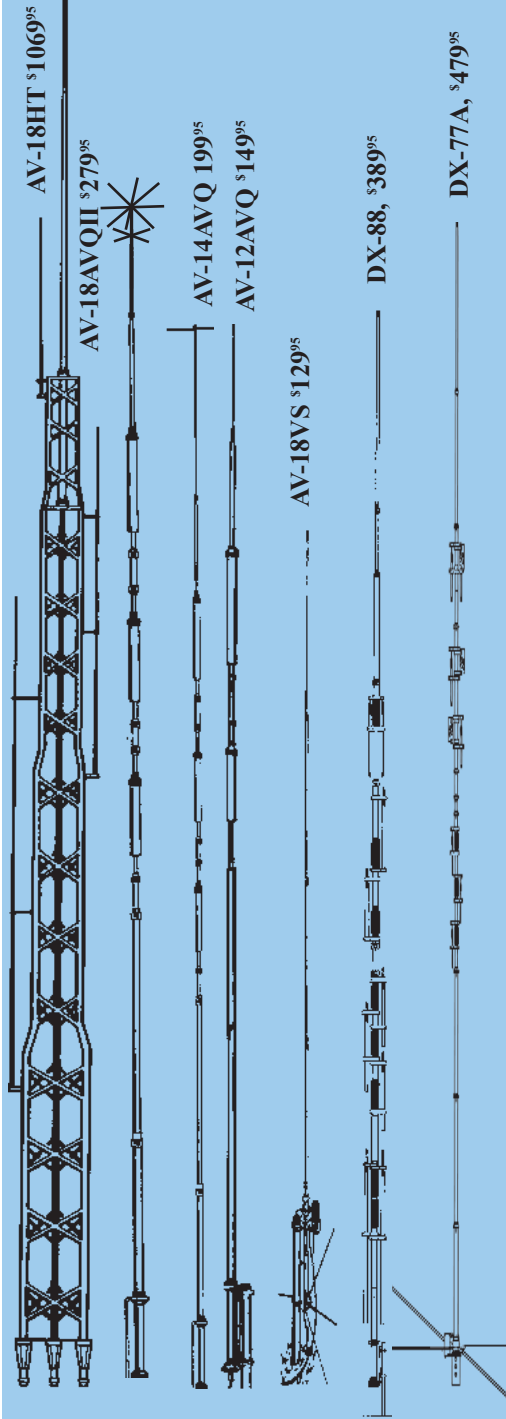
**AV-18HTJr. \$399<sup>95</sup>**  
UPS Shippable



# hy-gain

# HF VERTICALS

Self-supporting -- no guys required... remarkable DX performance -- low angle radiation, omnidirectional... 1500 Watts... Low SWR... 2 year limited warranty



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, \$1069.95.**

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.

**AV-18AVQII, \$279.95.**

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, \$199.95. 10/15/20/40M**

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 over-size coils give superb stability and 1/4 wave resonance on all bands. 18 feet, 9 pounds.

**MK-80, \$89.95.** 80 Meter add-on for AV-14AVQ. Easy to install. Includes pre-wound loading coil, hardware.

**AV-18VS, \$129.95.**

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 AV-14RMQ, \$99.95. 18 ft, 4 lbs.

**AV-12AVQ, \$149.95.**

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, \$99.95.

**AV-14RMQ, \$99.95**

Roof Mounting Kit

AV-14RMQ roof mounting kit provides rugged support for Hy-gain models AV-18VS, AV-14AVQ, AV-12AVQ. Includes base plate, mast, radial/guy wires and mounting hardware.

**DX-77A, \$479.95.**

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 lbs.

**DX-88, \$389.95.**

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, \$219.95.** 160 M add-on kit. **GRK-88, \$109.95.** Ground Radial System. **RRK-88, \$109.95.** Roof Radial System.

Model #	Price	Bands	Max Power	Height	Weight	Wind Surv.	Rec. Mast
AV-18HT	\$1069.95	10,15,20,40,80	1500 W PEP	53 feet	114 pounds	75 MPH	-----
AV-14AVQ	\$199.95	10,15,20,40	1500 W PEP	18 feet	9 pounds	80 MPH	1.5-1.625"
AV-12AVQ	\$149.95	10/15/20 M	1500 W PEP	13 feet	9 pounds	80 MPH	1.5-1.625"
AV-18VS	\$129.95	10 - 80 M	1500 W PEP	18 feet	4 pounds	80 MPH	1.5-1.625"
DX-88	\$389.95	10 - 80 M	1500 W PEP	25 feet	24 pounds	75 mph no guy	1.5-1.625"
DX-77A	\$479.95	10 - 40 M	1500 W PEP	29 feet	25 pounds	60 mph no guy	1.5-1.625"
AV-18AVQII	\$279.95	10,15,20,40,80	1500 W PEP	18 feet	12 pounds	70 mph guy	1.5-1.625"

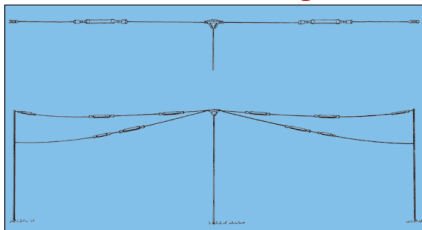
## Hy-Gain Tower Bases

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	\$319.95	50 lbs.*
TB-52	HG-52SS	\$319.95	80 lbs.*
TB-54	HG-54HD	\$319.95	90 lbs.*
TB-70	HG-70HD	\$369.95	102 lbs.*

## HF Multiband Hy-Q trap DOUBLET



DP-2BDQ DP-5BDQ  
**\$149<sup>95</sup>** **\$279<sup>95</sup>**  
 40/80 Meters 10-80 Meters

**DP-2BDQ** is a multiband Hy-Q trap doublet for 40/80 Meters, 101 feet maximum length of dipole.  
**DP-5BDQ, \$279.95.**

80-10 Meters, maximum length of dipole is 94 feet. 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  
**\$89<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.

**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, \$119.95.** For Dipoles.

BN-4000B  
**\$119<sup>95</sup>**  
 4000 Watts

**BN-4000N, \$129.95.** With "N" connector.

1500W

4000W

## 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. Use with Hy-gain *VB series* beams and other antennas without an SO-239 feed point.



APT-2  
**\$15<sup>95</sup>**

## 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 5000A of peak impulse current harmlessly to an independent ground. SWR less than 1.1:1. Less than 0.1 dB loss. Use to 1000 MHz. 1.5 kW PEP. **Does not** protect against direct lightning hit. **MFJ-97H, \$19.95.** Replacement gas discharge tube.



LA-2  
**\$34<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 an 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  
**\$27<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. APA-3 has a superior pullout resistance up to 2000 lbs. Use this *ArrowPoint anchor* to secure antennas, towers, tarps, trees, carpools, flagpoles and much more.



APA-3  
**\$17<sup>95</sup>**

## HY-GAIN INSULATORS FOR MULTIBAND DIPOLE ANTENNA



C-1, \$34.95. Center Insulator for multiband dipole antenna.



E-1, \$9.95. 7-inch End Insulator for Multiband doublet antenna. 5/16" holes. Set of 2.



C-1C, \$34.95. Like C-1, but has SO-239 antenna connector.

E-2, \$1.25 ea. E-26, \$4.95, 6-pack. Glazed ceramic. Won't break, arc over or melt under power. 5/16" holes.

## Hy-Gain 4 Foot Ground Rod

**Durable 4' copper bonded steel earth ground rod** is a tough 3/8" diameter. *Sharp* pointed end is easy to drive 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  
**\$11<sup>95</sup>**

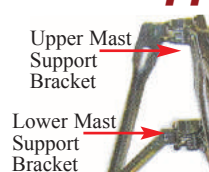
## Water pipe/tower leg ground clamp



GC-1  
**\$6<sup>95</sup>**

Clamps securely onto water pipe or ground rod. Fits pipe/rod 1/2 to 1". Ground wire hole accepts wire to 9/32 diameter. Swiveled 1/2 section allows easy removing. UL/CUL listed.

## Self-Supporting Ant. Mast Tripod



TP-3  
**\$49<sup>95</sup>**

**Heavy-duty 3-foot tripod self-supports** masts to 1.75" diameter and will support most Hy-Gain vertical antennas. Great for ground/roof mounting. 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 any type roof or surface. It is quick and easy to put up an antenna using screws in the three base feet.

**And . . .** rest 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 outdoors. Get your antenna *up-in-the-air* where it belongs!

**HG-5, \$44.95. Five Ft. Galvanized Mounting Pipe** 2" OD, 16 gauge Galvanized Steel Mast Pipe. Use for ground mount pipe or rotator mast.

**AGK-8, \$69.95. 3-Point Guy Wire Kit** For vertical antenna or antenna mast. Has guy brackets, thimbles, galvanized steel stakes and 150' Danscord rope. All you need to secure antenna/mast safely for high winds.



## Pipe-to-Pipe Mast Mount Kit



PTP-150  
**\$49<sup>95</sup>**

**Heavy Duty** extruded-aluminum clamp assembly with 5/16x6" SS bolts secures tubing either in-line or at 90-degrees. Support large Yagis without drilling the boom, attach masts to railings, extend supports, or add cross-sections to verticals for extra bands. Eight clamps and stainless steel hardware. Fits mast pipe 1-2". Max combined size 4". Hold up to 10 pounds, 5 feet from center.

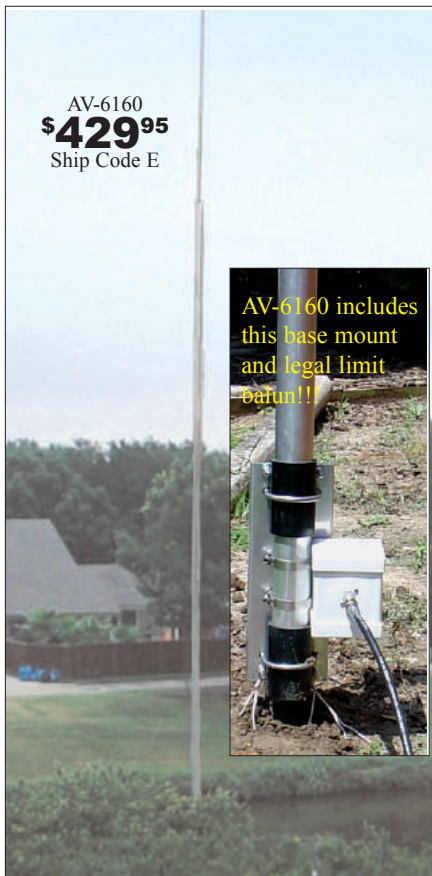
## Hy-Gain Antenna Rope

**A** **nylon**  
**Wire Antenna Installation Rope.** MFJ Nylon or Polyester dacron rope for your wire antenna installations. Black and UV resistant.  
**A. RPA-100, \$11.95.** 100 feet, 3/32 inch nylon rope.

**B** **polyester**  
**A. RPA-250, \$19.95.** 250 feet, 3/32 inch nylon rope.  
**B. RPC-100, \$14.95.** 100 feet, 3/16 inch polyester rope.  
**B. RPC-250, \$34.95.** 250 feet, 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  
\$429<sup>95</sup>  
Ship Code E

AV-6160 includes this base mount and legal limit balun!!!

Operate all bands 160-6 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 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 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. Right.

Optimized balun 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, \$39.95. 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.

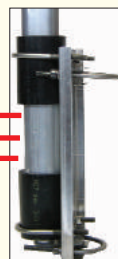
### 64', 11-Section Telescopic Aluminum Mast

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  
\$219<sup>95</sup>  
Ship Code D

### Base Mount for Fiberglass and Aluminum Masts

ATB-65, \$79.95. 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

Improves efficiency on 160/80 Meters for the popular 43-foot all band vertical antennas. Eliminates SWR-related coax and unun mismatch losses. Fed with a 1:4 unun, 43' antennas have a reasonable compromise SWR on 60-10M. 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 43 foot antenna base, just 3Wx16Hx3D inches.

**600 Watts 80/160 Meter Matching Network**  
AV-6108, \$269.95. Like AV-6110. 600W-80M, 300W-160M.

### 160 Meter Tuner Range Extender for 43' Verticals

43' vertical antennas are very popular. However, on 160M, they have a very high reactance and high voltage at the feedpoint. Tuning with a tuner results in max efficiency 80-10M, but conditions at 160M present a challenge for tuners. To get around this problem, add a range extender to the base of the antenna to increase 160M matching. Reduces reactance and puts antenna in range of the auto or manual tuner. Damaging high-voltage currents are reduced to prevent tuner damage. 1.5 kW. Weather-resistant PVC, ceramic feedthrus for in/out. 3 1/2"Wx3 1/2"Hx11"D". Use MFJ-998RT/MFJ-994BRT or other tuners.

AV-6102, \$69.95. Like AV-6104, 300 Watts, 5-way binding posts for in/out. 3 1/2"W x3 1/2"Hx7"D". Use MFJ-926B/927/993BRT auto tuners or manual tuners.



AV-6104  
\$89<sup>95</sup>  
Ship Code B



AV-6110  
80/160 Meter  
Matching  
Network

### Universal Vertical Tilt Base

A unique design allows this tilt base to fit most vertical antennas with or without a base bracket. Pre-punched hole makes it easy to mount many different type of verticals. Fits AV18VS, 14VS, 18AVQ, AV-680/640/620, AV-6160, 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 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 all U-bolts, mast saddles and stainless steel nuts and bolts.



ATB-75  
\$84<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 foot radial wires. Each has a 1/4 inch ring lug for attaching to the antenna ground point. Each end of the radial wires has a solder lug for staking at the wire end.

GRK-6160  
\$39<sup>95</sup>  
Ship Code A



hy-gain

## ROHN™ Steel Telescopic Masts & Vertical Mounting Accessories

### 20/30/40/50 foot Telescoping Masts

Telescoping masts are pre-galvanized and come pre-assembled with hardware. Erecting mast is made by simply connecting guys and brackets to the attached heavy duty rolled edge guy rings and clamps, extending the sections, inserting locking cotter pins, rotating tubes to locked position and tightening the clamps. Features interior tube flanging combined with double-crimped exterior tube to produce stronger, more stable joint than common masts. Also prevents sections from accidentally pulling apart and allows easy disassembly, pulling each section through lower end. Each section extends deeper into lower tubes than other designs, adding more structure stability. 1/4", 16-gauge galvanized tubing for top, others are 18 gauge.

**H-20, \$84.95.** 19 feet extended, 2 sections.  
**H-30, \$119.95.** 28 feet extended, 3 sections.  
**H-40, \$179.95.** 36 feet extended, 4 sections.  
**H-50, \$219.95.** 44 feet extended, 5 sections.  
 All above models ship by truck only.



### Deluxe "Y" Wall Mount Bracket

**WMD-12, \$59.95.** 12" standoff with 3rd Leg for mounting of Antenna Masts from 1 inch to 1.75 diameter and up to 10 foot Height, Standoff from Wall by 12 inches.

### 48" Galvanized Eave Mount Bracket

**EVE-48, \$44.95.** Mount your mast on eave of a house. Lower Bracket is 16 gauge Hot Dip Galvanized steel, 48". Both upper/lower brackets are for masts up to 2 1/4" diameter with clamps, bolts and 2 1/2" lag screws. Will stand-off mast 2 1/4" from surface.



### Antenna Mast Chimney Mount

**EZ-29, \$44.95.** Four inch Stand-off, Deluxe "Y" with 18 Feet of Stainless Steel Straps to Wrap around Chimney.



### 5 Foot Galvanized Mounting Pipe

**HG-5, \$44.95.** 5 foot, 2" OD, 16 AWG Galvanized steel Antenna Mast Pipe.

## Hy-gain Vertical Antenna Mounting Hardware



- A. 463011, \$14.00.** Base tube insulator, fits 1 1/4" OD tube. Six 5/16" mounting holes. Super strong, made of fiberglass filled ABS. Used in Hy-tower to isolate legs from ground. Tube not included.
- B. 877130, \$28.64.** Vertical antenna bracket assembly. Includes bracket (C), base cover insulator (D), support insulator (E) and SO-239. Tube not included. Fits 1 1/4".
- C. 160043-1, \$11.84.** Base mount bracket. Custom-tooled 1/8" thick x 12 inch length aluminum bracket with vertical ridges for super strength. Pre-punched holes for SO-239 or N-connector.
- D. 863427, \$6.90.** Base cover insulator. Allows attachment of base tube. Has hollow center for antenna connector. Mold-in pin connects base tubing to connector.
- E. 463056, \$3.12.** Base antenna support insulator. Made to fit top support of antenna bracket (C). Fits 1 1/4" OD.
- F. 460316, \$12.96.** Tubing coupler and insulator. Used to couple or insulate one inch tube to 3/8" tubing. Made of fiberglass filled ABS, 5 inches long.

## Hy-gain Aluminum Tubing

**6063 T832** round, drawn aluminum tubing sold in 2 styles: **standard** or **slitted one end**, (.083" gaps, 1-2" slit lengths). Available in 3 or 6 ft. lengths. Tubing is sized to allow telescoping into one another from 3/8"-2 1/2" OD. Select **slitted** for telescoping. Use Hy-gain hose clamps to secure.

6" Lg OD x Wall x ID	P/N No slit	Price/ea	P/N Slitted	Price/ea	\$/Ad Ft.
0.375"x.058"x0.250"	810-0375E-6U	\$4.72	810-0375E-6S	\$5.22	\$0.79
0.500"x.058"x0.375"	810-0500E-6U	\$4.88	810-0500E-6S	\$5.38	\$0.82
0.625"x.058"x0.555"	810-0625E-6U	\$5.79	810-0625E-6S	\$6.29	\$1.04
0.750"x.058"x0.634"	810-0750E-6U	\$6.99	810-0750E-6S	\$7.49	\$1.25
0.875"x.058"x0.759"	810-0875E-6U	\$7.49	810-0875E-6S	\$7.99	\$1.33
1.000"x.058"x0.884"	810-1000E-6U	\$8.09	810-1000E-6S	\$8.59	\$1.43
1.125"x.058"x1.009"	810-1125E-6U	\$8.99	810-1125E-6S	\$9.49	\$1.58
1.250"x.058"x1.134"	810-1250E-6U	\$10.09	810-1250E-6S	\$10.59	\$1.77
1.375"x.058"x1.259"	810-1375E-6U	\$11.19	810-1375E-6S	\$11.69	\$1.95
1.500"x.058"x1.384"	810-1500E-6U	\$12.49	810-1500E-6S	\$12.99	\$2.17
1.625"x.058"x1.509"	810-1625E-6U	\$13.99	810-1625E-6S	\$14.99	\$2.50
1.750"x.058"x1.634"	810-1750E-6U	\$14.89	810-1750E-6S	\$15.89	\$2.65
1.875"x.058"x1.751"	810-1875E-6U	\$15.99	810-1875E-6S	\$16.99	\$2.65
2.000"x.058"x1.884"	810-2000E-6U	\$18.75	810-2000E-6S	\$19.75	\$2.88
2.000"x.120"x1.760"	810-2000I-6U	\$27.49	810-2000I-6S	\$28.60	\$4.78
2.125"x.058"x2.009"	810-2125E-6U	\$20.65	810-2125E-6S	\$21.65	\$3.10
2.375"x.058"x2.259"	810-2375E-6U	\$23.89	810-2375E-6S	\$24.89	\$3.68
2.500"x.058"x2.384"	810-2500E-6U	\$26.15	810-2500E-6S	\$27.15	\$4.65
3" Lg OD x Wall x ID	P/N No Slit	Price/ea	P/N Slitted	Price/ea	\$/Ad Ft.
0.375"x.058"x0.250"	810-0375E-3U	\$2.36	810-0375E-3S	\$2.61	\$0.79
0.500"x.058"x0.375"	810-0500E-3U	\$2.44	810-0500E-3S	\$2.69	\$0.82
0.625"x.058"x0.555"	810-0625E-3U	\$2.89	810-0625E-3S	\$3.14	\$1.04
0.750"x.058"x0.624"	810-0750E-3U	\$3.49	810-0750E-3S	\$3.74	\$1.25
0.875"x.058"x0.759"	810-0875E-3U	\$3.75	810-0875E-3S	\$3.99	\$1.33
1.000"x.058"x0.884"	810-1000E-3U	\$4.05	810-1000E-3S	\$4.29	\$1.43
1.125"x.058"x1.009"	810-1125E-3U	\$4.50	810-1125E-3S	\$4.75	\$1.58
1.250"x.058"x1.134"	810-1250E-3U	\$5.05	810-1250E-3S	\$5.29	\$1.77
1.375"x.058"x1.259"	810-1375E-3U	\$5.60	810-1375E-3S	\$5.85	\$1.95
1.500"x.058"x1.384"	810-1500E-3U	\$6.00	810-1500E-3S	\$6.50	\$2.17
1.625"x.058"x1.509"	810-1625E-3U	\$7.00	810-1625E-3S	\$7.50	\$2.50
1.750"x.058"x1.634"	810-1750E-3U	\$7.45	810-1750E-3S	\$7.95	\$2.65
1.875"x.058"x1.751"	810-1875E-3U	\$8.00	810-1875E-3S	\$8.50	\$2.65
2.000"x.058"x1.884"	810-2000E-3U	\$9.38	810-2000E-3S	\$9.88	\$2.88
2.000"x.120"x1.760"	810-2000I-3U	\$13.75	810-2000I-3S	\$14.35	\$4.78
2.125"x.058"x2.009"	810-2125E-3U	\$10.33	810-2125E-3S	\$10.83	\$3.10
2.375"x.058"x2.259"	810-2375E-3U	\$11.95	810-2375E-3S	\$12.45	\$3.68
2.500"x.058"x2.384"	810-2500E-3U	\$12.08	810-2500E-3S	\$15.38	\$4.65

**810-2000I-6W, \$33.60 each.** Unique tubing has one end slitted and one end swaged for stacking. Join two to make longer poles. Secure with standard hose clamp. Strong, 2"OD x .120" wall. Good for base sections of verticals. Standard 6-ft. length, longer sections, to 20 ft. available. Add \$4.78 each add'l foot.

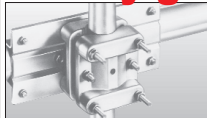
**All tubing UPS Shippable. Call for quote.**

## MFJ Telescopic Fiberglass Tubing

*Super-strong, heavy duty telescoping sections, .125 inch thick wall fiberglass*

Size OD"	Part Number	6 ft.	6 ft. slit	Part Number	7.75 ft.	7 1/2" slit
1/2"	884-40500-6(S)	\$8.21	\$10.46	884-40500-775(S)	\$10.95	\$13.95
3/4"	884-40750-6(S)	\$9.71	\$11.96	884-40750-775(S)	\$12.95	\$15.95
1"	884-41000-6(S)	\$11.96	\$14.21	884-41000-775(S)	\$15.95	\$18.95
1 1/4"	884-41250-6(S)	\$16.46	\$19.46	884-41250-775(S)	\$21.95	\$25.95
1 1/2"	884-41500-6(S)	\$18.71	\$20.96	884-41500-775(S)	\$24.95	\$27.95
1 3/4"	884-41750-6(S)	\$22.46	\$25.46	884-41750-775(S)	\$29.95	\$33.95
2"	884-42000-6(S)	\$26.96	\$29.21	884-42000-775(S)	\$35.95	\$38.95
2 1/4"	884-42250-6(S)	\$33.71	\$35.96	884-42250-775(S)	\$44.95	\$47.95
2 1/2"	884-42500-6(S)	\$36.71	\$39.71	884-42500-775(S)	\$48.95	\$52.95

## Hy-gain Custom Made Precision Antenna Hardware



### BMC-249, \$84.95. Boom to Mast Clamp

Heavy duty 1 1/4" OD thick aluminum die casted boom to mast clamp designed specifically for securing heavy antennas. It is capable of supporting 2" boom antennas, such as the TH-11DX, Long John Monobanders and other beams with a 2" boom. The BMC-249 allows mast to extend past the top of the clamp. This feature allows stacking of several antennas on one mast. Clamp is adjustable for mast sizes from 1 1/4" to 2 3/4" OD. Tilt-over feature permits easy assembly of elements, simplifies maintenance of antenna. 4Wx4Hx1 1/4" thick. Kit comes complete with stainless steel hardware.

**Element Insulators** are made to fit the element bracket (right). Precision injection molded with black UV resisted ABS plastic.

Part No.	Price	Fits these Element sizes	Insulator Size	Fits Element to boom clamp
465216	\$3.42	3/16" OD	7/8" OD x 2 1/4"	163409
461057	\$4.40	5/16" OD	1 1/2" OD x 3"	165919
463767	\$4.40	7/16" OD	1 1/2" OD x 3"	165919
465833	\$4.80	1 1/4" OD	1 1/2" OD x 4"	165920

### Hy-gain TH-series HF Beam Trap Caps

- A. 464723, \$7.5 ea.** Trap caps, for large Hy-gain TH-series traps.  
**B. 466221, \$1.59 ea.** Trap caps for Hy-gain TH-3r traps.



### Hygain Stainless Steel Hose Clamps

Part No.	Price	Description
745-3104S	\$0.90	#4 Clamp for 3/32" OD to 5/8" OD tubing
745-3106S	\$1.00	#6 Clamp for 3/4" OD to 7/8" OD tubing
745-3108S	\$1.00	#8 Clamp for 7/8" OD to 1" OD tubing
745-3110S	\$1.25	#10 Clamp for 1" OD to 1 1/8" OD tubing
745-3112S	\$1.25	#12 Clamp for 9/16" to 1 1/4" OD tubing
745-3116S	\$1.25	#16 Clamp for 1 1/4" OD to 1 7/8" OD tubing
745-3120S	\$1.75	#20 Clamp for 3/4" OD to 1 1/4" OD tubing
745-3128S	\$1.75	#28 Clamp for 1 7/8" OD to 2" OD tubing



### Element to Boom Clamps

High tensile strength aluminum alloy. Custom die stamps these clamps. No miss-drilled holes, fit perfect everytime. Required 2 clamps per element. Element Insulators available (left).

Part#	Price	Boom OD"	Element OD w/insulator	Description	Insulator
161409	\$2.71	2"	5/8"	2 1/8x7"x.08 Thick, #12	None
163764	\$3.80	2"	7/8"	2 1/8x7 1/8"x.08 Thick, #4	465216
165919	\$5.32	2"	1 1/4"	3 1/8x7 1/4"x.125 Thick, #13	463767, 461057
165920	\$6.28	2"	1 1/2"	3 1/8x9 1/2"x.125 Thick, #14	465833
160055	\$1.22	1 1/2"	7/16"	1/4x5"x.063 Thick, #0	None
161422	\$3.63	1 1/2"	5/8"	2 1/8x6 1/2"x.08 Thick, #11	None
165141	\$3.76	1 1/4"	7/8"	2 1/8x6 7/8"x.08 Thick, #12	465216
165138	\$5.20	1 1/4"	1 1/4"	2 1/8x6 1/8"x.08 Thick, #1	463767, 461057
872223	\$6.60			Stainless steel screws, nuts and washers for 1 set of element-to-boom clamp	

# MIRAGE

## 2019 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  
**\$469.95**  
 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 auto 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, \$59.95, 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, \$59.95, 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, \$469.95.**

160 Watts output for 50 Watts input. For 20 to 60 Watt mobile or base station transceivers.

**B-1018-G, \$519.95.**

160 Watts output for 8 Watts input. For 0.25 to 15 Watt input transceivers.

#### 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  
**\$419<sup>95</sup>**  
 Suggested Retail

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.

FCC Type Accepted



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  
**\$479<sup>95</sup>**  
 Suggested Retail

D-3010-N  
**\$459<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 Use with Most Models

RC-1  
**\$59<sup>95</sup>**  
 Suggested Retail



#### FEATURES

- Easy remote ops 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 3/4"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	\$479.95	.30-15 W	5-110 W	20 amps
D-3010-N	\$459.95	5-45 W	7-100 W	20 amps

## Mirage Amateur Television Amps

Specially designed for Amateur Television, 420-450 MHz



D-1010-ATVN  
**\$499<sup>95</sup>**  
 Suggested Retail

D-100-ATVN  
**\$509<sup>95</sup>**  
 Suggested Retail



Commercial Amplifiers available for 150-174, 450-

PAC30-130B  
**\$379<sup>95</sup>**  
 Suggested Retail

470 MHz and VHF marine bands, 70-100 Watts out. Most feature over-temperature sensing, bypasses amp when safe operating temps are exceeded. Heavy duty heatsinks are finned on 3 sides and have a wide input range. Amps designed for 2-way radio, commercial, mobile, or fixed location use. All are FCC type accepted.

**D-1010-ATVN, \$499<sup>95</sup>**  
 10W In-52W Out (ATV-AVG)  
 10W In-82W Out (ATV-PEP)  
 10W In-100W Out (SSB/FM)

**D-100-ATVN, \$509<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

### MIRAGE Commercial Amplifier Specifications

Model	Price	Input	Output	Preamp	Range
B-34-GC	\$199.95	5-3 W	10-30 W	Yes	150-162
Pac15-100C	\$459.95	5-25 W	5-100 W	No	450-475
Pac30-130B	\$379.95	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  
**\$259<sup>95</sup>**  
 Suggested Retail  
**D\*STAR  
 Compatible!**

- 45 Watts Output on 2 Meters • 35 Watts out on 440 MHz
- **D\*STAR, System Fusion 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 4W in! **BD-35 is D-STAR, System Fusion 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      B-34  
**\$179<sup>95</sup>**      **\$159<sup>95</sup>**  
 Suggested Retail      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 \$179.95 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 saves your amp if you connect power backward.

**Automatic** RF sense transmit/receive switch makes operation easy. Low input SWR keeps your HT 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, \$159.95.** Like B-34-G, FM only, less preamp, bracket. Tiny 3¼x1¾x4¾ inches fits anywhere.

**B-34GC, \$199.95.** 150-162 MHz, has 15 dB preamp.

## 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 out. 3 Watts in from your HT gives full power.

**High** power input for mobile radios, 10 Watts to 50 Watts.

## 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", SWR, preamp, 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  
**\$319<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

10W in gets 95W out. 50W in, gets full output power. Custom wrap-around heatsink gives excellent heat dissipation. Superb Mirage Warranty.

B-320-G  
**\$569<sup>95</sup>**  
 Suggested Retail



## SMA/BNC Cables/Adaptors

- A. B. C.
- Release strain on your HT's antenna connector! Choose SMA or BNC. Flexible, mini coax, 3 feet.

A. MFJ-5612S, \$16.95.

SMA Male to SO-239 adapter cable.  
 B. MFJ-5612SF, \$16.95. SMA Female to SO239 for Wouxun/Baofeng.

C. MFJ-5612B, \$16.95.

BNC Male to SO-239 adapter cable.

MFJ-7716, \$5.95 each. SMA female to BNC male adaptor.

MFJ-7718, \$5.95 each. SMA female to BNC female adaptor.

MFJ-7719, \$5.95 each. SMA male to SO-239 adaptor.

# MIRAGE HF/VHF/UHF PREAMPLIFIERS

KP-1  
**\$159<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
- GaAsFET boosts weak signals, SO-239
- In-Line design for easy ops, 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 1/4"Wx2 5/16"Hx1 3/16"D inches

KP-2  
**\$219<sup>95</sup>**  
 Suggested Retail



**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
- Mastmount 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 1/4"Wx2 5/16"Hx1 3/16"D inches

## MIRAGE VHF/UHF Repeater Amplifiers

*Dedicated Repeater Amplifiers for Continuous Duty Service*

**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 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.

**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 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 automatically 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 Repeater Amp Specifications**

Model#	Price	Input	Max Out	MHz
A-1015-R	\$609.95	.25-5 W	98 W	50-52
B-1018-R	\$749.95	.25-3 W	130 W	145-148
B-2518-R	\$719.95	.5-10 W	111 W	145-148
D-1010-NR	\$759.95	.25-4 W	80 W	440-450
D-3010-NR	\$729.95	1-15 W	75 W	440-450
D-100-ATVN-R	\$729.95	.25-1 W	52 W	420-450
D-1010-ATVN-R	\$729.95	.25-4 W	80 W	420-450



# VECTRONICS

## 2019 HAM RADIO CATALOG

### Vectronics 2 kW Roller Inductor Antenna Tuner

**Vectronics HFT-1500 Roller Inductor Tuner** has 3 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!

**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!

**Tune** your SWR down to absolute minimum 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 reading and has fully

HFT-1500  
**\$509<sup>95</sup>**

Ship Code D

adjustable level and delay controls.

**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 for tuned and bypass. Coax 2 for tuned and bypass and balanced line 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, 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...

4:1 balun for balanced lines. 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

VC-300DLP  
**\$194<sup>95</sup>**  
Ship Code B

peak and average power on 30/300 Watt scales. Lamp has front panel switch and uses 12 VDC or 110 VAC with optional AC-12D \$17.95.

8-position switch selects 2 coax fed antennas, random wire/balanced line or built-in dummy load for use with tuner or direct to your rig. Bypass position keeps SWR meter in line.

**Built-in** dummy load is for testing and repairing radios, setting levels, adjusting your mic gain and more.

**Chemically** treated aluminum case, durable baked-on paint and scratch-proof color Lexan front panel. Compact 10Wx9.5Dx3.5H inches.

### VECTRONICS Deluxe 300 Watt Antenna Tuner with 21 Segment SSB Bargraph



**VC-300D, \$234.95.** Like VEC-300DLP, but has 21-segment bargraph that makes analyzing SSB power amazingly easy. LED shows peak reading and has fully adjustable level and delay controls.

### VECTRONICS SWR/Power Meters

**PM-30, \$99.95.**  
For 1.8-60 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, \$109.95.**

For 144, 220 and 440 MHz ranges. Covers 144/220/440 MHz. Has 30 and 300 Watt ranges. SO-239s.

**PM-30UVN, \$109.95.**

Similar to PM-30UV but has Type N antenna connector.

**PM-30UVB, \$109.95.**

Similar to PM-30UVN but has BNC antenna connector.



### Vectronics 300 Watt Mobile Tuner

VC-300M  
**\$139<sup>95</sup>**  
Ship Code B



**VC-300M Mobile**

Antenna Tuner is compact, lightweight, easy-to-operate and is our most economical. Compatible with any mobile antenna and any mobile HF rig and small enough to fit in a compact car.

**Use** at base station with dipoles, vees, verticals, beams or quads fed by coax. Backlit dual movement meter simultaneously monitors power/SWR.

**Covers** 18 to 30 MHz. Handles 300 Watts SSB PEP, 200 Watts continuous, (150 Watts on 1.8 MHz).

**Measures** just 7.25Wx8.75Dx3.6H inches. Weighs just 3.4 pounds.

## VECTRONICS HF/VHF/UHF Dry Dummy Loads

### 1500 Watts HF/VHF/UHF Dry Dummy Loads

**DL-650M, \$84.95.**  
Handles 1000 Watts continuous, 1500 Watts for 10 seconds to 650 MHz. Ceramic resistor. SWR lower than 1.3:1. Has SO-239 Connector.



**DL-650M \$84.95**  
Ship Code A

**DL-650MN, \$89.95.**  
Like DL-650M but has N-type connector.

### 300 Watts Dry Dummy Loads

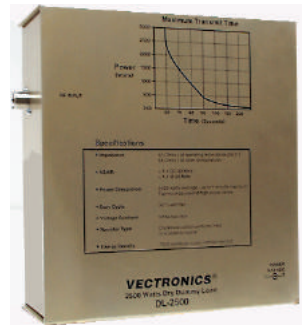
**DL-300M \$54.95**  
Ship Code A  
**DL-300M, \$54.95.**  
Handles full 300 Watts for thirty seconds. Air-cooled, non-inductive resistor in a perforated metal housing. Has SO-239 connector. Silk-screened derating curve. SWR below 1.1:1 to 30 MHz.



**DL-300MN, \$59.95.** Like DL-300M but with N connector.

### 2500 Watts Fan-cooled Dry Dummy Load

**DL-2500, \$239.95.**  
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.



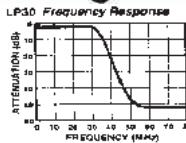
**DL-2500 \$239.95**  
Ship Code B

**DL-2500N, \$244.95** with N connector.

## VECTRONICS Low Pass TVI Filters

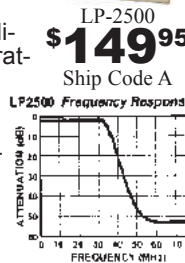
### 1500 Watts Low Pass TVI Filter

**LP-30 \$99.95**  
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 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.



### 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.

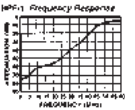


## High Pass TVI Filters

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 passband 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 \$34.95**  
Ship Code A

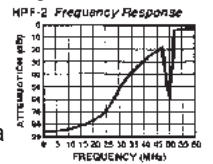


### HPF-2 Deluxe High Pass Filter

Use between Cable and VCR/TV set. Reduces TV interference (TVI) from nearby radio transmitters (like broadcast, commercial, 2-way, amateur, and CB below 30 MHz. Unique common-mode rejection (RF current on 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 \$49.95**  
Ship Code A



### Tuned Active SWL Antenna

**AT-100, \$109.95.**  
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 Shortwave listening and for those without access to the outdoors!



**AT-100 \$109.95**  
Ship Code A

### Deluxe Iambic CW Keyer

**Speed, weight, tone, volume controls, tune, iambic A/B switch, 3 types keying output, speed: 6-50 wpm, self-complete dots/dashes. Use 9V battery/110 VAC.**



**CK-200 \$109.95**  
Ship Code A

### Deluxe Iambic CW Paddle

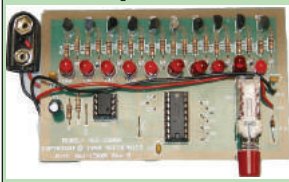
Iambic Key Paddles complete with 1/4" plug and cable. **KP-200, chrome base or KP-200B, black base.**



**KP-200 \$99.95**  
Ship Code A

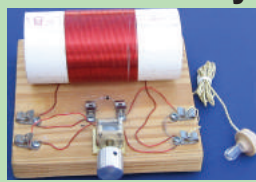
# VECTRONICS® High-performance electronic kits ... fun to build and use!

## 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, \$34.95.**

## Crystal radio set Kit



Relive the experience of early radio pioneers! 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 1/2". weekend!!! It's a great way to start to elmer a new young ham! **Order VEC-121K, \$29.95.**

**SCA Decoder Kit** lets you discover interesting programming hidden in many standard FM broadcast signals. Commercial-free background music, all-news, weather reports, stock quotes, digital data, ethnic programs, blind reading services, etc. Tune entire SCA band 50-100 KHz. Connect 422K to detector out of FM receiver. 1 3/4 x 6 1/2 x 5". *Simple level.* **VEC-422K, \$34.95.**

**Aircraft Receiver Kit** tunes entire voice aircraft band 118-136 MHz, air traffic up to 100 miles away. Track in/out traffic in your area, weather information, discover how National Air Traffic System works. Learn about aviation. Use 9V battery. Drives external speaker/phones. 1 3/4 x 4 x 3 1/2 in. *Intermediate.* **VEC-131K, \$34.95.**

**Shortwave Converter Kit** converts AM or AM/FM radios to SW 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. On/off by-pass, NE-602/612 mixer-oscillator IC, tuned input circuit. 9 V battery. 1 3/4 x 4 x 3 1/2". *Intermediate.* **VEC-101K, \$34.95.**

**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, \$24.95.**

**QRP Transceiver Kits for 80/40/30/20 Meters** give VFO frequency control, broadband transmitter circuitry, solid 1-Watt plus output, shaped keying, .3 uV sensitivity, direct conversion receiver. Has crystal for popular QRP frequency. 1 3/4 x 4 3/4 x 5 1/4". *Intermediate skill level.* **VEC-1380K (80 Meters), VEC-1340K (40 Meters), VEC-1330K (30 Meters), VEC-1320K (20 Meters), \$69.95 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, \$44.95.**

**The Giant Book of Electronic Projects** **VEC-1901, \$24.95.** Includes 19 different kits on this page. Building tips, complete parts lists, parts placement, PC board layouts, schematics, test and alignment, more.



## Full featured CW Keyer Kit

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, \$29.95.**

**CW Memory Keyer Kit** stores 512 characters in four 128 character non-volatile EEPROM message memories. Carry on entire QSOs by just pressing memory 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, \$74.95.**

**Tunable SSB/CW Audio Filter Kit** has sharp four pole peak and notch filters. Zero in with frequency control and adjust bandwidth for best response. Tune frequency 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, \$39.95.**

**Super CW Audio Filter Kit** gives you 3 bandwidths: 80, 110, 180 Hz. 8 poles give super steep skirts with no ringing. Pull CW out of terrible QRM! Plugs in phone jack to drive. QRM down 60 dB one octave from center (750 Hz) 80 Hz bandwidth. Improves S/N ratio 15dB. Use 9V battery. 1 3/4 x 4 x 3 1/2 in. *Simple.* **VEC-820K, \$24.95.**

**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, \$34.95.**

**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, \$24.95.**

**Ni-Cad/Ni-MH Battery Charger Kit** safely quick charges expensive batteries, (no overcharge) 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, \$54.95.**

## Shortwave Receiver Kit

Kit listens to the world! Get 75/80, 49, 40, 30, 31, 20, 25, 22, 19, 17, 16, 15, 13 Meters. Explore AM, SSB, CW, WWV, RTTY, Packet. Explore a great weekend with a grandchild by building this receiver and teaching them about radio waves. Vernier reduction drive, regeneration control, RF stage. Includes cabinet, knobs, buttons. 2 earphone jacks. Use 9V battery. 2 1/2 x 7 x 6 in. *Intermediate skill level.* **Order VEC-102K, \$89.95.**

**20/30/40/80 Meter Receiver Kits** give high performance! Cover entire band or tailor for desired. 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), \$34.95 ea.**

**20/30/40/80 Meter QRP CW transmitter Kits** have variable crystal oscillator tuning, front panel switch selects 1 of 2 crystals, 1 included. Transmit/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), \$34.95 each.**

**AM Radio Transmitter Kit** Set up your own AM broadcast station. Crystal clear programming with you as the disc jockey. Choose clear frequency 530-1750 KHz. Standard line level or mic input. Audio level adjustment. 1 3/4 x 4 x 3 1/2 in. *Simple skill level.* **Order VEC-1290K, \$34.95.**

**FM Stereo Transmitter Kit** lets you connect your MP3/CD player, tape or other 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, \$44.95.**

**144/220/440 MHz Low-Noise Preamp Kits** soup up antenna systems, pull in weakuns. Immunity from damaging electrostatic discharge. 1x1 1/2". *Simple.* **VEC-1402K-144, VEC-1422K-220, VEC-1444K-440, \$19.95.**

Cases available for most kits listed above, \$15.95. Add "C". **Example: VEC-201KC, \$15.95.**

VECTRONICS

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**AMERITRON**®

# 2019 AMATEUR RADIO CATALOG

## 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!



ALS-1306

**\$3299**  
Suggested Retail

Ameritron's  
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 8 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 heat in one small package. They not only are more difficult to cool, if one transistor fails, they all have to be replaced.

ALS-1306 RF deck operates at 50 Volts for efficient, low distortion linear RF power. 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. Attractive desktop amplifier weighs only 22 lbs. Compact 10Wx6 1/2 Hx18 1/2 D 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.

LED-illuminated Cross-Needle SWR/Wattmeter reads 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.

capability reads band data from your transceiver and automatically changes bands as you make transceiver adjustments. An optional interface cable is required for your particular radio.

### Clean, Modular Construction

Unlike other solid state amplifier designs that are packed so tightly they are un-serviceable, the ALS-1306 construction is super-clean with easy-service modular construction.

### ALS-1306 Power Supply

Powered by a 50 VDC switching power supply.



Comes with a pre-wired cable to plug into the ALS-1306. Hash-free fully regulated switching power supply is only 12 pounds and measures a compact 10Wx6 1/2 Hx9 1/2 D". Place it conveniently out-of-the-way at your 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.

## 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!*

### Front-panel ALC control!

Exclusive Ameritron feature lets you adjust output power on the convenient front panel. Get front panel operation, band/error LED indicators like reflected power and switch 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

## Ameritron Amplifier Remote Interface

ARI-1306  
**\$579<sup>95</sup>**



ARI-1306 allows full control of the Ameritron ALS-1306 and ALS-606 amplifiers via USB or through internet.

Lets you operate your amplifier from a remote location as if you were sitting right in front of it. Exotic places, work.

Get full control of band selection (manual or automatic), standby/operate switch, ALC adjustment, power on/off and forward/reflected calibration.

See more details on page 95.

**AMERITRON**®  
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