

# HAM RADIO OUTLET®

COMMUNICATIONS CATALOG  
FALL/WINTER 2024  
EVOLUTION

WORLDWIDE DISTRIBUTION

**POWER  
DOWN  
THE ROAD  
WITH  
YAESU**



**FT-2980R**  
PAGE 20



**FTM-3100R**  
PAGE 20



**FTM-500DR**  
PAGE 19



**FTM-6000R**  
PAGE 20

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# ALINCO

Switching-mode Power Supply with a digital display

## DM-530E

CE Approved

## DM-530T

RoHS

**Communications-grade switching power supply with Powerpoles®, highly visible Digital display and useful USB terminals!**

DM-530 features include a large illuminated digital Volt/Amp meter, rear panel binding posts/front panel Anderson Powerpoles® (30A peak), voltage adjust (5-15V) or fixed at 13.8V, ripple less than 50mVp-p and protection for short-circuit, over temperature, and current limiting!

### Voltage Control & Noise Offset

The output voltage is continuously adjustable from 5 to 15 Volt DC, or fixed at rated 13.8V. Noise Offset helps rejecting switching-noise on your receiving frequency.



### Forced Air Cooling

Designed with reliability in mind, a durable cooling fan keeps DM-530 running continuously under heavy loads.

### Large Binding Posts

The main output terminals are large enough to provide an efficient power transfer to your equipment.



### Auxiliary 30A Output Terminals and USB Ports

Added front panel Anderson Power Pole® terminals and USB ports provide versatile, quick connections.

### Volt & Amp Meter

A highly visible, accurate digital Volt / Amp meter allows real-time monitoring of the output current.



### SPECIFICATIONS

Input Voltage	120VAC (DM-530T) 230VAC (DM-530E)
Output voltage	5-15V DC / USB:5V
Output current	30A (max)
Output voltage regulation	Less than 3%
Ripple voltage	Less than 50mVp-p at rated load
Protection	Short-circuit, Automatic current limiting over 30A Over-temperature
Fuse	8A (DM-530T) / 4A(DM-530E)
Dimensions WxHxD (Projections not included)	190(W) x 69(H) x 181(D) mm 7.48(W)x2.71(H)x7.12(D) inches
Weight	Approx. 2.3kg / 5.07 lb with AC cord

Anderson Powerpole is a registered trademark of Anderson Power Products, Inc.

**Caution** Please be sure to read the instruction manual before using the product for your safety.

## ALINCO, INC.

Electronics Division  
Yodoyabashi Dai-Bldg 13F, 4-4-9 Koraihashi,  
Chuo-ku, Osaka 541-0043 Japan  
Phone: 06-7636-2362 Fax: 06-6208-3801  
https://www.ALINCO.com  
E-mail: export@alinco.co.jp

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## Evolution



How many of you hear fellow hams comment how they wish things were, "Like the old days!" It makes me cringe. Change is a fundamental aspect of existence. One of the most illustrative examples of evolution can be found in the realm of technology, particularly in amateur radio. From its humble beginnings to the sophisticated radio hobby of today, amateur radio exemplifies how everything evolves, driven by innovation, necessity, void, and even cultural shifts.

Radio technology began with basic spark transmitters to send Morse code across distances, laying the groundwork for a new form of communication. This marked the birth of a medium that would soon become essential for both personal and global communication and is the basis of our hobby.

As technology advanced, so did radio. The transition from spark transmitters to continuous wave (CW) transmission in the early 20th century improved clarity and reliability. Amplitude modulation (AM) and frequency modulation (FM) further revolutionized the medium, allowing for voice and music broadcasts. This evolution was not merely technical; it also reflected societal changes, as radio became a vital tool for information dissemination.

The rise of digital technology in the late 20th century marked another significant leap. Digital signals enhanced the quality of audio transmission and introduced new modes of communication, such as satellite and internet radio. This shift exemplifies how necessity drives evolution; as our world became more interconnected, radio adapted to meet the demands for faster, clearer communication.

Today, we see the ongoing evolution of radio with the integration of artificial intelligence. These advancements illustrate a broader trend: all technologies and systems evolve in response to cultural, social, and technological changes. The way we communicate, entertain, and inform ourselves continues to transform, reflecting the dynamic nature of human society.

The evolution of amateur radio mirrors the evolution of everything. It underscores a universal truth: change is constant, and innovation is driven by the desire to improve our lives but, most importantly, connect with one another. "The old days...", no thanks. I'm interested in what is next. It is gonna be great.

*Robert Ferrero*

Robert Ferrero, W6KR  
President, Ham Radio Outlet

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# CONTENTS

**AMATEUR RADIOS**  
4-23

**RADIO MOUNTS**  
24

**SCANNERS &  
SWL & SDR**  
14, 26-27

**DIGITAL/PACKET &  
RADIO CONTROL**  
28-31

**AUDIO INTERFACE &  
AUDIO GEAR**  
32-34

**MORSE KEYS,  
PADDLES & READERS**  
35-36

**METERS**  
37

**OPEK**  
38-45

**BOOKS, SOFTWARE  
& STUDY MATERIALS**  
46-49

**ADVERTISER SECTION**  
50-66

**AMPLIFIERS**  
67-68

**POWER SUPPLIES,  
BATTERIES &  
ACCESSORIES**  
69-71

**COAX & CONNECTORS**  
72-73

**ANTENNA TUNERS, BALUNS  
& SWITCHES**  
74-77, 86-87

**OPEK**  
78-85

**ANTENNAS, MOUNTS &  
HARDWARE**  
88-102

**ANTENNA ANALYZERS**  
103

**ROTATORS & TOWERS**  
104-108

**LAST CHANCE ITEMS**  
110-111

**STORE LOCATIONS**  
112-113

**COMPLETE INDEX**  
114

# HAM RADIO OUTLET





Dual Band

2 m /70 cm Dual Band  
Remote Head Unit  
DR-735T



Building on Alinco's reputation for simple operating commands and straight-forward key design, the DR-735 is a radio you can start enjoying from the moment you power up.

- 144 MHz / 440 MHz FM transceiver.
- TX 144-148 MHz / 430-450 MHz.
- RX 108-174 MHz (AM/FM) 400-480 MHz (FM).
- Receiver double conversion.
- Civil aviation and utility receive.
- 1000 channel programmable memory.
- Full duplex / X-band repeat.
- 50 / 20 / 5 W power output on both bands.
- Huge alphanumeric LCD display.
- RGB backlight with choice of eight colors.
- Set different display color for different functions and store in memory.
- Independent 2 meter / 70 cm dials / volume / squelch knobs.
- Removable front control head. Mount remotely or inverted for optimal speaker placement.
- Wide variety of scanning features.
- Computer programmable. Software available on line.



EXTENDED WARRANTY  
INFORMATION  
ON PAGE 113.

Mobile Specifications

Model	Frequency Range	Power In	Current Drain TX	Current Drain RX	Power Out	Memory Channels	Sensitivity	Height Inches	Width Inches	Depth Inches	Weight Pounds
DR-CS10T	144-148Mhz	13.8 VDC	10A	600 mA	60 W	200	< .3uv	1.378	5.709	7.087	2.0
DR-CS25T	220-224.975Mhz	13.8 VDC	10 A	600 mA	10/25/50 W	100	< .3uv	1.37	5.7	7.08	2.0
DR-06TA	50-53.995Mhz	13.8 VDC	11 A	600 mA	50 W	100	< .25uv	1.57	5.58	6.83	2.2
DR-735T	2M/70CM	13.8 VDC	12 A	600 mA	5/20/50 W	1000	< .20uv	2.3	5.6	7.4	2.6
DR-MD500T	2M/70CM	13.8 VDC	10 A	500 mA	55/40 W	4000		1.7	5.5	7.4	2.2
DR-MD520T	2M/1.25CM/70CM	13.8 VDC	10 A	500 mA	55/5/40 W	4000		1.7	5.5	7.4	2.2

Dual/Tri Band

Dual Band  
High Power Output  
DR-MD500T



The DR-MD500T has features such as Color LCD Display, 55W Output Power on VHF and 40W on UHF as well as up to 4000 Memory Channels, 10,000 TalkGroup and up to 300,000 Contact lists. Capable of operating in Digital and Analog with mixed mode in VFO or Memory mode.

- DMR Tier I and Tier II
- MAX output power 55W(VHF) / 40W(UHF)
- 4000 channels, 250 zones, 250 scan lists
- 300,000 Digital contact list
- Large 1.77 LCD Display
- Automatic Repeater Roaming
- Single or Dual Channel selectable
- Displays DMR ID, Call sign, Name.
- X-band repeat, Analog uplink/Digital downlink or vice versa
- FM Broadcasting receiver with 100 memory channels and VFO
- FCC Part 90 Certified



222Mhz FM Mobile  
DR-CS25T

The DR-CS25 in its ultra compact package is loaded with high technology features, with a large back-lit display & microphone, excellent transmit & receive audio, 200ch memories, various scanning and more! This is the easiest way to get into 220Mhz excitement in your area.

Tri Band  
High Power Output  
DR-MD520T



The DR-MD520T has features such as Color LCD Display, 55W Output Power on 144MHz, 5W on 220MHz and 40W on 440MHz Amateur Bands as well as up to 4000 Memory Channels, 10,000 TalkGroup and up to 500,000 Contact lists. Capable of operating in Digital and Analog with mixed mode in VFO or Memory mode and with Built-in GPS receiver also supports APRS feature both in Analog and Digital modes.

- DMR Tier I and Tier II
- MAX output power 55W(VHF) / 40W(UHF)
- 4000 channels, 250 zones, 250 scan lists
- 500,000 Digital contact list
- Large 1.77 LCD Display
- Automatic Repeater Roaming
- FCC Part 90 Certified



6 Meters & 50 watts  
DR-06TA

Catch the exciting world of the 6m band with the DR-06TA. Covering 50-53.995 MHz with an output of 50 W, it has convenient scan features, a variety of selective calling tones, theft alarm, ignition key on/off, direct frequency input, and controls from the EMS57 key pad microphone.

Single Band

2 Meter Mobile  
High Power Output  
DR-CS10T



Alinco's latest 2M DR-CS10 in its ultra compact package is loaded with high technology features. The easy and smooth operation of the DR-CS10 is inherited from other popular Alinco radio equipment, with a large back-lit display & microphone, excellent transmit/receive audio, 200ch memories, various scanning features and more. Affordable and easy-to-use, the DR-CS10 offers everything you would expect from a 2M mobile transceiver.

- Output power selectable up to 60W.
- PC-programmable 200 channel.
- Alphanumeric name tags.
- Wide variety of selective calling features.
- Built-In 2-Tone/5-Tone, 51 CTCSS, 1024 DCS, 4 Tone-burst tones and DTMF / ANI decode.
- Large, bright LCD and easy-to-operate backlit microphone keys.
- Multi-function microphone enables direct frequency entry & remote control.
- Various scan modes, Key lock, Wide / Narrow operations and more.
- Clean, clear Alinco audio.

Transmitter:

- Total Output power: Approx. 60W.
- Modulation: Wide Mode: 16KPF3E / Narrow Mode: 1KPF3E.
- Adjacent Channel Power: Wide Mode: ≥68dB / Narrow Mode: ≥60dB.
- Audio Distortion: ≤5%.
- Current drain (max): 10A (TX) / 0.6A (RX).

Receiver:

- Receive System: Double-conversion superheterodyne.
- Sensitivity (12dB Sinad): Wide mode: ≤0.3μV / Narrow mode: ≤0.35μV.
- Audio Distortion: ≤5%.
- Audio Power Output: >2W@10%.

Handheld Specifications

Model	Frequency Range	Power In	Current Drain TX	Current Drain RX	Power Out*	Memory Channels	Sensitivity	Height Inches	Width Inches	Depth Inches	Weight Pounds
DJ-VX50T	2M/70CM	7.4 VDC	1.5 A	80 mA	5 W/4 W	200	< .12uv	4.65	2.32	1.5	.5
DJ-MD5XLT DJ-MD5FXT	2M/70CM	7.4 VDC	1.5 A	300 mA	.2/1.2/5/5 W	4000	< .25uv	4.65	2.32	1.57	.58

\*Power output is determined by choice of battery pack. †At 13.8VDC

Dual Band

Dual Band  
2m /70 cm  
DJ-VX50T

The DJ-VX50T has a compact IP67 dust/ water proof body. CTCSS, DTMF, DCS are standard, along with a variety of tone bursts for repeater access or selective calling. Convenience features include direct frequency input, alphanumeric channel labels and 200 memory channels that can each store operating parameters. In addition, DJ-VX50T sports VHF AM aircraft, FM broadcast and NOAA Weather Channel receiver. A Li-on battery pack and a stand charger are included.



Dual Band  
Analog + DMR  
DJ-MD5XLT

Alinco's 3rd Generation HT with Advanced CPU, Dual Band VHF/ UHF, DMR, GPS and APRS (analog/digital) support. The DJ-MD5XLT has a compact and durable IP54 rated polycarbonate body, designed to resist dust and splash. The DJ-MD5XLT has features such as Color LCD Display, 5W Output Power, up to 4000 Memory Channels and built-in GPS. Capable of operating in Digital and Analog with mixed mode in VFO or Memory mode. Supports two-slot TDMA DMR Tier I and II. The DJ-MD5XLT has powerful audio output power to insure loud crisp receive audio.

DJ-MD5FXT also available. Similar features/specs as DJMD5XLT but without GPS.

Has updated USB-C charging.



GMRS

GMRS/FRS  
DJ-G46T

The Alinco DJ-G46T is a portable, 5W GMRS, personal, general purpose communication 2-way radio. It is rugged (IP54 rated), compact, suitable for various sports activities, camping and other travel adventures that make this versatile radio extremely enjoyable.

While this radio shares the same channels as FRS, a license\* is required to operate DJ-G46T handy talky as it offers more power and range over traditional FRS. The DJ-G46 is also able to extend its range when connected to local GMRS repeaters. Please consult a GMRS dealer or your local GMRS repeater administrator for connection through repeaters.



Keep in touch around the house, down the road, on the beach, outdoor sports, hunting, fishing, in a theme-park, shopping mall, playground... where you need to talk to someone near-by, the CROSS-TOUCH DJ-G46 is a brilliant alternative to a cellphone!

- 128 Channel capabilities
- 5W GMRS, 2W FRS output
- LCD Display screen
- GMRS Repeater ready
- CTCSS/ DCS Group talk tones
- IP54 Weatherproof
- Emergency call
- Hand-free Vox
- FM Radio
- Alert Beep & Tones
- LED flashlight
- PC programmable
- 1700mAh Li-ion battery
- FCC Part 95 Certified

\* GMRS is a PAID land-mobile service and a license is required. Contact your local HRO for more information about GMRS.





Dual VFO Software Defined Radio  
IC-7610

Faint signals are no longer a challenge for DXers and Contesters worldwide, with the IC-7610. The difference between putting the QSO in the log or trying another time is the capability of your receiver. The high-performance

RMDR in the IC-7610 can pick out the faintest of signals even in the presence of stronger, adjacent signals.

The IC-7610 introduces dual RF direct sampling receivers. Achieving 100dB RMDR, these receivers rival that of other top-of-the-line transceivers. The IC-7610 also comes with a high-speed, high-resolution, real-time spectrum scope on a 7-inch color display.

The IC-7610 uses an innovative RF direct sampling system to convert a received analog signal to digital. Then it applies sophisticated processing to produce extraordinarily clear audio with high signal-to-noise ratio. The ultra-low noise master clock oscillator yields superior TX and RX performance including an incredible 110 dB of RMDR (reciprocal mixing dynamic range) at 2 kHz frequency separation!

Independent dual receivers allow simultaneous reception of two bands and two modes. Independent RF/AF gain controls are provided, and the optional RC-28 USB remote encoder knob can provide a second tuning dial for greater operating flexibility (optional RS-BA1 remote control software is NOT required).

High performance features include 100 watts of power on 160-6 meters on SSB / CW / FM / RTTY / PSK, built-in high-speed automatic antenna tuner, and digital IF filtering with digital twin passband tuning for outstanding interference rejection.

- Receives 0.30 – 60 MHz.
- DIGI-SEL digital receiver preselector provides tight RF filtering for both main and sub receiver front ends.
- Dual high-speed, high-resolution, real-time spectrum scopes and waterfall displays.
- High-resolution 7" touch-screen color display for quick, intuitive operation and effortless control of functions.

- Ethernet port for IP remote operation (optional RS-BA1 software required).
- Compatible with SM-50 dynamic mic and AH-730 remote automatic antenna tuner options.
- Superior sound quality speaker.
- SD card saves settings and recorded communications. (Card not included).
- External monitor via a DVI-D port.

Speakers



Speaker  
SP-39AD

External Speaker for the IC-R8600 with built in 15 Volt, 2 Amp supply and correct plug for the IC-R8600. Rated 8 ohms at 4 watts.



Speaker  
SP-38

You will get great sound with this high quality speaker. It is perfect for the IC-7300. Rated 5 watts @ 8 ohms.

Max input power is 7 watts. Includes 5.9 ft (approx) of audio cable. Weight: 2.54 lb.



Speaker  
SP-33

Base station mono speaker. Rated 8 ohms @ 4 watts. Includes a 6 ft cable that terminates in a 3.5 mm male mono plug.



Speaker  
SP-41

Designed to match the IC-7610. Two input lines. Has tone switches, input jack selector switch, 1/4"

head-phone jack and On/Off Switch. Rated 5 watts & 8 ohms. Max input power is 7 watts.

HF/6M Transceivers



The Software Defined Radio  
Everybody Wants!  
IC-7300

The Innovative HF Transceiver comes with a High Performance Real-Time Spectrum Scope.

New technology is changing the way receivers are being designed, and the IC-7300 is an industry first as an RF Direct Sampling System is being used in an entry-level HF radio.

The ability to digitize RF before various receiver stages reduces the inherent noise that is generated in the different IF stages of a radio. We feel the performance of the '7300 will far exceed your expectations for a radio considered entry-level.

This HF transceiver has innovative features like the RF direct sampling used in many software defined radios. The real-time spectrum scope with waterfall function gives top-level performance in resolution, sweep speed, and dynamic range.

- SSB, CW, RTTY, AM and FM modes.
- Transmits on amateur HF + 6m frequencies.
- Use the TFT LCD as a touch screen to set various functions and edit memory contents.
- 100 W output HF / 50 MHz bands.
- Built-in high-speed automatic tuner.
- Multi-dial knob for smooth operation. Push to see menu items. Select with a touch of the screen and adjust levels by turning the multi-dial knob.
- Phase noise characteristics are improved about 15 dB (at 1 kHz frequency offset) when compared to other transceivers.
- 101 memory channels: 99 regular and 2 scan edge channels.
- Remote control operation for RS-BA1.
- Memory keyer functions for CW and RTTY.
- USB for CI-V and audio input / output.
- Voice memory function.
- RTTY decode log function.
- Screen capture & SD card slot.
- Large cooling fan system.
- Multi-function meter.
- Multiple CW functions & digital noise reduction.



HF Transceiver



All-Band HF | IC-718

The IC-718 is a compact rig with ample features for HF communications. The HF bands enable you to communicate across long distances, even reaching the other side of the Earth. With its wide dynamic range, high S/N ratio, and full duty operation, you will make contacts easily.

- Compact Design.
- RX .03~29.995 Mhz.
- USB, LSB, CW, RTTY, & AM.
- IF shift interference rejection.
- Output power: SSB / CW / RTTY 5W~100W variable, AM: 2~40W variable.
- Transmits ALL amateur HF except 60m.
- AF DSP built-in.
- Built-in keyer.
- VOX operation, mic compressor, RF gain control.

Remote Antenna Tuner



HR Autotuner  
IC-AH730

Fast Tune-up from 1.8 to 50 MHz band remote control with Icom transceivers. With a 7 m (23 ft) or longer wire element, all band matching is possible from the 1.8 MHz (160 m) band to the 50 MHz (6 m) band. Efficient for multi-band operation.

Dust Covers

Covers

PRC7300 / PRC7610 / PRC9700



Protect your favorite radio from dust and scratches. These leather covers are meticulously designed to fit your Icom radio perfectly. All have an embroidered Icom logo and radio model on the front.

Model	Receive Freq Range	Power	TX Amp	AM	FM	SSB	CW	FSK	Mike Z	Sensitivity 1.8-30 MHz	Notch	Audio
IC-705	Medium wave to 70cm	13.8 VDC		.5-10 W	.5-10 W	.5-10 W	.5-10 W		600		Man + auto	
IC-718	0.03-29.995 HHZ	13.8 VDC	20A	2-40 W		5-100 W	5-100 W	5-100 W	600	< .16 dBu at 10 dB		> 2.0 W
IC-7100	30 kHz-199.9999 MHz 400-470 MHz	13.8 VDC	22A	1-40 W	**	**	**	**	600	< .18 dBu at 10 dB	Man + auto	> 2.0 W
IC-7300	30 kHz-60 MHz	13.8 VDC	21A	1-25 W	100 W	100 W	100 W	100 W	600	< .16 dBu at 10 dB	Man + auto	> 2.0 W
IC-7610	30 kHz-60 MHz	13.8 VDC	23A	1-25 W	1-100 W	1-100 W	1-100 W	1-100 W	600	< .15 dBu at 10 dB	Man + auto	> 2.0 W

† Output is continuously adjustable from 5 to full power. \* 50 W on 2 meters, 20 W 70cm. ## 2-100 W HF / 50 MHz, 2-50 W VHF, 2-35 W UHF.

Microphones



Desk Mic  
IC-SM30

This goose-neck style desktop microphone features an 8-pin metal connector, PTT / PTT lock switches and low-cut filter. It also has an adjustable microphone output level and the voice characteristics have been especially designed for SSB and FM. IC-OPC589 required for use with radios with modular jack [IC-703, IC-706series, IC-7000, IC-7100].



Desk Mic  
IC-SM50

This unidirectional, dynamic microphone is designed for select Icom base station transceivers. (It cannot be used with non-Icom transceivers since the power is supplied from the connected transceiver). The SM-50 features Up-Down tuning (on compatible Icom transceivers). There is a switch for PTT and also a lock feature. A low cut switch on the top of the base cuts out the low frequency components on input voice signals. IC-OPC589 required for use with radios with modular jack such as the IC-703, IC-706 series, IC-7000, & IC-7100.

Software



IP Remote Control  
RS-BA1v2 22

Remotely control your Icom transceivers via an IP network with the RS-BA1v2. It allows you to install the radio in another room using your home network or a remote location over the Internet. The low voice latency caused by the RS-BA1v2 provides the same operational experience as using an actual radio. Most functions and modes of your transceiver can be controlled.

The RS-BA1v2 has two component applications: System configuration to set up the IP address and other settings, and Remote Control allows you to control the radio. The display on the RS-BA1v2 is similar to the radio's front panel. Supports the IC-7100, 7200, 7410, 7300, 7600, 7610, 9700, 705, or 9100 with USB connection to a PC. Also the IC-7800, 7851 or 7700 connected to a PC with an RS-232C cable plus S/P DIF or ACC cable.



Remote USB Encoder  
IC-RC28

The optional IC-RC28 utilizes the same tuning knob and encoder used on Icom HF radios, providing a tactile option for the RS-BA1 software. The IC-RC28 is a standalone controller for the IC-7610 and the IC-7851 radios and may also be used with the RS-BA1 software.





Dual Band

Practical Dual Bander

IC-2730A

With Optional Bluetooth Headset



This high performance mobile radio is a classic 2m/70cm performer.

- Wideband receiver 118- 174 / 375-550 MHz.
- Large backlit LCD screen.
- V/V & U/U simultaneous receive.
- Hands-free capable with optional UT-133.
- Optional VS-3 Bluetooth® headset.
- Cross band repeater capability.
- CS-2730 free downloadable PC programming software.
- 50 watts output on VHF and UHF.
- Squelch delay and squelch attenuator.
- Built-in 50 CTCSS and 104 DTCS tones with split tone function.
- Controller attachment to the main unit with optional MBA-4.
- 1052 memory channels including 50 scan edges and 2 call.
- Weather channel receive with weather alert (USA version only).
- HM-207 remote control mic is standard.
- 16 DTMF autodial memories.
- CI-V remote control capability (through the optional OPC-478UD).

ACCESSORIES	50A 52A	T10	V86	HRO Price
Battery Packs	BP-280	•	•	\$81.95
	BP-271	•	•	\$79.95
	BP-272	•	•	\$129.95
	BP-298	•	•	\$61.95
	BP-307	•	•	\$135.95
	BP-263	•	•	\$28.95
Battery Cases	BP-273	•	•	\$57.95
	BP-193	•	•	\$34.95
Other	SP-27	•	•	\$33.95
	AD-92SMA	•	•	\$25.95
	MB-124	•	•	\$11.95

Icom Handhelds

Model	Frequency Range	Power In	Current Drain TX	Current Drain RX	Power Out (Std Battery Pack)	Sensitivity	Height Inches	Width Inches	Depth Inches	Weight Oz
IC-T10	2M / 70CM	--	< 2.5 A	< 600 mA	5.0 W	< .18uv	4.4	2.1	1.2	9.8
IC-V86	2M	7.5 W	1.6 A	450 mA	7.0 W	< .18uv	4.4	2.3	1.2	10
ID-50/52A	2M / 70CM	7.4 W	2.5 A	450 mA	5.0/2.5/1.0/0.5 W	< .18uv	4.4/4.8	2.3/2.4	1.2	10.6/11.6

Single Band

2 m Mobile Solution  
IC-V3500



The IC-V3500 is a 2m mobile transceiver with modern elegance, rugged design and enhanced features.

- 65W(max) 2m analog FM mobile, commercial radio for some markets.
- Similar functionality as the 2300H.
- Modern design: Easy to use radio, better readability with the new white LCD backlight.
- Louder, clear speaker output.
- New emergency functions, requirements for commercial users in some markets, adding a new dimension in user operational safety.
- Instant mute.
- Audio Volume Boost - new functions in this product category.
- CS-V3500 programming software will be available for download.
- Supplied Accessories: HM-133V, DC Power Cord.

ACCESSORIES	50A 52A	T10	V86	HRO Price
Cables	CP-12L	•	•	\$39.95
	CP-23L	•	•	\$37.95
	OPC-254L	•	•	\$28.95
	OPC-478UD	•	•	\$89.95
	OPC-515L	•	•	\$24.95
	OPC-2004*	•	•	\$30.95
Speaker Mics	OPC-2144	•	•	\$33.95
	HM-153LS	•	•	\$110.95
	HM-158LA	•	•	\$48.95
	HM-159LA	•	•	\$74.95
	HM-166LS	•	•	\$84.95
	HM-186LS	•	•	\$56.95
Headsets	HS-94	•	•	\$25.95
	HS-95	•	•	\$159.95
	HS-97	•	•	\$38.95

\*Cable only to be used with HS-94, 95, or 97.

Dual Band

Dual Band  
D-STAR® & GPS Mobile  
ID-5100AD



The ID-5100AD offers an intuitive user interface experience with an industry leading touch screen display. Additionally, the ID-5100AD interfaces with Android™ devices and Bluetooth® headsets via the optional Bluetooth® module.

- Wideband receive (118-137 MHz (AM), 137-174 / 375-550 MHz only).
- Antenna RX diversity (second antenna connector).
- DTMF decode / DV / FM repeater list.
- Optional UT-133 Bluetooth® unit enables audio accessory connection and Android™ connection (CI-V via Bluetooth® SPP profile).
- Optional VS-3 Bluetooth® pendant earpiece mic.
- Built-in GPS engine.
- Includes MBA-2 bracket. IC-MBF4 not included.
- RS-MS1A Android™ application (free DL)
- Independent VHF and UHF band units (V/V / U/U capable) for 50 W output.
- D-Plus reflector usability.
- DV dual watch for simultaneously waiting in two DV voice streams (decodes one only).
- HM-207 control microphone is supplied as standard.

EXTENDED WARRANTY  
INFORMATION ON  
PAGE 113.

AA Alkaline  
Battery Packs

BP-208N  
BP-263  
BP-273  
BP-293

Use standard "AA" batteries to power your handheld. Never run out of power again. Great for emergency use or as a quick, backup battery.

Dual Band

2 m/ 70 cm  
IC-T10

The IC-T10 is a direct conversion VHF/UHF portable transceiver with advanced features.

- 2m/70cm analog only FM handheld portable.
- 5W RF output.
- 1500mA AF output.
- Based on the commercial IC-F1000T series.
- 2.5ppm stability.
- FM- Wide and Narrow.
- CTCSS / DTCS / DTMF encoding.
- Priority Scan.
- Internal VOX function.
- Direct conversion design.
- 200 channels.
- FM broadcast RX (88-108MHz).
- MIL-810-G / IP67 environmental protection.



Supplied Accessories: BP-280 (2280mAh Li-ion battery pack), single rapid charger BC-213, AC-Plug changeable AC adapter BC-242, FA-S270C antenna and belt clip.

Single Band

2 m Analog  
Radio  
IC-V86

Class leading 7 watt output power and new antenna design increase efficiency and communication overall coverage.

- Solid structure meets IP54 and MIL-STD 810G standards.
- Built-in CTCSS and DTCS enc/dec features.



- Frequency coverage TX / RX guaranteed useable range USA:144-148 MHz, EXP: 136-174 MHz.
- 1500 mW powerful and crystal clear audio provides clear communication even in noisy environments.
- Supplied BP-298, 2250 mAh (typical) large capacity Li-ion battery pack.
- Optional BP-299, 3150 mAh (typical) extra large capacity Li-ion battery pack.
- Supplied BC-240, battery charger with the charging control function which reduces degradation of battery.

Desktop Receiver



Wideband  
Receiver  
IC-R8600

- Ultra-wide frequency coverage (10 kHz-3 GHz) with RSSI (received signal strength indication) function.
- Fast moving, real-time spectrum scope and waterfall.
- Decodes multiple digital protocols, including D-STAR®, NXDN™, dPMR™ and APCO P25.
- Large 4.3 inch TFT color touch screen display.
- Clear audio quality using FPGA / DSP base architecture with superheterodyne circuitry.
- Optional IC-CSR8600 PC remote control software allows control of all receiver functions.
- I/Q signal output for use with third-party SDR software and/or external decoding.
- SD card slot for logs and voice recording.

Handheld Receiver



Portable  
IC-R15

With simple operation and multi-functionality, even beginners can enjoy receiving various radio signals, such as aviation, railway, marine, and so on.

- Dualwatch function supporting more effective reception.

- Frequency coverage of 108 ~ 500 MHz in AM and FM modes and receiving FM radio broadcasting.
- Simple Operation Mode supporting quick signal reception.
- Excellent visibility with a large color display.
- Built-in recording function that enables simultaneous recording of two signals.
- Separate keys for the Scan and Skip functions.
- Audio Saving on a microSD Card in the WAV format.
- IPX7 waterproofing and pro-grade construction.
- Built-in Bluetooth® function.
- 13 hours of operation with the supplied BP-287 battery.
- High-speed scan (150 channels/sec).
- Charging with a USB Type-C™ cable.

Watch Online



ICOM QUESTIONS?  
HRO Has The Answers!

Watch our YouTube video series and learn about the latest from Icom quickly and easily!



<https://www.youtube.com/watch?v=eRSYeTyikKM>

Handheld Receiver



Portable  
IC-R6 SPORT

The power of listening to the world in the palm of your hand is possible with the compact R6! The IC-R6 is a signal search machine, covering 100 kHz to 1309.995 MHz (cellular blocked and receives analog TV only), it can search 100 channels a second. The receiver is energy-efficient and designed to provide up to 15 hours of listening on a single charge.

With 1300 alphanumeric memory channels, 50 scan edges, and 200 auto-write memories, there are many scanning opportunities. The bank link feature allows connecting any of the 22 memory banks. The Voice Squelch Control opens the squelch only when a modulated signal is detected.

IC-R6 Accessories

Model	Description	Price
OPC-478UD	USB PC to Radio Cable	\$89.95
SP-27	Tube Earphone	\$33.95
AD-92SMA	BNC Antenna Adaptor	\$25.95





## Dual Band HT

### VHF/UHF D-STAR® Digital Transceiver ID-50A

The ID-50A is a compact dual-bander (2m/70cm), making it the perfect on-the-go handheld. The easy D-STAR settings allow for a quick menu selection to call a friend locally or talk to regions around the world. Enhance QSO opportunities by taking advantage of various smart features.



- 2.3" Monochrome Display. Easy to Read.
- Easy D-STAR® Settings for Beginners
- Simultaneous reception in V/V, U/U, V/U and DV/DV.
- Easily Find Active Channels by Sight.
- Enjoy D-STAR® Text Message Communications.
- Build Your Own D-STAR® Gateway
- Double QSO Opportunities with Dualwatch.
- Various Data Saving on a MicroSD Card.
- 750mW Loud Audio Output Power
- USB Type-C Connector
- Reliable in Rainy Environments. IPX7 - 1 m depth of water for 30 minutes.

## Special/Limited Editions

### VHF/UHF D-STAR® Digital Transceiver ID-52A Plus 45

The popular ID-52A 45 PLUS D-STAR transceiver just gets more powerful. Terminal mode and Access Point mode, which previously required a cable connection, can now connect to an Android™ device via Bluetooth® technology. In addition, dual operation of Terminal mode and Simplex/Repeater operations is now possible. Moreover, an industry standard USB Type-C™ port for convenient USB Type-C™ charging is newly adopted.



### VHF/UHF D-STAR® Digital Transceiver ID-52A Plus 35 60th Anniversary

Icom has crafted a limited edition model of the popular ID-52A PLUS with a few enhancements to commemorate their 60th Anniversary.

The ID-52A PLUS 60th Anniversary Model will have a special:

- Metallic-colored body
- Exclusive embossed hand strap
- Commemorative box



## Dual Band HT

### VHF/UHF D-STAR® Digital Transceiver ID-52A

The ID-52A is equipped with a color display. To provide more 'on-screen' information and increase readability the display size is 2.3 inches and a transreflective display is used to achieve excellent visibility, even in bright sunlight. The transceiver also supports Bluetooth® communication as standard. Wirelessly connect to Android™ devices with ST-4001A/ST-4001I Picture Utility Software and RS-MS1A Remote Control Software installed. The optional VS-3 Bluetooth® headset is also available, for hands-free operation.



- 2.3" large transreflective color display that is easy to see outdoors.
- Bluetooth® communication as standard.
- Simultaneous reception in V/V, U/U, V/U and DV/DV.
- Enriched D-STAR® features including the terminal mode/access point mode.
- UHF Air Band reception (225~374.995 MHz).
- Significantly increased audio output power to 750 mW (400 mW for ID-51 series).
- Accessories for the ID-51A/E such as battery packs and microphones can be used.
- IPX7 - 1 m depth of water for 30 minutes.

## Multi-Band

### HF/VHF/UHF + D-STAR® IC-7100



- Intuitive touch screen interface.
- Easy-to-see, easy-to-use slant top controller.
- Built-in high efficiency oval speaker on the controller.
- D-STAR® DV mode digital voice and low speed data communications.
- 505 memory channels.
- SWR graphic display.
- Optional MBF-1 mounting base.
- Built-in SD card slot for voice storage and data cloning.
- Built-in RTTY functions.
- Easy vehicle mounting with the optional MBF-1 kit.
- IF DSP controlled digital features. The 32-bit floating point DSP supports many digital processing features such as digital IF filter, twin PBT and manual notch filters.
- Remote Control Software (optional RS-BA1v2).
- CW full break-in.
- CW auto tuning.
- USB Audio/Control.
- IF-DSP.

## Ultra-Portable QRP



### 1-30/ 50/ 144/ 430 MHz All-Mode QRP Transceiver IC-705

The new IC-705 puts the power of a "Base Station" in the palm of your hand. And because of its ultra-portable size you can literally take this small wonder just about anywhere. Perfectly suited for backyards, parks, mobile, and mountain tops. 10 watts output.

#### RF Direct Sampling

The IC-705 converts RF signals directly to digital data. A FPGA (Field Programmable Gate Array) processes the digital data into audio. The result is a reduction of internal noise that can hide weak signals. You will hear those distant signals that other radios mask.

#### Real Time Spectrum Scope And Waterfall Display

Easily see band activity, find a clear frequency, monitor receive and transmit conditions in real time. No more need for expensive add-on options.

#### Multiple Power Options

Included is a high capacity Li-ion battery, the same used in the ID-51A and ID-31A. For extended operation you can supply your own power from any 13.8V DC external source.

#### HF/50/144/440 MHz Multimode

Don't be limited to a few bands. Enjoy the freedom of operation from HF to UHF and in FM, AM, SSB, RTTY, and D-STAR DV. You'll also get FM broadcast and Airband reception.

#### Large, Color Touchscreen

At 4.3" the color TFT touch LCD allows you to clearly see and operate with ease. You can navigate through menus and adjust operating parameters with a simple touch of your finger. And the bright display means no worries when operating outdoors.

#### Compact and Lightweight

Even with all the impressive features this radio is a rugged, compact, and lightweight unit. At only 2.5 lb you will quickly discover that taking this radio with you is easier than ever!

## Tri-Band

### VHF/UHF/SHF D-STAR® Transceiver IC-9700



Designed for the VHF / UHF weak signal operator, the IC-9700 is an RF direct sampling receiver for 2 m and 70 cm, with a single down conversion for 23 cm with an IF sampled receiver between 311 - 371

## VHF/UHF/SHF



### VHF/UHF/SHF All-Mode Transceiver IC-905

Aim higher and enter the world of SHF. The IC-905 is an industry-first all-mode transceiver with 144/440/1200/2400/5600 MHz coverage. Add 10 GHz with the optional CX-10G transverter.

Two separate units (controller and RF module) allow you to mount the RF module as close as possible to the antenna.

The LAN cable connection between the controller and the RF module significantly reduces power loss.

PoE (Power over Ethernet) technology improves the location of the RF module installation.

#### Main Features

- Output power is 10 W on 144 / 430 / 1200 MHz, 2 W on 2400 / 5600 MHz and 0.5 W on 10 GHz
- 4.3 inch large color LCD touch display
- A high-performance real-time spectrum scope and waterfall display
- The real-time spectrum scope can be adjusted for various band spans
- Easy digital mode settings
- SD card slot
- High-performance GPS antenna supplied
- GPS 1 pps signal frequency management
- Full D-STAR functions (DV/DD Mode)
- ATV (Amateur TV) in the FM Mode
- USB connection for PC and mobile
- CX-10G, 10 GHz Transverter, available as an optional item.



MHz. This design provides a quiet receiver with the power of Icom's DSP technology along with a robust PA providing 100 W on 2 m, 75 W on 70 cm, and 10 W on 23 cm.

- All mode, tri-band transceiver covers 144, 430 / 440 and 1200 MHz.
- Supports CW / AM / SSB / FM / RTTY and D-STAR® DV and DD modes.
- Digital Data (DD) mode provides 128 kbps data communication.
- PA has a powerful 100 W (144

- MHz), 75W (430 / 440 MHz) and 10W (1200 MHz) output.
- 4.3" touch screen color TFT LCD.
- Smooth satellite operation with normal / reverse tracking and 99 satellite channels.
- Real-time, high-speed spectrum scope and waterfall display.



KENWOOD

Tri-Band Transceiver

FM & D-STAR®  
GPS & APRS  
TH-D75A

Introducing the Next Phase in the Evolution of the Handheld Transceiver, Featuring Simultaneous Reception of 2 D-STAR® Signals, Reflector Terminal Mode, and APRS® Standalone Digipeater.

Following on from the TH-D74, the TH-D75A adds many useful features such as simultaneous reception of 2 D-STAR signals, Reflector Terminal mode for accessing D-STAR reflectors, enhanced voice guidance and digipeater function.

Usability has also been further enhanced with the adoption of USB Type-C, Bluetooth headset PTT support, and a fully ergonomic design.

Compatible with the APRS communication protocol, which allows real-time two-way data transmission by using packet communications. Various types of communication are possible, such as GPS positional information sharing, text messaging, and communicating via the ISS and other satellites. In addition, full-fledged APRS operation is made possible through a unique standalone digipeater function that sets APRS-veteran KENWOOD apart.

These much-anticipated additions are sure to satisfy the needs of a Wide Range of Amateur Radio Operators.

Supports D-STAR®, the amateur radio digital communications protocol, which provides both voice and data modes. From local to overseas, QSOs can be enjoyed in a variety of modes, including simplex, single repeater, and gateway communications over a network of repeaters. Newly supported Reflector Terminal mode and simultaneous reception of two digital voice signals provide additional flexibility to D-STAR® operations.

- APRS® Protocol compliant: Real-time 2-way data communications, plus standalone digipeater function further enhances the capability. APRS® is a registered trademark of TAPR and is used with permission.
- D-STAR® Digital Protocol compatible: Flexibility stretches with simultaneous reception of 2 signals for digital voice and data operation.
- Reflector Terminal mode: Easy access to D-STAR® reflectors via a Windows PC or Android device using a USB port or Bluetooth®, so there is no need for a mini RF device such as a Hotspot.
- Wideband and Multimode reception, and on top of that IF output via USB port lets you connect the radio to a PC to use bandscope for checking nearby frequencies while listening to the radio.
- USB Type-C™ port for serial connection, audio out and charging functions.
- Enhanced voice guidance including 4-step variable speed and 770+ phrases.
- 1.74-inch TFT reflective color LCD.
- Renowned KENWOOD sound quality.



EXTENDED WARRANTY  
INFORMATION  
ON PAGE 113.

Kenwood Battery Packs

Model	VDC	mAh Rating	Desk Charger	Radio Series	HRO Price
PB-45L	7.4	1800	KSC-32	TH-D72A	\$84.95
KNB-75LAM	7.4	1820	KSC-25LSK	TH-D74A/D75A	\$109.95

Accessories

External Speaker  
SP-990M



Designed to match Kenwood's TS-990S, this external speaker features dual inputs and high cut and low cut filters as well as a headphone jack on the front.

External Speaker  
SP-23



The SP-23 speaker matches several Kenwood radios including the TS-590SG, TS-450S, TS-570S/D and the TS-690.

External Speaker  
SP-890W



Designed to match Kenwood's TS-890S, this external speaker features dual inputs and high cut and low cut filters as well as a headphone jack on the front.

Switching  
Power Supply  
KPS-15



Provides 13.8 V at 23 A continuous or 25 A surge. Housed in a heavy metal case with an internal cooling fan, this small supply weighs just over 3 lbs.

Prism Embroidery  
DUST-COVER



Leatherette dust cover custom crafted to fit each HF radio or amplifier. Available for most Kenwood HF radios. Contact HRO for a cover for your specific model.

KENWOOD

HF / 50 MHz Transceiver



Extreme Performance  
HF / 50 MHz  
TS-990S

The TS-990S raises the bar on HF performance and DX operating ease. Dual display and dual watch gives you the edge in DX contesting.

- Frequency range HF + 50 MHz.
- Output power: 5 - 200 watts.
- Built-in antenna tuner.
- Mode: SSB, CW, FSK, PSK, FM, & AM.
- Built-in switching power supply.
- Comm ports: USB A / B and LAN.
- Dual TFT display and dual receiver. Main display monitors target signal vicinity and sub display monitors actual target signal.
- Down conversion for all amateur radio bands on the main receiver.
- IP3 + 40 dBm mixer performance.
- Narrow-band high-IP roofing filters.
- TCXO ±0.1 ppm for high stability receive.
- Dedicated triple DSP for main and & sub-receivers plus band scope.
- Remote PC operation.
- Data mode facilitates switching between external terminals.
- Advanced AGC – digital and analog.
- 2-step split frequency configuration for quick setup.
- Maximum of 120 memory channels.
- Dual channel memory allows access while receiving two frequencies simultaneously.
- Memory accessible during split/sub receiver operation.
- Two USB sockets on the front panel.
- Firmware updates via USB stick or cable.
- VCO division-type first oscillator divides high frequencies to ensure high C/N.
- Dedicated triple 32-bit floating point DSPs for main & sub receivers plus band scope, audio scope and S-meter.
- Cooling system capable of providing ample airflow to each unit to ensure a stable 200 W output.

Kenwood HF Specifications

Model	RX Frequency Range	Power Supply			Power Out Watts					Mic Z	RX Type	SENS Level	RIT/XIT Range	Notch Filter	Audio Output
		Volt	XMIT	REC	AM	FM	SSB	CW	FSK						
TS-590SG	0.13 - 60 MHz	13.8 VDC	20.5 A	1.5 A	25	100	100	100	100	600	#	<.2 μV	±9.99 kHz	>70 dB	1.5 W
TS-890S	1.81 - 29.7 MHz 50 - 52 MHz	13.8 VDC	22.5 A	1.5 A	50	100	100	100	100	600	Double Superhet	<.2 μV	±9.99 kHz	>70 dB	1.5 W
TS-990S	0.13 - 30 MHz 50 - 54 MHz	110/220 VAC Inc.	720 VAC	120 VAC	50	200	200	200	200	600	Double Superhet	<.2 μV	±9.99 kHz	>70 dB	1.5 W

# Down conversion is selected automatically when receiving in CW/ FSK/ SSB modes if the final passband is 2.7 kHz or less.

HF / 50 Mhz Transceiver

Hi-Performance  
HF / 50 MHz  
TS-890S



The Kenwood TS-890S transceiver features a full down conversion receiver with H-mode mixer and high C/N 1st LO with four built in roofing filters: 500 Hz, 2.7 kHz, 6 kHz and 15 kHz (optional 270 Hz). This transceiver has a 7 inch color TFT display and includes roofing frequency sampling band scope, auto scroll mode and multi information screen. Heavy-duty construction and a high-speed 100 W antenna tuner come standard. The configuration of the band scope receiver has changed from the superheterodyne system used in the TS-990S to 1st IF sampling using an A/D converter (14bit/39MHz), and FPGA digital down conversion. This means a change in scanning method from step FFT to FFT, achieving high- speed updates to the display irrespective of scan settings.

- Cross tone.
- IF filter shape, AF filter.
- Audio peak filter, AGC quick recovery.
- Notch filter, noise blanker.
- Highly reliable 100 W final-stage amplifier circuit for HF and 50 MHz.

HF / 50 MHz Transceiver

Class Leading  
Performance  
TS-590SG



The TS-590SG features a narrow-band roofing filter to significantly reduce interference from unwanted signals. The resulting excellent RX performance reveals signals that would be hidden to lesser rigs. With IF AGC based on advanced DSP technology, Kenwood has essentially redefined HF transceiver performance.

- Has sharp 500 Hz / 2.7 kHz roofing filter and dedicated first mixer.
- Built-in electronic memory keyer.
- Programmable keys, 110 memory channels, memory scroll function, multiple scan functions.
- Advanced AGC through digital signal processing from the IF stage onward, digital IF filters, detection and demodulation, noise reduction and IF auto notch, IF AGC, AF digital signal processing, two types of noise reduction, and TX audio shaping.
- Morse code decoder function.
- Direct frequency entry, USB connectivity for PC control, remote control using a computer, optional voice guide and storage unit.
- Split function enabling quick setting.
- Transmitter features: 100 watt heavy-duty design, built-in automatic antenna tuner, optional TCXO, drive output, speech processor (SSB / AM / FM), adjustable TX filter (SSB / AM), TX equalizer, TX monitor, VOX, adjustable TX power output and CAR level.
- Antenna output function (shared with DRV connector)
- LED backlight with selectable color tone.
- FIL A/B configurable independently with VFO A/B. Convenient during Split operation.
- Front or rear PTT selectable for Data PTT.
- Switching from HI CUT/ LO CUT to WIDTH/ SHIFT possible for reception bandwidth changing in SSB mode □ Interference/noise removal features.
- Built-in preset-type high speed operation automatic antenna tuner.





## Single SMA Input

### RSP1A

HRO Price: \$124.95

The RSP1A is a powerful wideband full-featured 14-bit SDR which covers the entire RF spectrum from 1 kHz to 2 GHz. All it needs is a PC and an antenna to provide excellent communications receiver functionality. Combined with the power of readily available SDR software, such as SDRUno, you can monitor up to 10 MHz of spectrum at a time. Other SDR software is available for most OS platforms (including Linux, Mac, Raspberry Pi). Third party software is also available to allow reception of various digital modes or to implement panadapter functionality for any CAT controllable rig.

- Continuous coverage from 1 kHz to 2 GHz.
- Up to 10 MHz visible bandwidth.
- Powers over the USB cable with a simple type B socket.
- 14-bit ADC silicon technology (not another 8 bit dongle!).
- 11 high-selectivity, built in front-end pre-selection filters.
- Software selectable AM/FM and DAB broadcast band notch filters.
- Software selectable multi-level low noise preamplifier.
- Bias-T power supply for powering antenna-mounted LNA.
- RF shielding layer inside case.
- SDRUno: world class Windows SDR software available as FREE download.
- Documented API for new apps development.
- Single SMA antenna socket covering entire frequency range.

## Single SMA Input

### RSP1B

HRO Price: \$139.95

An update to the RSP1A. The key advantages are that it comes in a strong, black, painted steel case instead of plastic, and (compared to the RSP1A) has significantly improved noise performance below 1MHz. Also noticeable noise improvements in the 3.5-5.5MHz and 250-320MHz spectrum. It also has improved signal handling at HF frequencies compared to the RSP1A.



## Three Antenna Ports

### RSPdx

HRO Price: \$249.95

The RSPdx is a major upgrade to the popular RSP2 and RSP2pro multi-antenna receiver design. It's a wideband full-featured 14-bit SDR which covers the entire RF spectrum from 1 kHz to 2 GHz. Combined with the power of readily available SDR receiver software (including SDRUno supplied by SDRplay) you can monitor up to 10 MHz spectrum at a time. The RSPdx provides three software-selectable antenna inputs, and an external clock input.

You get all the benefits of the RSP1A plus...

- Additional design optimization for demanding reception conditions below 2 MHz.
- Software selectable choice of 3 antenna ports (2 x SMA and 1 x BNC).
- Enhanced ability to cope with extremely strong signals.
- External clock input for synchronization purposes, or connection to GPS reference clock for extra frequency accuracy.
- Excellent dynamic range for challenging reception conditions.
- Calibrated S meter/ RF power and SNR measurement with SDRUno.
- Enclosed in a rugged black painted steel case.

## Enhanced Version

### RSPdx-R2

HRO Price: \$239.95



The SDRplay RSPdx-R2 is an enhanced version of the popular RSPdx and is a wideband full-featured 14-bit SDR which covers the entire RF spectrum from 1kHz

to 2GHz. You gain significantly improved noise performance below 1MHz (i.e. for some MF, LF and below).



## 3 Ports & Dual Tuners

### SDRduo

HRO Price: \$299.95

The SDRplay RSPduo is a dual-tuner wideband full-featured 14-bit SDR which covers the entire RF spectrum from 1 kHz to 2 GHz, giving 10 MHz of spectrum visibility. Combined with SDRUno software for Windows, you can simultaneously monitor two completely separate 2 MHz bands of spectrum anywhere between 1 kHz and 2 GHz. The RSPduo provides three software selectable antenna inputs and clocking features ideally suited to industrial, scientific and educational applications. All it needs is a PC and an antenna to provide excellent communications receiver functionality. A documented API allows developers to create new demodulators or applications around the platform.

- Dual tuners provide independent coverage 1 kHz to 2 Hz using 2 antenna ports simultaneously.
- 14-bit ADC silicon technology (not another 8 bit dongle!).
- Up to 10 MHz visible bandwidth (single tuner mode) or 2 slices of 2 MHz spectrum (dual tuner mode).
- 3 software-selectable antenna ports (2 x 50 ohms and 1 x 1k ohms high impedance balanced/unbalanced input).
- High impedance antenna port (1 kHz to 30 MHz) with selectable MW notch filter and choice of 2 pre-selection filters.
- Software selectable AM / FM and DAB broadcast band notch filters for the two SMA antenna (1 kHz to 2 GHz) ports.
- External clock input and output enables easy synchronization to multiple RSPs or external reference clock.
- Powers over the USB cable with a type B socket.
- 11 high-selectivity, built in front-end preselection.
- Filters on both the 2 SMA antenna ports.
- Software selectable multi-level low noise preamplifier.
- Bias -T power supply for powering antenna-mounted LNA.
- Enclosed in a rugged black painted steel case.
- SDRUno: World class SDR Windows software FREE to download.
- Open API for new apps development.



**HOW-TO VIDEOS,  
SOFTWARE, AND MORE  
ALL AVAILABLE FROM**  
<https://sdrplay.com/apps-catalogue>

**YAESU**  
The radio

High Performance HF Transceivers



## HF/50 MHz - 100 W

### FTdx101D

The new FTdx101 series is an impressive achievement from Yaesu's elite "FTdx" design team, utilizing the very latest SDR technology and brilliantly executed firmware to yield a high-end transceiver that exudes quality and high performance. Building on the legacy of the legendary best-selling FT-101 line, the new FTdx101 series stands to create its own legacy as one of the best performers ever available to the elite-class operator.

- Superb, class-leading close-in dynamic range.
- FTdx101D: 5-100 watts all modes except AM (25 W).
- FTdx101MP: 5-200 watts all modes except AM (50 W).
- 9 MHz IF roofing filter for excellent close-in IMD immunity.
- 400 MHz HRDDS (high resolution direct digital synthesizer).
- Hybrid SDR: direct sampling & NBW (narrow bandwidth) SDR technology.

## HF/50 MHz - 200 W

### FTdx101MP

- Completely independent dual receivers.
- High-Q VC-tuning front-end with general coverage RX.
- Yaesu renowned interference reduction system with 32-bit IF DSP and digital noise reduction and DSP auto notch.
- Large touch-panel precision color display and external display output.
- Rich, sparkling audio quality on both transmit and receive.
- Active band indicator with LED illumination

- of the operating band: facilitates rapid, mistake-free band changes.
- MPVD (multi-purpose VFO outer dial) provides sub VFO tuning, clarifier operation, VC-TUNE adjustment, VFO fine tuning, or a CS (custom selection) function.
- MP 200-watt version includes larger heatsink and fan, and uses external speaker/power supply.
- Superb, class-leading close-in dynamic range.

## 100 W Transceiver with 3DSS

### FTDX10

#### Hybrid SDR Configuration

Like the FTDX101 series, the new FTDX10 utilizes the Yaesu Hybrid SDR configuration - Narrow Band SDR and Direct Sampling SDR. The Narrow band SDR receiver emphasizes excellent receiver performance, while the Direct Sampling SDR provides a Digital Processing Real-Time Spectrum Scope.

#### Narrow Band SDR with 3 types of Roofing Filters and Phenomenal Multi-signal receiving Characteristics

Like the FTDX101 series, the Down Conversion type receiver configuration with the first IF at 9MHz has been adopted. It makes it possible to incorporate excellent narrow bandwidth crystal roofing filters that have the desired sharp "cliff edge" shape factor. Thanks to the Narrow Band SDR with the latest circuit configuration including 500Hz, 3kHz and 12kHz roofing filters and low-noise oscillator, the RMDR (Reciprocal Mixing Dynamic Range) reaches 116dB or more, the close-in BDR (Blocking Dynamic Range) reaches 141dB or more and 3rd IMDR (third-order Intermodulation Dynamic Range) reaches 109dB or more in the 14MHz band at 2kHz separation.

#### 250MHz HRDDS (High Resolution Direct Digital Synthesizer) Affords Quiet and Clear Reception

The local circuit of the new FTDX10 uses 250MHz HRDDS method same as the FTDX101 series. Thanks to its characteristics that improve the C/N (carrier to noise) ratio and the careful selection of components in the design, the phase noise characteristic of the local signal achieves an excellent value of -145dB or less in 14MHz at 2kHz separation.



- HF/50MHz band 100W Transceiver.
- Hybrid SDR configuration utilizing a Narrow Bandwidth SDR and a Direct Sampling SDR.
- Narrow Band SDR enables phenomenal multi-signal receiving characteristics (2kHz RMDR 116dB+, 2kHz BDR 141dB+, 2kHz 3rd IMDR 109dB+).
- 15 separate powerful Band Pass Filters (BPF).
- 5-inch full color touch panel and 3DSS (3-Dimensional Spectrum Stream) display.
- MPVD (Multi-Purpose VFO Outer Dial) enables

- outstanding operating performance.
- Quick Memory Bank (QMB).
- Supports CW operation with multiple functions such as: CW zero-in, CW auto zero-in, CW reverse, CW decode, CW keying signal form shaping by FPGA and others.
- RTTY (FSK)/ PSK Encode/ Decode function.
- Other practical features such as optional RF gain selection by IPO. Automatic Gain Control, quick split function.
- SD card slot.
- Remote operation via internet with optional LAN-Unit (SCU-LAN10).



YAESU  
The radio

HF/50Mhz Transceiver

100 W Transceiver with AESS  
FT-710 AESS



The new FT-710 AESS is packaged in a sleek new compact design while providing 100W output. It also utilizes the advanced digital RF technology introduced in the FTDX101 and FTDX10 series.

Includes Yaesu SP-40 External Speaker with every unit.

A few of the new incredible features of the FT-710 AESS are:

- Unmatched SDR technology emphasizes the Receiving Performance.
- Band Pass Filters dedicated for the Amateur Bands that specialize in eliminating out-of-band unwanted signals.
- RF Front-End design with the 250MHz HRDDS (High Resolution Direct Digital Synthesizer) enables Phenomenal Multi-Signal Receiving Characteristics.
- QRM rejection by the dual core 32-bit high speed floating decimal point DSP for SHIFT/ WIDTH/ NOTCH/ CONTOUR/APF (Audio Peak Filter)/ DNR (Digital Noise Reduction)/ NB (Noise Blanker) and 3-Stage Parametric Equalizer.
- High Resolution 4.3-inch TFT Color Touch Panel Display.
- 3DSS (3-Dimensional Spectrum Stream).
- VMI LED (VFO Mode Indicator) placed around the VFO dial shows the current operating mode (VFO-A, VFO-B, Memory Mode and Clarifier/Split Operation).
- PRESET Mode Function most suitable for FT8 Operation
- AESS: Acoustic Enhanced Speaker System with SP-40 creates the high-fidelity audio output.
- External Display Connection Terminal (DVI-D).
- Built-in High Speed Automatic Antenna Tuner with 100 channel memory.
- Supports the FC-40 Auto Antenna Tuner.
- SD Memory Card can be used to save the communication record, transceiver setting, the memory contents, screen capture images, and to update the firmware.
- Two (2) USB Ports (Type-A and Type-B).
- Other essential features such as CW Zero-In and SPOT, IPO (Intercept Point Optimization), and Remote Operation with Network Remote Control System to name a few.

100 W Transceiver  
FT-710 FIELD



The FT-710 transceiver is also available without the SP-40 external speaker. Same specifications. Perfect for mobile, field day, and portable operations.

COMING  
SOON!

HF/50Mhz/144Mhz/430Mhz

QRP SDR Transceiver  
FTX-1F



The new FTX-1F is a portable transceiver utilizing SDR technology and will provide 6W of power output with the included 5670 mAh Lithium-ion battery pack.

With average operation this enables 9-hours stand-alone operating time on the HF bands in SSB mode, and 8-hours operating time on the V/UHF bands in FM mode based on a 6-6-48 duty cycle.

Up to 10W of power output is available when using an external DC power supply.

- Operation in SSB, CW, AM, FM and C4FM digital modes.
- SDR Technology and 3DSS (3-Dimensional Spectrum Stream) on a 4.3-inch high-resolution full-color touch display panel.
- Two independent receiver circuits provide true simultaneous dual-band operation, whether in the same band or in different bands. For example: SSB communication on HF bands simultaneously with C4FM digital communication on V/ UHF bands (\*HF+V, HF+U, V+V, U+U, V+U, U+V).
- An optional Automatic Antenna Tuner can be attached to the rear of the transceiver with the 5670 mAh high-capacity Li-ion battery pack. The optional Cooling-fan, which is necessary for comfortable FT8 operation, can also be combined with the antenna tuner. (All-in-one rear panel design).
- RF front-end and Low Noise Reference Oscillator, enable Phenomenal Multi-signal Receiving characteristics.
- Two Loud speakers ensure clear and powerful audio output.
- Effective QRM rejection afforded via High-speed 32-bit IF DSP (YAESU's renowned interference reduction systems: SHIFT / WIDTH / NOTCH / CONTOUR / APF / DNR / NB).
- Compatible with WiRES-X operation.
- PMG (Primary Memory Group) function can register and monitor up to 5 frequently used frequencies.
- MAG (Memory Auto Grouping) function enables Memory Channels to be categorized in each band that can be quickly recalled by band groups (HF/ VHF/UHF/AIR/OTHERS).
- USB ports support CAT operation, audio input/output and TX control.

\*The FTX-1F has NOT been formally released by YAESU for sale in the United States. This is not an offer to sell this transceiver.



FT-710 Speaker  
SP-40

Full range, matching speaker for the FT-710. Included with the FT-710 AESS, optional with the FT-710 Field.

FT-991A Speaker  
SP-10

Full range, matching speaker for the FT-991A



AM/FM/CW/SSB + C4FM Digital

HF/50/144/440 MHz Portable  
FT-991A



The FT-991A is the next generation in all mode, all band MF/HF/VHF/ UHF transceiver with C4FM (System Fusion) Digital capability. The FT-991A includes multi-mode operation on CW, AM, FM, SSB, and Digital Modes (Packet, PSK31, RTTY and C4FM), with 100 Watts of HF/50mhz Capability (50 Watts VHF/UHF).

The FT-991A includes a high-resolution full color 3.5" TFT Touch panel for superior operability and visibility, incorporating a High Speed Spectrum and High Resolution real-time scope with ASC (Automatic Spectrum-scope control) built right in.

- Receive coverage 160m through 70cm.
- Transmits 100 W (HF), 50 W (2 m), 50 W (70 cm).
- 3.5 inch TFT full-color touch panel operation.
- High speed spectrum scope with automatic control built-in.
- Roofing filter 3 kHz and 15 kHz.
- Triple conversion with 1st IF frequency of 69.450 MHz on all bands.
- High accuracy TCXO ±0.5ppm.
- Separate RF amps for best characteristic on each band.
- High resolution DDS and PLL local oscillator.
- 32 bit high speed floating point IF DSP.
- IF width and IF shift.
- Contour, DNR, IF Notch.
- APF for CW only.
- 160-6m, high speed automatic antenna tuner.
- Full color TFT / LCD display. Four user defined function keys.
- Electronic keying with break-in support, electronic keyer weight control.
- Message memory function.
- 50 tone CTCSS encoder / decoder for FM operation.
- Compatible with optional ATAS-120 Active Antenna System.

Yaesu HF Specifications

Model	Bands	Volts AC	Volts DC	TX Amps	RX Amps	AM	FM	SSB	CW	MIC Z	RX Type	Sens	RIT/XIT Range	Audio Power
FTDX10	HF/50Mhz		13.8	23 A	2.1 A	25 W	100 W	100 W	100 W	200-10K	Double	< .16 dBu	±9.99 kHz	2.5 W
FTDX101D	HF/50Mhz		13.8	23 A	3.5 A	25 W	100 W	100 W	100 W	200-10K	Double	< .16 dBu	±9.99 kHz	2.5 W
FTDX101MP	HF/50Mhz	100-201		720 VA	100 VA	50 W	200 W	200 W	200 W	200-10K	Double	< .16 dBu	±9.99 kHz	2.5 W
FT-710	HF/50Mhz		13.8	21 A	2.2 A	25 W	100 W	100 W	100 W	200-10K	DSP	< .16 dbu	±9.99 kHz	205 W
FT-891	HF/50Mhz		13.8	23 A	2.0 A	25 W	100 W	100 W	100 W	200-10K	Triple	< .158 dBu HF < 125 dBu 6m	±9.99 kHz	2.5 W
FT-991A	HF 50MHz 144Mhz 440MHz		13.8	23 A	2.2 A	2-25 W	100 W 50 W 2M 50 W 70CM	100 W 50 W 2M 50 W 70CM	100 W 50 W 2M 50 W 70CM	200-10K	Triple	< .158 dBu HF < 125 dBu 6m < .111 dBu VHF/UHF	±9.99 kHz	2.5 W

Mobile HF Transceiver

HF/50 MHz  
Compact Mobile  
FT-891



A great mobile transceiver in a compact package providing uncompromised performance for both the mobile and stationary amateur operator. High end 32-bit floating point DSP enhances the operating experience providing a cleaner, clearer signal and reducing overall operator fatigue creating a more enjoyable environment for any amateur operator.

- Frequency Range: Tx: 1.8 – 54 MHz (Amateur Bands Only)  
Rx: 30 KHz – 56 MHz
- Channel Step: 2/5/10 Hz (SSB, CW), 10/100 Hz (AM,FM)
- Frequency Stability: +/- 0.5 ppm 14 °F to + 122 °F (-10 °C to +50 °C)
- Modes of Emission: A1A (CW), A3E (AM), J3E (LSB, USB), F3E (FM)
- Impedance: 50 ohms, unbalanced
- Supply Voltage: 13.8VDC +/- 15%, negative ground
- Current Consumption: Rx: 2.0 A (Signal Present) Tx: 23 A
- Operating Temperature Range: 14 °F to ° +122 °F (-10 °C to +50 °C)
- Case Size (WxHxD): 6.1" x 2.0" x 8.6" (155 x 52 x 218 mm) w/o Knobs
- Weight (Approx.): 4.18 lb (1.9 kg)
- Output Power: 100W SSB/ CW/FM (AM: 25W)
- Circuit Type: SSB/CW/AM: Triple-conversion super-heterodyne FM: Double conversion super-heterodyne
- Intermediate Frequencies: 1st: 69.450 MHz / 2nd: 450 KHz
- Maximum AF Output: 2.5 W 4 ohmz with 10% THD
- Audio output Impedance: 4 to 16 Ohms (8 Ohms nominal)
- Sensitivity: SSB/CW (S/N 10dB) 0.158uV (1.8 - 30 MHz), 0.125uV (50 -54 MHz)
- AM (S/N 10 dB) 4 uV (0.5 – 1.8 MHz), 1.6uV (1.8 – 30 MHz), 1.2uV (50 – 54 MHz)
- FM (12 dB SINAD) 0.35uV (29, 50 – 54 MHz)

Matching Auto  
Tuner  
FC-50





YAESU  
The radio

Desk Microphone



Dual Element  
M-1

Revolutionary dual microphone configuration has both a dynamic element for depth and warmth and a condenser element for crisp highs. The M-1 lets you adjust the balance of the two microphone sources to create a sound that is just right for your voice. The nine-band graphic equalizer applies to each microphone element independently. A clip-on cowling enhances the response of both elements by minimizing aural interference. The solid aluminum die cast mic stand prevents sympathetic vibration. The central recessed control panel has been configured for ease of use. Check your voice in the headphones with the built-in record and playback feature. The built-in memory can store two different groups of settings for each microphone.

Programming Kits

**HF Radios:**  
YPS-818-USB.....FT-818ND  
YPS-FT710-USB.....FT-710  
ADMS-891-USB.....FT-891  
ADMS-991-USB.....FT-991  
YPS-DX10-USB.....FTdx10  
YPS-DX101-USB.....FTdx101

**Mobiles Radios:**  
ADMS-M3100.....FTM-3100R  
YPS-M200-USB.....FTM-200DR  
ADMS-2900.....FT-2980  
YPS-M500-USB.....FTM-500DR  
YPS-M6000-USB.....FTM-6000R  
YPS-M300-U.....FTM-300DR  
ADMS-M400-U.....FTM-400XDR

**Handhelds:**  
ADMS-1J.....FT-60R  
ADMS-FT25-USB.....FT-25R  
ADMS-FT65-USB.....FT-65R  
ADMS-70D-USB.....FT-70DR  
ADMS-VX6.....VX-6R  
YPS-FT5D-USB.....FT5DR

Internet Linking

Wires-X  
Connection Kit  
HRI-200



WIRES (Wide-coverage Internet Repeater Enhancement System) is an Internet communication system which expands the range of amateur radio communication.

Users' stations can communicate with other amateur stations all over the world using a node within the radio wave range.

WIRES-X supports both analog and the new C4FM digital radio communications modes: Yaesu's System Fusion II.

Desk Microphone

Single Element  
M-70



The M-70 utilizes a directional condenser microphone element which has precisely tuned the frequency response to obtain clear and crisp audio quality. The PTT uses three Air-Cylinder tubes similar to the Reference Microphone M-1 to provide a solid and smooth extended operation. A simple one-touch PTT key lock button is placed just above the PTT key for those long rag chews. The M-70 is compatible with all YAESU HF transceivers equipped with round 8-pin microphone connector or 8-pin modular microphone connector.

Single Element  
M-90D



The M-90D utilizes a Dynamic Microphone Element that is finely tuned to deliver rich low to mid frequency response desirable for a clear and concise conversation. Using a windscreens cover and a directional microphone element, the structure of the microphone of the M-90D and M-90MS is designed to concentrate voice input from the front while reducing ambient noise from the side. Built-in Low-Cut filter creates clear and crisp audio characteristics by shaping the low frequency response (cut off at 340Hz, -6dB/octave). The M-90D is compatible with all YAESU HF transceivers equipped with the round 8-pin microphone connector or the 8-pin modular microphone connector.

Tuners/Antennas

All-Band Auto Tuner  
FC-40



The FC-40 is a microprocessor-controlled antenna impedance matching network designed to provide all-amateur-band transmitting capability with the FT-450D/891 transceivers when used with an end-fed random wire or long whip antenna.

Portable HF Antenna ATAS-120A

The ATAS-120 Active Tuning Antenna system provides HF/VHF/UHF coverage with automatic motorized tuning. Compatible with Yaesu radios with ATAS support.

Portable HF Antenna ATAS-25

Looking for something simpler than the automatic ATAS-120A? The bands are covered by manually changing the supplied elements and hand adjusting the coils.

Power Supplies

25 Amp | FP-1030A

The FP-1030A is a regulated linear supply at 25 amps and includes meters. **HRO Price: \$229.95**

23 Amp | FP-1023A

The FP-1023A has 23 amps continuous and 25 intermittent. This low-profile switching power supply operates on 110 or 220 VAC. **HRO Price: \$149.95**

Analog/Digital Repeater

Dual Band Repeater  
DR-2X



YAESU's System Fusion Repeater DR-2X comes with new exciting features, such as Dual Receive Operation, Digital Group ID Feature, and IMRS feature - Internet-linked Multi-Site Repeater System.

The repeater controller, receiver and transmitter are all packaged into a 19" standard cabinet rack mount panel unit for simple replacement of an existing repeater. Existing peripheral devices such as the duplexer and amplifier, etc., can continue to be used as-is.

- Dual Receive Operation allows the repeater manager to control the repeater operation while other members are using the repeater.
- Digital Group ID feature on C4FM could be used like CTCSS on analogue FM repeaters.
- IMRS, Internet-linked Multi-Site Repeater System with optional board is used when the repeaters are linked through Internet for wider coverage operation.

DR-2X New Features

- Dual Frequency Operation (DRDT)
- MSRL (Multi-site repeater link) Function for Easy Coverage Expansion using optional module
- New and improved "News Station" feature for Easy sharing of voice and text messaging.
- Enhanced Group Monitor Feature for Easy Grouping Set-up (DG-ID, DP-ID)

Dual Band



2 m/ 70 cm  
Analog & Digital  
GPS & APRS  
FTM-300DR

The FTM-300DR provides stable and reliable 50W of clean output power. It is equipped with a big, heavy-duty heatsink that includes our exclusive FACC (Funnel Air-Convection-Conductor Wind Tunnel) to cool the radio while operating.

Real Dual Band Operation (V+V, U+U, V+U, U+V) is available with two independent receivers, and the FTM-300DR supports simultaneous C4FM digital monitoring for both the A and B bands. It has a 2-inch high-resolution QVGA full-color TFT display.

- 50 W Stable High-Power.
- Dual Band Operation (V+V, U+U, V+U, U+V) and Simultaneous C4FM monitoring.
- Large-capacity 1104 channel memory.
- Receiver for Analog node station as well as Digital node station with FTM-400D.
- 2-inch High-Resolution QVGA Full-Color TFT Display and Demountable Front Panel Controller.
- Memory Channel Band Auto

- Grouping Function (AIR, VHF, UHF, GEN).
- High-Speed & High-Resolution Band Scope.
- 3 W audio power speaker with two individual terminals for the external speakers.
- Built-in Bluetooth® unit for hands-free operation with the SSM-BT10 (optional).
- Micro SD Slot (up to 32GB).
- Built-in 66ch high precision GPS receiver and external GPS device connectivity.

Dual Band

2 m/ 70 cm  
Analog & Digital  
GPS & APRS  
FTM-500DR



The FTM-500DR shares the Yaesu core features, utilizing the latest C4FM Digital technology with many new features and improvements. Operation is possible on 2m and 70cm with this mobile transceiver. Select power of 50, 20, or 5 watts on either band.

- Delivers Clear & Powerful High-fidelity Audio.
- Front Speaker, with AESS\* Dual Speaker System (AESS: Acoustic Enhanced Speaker System).
- Uncomplicated and Effortless Dual Band Mobile Operation.
- Innovative Smart Operating System with TOUCH&GO / SEARCH&GO Functions. E2O:Easy to Operate -IV. TOUCH & GO enables initiating communications quickly by touching the target frequency. SEARCH & GO enables Dual-Receive of a desired frequency during Main channel operation.
- Slide and lock rail mounting system
- MAG - Memory Auto Grouping.
- Band scope & spectrum scope.
- APRS® & Bluetooth®.
- SD Card slot

Dual Band



2 m/ 70 cm  
Analog & Digital  
GPS & APRS  
FTM-200DR

The new FTM-200DR is a C4FM Digital multi-functional transceiver with a single receiver. The FTM-200DR delivers reliable and stable 50W transmit performance. The heavy-duty heat sink is equipped with FACC (Funnel Air Convection Conductor). The speaker delivers 3W of clear and crisp receive audio which has been specifically tuned for radio communication. 2-inch full-color display provides high visibility and highlights the frequency of the operating band with selectable color - White, Blue or Red. Front panel of the FTM-200DR is detachable and can be mounted at the most desirable operating position. The new FTM-200DR supports optional Bluetooth® wireless operation using the SSM-BT10 Headset or a commercially available Bluetooth® headset.

- 1104 Memory channels.
- Wide-range 108MHz to 999.995MHz receive coverage
- High speed Band Scope (displays the receive status of up to 61 channels centered on the current VFO frequency or up to 21 channels in Memory Mode)
- VFO Band Skip Function
- High-precision 66 channel GPS Receiver
- 1200/9600bps APRS® Data Communication
- VOX function
- Recording Function
- Snapshot Feature (with MH-85A11U)
- microSD Card Slot.

**YAESU 3-YEAR WARRANTY**  
All current Yaesu amateur radios come with a three (3) Year Manufacturer's Warranty! The move to a three (3) Year Warranty is a firm commitment from Yaesu to continue to supply top quality products for many years to come.



YAESU

The radio

Dual Band Analog

2 m/ 70 cm

Analog Mobile

FTM-6000R



The FTM-6000R is the latest dual band, analog mobile from Yaesu. Designed with a slim size and detachable front panel, this powerful radio can easily be installed in most any vehicle.

- New User Operating Interface E2O-III (Easy to Operate-III).
- PMG (Primary Memory Group) Function allows instant recall of the frequently used frequencies registered in the PMG.
- MAG (Memory Auto Grouping) Function allows memory channels to be automatically categorized in each band, and quickly recalled by band groups.
- 1,100 Memory channels with character alphanumeric tags (Maximum 6 characters).
- 3W Powerful & Clear Audio.
- Wide-range receive coverage from 108MHz to 999.995MHz.
- Easy wireless operation Bluetooth® connection capability (Requires Bluetooth Unit BU-4 and Bluetooth Headset SSM-BT10).
- Frequency range:
  - Transmit: 144 - 148 MHz,
  - Receive: 108 - 999 MHz (some frequencies are blocked).
- Double conversion superheterodyne.
- 1100 alphanumeric memory channels.
- CTCSS and DCS encode/decode.
- VFO Band Skip function.
- DTMF microphone.
- Output power: 50 / 25 / 5 W.
- Radio Unit 5.47"x 1.66"x 5.2" (139 x 42 x 132 mm)w/o fan.
- Contoller 5.51"x 1.6"x 1.38" (140 x 40.5 x 35 mm)w/o knob.

Single Band Analog

Ultra-Rugged

2 m Mobile

FT-2980R



This 144 MHz 80 watt FM mobile transceiver has 3 watts of RX audio, and an MH-48A6JA DTMF microphone. The FT-2980R arrives with the solid feature configuration and mechanical toughness of the ever popular FT-2900R, with output power now at 80 watts!

The FT-2980R four output power settings: 80 W, 30 W, 10 W and 5 W are selectable, allowing each user to choose the power they want for their operating style and situations. A massive heatsink guarantees a solid 80 watts of RF power with no cooling fan needed. Thanks to a loud 3 watts of audio output, the operator can enjoy CLEAR reception, even in noisy environments. Also included are: alphanumeric channel display, 200 memory channels, CTCSS and DCS encode/decode built-in, versatile scanning capability, wide/narrow deviation selection, plus an interactive programming menu.

Single Band Analog

Simple 2 m

FTM-3100R



The FTM-3100R is a ruggedly built yet compact VHF-FM mobile transceiver, providing high output power of up to 65 watts. One of the distinguishing features of this mobile transceiver is the front panel speaker delivering 3 watts of loud and crystal clear audio.

- Frequency range:
  - Transmit: 144 - 148 MHz,
  - Receive: 136 - 174 MHz.
- Double conversion superheterodyne.
- 220 alphanumeric memory channels.
- CTCSS and DCS encode/decode.
- High stability TCXO ±2.5 ppm).
- Severe weather alert.
- DTMF microphone
- Output power: 65 / 30 / 5 W.
- Loud front-firing speaker.

Yaesu Handhelds

Model	Frequency	Mode	Power Supply	Watts Out	TX Amps	RX Amps	Sens	Height in (cm)	Width in (cm)	Depth in (cm)	Weight oz (g)
FT-60R	2m / 70cm	FM	7.2 VDC	5	1.5	125 mA	.16 dBu / 12 dB	4.3 (10.9)	2.3 (5.8)	1.2 (3.0)	13.5 (370)
FT-65R	2m / 70cm	FM	7.4 VDC	5/2.5/0.5	1.5/1.7	205 mA	.2 dBu / 12 dB	4.1 (10.4)	2.5 (5.2)	1.2 (3.0)	9.17 (260)
FT5DR	2m / 70cm	FM	7.4 VDC	5/2.5/1/3	1.9	170mA	.2 dBu / 12 dB	3.94 (10)	2.44 (6.2)	1.34 (3.2)	9.95 (282)
FT-4XR	2m / 70cm	FM	7.4 VDC	5/2.5/0.5	1.5/1.7	190 mA	.2 dBu / 12 dB	3.5 (9)	2.1 (5.2)	1.2 (3.0)	8.82 (250)
VX-6R	2m / 70cm **†	FM	7.4 VDC	5	1.5 1.6/1.8	150 mA	.16 dBu / 12 dB	3.4 (8.7)	2.3 (5.8)	1.1 (2.8)	9.5 (270)
FT-70DR	2m / 70cm †	FM	7.4 VDC	5/2/0.5	1.6	180 mA	.16 dBu / 12 dB	2.36 (6.0)	3.86 (9.8)	1.3 (3.3)	8.99 (255)

Power output can be increased depending on the battery pack. †Extended range.

Yaesu Handheld Accessories

Accessory	Model	FT 60R	25R 65R	FT 4XR	VX 6R	FT 70DR	FT 3DR	FT 5DR	HRO PRICE
Mic Adapter	CT-44	•				•	•	•	\$16.95
Mic Adapter	CT-91				•				\$17.95
Bluetooth® Headset	SSM-BT20						•	•	\$36.95
VOX Headset	SSM-64A				•				\$59.95
VOX Headset	SSM-63A	•				•	•	•	\$69.95
VOX Earpiece Mic	SSM-512B		•						\$29.95
Speaker/Mic	SSM-17A	•				•	•	•	\$39.95
Speaker/Mic	SSM-17H				•		•	•	\$27.95
Speaker/Mic	MH-73A4B				•				\$47.95
Compact Speaker/Mic	SSM-17B		•	•					\$24.95
Ear Piece Mic	SSM-517A				•				\$39.95
Ear Piece Mic	SSM-518A	•				•	•	•	\$34.95
DC/DC Cigar Adapter	SDD-13	•			•	•	•	•	\$27.95
DC/DC Adapter	EDC-6	•			•	•	•	•	\$8.95
Wall Charger	SAD-24B	•			•				\$28.95
Wall Charger	SAD-25B					•	•	•	\$29.95
AC Adapter	SAD-26B		•						\$19.95
Rapid Charger	CD-15A				•				\$39.95
Charger Cradle	SBH-13	•							\$23.95
Rapid Charger	SBH-22		•	•					\$19.95
Charger Cradle	SBH-28					•			\$29.95
Charger Cradle	CD-26								\$25.95
Charger Cradle	SBH-52						•	•	\$37.95
Battery 1370 mAh	SBR-40LI				•				\$79.95
Battery 1300 mAh 7.4 V	FNB-83	•							\$35.95
Li-ion 2200 mAh	SBR-14LI						•	•	\$79.95
Li-ion 1800 mAh	SBR-24LI					•			\$39.95
Li-ion 1950 mAh	SBR-25LI		•						\$34.95
Li-ion 1950 mAh	SBR-26LI		•						\$44.95
Li-ion 1750 mAh 7.4 V	SBR-28LI			•					\$35.95
Battery Case AA	FBA-23				•				\$29.95
Battery Case AA	FBA-25	•							\$18.95
Battery Case AA	FBA-39						•	•	\$31.95
Cloning Cable	CT-27	•				•			\$14.95
Cloning Cable	CT-168						•	•	\$24.95
Cloning Cable	SCU-36		•	•					\$19.95
Programming Cable	SCU-59		•	•					\$19.95
Data Cable (Dsub>9pin)	CT-169						•	•	\$29.95
Data Cable (11pin>2.5)	CT-170						•	•	\$29.95
Data Cable (2.5>2.5)	CT-176						•	•	\$24.95
WiresX Cable	SCU-57						•	•	\$38.95
Ant Adapter SMA-BNC	CN-3	•			•		•	•	\$8.95
Soft Carry Case	CSC-91				•				\$16.95
Soft Carry Case	SHC-27					•			\$19.95

Simplified User Manuals

Nifty Mini-Manuals

Fully laminated, spiral bound booklets, 4.25 x 8 inches, providing simplified step-by-step instructions for all your radio's features. These short-form manuals are smaller, more durable, and easier to use than manuals normally supplied with a radio.

Model	Description	HRO Price
NIFTY-FT3DR	Mini-Manual	\$26.95
NIFTY-FT5DR	Mini-Manual	\$29.95
NIFTY-FT60R	Reference Card	\$9.95
NIFTY-VX6R	Mini-Manual	\$24.95
NIFTY-FT65R	Reference Card	\$9.95
NIFTY-FT70DR	Mini-Manual	\$21.95
NIFTY-FT4XR/VR	Mini-Manual	\$21.95

Programming Software

rt SYSTEMS

RADIO PROGRAMMING MADE EASY

Since 1995, RT Systems has produced the most up-to-date amateur radio software for all the top radio manufacturers. Along with the most reliable software, RT Systems makes the best cables for programming and/or control. RT Systems removes the worry over programming or managing your radio memories.

Model	RT Software	HRO Price
FT-2DR	ADMS-FT2D-USB	\$48.95
FT-5DR	YPS-FT5D-USB	\$48.95
FT-60R	ADMS-1J	\$38.95
FTM-6000	YPS-M6000-USB	\$48.95
VX-6R	ADMS-VX6	\$38.95
FT-65R	ADMS-65-USB	\$48.95
FT-70DR	ADMS-70D-USB	\$48.95
FTM-400XDR	ADMS-M400-U	\$24.95

MARS/CAP Modifications

MARS is the Military Auxiliary Radio Service. CAP is Civil Air Patrol. They use frequencies near ham bands.

Ham Radio Outlet is able to modify most radios to operate in the MARS/CAP service frequencies. Contact HRO for details.

\*MARS/CAP modification are for those authorized with one or the other organization, and the frequencies are for official use only.

20

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21



**YAESU**  
The radio

## Dual Band

### FM & C4FM GPS & APRS FT5DR

The FT5DR is 5 W of RF power output in a light weight, compact design. Battery power saving settings are available for each frequency band with TX output power levels (5 W / 2.5 W / 1 W / 0.3 W) individually selectable. Enjoy loud, clear C4FM voice quality from 1 watt of audio power. Real dual band operations (V+V, U+U, V+U, U+V) are available with two independent receivers, and the FT5DR supports simultaneous C4FM digital monitoring for both the A and B bands (C4FM & C4FM standby).

#### Color Touchscreen

- C4FM digital V/D mode, voice FR mode, data FR mode, and conventional FM mode in one unit.

- Built-in Bluetooth® for hands-free.

- Color selectable high-resolution display (white, red, or blue).

- Simultaneous AM/FM Broadcast reception and 2-channel monitoring.

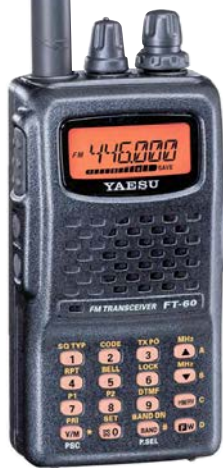
- Band scope function for monitoring up to 79 channels centered around the current VFO frequency with high-speed.
- System Fusion II compatible AMS (automatic mode select), DG-ID (digital group ID), and smart navigation functions.
- WiRES-X portable digital node compatible.
- Built-in 66 channel high-sensitivity GPS receiver.
- New Touch & Go operation from Primary Memory Group.
- Voice recording function for the received and transmitted audio.
- Built-in On/Off timer, automatic power off (APO) and time-out timer (TOT).
- Micro SD card slot (up to 32GB).
- IPX7 rating water protection.
- 7.2V 2,200 mAh Lithium Ion battery pack (SBR-14LI) included.
- Standard SMA antenna connector
- Belt clip & quick-release holster included.

## Dual Band

### 2 m/ 70 cm Analog FT-60R

One of the most popular radios ever produced! The FT-60R is a staple in most amateur operators arsenal of radios. Great as a 1st radio or as an addition to many. Rugged and built to last. With 5 watts of power plus strong, crisp, clear audio output from a large speaker, and an easy to read display you'll soon understand what makes the FT-60R a must-have standard.

#### Extended Frequency Receive Coverage



- Receives 108-520 MHz and 700-999 MHz (cellular blocked) for monitoring amateur, public safety, business, marine, aircraft, government communications.
- Tough die-cast, water resistant construction. Built to endure years of use and abuse.
- 1000 memories w/alphanumeric labels.
- 5 watt output.
- CTCSS and DCS (encode/ decode) with split tone; DCS encode only capable.
- ARTS™.
- One-touch to NOAA.
- Nine DTMF auto-dial memories.
- WiRES™ Internet linking.
- Huge LCD display.
- Two front panel programmable keys.
- Automatic repeater shift.

## Dual Band

### 2 m/ 70 cm Analog + C4FM Digital FT-70DR

The new FT-70DR is the compact and very attractively priced Yaesu System Fusion transceiver with both conventional FM operation and the advanced C4FM digital mode. The FT-70DR provides up to 5 W of reliable RF power, and its large front speaker delivers 700 mW loud audio output. AMS (automatic mode select) detects the operating mode of the received signal and automatically and instantly switches the receiver to the appropriate mode. Multi-colored LED mode indicator on its front case also assists an operator to enable hassle-free operation.

DG-ID (Digital Group Identification) and DP-ID (Digital Personal Identification) are the useful features

newly included in the FT-70DR to simplify the GM operation. Very simply, the transceivers selecting the same DG-ID or DP-ID can communicate, but not others. Between 00 and 99 DG-ID and DP-ID are selectable.



IP54 rating (dust/ water protection) construction, wide band receive coverage of 108 - 579.995 MHz, and versatile scanning capabilities make this a very robust handheld.

- System Fusion II compatible.
- 700 mW audio output.
- Wide band receive coverage of 108 - 579.995 MHz.
- 1,105 channel memory.
- CTCSS / DCS operation.
- Large multi-color mode indicator.
- Versatile scanning capabilities (programmable VFO, memories, & priority channel scans).
- 7.4 V 1,800 mAh Lithium Ion battery pack (SBR-24LI) Included.
- RF Squelch.
- WX channels with 'severe weather' alert (US version).
- Mini USB port for memory management and software updates.
- Transceiver to transceiver cloning with optional cloning cable (CT-27).
- Automatic power-off feature, RF squelch, transmitter time out timer, and busy channel lock-out.
- IP54 rating (dust / water protection) construction.
- Standard SMA antenna connector allows optional antennas to be used.

## Dual Band

### 2 m/ 70 cm FT-4XR

#### Extremely Compact Dual Band Radio

The FT-4XR is the ultimate in compact designed (2.1" W x 3.5" H x 1.2" D) handheld transceivers, providing up to 5 W of stable and reliable output power thanks to Yaesu's integration of highly efficient Bridged Transless (BTL) amplifier technology.



Go ahead and drop the FT-4XR into your go-bag, glove box, or slip it into your back pocket easily. With such a slim and compact design you'll barely notice it but always have it when you need it. It's the ultimate way to take 2m and 70cm with you virtually anywhere!

Its small size doesn't mean it is small on audio. The FT-4XR handheld transceiver has a 1.4-inch front speaker that delivers 1 watt of powerful clear and crisp intelligible audio. So no matter the environment you'll always be able to hear and respond.

- Three selectable TX power settings: 5 W (high) / 2.5 W (middle) / 0.5 W (low).
- More than 15 hours operating time with supplied 1,750 mAh Li-ion battery pack.
- Large-capacity 200 memory channels.
- Selectable frequency steps (5 / 10 / 12.5 / 15 / 20 / 25 / 50 / 100 kHz).
- WX channels with 'severe weather' alert.
- PC programmable with optional programming cable (SCU-35).
- Transceiver-to-transceiver cloning with optional cloning cable (SCU-36).



**YAESU**  
**3-YEAR**  
**WARRANTY**

All current Yaesu amateur radios come with a three (3) Year Manufacturer's Warranty! The move to a three (3) Year Warranty is a firm commitment from Yaesu to continue to supply top quality products for many years to come.

## Dual Band

### 2 m/ 70 cm FT-65R

#### Workhorse Dual Band

An excellent dual band transceiver based on the ever popular FT-60R. Very compact and ruggedly constructed with three selectable power settings. A large front-firing speaker provides a full 1 watt of crisp, clear audio even in noisy environments. Capable of over 9 hours of operation and 11.5 hours of operation with the optional 2500 mAh Li-Ion battery.



A variety of user requested features such as versatile scanning capabilities, programmable VFO scan, memory scan, weather alert scan, FM broadcast receive, auto power off and PC programability makes this an excellent value radio.

- Selectable output power settings - 5 W / 2.5 W and 0.5 W.
- Speaker provides 1 watt audio input.
- Supplied 1950 mAh Li-ion battery pack provides more than nine (9) hours operation. Optional higher capacity 2500 mAh Li-ion battery pack provides more than 11.5 hours of operation.
- LED display.
- Four (4) quick recall keys (QRK) are individually user-programmable to store and recall favorite frequency settings and to be used as shortcut keys to set mode menu items.
- White LED flashlight.
- Programmed VFO scan, memory scan, priority channel scan, weather alert scan.
- WX channels with 'severe weather' alert (US Version only).
- VOX operation.
- FM broadcast receiver.
- ARTS (automatic range transponder system).
- DTMF operation - CTCSS / DCS operation.
- Busy channel lock-out.
- Battery saver function.
- Automatic power-off.
- Transmitter time-out-timer.
- Rugged and durable construction.

## Tri-Band

### 2 m/ 1.25 m/ 70 cm VX-6R

#### True Tri-Band Coverage

Don't let your operating environment stop you from enjoying radio on-the-go. For 'anywhere' communication you'll find the VX-6R just what you need. It is both rugged and submersible (JIS7: 30 minutes of submersion at depth of 3 feet), which means you can take it just about anywhere.



A front firing speaker delivers strong audio. The dual-selector knob allows for easy operation of memory selection, VFO, volume level, and settings in one convenient location. Supplied with a strong tri-band antenna this HT has everything.

- Covers 504 kHz to 998.99 MHz (with cell blocked).
- 5 watts of power 144 and 440 MHz bands; 1.5 watts on 222 MHz.
- One-touch memory access.
- FNB-80LI 1400 mAh lithium-ion battery pack standard.
- Emergency automatic ID.
- Security password.
- CW trainer.
- Enhanced paging and code squelch (EPCS).
- Wake-up battery saver.
- 900 memories with alpha-numeric labels.
- Compact: measures just 2.3" x 3.5" x 1.1" WHD.
- Oversized volume and squelch knobs.

## HT QUESTIONS? HRO HAS THE ANSWERS!

We are here to help. Ham Radio Outlet salespeople are available to answer your questions about HT's, features, and accessories. Simply contact your local HRO store for assistance.





**Radios are NOT included.**  
They are shown for illustration purposes only.

**Between The Seats Mount LM-WEDGE**

Plastic device holder wedges between seat and console. Adjustable viewing angle, provides multiple options for installing two devices: Mobile Radio Remote Head, HT, Microphone (Cell phone attaches with the optional LM-H holder) in any combination you prefer.  
HRO Price: \$49.95



**Suction Mount LM-505-EXP-2**

Can be used on a windshield or dash and comes with a disc that has a 3M adhesive on one side and smooth on the other. You can attach the disc to a flat surface and then attach the suction cup to the disc. The suction cup on the LM-505 is made from polyurethane which is "sticky" in some cases and can be attached to the dash without using the disc. This package comes with our EXP-2 HT face plate. This mount will work with any HT or portable as long as it has a belt clip. The face has a non skid silicone pad to protect your device. **HRO Price: \$24.95**



**Vent Mount With Side Grip Holder LM-100H**

The vent mount includes a side grip holder for some Kenwood and Icom remote heads. The grip has padded arms and can handle devices from 1 7/8 inches to 4 1/4 inches in height. Easily remove your device to store out of sight when you reach your destination. For use with horizontal air vent louvers. **HRO Price: \$24.95**



**Bendable Floor Mount LM-300-QR**

The LM-300-QR seat bolt mount has a bracket that fits underneath the seat bolt that holds the seat to the floor board. Please check out the seat bolt on your vehicle before purchasing. Not every vehicle has a seat bolt that can be accessed, some do not have bolts at all. We offer 2 lengths, 22" or 18". The mount has a very stiff aluminum rod that can be shaped for your needs.  
HRO Price: \$34.95



**Yaesu/Icom Adaptor LM-AD1**

Adapter kit for the remote display heads that use the camera style threaded socket to hold the display head to the mount. The kit is sold separately and attaches to all the Lido Mounts. **HRO Price: \$12.95**



**Rail Mount With Express Plate LM-1000EXP**

HRO Price: \$19.95



**Cup Holder Mount LM-802-QR**

Designed with a 1" Ram ball. The base can be expanded from 2 1/2" to 3 1/2". The ball and socket design will support heavier devices as well as multi-device configurations. This package comes with our QR pack. With the pack, you can attach any amateur radio remote head transceiver. **HRO Price: \$44.95**



**Side Grip Holder LM-H**

Optional side-grip holder fits all Lido Mounts. Place your device in the LM-H and squeeze the arms together. Push button on the side releases the arms. Holds large size HT's, remote display heads, GPS units, cell phones etc.  
HRO Price: \$14.95



**Nifty!**

**HT DESK STAND**

Radio not included.



The HT Desk Stand sports a glossy jet black finish. Main support plate and shelf are made of tough, durable polycarbonate and the steel base has a heavy-duty powder coat finish. This thing looks great! Adjustable to fit all hand held radios. Provides solid stable support, holding the radio at a convenient viewing and operating angle.  
HRO Price: \$42.95

**WIRE BALE STAND**

Our Universal Wire Bale Stand can be used with any radio equipped with a foldable wire stand, providing an ideal angle for viewing the display and working the controls. Use with the FT-991, IC-7300, IC-7000, IC-718, TS-2000, TS-590, K3, K3S, DX-SR8T.  
HRO Price: \$23.95



**DESK STAND**

Radio not included.



Desk Stands are custom designed to perfectly fit your radio, providing an ideal angle for viewing the display, and stable support for touching buttons on the screen and working the controls. Your radio securely attaches to the stand using two thumbscrews for the mounting holes at the back of the control head. An additional four rubber feet are provided for use with the main body of the radio allowing it to also be placed on the desk top.

Icom ID-5100 .....HRO Price: \$33.95  
Icom IC-705 .....HRO Price: \$33.95  
Elecraft KX3 .....HRO Price: \$32.95  
Yaesu FTM-400XDR .....HRO Price: \$33.95

**From static to FANTASTIC**

**RT Systems Radio PROGRAMMERS**

**make it happen!**

**Set up all the features of your radio...  
Not just the memories**



**DMR**  
**D-STAR**  
**Fusion**  
**Names**  
**Tones**  
**Banks**  
**HF Filters**  
**PM Settings**  
**Programmable Key Options**

*"It's kind of fun to do the impossible."*  
-Walt Disney

**Contact HRO for Pricing and Availability**

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Retevis • RF Gear • Rugged Radios • SainSonic • Senhaix • Socotran  
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RT Systems **Knowledge Base** on our website.



24
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# uniden®

## Base/Mobile

### True I.Q. Trunking SDS200

HRO Price: \$699.99



- True I/Q™ receiver.
- TrunkTracker X.
- Direct ethernet connectivity for streaming and control.
- Complete USA / Canada radio database.
- Location control for simple operation.
- External speaker jack.

- Auxiliary USB type A jack for future expansion.
- 3.5" customizable color display.
- GPS connectivity for simple mobile operation.
- Recording, playback, and replay.
- PC programming & control.



### WiFi Remote + Trunk Tracker V BCD536HP

HRO Price: \$649.99

- APCO 25 Phase I / II.
- Motorola, EDACS, LTR trunking.
- HomePatrol operation.
- WiFi link for remote operation.
- USA / Canada database.
- Zip Code selection.
- Fire tone-out alert.
- Temporary avoid.
- CloseCall® RF capture.
- System channel / number tagging.
- DCS / CTCSS rapid decode.
- Audio AGC.

- S.A.M.E. weather alert.
- Backlit keypad & LCD.
- 4 GB memory.
- Enhanced dynamic memory.
- USB connectivity.
- PC programming/cloning.
- Covers 25-512, 758-824, 849-869, 894-960, 1240-1300 Mhz.
- Includes antenna, DC adapter, USB cable, three wire harness, mounting bracket and hardware.



### Hybrid CB/Digital Scanner BEARTRACKER 885

HRO Price: \$399.99

- Full-Featured 40-Channel CB Radio & Digital Trunktracking Scanner: Receive police, fire, ambulance, and DOT dispatch transmissions.
- BearTracker Warning System: Legal alternative to Radar Detectors. Alerts you when nearby public safety

- transmissions are detected.
- GPS Included: Allows the BearTracker 885 to automatically select nearby scanner channels to monitor.
- Nationwide Scanner Database: Includes all known police/fire/ambulance/DOT channels in use in the USA and Canada.

## Handheld

### Trunking BCD436HP

HRO Price: \$549.99



- APCO 25 Phase I / II.
- Easy HomePatrol operation.
- 4 GB memory.
- USB connectivity
- CloseCall® RF capture.
- Audio AGC.
- S.A.M.E. weather alert.
- Backlit keypad & LCD.

- Includes antenna, USB adapter, 3AA NiMH batteries, hand strap, SMA-BNC ant adapter.
- Motorola, EDACS, LTR trunking
- USA/Canada radio database pre-programmed.
- Enhanced dynamic memory.
- System channel / number tagging.
- DCS/CTCSS rapid decode.
- PC programming and cloning.
- Covers 25-512, 758-824, 849-869, 894-960, 1240-1300 MHZ.

### I/Q Scanner With SDR Technology SDS100

HRO Price: \$649.99



Uniden has created the first scanner to incorporate Software Defined Radio (SDR) technology. The SDS100's digital performance is better than any other scanner in both simulcast and weak-signal environments.

This is the first scanner that allows you to decide what to display, where, and in what color. Custom fields put the information important to you right where you need it.

Of course, the SDS-100 also includes all the advanced features you've come to expect from a Uniden scanner: Trunktracker X, weather alerts, APCO P-25 Phase I and II, location-based scanning, and USA / Canada radio database. It meets JIS4 (IPX4) standards for water resistance. This is a do-all, take-anywhere scanner.

## Portable

### Touch Screen Programming HOME PATROL II

- Digital touch screen.
- USA & Canada database.
- APCO P-25 Phase I & II.
- USB-source charging.
- No subscription.
- Simple programming by entering your Zip Code.
- 3.5" daylight viewable bright display.
- Sentinel Windows PC software included.
- S.A.M.E. emergency weather alert system.
- Famous TrunkTracker IV.



Great for monitoring public safety, local government, amateur radio operators, and more.

HRO Price: \$599.99

## Carrying Cases



### Protective Leather or Nylon Scanner Cases

Protect your portable scanner investment with these rugged, attractive, form-fitting cases designed specifically for each scanner model. Scanner Master offers three types: Hard leather (for the most protection), soft leather, and nylon with different belt attachments as noted below.



### Bearcat SDS100

With swivel belt clips for professional swivel and quick release.

- Hard Leather Case: HRO Price: \$39.95
- Soft Leather Case: HRO Price: \$39.95
- Nylon Case: HRO Price: \$29.95

### Bearcat BCD436HP

With swivel belt clips for professional swivel and quick release.

- Hard Leather Case: HRO Price: \$39.95
- Soft Leather Case: HRO Price: \$34.95
- Nylon Case: HRO Price: \$27.95

### Bearcat BCD325P2

### Bearcat BC125AT

### Bearcat BC75XLT

- Hard Leather Case (Fixed Belt Clip): HRO Price: \$39.95
- Soft Leather Case (Swivel Belt Loop): HRO Price: \$39.95
- Nylon Case (Fixed Belt Loop): HRO Price: \$29.95

### Whistler WS-1040 Radio Shack Pro-106 Radio Shack Pro-651

- Hard Leather Case (Fixed Belt Clip): HRO Price: \$49.95
- Soft Leather Case (Swivel Belt Loop): HRO Price: \$39.95
- Nylon Case (Fixed Belt Loop): HRO Price: \$29.95

### SCANNER QUESTIONS? HRO HAS THE ANSWERS!

We are here to help. Simply contact your local HRO store for assistance.

## Desk Mounts

- Radios Not Included -

### DESK-MT BASE-4

Desk mount for four base scanners. HRO Price: \$94.95



### DESK-MT BASE-3

Desk mount for three base scanners. HRO Price: \$89.95



### DESK-MT BASE-2

Desk mount for two base scanners. HRO Price: \$74.95



### DESK-MT PORT-3 PORT-2 PORT-1

Desk mount for one, two, or three portable scanners. HRO Price: \$59.95  
HRO Price: \$49.95  
HRO Price: \$39.95



## Shortwave



# C.C. CRANE

AM/FM/SW/  
WX/Aviation/SSB  
CC SkyWave SSB 2

HRO Price: \$179.99

You can now listen to Hams, long range aviation (commercial and military), maritime, space and even spy transmissions from all over the world. Single Side Band is an efficient and reliable way to get long range information without Internet or satellite and it's not available on your smartphone. Ham radio operators play a critical part in emergencies when virtually all normal communication is down.

Now Includes SW Wire Antenna Adapter!

- Direct entry of a frequency plus auto scan and store.
- Lighted LCD display.
- Selectable fast or fine tuning on all bands except weather.
- 400 memory presets.
- Runs on (2) AA Alkaline batteries (not Incl.)
- Optional/Available CC Skywave AC adapter.
- Stereo headphone jack and fold-out back stand.
- Clock with 12/24 hour format and alarm.
- Rotary volume knob.
- Compact size.
- One Year Limited Warranty.



ZUMspot  
Multi-Mode Hotspot



- High performance 32-bit ARM processor.
- Supports DMR, P-25, D-Star, System Fusion, NXDN and POCSAG.
- Onboard LEDs to show status (Tx, Rx, PTT, Mode).
- Up to 10 mW RF power.
- SMA antenna connector, UHF antenna included.
- Mounted on Raspberry Pi Board
- The firmware is pre-loaded on an SD card and is easily upgraded via software.
- Built-in 3.5" color LCD display.
- 3A power supply included.
- 1 Year Warranty.
- Open source firmware (MMDVM) and software (PiStar) and board design.
- ZUMspot board fully assembled and tested.

HRO Price: \$249.95

Multi-Mode Hotspot



The Mini 1.3 OLED ZUMspot is a small and efficient Multi-Mode Digital Hotspot. Includes Raspberry Pi Zero WH. Supports DMR, P-25, D-Star, System Fusion, NXDN and POCSAG. 10mW RF transmit power.

HRO Price: \$174.95

Farallon Electronics

Data Modem



**PACTOR-4 DR-7400**  
HRO Price: \$1628.95

The DR-7400 offers a lower priced entry to the P4dragon modem class. The DR-7400 has been optimized for use with the new high-end data transmission mode PACTOR-4.

The DR-7400 is software compatible to the PTC-II series and to the DR-7800 so that existing PACTOR software (AirMail, RMS Express, Alpha etc) can continue to be used. Due to the plug compatibility of the radio ports, a change from the tried and tested PTC-II technology to the innovative P4 dragon technology is very easy. Change over the plugs, turn on, and enjoy PACTOR-4!

- The DR-7400 has many of the features of the DR-7800 but a lower price.
- Backwards compatible to PACTOR-1/2/3. Automatic negotiation during link setup.
- Noticeably improved reception with PACTOR-2 and PACTOR-3.
- Operating Modes: PACTOR-4, PACTOR-3, PACTOR-2, PACTOR-1, weather-FAX (receive), GPS / RTTY / NAVTEX decoder.

Data Modem



**PACTOR-4 DR-7800**  
HRO Price: \$1999.95

The DR-7800 P4dragon is the no compromise further development of the legendary PTC-II, which was designed for professional use and for the ambitious amateur radio enthusiast. The DR-7800 has been optimized for use with the new high-end data transmission mode PACTOR-4.

The DR-7800 is software compatible to the PTC-II series so that existing PACTOR software (AirMail, RMS Express, Alpha etc.) can continue to be used.

- Operating Modes: PACTOR-4, PACTOR-3, PACTOR-2, PACTOR-1, weather-FAX (Receive), GPS decoder.
- Display: 256 x 64 pixel OLED, blue, high contrast, excellent readability, no viewing angle problems, display of spectrum and much more.

NEW DATA ENCRYPTION

AES-256 encryption option for P4dragon modems license for firmware 2.40 and higher. #9511 - HRO Price: \$199.95

Farallon Cables/Accessories

Model	Description	HRO Price
<b>Miscellaneous</b>		
9001	6' power cable	\$17.95
8120	1200 baud packet cable	\$49.95
8050	9600 baud packet cable	\$49.95
<b>Control Cables</b>		
8080	Modem to Kenwood or Yaesu radio, SCS 13pin DIN to DB9 female	\$39.95
8081	Modem to Icom radio, SCS 13pin DIN to 3.5mm mini phone plug	\$39.95
8083	Modem to Icom or SGC radio, SCS 13pin DIN to male DB9, 5"	\$39.95
8130	Modem to Yaesu radio, SCS 13pin DIN to 8pin mini-DIN, 2m	\$39.95
<b>Audio Cables</b>		
8050	Modem to Yaesu radio, SCS 5pin DIN to 6pin mini DIN 9600 baud	\$49.95
8120	Modem to Yaesu radio, SCS 8pin DIN to Yaesu 6pin mini-DIN, 2m	\$49.95
8123	Modem to Yaesu radio, SCS 8pin DIN to Yaesu 5pin DIN, 2m	\$49.95
8125	Modem to Yaesu radio, SCS 5pin DIN to 1/8" stereo phone plug	\$49.95
9090	Modem to Icom radio, SCS 8pin DIN to Icom 8pin DIN, 1.5m	\$49.95
9095	Modem to Icom radio, SCS 8pin DIN to Icom 13pin DIN, 1.5m	\$49.95
9096	Modem to Kenwood radio, SCS 8pin DIN to Kenwood 13pin DIN	\$49.95
9097	Modem to Kenwood radio, SCS 8pin DIN to Kenwood 13pin DIN	\$49.95

Kantronics

TNC's



**Multi-Mode DSP Controller KAM XL™**  
HRO Price: \$449.95

Kantronics' third generation multi-mode TNC is a state of the art design for operations on HF, VHF and UHF while supporting DSP modems and popular new modes of operation. The unit provides modes of Packet 300, 1200 or 9600 baud, G-TOR, Pactor 1, AMTOR ARQ, PSK31, RTTY, NAVTEX/AMTEX, ASCII, WEFAX and CW. It has a dual port mailbox and remote SYSOP access. It is GPS NMEA-0183 compatible and provides Kantronics Host Mode and KISS.



**VHF/UHF TNC KPC-3 Plus 512K USB**  
HRO Price: \$239.95

This compact, low current TNC has become the work horse of packet radio today. It features multiple packet connects, digipeating for APRS® operations, WEFAX reception, a GPS mode for tracking, personal packet mailbox. Also available with RS232 interface for \$289.95.



**Dual-Speed Dual-Port TNC 9612XE USB**  
HRO Price: \$449.95

This is the rapid delivery model, supporting 9600 baud. It features both 1200 and 9600 packet ports, advanced APRS® digipeating (APRS® is a trademark of Bob Bruninga), (K-Net) net-working, amateur beeper (paging), the ability to download EMWIN weather broadcasts. Also available with RS232 interface for \$489.95.

RADIO CONTROL SOFTWARE

Premier Ham Radio Software Suite HRD



HAM RADIO DELUXE SOFTWARE  
The Radio Amateur's Best Asset  
[www.HamRadioDeluxe.com](http://www.HamRadioDeluxe.com)

**RIG CONTROL**  
Organize buttons, sliders, and drop-downs to toggle radio options, select modes and filter settings, and control level inputs via your computer screen.

**LOGBOOK**  
A complete DX operations center, Logbook is the ideal shack accessory for everyone. Keep track of all important contact information with the click of a mouse.

**DIGITAL MODES**  
DM-780 is capable of digital modes, including WSJT-X, CW, RTTY, SSTV, PSK31, MT-63, and more. Digital Master interfaces with the popular KIEL WinKeyer.

**SATELLITE TRACKING**  
Take the guesswork out of satellite operations using the latest orbital mechanics equation and up-to-the-minute Keplerian element information.

**ROTATOR CONTROL**  
Integrating with Logbook and Satellite Tracking, Rotator Control manages beam headings via any computer interfaced rotator controller.

**Support:**  
<https://www.hamradiodeluxe.com/support/>  
**Forums:**  
<https://support.hamradiodeluxe.com/support/login>

Physical Software Key - HRO Price: \$79.95

APRS Trackers & Digipeaters

APRS Tracker TNC & Transceiver APRS Voyager



**Built-in 38.5 dbm / 7 watt transceiver**  
APRS Voyager incorporates a built-in transceiver and power amplifier capable of transmitting and receiving APRS® packets. The only thing you need to do is to connect a proper antenna to the SMA connector. Output power is programable between 5 watts and 7 watts.

Supports Mic-E/Base-91/Plain text position reporting; a main feature for an APRS tracker.

**Built-in Bluetooth interface**  
A built-in Bluetooth® interface which can work in one of selectable modes: Serial console – similar to RS-232 serial console. KISS – allows to exchange packets with your laptop, tablet or smartphone with APRS® software installed. Works great with APRSDroid. GPS passthrough – if you have a GPS receiver you can forward the NMEA stream to any other device using Bluetooth® interface.  
HRO Price: \$249.95

APRS Digipeater & i-Gate WX3in1 Mini



**APRS Station**  
WX3in1 Mini allows you to generate APRS® data packets with information defined by the user and send them in a specified interval. In this way, it is possible to send beacons, objects, weather and telemetry data.

**APRS Station**  
The main purpose of the device is receiving and sending APRS® data packets via an amateur radio transceiver. WX3in1 Mini is capable of receiving an APRS® packet, decoding the sender, recipient, path and information field. Then actions are performed in accordance with the options configured by user: Packet is digipeated via the APRS® network, Packet is sent to the APRS-IS server, Packet is ignored if it was corrupted.

GPS Support, Bluetooth® interface support, KISS TNC operation, weather station support, and a ton more features makes this a very configurable unit.  
HRO Price: \$139.95



## TIMEWAVE TECHNOLOGY

### Data Controller



#### Multi-Mode PK-232SC

HRO Price:  
\$599.95

With the addition to the PK-232 of a built-in sound card, rig control, computer isolation, and total USB connectivity, the PK-232SC brings a new level of performance with sharp, accurate DSP filters for all its internal data modes and dual transformer isolation for sound card data modes. Weak signals magically appear from the noise and QRM bounces off the new DSP filters for cleaner copy with fewer errors than the old analog filters.

#### More Filters, Better Filters, Auto Selection

The PK-232SC brickwall filters have tighter bandwidth and steeper skirts for improved noise and QRM rejection. New firmware (version 7.2) allows a wider selection of filters than the original PK-232, so the filter can match the mode. The correct DSP filter is automatically selected when you choose an internal mode. In RTTY, Timewave's proven twin peak filters pluck the mark and space tones from the noise and QRM for great copy. In PACTOR, the filter bandwidth automatically changes when the baud rate shifts in response to the error rate of the link. In Morse (CW), the operator can preset either 100 Hz or 200 Hz bandwidth. The PK-232SC is compatible with all Windows XP, Vista, and Windows 7 software terminal programs for the PK-232.

#### Sound Card Interface and Rig Control

For maximum flexibility, Sound Card / TNC switching is both software and panel switch controlled; sound card mode selection is software controlled. For example, when operating with Radio Operating Center software, changing to PSK31 from Pactor or MT63 is a simple menu click. The single USB cable from your PC also moves your logic level Kenwood RX / TX / RTS / CTS, Yaesu CAT, and Icom CIV and USB rig control interface to the back panel of your PK-232SC.

**All the Proven Modes + All Sound Card Modes** PK-232SC supports all new sound card modes in addition to all of the existing PK-232 modes: Pactor, VHF/ HF packet, AMTOR/ SITOR, Baudot, ASCII, Morse, HF Weather FAX, TDM, and NAVTEX. The PK-232 / PSK comes with a complete cable and connector set in addition to Timewave's on-line and telephone support. As always, you can upgrade any PK-232 ever built to the latest PK-232SC!

- Digital signal processor & 18 DSP filters.
- Twin peak RTTY filters; adaptive PACTOR filters.
- Works with all sound card modes.
- USB sound card audio.
- Rig control for Icom, Yaesu, and Kenwood transceivers.

### Radio Control

#### Plug & Play Remote Control HAMLINK USB™

USB Rig  
Controller  
Plus

HRO Price:  
\$59.95

**Connect and  
control your  
transceiver via  
USB with Plus  
option for T-R  
switch, key,  
foot switch,  
input, or user  
I/O.**



The HamLinkUSB™ Rig Controller Plus is a USB to logic level conversion device for CAT / CI-V enabled transceivers that provides PTT output, keying output, or foot switch input options.

The CAT / CI-V feature provides a logic level serial interface which connects directly with non-RS-232 CAT / CI-V inputs on Kenwood, Icom, Yaesu, Ten-Tec, Elecraft and Alinco models. The controller is compatible with most soundcard and software control programs such as PK-Term 3.0.

**HamLinkUSB  
Optional Cable Assemblies**  
HLUSB-CIV CI-V - Icom, Ten-Tec, Elecraft.  
HRO Price: \$8.95

HLUSB-CAT MiniDIN-8 cable assembly for  
Yaesu FT-857 / 817/ 100 / 100D  
HRO Price: \$13.95

HLUSB-4CON 4 conductor with 3.5 mm plug  
to open end cable.  
HRO Price: \$13.95

**TIMEWAVE  
TECHNOLOGY  
QUESTIONS?  
HRO HAS THE ANSWERS!**

**We are here to help. Simply contact  
your local HRO store for assistance.**

### Noise Reduction



#### Cancel Noise ANC-4

HRO Price:  
\$259.95

The ANC-4 RF device eliminates or reduces power line noise, computer noise, TV generated interference, and other types of electrical noise. Attach the unit directly to the antenna connector of the receiver or transceiver to cancel locally generated noise before it affects the receiver AGC circuits. Reception of signals well below the noise level of the local interference is possible.

To cancel locally generated interference, the ANC-4 detects the interfering signal and adjusts its phase and magnitude so that it matches the offending interference at the receiver input, but is 180 degrees out of phase. Front panel controls allow adjustment of both phase and magnitude. Connect the ANC-4 between the main station antenna and the receiver antenna connector. A second antenna connects to the ANC-4 to pick up noise. A short wire antenna or short collapsible whip is generally satisfactory for eliminating noises generated around the operating position or in the house, but an external antenna works better to eliminate noises generated outside the home. Any noise antenna that works, including combinations of horizontal and vertically polarized antennas, is satisfactory.

The ANC-4 operates as an active antenna by using the noise antenna and the NOISE GAIN control to amplify the antenna output. The unit can also be used as a diversity combiner to peak weak signals or null interfering signals.

### Sound Card Modem



#### USB Audio NAVIGATOR

HRO Price:  
\$374.95

The Navigator USB sound card modem has a proven USB audio sound chip, six FTDI USB serial COM ports, a K1EL WinKey keyer, true FSK and rig control connections for every radio. A built-in USB sound card with isolated audio I/O to your radio prevents ground loops. A second audio input lets you use both receivers in a dual receiver radio. The logic level and RS-232 rig control ports support your Icom CI-V, Yaesu CAT, Kenwood and other radios. Front panel controls set both RX audio levels, TX audio out-put level, audio monitor level, and the CW speed.



**digirig**

a tidy digital modes interface for ham radio



ICOMMOBILE.....	\$99.99
ICOMRJ45MOBILE .....	\$99.99
G90MOBILE .....	\$99.99
BFENGMOBILE.....	\$99.95
YSU10CATMOBILE.....	\$99.99
YAESURJ12MOBILE.....	\$99.99
ELEKXMOBILE .....	\$99.99
FT8XXMOBILE.....	\$99.99
YAESUHTMOBILE .....	\$99.99

Digirig interface modules include complete cable kits for your selected radio. Visit the HAMRADIO.COM website for details.

### Digital Modes Interface

Digirig is an open-source integrated digital modes interface for amateur radio. Yes, another one, but bear with me for a moment.

Hi, I'm Denis Grisak; amateur radio call sign KOTX.

Shortly after starting my ham journey in July 2020 I was logging my first FT8 QSOs while dealing with the rats nest of cables, breakout boards, dongles and ferrite beads between my radio and computer. That was especially messy while trying to operate mobile with rig cords sticking out of both sides of the laptop and wires tangled all over the place.

Here comes the informercials' favorite cliché "there's gotta be a better way!". My market research yielded the list of overpriced bulky boxes with limited functionality. The leading product only supported a VOX based PTT and dated itself by its Netscape Communicator's worthy web property boasting surface mount construction as "State Of The Art" and corporate trademark abandoned since early 90's. Electric engineer's gears started to turn... Welcome to Digirig!

#### Integrated Interface

As a differentiating feature, Digirig only requires a single USB connection to the computer with all the digital goodness packed in a single small enclosure. The internals include a USB hub, audio codec, a fully featured serial CAT (Computer Aided Transceiver) interface, and potentially other modules such as GPS receiver for time synchronization.

#### Open Source

Digirig is an open-source because amateur radio is a hobby, and it's a hobby which encourages learning, experimentation and collaboration. I hope that the project is shaped by your participation in the form of comments, requests and tester feedback. All of the specs, drawings and other materials are publicly available on Github.



### Digital Voice and Image Interface

#### Digital Voice+Image ARD9800



Use a conventional voice transceiver for digital voice communications, data and images while you maintain analog capabilities. The ARD9800 is a breakthrough in communications technology.

The ARD9800 is a modem unit that connects to the mic input of any transceiver. The user simply wires a connector for their particular transceiver, connects the speaker output of their transceiver to the modem and then connects the modem to a 12 VDC power source.

Digital Voice Communications on Amateur Radio bands. You get clear, crisp audio at the touch of a button.

**Automatic Mode Recognition.** The ARD9800 automatically recognizes incoming digital signals and starts decoding those signals immediately.

**Maintains Analog Capability.** You keep the ability to communicate in conventional analog modes. And you can easily shift between digital and analog operations.

**Send Images Too!** With the optional memory module, you can send photos or captured video images quickly and easily. View the images through any NTSC monitor that has a video input. It's like SSTV, only faster!

**No Rig Modifications Needed.** All you need to do is connect the ARD9800 to your Amateur transceiver's microphone and speaker output ports, using the supplied cables. (You will have to prepare a connector for your rig's microphone port.) It's a simple, easy process to start using digital communications and there are no internal modifications or adjustments needed for your radio.

**Open Digital Protocol means use of the ARD9800 is permitted on the US Amateur Bands (non-USA users should check applicable regulations).**

**Keyboard communications and file transfers are also possible.** Users should check applicable regulations. Keyboard communications and file transfers are also possible.





HEIL  
HAM RADIO

HM-10XD \*

The HM-10XD features our new HC-5X and HC-4X elements. The narrow response of the HC-4X is ideal for DX work and the full response of the HC-5X is great for everyday rag chew. It comes equipped with a microphone clip and a foam windscreen.



HM-12 \*

The high output full range "Genesis" dynamic element in the HM-12 is designed to work with just about every amateur radio low impedance transmitter. The element is mounted in a unique internal shock mount and exhibits nearly -35 dB of rear rejection, reducing background and ambient noise from the transmitted signal. This microphone has a unique internal windscreen plus an external foam windscreen. It has the 5/8" X 27 microphone clip designed for our booms and stands. Frequency response: 80 Hz-14 kHz @ -55 dB.



PR-77D/PR-77DP \*

A professional quality dynamic microphone for commercial broadcast, recording, podcasts and any application that requires a smooth flat response over a wide frequency range. Excellent transient response, great speech articulation and low IMD with -40 dB rear rejection. Features a two position switch allowing the selection of the best characteristics for voice or music. Choose purple or black.



PR-781/PR-781G \*

These professional quality dynamic cardioid microphones for amateur radio provide a wide frequency response, great articulation, and a -40 dB of rear rejection with ample output to drive most amateur radio microphone inputs. The PR-781 is specifically designed for use with most makes of Elite transceivers by Kenwood, Flex, Elecraft, Yaesu, Ten Tec and Icom. The PR-781G is the same great design and performance as the PR-781 but now with a beautiful gold screen. Both models come with the SM-3 mount.



The Fin™ \*

The Fin™ utilizes the PR-20 element so popular in the professional audio realm. It is housed in a gorgeous high-gloss chrome finish. If phantom power (not compatible with Icom transceivers) is provided to The Fin™, the blue wind screen (also available in red) becomes illuminated by 4 embedded LEDs. Now also available in satin black with red, or blue LEDs/foam.



HANDI-MICS \*

The Handi Mic is an ultra-compact hand microphone utilizing a special internal shock mount, yielding superior audio compared to the standard microphones offered by the radio manufacturers. The Handi Mic is available with the "iC" element designed for Icom rigs. A special "Pro" version is also available, with a wide-range dynamic element that sounds great on FM mobile rigs. Both have PTT.

**Model Element**  
HM-iC Electret for most ICOM  
HM-PRO Wide Range Dynamic



ICM/ICM BG

A salvation for Icom users. The ICM is a high-quality microphone for early Icom transceivers that comes in an all platinum colored finish or a matte black with gold grill. It features a high-gain condenser element that provides full-bodied audio with plenty of drive to match up with the low-gain audio systems of the earlier Icom rigs. It also works well with the higher-gain "Pro" radios and IC-7800. It comes with an attached, shielded 8' cable terminating in an 8-pin mic plug and a 1/4" PTT pigtail. Connecting cable needed for certain radios.



GOLD ELITE \*

The new Gold Elite microphone is designed and crafted specifically for amateur radio communications. It contains two distinctly different high performance dynamic elements that are available at the flip of a switch to meet the different types of communications needs. The Gold Elite microphone comes to you with a foam windscreen and a 5/8"-27 microphone clip that is designed for our booms and desk stands.



PR-30 \*

The PR 30 was designed for commercial broadcast, live sound and recording. It has comparable sound to the finest condenser microphones because of its wide frequency response, excellent transient response and low IMD. The PR 30 comes standard with the SM-3 5/8"x27 mount. Available in champagne and black.



PR-40 \*

The PR 40 was designed for commercial broadcast, live sound and recording. It features the Heil dynamic element with a perfectly flat response from 28 Hz all the way up to 18 kHz and has gorgeous articulation. The PR 40 is shipped with the SM-3 5/8" X27 mount. Available in champagne, chrome, gold, black and gold, or all black.



HMM-Dyn | HMM-iC

The HMM brings new technology to the hand microphone. When you place a microphone element inside a clam shell, the result is a hollow muffled sound. To solve this problem, we installed a grill on the top of the microphone that detunes the internal resonance of the housing. We came up with a very special, full-range microphone element with great speech articulation. A very flexible but sturdy coil cable terminates with 1/8" male for the microphone and a 1/4" male for the PTT control. **HMM-Dyn (Dynamic)**



Also offered with the iC electret element as **HMM-iC**. AD-1 cable required.

HEIL MICROPHONE  
OR ACCESSORY  
QUESTIONS?  
HRO HAS THE ANSWERS!

Our sales experts can help you find the right Heil microphone and/or accessories that work best for you. Simply contact your local HRO store for assistance.

\* Adaptor cable not included. Separate CC-1 or CC1-XLR cable required.

HEIL  
HAM RADIO

Shock Mount  
SM-1

\*Microphone not included

The ultimate suspension mount for your Heil hand microphones. This shock mount can be used on all Heil stands or booms with a simple 5/8"x 27" std. thread mount. **HRO Price: \$79.00**



Shock Mount  
PRSM

This flexible support system helps suppress low frequency rumble by dampening vibrations. The PRSM fits large diameter microphones including the PR 30/40/781 and can be used on all booms or stands with 5/8"x27" threading.

**PRSM-B** black finish. **HRO Price: \$99.00**

Switches

PTT Hand Switch  
HS-2



Heil's high quality hand switch made for PTT operation is shaped to fit your hand naturally and comfortably. Comes with a 6 foot cable that plugs into the AD-1 or CC-1 adapter. **HRO Price: \$35**

Single Circuit  
Foot Switch  
FS-3



Use the FS-3 to control the transmit function of your amateur radio. A 6-foot shielded cable is terminated with a commercial 1/4" plug that connects into the Heil CC-1 and AD-1 cable system. **HRO Price: \$35**

Mounts

Illuminated  
Base  
LB-1R

Red Finish with White Light  
**HRO Price: \$99.00**



Classic Base  
CB-1 PTT

This beautiful reproduction of a 1930 RCA microphone base has stainless trim and features a PTT with a 4" riser that accepts 5/8" x 27" hardware. **HRO Price: \$79**



Flange Mount  
FL-2

Basic mount with brass insert. Fits the PL-2T, SB-2, & HB-1. **HRO Price: \$29**



Desktop  
Flush Mount  
DT-1

Allows PL-2T, SB-2 and HB-1 to slip into 1-1/2" hole drilled into the desktop. **HRO Price: \$39**



Vertical  
Surface Mount  
WM-1

The WM-1 is a unique mount for the Heil booms that allows them to be mounted on a vertical surface. The brass insert of the WM-1 ensures smooth, perfect fit with PL-2T and HB-1. **HRO Price: \$29**



Audio Processor

Parametric Receive  
Audio System  
PRAS EQ



The Parametric Receive Audio System Equalizer (PRAS EQ) is an audio processor that enhances the internal audio systems of amateur radio, shortwave, commercial, and CB receivers. The PRAS EQ allows radio operators to modify, shape, and improve the audio output of their receivers using three separate EQ controls. The PRAS is supplied with a 2.5 mm barrel to Powerpole adapter cable and a 1/4" to 1/8" stereo adapter.

Booms

Studio Boom  
PL-2T

The PL-2T "Topless" boom is a unique articulated boom that lets you tuck your microphone cable away for a professional appearance. It accepts all Heil Sound 5/8" x 27" threaded microphone mounting clips. Includes a C-Clamp. It can support a total weight of 2.5 lbs. **HRO Price: \$115**



Small Boom  
SB-2

This compact, adjustable boom accepts standard 5/8" x 27" threading and comes with a C-Clamp. It is compatible with all Heil Sound hardware. **HRO Price: \$69**



Riser | RS-1

This 12" riser allows you to mount any Heil Sound boom behind your transceiver or console. **HRO Price: \$49**



Economy Mic Boom  
HB-1

The HB-1 is an articulated boom balanced by four external springs. It is capable of supporting microphones weighing up to 2.5 lbs. and any standard 5/8" x 27" threaded microphone hardware. The HB-1 is shipped with a C-Clamp mount that accepts up to a 1.5" thick table and is compatible with all Heil Sound hardware. **HRO Price: \$79**



Powered Speaker  
HPS-5

The Heil Powered Speaker (HPS-5) is a two-way powered speaker designed to be used with the PRAS. Together they provide unmatched speech articulation and bring new dimensions to receive audio quality. The HPS-5 features a 5" driver and a 24-watt amplifier. It comes with an XLR to XLR cable, a 2.5 mm barrel to Powerpole adapter cable, a 1/8" to 1/8" stereo source cable, and a 1/4" to 1/8" stereo adapter.





## HEIL HAM RADIO

### Pro Series



### Stereo and Selectable Elements \* PRO-7

The Pro 7 features an audio balance control allowing the user to adjust levels between speakers. It also features the Heil Sound Phase Reversal Switch, which allows the user to "move" the incoming signal to significantly improve copy in a tough DX pile up. The mic boom can be rotated for use on either the right or left ear. The Pro 7 is available in black or blue. Outfitted with the HC-7 dynamic element or the iC electret element, the HC 74 Element for DX is available separately. Compatible with current AD-1 series adapter cables.



### Professional and Lightweight PRO SET 3

Pro Set 3 stereo headphones are professional and lightweight designed for music recordings, internet, commercial radio, and ham radio. They ship with 3 detachable cables: a 1.8 M flexible straight cable, a 1.8 M straight cable with 3.5mm plug, and a 3 M coiled cable. All cables feature a twist lock terminating in a 1/8" (3.5mm) professional gold plated screw-on 1/4" (6.3mm) adapter. The Pro Set 3 features the Heil Sound Phase Reversal Switch, which allows the user to "move" the incoming signal to significantly improve copy in a tough DX pile up.

### Pro Series

### Improved Comfort \* PRO SET ELITE



The redesigned Pro Set Elite features improved comfort and durability. It offers dual side, highly efficient speakers mounted in acoustically tuned chambers which offer high rejection of outside noise. The headset folds for easy transport and storage and comes in two models. The Pro Set Elite-6 contains the Heil HC-6 full range dynamic microphone element and the Pro Set Elite-iC contains the Heil iC electret microphone element specifically designed for Icom.

### Application Specific \* PRO SETS



Pro Sets are lightweight, versatile boomsets with the Heil Sound Phase Reversal Switch, allowing the user to "move" the incoming signal to significantly improve copy in tough DX pile ups.

**Pro Set Media Pro** for computer has a high-level condenser element and two 1/8" plugs for applications requiring connection of a headset / boom mic to a computer's sound card.

**Pro Set 6** for commercial broadcast applications utilizes the HC-6 dynamic element. Requires AD-1 adapter.

**Pro Set iC** with electret condenser designed for low mic inputs used on many Icom transceivers. The iC requires 5 volts of DC phantom power (provided by all Icom rigs). Requires AD-IC or AD-ICM adapter.

Pro Set Accessories:  
**BAG -1** Leatherette travel bag for all Heil Sound headsets. **HRO Price: \$29**

\* Adaptor cable not included.  
Separate AD-1 cable required.

### Lightweight Headsets

### Handie Talkie Headset

These HTH single-sided and HTHD dual sided light weight headsets are designed for use with popular handheld transceivers featuring an in-line PTT.

Single Sided Model  
Dual Sided Model

HTH  
HTHD

HTH-K, HTHD-K works with 2-pin Kenwood, Baofeng, and Wouxun. HTH-i, HTHD-i works with 2-pin Icom. HTH-Y, HTHD-Y\* works with TRRS Yaesu / Vertex. \*For weather resistant Yaesu / Vertex, use the HTH-Y and HTH-ADY adapter.



\* BM-10

Only 3 oz. Has an articulate boomset that is ideal for DXpeditions, mobile, and general rag chewing. The speakers are extremely sensitive and don't require much AF drive from the transceiver. The frequency response is 60 Hz - 12 kHz with very low distortion. The ear pads are replaceable acoustic foam. AD-1 cable required.

### BM-17\*

The BM-17 is a new, lightweight headset designed for emergency communications available as either a single-side or dual-side model, with either a BM-17-Dynamic element or a BM-17-iC Electret element.

BM-17 Dynamic Dual  
BM-17 Dynamic Single  
BM-17 ICOM Dual  
BM-17 ICOM Single



### PRO MICRO PMS-6

The lightweight Pro Micro headsets are designed for commercial broadcast applications.

**Pro Micro iC** has an electret condenser designed for low mic inputs used on many Icom transceivers.

Requires 5 volts of DC phantom power (provided by all Icom rigs). Requires AD-IC or AD-ICM adapter.

Single  
Sided



## Palstar

### Keyer

### Electronic Keyer CW50A



The CW50A microprocessor-based electronic keyer works with any transmitter or transceiver.

A front panel speed control is continuously adjustable over the range of 10 to 40 WPM and is crystal controlled for high accuracy over the full voltage and temperature range. Your choice of Mode A or Mode B Iambic keying is just a rear panel switch away. Separate rear panel outputs for grid block or cathode keying are available.

A built-in sidetone generator and speaker with convenient front panel volume and pitch controls makes it easy to monitor your sending and also means the keyer can serve as a practice keyer for training purposes.

Spacing is adjustable to provide compensation for transmitters which distort the keying waveshape. Dash weight is adjustable to provide compensation for equipment that distorts the dash to space ratio.

The CW50A may be used with a straight key, semi-automatic (bug) keys and single lever or dual lever "squeeze" paddles. Why would you use an electronic keyer with a straight key or "bug"? Because the key closure and key opening are debounced. This is especially useful when using a bug with modern, high transfer speed, full break-in rigs.

The CW50A works with all tube and solid state rigs and is powered by either a 9V battery or an AC adapter (supplied - U.S. only). The front panel and top cover are finished with durable powdercoat. All needed plugs are included.

A reed relay mute circuit allows the keyer to be used with the Palstar R30 or other receiver when using a separate transmitter. The CW50A is even programmable to allow full or semi break-in when used with a separate transmitter/receiver combo.

If a separate receiver is not used, the reed relay becomes available as an additional keying output, and is jumper selectable to provide either a contact closure to ground or a +12VDC output. The CW50A Electronic Keyer to be the most versatile keyer on the market today.

## VIBROPLEX®

The high-quality **Benchner** product line is now part of the oldest name in Ham Radio, Vibroplex.

### Advanced Performance RJ SERIES HAND KEYS



The "RJ" hand keys have an advanced American-style design derived from the telegraph keys that won the west, yet with modern features like Oilite bearings, a solid navy knob, gold-plated solid silver contacts, full locking adjustments of all tension and spacing parameters, and Benchner quality materials throughout. These keys are ideal for the new amateur just mastering code as well as the old time brass pounder anxious to "clear the hook." This key offers the Morse code operator an investment that will bring years of pride and satisfaction. Try the Benchner "RJ" hand key at your nearby HRO. You will be convinced there is no better key available. **HRO Price: RJ-1 Black \$149.95 | RJ-2 Chrome \$179.95**

### Dust Covers PROTECT YOUR KEY

Keep your Vibroplex or Benchner in perfect working condition and protect it from harm with one of our dust covers. Elegantly styled and clear so you can enjoy the beauty of your key even while protected. **Various Models.**



### Single Lever Paddles ST SERIES

Superb Benchner features and construction for the ham who prefers single lever operation.

ST-1 Black - HRO Price: \$139.95  
ST-2 Chrome - HRO Price: \$164.95

### Iambic Paddles BY SERIES



You will enjoy the smooth, precise action of a Benchner paddle with any iambic keyer. These paddles feature a heavy steel base, gold plated silver contact points, non-skid feet, stainless steel adjustable spring, self-adjusting needle bearings, and large acrylic finger paddles.

BY-1 Black Base - HRO Price: \$169.95  
BY-2 Chrome - HRO Price: \$209.95

### Portable Oscillator

### Code Practice Oscillator CPO PLUS



Need to learn how to use a bug or straight key without the key connected to a radio? Now you can practice anywhere you wish with the portable oscillator. Our CPO with CP2 cable is ready to use.

Includes CPO board, speaker, cable. All you need to add is a 9V battery. 700 Hz tone from LM386 audio chip @350 mW output power. Not an electronic keyer - for use with bugs and straight keys only.

**HRO Price: \$29.95**



### Ham Radio's First Language

### MORSE CODE OPERATING

Tune in to the low end of any HF band, and you'll find it populated with ham radio operators using Morse code for casual conversations, chasing DX or fast paced contests.

Morse Code Operating for Amateur Radio is your introduction into the fascinating world of radio communication by Morse code, now simply called "CW". It discusses how to get started in the hobby, the advantages to learning and using Morse code, how to set up your station for CW and how to adjust your Morse code key. #0004  
**HRO Price: \$12.95**



# VIBROPLEX®

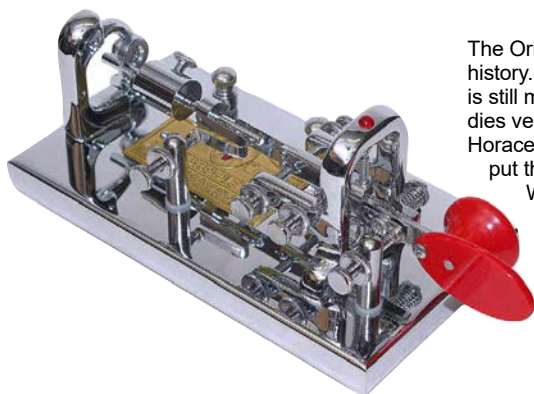
Quality & Pride Throughout!

## Non-Iambic Paddle VIBROKEYER

The Vibrokeyer is designed for those who prefer a non-iambic paddle. The single lever paddle imitates the automatic dots and dashes of the electronic keyer with the same motion used to operate the "Bug."

**Vibrokeyer Deluxe:** Highly polished decorative chrome base with bright chrome top parts. Silky smooth movements are jeweled as in fine Swiss watches. **HRO Price: \$219.95**

**Vibrokeyer Standard:** A neat, crisp black textured finish base with bright decorative chrome parts. Non-jeweled movement. **HRO Price: \$179.95**



## Iambic Paddle VIBROCUBE



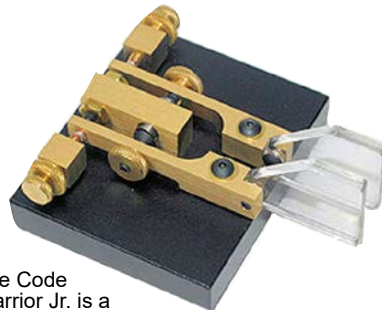
The Vibrocube registers just under 6 pounds on the scale. It is a large paddle that stays in place on the desk and accommodates a large hand comfortably. The base is USA-forged cold-rolled steel, upper components are zinc, steel and brass. The finger pieces are hard red acrylic. Instead of magnetic tensioning, we use a spring loaded method which provides a greater range of possible tension settings than magnets allow.

**Vibrocube Standard - HRO Price: \$209.95**

**Vibrocube-S-Upgrade - HRO Price: \$239.95**

**Vibrocube Deluxe** - Like the Standard version with jeweled upper and lower trunion screws, an all-chrome base and all-chrome top components. **HRO Price: \$289.95**

## Home/Portable CODE WARRIOR JR



The Code Warrior Jr. is a small footprint, steel base key with brass top parts and silver tipped copper contacts. Practical for home or portable use. Magnetic return action for wide range of tension adjustment. Weighs just 1 lb 10 oz. Budget priced. Available with black or blue base. **Code Warrior Jr BLACK - HRO Price: \$119.95**  
**Code Warrior Jr BLUE - HRO Price: \$129.95**

## Bright Finish CHROME WARRIOR



The Chrome Warrior is identical to the Code Warrior Jr. but has a decorative bright chrome polished steel base. **Chrome Warrior - HRO Price: \$159.95**

## Non-Iambic Paddle ORIGINAL

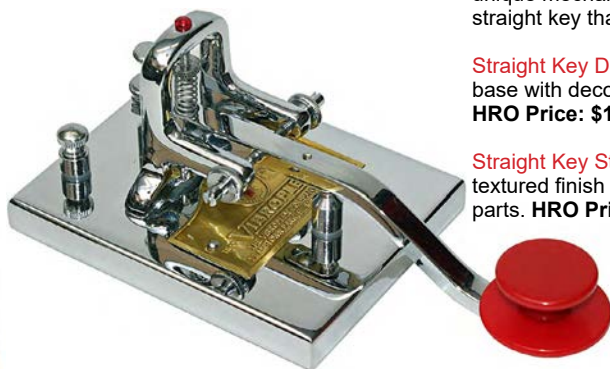
The Original Vibroplex is a genuine piece of history. First patented in 1894, the Original is still manufactured today using tools and dies very similar to those used by its inventor, Horace G. Martin. Modern-day operators can put their fist to the same equipment as the Western Union and railroad operators of old. **Original Deluxe pictured. HRO Price: \$279.95**

## Standard or Deluxe IAMBIC

This is the modern descendant of the Original. It incorporates the traditional Vibroplex look for use with modern electronic keyers.

**Iambic Deluxe:** Same as Presentation but without the 24K gold plated brass plate. **HRO Price: \$219.95**

**Iambic Standard:** A neat, crisp black textured finish base with bright decorative chrome top parts. **HRO Price: \$179.95**



## Standard or Deluxe STRAIGHT KEYS

Vibroplex® offers a STRAIGHT key with a unique mechanical action, unlike any other straight key that has ever been manufactured.

**Straight Key Deluxe:** Highly polished chrome base with decorative chrome top parts. **HRO Price: \$199.95**

**Straight Key Standard:** A neat, crisp black textured finish base with bright chrome top parts. **HRO Price: \$164.95**

## DIAMOND ANTENNA

### HF - SHF | SX-1100



### HF - UHF SX-240C



All models:

- Illuminated meters.
- Require 12 volts DC. Plug Included.
- Low insertion loss generally less than 0.2 dB in HF range and 0.3 dB at higher frequencies.
- Power measurement accuracy generally  $\pm 10\%$  on higher power ranges and  $\pm 5\%$  on the lower.
- Low loss SO-239 connectors are used except for the high frequency models as noted in the table.
- Measurements are forward power, reflected power, SWR and, on selected frequencies, PEP monitor.

### Diamond Meters

Model	Freq MHz	PWR Watts	IN/ OUT	HRO Price
SX-100	1.6-60	30 300 3000	SO-239	\$124.95
SX-200	1.8-200	5 20 200	SO-239	\$95.95
SX-240C	3.5-30 50-54 130-150 430-450	30 300 3000	SO-239	\$319.95
SX-400	140-525	5 20 200	SO-239	\$109.95
SX-600	1.8-160 140-525	5 20 200	SO-239	\$189.95
SX-1100	1.8-160 430-450 800-930 1230-1300	5 20 200	SO-239 + N-Type	\$254.95

### METER QUESTIONS? HRO HAS THE ANSWERS!

We are here to help. Ham Radio Outlet salespeople are available to answer your questions about Wattmeters, SWR meters, and more. Simply contact your local HRO store for assistance.

## Palstar



### Remote Coupler PM2000A

The PM2000A measures and displays forward power (up to 2000 W), reflected power, and SWR simultaneously on its dual movement meter system in the frequency range of 1.8 MHz to 60 MHz. Accuracy of the readings is assured because the PM2000A features a true shielded directional coupler. The backlit meter can display either peak or average power readings with a Peak Hold function, and has 300 and 2000 watt range settings.

The PM2000AM mobile version has a remote coupler that can be mounted up to 14' from the display head.

- PL259 coax connector.
- 115 VAC to 12 VDC adapter included.
- Size: 4.5" x 3.25" x 3.25" deep.
- Weight 1.2 lbs. / 0.55 Kg.

**PM-2000A - HRO Price: \$344.95**  
**PM-2000AM - HRO Price: \$344.95**

### Digital Vector Wattmeter LP-100A



LP-100A is an industry standard reference power meter. More than two dozen are in use at major ham

manufacturers' facilities for testing, checkout, calibration, etc. No other meter has dual bargraphs, OR a graphic display with solid bargraphs, OR bargraph with 90 bars for fine tuning of Power and SWR, OR an SWR alarm with snooze mode, OR a "sticky" bar for graphic peak hold indication... let alone having them all on one screen!

- Standard LPC1 coupler (1.8 to 54 MHz, 3KW)
- 6 ft. connecting cables between coupler and main unit
- Power cable with tinned ends for connection to +12VDC
- Also includes VCP, Plot and MCLoader software
- 11 band NIST calibration

**LP-100A 3K - HRO Price: \$589.95**  
**LP-100A 5K - HRO Price: \$629.95**



## DAIWA



### Cross Needle CN-501H

- Cross needle design reads forward, reverse and VSWR simultaneously, no calibration required.
- Easy to read meter.
- PEP monitor function.
- Illuminated meter, 12 VDC plug provided.

### Specifications

	CN-501H	CN-501H2
Frequency Range	1.8-150 MHz	1.8-150 MHz
Power Range	15 / 150 / 1.5 KW	20 / 200 / 2 KW
Rating	1.5KW (1.8-60 MHz 1KW (144 MHz)	1.5KW (1.8-60 MHz 1KW (144 MHz)
SWR Detection	4 W Minimum	4 W Minimum
Price	\$124.95	\$129.95



### Professional Series CN-901HP3

- Easy to read, illuminated, extra large meter face with mirrored graph in .5 watt increments.
- Cross needle design reads forward, reverse and VSWR simultaneously, no calibration required.
- CN-901HP3 is the new 3000 watt version.
- 12 VDC plug provided.

### Specifications

	CN-901 HP3	CN-901 V	CN-901 G
Frequency Range MHz	1.8-200	140-525	900-1400
Power Range Watts	20/200/3K	20/200	2/20
Impedance	50 ohm	50 ohm	50 ohm
Connectors	SO-239	SO-239	N-Type
SWR Detection	5 W Min	5 W Min	.5 W Min
Price	\$239.95	\$174.95	\$279.95





VHF/ UHF Wide-Band Mobile Antenna  
Wireless Communication Antenna Expert Since 1981

Wide-Band

Mobile Antenna - NO TUNING Needed

MODEL	Freq.	Bandwidth MHz	Wave	Gain (Peak)	Description	Overall Length
VH-1228S	136-174	38	1/4 Wave	Unity	w/spring	20"
VH-1228SB	136-174	38	1/4 Wave	Unity	Black w/spring	20"
VH-1229	145-165	20	1/2 Wave	4.5 dBi with ground plane	w/o spring	39"
VH-1229S	145-165	20	1/2 Wave	4.5 dBi with ground plane	w/spring	38"
VH-1229B	145-165	20	1/2 Wave	4.5 dBi with ground plane	Black w/o spring	39"
VH-1229SB	145-165	20	1/2 Wave	4.5 dBi with ground plane	Black w/spring	38"
UH-415S	380-520	140	1/2 Wave	4.5 dBi with ground plane	w/spring	11"
UH-415SB	380-520	140	1/2 Wave	4.5 dBi with ground plane	Black w/spring	11"
UH-416S	406-470	64	1/2 Wave	5 dBi with ground plane	w/spring	12"
UH-416SB	406-470	64	1/2 Wave	5 dBi with ground plane	Black w/spring	12"
UH-417	440-480	40	5/8 over 1/2 Wave	6.5 dBi with ground plane	w/o spring	30"
UH-417S	440-480	40	5/8 over 1/2 Wave	6.5 dBi with ground plane	w/spring	31"
UH-417B	440-480	40	5/8 over 1/2 Wave	6.5 dBi with ground plane	Black w/o spring	30"
UH-417SB	440-480	40	5/8 over 1/2 Wave	6.5 dBi with ground plane	Black w/spring	31"
NEW OP-1229W	148-174	26	1/2 Wave - No Ground Plane	4.5 dBi with ground plane	w/o spring	34.8"
NEW OP-1229WB	148-174	26	1/2 Wave - No Ground Plane	4.5 dBi with ground plane	Black w/o spring	34.8"
NEW OP-1229SW	148-174	26	1/2 Wave - No Ground Plane	4.5 dBi with ground plane	w/spring	34"
NEW OP-1229SWB	148-174	26	1/2 Wave - No Ground Plane	4.5 dBi with ground plane	Black w/spring	34"

VH-1228S	VH-1229	VH-1229S	OP-1229W	UH-415S	UH-416S	UH-417	UH-417S
VH-1228SB	VH-1229B	VH-1229SB	OP-1229WB	UH-415SB	UH-416SB	UH-417B	UH-417SB
Freq. SWR	Freq. SWR	Freq. SWR	Freq. SWR	Freq. SWR	Freq. SWR	Freq. SWR	Freq. SWR
136 <1.88:1	145 <1.87:1	145 <1.90:1	148 <1.78:1	380 <1.86:1	406 <1.62:1	440 <1.43:1	440 <1.58:1
145 <1.48:1	150 <1.42:1	150 <1.35:1	154 <1.59:1	430 <1.48:1	422 <1.09:1	450 <1.21:1	450 <1.31:1
155 <1.23:1	155 <1.30:1	155 <1.25:1	158 <1.27:1	450 <1.39:1	438 <1.25:1	460 <1.19:1	460 <1.18:1
165 <1.69:1	160 <1.47:1	160 <1.55:1	162 <1.21:1	470 <1.23:1	464 <1.47:1	470 <1.42:1	470 <1.36:1
174 <1.98:1	165 <1.95:1	165 <2.00:1	174 <1.65:1	490 <1.40:1	470 <1.65:1	480 <1.62:1	480 <1.57:1
				520 <1.82:1			



PRODUCTS MADE IN TAIWAN

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VHF / UHF Heavy-duty  
High Performance Base Antenna  
Wireless Communication Antenna Expert Since 1981

4 Section - Aluminum Base Antenna

BS-110 VHF 107-112MHz, 6.0 dBd Gain, 4-Sec. Aluminum Tube  
BS-150 VHF 136-174MHz, 6.0 dBd Gain, 4-Sec. Aluminum Tube  
BS-450 UHF 406-512MHz, 5.0 dBd Gain, 4-Sec. Aluminum Tube

1 Section - Fiberglass Base Antenna

VH-2200 VHF 118-174MHz, Omni, 4.5 dBd Gain, 200 Watts  
VH-2201 VHF 136-174MHz, Omni, 4.5 dBd Gain, 200 Watts  
UH-2401A UHF 400-470MHz, Omni, 6.5 dBd Gain, 200 Watts  
UH-2401B UHF 430-490MHz, Omni, 6.5 dBd Gain, 200 Watts  
UVS-100A VHF:144-148MHz (4.5 dBd) / UHF:430-440MHz(6.5 dBd), Omni, 200 Watts  
UVS-100B VHF:144-148MHz (4.5 dBd) / UHF:440-450MHz(6.5 dBd), Omni, 200 Watts

2 Section - Fiberglass Base Antenna

UVS-200A VHF:144-148MHz (6.0 dBd) / UHF:430-440MHz(8.0 dBd), Omni, 200 Watts  
UVS-200B VHF:144-148MHz (6.0 dBd) / UHF:440-450MHz(8.0 dBd), Omni, 200 Watts  
VH-2202 VHF 136-174MHz, Omni, 6.7 dBd Gain, 200 Watts  
TS-20 TRI-BAND 146MHz (6.5dBi) / 220MHz (7.8dBi) / 445MHz (9.0dBi), Omni Fiberglass Base Repeater Antenna, VSWR: <= 1.5 : 1, Power : 120W Max.

3 Section - Fiberglass Base Antenna

UVS-300A VHF:144-148MHz (8.3 dBd) / UHF:430-440MHz(11.7 dBd), Omni, 200 Watts  
UVS-300B VHF:144-148MHz (8.3 dBd) / UHF:440-450MHz(11.7 dBd), Omni, 200 Watts

Model	Frequency	Gain	Imped.	Max.Power	VSWR	Mast Diameter Accepted	Connector	Length (Meters)	Description
VH-2200	118 - 174 MHz	4.5 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	1.93M	1-Sec. Fiberglass
VH-2201	136 - 174 MHz	4.5 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	1.70M	1-Sec. Fiberglass
VH-2202	136 - 174 MHz	6.7 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	3.65M	2-Sec. Fiberglass
UH-2401A	400 - 470 MHz	6.5 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	1.50M	1-Sec. Fiberglass
UH-2401B	430 - 490 MHz	6.5 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	1.50M	1-Sec. Fiberglass
BS-110	107 - 112 MHz	6.0 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	3.44M	4-Sec. Fiberglass
BS-150	136 - 174 MHz	6.0 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	3.40M	4-Sec. Fiberglass
BS-450	406 - 512 MHz	5.0 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	1.10M	4-Sec. Fiberglass
UVS-100A	144-148 / 430-440	4.5 / 7.2 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	1.85M	1-Sec. Fiberglass
UVS-100B	144-148 / 440-450	4.5 / 7.2 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	1.85M	1-Sec. Fiberglass
UVS-200A	144-148 / 430-440	6.0 / 8.0 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	2.50M	2-Sec. Fiberglass
UVS-200B	144-148 / 440-450	6.0 / 8.0 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	2.50M	2-Sec. Fiberglass
UVS-300A	144-148 / 430-440	8.3 / 11.7 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	5.20M	3-Sec. Fiberglass
UVS-300B	144-148 / 440-450	8.3 / 11.7 dBd	50Ω	200W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	5.20M	3-Sec. Fiberglass
TS-10	52/146/445 MHz	3.5 / 6.2 / 8.6 dBi	50Ω	150W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	2.40M	2-Sec. Fiberglass
TS-20	146/220/445 MHz	6.5 / 7.8 / 9.0 dBi	50Ω	120W	≤ 1.5	30-62 Ømm	UHF Jack(SO-239)	3.10M	2-Sec. Fiberglass

PRODUCTS MADE IN TAIWAN

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HF Band / Dual Band / Cellular Antenna  
Wireless Communication Antenna Expert Since 1981

Low-Profile NO TUNING Needed

MODEL	Freq.	V.S.W.R	Gain (Peak)	Description
CP-705W	698 - 960 MHz	≤ 2.0	3.0 dBi	—
CP-705WM	1700 - 2700 MHz	≤ 2.0	3.0 dBi	W/ NMO Type Magnetic Mount 17Ft. RG-58U + PL-259 Plug
CP-715-NMO	617 - 960 MHz 1500- 2110 MHz 2110- 2700 MHz	≤ 2.0	3.0 dBi 5.5 dBi 4.5 dBi	Full Band Cellular Antenna
VH-1582N	150- 158 MHz	≤ 2.0	2.0 dBi	No Ground Plane Antenna
UH-4603N	450- 480 MHz	≤ 2.0	2.0 dBi	No Ground Plane Antenna



Cellular Ant. NO TUNING Needed

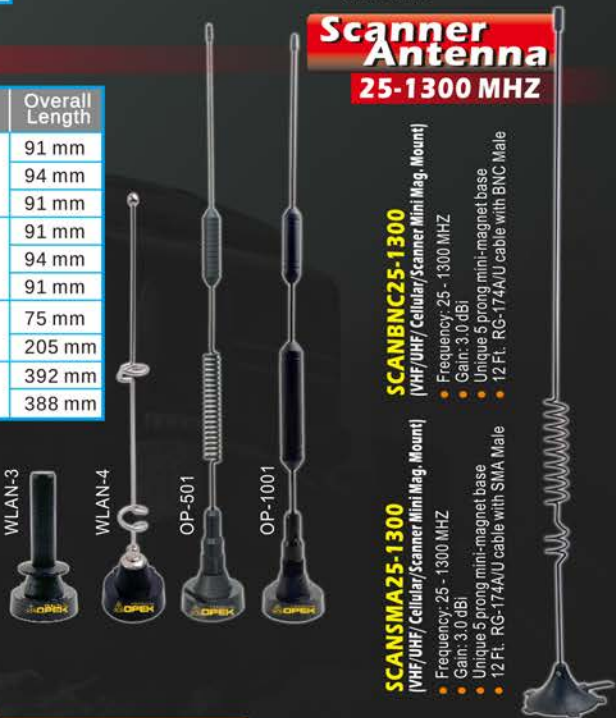
MODEL	Freq.	V.S.W.R	Gain (Peak)	Description	Overall Length
CPM-701	698 - 960 MHz	≤ 2.0	3.0 dBi	Ø37mm MINI Magnetic Mount 9FT. RG174A/U Coax. Cable	91 mm
CPM-702	1700 - 2700 MHz	≤ 2.0	3.0 dBi	W/ PL-259 or BNC Male SMA Male N Type Male	94 mm
CPM-703	698 - 960 MHz	≤ 2.0	3.0 dBi	Ø29mm MINI Magnetic Mount 9FT. RG174A/U Coax. Cable	91 mm
CPM-711	1700 - 2700 MHz	≤ 2.0	3.0 dBi	W/ PL-259 or BNC Male SMA Male N Type Male	94 mm
CPM-712	698 - 960 MHz	≤ 2.0	3.0 dBi	W/ PL-259 or BNC Male SMA Male N Type Male	91 mm
CPM-713	1700 - 2700 MHz	≤ 2.0	3.0 dBi	W/ PL-259 or BNC Male SMA Male N Type Male	91 mm
WLAN-3	850 - 1200 MHz 2200 - 2600 MHz	≤ 2.0	3.0 dBi	WLAN Cellular Antenna	75 mm
WLAN-4	2200 - 2600 MHz	≤ 2.0	5.0 dBi	WLAN Cellular Antenna	205 mm
OP-501	698 - 960 MHz	≤ 2.0	5.0 dBi	Full Band Cellular Antenna	392 mm
OP-1001	1700 - 2700 MHz	≤ 2.0	5.0 dBi	Full Band Cellular Antenna	388 mm



Scanner Antenna 25-1300 MHz

SCANBNC25-1300 (VHF/UHF Cellular/Scanner Mini Mag. Mount)  
• Frequency: 25 - 1300 MHz  
• Gain: 3.0 dBi  
• Unique 5 prong mini-magnet base  
• 12 Ft. RG-174A/U cable with BNC Male

SCANSMA25-1300 (VHF/UHF Cellular/Scanner Mini Mag. Mount)  
• Frequency: 25 - 1300 MHz  
• Gain: 3.0 dBi  
• Unique 5 prong mini-magnet base  
• 12 Ft. RG-174A/U cable with SMA Male



Dual Band VHF / UHF CUT TUNING



HF Band Telescopic Antenna

NEW OP-SS-17F (17 Ft. Fully Extended Whip (24" collapsed))

- Ten Sections
- Stainless Steel Construction
- Standard 3/8"- 24T Mounting Stud
- 7/8" Diameter Bottom Section Tube
- 1/4" Diameter Top Section Tube
- 1"Diameter by 2" Long Stainless Steel Bass
- 5/16 Inch Diameter Round Top Ball
- Affixed to a Base Mount for 1/4 Wave Vertical Use or a Dipole Mount
- For full 1/4 Wave operation on 20 Meters without loading coil, and 30 / 40 / 60 / 80 / 160 Meters with loading coil.

PRODUCTS MADE IN TAIWAN

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Marine Antenna / Multi-band Antenna  
Wireless Communication Antenna Expert Since 1981

Marine Antenna

MFV-5 MFV-5MH (5 Ft. Antenna Only, W/O Mount & Hardware) (With AM-901 Mount & Hardware)

- FREQUENCY: 156-162 MHz
- GAIN: 3.0 dBd (5.0 dBi)
- ANTENNA LENGTH: 5 FT. (Fiberglass Rod)
- Nylon Ratchet Mount (Optional) With 1" x 14 Thread Mounts To Any Surface At Any Angle And Is Completely Adjustable
- Complete With Stainless Steel Mounting Hardware & 6M RG-58U White Cable Attached With PL-259 Plug



MFV-8 MFV-8MH (8 Ft. Antenna Only, W/O Mount & Hardware) (With AM-901 Mount & Hardware)

- FREQUENCY: 156-162 MHz
- GAIN: 6.0 dBd (8.0 dBi)
- ANTENNA LENGTH: 8 FT. (Fiberglass Rod)
- Nylon Ratchet Mount (Optional) With 1" x 14 Thread Mounts To Any Surface At Any Angle And Is Completely Adjustable
- Complete With Stainless Steel Mounting Hardware & 6M RG-58U White Cable Attached With PL-259 Plug



VH-3200CX (3Ft.S.S Marine Antenna)

- FREQUENCY: 156-162 MHz
- GAIN: 3.0 dBd (5.0 dBi)
- VSWR: Less Than 1.5:1
- 250 Watts Max. Power Handling
- Low-Profile, Ideal For Rooftop Mounting
- Specifically Designed For Use On Fiberglass And Wooden Marine Crafts
- Complete With An "L"-Type Mounting Bracket And 15FT. RG-58U White Cable With PL-259 Plug On Both Ends



VH-3210 (3.4 Ft.S.S Marine Antenna)

- FREQUENCY: 156-162 MHz
- GAIN: 3.0 dBd (5.0 dBi)
- VSWR: Less Than 1.5:1
- 200 Watts Max. Power Handling
- Low-Profile, Ideal For Rooftop Mounting
- Specifically Designed For Use On Fiberglass And Wooden Marine Crafts
- Complete With An "L"-Type Mounting Bracket And 15FT. RG-58U White Cable With PL-259 Plug On Both Ends



Marine Antenna Mount

AM-901 AM-903 AM-907 AM-908



Multi-Band Antenna



Model	Freq.	V.S.W.R	Max.Power	Connection	Description
HVT-400B (8-Band)	• 1/4λ : ~ 80M (3.75 MHz) • 15M (21.1 MHz) • 2M (146MHz) • 40M (7.15 MHz) • 10M (28.5 MHz) • 70cm (445MHz) • 5/8λ : 2M (145MHz) • AIR BAND (118/136 MHz)	LOW	120W	UHF Plug (PL-259)	• USE JUMPER WIRE TO CHANGE FREQ. BAND • RETRACTABLE TELESCOPIC WHIP FOR BEST TX/RX TUNING
HVT-600 (10-Band)	• 1/4λ : ~ 80M (3.75 MHz) • 20M (14.15 MHz) • 12M (24.95 MHz) • 2M (146MHz) • 40M (7.15 MHz) • 17M (18.2 MHz) • 10M (28.5 MHz) • 30M (10.1MHz) • 15M (21.1 MHz) • 6M (52 MHz)	LOW	120W	UHF Plug (PL-259)	• USE JUMPER WIRE TO CHANGE FREQ. BAND • RETRACTABLE TELESCOPIC WHIP FOR BEST TX/RX TUNING

PRODUCTS MADE IN TAIWAN

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Power Supply

Wireless Communication Antenna Expert Since 1981

OP-PS3001D 30 Amp Digital Switching Power Supply

Output : 4 to 16 VDC / Max. Current : 30 Amp / 115/230 VAC Input Power Selector Switch



Main Features:

- Input Voltage : 100~120 VAC or 200-240 VAC fixed
- Output Voltage : 4 to 16 VDC
- Amp Rating (13.8V) : 25A continuous / 30A Surge
- DC Output : Binding Posts (Front)
- DC Output : Dual (Anderson) Powerpole connectors (Rear)
- AC Input : Power cord socket
- Display : 2 inches backlit LCD (Volts / Amps)
- Temperature controlled Cooling fan
- Dimensions : 154 x 127 x 63 (6"x5"x2.5")
- Weights : 3.14 lbs

CE FC UK IC RoHS

OP-PS3002 30 Amp Switching Power Supply

Output : 13.8 VDC / Max. Current : 30 Amp / 115 VAC Input Power



Main Features:

- Input Voltage : 115 VAC fixed
- Output Voltage : 13.8 VDC fixed
- Amp Rating (13.8V) : 25A continuous / 30A Surge
- DC Output : Dual (Anderson) Powerpole connectors (Front)
- DC Output : Binding Posts (Rear)
- AC Input : Power cord socket
- Temperature controlled Cooling fan
- Dimensions : 160 x 125 x 60 (6.3"x5"x2.4")
- Weights : 3.2 lbs

CE FC UK IC RoHS

Additional Accessory

AM-PS1

Mounting Bracket For  
OP-PS3001D  
OP-PS3002



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VHF / UHF SWR Meter

Wireless Communication Antenna Expert Since 1981

SWR-2 CB / VHF SWR METER

- Impedance: 50  $\Omega$
- Frequency: 1.7 - 30 MHz
- Accuracy:  $\pm 5\%$
- Power Measurement: 10 Watts
- Dimensions: 85(W) x 56(H) x 75(D) mm

SWR-3 CB / VHF SWR METER

SWR / POWER / FIELD STRENGTH

- Impedance: 50  $\Omega$
- Frequency: 1.7 - 150 MHz
- Accuracy:  $\pm 5\%$ (SWR),  $\pm 10\%$ (POWER)
- RF-Power Range: 0-10 W / 0-100 W
- Dimensions: 145(W) x 52(H) x 57(D) mm

NEW

SWR-9 DIGITAL SWR / POWER METER

Features

- Impedance: 50  $\Omega$
- Large LCD (3.5") Display for Easy of Reading.
- Forward / Reflected Power / VSWR Ratio in One Push Button.
- LCD Backlight Display.
- Convenient Control Layout for Easy Operation.
- DC 12V Wire.

MODEL	SWR-9
Frequency Range	1.6 - 60 MHz / 125 - 525 MHz
Calibration Point	14MHz / 50MHz / 145MHz / 435MHz
Power Range	0 - 200W
Accuracy	(+ / - 5%)
Min. Power for SWR	1W
Input/ Output Connector	SO-239 ( N-type Female Option)
Weight (Net)	750g
Insertion Loss	Less than 0.1 dB
Testing Function	FWD / REF Power & VSWR Ratio
Input/ Output Impedance	50 Ohms
Dimension (W/H/D) mm	140 x 84 x 122

PRODUCTS MADE IN TAIWAN



SWR-6 CB / VHF SWR/POWER METER

SWR-6L SWR / POWER Meter With LED Light

- Impedance: 50  $\Omega$
- Frequency: 1.6 - 60 MHz
- Power Range: 0 - 2KW
- Power Scale: 20 / 200 / 2KW
- Max. Power: 2KW
- Tolerance: 10% Full Scale
- Dimensions: 140(W) x 84(H) x 122(D) mm



SWR-7 CB SWR / POWER METER

SWR-7L SWR / POWER Meter With LED Light

- Impedance: 50  $\Omega$
- Frequency: 26 - 30 MHz
- Power Range: 0 - 2KW
- Power Scale: 20 / 200 / 2KW
- Max. Power: 2KW
- Tolerance: 10% Full Scale
- Dimensions: 140(W) x 84(H) x 122(D) mm



SWR-8 V / UHF SWR / POWER METER

SWR-8L SWR / POWER Meter With LED Light

- Impedance: 50  $\Omega$
- Frequency: 144-160 MHz (VHF) / 420-460MHz (UHF)
- Power Range: 0 - 200W
- Power Scale: 2 / 20 / 200W
- Max. Power: 200W
- Tolerance: 10% Full Scale
- Dimensions: 140(W) x 84(H) x 122(D) mm

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Brackets / Mount / NMO Kits

Wireless Communication Antenna Expert Since 1981

Fender Brackets



**AM-422**  
Antenna NMO 3/4" Hole L Bracket  
• Stainless Steel #304

**AM-422B**  
Antenna NMO 3/4" Hole L Bracket  
• Stainless Steel #304  
• Black Coating

NMO Type Antenna Ground Plane Kit



**NMO-410**  
NMO Type Antenna Ground Plane Kit W/ N Connector  
• NMO Mount to N female Connector  
• Max Power: 200 W  
• 7 1/8" (180mm) Ground Plane Steel Radials  
• Includes Stainless Mounting Hardware  
• Easy Installation on Any 2" (5cm) Pole or Pipe (Not Included)

NMO Type Adapters



**NMO-1**  
3/4" Hole NMO Mount Kit  
• Brass Body  
• Teflon Insulator, O-Ring, Gold Plated Contact and ABS Connection Cover

**NMO-1-N**  
3/4" Hole NMO Mount Kit (Nickel)  
• Brass Body (Nickel Plated)  
• Teflon Insulator, O-Ring, Gold Plated Contact and ABS Connection Cover

**NMO-2**  
3/8" Hole NMO Mount Kit  
• Brass Body  
• Teflon Insulator, O-Ring, Gold Plated Contact and ABS Connection Cover

**NMO-2-N**  
3/8" Hole NMO Mount Kit (Nickel)  
• Brass Body (Nickel Plated)  
• Teflon Insulator, O-Ring, Gold Plated Contact and ABS Connection Cover



**NMO-3-1**  
NMO to UHF-Female Adapter (1-Inch Long Type)  
• 1" Thick Mount  
• UHF-Female (SO-239) Connector  
• For 5/8" Hole  
• Overall Length: 25.4mmL

**NMO-3**  
NMO to UHF-Female Adapter (2-Inch Long Type)  
• 2" Thick Mount  
• UHF-Female (SO-239) Connector  
• For 5/8" Hole  
• Overall Length: 52.5mmL



**NMO-3UA**  
Heavy-duty NMO to UHF-Female Adapter (1-Inch Long Type)  
• 1" Thick Mount  
• UHF-Female (SO-239) Connector  
• For 5/8" Hole  
• Overall Length: 25.4mmL



**NMO-4**  
NMO to N-Female Adapter (1.5-Inch Long Type)  
• Up to 1/2" Thick Mount  
• N-Female Connector  
• For 5/8" Hole  
• Overall Length: 40.5mmL

NMO Accessories



**NMO-6**  
NMO Antenna Connector to 3/8 x 24T  
• For 3/8-24T Thread Base Antenna  
• Diameter: ~ 1.50 Inches

**NMO-8**  
NMO Antenna Connector to UHF Female (SO-239) Adapter  
• For UHF Base Antenna  
• Diameter: ~ 1.50 Inches

**NMO-5**  
Rain Cap Cover for NMO Connector  
• NMO Thread  
• Dust-Rain Protector for NMO Connector  
• Black ABS Plastic

**NMO-34**  
3/4" NMO Hole Rubber Plug Cover  
• Dust-Rain Protector for 3/4" for NMO Hole  
• Black Rubber



Antenna Brackets / Mount Kits

Wireless Communication Antenna Expert Since 1981

Mirror Brackets



**AM-305**  
Mirror/Clamp-on Antenna Bracket 3/4" Hole W/Hardware

**AM-306**  
Large Mirror/Clamp-on Antenna Bracket 3/4" Hole W/Hardware

**AM-303 (Cable Kit)**  
Mirror/Clamp-on NMO Stainless Steel Mount Kit. 17 Ft. RG-58U cable with RF Connector.

Fender Brackets



**AM-408**  
DODGE RAM (09-23) "Old Body Style" Antenna Bracket 3/4" Hole  
• Fits '93 to '08 series  
• Fits '01 to '07 GMC Sierra and '00 to '05 Yukon

**AM-409**  
CHEV / GMC Antenna L Bracket 3/4" Hole  
• Fits '93 to '08 series  
• Fits '01 to '07 GMC Sierra and '00 to '05 Yukon

**AM-410**  
FORD (17-UP) F250/350/450/550 Antenna Bracket 3/4" Hole  
• Fits '17 to '23 Ford Super Duty F250, F350, F450 and F550 (Passenger's Side)  
• Fits '23 to '24 Ford Super Duty F250, F350, F450 and F550 (Driver's Side)

**AM-411**  
FORD F150 (21-UP) & F250/350/450/550 (17-UP) Antenna Bracket 3/4" Hole (Both Side)  
• Fits '21 to '23 Ford F150 (Driver's Side)  
• Fits '17 to '22 Ford Super Duty F250, F350, F450 and F550 (Driver's Side)  
• Fits '23 to '24 Ford Super Duty F250, F350, F450 and F550 (Passenger's Side)



**AM-412**  
FORD F150 (15-23) Antenna Bracket 3/4" Hole  
• Fits '15 to '20 Ford F150. Compatible with '21-'23 with Tighter Fitting to the Body. Alteration may be required.  
• Fits '15 to '18 Ford Raptor  
• Fits '13 to '18 Toyota Rav4

**AM-413**  
CHEV / GMC (14-19) Silverado/Sierra Antenna Bracket 3/4" Hole  
• Fits '14 to '18 Chevrolet Silverado  
• Fits '19 Chevrolet Silverado (non crew cab models)  
• Fits '14 to '18 GMC Sierra  
• Fits '19 GMC Sierra (non crew cab models)

**AM-414**  
DODGE RAM 1500 (19-UP) Antenna Bracket 3/4" Hole (Driver's Side)  
• Fits '19, '20, '21, '22 Dodge Ram 1500 (New body style). Does not fit classic version.

**AM-415**  
DODGE RAM 1500 (19-UP) Antenna Bracket 3/4" Hole (Passenger's Side)  
• Fits '19, '20, '21, '22 Dodge Ram 1500 (New body style). Does not fit classic version.



**AM-416**  
CHEV / GMC (19-20) Silverado/Sierra Antenna Bracket 3/4" Hole  
• Fits '19 Chevrolet Silverado (Crew Cab models)  
• Fits '19 GMC Sierra (Crew Cab models)  
• Fits '20 Chevrolet Silverado (High Country, LTD, LTZ LTD, LT Trail Boss, RST)  
• Fits '20 GMC Sierra (AT4, Denali, Elevation, SLE, SLT)

**AM-417**  
DODGE RAM 2500-5500 (19-UP) Antenna Bracket 3/4" Hole  
• DODGE RAM 2500 - 5500 ('19-UP) (Driver's Side)  
• Fits '19, '20, '21, '22 Dodge Ram 2500, 3500, 4500, 5500 (New Body Style).

**AM-418**  
DODGE RAM 2500-5500 (19-UP) Antenna Bracket 3/4" Hole  
• DODGE RAM 2500 - 5500 ('19-UP) (Passenger's Side)  
• Fits '19, '20, '21, '22 Dodge Ram 2500, 3500, 4500, 5500 (New Body Style).

**AM-420**  
CHEV / GMC (21-22) Silverado/Sierra Antenna Bracket 3/4" Hole  
• Fits '17 to '22 GMC Acadia  
• Fits '19 Chevrolet Silverado (Crew Cab Models)  
• Fits '19 GMC Sierra (Crew Cab Models)  
• Fits '20 to '22 Chevrolet Silverado (High Country, LTD, LTZ LTD, LT Trail Boss, RST)  
• Fits '20 to '22 GMC Sierra (AT4, Denali, Elevation, SLE, SLT)

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Radio Manuals

Nifty Mini-Manuals

Fully laminated, spiral bound booklets, 4.25 x 8 inches, providing simplified step-by-step instructions for all your radio's features. These short-form manuals are smaller, more durable, and easier to use than manuals normally supplied with a radio.

YAESU

Model	Description	HRO Price
NIFTY-FT710	Mini-Manual	\$29.95
NIFTY-FT891	Mini-Manual	\$23.95
NIFTY-FT991A	Mini-Manual	\$31.95
NIFTY-FTDX101D/MP	Mini-Manual	\$29.95
NIFTY-FT3DR	Mini-Manual	\$26.95
NIFTY-FT5DR	Mini-Manual	\$26.95
NIFTY-FTM500DR	Mini-Manual	\$31.95
NIFTY-FTDX5000/MP	Mini-Manual	\$16.95
NIFTY-FTM-100DR	Mini-Manual	\$4.00
NIFTY-FTM-300DR	Mini-Manual	\$35.95
NIFTY-FTDX10	Mini-Manual	\$29.95
NIFTY-FTM-200DR	Mini-Manual	\$19.95
NIFTY-FT60R	Reference Card	\$9.95
NIFTY-FT65R	Reference Card	\$9.95
NIFTY-FT70DR	Mini-Manual	\$21.95
NIFTY-FTM400XDR	Mini-Manual	\$28.95
NIFTY-VX6R	Mini-Manual + Reference Card	\$24.95
NIFTY-FTM-6000R	Mini-Manual	\$21.95

KENWOOD

Model	Description	HRO Price
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NIFTY-TM-D710G	Mini-Manual	\$26.95
NIFTY-TM-V71A	Mini-Manual	\$21.95
NIFTY-TS-480S/HX	Mini-Manual	\$19.95
NIFTY-TS-590SG	Mini-Manual	\$28.95
NIFTY-TS-890S	Mini-Manual	\$34.95

ALINCO

Model	Description	HRO Price
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MISCELLANEOUS

Model	Description	HRO Price
NIFTY-MM-BandPlan	Amateur Radio Band Plan	\$11.95
NIFTY-D-STAR-BOOK	E-Z Guide to D-Star Operations Book	\$18.95
NIFTY-MMDXFIELD	DX Field Guide Book	\$21.95
NIFTY-PSK31-BOOK	E-Z Guide to PSK31 Operations	\$14.95
NIFTY-RADIO MG	Radio Monitoring Guide	\$21.95
NIFTY-ECHOLINK-BOOK	Guide to Echolink	\$18.95
NIFTY-K3S	Mini-Manual Elecraft K3S	\$26.95
NIFTY-KX2	Mini-Manual Elecraft KX2	\$28.95
NIFTY-KX3	Mini-Manual Elecraft KX3	\$28.95

ICOM

Model	Description	HRO Price
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NIFTY-IC-9700	Mini-Manual IC-9700	\$35.95
NIFTY-IC-705	Mini-Manual IC-705	\$33.95
NIFTY-ID-4100	Mini-Manual ID-4100	\$28.95
NIFTY-ID-5100	Mini-Manual ID-5100	\$30.95



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GROL+	Get Your Commercial Radio License Book	\$49.95
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Radio Guides

Rather than duplicate the manufacturer's manuals which describe each button, function, and control, the author's approach is more functional. The 'Radio Today' guides are "how to do it" books, with easy to follow step by step instructions. The structure is based around completing tasks such as preparing the radio for your first SSB conversation, or interfacing with a PC for digital mode operation. Tips are provided along the way where the author found an undiscovered function or a better way to set up the radio.

Currently the series contains 8 books and covers most popular radios, operating principles, and amateur related topics.

Shortwave Listening



Worldwide Listening Guide

Written by John Figlio. New and expanded 11th edition provides comprehensive program guide to all of the ways programs can be heard: "live", on-demand, WiFi, podcast, satellite, internet, digital, and, of course, analog AM, FM, and SW. Spiral bound to open in a flat, easy-to-use format.  
HRO Price: \$29.95

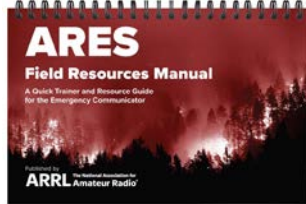
Nifty!

Radio Monitoring Guide



Covering 0.5 to 500 MHz, this reference to short-wave, police, fire, aviation, marine radio and more, combines shortwave listening and VHF / UHF scanning into one guide. Use it as a tuning guide, and for programming the scanning capabilities of your radio. Has information useful for monitoring radio services including International Space Station frequencies and NASA rebroadcasting. Amateur radio HF DX propagation beacons, plus Maritime and other popular emergency and communication nets are covered. Web page URL's are provided to sites offering current broadcast schedules.  
HRO Price: \$21.95

ARES FIELD RESOURCE MANUAL

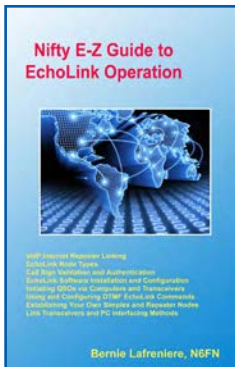


This manual is intended to serve as a quick trainer and reference for amateurs deployed in the field for emergency services work, primarily through the ARRL Amateur Radio Emergency Service (ARES).

It provides basic program information, forms and operating aids. A number of templates can be customized for the local area to include reference information such as important phone numbers, emergency frequencies, maps, organizational details and so forth. #5439  
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Nifty!

Echolink Operating Guide

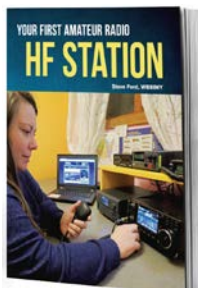


This ideal reference for those getting into EchoLink shows how to make contacts using your computer or DTMF equipped transceivers.

- Straight forward, simple explanations for both beginning & experienced users.
- Voice over Internet technology.
- EchoLink computer users, simplex links, and repeaters.
- Installing and using EchoLink software.
- Call sign validation and authentication.
- RF Link transceiver requirements.
- Establish RF EchoLink simplex and repeater nodes.
- Create a node by interfacing your transceiver to a computer.
- Configure EchoLink's sysop setup menus.
- Add EchoLink capability to a repeater.
- Numerous clear illustrations.

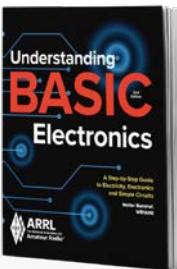
HRO Price: \$18.95

YOUR FIRST AMATEUR RADIO HF STATION



Here is practical advice on choosing your first radio, antenna, computer, software, and accessories. Explains the best way to set them up, how to safely hook up to power while protecting your gear. Explains where to put your priorities. #0079  
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Your gateway into the exciting world of electricity and electronics. This book is written in a friendly, easy to understand style. #0823  
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Ham Magazines

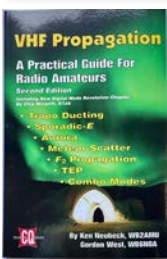
MONTHLY	QST
BI-MONTHLY	QEX, NCJ On The Air

QSL Holders



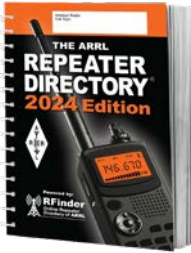
THE MOST COMPREHENSIVE WAY TO  
DISPLAY YOUR QSL CARDS!  
HRO Price: \$15.95

CQ Publications



A practical guide for radio amateurs. CQ brings you this new – Second Edition from three of Amateur Radio's well-known authors – WB2AMU and WB6NOA. Includes the "Digital Mode Revolution" chapter by Chip Margelli K7JA.  
HRO Price: \$21.95

Repeater Listings

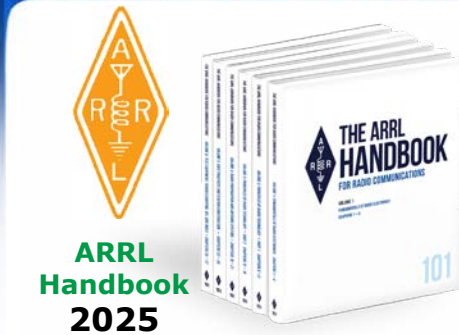


ARRL 2024 REPEATER DIRECTORY

The 2024 Repeater Directory® includes "crowdsourced" listings contributed by users, repeater owners, and volunteer frequency coordinators. Public

service volunteers: include this printed directory with your emergency 'go kit'. 28,000+ listings. World's largest printed directory of repeater systems. Listings for US and Canada, organized by state/province, city, and operating mode. Digital repeaters including System Fusion II, D-STAR®, DMR, NXDN, and APCO P-25 systems. VHF/UHF and microwave band plans included.  
#1854 HRO Price: \$19.95

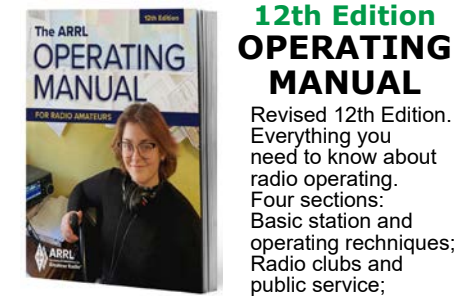




This 101st edition of The ARRL Handbook is your complete guide to radio experimentation, discovery, and innovation. It is The Handbook - written by radio amateurs for everyone with a desire to advance the pursuit of wireless technology.

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GRID ATLAS Grid Locator Atlas.....**#2944**

**ARRL LISTINGS**  
DXCC LIST Official ARRL DXCC List...**#0840**  
LB Log Book.....**#1250**  
RD Repeater Directory.....**#1670**

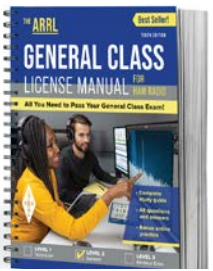
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**Use ARRL License Manuals with ARRL Online Exam Review for Ham Radio!**



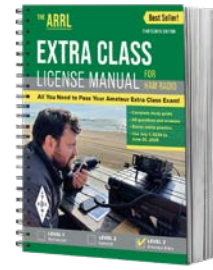
**Ham Radio License Manual**  
Includes the latest complete question pool with answer key and explanations for use to pass

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**Extra Class Ham Course**  
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**Study Manual Technician Class**

Gordon West Technician Class ham radio study manual. Valid thru 06/30/2026.

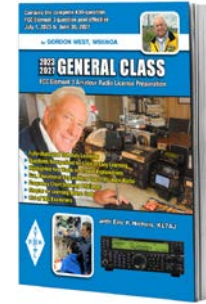
**#GWTM-22** 1908  
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**Study Manual General Class**

Gordon West General Class ham radio study manual. Valid thru 06/30/2027.

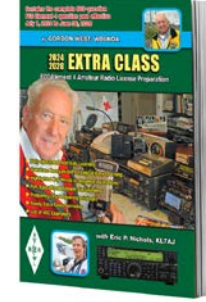
**#GWGM-23** 1915  
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**Study Manual EXTRA Class**

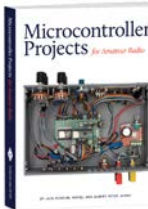
Gordon West Extra Class ham radio study manual. Valid thru 06/30/2028.

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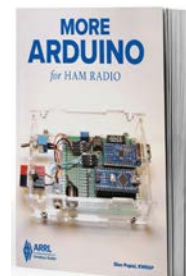


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All the information you need to build fascinating projects using the Arduino, STM32 ("Blue Pill"), ESP32, and Teensy 4.0 micro-controllers. Unfamiliar with C or C++ programming? No problem. Microcontroller Projects for Amateur Radio provides all the introduction you need to build projects such as a programmable power supply, a signal generator, a DSP mic processor, and more! Features many practical hands-on projects. **#1281** HRO Price: **\$34.95**



**MORE ARDUINO FOR HAM RADIO**

Introduces many of the new Arduino boards and add-on modules, followed by an overview of the software, tools, and techniques needed to bring projects to life. These concepts are put to work in 10 practical projects that showcase a wide variety of applications and include detailed descriptions of how the software "sketches" work. Each project is complete as-is, with ideas for you to add your own personal touches or create your own projects using the techniques and modules presented. That's part of the fun of the Arduino and the Open Source community.  
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A single resource covering antenna theory, design and construction, and practical treatments and projects. This book contains everything you need to understand how radio signals propagate, how antennas work, and how to construct your own antenna system. Use The ARRL Antenna Book to build hundreds of antenna designs: dipoles, verticals, loops, beams, and more. 25th edition.



Hardcover Collector's Edition. Includes e-book.  
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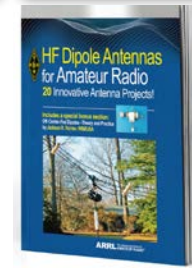
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Antenna Books

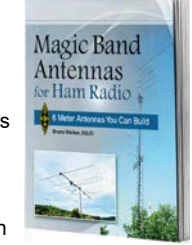
**ARRL's HF DIPOLE ANTENNAS FOR AMATEUR RADIO**



ARRL's HF Dipole Antennas for Amateur Radio is a collection of 20 HF dipole antenna designs published in QST, ARRL's membership journal, between 2000 and 2017. It includes innovative antenna projects for single- and multiband antennas, as well as antennas for portable applications.  
**#0994** HRO Price: **\$19.95**

**6 Meters MAGIC BAND ANTENNAS**

Designed for radio amateurs who want to discover the mysteries of the "magic band." Six meters is a band full of surprises...When you least expect it, 6 meters can suddenly open for contacts over hundreds and even thousands of miles.  
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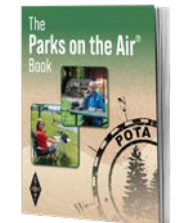


**ARRL ANTENNA BOOKS**  
APAI..... Antenna Physics: An introduction  
**ARRL TECHNICAL BOOKS**  
HK.....Hints and Kinks (19th ed.)

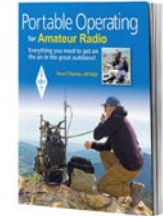
Portable Operating

**ARRL POTA**

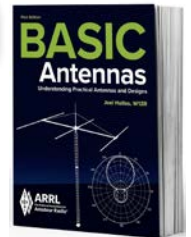
The Parks on the Air Book gives you a look at the setups and processes from a variety of skill levels and backgrounds and offers advice and motivation for taking your radio out to a park. Each chapter includes a detailed gear list so you can see exactly what your fellow operators are using, whether they're leaders of the pack or folks just getting started with Parks on the Air. Setups cover satellite operating, QRP, urban backpack portable, activating tailgate-style, wire antennas for POTA, and more. **#1748** HRO Price: **\$22.95**



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HRO Price: **\$19.95**

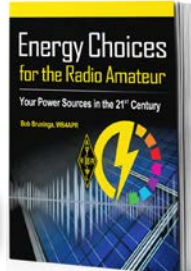
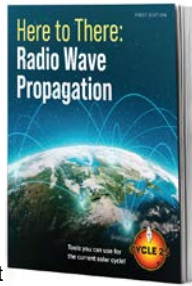


**ARRL's BASIC ANTENNAS**

Basic Antennas is a comprehensive introduction to antennas--basic concepts, practical designs, and details of easy-to-build antennas. You'll learn how to make antennas that really work! This book will provide a foundation in antenna theory and design necessary for anyone undertaking more advanced topics such as those presented in The ARRL Antenna Book.  
**#9994** HRO Price: **\$29.95**

**ARRL's Here to There: Radio Wave Propagation**

Presents the principles of amateur radio propagation in an easy-to-understand style. Knowing ionospheric structures, how they form, and which bands they interact with will prepare you for practical operating. **#1731** HRO Price: **\$22.95**

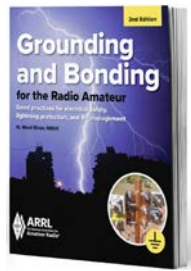


**ARRL's ENERGY CHOICES**

Revolutionary changes are taking place in the way we produce and consume power for our homes, transportation, and the technology that we use every day. This book explores the ongoing changes in the world of power and energy, and takes a careful look at the choices we can make. Home solar or utility power? Oil/gas heat or electric heat pump? Gas car or hybrid/EV?  
**#1038** HRO Price: **\$34.95**

**3rd Edition STORM SPOTTING**

Use Your Communication Skills to Help Keep Your Community Safe. Thousands of ham volunteers provide real-time information. Storm Spotting and Amateur Radio can help you become one of the volunteers, providing ground-truth information when it is needed most.  
**#1410** HRO Price: **\$19.95**



**GROUNDING & BONDING**

2ND EDITION Shows you how to make sure your station follows current standards for lightning protection and communication systems, not to mention the National Electrical Code.  
**#1496** HRO Price: **\$24.95**



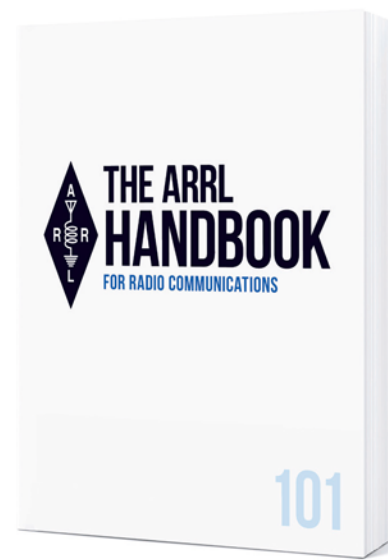


# HANDBOOK 101

The ARRL Handbook for Radio Communications is your complete guide to wireless technology experimentation, practice, and development. Since 1926, it has captured the state of radio science and technology in one authoritative work. Use *The ARRL Handbook* to delve into radio electronics, circuit design, digital modulation techniques, and equipment construction.



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Retail \$69.95

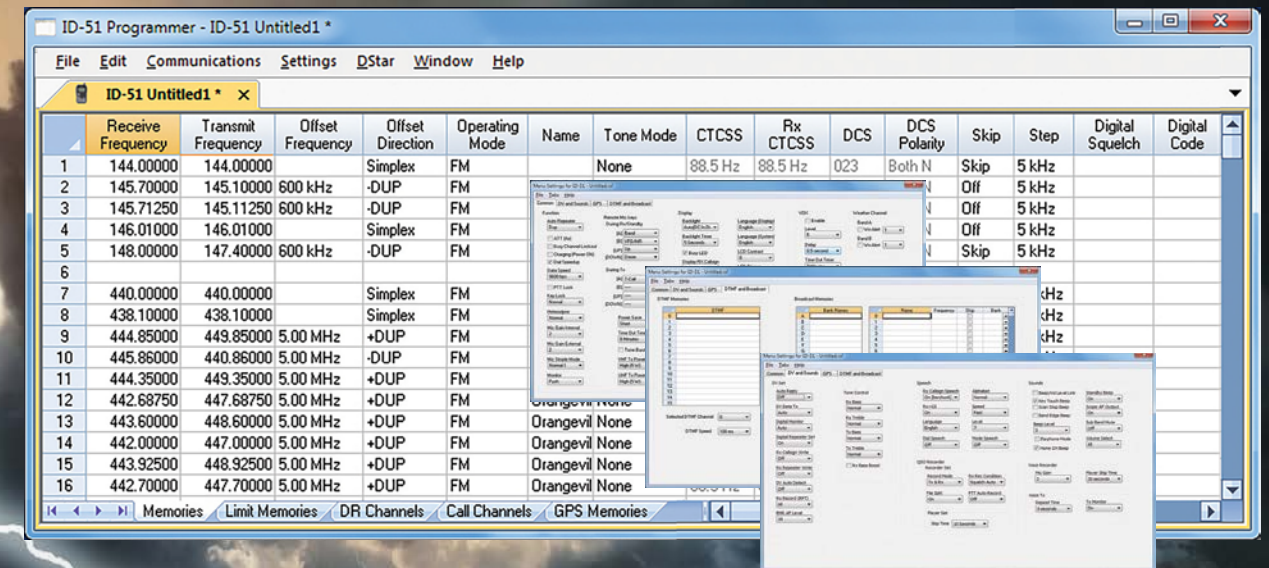
## Major Updates:

- Information on electromagnetic analysis and inexpensive tools for modeling circuits, antennas, and propagation.
- New material on higher-level modeling of transmitters and receivers.
- A new section on preparing your station for emergency operations.
- Radio astronomy receiver and antenna design information.
- A new section on batteries and battery safety.
- A new section on NEC4 and the antenna modeling software built on it.
- New material on SWR meters and related tests.
- The latest on RF safety and compliance with FCC exposure regulations.



# Be Prepared When Emergencies Strike

## Easily program EVERY feature of your radio.



## Don't Miss Any of the Conversation

- Options you struggle to set from the face of the radio can be set up and saved in the Programmer.
- Explore all your radio can do by seeing the features on the computer screen.
- Links to repeater data built-in.
- Set up D-STAR, Fusion, DMR, GPS, APRS right in the program.

*"The true losers in life are not those who Try and Fail, but those who Fail to Try."*  
— Jess C. Scott

**Contact HRO for Pricing and Availability.**

For More Information Before You Buy: [www.rtsystems.com](http://www.rtsystems.com) | [websales@rtsystemsinc.com](mailto:websales@rtsystemsinc.com) | 800-921-4834

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Kenwood ■ Leixen ■ Luiton ■ Midland ■ MML Radio ■ Powerwerx ■ Pofung  
Puxing ■ Quansheng ■ QYT ■ Radioddity ■ Retevis ■ Rugged Radios ■ SainSonic  
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RADIO PROGRAMMING MADE EASY





## DC POWER PRODUCTS FOR AMATEUR RADIO

### NEW! ANYTONE AT-D168UV

Dual-band DMR/Analog Handheld  
140-174/400-480 MHz, FCC Part 90 Commercial  
Dual Mode (Digital DMR + Analog)



### NEW! WATTMETER-TVP

DC Power Meter with Bright LCD Display  
Anderson Connectors  
Simple operation, no buttons or switches

### POWERPOLE TO 4 PIN HF CONNECTOR

25A ATO/ATC Inline Fused Adaptor Cable 12AWG  
Compatible with, but not limited to models  
from Icom, Kenwood and Yaesu



### POWERPOLE 15, 30, 45 AMP SERIES CRIMP TOOL

The perfect tool for 15, 30, and 45 amp series Powerpoles. With a ratcheting mechanism and built in contact positioner to guarantee a perfect crimp every time.



### POWERPOLE CONNECTOR KITS

Available as permanently bonded or unassembled kits,  
in 15A, 30A, or 45A varieties.  
Bundled in 10 kit packs or 25 kit packs

### ANYTONE AT-D578UV III PLUS

DMR Tri-Band Amateur Mobile Radio  
Airband Rx on 108-136 MHz, 144-148 MHz Tx, 222-225  
MHz Tx, 420-450 MHz Tx and wide band receive.



### ANYTONE AT-D878UV II PLUS

DMR Dual-Band Amateur Handheld Radio  
2G memory capacity with 500,000 digital contacts  
Built in Bluetooth, GPS, and APRS capable



Scan **QR Code** for Full Product Line!

# Base Station



**IC-718**  
HF All Band Transceiver



**IC-9700**  
2M / 70CM / 23CM



**IC-7300**  
HF / 6M



**IC-7610**  
HF / 6M



**IC-PW2**  
HF / 6M 1 kW Amplifier



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# D-STAR/Analog

# Analog



**ID-52A**



**ID-52A PLUS**



**ID-52A PLUS 60th**



**ID-50A**  
2M / 70CM  
Analog / Digital



**IC-T10**  
2M / 70CM Analog



**IC-V86**  
2M Analog



**IC-2730A**  
2M / 70CM Analog

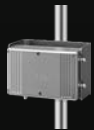
2M / 70CM / Analog / Digital



**IC-705**  
HF / 6M / 2M / 70CM



**IC-905**  
2M / 70CM / 23CM / 13CM / 5CM



\*Optional  
**CX-10G**  
10GHz Transverter



**IC-R15**  
108 - 500 MHz  
Dual Receiver



**IC-V3500**  
2M Analog



**IC-R6 Sport**  
100 kHz - 1 GHz\*\*  
Wideband Portable Receiver



**IC-R8600**  
10 kHz - 3 GHz\*\*  
Wideband SDR Receiver

RX



**IC-7100**  
HF / 6M / 2M / 70CM Analog / Digital

**D-STAR ready**



**ID-5100AD**  
2M / 70CM Analog / Digital



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\*\*Frequency coverage may vary. Refer to owner's manual for exact specifications. ©2024 Icom America Inc. The Icom logo is a registered trademark of Icom Inc. All other trademarks remain the property of their respective owners. All specifications are subject to change without notice or obligation. 31644c





# LDG Electronics

For home, POTA, SOTA, or just going down the road...  
LDG has a tuner, unun, or balun that's right for you!



**RU-1:1 UNUN**  
Common mode coax choke

**RU-9:1 UNUN**  
200W PEP EFLW antenna



**RU-4:1 UNUN**  
For matching verticals



**RBA-1:1 BALUN**  
Laddeline & long wires



**RBA-4:1 BALUN**  
Ladder line & long wires



**AT-200PRO II**  
1.8-54 Mhz desktop Auto Tuner  
Handles up to 250W SSB



**Z-100Plus**  
1.8-54 Mhz Portable Auto Tuner  
Perfect for the FT-891



**Z-100A**  
1.8-54 Mhz Portable Auto Tuner  
Icom interface cable included



## ULTIMAX 100 END-FED ANTENNAS 80M TO 6M (H.O.A. CHOICE)

The ULTIMAX 100 antenna is designed with the H.O.A., limited space amateur, and rapid deployment operator in mind. It provides for all-band operation from 80 to 6 meters continuously with just the use of an antenna tuner and no radials or grounding needed. Choose 24', 36', 49', or 66' length.



## ULTIMAX DXTREME END-FED ANTENNAS 160M to 6M @ 2KW

The DXTREME models are the ultimate end-fed antennas with the capability of covering from 160 to 6 Meters and have a power rating of up to 2KW! With Models available from 33' up to 124'.



## ULTIMAX HW-EF DUAL BAND ANTENNAS (NO TUNER REQUIRED)

The perfect antenna for those who prefer not to use or may not even own an external antenna tuner. The antenna will be resonant at the Amateur bands specified for each model with very low to almost flat SWR. Capable of handling near legal limit without core saturation. Choose 80/10 or 40/10 versions.

# Y ULTIMAX ANTENNAS™

For Ultimate Performance and Maximum Reliability  
**Reach for Ultimax Antennas!**



Made in  
the USA



**Terrific  
Deals**

# Field Gear.... That Goes the Distance!

**YAESU MOBILE FULL LINE-UP**

**FIELD GEAR – SUMMER'S BEST DEALS**

**C4FM Digital Unleash Advanced Communications**



144/430 MHz Dual Band  
50 W FM Transceiver  
**FTM-6000R**



C4FM/FM  
144/430 MHz Dual Band  
50 W Digital Transceiver  
**FTM-200DR**

**WIRES-X**  
Portable Digital Node  
Available



C4FM/FM  
144/430 MHz Dual Band  
50 W Digital Transceiver  
**FTM-300DR**

**WIRES-X**  
Portable Digital Node  
Available



144MHz  
65 W FM Transceiver  
**FTM-3100R**



144MHz  
80 W FM Transceiver  
**FT-2980R**



C4FM/FM  
144/430 MHz Dual Band  
50 W Digital Transceiver  
**FTM-500DR**

**WIRES-X**  
Portable Digital Node  
Available

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CA 90630 (714) 827-7600

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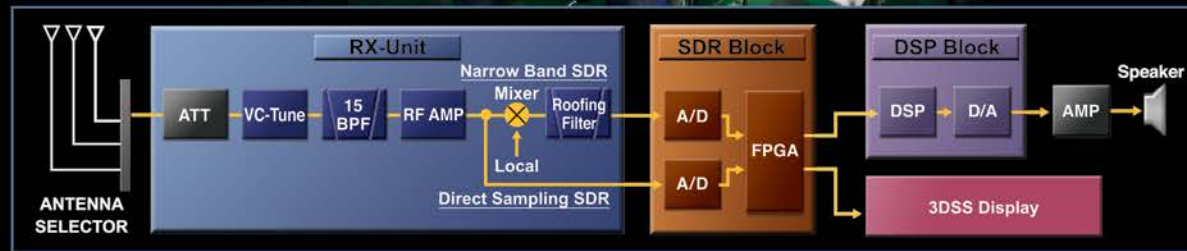
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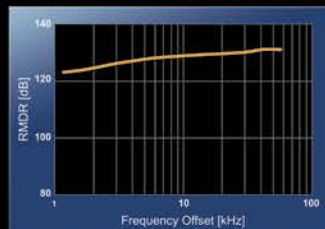
## FTDx101 TECHNICAL HIGHLIGHT

### True Performance Hybrid SDR Configuration

*The Hybrid SDR Configuration combines the excellent performance of a Narrow Band SDR receiver with the wide band sampling of a Direct Sampling SDR receiver that simultaneously provides a wide bandwidth real time display of band activity*

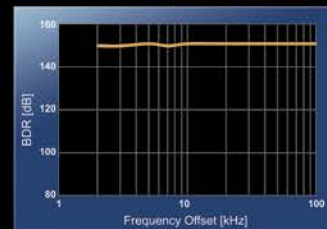


**2kHz RMDR 123dB+**



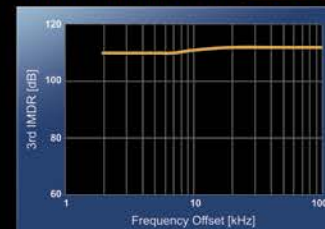
14MHz Band Reciprocal Mixing Dynamic Range (RMDR)

**2kHz BDR 150dB+**



14MHz Band Blocking Dynamic Range (BDR)

**2kHz 3rd IMDR 110dB+**



3rd IM Dynamic Range (IMDR)

HF/50MHz TRANSCEIVER  
**FTDx101MP** 200W

HF/50MHz TRANSCEIVER  
**FTDx101D** 100W



\* Microphone M-1: Optional

## FTDx101 TECHNICAL HIGHLIGHT

### 3DSS (3-Dimensional Spectrum Stream)

*Displays the constantly changing band conditions in 3D  
Instantly observe changes in the strength of the signals*

- Display up to 25 seconds of previous band conditions in real time
- Simultaneously view output from both Narrow band SDR and Direct Sampling SDR on the display
- Versatile scope and multi-color SDR display configuration enables clear and easy viewed presentation provided by 7" TFT Color touch panel display



HF/50MHz TRANSCEIVER  
**FTDx101MP** 200W

HF/50MHz TRANSCEIVER  
**FTDx101D** 100W



\* Microphone M-1: Optional



# The Best of the Best Narrow Band SDR Transceiver

## FTDx10

### Unrivalled RF Performance

### Narrow Band SDR Technology is the Revolution

Inheriting the performance of the FTDx101, which is validated to exceed HF transceivers in laboratories around the world.

The most advanced digital narrow band SDR technology is combined with the RF Front-End engineering, such as the low noise-figure RF amplifier and the very sharp shape factor roofing filter designs that Yaesu has incorporated over the years, resulting in unsurpassed HF receiver performance.

Equipped with the latest MPVD feature, and 3DSS visual display to deliver superior Operability and Visibility.

### A New Legend in HF Transceivers debuts

HF/50MHz TRANSCEIVER

**FTDx10** 100W



- The image is shown with an optional third party external display that may be connected using a DVI-D digital cable.
- Shown with Optional External Speaker SP-30.

# Carries the Yaesu genes for true RF performance

- SDR circuit emphasizes Receiving Performance
- Powerful RF Front-End & Low Noise Oscillator Enable Phenomenal Multi-Signal Receiving Characteristics\*
  - RMDR : 113dB+ • BDR : 127dB+
  - 3rd IMDR : 102dB+ • TX Phase Noise : -143dBc/Hz
- Band-Pass-Filters dedicated for the amateur bands to eliminate out-of-band unwanted signals
- Built-in High-speed Automatic antenna tuner
- Effective QRM rejection by Dual-core DSP

\*Multi-signal receiving characteristic: 14MHz band/2kHz separation

\*TX Phase Noise: 100W, CW mode

- AEES (Acoustic Enhanced Speaker System) with SP-40 speaker to create High-fidelity audio output
- 3DSS, real-time 3-Dimensional Spectrum Stream presentation
- High Resolution 4.3-inch TFT Color Touch Panel Display
- VMI (VFO Mode Indicator) shows the current operating mode
- "PRESET" Mode functions most suitable for FT8 operation
- Equipped with the External Display terminal

### FT-710 AEES

- Includes External Speaker SP-40

### FT-710 Field

- Includes Carrying Belt
- To use the AEES function, External Speaker SP-40 (Optional) is required

- Display is not included. The image is shown with an optional third-party external display that may be connected using a DVI-D digital cable.



\* Photo shows the FT-710 AEES

HF/50MHz 100W SDR TRANSCEIVER w/ SP-40

**FT-710 Aess**

Acoustic Enhanced Speaker System

HF/50MHz 100W SDR TRANSCEIVER

**FT-710 Field**

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# Smart New Operating Features

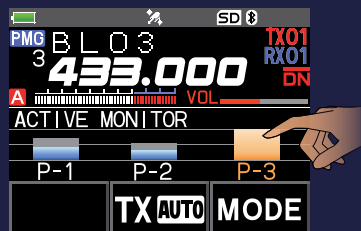


## Touch & Go

Simply Touch the displayed Channel Bar to Quickly Start Communications  
High-resolution Full-color LCD touch panel, and Ultra-High-Speed PLL Real-time Scope

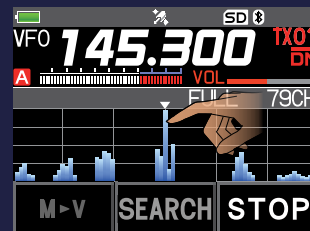
### PMG (Primary Memory Group) Activity Monitor

- Register the current display frequency into PMG with one press of the "PMG" key.
- Simply press the "PMG" key to instantly display the receive status of the registered frequencies in a Bar Graph (Activity Monitor).
- Touch & Go Operation allows quickly starting communication by touching the displayed target channel bar.



### 79 channel Band Scope

- Displays a bar graph of up to 79 channels, in high-speed real time, centered on the current VFO frequency.
- Select the number of channels from 79ch/39ch/19ch by touching the displayed channel number.
- Touch & Go Operation allows immediately moving to the frequency and starting communication by touching a displayed channel bar.



C4FM/FM 144/430MHz DUAL BAND  
5W DIGITAL TRANSCEIVER

## FT5DR



Comfortable Grip with Full Flat-Back  
and Quick Release Holster (Supplied)

- Comfortable size and form with no protrusions provides excellent grasp, even when wearing gloves for outdoor activities.
- Quick Release Holster that easily attaches and releases the FT5DR and allows operation with an excellent hold and feel.



**YAESU**  
The radio

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**YAESU**  
The radio

## The Perfect Choice Sophisticated Dual Band Digital Transceiver

Built to Commercial Grade Specifications



《Actual Size》

C4FM/FM 144/430MHz DUAL BAND  
5W DIGITAL TRANSCEIVER

## FT-70DR



Advanced C4FM Digital

System Fusion Compatible

Combines FM and Digital Communications  
with AMS (Automatic Mode Select)

Coordinated Group Operation  
with Digital Group ID

700 mW of Loud, Clear Voice, Audio Output

5 Watts of Reliable RF Power  
from a Compact Handheld Unit

Wide Band Receive Coverage 108 - 579.995 MHz

Rugged Construction  
Meets IP54 (Dust & Water protection)

Large Multi-Color Operating Mode Indicator

Huge 1,105 Channel Memory

**YAESU**  
The radio

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6125 Phyllis Drive, Cypress,  
CA 90630 (714) 827-7600

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All products listed are in stock at all Ham Radio Outlet Stores.  
Please visit [www.hamradio.com](http://www.hamradio.com) for pricing and product details.



## Buy With Confidence

ABR Industries manufactures all assemblies in our Houston facility, guaranteeing quality control from start to finish. Being a critical component of your system or station, it's important to know where and how your coax cable assemblies are built.

**Not All Cable Assemblies are Created Equal... See the ABR Difference.**



**ABR213 (PN:2213A)**  
Stranded Center, Solid PE Dielectric, 97% Copper Braid.  
Non-contaminating Direct-Burial Ultra-Violet Resistant Jacket.  
W/SILVER-TEFLON PL259 & WEATHERPROOF HST each end.  
**Attenuation per 100ft**  
0.6dB @ 10MHz  
1.0dB @ 30MHz  
1.4dB @ 50MHz  
2.4dB @ 150MHz  
4.5dB @ 450MHz  
**Power Rating**  
3.43kW  
1.95kW  
1.5kW  
.83kW  
.45kW  
• Application – HF workhorse cable. Heavy Duty coax for applications up to 500MHz. To be used with a heavy-duty rotor or stationary antenna systems.  
• Lengths 1.5ft to 150ft in stock



**ABR240F (PN:218XATC)**  
Stranded Center, Gas Injected Foam Dielectric, 100% Foil + 95% TC Braid.  
Non-contaminating Direct-Burial Ultra-Violet Resistant Jacket.  
W/SILVER-TEFLON PL259 & WEATHERPROOF HST each end.  
**Attenuation per 100ft**  
0.9dB @ 10MHz  
1.4dB @ 30MHz  
2.1dB @ 50MHz  
3.6dB @ 150MHz  
6.3dB @ 450MHz  
**Power Rating**  
2.16kW  
1.24kW  
0.96kW  
0.55kW  
0.31kW  
• Application – HF / Mobile cable. Medium duty coax for applications up to 500MHz. To be used with stationary antennas and light weight rotor applications  
• Lengths 1.5ft to 250ft in stock



**ABR400F (PN:25400F)**  
Stranded Center, Gas Injected Foam Dielectric, 100% Foil + 95% TC Braid  
Non-contaminating Direct-Burial Ultra-Violet Resistant Jacket.  
W/SILVER-TEFLON PL259 & WEATHERPROOF HST each end.  
**Attenuation per 100ft**  
0.8dB @ 30MHz  
1.1dB @ 50MHz  
1.8dB @ 150MHz  
3.3dB @ 450MHz  
**Power Rating**  
2.77kW  
2.14kW  
1.22kW  
0.69kW  
• Application – HF / VHF / UHF Low Loss cable. Versatile cable for applications to 500MHz. To be used with a heavy-duty rotor, array, or stationary antenna system.  
• Lengths 1.5ft to 150ft in stock



**RG316/U Teflon® .100" OD**  
HT jumpers "antenna attachment for better coverage"  
**Part# Description Length/Ft**  
23316-NM-3 N Male Both ends..... 3  
23316-NM-6 N Male Both Ends..... 6  
23316-SM-SF-3 SMA Male-SMA Female..... 3  
23316-SM-SF-6 SMA Male-SMA Female..... 6  
23316-SM-SF-9 SMA Male-SMA Female..... 9  
23316-SM-SF-12 SMA Male-SMA Female..... 12  
23316-SM-SF-15 SMA Male-SMA Female..... 15  
23316-SM-3 SMA Male Both Ends..... 3  
23316-SM-6 SMA Male Both Ends..... 6  
23316-SM-PL-3 SMA Male-PL259..... 3  
23316-SM-PL-6 SMA Male-PL259..... 6  
23316-SM-SO-3 SMA Male-SO239..... 3  
23316-SM-SO-6 SMA Male-SO239..... 6



**ABR400F (PN:25400F)**  
Stranded Center, Gas Injected Foam Dielectric, 100% Foil + 95% TC Braid  
w/N Male plugs each end. Complete w/Weatherproof Heat Shrink Tubing (WP-HST)  
**Attenuation per 100ft**  
0.8dB @ 30MHz  
1.1dB @ 50MHz  
1.8dB @ 150MHz  
3.3dB @ 450MHz  
**Power Rating**  
2.77kW  
2.14kW  
1.22kW  
0.69kW  
• Application – VHF / UHF Low Loss cable. Versatile cable for applications to 8 GHz. To be used with a heavy-duty rotor, array, or stationary antenna system.  
• Lengths 1.5ft to 150ft in stock



1" Tinned Copper Flat Ground Braid.  
7ga 85/Amps w/1/4" Stud Ring Terminals.  
Quick & Easy Grounding Terminations.  
Lengths 3ft to 20ft in stock



1/2" Tinned Copper Flat Ground Braid.  
10ga 53/Amps w/10 Stud Ring Terminals.  
Quick & Easy Grounding Terminations.  
Lengths 1ft to 12ft in stock



233/2-G4-length  
Unique design (Nickel Grommets 4" Spacing) allows for easy attachment to a vehicle's body or truck bed to create a "ground plane"  
Good option as a buss-bar in the shack  
1/2" wide tinned copper 38x48x8/34 10ga 53 amps  
Lengths 1.5ft to 10ft in stock

## Palstar Solid State Amplifier LA-1K



### Specifications

- SSB power: 1000 watts PEP CW ICAS.
- CW Mode: power levels up to 850 W.
- FM / RTTY: 500 watts.
- AM: 275 watts.
- Frequency range: 1.8 to 54 MHz.
- Display: Color TFT touch screen.
- Output: 3 x RF SO-239 or type N
- ALC: Exciter power control.
- Drive Required: 40-55 W (all bands).
- Gain: 13+/-1 dB (nominal.)
- RF sensing: auto band switching.
- RF Output: vacuum relay T/R switching.
- Power supply: internal medical grade.
- DC supply: 100 VAC - 260 VAC 50 V @ 42 amps.
- Power devices: 2 x 5600 H 600 W LD-MOS.
- Auto-Protect: SWR / short circuit.
- Intermod: low IMD distortion >-35 dB.

## ICOM Solid State Amplifier PW-2\*



### ICOM IC-PW2 HF and 50 MHz All Mode 1kW Linear Amplifier Pre Release Information

### Specifications

- The latest LDMOS effortlessly provides 1KW output at full duty cycle even for extended periods of time.
- 2x6 antenna selector realizes SO2R (Single Operator Two Radio) operation with only one amplifier.
- Six antenna connectors which may be enabled for a variety of antennas and bands.
- Super low-distortion output with superior IMD (Intermodulation Distortion).

- When connected to ICOM transceivers all settings are automatically completed.
- Simultaneous band data output for both Main and Sub bands.
- The IC-PW2 has an internal LAN port for remote control operation from a PC.
- Touch screen color TFT LCD enable intuitive setting changes.

\*The IC-PW2 has NOT formally been released by ICOM for sale in the United States. This is pre-release information only. This unit has not yet been approved by the FCC for sale in the US.

### Amplifier Specifications

	Model	Frequency Range	Modes	Power In	Power Out	Voltage	Current	Pre-amp	Connector	Weight
AMERITRON	ALS-600	160-15 M*	SSB, CW	100 W	600 W	110/220 VAC	16 A / 110 V	—	SO-239	13 lb
	ALS-600S	160-15 M*	SSB, CW	100 W	600 W	110/220 VAC	16 A / 110 V	—	SO-239	13 lb
	ALS-606	160-6 M*	All	75 W	600 W	120/220 VAC	12/6 A	—	SO-239	15 lb
	ALS-606S	160-6 M*	All	75 W	600 W	110/220 VAC	12/6 A	—	SO-239	14.2 lb
	ALS-1306	160-15 M*	SSB, CW	100 W	1200 W	110/220 VAC	25/12 A	—	SO-239	22 lb
	AL-82	160-15 M*	SSB, CW	100 W	1500 W	220 VAC	15 A	—	SO-239	52 lb**
ICOM	PW-2	1.8-54MHz	SSB CW	100W	1000 W 500 W	240 VAC 110 VAC		No	SO-239	46.3 lb
MIRAGE	B-34-G	144-148 MHz	All	2 W	35 W	12-15 VDC	4 A	Yes	SO-239	2 lb
PALSTAR	LA-1K	1.8-54 MHz	All	40-55 W	1000 W SSB	110/260 VAC		—	SO-239	27 lb

\*Owner modifiable for 10m \*\*Ships in 3 boxes. Transformer shipped in separate package.

### Low Noise Preamp



The LNA 30 is a broadband amplifier for applications in the frequency ranges VLF, LF, MW and HF. Signals above 30 MHz are strongly suppressed by a low pass at the input of the amplifier. The MMIC used enables a low noise figure with high large signal strength. This amplifier is supplied with 12 to 24 V voltage via the UHF socket.

- Frequency Range: 5kHz-30MHz.
- Connector: N-socket.
- Input: 12V-24V DC.
- Current Consumption: 150mA.

### Wide Band Preamp



High quality pre-amp with variable gain control and band pass filters to minimize interference. Frequency range of 24 to 2150 MHz. With a BNC Plug on one end and BNC socket on the other, the unit will fit on top of a handheld scanner or in line for use with a base receiver. Fitted band pass filters for much improved performance. Can be powered by its internal battery (one 9-Volt type ) or from 12 Volts DC.

### Aircraft Band Preamp



Tuned low noise preamp. Range 118-137 MHz, gain typ. 20 dB, BNC-connectors supply 12 Volts via coax. This device requires the PWR-I Power Injector for power. You can mount the LNA-Air outdoors at your antenna for the best signal amplification. In this way you will not be amplifying noise picked up by the coax cable. Run a short jumper cable from the pre-amp to the antenna such as our high-quality LMR-400 cable for antennas with N-connectors. BNC connector at both ends.



AMERITRON

No-Tune Amps

Legal Limit Amps



Solid State  
600 W @ 160-6 Meters  
ALS-606

Ameritron ALS-606S/ALS-606 Solid State 600 watt amplifier covers 160-6 Meters (no mod required) and automatically bandswitches by your transceiver. It's only 4 dB below 1500 watts - less than an S-unit - nobody can hear the difference! Be Heard! Work DX and ragchew with anyone.

No tuning! Just turn on, select band on your transceiver and operate. No tubes, no warming up, no tuning, ever. Desktop Size: 93/4Wx7Hx141/2D", just 14.2 pounds. SWR/thermal protected: extremely quiet, lighted peak reading Cross-Needle SWR/Wattmeter, front panel ALC control, operate/standby switch, multimeter. Includes Transformer Power Supply for 120/220 VAC, 32 lbs., 91/2Wx6Hx12D inches.

ALS-606S ALS-606 with 10 pound switching power supply also available.



ALS-600

No tuning, no fuss, no worries – just turn on and operate. 600 watts PEP / 500 W CW, 1.5-22 MHz, instant bandswitching, SWR protected. 120 / 220 VAC. 9-1/2 W x 6 H x 12 D inches. Includes matching transformer power supply.

ALS-600S ALS-600 with 10 pound switching power supply also available.



HF + 6, 1200 W  
Solid State Amplifier  
ALS-1306

Covers 1.5-54 MHz with 1200 watts PEP output. Features instant automatic band-switching, no tuning and no warm-up. It is SWR protected with quiet variable-speed cooling. Metering includes PEP FWD / REF, PA balance and ALC with an LED Indicator. There are front-panel band / error LEDs. Front-panel ALC control. The ALS-1306 has modular construction for easy servicing, and is powered by a 50 VDC switching power supply. This compact, operator-friendly and attractive desktop amplifier fits neatly into any station. Just 10 W x 6.5 H x 18.5 D inches and weighs only 22 lb.



AL-82

Full legal limit amplifier using a pair of 3-500ZG tubes. Super heavy duty Hypersil® power transformer allows the tubes to be used to their full potential. Two illuminated meters, including one specifically for monitoring grid current. 220 VAC. Ships in 3 boxes.

WATCH HRO'S  
YOUTUBE CHANNEL  
WHERE WE DISCUSS AND  
DEMONSTRATE ALL THE  
LATEST PRODUCTS...  
INCLUDING AMPLIFIERS!  
YOUTUBE.COM/@HAMRADIOOUTLET



LIMITED STOCK MFJ

DC Power Strips



MFJ-1118  
High current multiple DC outlet. Use for two HF and / or VHF transceivers and six or more accessories from your transceiver's main 12 VDC power supply.



MFJ-1117  
To power four HF / VHF radios (two at 35 amps each and two at 35 combined) simultaneously.



MFJ-1116  
Deluxe multiple DC power outlet. 8 outlets for powering accessories.



MFJ-1112  
MFJ-1112 is like the MFJ-1116 without on / off switch, voltmeter and fuse. 6 pair outlets.



MFJ-1129  
Get the best of both connectors. Has Anderson Powerpoles® and high-current binding posts. Outlets 1, 2, 4-8 are Powerpoles®, outlet 3 is a 35 A high current binding post. Includes 7 pairs of Powerpole® 35A contacts, ten fuses.



MFJ-1128  
12 outlets, factory installed fuses, handles 20 amps total.



MFJ-1126  
8 outlets  
12 - 35A contacts.



MFJ-1124  
6 outlets  
8 - 35A contacts.

ASTRON CORPORATION



All of Astron's solid-state electronically regulated Power Supplies have fold-back current limiting to protect from excessive current, and a heavy duty heat sink. Output voltage: 13.8 VDC ±.05 volts. 220 V supplies available on special order at slightly higher price. AP models have Anderson Powerpole® connections.

RS-A Series Standard power supply with on / off switch. Adjust voltage internally.

SL Series Slim line design for low-profile looks.

RS-M-AP Series power supplies with front meters. One is for voltage and the other current. Now with Anderson Powerpoles®.

SS Series High efficiency switching supplies specially filtered for use with communications equipment for all frequencies including HF. Heavy duty design, low profile, light weight and EMI filter.

Power Supplies

Brand	Model	Cont.Duty 13.8 VDC	Intermit Duty	Height in	Width in	Depth in	Weight lb
ALINCO	DM-330MVT	30 A	32 A	2.8	6.1	8.07	3.5
	DM-30TR	20 A	30 A	2.8	6.1	8.07	3.5
	DM-430TR	30 A	30 A	2.4	4.9	6.3	3.5
	DM-530T	30 A	30 A	2.7	7.5	12	5.07
ASTRON	RS-4A	3 A	4 A	3.75	6.5	9	5
	RS-7A	5 A	7 A	3.75	6.5	9	9
	RS-12A	9 A	12 A	4.5	8	9	13
	RS-20A	16 A	20 A	5	9	10.5	18
	RS-35A	25 A	35 A	5	11	11	27
	RS-35A-AP*	25 A	35 A	5	11	11	27
	RS-50A	37 A	50 A	6	13.75	11	46
	RS-12M	9 A	12 A	4.5	8	9	13
	RS-20M-AP*	16 A	20 A	5	9	10.5	18
	RS-35M-AP*	25 A	35 A	5	11	11	27
	RS-50M-AP*	37 A	50 A	6	13.75	11	46
	RS-70M-AP*	57 A	70 A	6	13.75	12.12	48
	RM-50A	37 A	50 A	5.25	19	12.5	50
	RM-60A	50 A	55 A	7	19	12.5	63
	RM-35M	25 A	35 A	5.25	19	12.5	38
	RM-50M	37 A	50 A	5.25	19	12.5	50
	RM-60M	50 A	55 A	7	19	12.5	63
	VS-35M-AP*	25 A	35 A	5	11	11	29
	VS-50M-AP*	37 A	50 A	6	13.75	11	46
	SL-11R	7 A	11 A	2.75	7.62	9.95	11
	SL-15R	12 A	15 A	2.75	7.62	9.95	14
	SS-18	15 A	18 A	2.38	6	9	3.6
	SS-25-AP	20 A	25 A	2.88	7	9.38	4.2
	SS-30M-AP	25 A	30 A	3.75	7	9.63	5
	SS-50-AP	40 A	50 A	2.88	7	9.38	5
DIAMOND	GZV4000	40 A	42 A	4.5	8.25	13	8
KENWOOD	KPS-15	23 A	24 A	2.2	7	8.25	4
POWERWERX	SS-30DV	25 A	30 A	2.5	5	6.1	3
	SPS-30DM	25 A	28 A	2.5	5	6.1	3.7
SAMLEX	SEC1212	10 A	12 A	2.2	7	8.25	3
	SEC1223	23 A	24 A	2.2	7	8.25	4
	SEC1223BBM †	23 A	24 A	2.2	7	8.25	4
	SEC1235M	30 A	35 A	2.4	7.28	8.19	4.5
YAESU	SEC1235P-M	30 A	35 A	2.4	7.28	8.19	2.28
	FP-1023	23 A	24 A	2.2	7	8.25	4
	FP-1030A	25 A	30 A	9.8	5.9	9.5	20.9

\*AP models now with Anderson Powerpoles® †Contains a backup battery module (220 volt versions of some models available at additional cost by special order. Contact HRO for details.)

Wire & Accessories



Ham Radio Outlet carries a wide variety of wire, connectors, crimpers, and accessories from 12 Volt Power. For more information visit our website or contact your local Ham Radio Outlet.







Switching Power Supply DM-30TR

Compact, lightweight design features 9-15 VDC variable output up to 20 amps continuous and 30 amps peak. The noise offset circuit lets you move any switching noise to another frequency. Features large illuminated digital volt / amp meter, rear panel (30 A peak) binding posts, front panel quick terminals (5 A) , front panel Anderson Powerpole® (30 A), short circuit, over temperature, and current limiting protection. Front panel adjustable.



30 Amp Switching Power Supply DM-430TR

Alinco's redesigned DM-430TR is an Ultra-Compact DC Switching Power Supply with Digital display and advanced technology featuring Anderson Powerpole® connectors supporting 5-15VDC variable output and delivers up to 30A peak power.



32 Amp Switching Power Supply DM-330MVT

Super compact, lightweight power supply is great for portable operations. Provides 32 A peak, 30 A continuous. Variable output 5-15 VDC. Preset voltage function. Patent pending noise offset circuit removes pulse noise. Short circuit protection. Convenient front panel connections. Cigarette plug socket.



32 Amp Switching Power Supply DM-530T

Features include a large illuminated digital Volt/Amp meter, rear panel binding posts/front panel Anderson Powerpoles® (30A peak), voltage adjust (5-15V) or fixed at 13.8V, ripple less than 50mVp-p and protection for short-circuit, over temperature, and current limiting!



40 Amp Switching Mode DC Power Supply GZV4000

The GZV4000 switching mode DC power supply has a 40 amp continuous rating at 100% duty cycle. The supply has variable voltage from 5-15 VDC using a voltage control knob with a center detent at 13.5 VDC. There is overload and short circuit protection with current feedback at approximately 42 amps and temperature protection with a variable speed fan. An AC line filter gives EMI protection. The meter selector allows monitoring of voltage and current. Power and overload indicators included. Front panel DC terminals, a cigarette lighter jack, and an internal 8 ohm speaker. Operates on 120 VAC ± 20%, 50-60 Hz. Ripple and noise is less than 8 mV rms. 240 VAC models also available for GZV4000.

HRO Price: \$179.95

FOR 224V operation the GZV4000-220V switching mode DC power supply has a 40 amp continuous rating at 100% duty cycle.

HRO Price: \$179.95



Bioenno Power®

Lithium Iron Phosphate Batteries

Bioenno Power's Lithium Iron Phosphate batteries are designed with ham radio applications in mind, and provide several key advantages:

- Based on advanced Lithium Iron Phosphate (LiFePO4) battery chemistry.
- Compatible with every brand (Icom, Kenwood, Yaesu, Elecraft, Alinco, etc.).
- Built-in protection-circuit-modules (PCM), which are "micro-computers" that internally balance cells and provide protection from overcharging, over-discharging, over-current, and short circuiting.
- 50% to 70% lighter than SLA (sealed lead acid) batteries.
- Service life of 2000+ charge cycles or 5-10+ years, with a shelf life that far exceeds the service life of many other batteries.
- Powerpole® connectors that are already attached and can connect directly to radios.
- Thermally and chemically stable.
- Dependable and reliable.

Based in Santa Ana, California, Bioenno Power products are currently used in a variety of applications and industries including ham radio, surveillance, avionics, scientific equipment, communications, audio/visual equipment, e-bikes/e-scooters, etc. with capacities ranging from 3 Ah up to 200 Ah. Contact HRO for all available sizes.



**BLF-1203W**  
12 Volt - 3 Ah LFP Battery  
LiFePO4  
HRO Price: \$49.95



**BLF-1206A**  
12 Volt - 6 Ah LFP Battery  
LiFePO4  
HRO Price: \$79.95



**BLF-1209A**  
12 Volt - 9 Ah LFP Battery  
LiFePO4  
HRO Price: \$99.95



**BLF-1212A**  
12 Volt - 12 Ah LFP Battery  
LiFePO4  
HRO Price: \$124.95



**BLF-1215A**  
12 Volt - 15Ah LFP Battery  
LiFePO4  
HRO Price: \$149.95



**BLF-1220A**  
12 Volt - 20 Ah LFP Battery  
LiFePO4  
HRO Price: \$189.95

Please note that these batteries should be charged using a LiFePO4 compatible charger, and not with a charger for SLA batteries.



samlexamerica®

For Base Stations



SEC-1212 & SEC-1223

The perfect lightweight companion for a 100 watt transceiver. SEC-1212 has the same form factor as SEC-1223.

- Switch mode design for minimal power loss.
- Highly efficient, and compact.
- Produces clean, consistent power with circuit innovations that minimize output voltage ripple and RFI.
- Works on 200 – 240 VAC input voltage with a simple jumper change.
- UL and FCC compliant.
- Safety features: over/under voltage protection and quiet cooling fan.

SEC-1212 - HRO Price: \$142.95  
SEC-1223 - HRO Price: \$165.95



SEC-1235M

Includes built-in volt and amp meters and is the best power supply value.

- All features of above SEC-1212/1223 plus advanced switch-mode technology.

SEC-1235M - HRO Price: \$174.95



SEC-1235P-M

The technologically advanced SEC P series power supplies are light, quiet, and power-factor corrected. SEC-1235P-M features backlit analog meters.

- Universal AC input.
- Efficiency Level 6 (VI).

SEC-1235P-M - HRO Price: \$199.95

Power Supply  
Modular Connector Cable  
SEC-PSPP



Model	Input VAC	Out VDC	Amps Out Nominal	Amps Out Peak
SEC-1212	100-130	13.8	10	14
SEC-1223	100-130	13.8	23	25
SEC-1235M	100-130	13.8	30	35
SEC-1235P-M	100-240	13.8	30	35
SEC-1223BBM	Preset 100/130	13.8	23	25

The power supply choice for radio manufacturers around the world. Reliable power at an affordable price!

SAMLEX POWER SUPPLIES CARRY A 3-YEAR WARRANTY



SEC-1223BBM

Combining the reliability of the SEC-1223 power supply with the reassurance of the BBM-1225 battery backup module. This unit provides uninterrupted DC power in the event of a power outage.

- All features of the SEC-1212/1223 units plus reliable, uninterrupted DC power source in conjunction with an external battery.

SEC-1223BBM - HRO Price: \$214.95

Radio Cabinets



Visit/Call for Info.

Integrate your mobile radio with any Samlex desktop switching power supply for an attractive and functional desktop.

Battery Backups & Protectors



Battery Backup Module Chargers

**BBM-1225**  
**BBM-12100**

Battery Voltage Protectors



**BGW-40** | **BGW-200**  
**BGW-60** | **BGW-400**

Extends battery life by preventing excessive discharge of the battery. Protects connected components against overvoltage.

BBM-1225	BBM-12100	BGW-40/60	BGW-200
25 A	100 A	40A/60A	200
Backup	Backup	Protector	Protector
\$79.95	\$184.95	\$105.95/\$145.95	\$269.95

DC to AC Inverters



**PST-150-12 150 Watt**  
**PST-300-12 300 Watt**  
**PST-600-12 600 Watt**

The PST series provides clean pure sine wave power. PST's commercial grade design is suitable for heavy duty loads, long periods of continuous operation and reliable AC power.

- Quiet operation with temperature-controlled.
- Fan reduces energy consumption.
- Extremely low interference with other devices.
- Pre-set for 12 V input. GFCI protected outlets.
- Safety certified to UL & CSA standards, FCC compliant.
- 3 Year Limited Warranty.

Model	PST-150-12	PST-300-12	PST-600-12
Watts	150	300	600
Price	\$196.95	\$229.95	\$329.95

Solar Power



Portable Kits

**MSK-90 90 Watt**  
**MSK-135 135 Watt**

Whether you need to charge your 12 V batteries during field emergencies or get extended run-times for your equipment, these MSK kits include a built-in, three-stage 10 amp charge controller to protect batteries and prevent overcharging. Includes pre-wired battery clamps on a 16' cable. 10 year power warranty on solar panels (Canada/US).



Cable Assemblies

CABLE X-PERTS  
Ready-Made Coax Cable Assemblies

Model	Connector Both Ends	Burial	UV Resistant	Shields	Attenuation dB @ 100 ft	Best Freq.
CXP1318FC	PL-259	Yes	Yes	2 (100% bonded foil + 95% TC Braid) V/F 84%	50 MHz 1.1 150 MHz 1.9 450 MHz 3.3	50-450 MHz
CXP008C	PL-259	No	Yes	1 (95% BC Braid) V/F 78%	10 MHz 0.51 30 MHz 0.9 50 MHz 1.2	1-50 MHz
CXP1318FN	N	Yes	Yes	2 (100% bonded foil + 95% TC Braid) V/F 84%	150 MHz 1.9 450 MHz 3.3	150 MHz and higher
CXP08XC	PL-259	No	Yes	1 (95% BC Braid) V/F 78%	10 MHz 0.98 30 MHz 2.0	1-30 MHz
CXP213C	PL-259	Yes	Yes	1 (97% BC Braid) V/F 66%	10 MHz 0.62 30 MHz 1.2	1-30 MHz (High Power)

RG213/U with PL-259		
Part Number	Length (ft)	HRO Price
CXP213C100	100	\$153.95
CXP213C50	50	\$88.95
CXP213C6	6	\$25.95
CXP213C3	3	\$20.95
RG8/U Foam with PL-259		
CXP008C100	100	\$176.95
CXP008C50	50	\$100.95
CXP008C25	25	\$61.95
CXP008C12	12	\$38.95
CXP008C6	6	\$27.95
CXP008C3	3	\$21.95
RG8X-Mini with PL-259		
CXP08XC100	100	\$98.95
CXP08XC75	75	\$77.95
CXP08XC50	50	\$58.95
CXP08XC25	25	\$37.95
CXP08XC18	18	\$33.95
CXP08XC6	6	\$26.95
CXP08XC3	3	\$22.95

9913-Type Flexible with N-Connector		
Part Number	Length (ft)	HRO Price
CXP1318FN100	100	\$173.95
CXP1318FN50	50	\$101.95
CXP1318FN25	25	\$63.95
CXP1318FN6	6	\$31.95
CXP1318FN3	3	\$26.95
9913-Type Flexible with UHF Connectors		
CXP1318FC100	100	\$169.95
CXP1318FC50	50	\$97.95
CXP1318FC6	6	\$27.95
CXP1318FC3	3	\$21.95

Tinned Copper Ground Braid		
235	1" wide	\$1.54/ft
2332	1/2" wide	\$0.70/ft
235RT-5	1" 5' long *	\$12.95
235RT-10	1" 10' long *	\$18.95
2332RT-5	1/2" 5' long	\$9.95
2332RT-10	1/2" 10' long *	\$12.95

\*With ring terminals

Connectors (Contact HRO for others)

Model	Description	HRO Price
BNC-44	BNC to UHF Adapter	\$6.99
N-31	N to UHF Adapter	\$9.95
PL-259ST	PL-259	\$3.59
N-TGS	Type N Male	\$7.95
UHF-08-TGNZ	4 Hole SO-239 Chassis Connector	\$4.95
UHF-10	Double Male UHF	\$5.99

Model	Description	HRO Price
UHF-11	UHF Barrel	\$4.99
UG-363-4	Long UHF-UHF Barrel	\$18.95
UHF-15-DGN	Right Angle Teflon Gold Pin	\$8.95
UHF-13	UHF "T"	\$7.99
UHF-19	BNC to UHF Adapter	\$6.99
UHF-18	UHF to N Adapter	\$8.99

Cable

Times

Call for Low Discount Prices on Times Cable

LMR-200 - RG58 type

This is a standard RG58 'type' outdoor cable that is ideal for jumper assemblies, short antenna feeder runs, or any application requiring an easily routed, low loss RF cable. It has a solid BC inner conductor, foam polyethylene dielectric, aluminum tape outer conductor, a tinned copper overall braid and black polyethylene jacket. The velocity factor is 83%. It will withstand 1000VDC, a peak power of 2.5 kW, and shielding effectiveness is >90 dB.

LMR-240 - RG8X type

This RG8X 'type' outdoor cable has a solid BC inner conductor, foam polyethylene dielectric, aluminum tape outer conductor, a tinned copper overall braid and black polyethylene jacket. The velocity factor is 84%. It will withstand 1500 VDC, a peak power of 5.6 kW, and shielding effectiveness is >90 dB.

LMR-400 - RG8/213 type

This is a standard RG8 / RG213 'type' outdoor cable that has a solid BCCA inner conductor, foam polyethylene dielectric, aluminum tape outer conductor, a tinned copper overall braid and black polyethylene jacket. The velocity factor is 85%. It will withstand 2500 VDC, a peak power of 16 kW, and shielding effectiveness is >90 dB.

LMR-400-UltraFlex

Similar specs as LMR-400 with TPE jacket.

Coax Jumpers

HRO carries a wide variety of coax jumpers from JSC to fit your needs. Contact your local store for selection info.



Rotator Cable

8 wire, standard duty - 8 wire cable using six #22 and two #18 bare copper conductors. PVC insulation.

8 wire, heavy duty - 8 wire cable using 6 - #18 and 2 - #16 bare copper conductors. PVC insulation; chrome PVC jacket.

When Ordering Bulk/Roll Cable  
Please order in multiples of 50 feet. Continuous length spools up to 500 feet are available. Call for quotes.



Our renowned LOW LOSS coax, Bury-FLEX™ is made by combining a gas-injected foamed dielectric with a dual foil / braid shield construction and jacketed by a UV and abrasion resistant polyethylene jacket which results in a longer cable life.



Bury-FLEX™ provides the electrical and performance characteristics found in the more expensive 400-series coaxes as well as typical air dielectric type cables. The PE jacket is durable enough for Direct Burial, yet flexible enough to be used for rotator loops.

Davis RF supplies amateurs with all types of aerial wire including our PolyStealth Wire™ and our various Flexweave™ products needed to make your own wire antennas. Other basics such as coax assemblies, rotor cable, rope and connectors/adapters , hardline and all type of coaxes are readily available.

All Cables Are American Made!

Coax

Purchase coax in any length up to 500 ft

RG8/U

Standard RG8 /U, #13 stranded copper center conductor, cellular polyethylene insulation, 97% bare copper shield, PVC jacket, 50 ohm impedance, 78% velocity factor and 1.8 dB loss per 100' at 100 MHz. The most popular cable for HF/VHF/UHF. Use when long cable runs are not required.

RG213/U

RG-213 / U coax, #13 stranded copper center conductor, solid polyethylene insulation, 97% bare copper shield, non-contaminating PVC jacket, 50 ohm impedance, 66% velocity factor and 2.2 dB loss per 100' at 100 MHz. This RG-8 type cable is best for HF. It may be buried.

9913F-7

9913F-7 is RG8/U-type coax, #9.5 stranded copper conductor, foam polyethylene insulation, 100% foil plus 88% braid shield, PVC jacket, 50 ohm impedance, 84% velocity factor and 1.4 dB loss per 100' at 100 MHz. The best cable for VHF and UHF applications.

RG8X

RG8X is small diameter coax, #16 stranded copper center conductor, cellular polyethylene insulation, 95% bare copper shield, PVC jacket, 50 ohm impedance, 78% velocity factor and 3.7 dB loss per 100' at 100 MHz. Good for short VHF runs and most HF uses.



American Built & Reliable

ABR Industries manufactures coax with a non-contaminating, ultraviolet resistant, and direct burial jacket. Cables are American Made and are fully tested and ready to use.

Direct Bury Cable

218XATC - lightweight for mobile, dipole antennas, or jumpers between equipment in tight places. RG8X (LMR@240 type) with PL-259 connectors and adhesive lined HST at both ends. Jacket is UV resistant and direct burial.

RG8X-Direct Bury with PL-259		
218XATC-PL-1.5	1.5	\$26.95
218XATC-PL-3	3	\$26.95
218XATC-PL-6	6	\$29.95
218XATC-PL-9	9	\$29.95
218XATC-PL-12	12	\$32.95
218XATC-PL-18	18	\$35.95
218XATC-PL-25	25	\$37.95
218XATC-PL-30	30	\$43.95
218XATC-PL-40	40	\$49.95
218XATC-PL-50	50	\$54.95
218XATC-PL-75	75	\$72.95
218XATC-PL-100	100	\$89.95
218XATC-PL-125	125	\$99.95
218XATC-PL-150	150	\$113.95
218XATC-PL-250	250	\$159.95

HT Jumpers

ABR Industries now supplies HT jumpers in various short lengths of RG316/U Teflon® .100" OD.

These can be had in 3, 6, 9, 12, and 15 foot lengths of SMA male to SMA female, or 3 and 6 foot lengths of SMA male at both ends, or SMA male to PL259 or SO239.

Ground Braid

Also available are various lengths of 1-inch or ½-inch tinned copper flat ground braid with ¼-inch stud ring terminals

And there are a few different lengths of ½-inch tinned copper with nickel grommets at 4" spacing for easy attachment to a vehicle body or truck bed to create a "ground plane" or an option as a buss-bar in the shack.

Direct Bury Cable

2213A - UV resistant, direct bury. RG213/U Mil-Spec w/PL259 connectors and adhesive lined HST at both ends. Solid polyethylene dielectric, high power, bands below 30MHz with amplifiers.

RG213/U with PL-259		
Part Number	Length (feet)	HRO Price
2213A-PL-1.5	1.5	\$28.95
2213A-PL-3	3	\$32.95
2213A-PL-6	6	\$37.95
2213A-PL-18	18	\$59.95
2213A-PL-25	25	\$69.95
2213A-PL-50	50	\$114.95
2213A-PL-75	75	\$149.95
2213A-PL-100	100	\$184.95
2213A-PL-150	150	\$229.95

25400F - (LMR@ 400UF) UV resistant, direct-bury, for frequencies above 144 MHz. PL-259 connectors and adhesive lined HST at both ends.

RG8/U Direct Bury with PL-259		
25400F-PL-1.5	1.5	\$28.95
25400F-PL-3	3	\$33.95
25400F-PL-6	6	\$39.95
25400F-PL-12	12	\$54.95
25400F-PL-18	18	\$66.95
25400F-PL-25	25	\$79.95
25400F-PL-50	50	\$129.95
25400F-PL-75	75	\$179.95
25400F-PL-100	100	\$199.95
25400F-PL-150	150	\$269.95

25400F - (LMR@ 400UF) UV resistant, direct bury, for frequencies above 144 MHz. N male connectors and adhesive lined HST both ends.

RG8/U Direct Bury with N Male		
25400F-NM-3	3	\$36.95
25400F-NM-6	6	\$41.95
25400F-NM-12	12	\$54.95
25400F-NM-18	18	\$72.95
25400F-NM-25	25	\$79.95
25400F-NM-35	35	\$99.95
25400F-NM-50	50	\$129.95
25400F-NM-75	75	\$169.95
25400F-NM-100	100	\$199.95
25400F-NM-150	150	\$269.95





The AT5K takes power handling to the next level over the AT4K, coming in with a rating of 3500 watts single tone continuous performance with low losses and wide Z range. Palstar's AT5K, like its AT4K little brother, has a T-matching network utilizing a 1:1 unbalanced-to-balanced transformer at the INPUT of the network.

- 3500 watts single tone, high efficiency, low tuner losses and wide Z range.
- 160m to 15m with limited Z range on 10m.
- Balanced output with high power 5 kW Teflon® wire balun at the input of tuner circuit.
- Ferrite 1:1 input balun.
- Custom, large plate variable capacitors (600 pF @ 6 kV).



peak-hold; a resonant free roller system to operate from 6m to 160m continuously; new LED lit meter system; and a new compact size.

- Power rating 2000 watts PEP.
- Frequency tuning 160m to 6m.
- Impedance matching range 20 ohms to 1200 ohms.
- Easy and quick tuning with only two controls.
- Palstar designed ceramic body roller inductor.
- 6 position mode switch for multiple antennas.
- Meter power range 0-300 watts / 0-3000 watts.
- Active peak and peak hold dual



lower minimum capacitance for improved high band performance, while maximum capacitance has been increased to 400 pF for better low band performance.

- Power rating 2000 watts PEP.
- Impedance range 20 to 1500 ohm 160m to 10m (assuming resistive load).
- Low minimum custom variable capacitors (15 pF to 400 pF at 4.5 kV).
- 10 µH relay-switched add-on inductor for 160 meters, roller inductor with turns counter.
- 18 µH 5 kV ceramic body roller

Antenna Tuner AT5K

- 10 amp 7 kV CERAMIC 3.25" body roller inductor (35 µH) wound with 10 ga. plated solid copper wire.
- Six-position switchable antenna input switch with 7 kV, 10 amp contacts.
- Peak and peak hold dual cross-needle metering (1-2 sec hold) with backlighting.
- Fan cooling for extended 100% duty cycle operation.

Antenna Tuner AT2KD

The AT1500DT and the AT1KP have been combined into a new 2 kW tuner. The AT2K has all our features such as: peak and our features such as: peak and cross-needle metering (1-2 sec hold) with LED backlighting. Differential capacitor tuning with 2 stators and 1 rotor (420 pF - 13 pF - 420 pF @ 5 kV). High power ferrite 1:1 or 4:1 current balun (optional) externally installed. Size: 12 1/2" W x 5 1/2" H x 16" D. Weight: 12 lb.

Antenna Tuner AT2K

The smaller roller inductor allows the AT-2K to tune 6 meters, while a relay-switched toroid adds the extra inductance needed for 160 meter coverage. Newly designed capacitors feature

- inductor with turns counter.
- Silver plated inductor wheel shaft and contact wheel.
- Active peak / peak hold cross-needle metering w/ backlighting.
- 6 position ceramic wafer antenna selector switch.
- Optional 1:1 or 4:1 current balun available.

Designed By Hams for Hams. Made in the USA!



Antenna Tuner AT4K

The AT4K has a power rating of 2500 watts single tone continuous.

- Unbalanced / balanced output (switch activated on front panel) with high power balun at the input of tuner circuit.
- T match circuit: impedance matching range 8 - 2000 ohms.
- Custom large value (460 pf) variable capacitors at 6 kV.
- Switchable antenna inputs.
- 10 amp edge-wound silver plated ceramic body roller inductors crank handle driven.
- Ferrite 1:1 input balun.
- Peak / peak hold dual cross-needle metering (1-2 sec hold) with backlight.
- Size: 15" H x 7" W x 16" D
- Weight: 20 lb.



Antenna Tuner AT-500

Covering 160 to 6 meters, the AT-500 has a differential tuning capacitor with 2 stators and 1 rotor, a precision ceramic body roller inductor, and a 4:1 ferrite current balun for balanced line feeds.

- Power rating: 600 watts PEP SSB; 500 watts CW.
- Output to both balanced and unbalanced lines.
- Impedance matching range 20 ohms to 1500 ohms.
- 6 position mode switch for multiple antennas.
- Active crossneedle peak/peak hold metering with back-lighting.
- Meter power range 0-300 watts / 0-1000 watts.
- Differential capacitor tuning with 2 stators and 1 rotor (360 pF - 14 pF - 360 pF @ 2.5 kV).

Palstar Products

Model	Description	Price
Amplifier		
LA-1K	1KW solid state amplifier	\$3,895.95
Antenna Tuner		
HF-AUTO	1500 W Antenna Tuner	\$1,689.95
AT5K	3500 W Antenna Tuner	\$1,479.95
AT4K	2500 W Antenna Tuner	\$1,389.95
BT1500A	1500 W Balanced Antenna Tuner	\$979.95
AT2K	2000 W Antenna Tuner	\$789.95
AT2KD	2000 W Differential Antenna Tuner	\$789.95
AT500	600 W Antenna Tuner	\$639.95
Wattmeters		
PM2000A	2000 W Wattmeter 1.8 MHz to 60 MHz	\$344.95
PM2000AM	200 W Wattmeter mobile 1.8 MHz to 60 MHz	\$344.95
Shortwave Accessories		
SP-30B-BLACK	Speaker 12 watts (for R30C/CC)	\$139.95
Dummy Loads		
DL1500	Dummy Load 1500 W - 450 MHz	\$194.95

High Power Manual Tuners



High Power ATR-20

The ATR-20 is the little brother of the Ameritron ATR-30 True Legal Limit antenna tuner! It's Ameritron Tough -- handles a full 1.2 kW SSB and 600 Watts CW. It's designed to safely handle the full SSB power of Ameritron's AL-811, AL-811H, AL-80B, ALS-500M, ALS-600 and other 1.2 kW SSB amplifiers. Compact all metal cabinet measures 13W x 4 3/4H x 17D inches. The ATR-20's roller inductor (gear driven with turns counter and crank knob) "T" matching network continuously tunes all frequencies from 1.8 through 30 MHz. Both tuning capacitors have vernier reduction gear drives for smooth precise tuning. Features an accurate built-in 3 kilowatt true peak or average detecting directional power meter. Peak and average forward power, reflected power, and SWR are displayed on an illuminated cross-needle meter. Legends will never wear off -- scratch-proof Lexan front panel.

LEGAL LIMIT TUNER ATR-30

Ameritron's ATR-30 true Legal Limit roller inductor antenna tuner is ham radio's toughest! It'll handle 1500 Watts continuous carrier output on all modes and all HF bands into most antennas -- even on 160 meters where most antenna tuners fail. It's perfect for Ameritron's most powerful amplifiers where the ATR-30 just loaf. All band coverage lets you operate 1.8 - 30 MHz including all MARS and WARC bands. Box dimensions 23" X 21" X 16".



300 WATT TUNER VC300DLP

The Vectronics VC300DLP is an affordable HF antenna tuner. This model features a front panel switch control which allows you to alternate between two coax-fed antennas (direct or through the tuner). You can also switch to a balanced line or a wire antenna. In the DIRECT positions, COAX 1 OUT or COAX 2 OUT, the tuner is bypassed, but the SWR/Power meter remains active. The VC300DLP also has switch positions for the dummy load. Using the tuned dummy load allows you to preset the tuner for the band in use, eliminating on-air interference. Power ranges are 30 and 300 Watts. This tuner employs continuous rotation capacitors and a 12 position switched inductor.

Automatic Motorized Antenna Controller



TuneMatic is a self-contained antenna controller which automatically adjusts the resonant frequency of a screwdriver/motorized antenna. TuneMatic operates anywhere between 1-60 MHz, and supports a wide variety of screwdriver-type tunable antennas. TuneMatic utilizes frequency measurement, SWR detection, and antenna position to perform the proper tuning, and stores the tuning data in a series of internal reserved memory banks, based on frequency and bandwidth.

The TuneMatic is independent of rig make and model and will typically support any HF rig with a PTT control line. TuneMatic is supplied with a backit wired remote button panel, which contains all the functions necessary to operate TuneMatic from the driver's seat.

Manual Tuner

C★MET 1.8-50MHz Tuner CAT-300



Tunes dipoles, verticals, mobile whips, long wires and other antenna designs in all bands between 1.8MHz and 50Mhz

Cross needle meter displays forward power, reverse power, and SWR simultaneously

Specifications:  
Max Power: 300W (SSB)  
Input impedance: 50 Ohm  
Output impedance: 10 - 600 Ohm  
Voltage Required For Meter Light: DC 11V - 15V, 250mA  
Weight: 6 Lb  
Dimensions: 10 x 4 x 8 inches  
HRO Price: \$269.95

WATCH HRO's YouTube CHANNEL WHERE WE DISCUSS AND DEMONSTRATE ALL THE LATEST PRODUCTS!

YOUTUBE.COM/@HAMRadioOutlet





LDG Electronics

In 1995 LDG Electronics pioneered the automatic Switched-L HF tuner. Powered by a microprocessor, it did away with manually tuned capacitors and inductors, automatically finding a match in seconds.

Now over twenty years later LDG has grown to be an industry leader, offering a wide array of tuners and other amateur products. Refining the original design with new tuning algorithms and upgraded components, LDG tuners define the state of the art. LDG remains a family-owned and operated business.



All LDG products come with a two year transferable warranty.

For Most Modern HF Transceivers

Z-100A

The Z-100A features LDG's famous 10:1 SWR tuning range that matches Dipoles, Verticals, Endfed wires, G5RVs or even an Off-center fed Windham. Easy integration means plug and play operation; installation could not be simpler. The Z-100A tuner goes anywhere with your HF radio... desktop, portable, parks, islands, or tall summits. Includes cables for Icom, Kenwood, & Yaesu. **HRO Price: \$179.95**

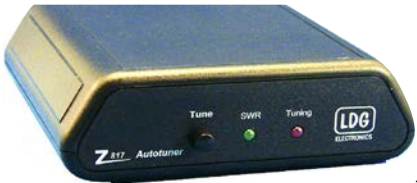


- Frequency Range: 1.8 - 54 MHz.
- Power: 125 W PEP, 30 W Digital.
- Input Impedance: 50 ohms.
- Tuning Range: 10:1 SWR.
- Memories: 2000.
- Retune Time: < 1.0 Seconds.
- Voltage: 13.8 VDC +/- 15%.
- Current Draw: 500 mA tuning, 20 mA idle.
- Size: 6.3" x 6.3" x 1.5"
- Weight: 1.5 lb.

Transceiver Matching

Z-817

Automatic Tuner for the Yaesu FT-818



The Z-817 automatic tuner, operating on 160 – 6 meters, attaches to the CAT port with the provided cable. Press the One-Touch-Tune button on the tuner and the Z-817 sets mode and power on the radio, tunes, then restores mode and power. Tuning time is 0.2 seconds for recalling one of its 2000 memories, and average time for a full cycle is 2.5 seconds. The Z-817 also works with any QRP radio with output of up to 20 watts. Press the tune button on the tuner while transmitting a carrier and it finds a match. Includes one foot CAT interface cable. Has CAT-thru port to allow computer control of radio. Tuning range of SWR loads from 6 to 450 ohms. It is powered by four AA batteries (not included). Size is 4.5" W x 4.5" H x 1.5" D. **HRO Price: \$139.95**

Remote Tuner

RT-100 & RC-100



Automatic Antenna Tuner / Remote Control

Place this 100 watt coax-in / coax-out tuner near the feed-point of the antenna and it will virtually eliminate all feed line loss due to SWR. The RT-100 is DC powered over the coax, so no extra cables are needed. Add your own DC injection circuit or use the LDG RC-100 to power and control the tuner from your shack. The RC-100 will provide DC power over the coax as well as control for auto mode, lock, and tune. **HRO Price: \$289.95**



Unun/Balun

LDG has an incredible line of Baluns and Ununs to make your next wire antenna or matching project a success.

Color coded for easy identification, waterproof, lightweight, durable, and power handling up to 200W PEP.



RU-1:1 UNUN



RU-9:1 UNUN



RU-4:1 UNUN



RBA-1:1 BALUN



RBA-4:1 BALUN

LDG Electronics

Tune Multiple Antennas



AT-1000ProII

The AT-1000ProII features an auto mode that automatically starts a tuning cycle any time the SWR exceeds a limit you set. Tune two antennas and switch between them. 2000 memories store tuning parameters for each antenna. The unit operates at any power level between 5 and 1000 watts peak RF input. A large, easy-to-read LED bar graph has two selectable ranges. It will tune from 1.8 to 54 MHz. **HRO Price: \$549.95**



AT-100ProII

This automatic desktop tuner covers 1.8 – 54 MHz. A two-position antenna switch allows you to switch instantly between two antennas. The AT-100ProII requires just 1 watt for operation, but will handle up to 125 watts, making it suitable for everything from QRP to a typical 100 watt transceiver. It includes more than 2,000 memories for each antenna, automatically storing tuning configurations for each frequency and band as you use them. Includes antenna and bypass indicators on front panel. **HRO Price: \$269.95**



AT-600ProII

The AT-600ProII will handle up to 600 watts SSB and CW, 300 on RTTY (1.8 – 30 MHz), 250 watts on 54 MHz.

- Processor-controlled switched L-tuner.
- Matches coax-fed antennas. Matches 10:1 SWR down to 1.5: 1.
- Use with longwires, random wires, and antennas fed with ladder line by adding an optional balun.
- Two antenna ports.
- Requires 11-16 VDC at 750 mA.

**HRO Price: \$409.95**

Low-Cost Tuner



Z-100Plus

Designed to provide 125 watt power handling in SSB and CW and 50 watts in digital modes. The Z100Plus features 2000 memories that store both frequency and tuning parameters. Operating frequencies are stored with tuning parameters to make memory tunes in a fast 0.1 seconds. Full tunes take an average of only 6 seconds. This makes the Z-100Plus perfect for SOTA, POTA and other portable operations. **HRO Price: \$189.95**

Portable Tuner



Z-11ProII

Now includes battery pack!

Here is everything you need in a small, portable tuner designed for battery operation. Only 5" W x 7.7" D x 1.5" H and weighing 1.5 pounds, it handles 0.1 to 125 watts, making it ideal for both QRP and standard 100-watt transceivers from 160 – 6 meters. With 8,000 memories, the Z-11 ProII uses a state-of-the-art processor-controlled switched-L tuning network. It matches dipoles, verticals, inverted-Vs or virtually any coax-fed antenna. With an optional LDG balun, it will also match longwires or antennas fed with ladder-line. **HRO Price: \$209.95**

High Power Tuner



AT-200ProII

The AT-200ProII handles up to 250 watts SSB or CW on 1.8 – 30 MHz, and 100 watts on 54 MHz (including 6 Meters). Rugged and easy-to-read LED bar graphs show power and SWR. A function key on the front panel allows you to access data such as mode and status. An LED indicates bypass mode and another shows which antenna is selected. **HRO Price: \$309.95**





Communication Speaker

Wireless Communication Antenna Expert Since 1981



Cable Hand Tools

Wireless Communication Antenna Expert Since 1981

7-16

DELUXE COMMUNICATION SPEAKER

- \* 2-1/2" Mylar Cone Mini Speaker
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Metal Mesh for Max. Sound Dispersion
- \* 3 Watts Nom. / 5 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-16A: 4 Ohms Available)
- \* Cabinet Size : 83(W) x 83(H) x 60(D)mm
- \* 6 Ft. Shielded Cable with 3.5mm Right Angle Plug
- \* With Swivel Bracket, Knobs & Hardware

7-25

DELUXE COMMUNICATION SPEAKER

- \* 2 x 3.5" Air Suspension Speaker for Soft Bass
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Metal Mesh for Max. Sound Dispersion
- \* 5 Watts Nom. / 8 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-25A: 4 Ohms Available)
- \* Cabinet Size : 140(W) x 86(H) x 66(D)mm
- \* 6 Ft. Shielded Cable with 3.5mm Right Angle Plug
- \* With Swivel Bracket, Knobs & Hardware

7-17

DELUXE COMMUNICATION SPEAKER

- \* 2-1/4" Mylar Cone Mini Speaker
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Metal Mesh for Max. Sound Dispersion
- \* 3 Watts Nom. / 5 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-17A: 4 Ohms Available)
- \* Cabinet Size : 80(W) x 66(H) x 53(D)mm
- \* 6 Ft. Shielded Cable with 3.5mm Right Angle Plug
- \* With Magnetic Swivel Bracket, Knobs & Hardware

7-26

DELUXE COMMUNICATION SPEAKER

- \* 3" Mylar Cone Mini Speaker
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Metal Mesh for Max. Sound Dispersion
- \* 5 Watts Nom. / 8 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-26A: 4 Ohms Available)
- \* Cabinet Size : 105(W) x 92(H) x 50(D)mm
- \* 6 Ft. Shielded Cable with 3.5mm Right Angle Plug
- \* With Swivel Bracket, Knobs & Hardware

7-26M

DELUXE COMMUNICATION SPEAKER

- \* 3" Mylar Cone Mini Speaker
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Metal Mesh for Max. Sound Dispersion
- \* 5 Watts Nom. / 8 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-26A: 4 Ohms Available)
- \* Cabinet Size : 105(W) x 92(H) x 50(D)mm
- \* 6 Ft. Shielded Cable with 3.5mm Right Angle Plug
- \* With Swivel Bracket, Knobs & Hardware

7-26P

DELUXE COMMUNICATION SPEAKER

- \* 3" Mylar Cone Mini Speaker
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Plastic Mesh & Cabinet
- \* 5 Watts Nom. / 8 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-26PA: 4 Ohms Available)
- \* Cabinet Size : 105(W) x 92(H) x 50(D)mm
- \* 6 Ft. Shielded Cable with 3.5mm Right Angle Plug
- \* With Swivel Bracket, Knobs & Hardware

7-26PM

DELUXE COMMUNICATION SPEAKER

- \* 3" Mylar Cone Mini Speaker
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Plastic Mesh & Cabinet
- \* 5 Watts Nom. / 8 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-26PA: 4 Ohms Available)
- \* Cabinet Size : 105(W) x 92(H) x 50(D)mm
- \* 6 Ft. Shielded Cable with 3.5mm Right Angle Plug
- \* With Swivel Bracket, Knobs & Hardware

7-23

DELUXE COMMUNICATION SPEAKER

- \* 2-1/4" Mylar Cone Mini Speaker
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Metal Mesh for Max. Sound Dispersion
- \* 3 Watts Nom. / 5 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-23A: 4 Ohms Available)
- \* Cabinet Size : 73(W) x 68(H) x 30(D)mm
- \* 6 Ft. Shielded Cable with 3.5mm Right Angle Plug
- \* With Magnetic Swivel Bracket, Knobs & Hardware

7-30

DELUXE COMMERCIAL COMMUNICATION SPEAKER WITH NOISE CANCELLING & MUTE/ATTENUATOR

- \* Noise Cancelling for Clear Communication
- \* Mute (Attenuator) : -8dB
- \* 3" Paper Cone High Performance Speaker
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Metal Mesh for Max. Sound Dispersion
- \* 5 Watts Nom. / 8 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-30A: 4 Ohms Available)
- \* Cabinet Size : 110(W) x 90(H) x 40(D)mm
- \* 6 Ft. Shielded cable with 3.5mm Right Angle Plug
- \* With Magnetic Swivel Bracket, Knobs & Hardware

7-24

DELUXE COMMUNICATION SPEAKER

- \* 2-1/4" Mylar Cone Mini Speaker
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Special Mesh for Max. Sound Dispersion
- \* 3 Watts Nom. / 5 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-24A/ 7-24MA: 4 Ohms Available)
- \* Cabinet Size : 80(W) x 74(H) x 48(D)mm
- \* 6 Ft. Shielded Cable with 3.5mm Right Angle Plug
- \* With Swivel Click Bracket, Knobs & Hardware

7-24M

DELUXE COMMUNICATION SPEAKER

- \* 2-1/4" Mylar Cone Mini Speaker
- \* Stylish High-heat Resistant Plastic Cabinet
- \* Special Mesh for Max. Sound Dispersion
- \* 3 Watts Nom. / 5 Watts Max. Power
- \* Impedance : 8 Ohms ( 7-24A/ 7-24MA: 4 Ohms Available)
- \* Cabinet Size : 80(W) x 74(H) x 48(D)mm
- \* 6 Ft. Shielded Cable with 3.5mm Right Angle Plug
- \* With Swivel Click Bracket, Knobs & Hardware



TH-55FP  
(8 Ohms)



HS-55W  
(4 Ohms)

5" PLASTIC HORN SPEAKER

- \* Max. Input Power: 12 Watts
- \* Crisp Sound Reproduction
- \* Ideal for CB, PA & Security System
- \* Adjustable Mounting Bracket
- \* 10 Ft. Cord with 3.5mm Right Angle Plug

NEW

7-36

WATERPROOF COMMUNICATION SPEAKER (w/ Volume and Power Control)

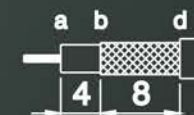
- \* Impedance: 8 Ohms
- \* 10 Watts Nom. / 15 Watts Max. Power
- \* Voltage: 12V
- \* IP Rating: Ip67
- \* Cabinet Size: 125(W) x 125(H) x 59(D)mm
- \* 6 Ft. #18 Power Cord with 3.5mm Mono Plug

PRODUCTS MADE IN TAIWAN

Copyright@AUTOTEK LTD.

CXT-S901A

3 Blade Stripper for RG-8 / RG-11 / RG-213 / LMR400



CXT-S902A

3 Blade Stripper for RG-6 / RG-58 / RG-59 / RG-62



CXT-S903A

Cutter for cable RG-58/ RG-59/ RG-6 Max. 16mm<sup>2</sup> cable with a steel center conduct.



CXT-S904A

Cutter for Copper / Alumin. / RG-58 / RG-59 / RG-6/ RG-7 / RG-11 cables. Max. Ø13.2mm.



CXT-C101A

8.7" Ratchet Coaxial Hex Crimper for RG-58/ RG-59/ RG-8/ RG-11/ RG-62/ RG-213/ LMR240/ LMR400



CXT-C130A

8.7" Ratchet Coaxial Hex Crimper for RG-58/ RG-59/ RG-62/ RG-174 Fiber Optic

PRODUCTS MADE IN TAIWAN



CXT-C102A

9" Heavy Duty Ratchet Crimper for RG-58/ RG-6/ RG-11/ RG-213/ LMR240/ LMR400



CXT-380

Automatic Wire Stripper precise wire stripper for AWG 16-8 (JIS1.25 / 2.0 / 3.5 / 5.5 / 8 mm<sup>2</sup>)



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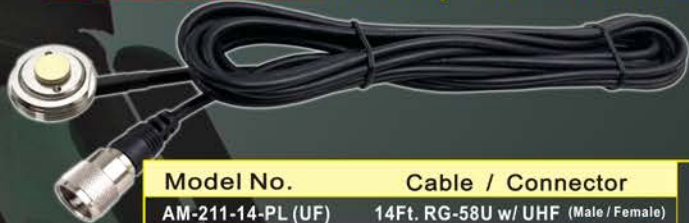




NMO Coaxial Cable Kits

Wireless Communication Antenna Expert Since 1981

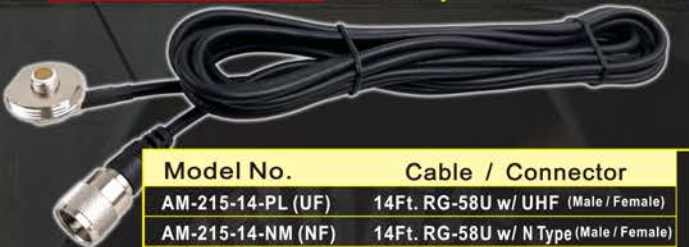
**3/4" Nickel Plated Zinc NMO Mount Up to 5G (W/O UHF Connector)**  
**High Frequency 14Ft. / 17Ft. RG-58U Coaxial Cable with Connector**



Model No.	Cable / Connector
AM-211-14-PL (UF)	14Ft. RG-58U w/ UHF (Male / Female)
AM-211-14-NM (NF)	14Ft. RG-58U w/ N Type (Male / Female)
AM-211-14-BM (BF)	14Ft. RG-58U w/ BNC (Male / Female)
AM-211-14-TM (TF)	14Ft. RG-58U w/ TNC (Male / Female)
AM-211-14-FM (FF)	14Ft. RG-58U w/ FME (Male / Female)
AM-211-14-SAM (SAF)	14Ft. RG-58U w/ SMA (Male / Female)
AM-211-14-C	14Ft. RG-58U no Connector

Model No.	Cable / Connector
AM-211-17-PL (UF)	17Ft. RG-58U w/ UHF (Male / Female)
AM-211-17-NM (NF)	17Ft. RG-58U w/ N Type (Male / Female)
AM-211-17-BM (BF)	17Ft. RG-58U w/ BNC (Male / Female)
AM-211-17-TM (TF)	17Ft. RG-58U w/ TNC (Male / Female)
AM-211-17-FM (FF)	17Ft. RG-58U w/ FME (Male / Female)
AM-211-17-SAM (SAF)	17Ft. RG-58U w/ SMA (Male / Female)
AM-211-17-C	17Ft. RG-58U no Connector

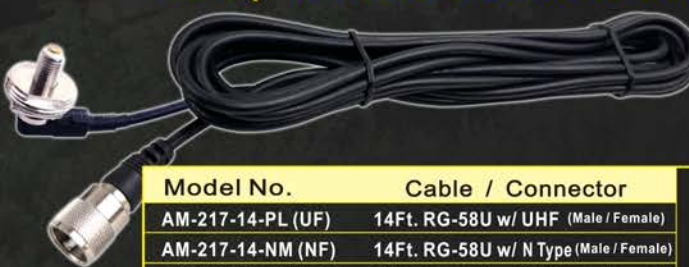
**3/8" Nickel Plated Zinc NMO Mount Up to 5G (W/O UHF Connector)**  
**High Frequency 14Ft. / 17Ft. RG-58U Coaxial Cable with Connector**



Model No.	Cable / Connector
AM-215-14-PL (UF)	14Ft. RG-58U w/ UHF (Male / Female)
AM-215-14-NM (NF)	14Ft. RG-58U w/ N Type (Male / Female)
AM-215-14-BM (BF)	14Ft. RG-58U w/ BNC (Male / Female)
AM-215-14-TM (TF)	14Ft. RG-58U w/ TNC (Male / Female)
AM-215-14-FM (FF)	14Ft. RG-58U w/ FME (Male / Female)
AM-215-14-SAM (SAF)	14Ft. RG-58U w/ SMA (Male / Female)
AM-215-14-C	14Ft. RG-58U no Connector

Model No.	Cable / Connector
AM-215-17-PL (UF)	17Ft. RG-58U w/ UHF (Male / Female)
AM-215-17-NM (NF)	17Ft. RG-58U w/ N Type (Male / Female)
AM-215-17-BM (BF)	17Ft. RG-58U w/ BNC (Male / Female)
AM-215-17-TM (TF)	17Ft. RG-58U w/ TNC (Male / Female)
AM-215-17-FM (FF)	17Ft. RG-58U w/ FME (Male / Female)
AM-215-17-SAM (SAF)	17Ft. RG-58U w/ SMA (Male / Female)
AM-215-17-C	17Ft. RG-58U no Connector

**3/8" or 3/4" Hole Brass NMO 1/2" Thick Roof Mount**  
**14Ft. / 17Ft. RG-58U Coaxial Cable with Connector**



Model No.	Cable / Connector
AM-217-14-PL (UF)	14Ft. RG-58U w/ UHF (Male / Female)
AM-217-14-NM (NF)	14Ft. RG-58U w/ N Type (Male / Female)
AM-217-14-BM (BF)	14Ft. RG-58U w/ BNC (Male / Female)
AM-217-14-TM (TF)	14Ft. RG-58U w/ TNC (Male / Female)
AM-217-14-FM (FF)	14Ft. RG-58U w/ FME (Male / Female)
AM-217-14-SAM (SAF)	14Ft. RG-58U w/ SMA (Male / Female)
AM-217-14-C	14Ft. RG-58U no Connector

Model No.	Cable / Connector
AM-217-17-PL (UF)	17Ft. RG-58U w/ UHF (Male / Female)
AM-217-17-NM (NF)	17Ft. RG-58U w/ N Type (Male / Female)
AM-217-17-BM (BF)	17Ft. RG-58U w/ BNC (Male / Female)
AM-217-17-TM (TF)	17Ft. RG-58U w/ TNC (Male / Female)
AM-217-17-FM (FF)	17Ft. RG-58U w/ FME (Male / Female)
AM-217-17-SAM (SAF)	17Ft. RG-58U w/ SMA (Male / Female)
AM-217-17-C	17Ft. RG-58U no Connector

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CB Power Cord

Wireless Communication Antenna Expert Since 1981



**CB-2** 2-Pin Molded Plug To Tinned End  
**CB-2P** 2-Pin Molded Plug To Cig. Plug  
**5FT 20AWG 2-WIRE CB POWER CORD W/ INLINE FUSE HOLDER (2A Fuse)**



**CB-3-2A** 20AWG Wire, 3-Pin Molded Plug To Tinned End  
**CB-3P** 20AWG Wire, 3-Pin Molded Plug To Cig. Plug  
**5FT 2-WIRE CB POWER CORD W/INLINE FUSE HOLDER (2A Fuse)**

**CB-3-3A** 20AWG Wire, 3-Pin Molded Plug To Tinned End  
**5FT 2-WIRE CB POWER CORD W/INLINE FUSE HOLDER (3A Fuse)**

**CB-3A** 16AWG Wire, 3-Pin Molded Plug To Tinned End  
**CB-3AP** 16AWG Wire, 3-Pin Molded Plug To Cig. Plug  
**5FT 2-WIRE CB POWER CORD W/INLINE FUSE HOLDER (4A Fuse)**  
(CB-3 & CB-3AP Are Desinged For All Cobra Dx Series High Current Radios)



**CB-4** 3-Pin Molded Plug To Tinned End  
**CB-4P** 3-Pin Molded Plug To Cig. Plug  
**5FT 20AWG 3-WIRE CB POWER CORD W/ 2 INLINE FUSE HOLDERS (2A Fuse \* 2)**  
(CB-3 & CB-3AP Are Desinged For All Cobra Dx Series High Current Radios)



**POW-VBL**  
2-Pin Quick Disconnect Bullet Leads  
**30cm 20awg Wire To Cut End.**  
**A Quick And Convenient Way Of Providing Non-Reversible Power Cable For All Transceivers**



**OP-ICOM6CLA**  
2-Pin T-Male DC Power Connector To Cig. Plug  
**ICOM 6FT 14AWG 2-WIRE CB POWER CORD W/ INLINE FUSE HOLDER (15A Fuse)**



**OP-ICOM10HWP**  
2-Pin T-Male DC Power Connector To Tinned End  
**ICOM 10FT 14AWG 2-WIRE CB POWER CORD W/ INLINE FUSE BOX (15A Fuse) (15cm To The Fuse Box)**



**OP-KEN6CLA**  
2-Pin Kenwood NX Connector To Cig. Plug  
**KENWOOD 6FT 14AWG 2-WIRE CB POWER CORD W/ INLINE FUSE HOLDER (15A Fuse)**



**OP-KEN10HWP**  
2-Pin Kenwood NX Connector To Tinned End  
**KENWOOD 10FT 14AWG 2-WIRE CB POWER CORD W/ INLINE FUSE BOX (15A Fuse) (15cm To The Fuse Box)**



**OP-N6CLA**  
Cigarette Lighter to Cut End  
**6FT 14AWG 2-WIRE CB POWER CORD W/ INLINE FUSE HOLDER (15A Fuse)**

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Mobile Antenna Mount & Accessories  
Wireless Communication Antenna Expert Since 1981



**AM-100**  
3/8"x24T Type 3.5" Magnetic Mount,  
Black Plastic Cover, 14FT. (or 17FT.)  
RG-58U Cable W/ PL-259



**AM-101**  
3.5" SO-239 Type Magnetic Mount,  
Black Plastic Cover, 14FT. (or 17FT.)  
RG-58U Cable W/ PL-259



SO-239 Type Magnetic Mount, Chrome  
Metal Cover, 14FT. (or 17FT.) RG-58U  
Cable W/ PL-259

**AM-1023** 3" Cover  
**AM-1024** 4" Cover  
**AM-1025** 5" Cover



3/8" x 24T Type Magnetic Mount, Black  
Plastic Cover, 17FT. RG-58U Cable  
W/ PL-259

**AM-1034** 3" Cover  
**AM-1035** 5" Cover



NMO Type Magnetic Mount, Chrome  
Metal Cover, 14FT. (or 17FT.) RG-58U  
Cable W/ PL-259

**AM-1043** 3" Cover  
**AM-1044** 4" Cover  
**AM-1045** 5" Cover



**AM-106**  
5"(134mm) Black Plastic Cover  
UHF Female (SO-239) Type Heavy Duty  
Magnet Mount W/Protective Rubber Boot  
14FT. RG-58/U Coaxial Cable + PL-259



**AM-107**  
3/8" X24T Type 5" Magnetic Mount  
Chrome Metal Cover, 17FT. RG-58U  
Cable W/ PL-259



**AM-109** BNC Jack on the Mount  
**AM-110** SMA Jack on the Mount  
1.5" Mini. Magnet Antenna Mount 2.5M  
RG-174A/U Cable + BNC (SMA) Plug.  
Adopts Super Strong Rare Earth Magnet



**AM-203**  
16mm Hole, S.S. Trunk-Lip Mount



**AM-204**  
16mm Hole, S.S. Trunk-Lip Mount



**AM-205**  
16mm Hole, S.S. Trunk-Lip Mount



**AM-209**  
NMO Type Trunk-Lip Mount, 14FT.  
RG-58U Coax. W/ PL-259



**AM-210**  
SO-239 Type Trunk-Lip Mount,  
14FT. RG-58U Cable W/ PL-259



**AM-302A** 3-Way Aluminum Mirror Mount,  
Ø16mm Hole  
With 2" Screws.  
**AM-302B** Ø16mm Hole  
With 1-1/2" Screws.  
**AM-302C** Ø12.7mm Hole  
With 1-1/2" Screws.



**AM-302+SO-239**  
3-Way Aluminum Mirror Mount,  
Ø16mm Hole. With 1-1/2" Screws.



**AM-207A-14** W/ 14FT. Cable  
**AM-207A-17** W/ 17FT. Cable  
3/4" NMO Brass Mount, Plastic Cover & RG-58U  
Cable W/ PL-259



**AM-207B-14** W/ 14FT. Cable  
**AM-207B-17** W/ 17FT. Cable  
3/8" NMO Brass Mount, Plastic Cover & RG-58U  
Cable W/ PL-259



**AM-207AN-14** W/ 14FT. Cable  
**AM-207AN-17** W/ 17FT. Cable  
3/4" NMO Nickel Plated Mount, Plastic Cover  
& RG-58U Cable W/ PL-259



**AM-207BN-14** W/ 14FT. Cable  
**AM-207BN-17** W/ 17FT. Cable  
3/4" NMO Nickel Plated Mount, Plastic Cover  
& RG-58U Cable W/ PL-259



**AM-204-7-LA**  
SO-239 UHF Adjustable Trunk Lip Antenna  
Mount & 17FT RG-58U Cable W/ PL-259



**AM-204-7-SM**  
3/8" x 24T Stud Adjustable Trunk Lip Antenna  
Mount(For 5/8" Hole Mount) & 17FT. RG-58  
Cable W/ PL-259



Mobile Antenna Mount & Accessories  
Wireless Communication Antenna Expert Since 1981

Microphone Cable



**MC4-4** 4FT Mic Cable With 4pin Plug & Jack  
**MC6-4** 4FT Mic Cable With 6pin Plug & Jack  
**MC8-4** 4FT Mic Cable With 8pin Plug & Jack



**MC6-10** 10FT 6-Wire(5c+1s) CB MIC. Spring  
Cable, Dull Finish.  
**MC8-6** 6FT 8-Wire(7c+1s) CB MIC. Spring  
Cable, Dull Finish.  
**MC8-10** 10FT 8-Wire(7c+1s) CB MIC. Spring  
Cable, Dull Finish.

Antenna Mount w/ Cable



**AM-207C-14** W/ 14FT. Cable  
**AM-207C-17** W/ 17FT. Cable  
For 5/8" Mounting Hole  
NMO Right Angle Antenna Mount  
RG-58U Cable W/ Molded PL-259 Plug



**AM-207D-5-8**  
For 5/8" Mounting Hole  
3/8" x 24T Stud Right Angle Antenna  
Mount, 17FT RG-58 W/ PL-259



**AM-207-LA**  
For 5/8" Mounting Hole  
SO-239 UHF Right Angle Antenna Mount,  
17FT. RG-58 W/ PL-259



**AM-207MU** W/ 14FT. Cable  
**AM-207MU-17** W/ 17FT. Cable  
3/4" NMO Hole Mount, RG-58U W/ Mini UHF Plug



**AM-550**  
SMA Clip Mount, 4FT. RG-174A/U  
Coax Cable W/ SMA Plug



**AM-551**  
BNC Clip Mount, 4FT. RG-174A/U  
Coax. Cable W/ BNC Plug



2" SWIVEL BALL MOUNT WITH  
IMPROVED LOCKING PLATE.

**AM-601S** 3" Locking Plate,  
SO-239 Connection.  
**AM-601L** 3" Locking Plate,  
LUG Termination.  
**AM-602S** 3.5" Locking Plate,  
SO-239 Connection.  
**AM-602L** 3.5" Locking Plate,  
LUG Termination.



**AM-701**  
3/8" x 24T Pillar Side Mount  
W/ Metal Plate & Hardwares.



**AM-800**  
SMA Type Window Mount, 8FT.  
RG-174A/U Cable W/ SMA Plug



**AM-801**  
BNC Type Window Mount, 8FT.  
RG-174A/U Cable W/ BNC Plug



**RM-10**  
Hand Radio Mounting Bracket  
W/ Foam Pad. Spring Loaded,  
Quick/Easy Installation.



Antenna Trunk Hole Mount,  
SO-239 Connection, 3/8" x24T Fitting.

**HDM-1B** Black Cover  
**HDM-1G** Gray Cover

Heavy Duty Antenna Mount



**AM-1102**  
DUAL 3-WAY ALUMINUM ANTENNA MOUNT  
With One SM-1 Stud and One Down Stud For Ground, Mounts On Mast  
Up To 1 1/8" Diameter For 2 Mobile Antenna.  
One Side: SO-239 To 3/8-24T Mount Hole  
One Side: 3/8-24T Mount Hole

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Heavy-duty Magnet Mount & Voltage Reducer  
Wireless Communication Antenna Expert Since 1981

AM-911

Extra Heavy Duty Triple Magnet Mount (3 x 5" Mount)

Black Plastic Cover With Protective Rubber Pad  
5/8"(16mm) Mounting Hole On Triangle Metal Plate  
Cardboard Box Packing  
Optional Feeding Cable Assembly As Shown



AM-911-3-8x24 (AM-911+PS-15)

3PCS \* 5" Triple Magnet Antenna Mount  
Black Plastic Cover With Protective Rubber Pad  
3/8"-24T Threads (5/8" Mounting Hole)  
With 14FT. RG-58U Cable & PL-259 Plug

W/ PS-15 Cable



AM-911-UHF (AM-911+PS-17)

3PCS \* 5" Triple Magnet Antenna Mount  
Black Plastic Cover With Protective Rubber Pad  
SO-239 Type Antenna Connector  
With 14FT. RG-58U Cable & PL-259 Plug

W/ PS-17 Cable



AM-911-NMO (AM-911+AM-207C)

3PCS \* 5" Triple Magnet Antenna Mount  
Black Plastic Cover With Protective Rubber Pad  
NMO Connection  
With 14FT. RG-58U Cable & PL-259 Plug

W/ AM-207C Cable

3.5" Heavy Duty Chrome Zinc Magnet Mount



NEW

14FT. Cable

AM-1203R-UM W/ PL-259 Connector  
AM-1203R-NM W/ N-Type Male Connector  
AM-1203R-BM W/ BNC Male Connector  
AM-1203R-SM W/ SMA Male Connector  
AM-1203R-MPL W/ MINI UHF Male Connector

- 3.5" Chrome Zinc Magnet NMO Mount
- Gold Contact Pin
- High Quality Die-Casting With Rubber Boots
- 14 FT. RG-58U Dual Shield Coax Cable W/ Connector

17FT. Cable

AM-1203RL-UM W/ PL-259 Connector  
AM-1203RL-NM W/ N-Type Male Connector  
AM-1203RL-BM W/ BNC Male Connector  
AM-1203RL-SM W/ SMA Male Connector  
AM-1203RL-MPL W/ MINI UHF Male Connector

- 3.5" Chrome Zinc Magnet NMO Mount
- Gold Contact Pin
- High Quality Die-Casting With Rubber Boots
- 17 FT. RG-58U Dual Shield Coax Cable W/ Connector

15 Amps DC To DC Voltage Reducer



VR-15

15 AMPS DC TO DC VOLTAGE REDUCER

- Over Voltage, Over Current & Wrong Polarity Protection
- Hot Line Fuse (15AMP) Protection
- Input Voltage : DC 18~35V
- Output Voltage : DC 12.5V ~14.5V (13.8V No Load.)
- Dimensions: 170(W) x 40(H) x 130(D) mm



Antenna Switch / RF Surge Protector / Dummy Load  
Wireless Communication Antenna Expert Since 1981



2-WAY COAX ANTENNA SWITCH

CX-201U W/ SO-239 UHF Jacks  
CX-201N W/ N-Type Jacks

- With Center Ground Tap Keeps The Unused Terminal Always Grounded
- Rotary Selecting Switch
- Frequency: Up To 600 MHz (CX-201U) Up To 1 GHz (CX-201N)
- V.S.W.R. : Less Than 1.2:1
- Power Rating : 1 KW (CW)
- Impedance: 50 OHMS
- Insertion Loss: Less Than 0.2 dB
- Isolation: Better Than 50 dB



3-WAY COAX ANTENNA SWITCH

CX-301U W/ SO-239 UHF Jacks  
CX-301N W/ N-Type Jacks

- With Center Ground Tap Keeps The Unused Terminal Always Grounded
- Rotary Selecting Switch
- Frequency: Up To 800 MHz (CX-321U) Up To 1 GHz (CX-301N)
- V.S.W.R. : Less Than 1.2:1
- Power Rating : 1 KW (CW)
- Impedance: 50 OHMS
- Insertion Loss: Less Than 0.2 dB
- Isolation: Better Than 50 dB

NEW



CX-5

3-WAY COAX ANTENNA SWITCH

- W/ SO-239 UHF Jacks
- Rotary Selecting Switch
- Power Range: DC -200 MHz (1KW PEP.) 200-500 MHz (500W PEP.)
- VSWR: DC - 300 MHz  $\leq 1.5$  300 - 500 MHz  $\leq 2.0$
- Impedance: 50 OHMS
- Isolation: Better Than 50 dB
- Connector: 1 x SO-239 to 3 x SO-239



VHF/UHF INDOOR DUPLEXER

DU-500UF SO-239 JACK To 2 x SO-239 JACKS  
DU-500UM SO-239 JACK To 2 x PL-259 PLUGS  
DU-500NF SO-239 JACK To 2 x N-JACKS

- Zinc Alloy Diecasting Box Prevents the Duplexer from Electro-magnetic Interferences
- Frequency Bandwidth: 1.3 - 225MHz(VHF) / 350 - 540MHz(UHF)
- Power Handling: 500W(1.3 - 35MHz), 300W(50 - 540MHz)
- V.S.W.R. : Less Than 1.2:1 (130 - 180MHz)
- Insertion Loss: Less Than 0.2 dB
- Isolation: Better Than 40 dB



VHF/UHF INDOOR DUPLEXER

DU-510A-UM SO-239 JACK To 2 x PL-259 PLUGS  
DU-510A-NF N Female To 2 x N Female  
DU-520A-NF N Female To 2 x N Female

- Zinc Alloy Diecasting Box Prevents the Duplexer from Electro-magnetic Interferences
- Frequency Bandwidth / Power Handling  
DU-510A : 1.3-170MHz(300W) / 350 - 540MHz(300W)  
DU-520A : 1.3-60MHz(500W) / 125-470MHz(300W)
- V.S.W.R. : Less Than 1.3:1
- Insertion Loss: Less Than 0.2 dB
- Isolation: Better Than 40 dB



VHF/UHF INDOOR DUPLEXER

DU-510B-NF N Female To 1x PL-259 + 1x N Male  
DU-520B-NF N Female To 1x PL-259 + 1x N Male

- Zinc Alloy Diecasting Box Prevents the Duplexer from Electro-magnetic Interferences
- Frequency Bandwidth / Power Handling  
DU-510B : 1.3-170MHz(300W) / 350 - 540MHz(300W)  
DU-520B : 1.3-60MHz(500W) / 125-470MHz(300W)
- All Specifications are Same as Above DU-510A / DU-520A, But Different in Connection :
- N-Jack on Input Side
- 1FT. 5D-FB Coax. Cable w/ PL-259 Plug & 1FT 5D-FB Coax. Cable W/ N-plug on Output Side



COAXIAL LIGHTNING SURGE PROTECTOR

LP-230A N-FEMALE To N-FEMALE  
LP-230B N-MALE To N-FEMALE

- Frequency: DC - 1500 MHz
- Impedance: 50 OHMS
- Insertion Loss: Less Than 0.1 dB
- Power: 100 W Max.
- Discharge Voltage: 230 VDC



COAXIAL LIGHTNING SURGE PROTECTOR

LP-350A SO-239 To SO-239  
LP-350B PL-259 To SO-239

- Frequency: DC - 500 MHz
- Impedance: 50 OHMS
- Insertion Loss: Less Than 0.1 dB
- Power: 300 W Max.
- Discharge Voltage: 350 VDC



LPB-1

BRACKET For SURGE PROTECTOR

Bracket For LP-230A/B & LP-350A/B



DL-60

60 WATT DUMMY LOAD W/ HEAT SINK

- VSWR : 1.10 ( 250MHz ) , 1.40 ( 450MHz )
- Impedance: 50 OHMS
- Power: 20 Watts(Cont.), 60 Watts(Max.)
- Connector: PL-259

NEW



DL-200UM (DC-1GHz)

200 WATTS DUMMY LOAD

- S.W.R. :  $\leq 1.10$  ( DC - 600MHz )  $\leq 1.16$  ( 600MHz - 1GHz )
- Impedance: 50 OHMS
- Power: 35 Watts(Cont.) 200 Watts(Max.)
- Connector: PL-259 ( N Male Option)

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## Lightning Protected Coax Switches

### ALPHA DELTA

#### 4 Position Switch Delta-4B



This lightning protected 4 position RF coax switch uses the Alpha Delta ARC-PLUG® cartridge to protect your equipment from electrical surges. The exclusive center "off" (ground) position internally disconnects and grounds all antenna circuits. It has a diecast housing with constant impedance micro-strip cavity construction. Features a positive detent roller bearing switch drive. Handles full legal power. Delta-4/N for type "N" connectors. The Delta-4 handles frequencies through 500 MHz and the Delta-4/N through 1.3 GHz.

**HRO Price: \$134.95; Type N: \$144.95.**

#### 2 Position Switch Delta-2B

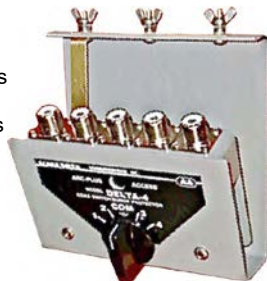


This 2 position coax switch has the same features as the Delta-4. Order UHF, or type "N" connectors for low-loss performance through 1.3 GHz.

**HRO Price: \$114.95; Type N: \$124.95.**

#### Antenna Selector Console Desktop Coax Switch

This series retains all the features and specifications of the precision DELTA-4B series, including ARC-PLUG® module surge protection, in a desk top console that will sit right next to the equipment on your desk without having to be secured or bolted down. The console features a powder-coated steel housing and a solid brass ground buss, with #10 wire attachment hardware across the rear of the housing providing a common ground point for all station equipment and accessories.



**Model ASC-4B** Antenna Selector Console Switch (4 position, UHF Connectors thru 500 MHz). **HRO Price: \$199.95**

**Model ASC-4B/N** Antenna Selector Console Switch (4 position, N Connectors thru 1.3 GHz). **HRO Price: \$209.95**

### ALPHA DELTA

Surge Protector



The ATT3G50 coaxial surge protector was designed for the cellular, microwave point-to-point, and the broadband wireless industry. These products feature very low loss performance through 3 GHz for 50N models and 500 MHz for 50U models. Typical loss is 0.1 dB at 1 GHz through 0.5 dB at 3 GHz. This series represents the lowest loss broadband design in the industry. Choose connector: type "N" (50N models) or "UHF" (50U models).

The Defense Logistic Agency (DLA) has assigned National Stock Number (NSN) 01 5470278 to the Model TT3G50 Coax Surge Protector and NSN 5325 01 5466841 to the 3G50 ARC-PLUG® Cartridge for use in all US Military and NATO applications, worldwide.

**ATT3G 50N**  
200 W – 3.0 GHz, Type N..... **\$78.95**  
**ATT3G 50NHP**  
2 kW – 3.0 GHz, Type N..... **\$78.95**  
**ATT3G 50U**  
200 W – 500 MHz, UHF ..... **\$68.95**  
**ATT3G 50UHP**  
2 kW – 500 MHz, UHF..... **\$68.95**

## HF Antenna Switches



#### 2 Position Coax Switch

**CS-201A**

Daiwa has two heavy-duty coaxial switches. Model A (SO-239 connectors) is usable to 500 MHz, model GII (N connectors) is usable to 1.3GHz. The unused positions are grounded.

**HRO Price CS-201A (SO-239): \$36.95**

**HRO Price CS-201GII (N): \$59.95**

### DIAMOND

ANTENNA

#### 2 Position Coax Switch



**CX-210A**

Diamond's heavy-duty wideband coax switch, the CX-210A, is a high quality 2 position coax switch with SO-239 connections. Like most Diamond products, this switch is very well built and durable. Two screws on the back allow you to mount the switch to a flat surface.

**HRO Discount Price: \$56.95**

## Ground Clamp



**Model  
UCGC**

The UCGC clamp mounts directly on a standard 5/8" copper ground rod. You can attach up to 4 Model ATT 3G50 series coax surge protectors. The ground clamp is made from solid copper and has stainless steel mounting hardware with 6 bolts, washers, and nuts. It includes an adjustable copper ground wire clamp for your station single point ground wire of up to 4 gauge in size.

**HRO Price: \$54.95**

## Lightning Protection

### PolyPhaser®

CORPORATION

#### Coaxial Impulse Suppressors

Hermetically-sealed voltage sensitive gas tubes and other components assure that surge voltages and currents will not reach your equipment.

#### Flange Mounts HRO Price: \$89.95 - \$94.95



MODEL	FREQ RANGE	MAX POWER
IS-50 UX-C0	1.5-700	HF - 2kW VHF - 375 W UHF - 125 W
IS-50 NX-C0	1.5-700	HF - 2kW VHF - 375 W UHF - 125 W
IS-50 NX-C2	125-220	VHF - 375 W UHF - 125 W
w/N Connectors	220 - 700	UHF - 125 W
	700 - 1 GHz	SHF - 50 W

#### Bulkhead Mounts HRO Price: \$94.95 - \$104.95



MODEL	FREQ RANGE	MAX POWER
IS-B50LN-CO-ME	1.5-400	HF - 2kW VHF - 375 W UHF - 125 W
IS-B50HN-CO	1.5-700	HF - 3kW VHF - 500 W UHF - 200 W

## Coax-Seal



## Coax-Seal

Coax-Seal will seal all types of coax fittings, baluns, antenna parts and connectors of any shape. Wrap Coax-Seal around the object you want to protect and then mold it into shape. Keeps moisture out of the coax fitting on antenna feed lines. Need to make a change? Just remove it and start over.

Seals and protects all types of cable, wire and connectors from moisture and corrosion. Adheres to all cable and wire hardware and cable jackets. Offers years of protection from the effects of weather. Stays flexible, hot or cold; easy to remove.

**HRO Price: \$4.95/per roll**

## Baluns

### LDG

Electronics

200 watts  
1.8 to 30 MHz



RBA-4:1	Remote 4:1	Balun	\$29.95
RBA-1:1	Remote 1:1	Balun	\$29.95
RU-1:1	Remote 1:1	Unun	\$29.95
RU-4:1	Remote 4:1	Unun	\$29.95
RU-9:1	Remote 9:1	Unun	\$29.95

### RadioWavz

The RadioWavz baluns are designed to handle full legal power with a low SWR.



1:1 Air	B11a	\$34.95
1:1 Ferrite	B11f	\$46.95
1:1 Isolation	B11i	\$46.95
1:4 Voltage Ferrite	B14vf	\$52.95
1:4 Current Air	B14ca	\$46.95
1:4 Current Ferrite	B14cf	\$56.95
1:9 Balun Isolation TX	B19tx	\$46.95

## Coax Wrap



CoaxWrap will provide your coax connections with outstanding protection from the weather. Just wrap the connection with the convenient roll. When you need access to the connection, the wrap removes easily. Available in red, white, blue, clear, and black.

**HRO Price: \$6.95/ per roll**

### PALOMAR

ENGINEERS®



#### CB-4-1500TS

The CB-4-1500TS balun is a 4:1 impedance transformer designed to step down balanced ladder line feed point impedances of 600-50 ohms to 150-16.7 ohms unbalanced coax at 1500 watts PEP from 1.8 to 61 MHz. **HRO Price: \$119.95**

#### CB-1-5000EB

The CB-1-5000EB current balun is used for dipole antennas to keep RF on the antenna and off the outside of the coax braid. Rated 5000 watts PEP from 1-61 MHz. **HRO Price: \$139.95**



#### CMNF-500-50

Common mode coax noise filter rated at 500 watts PEP from 1-61 MHz with common mode attenuation up to 38 dB. Not effective for noise from AC power lines or noise received directly by antenna.

**HRO Price: \$69.95**

#### CU-1-5000SO

The CU-1-5000SO is a high power unun used as a line isolator or feedline choke. SO-239 in/out connectors. Rated 5 kW PEP 1.8-61 MHz. If you run RTTY contests or digital modes at 1500 W output, this is the unun you need for high duty cycles.

**HRO Price: \$119.95**



#### CU-4-9-1200

Model CU-4-9-1200 is a 4:1 and a 9:1 Ruthroff unun with one side stud for 4:1 (200:50Ω), a top stud/ eyebolt for 9:1 (450:50Ω) output, and a side stud for ground connection. Input power levels up to 1.2 kW PEP when used with a matched load. A great multipurpose unun for end fed non-resonant antennas, traveling wave verticals, etc.

**HRO Price: \$109.95**





Transceiver/Amplifier Kits

These RFI kits effectively suppress transmitter RFI and reduce common mode receiver noise. Quick installation - immediate RFI reduction. No radio mods required – works on all brands.

Part#	Desc	HRO Price
RFI-XCVR-STD	Single antenna port radio	\$39.95
RFI-XCVR-DELUXE	Multi-antenna port radio	\$89.95
RFI-LA-GAC	AC powered linear amps	\$54.95

Electronic Device RFI Kits

Part#	Desc	HRO Price
RFI-WW-10	Wall wart noise filter	\$29.95
RFI-HTS	Audio/video home theater	\$69.95
RFI-COMPUTER	Laptop or desktop	\$49.95
RFI-SMPS	Switch mode power supply	\$29.95

Ferrite Combo/Bulk Kits



Part#	Desc	HRO Price
FSB31-1/2-10	1/2" Snap on Qty: 10	\$59.95
F240-31-10	1.4" ID Ring Qty: 10	\$89.95
FSCP-31-22	1/4, 3/8, 1/2, 3/4 Snap on	\$94.95
FMSCP-31-10	1/4, 1/2, 3/4 Snap On	\$49.95
MRSCP-31-17	3/8, 1/2, 3/4 Snap On + 1.4" ID Ring	\$94.95
FRCP-240-10	31-(4), 61-(3), 75-(3) Ring	\$119.95

Antennas



End Fed Antenna BAS-71

One of the most popular antennas today is the end fed due to it ease of installation, portability and stealth in various installations. It can be a condo dweller's only access to the world of ham radio or the best alternative for a backpacking SOTA (Summits on the Air) mountaintop expedition.

The antenna is simple to deploy, folds up easily for transport, and weighs under a pound, yet, with the 71 foot included wire, can work the 80-10 meter bands easily with the built in antenna tuner of most current day transceivers.

The key to the antenna's success is the matching network interface between the long wire antenna and the coax feed line to the transceiver. Palomar Engineers employs a dual core matching system that offers wide bandwidth (1.8-61 MHz), 500 watt PEP rating, and a connection for a counterpoise or ground if desired, and a SO-239 female coax connector for easy attachment of coax cable (50 or 75 ohm is ok).

The antenna can be used as a sloper, "L" with a vertical section and a longer horizontal section, or as a random horizontal antenna between two trees or supports.



Dual Wire Counterpoise Kit

Feed Line Choke



Includes 71 foot antenna for 80-6 meters, dual wire counterpoise kit and a feed line choke all in one convenient package (great for HOA restricted areas, camping and portable operations).



Off Center Fed Antenna PAL-OCF8010

Super convenient and quick – great for contest operation! Choose 1500 or 5000 watt PEP (use 5KW model for digital modes over 1000 watts). Unlike other OCF antennas (at twice the price, and no WARC band or 15 Meter operation), you can transmit and receive on 12,15 and 17 meters with our OCF. Better engineering and lower price!

- Covers 80-40-20-17-15-12-10-6 meter ham bands
- Low SWR on most bands with little or no tuning
- 1.5KW PEP (SSB-ICAS)
- Stainless Steel hardware for long life
- Halyard Hoist for ease of installation
- Insulated #14 wire for durability, High Strength insulators
- 4:1 Balun and 1:1 Choke included in a single enclosure

For best results support center at 30+ feet and ends over 15 feet. Angle of feed each side must be great than 45 degrees or 120 – 180 degrees total between each side preferred. Any length of 50 ohm feed line ok but longer feed lines over 50 feet may show reduced SWR on some bands due to losses in feed line and soil conductivity, nearby objects, etc. Due to local ground conditions, antenna height and feed line length, SWR may vary from samples shown and an antenna tuner may be required or some bands to bring SWR at end of feed line to acceptable levels. Overall length is 134 feet.

Balun

1:1 Mini Choke MC-1-500-50

Uses proprietary Multi-Mix, Multi-Core, Multi-Turn ferrite technology for maximum choking (up to -38 dB common mode noise rejection) and maximum bandwidth. 500 Watts PEP, 50 ohm SO-239 connectors Input and Balanced Output, 1-61 MHz (usable to 100 MHz). 1:1 balun included in interface.



DESIGNED FOR PERFORMANCE AND DURABILITY



EASE OF BUILDING  
EXCEPTIONAL SERVICE  
SUPERIOR PERFORMANCE  
ONLY FROM MOMO BEAM!

PENTA 10  
10 • 12 • 15 • 17 • 20  
Our popular multiband antenna with a compact design that covers 5 bands using a single coaxial cable. The square boom provides a life long, great look, and elements that are perfectly aligned. Extremely simple to assemble and deploy.





## RadioWavz

MODEL.....	PRICE
G5RV Jr. ....	\$74.95
G5RV Lite-E .....	\$119.95
G5RV-E .....	\$104.95
G5RV MAX-E .....	\$169.95



Double Bazooka	FREQ.....MODEL.....	PRICE
80 m.....	80-DBZ .....	\$109.95
75 m.....	75-DBZ .....	\$99.95
40 m.....	40-DBZ .....	\$69.95
20 m.....	20-DBZ .....	\$59.95
17 m.....	17-DBZ .....	\$54.95
10 m.....	10-DBZ .....	\$54.95
6 m.....	6-DBZ .....	\$49.95
2 m.....	2-DBZ .....	\$49.95

Dipoles with 1:1 Balun		
80 m	80-DP11.....	\$89.95
40 m	40-DP11.....	\$64.95
20 m	20-DP11.....	\$54.95
10 m	10-DP11.....	\$49.95

DX (OCF) Windom		
DX 40	DX-40 .....	\$79.95
DX 80	DX-80 .....	\$104.95

**Sentinel Barrett Series Hex Beam**  
160-10m or 40-6m.  
**Sentinel Hex Beam 6 bands**  
10, 12, 15, 17, 20, and 40m.  
**Sentinel Hex Beam 10 m & 6 m**  
Dual band.  
**Sentinel Hex Beam 4-band**  
Covers 20, 15, 10, and 6m .  
**Sentinel Hex Beam 20m**  
Single band antenna.  
**Sentinel Hex Beam 10m**  
Single band antenna.  
**Sentinel Hex Beam 6m**  
Single band antenna.

## BUCKMASTER

### HF OCF Antennas

#### Off Center Fed (OCF) Antennas



Worldwide DX, multiband, and no tuner required.

4-BAND: 40, 20, 10, & 6 meters		
68 feet (23+45) long.		
DX-OCF-40.....	300 W .....	\$274.95
DX-OCF-HP40.....	3 kW .....	\$374.95

<b>7-BAND: 80/75, 40, 20, 17, 12, 10, &amp; 6 meters</b>		
<b>135 feet (45+90) long.</b>		
DX-OCF.....	300 W .....	\$304.95
DX-OCF-HP.....	3 kW .....	\$394.95

8-BAND: 160, 80/75, 40, 20, 17, 12, 10, & 6 meters		
270 Feet (90+180) long.		
DX-OCF-160.....	300 W .....	\$389.95
DX-OCF-HP160.....	3 kW .....	\$484.95

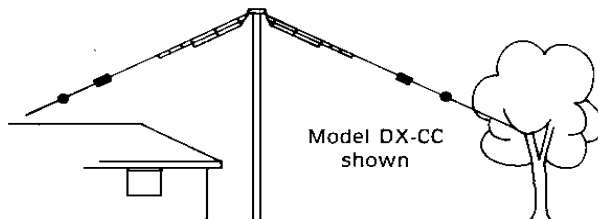
## ALPHA DELTA

### Limited Space Antennas

All of Alpha Delta's limited space antennas use stainless steel hardware where required, are fully assembled, and are manufactured to withstand severe weather. SO-239 connectors. The DX-A and DX-B slopers must be attached to a tower with an HF size beam on top to be a "capacity hat" for proper tuning. Power Rating: 1000 watts CW/PEP.

**Model DX-B** is a single wire, high performance quarter-wave sloper antenna for 160, 80, 40 & 30 meters. For limited space, the antenna requires only 60 feet for installation. Use with a wide range antenna tuner. Pre-assembled and pre-tuned. Has stainless steel hardware, 12 gauge insulated solid copper wire and the Alpha Delta "ISO-RES" RF choke coils, 50 ohm coax feed.  
**HRO Price: \$154.95**

**Model DX-A:** Quarter wave twin sloper for 160-80-40 meters. One leg is 67'; the other 55'. Installs as an inverted-V.  
**HRO Price: \$149.95**



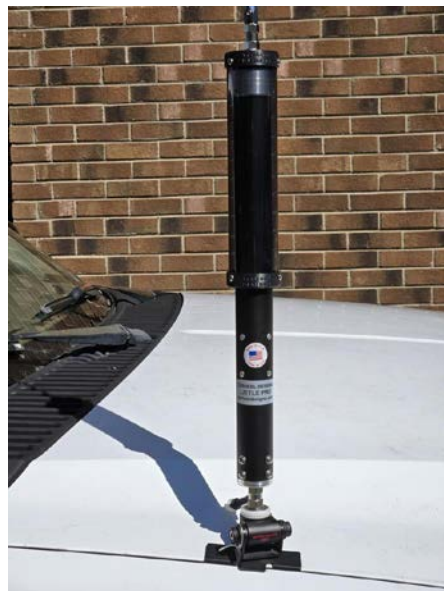
**Model DX-CC:** A no trap 80-40-20-15-10 meter dipole. 82' long.  
**HRO Price: \$204.95**

**Model DX-DD:** A no trap 80-40 meter dipole. 82' long.  
**HRO Price: \$174.95**

**Model DX-EE:** A no trap 40-20-15-10 meter dipole. Only 40' long.  
**HRO Price: \$189.95**

## Tarheel Designs, LLC

### 3.5-54 MHz LITTLE PRO



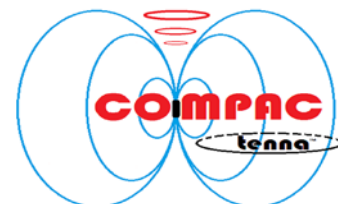
The Little PRO is a small short base antenna that needs to be mounted high on the vehicle. The hood, door jamb, bed rail, or high hatch are all good places to mount this antenna. A simple mount will hold this antenna or any good lip style mount will work so long as it has a 3/8-24 stud.

The Little Pro Includes:

- Whip.
- Up/Down Switch.
- 20' Control Cable.
- Snap-it ferrite.
- 3/8-24 stud.
- Lock Washer.
- Two Year Warranty.

Specifications:

- Continuous 3.5 to 54 Mhz Frequency Coverage.
- 300 Watts PEP.
- Lower Mast 16".
- Whip 30".
- Total Length 6 Meters Position 48". Total Length 80 Meters Position 54".
- 3/8- 24 Mounting.
- Weight 2 lbs.



COMPACTenna is a family of patented, small antennas which require no tuning, yielding high performance. There are antennas for mobile allowing passage into garages and drive-thrus. There are models for home use that are perfect for condos and apartments.

### Mobile Antennas



The photo shows the 7" 2m/220/440 model on the left and the 9" Scanner Radio Antenna on the right.

Model	Height	HRO Price
2m/220/440	7"	\$128.95
2m/440	7"	\$118.95
2m/440 PLUS* For Maximum Gain on 2m & 70cm	9"	138.95
SCANNER	9"	\$148.95
LMR-1 Land Mobile Radio	9"	\$198.95

\*Check out the August 2022 issue of QST for a great review of the 2m/440 Plus!

### Base Antennas



**NEW 20/40 Meters Base Antenna. Revolutionary! Only 10" in size!**

Combine one of our antennas above with our Compac-Counterpoise adaptor and you now have a powerful base station antenna that fits almost anywhere. Available in SO-239 and N connectors.

## Tarheel Antennas, Inc.



### 3.5-54 MHz LITTLE TARHEEL II

### 10-40 M BABY TARHEEL

When properly installed on your vehicle the Little Tarheel II will provide continuous coverage from 3.5 to 54 MHz with the supplied whip. Like all of our motorized antennas, this model meets the highest standards but in a smaller size.

It comes with sensors pre-installed so if you decide to add one of the auto controllers (SDC-100 Simple Controller, SDC-102 Programmable Controller, Turbo Tuner, and Tunematic) now or later, everything is ready.

This antenna is for the person who wants to enjoy HF mobile with a more compact antenna. Don't let the small size fool you. The Little Tarheel II mounts higher on the vehicle so you have less ground loss and higher performance. Because of its smaller size, this antenna offers the convenience of a more common type of mount like the Diamond K400 Series, the Comet Series, or similar 3/8" stud type mount.

The Little Tarheel II comes as a package. All you need is a mount and a nice HF radio. Included standard with the antenna is: the whip, 20 feet of plug and play control cable, manual control box, ferrite decoupling core, and 3/8" x 24 stud.

The antenna is powder coated in standard colors of black, white, red or silver. It also comes with the tough Lexan™ Weather Shield like its big brothers. This model also uses the commercial 12 volt gear motor.

The antenna has a **ONE YEAR NO MATTER WHAT WARRANTY** to the original owner.

Specifications:

- Lower mast size & weight: 1 1/2" & 1.9 lb.
- Lower mast length: 16".
- Whip length: 32".
- Total antenna length: 54 MHz position: 48", 3.5 MHz position: 54".
- Continuous coverage: 3.5 - 54 MHz.
- Power rating: 200 watts PEP.
- Typical SWR: 1.5 or less.





## VHF / UHF Base Antennas

### 2 m Verticals

These easy-to-assemble verticals are made of aluminum and high-strength fiberglass. When disassembled the longest part is about 4'. Choose 3, 6, or 7 dB gain and the overall length that best suits your application.

#### G7-144

- Frequency range: 144-148 MHz.
- Gain: 7 dB.
- Bandwidth: 4 MHz.

#### G6-144B

- Frequency range: 143-149 MHz
- Gain: 6 dB.
- Bandwidth: 6 MHz

#### G3-144

- Frequency range: 144-148 MHz.
- Gain: 3 dB.
- Bandwidth: 4 MHz.

### 220 & 440 MHz Verticals

#### G7-220

The G7-220 is of similar design and construction as the G7-144. Fiberglass & aluminum.

- Frequency range: 220-225 MHz.
- Gain: 7 dB.
- Bandwidth: 5 MHz.

#### G6-440

The G6-440 is of similar design and construction as the G6-270R. One piece radome.

- Frequency range: 440-450 MHz.
- Gain: 6 dB.
- Bandwidth: 10 MHz.

### Repeater Antennas THE SPIRIT SERIES

Hustler's omnidirectional, collinear design base station antennas are enclosed in a rugged fiberglass radome that will help minimize pattern variations due to high winds or extreme conditions. Models are available for 144, 220, 440, 900 MHz, and 1.2 GHz. The gain will be unity, 3, 6, 9, or 12 dB depending on the frequency.

Call HRO for quotes on custom frequencies.

### 2 m/ 70 cm Dual Band G6-270R

The G6-270R is a combination G6-144B and G6-440. It is factory tuned for quick and easy installation.

- Frequency range: 144-148 MHz / 435-445 MHz.
- Gain: 6 dB.
- Bandwidth: 4 MHz – 2 m / 10 MHz – 70 cm.
- One piece radome.
- VSWR: < 1.5:1 @ resonance.

## HF Base Antenna

### 6-BTV

10, 15, 20, 30, 40, 75 or 80 m

### 5-BTV

10, 15, 20, 40, 75 or 80 m

### 4-BTV

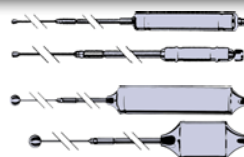
10, 15, 20, 40 m

- Broadbanded, low VSWR at band edges.
- Power capability – full legal limit on SSB or CW.
- Solid one-inch fiberglass trap forms for optimum electrical and mechanical stability.
- Heavy wall, high strength aluminum tubing, heavy duty aluminum mounting bracket and low loss, high strength insulators.
- Stainless steel clamps and hardware.
- Easy assembly and tuning.
- Single line feed with any length of 50 ohm coax used as ground mount with or without radials, or elevated mount with radials.
- All the BTV's can be mounted in a piece of PVC and disguised as a flagpole in deed restricted neighborhoods.

### 30-MTK

30 meter add on kit for 4/5 BTV

## HF Resonators



VP-1

Customize your HF mobile system with Hustler products. Resonators may be used separately on one of the masts or up to three at a time with the VP-1. Add the QD-2, springs and mounts as needed for your installation.

Switch bands automatically with any three Hustler HF resonators. Adapts any Hustler mast to tri-band operation automatically.

## Hustler HF Resonators

Model	Type	Band	Power SSB	Bandwidth 2:1 SWR	Weight lb.
RM-10	STD	10M	400W	150-250KHz	0.41
RM-11	STD	11M	400W	150-250KHz	0.41
RM-12	STD	12M	400W	90-120KHz	0.41
RM-15	STD	15M	400W	100-150KHz	0.42
RM-17	STD	17M	400W	120-150KHz	0.44
RM-20	STD	20M	400W	80-100KHz	0.46
RM-30	STD	30M	400W	50-60KHz	0.84
RM-40	STD	40M	400W	40-50KHz	0.84
RM-60	STD	60M	400W		
RM-75	STD	75M	400W	25-30KHz	1.05
RM-80	STD	80M	400W	25-30KHz	1.05
RM-10-S	Super	10M	1kW	250-400KHz	1
RM-15-S	Super	15M	1kW	150-200KHz	1.2
RM-20-S	Super	20M	1kW	100-150KHz	1.25
RM-40-S	Super	40M	1kW	50-80KHz	1.8
RM-75-S	Super	75M	1kW	50-60KHz	2.1
RM-80-S	Super	80M	1kW	50-60KHz	2.1

## Hustler Base Antennas

Model	Band	Gain	Connector	Height Ft.
G7-144	2 m	7 dB	N Female	16.3
G6-144B	2 m	6 dB	SO-239	9.8
G3-144	2 m	3 dB	SO-239	7.5
G7-220	1.25 m	7 dB	N Female	10.2
G6-440	70 cm	6 dB	N Female	7.3
G6-270R	2 m/70 cm	6 dB	N Female	7.6
6-BTV	10-30-80 m			24
5-BTV	10-80 m			25
4-BTV	10-40 m			21.4

## VHF/UHF Mobile Antennas

Model	Band	Gain	Power	Mount
LMC-270	2 m/70 cm	2.4/4	100	NMO
MX-270	2 m/70 cm	2.4/4	100	Mag
LMG-144	2 m	3.4	200	NMO
BBG-144	2 m	3.4	200	NMO
BBG-440-5	70 cm	5	200	NMO
BBGT-144	2 m	3.4	200	Trunk
MX-220	1.25 m	3.4	200	Mag
MX-2B	2 m	3.4	200	Mag
MX-440B	70 cm	3.4	200	Mag
SF-2	2 m	3.4	100	3/8 x 24
SF-220	1.25 m	3.4	100	3/8 x 24
RX-2	2 m	3.4	100	Mag
RX-220	1.25 m	3.4	100	Mag
RX-440	70 cm	5	100	Mag
CG-144	2 m	5.2	200	3/8 x 24
CG-220	1.25 m	5.2	200	3/8 x 24
CGT-144	2 m	5.2	200	Trunk
THF	140-500	Unity	200	Trunk
UGM	140-500	Unity	25	Mag

## VHF / UHF Mobile Antennas

### Dual Band

Dual band models for 144/440 MHz give you 2.4 dB / 4 dB gain. The antennas are rated at 100 watts.

#### LMC-270

- NMO style coil.
- Chrome top.
- Coil and whip only.

#### MX-270

- NMO style magnetic mount.
- Chrome top.
- 17 ft RG58/U coax.
- PL-259 connector.

### Magnetic Mounts

Models for 144, 220, and 440 MHz are power rated for 200 watts. Each has an NMO-style coil and a magnetic mount.

#### MX-2 ..... 144 MHz ..... 3.4 dB gain

#### MX-220 ..... 220 MHz ..... 3.4 dB gain

- Chrome top.
- 10 oz magnet.
- 17 ft RG58/U coax.
- PL-259 connector.

#### MX-2B ..... 144 MHz ..... 3.4 dB gain

#### MX-440-5B 440 MHz ..... 5.0 dB gain

- Same as above but all black coil

### Collinear

Collinear models for 144 MHz and 220 MHz provide 5.2 dB gain. They are power rated for 200 watts. All have a swivel ball for vertical positioning.

#### CG-144 ..... 6 MHz bandwidth

#### CG-220 ..... 4 MHz bandwidth

- 3/8" x 24 thread.
- 5/8 over 1/4 wave.

#### CGT-144 ..... 6 MHz bandwidth

- Trunk mount base.
- 17 ft RG58/U coax.
- PL-259 connector.

### Unity Gain

An antenna to custom trim as needed for VHF or UHF frequencies. Covers 140-500 MHz.

#### THF

Trunk Lip Mount

#### UGM

Magnet Mount

### Quick Disconnect

#### QD-2

Remove antennas easily with a push and twist release. Compression design of 100% stainless steel. 3/8" x 24 threads.

### Coil and Whip

Models for 144 or 440 MHz are power rated for 200 watts. NMO-style coil on each requires an NMO mount.

#### LMG-144-3 3.4 dB gain

- Chrome top and bottom.
- Contact-silver painted push pin.

#### BBG-144 3.4 dB gain

#### BBG-440-5 5.0 dB gain

- Chrome top, swivel ball, and spring

#### BBGT-144 3.4 dB gain

- Includes trunk mount
- 17 ft RG58/U coax
- PL-259 connector

### 5/8 Wave

Base-loaded 5/8 wave models for 144 MHz, 220 MHz, and 440 MHz are power rated for 100 watts.

#### SF-2 ..... 144 MHz ..... 3.4 dB gain

#### SF-220 ..... 220 MHz ..... 3.4 dB gain

- 3/8"x24 thread.
- Mount to any Hustler mount.

#### SF-2

#### RX-2 ..... 144 MHz .. 3.4 dB gain

#### RX-220 .. 220 MHz .. 3.4 dB gain

#### ..... 440 MHz .. 5.0 dB gain

- 3 oz magnetic mount.
- 15 ft RG-58/U coax.
- PL-259 connector.

## Accessories

### Radial Kit

#### MRK-2

Used to convert RX Series, SF Series, & CG Series to fixed station operation. Contains three radials. Mount can accept any 3/8" x 24 threaded mount.

### Quick Disconnect

#### QD-2

Remove antennas easily with a push and twist release. Compression design of 100% stainless steel. 3/8" x 24 threads.

## Mobile Mounts

• **BM-1** Bumper mount with stainless steel strap and 1" diameter ball with 3/8 x 24 threads.



• **C-29** Stainless steel 4" spring. Copper braided center conductor to prevent detuning.



• **MBM** Powerful 5" diameter magnet with 3/8 x 24 threads. 16' of RG58U coax with PL-259 connector.



• **C-30** Chrome plated 4" spring. Copper braided center conductor to prevent detuning.



• **SSM-1** Heavy duty ball mount with 4" stainless steel spring with copper braided center conductor to prevent detuning. 180 degree adjustable.



• **RSS-2** Stainless steel 3" spring. Used for mobile antennas between resonator and mast. Copper braided center conductor to prevent detuning. Accepts 3/8 x 24 antennas.

• **SSM-2** Heavy duty 2" diameter stainless steel ball mount. 180 degree adjustable. Accepts 3/8 x 24 antennas.

• **SSM-3** Heavy duty stainless steel 4" spring with 3/8 x 24 coupling stud. Copper braided center conductor to prevent detuning.

• **C-32** Chrome plated 1" ball mount. Accepts 3/8 x 24 antennas.



• **HOT** Trunk lip mount with easy off/on with thumb knob. 180 degree 1" diameter ball, which accepts 3/8" x 24 antennas. RG58U coax with PL-259 connector.

• **TLM** Trunk lip mount which accepts 3/8 x 24 antennas. RG58U coax with PL-259 connector.

All mounts below are supplied with 17' RG-58U cable.



CHMA ..... 3/8" Hole mount without connector



CHMA-P ..... 3/8" Hole mount w/crimp-on PL-259



CHMB ..... 3/4" Hole mount without connector



CHMB-B ..... 3/4" Hole mount w/crimp-on BNC



CMMA ..... NMO 10 oz mag w/solder-on PL-259



CTMA ..... NMO Trunk mount without connector

## Mobile Masts

### Fold-Over

#### MO-1

Mobile mast 54" high for bumper, fender or hitch mounting. Folds over at 15" above base. 3/8 x 24 threaded.

### Fold-Over

#### MO-2

Mobile mast 54" high for bumper, fender or hitch mounting. Folds over at 27" above base. 3/8" x 24 threaded.

### Solid Mast

#### MO-3

Mobile mast 54" high for bumper, fender or hitch mounting. Solid aluminum with white vinyl coating. 3/8 x 24 threaded.

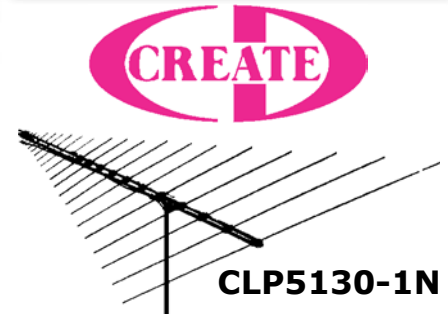
### Solid Mast

#### MO-4

Mobile mast 22" high for trunk or deck mounting. Three retuning tip rods included. 3/8" x 24 threaded.



Log Periodic



The CLP5130 antennas are high gain, wide band VHF/UHF log periodic beams for horizontally polarized base station use. Covers amateur bands from 50-1300 MHz, FM broadcasting, scanning, VHF / UHF TV, air band communications, government and business bands.

Forward gain is 10 to 12 dB - 10 to 16 times the gain of a non-directional discone type antenna. The VSWR is less than 2.0:1 across the band. The high-quality aluminum antennas have a boom design that allows movement of the phasing line. Distortions in the vertical and horizontal planes are minimized and element adjustment is not necessary. The boom-to-mast bracket is made of a lightweight and rugged magnesium alloy.

Create Antennas

	CLP 5130-1N	CLP 5130-2N
Frequency	50-1300 MHz	108-1300 MHz
No. Elements	23	19
Power PEP	500 W	500 W
Forward Gain	10-12 dBi	10-12 dBi
Front/Back	15 db	15 db
Longest Element	9' 10"	4' 6"
Boom Length	5' 9"	4' 6"
HRO Price	\$479.95	\$369.95

SWL Antennas



The DX-SWL is tuned for the most popular SWL bands (13, 16, 18, 19, 21, 25, 31, 41, 49, 90 and 120 meters). It can be used as a multi-band transmit antenna with the appropriate antenna tuner. Length is 60 feet. Requires a single support. Standard coax connects antenna to your radio. Feed point is 50 ohms. SO-239 connection. **HRO Price: \$164.95**

Discone Antennas



**AOR USA DA6000**  
The AOR DA6000 is a rugged, high performance, commercial grade UHF discone receive antenna covering 700 to 6000 MHz. Type N female connector.  
**HRO Price: \$559.95**



Super Wideband D-130J/NJ

Monitor 25-1300 MHz. Transmit on 50, 144, 430, 1200 MHz. All stainless steel. Input power 200 watts maximum. Impedance: 50 ohms. VSWR: 1.5:1. Length: 1.7 meters. Mounts on 1" to 2" masts. D-130 UHF and D-130NJ Type-N connector.

**HRO Prices: D-130J or D-130NJ \$124.95**



C★MET Wideband RX/TX DS-150S

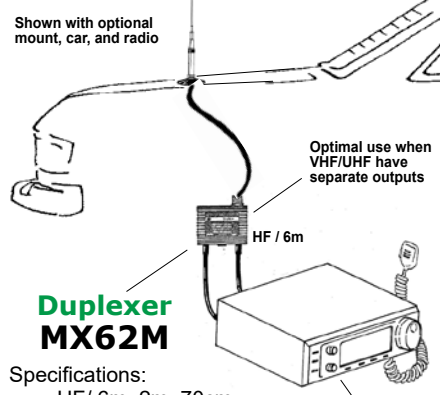
Extremely wideband scanner/receive antenna. Perfect for RX on 25MHz to 1300MHz. You can also TX on 6/2/220/440/900/1200MHz. Includes 65 feet of RG-58A/U coax with PL-259 connectors installed.  
**HRO Price: \$119.95**



Mobile Antenna System for HF/VHF Transceivers HV7A

Five band capability: 70 cm, 2 m, 6 m and 2 HF bands through use of loading coils. Fold-over feature allows for easy access into low overhead buildings.

Bands Supplied: 10m / 6m / 2m / 70cm  
Opt. Loading Coils: 40m / 20m / 17m / 15m  
Power, PEP: HF 120W / VHF 200W UHF  
Mount Connection: 54" (HV7A)  
Length: 1.5:1 nominal  
SWR: 1.5:1 nominal  
**HRO Price: \$129.95**



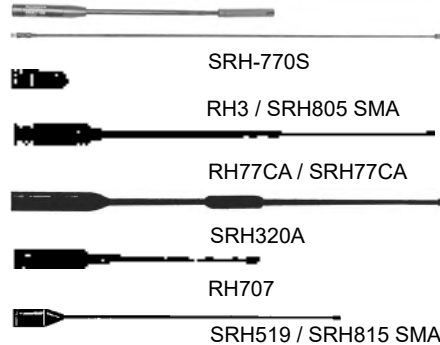
Duplexer MX62M

Specifications:  
• HF/ 6m, 2m, 70cm duplexer  
• 1.6-56 MHz LPF  
• 76-470 MHz HPF  
• (76-120 receive only)  
• Watts: 600 PEP.  
• 2 dB LPF Loss  
• 3 dB HPF Loss  
• Isolation: 50 dB  
**HRO Price: \$69.95**

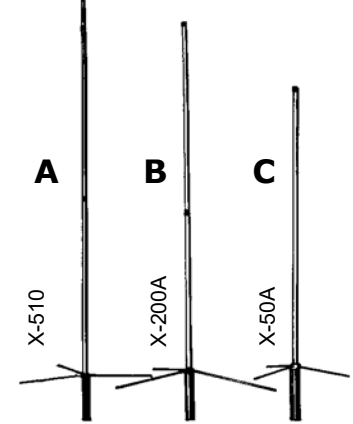
**Optional Loading Coils**  
HVC14 20m \$37.95  
HVC18 17m \$37.95  
HVC21 15m \$37.95

Handheld Antennas

Upgrade the RX/TX performance of your HT. A definite improvement over the stock antenna.



- Wide-band performance
- Highest gain
- Fiberglass radome
- Factory adjusted
- DC grounded
- UPS shippable
- High wind rating
- Stainless hardware



1. 52-54 MHz only. DPGH62 is adjustable from 50-54 MHz
2. 28/50 MHz 400 W PEP, 14/21 MHz 400 W PEP, 7 MHz 200 W PEP

The Standard by Which All Others are Judged

Base Antennas\*

Model	Bands	Gain, dB	Watts	Connector Type	Weight (lb)	Length (ft)	MPH (no ice)	Fig	HRO Price
A502HB	6m Yagi 2 element	6.3 dBi	400 PEP	UHF	3.75	2.6			\$129.95
A144S5	2m Yagi 5 element	6.0 dBi	100 PEP	UHF	1.4	3.1			\$69.95
A430S10	70cm Yagi 10 element	13 dBi	100 PEP	UHF	1.4	3.6			\$74.95
A430S15	70cm Yagi 15 element	14.8 dBi	100 PEP	UHF	2.15	7.4			\$94.95
CP-22E	2m	6.5	200	UHF	3	9	90	B	\$64.95
CP-5HS (2)	40/20/15/10/6m		200	UHF	6.6	11.75	80		\$379.95
CP-62	6m	5.5 dBi	200	UHF	9	22	80		\$219.95
CP-610	10/6m	5.5/3.4 dBi	200	UHF	9	22	80		\$264.95
F-22A	2m	6.7	200	UHF	5	10.5	112	B	\$102.95
F-23H	144-174 tunable	7.8	350	UHF	5	15	90	A	\$159.95
F-718	70 cm	11.5	250	N	5	15	90	A	\$199.95
MG-200	2.4 GHz	11		N	3	6	135	C	\$59.95
V2000A (1)	6m/2m/70cm	2.1/6.2/8.4	150	UHF	4	8.3	110	B	\$159.95
X-30A	2m/70cm	3.0/5.5	150	UHF	2	4.5	135		\$69.95
X-50A	2m/70cm	4.5/7.2	200	UHF	3	5.6	135	C	\$99.95
X-50NA	2m/70cm	4.5/7.2	200	N	3	5.6	135	C	\$99.95
X-200A	2m/70cm	6.0/8.0	200	UHF	4	8.3	112	B	\$129.95
X-300A	2m/70cm	6.5/9.0	200	UHF	4	10	112		\$144.95
X-300NA	2m/70cm	6.5/9.0	200	N	4	10	112	B	\$144.95
X-510HDM	2m/70cm	8.3/11.7	330/250	UHF	5	17.2	90	A	\$199.95
X-510HDN	2m/70cm	8.3/11.7	330/250	N	5	17.2	90	A	\$199.95
X-510NJ	144/430	8.3/11.7	200	N	5	17.2	90	A	\$209.95
X-6000A	2m/70/23cm	6.5/9.0/10.0	100	N	5	10	112	B	\$189.95
BB7V	2-30 MHz		250	UHF	6	5/22	80		\$384.95
CP6AR	75/40/15/10/6m		200	UHF	9.9	15.1	80		\$449.95

All base antennas grounded for lightning protection. Factory adjusted for American amateur bands, no tuning required.  
\*Most longer base antennas require additional freight. This applies to ALL Diamond Base Antennas

Handheld and Receiving Antennas

Model	Description	HRO Price
D-130J	Wideband discone 25-1500 MHz. 20 W Transmit 50-1300 MHz. 100 W 144-3000 MHz, No cable.	\$124.95
D-130NJ	Wideband discone 25-1500 MHz. 20 W Transmit 50-1300 MHz. 100 W 144-3000 MHz, No cable, Type N.	\$124.95
D-3000N	Wideband discone RX 25-3000 MHz, TX 50-1300 MHz 20 W 50 MHz, 20 W transmit 50 MHz. 100 W 144-1300 MHz, 67" tall, Type N	\$154.95
RH-3	2m/70cm dual-band HT antenna. 1.75" BNC. 120-900 MHz receive	\$26.95
RH-77CA	High gain 2m/70cm dual-band HT antenna. Receive range to 900 MHz. BNC	\$22.95
RHF-10	144/440. Air band 6W. Receive only 150/300/450/800/900 MHz. BNC	\$22.95
RHF-40	Super flexible version of Model RH-77CA	\$27.95
SRHF-40	Super flexible 15" tail SMA 144/440 MHz HT antenna	\$26.95
RH-205	2m HT antenna, telescopic, 5/8 fully extended, 47.5"; 1/4 retracted, 9".	\$26.95
RH-519	2m/70cm slim dual-band HT antenna. Flexible. 8" BNC, 10 watts.	\$23.95
RH-707	2m/70cm dual-band, tiltable whip HT antenna. 8-1/4" BNC.	\$29.95
SRHF10	HT antenna, 144/440 MHz. Air Band 6W, SMA, Receive only 150/300/450/800/900 MHz	\$21.95
SRJF-10	144/440 MHz, Air Band 150/300/450/800/900 MHz (Receive only), 2.75", 6W, SMA(F) 1/4 wave length	\$21.95
SRH-519	2m/70cm slim dual-band HT antenna. Flexible. 8" SMA, 10 watts.	\$24.95
SRH-77CA	High gain 2m/70cm dual-band flexible HT antenna, SMA	\$22.95
SRH-770S	2m/70cm, 10W max, SMA-P, 2m 3/8 wave 2.15dBi, 70cm 3/4 wave 4.5dBi	\$34.95
SRJ-77CA	Same as SRH-77CA for Wouxun, SMA. Reverse SMA.	\$24.95
SRH-229	For Alinco DJ-G29T. High gain, flexible whip, 13", 220-900 MHz, 10W, 4dB, SMA	\$29.95
SRH-320A	2m/1-1/4m/70cm tri-band HT antenna. Flexible. SMA. 10 watts	\$46.95
SRH-789	Telescoping handheld antenna 95-110 MHz, 6 sections, folds at base	\$33.95
RH-789	Same as SRH-789 but BNC connector	\$32.95
SRH-805	2m/70cm/23cm tri-band HT antenna. 1.75" SMA, 10 watts.	\$26.95
SRH-815	2m/70cm/23cm tri-band HT antenna. Flexible. 6" SMA, 6 watts.	\$32.95
SRH-999	6m/2m/70cm/23cm quad-band HT antenna. Flexible. 21 1/4" SMA, 10 watts.	\$54.95

Specialty Antennas

**High Power 2 m/ 70 cm**  
Dual-band mobile antenna. 300 watts (2m) and 250 watts (70cm). Use K400 and K600 series mounts. **NR7900A HRO Price: \$84.95**

**Quad Band FM**  
10m/6m/2m/70cm quad FM antenna for FT8900R radio or multi radio applications. Use K400 and K600 series mounts. **CR8900A HRO Price: \$114.95**

**2 m/ 70 cm Mobile**  
Ideal antenna for increased performance of HT radio or where a compact antenna is required. Magnetic mount base. 1/4 wave (2m) and 1/2 wave (70cm), black finish. Available in UHF or SMA cable configuration. **MR77 / MR77SMA HRO Price: \$37.95**

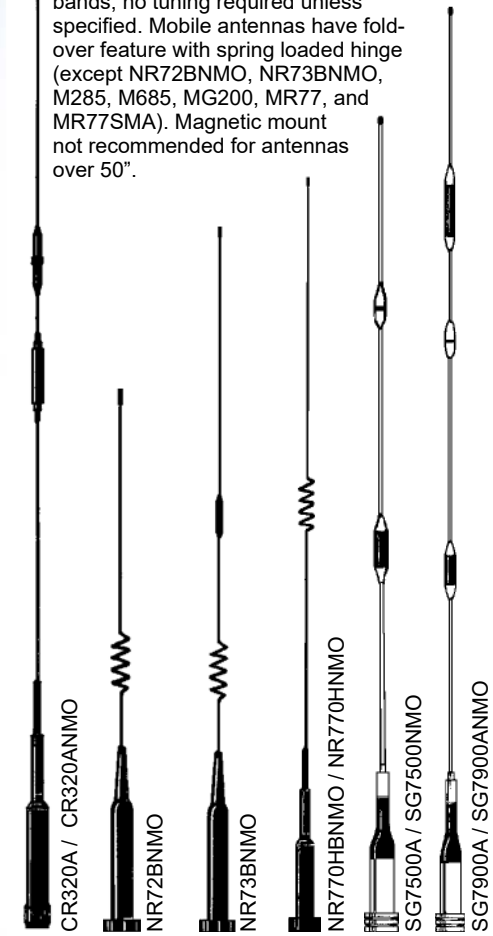
**2 m/ 70 cm Mobile**  
**NR-770HRKS HRO Price: \$114.95**





Mobile Antennas

Factory adjusted for American amateur bands, no tuning required unless specified. Mobile antennas have fold-over feature with spring loaded hinge (except NR72BNMO, NR73BNMO, M285, M685, MG200, MR77, and MR77SMA). Magnetic mount not recommended for antennas over 50".



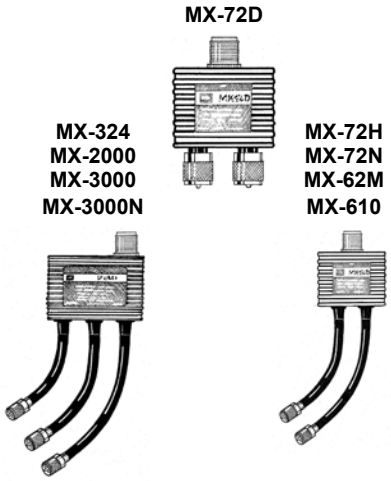
Antennas

Model	Bands	Gain dB	watts	Mount	Length (in)	HRO Price
AZ504SP	2m/70cm	2.15 dBi	50	UHF	15.5	\$39.95
AZ507RSP	2m/70cm	2.15(2m) 4.9(70cm)	50	UHF	27.5	\$47.95
CR320A* (4)(6)	2m/1-1/4m/70cm	2.1/3.8/5.5	100	UHF	36	\$79.95
CR320BNMO* (4)(6)	2m/1-1/4m/70cm	2.1/3.8/5.5	100	NMO	36	\$79.95
CR8900A (4)(7)(FM Only)	10m/6m/2m/70cm	2.15(2m) 5.5(70cm)	60	UHF	50	\$114.95
D220 discone	100-1600 MHz	2	50	PL-259	35.5	\$109.95
MG200 (7)	2.4 GHz	7		N	23.6	\$59.95
M285 (4)(8)	2m	3.4	200	UHF	52.4	\$31.95
M285SNMO (4)(8)	2m	3.4	200	NMO	52.4	\$33.95
MR75S Mag Mt	2m/70cm	2.15/3.4	35	SMA	20	\$36.95
MR75SJ Mag Mt	2m/70cm	2/2.4	35	SMA	20	\$36.95
MR77* (7)	2m/70cm	2.15/3.4	70	†	20	\$37.95
MR77SMA* (7)	2m/70cm	2.15/3.4	70	**	20	\$37.95
MR77SJ Mag Mt	2m/70cm	2.15/3.4	70	SMA	20	\$37.95
M685S (4)(7)	6m	2.15	200	UHF	52.4	\$34.95
M685SNMO (4)(7)	6m	2.15 dBi	200	NMO	52.4	\$34.95
NR124N	23cm	8.4	100	Type N	25	\$54.95
NR140BNMO	1-1/4m	4	159	NMO	36.2	\$46.95
NR22LH (4)	2m/70cm	6.5	100	UHF	96.8	\$74.95
NR2000NA	2m/70cm	3.15/6.3/9.7	100	N	39	\$84.95
NR-72BNMO* (4)(7)	2m/70cm	2.1/2.1	100	NMO	14	\$39.95
NR-73BNMO*	2m/70cm	2.1/5.3	100	NMO	33	\$55.95
NR-770HA	2m/70cm	3.0/5.5	200	UHF	40	\$54.95
NR-770HBNMO	2m/70cm	3.0/5.5	200	NMO	41	\$54.95
NR-770HB*	2m/70cm	3.0/5.5	200	UHF	40	\$54.95
NR-770HBNMO*	2m/70cm	3.0/5.5	200	NMO	41	\$54.95
NR-770HRKS (9)	2m/70cm	3.0/5.5	200	UHF	40.2	\$114.95
NR-7900 (4)	2m/70cm	3.7/6.4	300/250	UHF	57	\$84.95
SD330 Screwdriver	3-20 MHz		200	UHF	73	\$399.95
SG7000A (4)(7)	2m/70cm	2.1/3.8	100	UHF	18	\$69.95
SG7500A	2m/70cm	3.5/6.0	150	UHF	41	\$72.95
SG7500NMO	2m/70cm	3.5/6.0	150	NMO	42	\$72.95
SG7900A (4)	2m/70cm	5.0/7.6	150	UHF	60	\$109.95
SG7900ANMO (4)	2m/70cm	5.0/7.6	150	NMO	62	\$114.95

- \* Black anodized finish.
- † Mag mount with 13' RG58 cable w/UHF.
- \*\* Mag Mt w/13' RG58 cable w/SMA.
- 4. Magnetic mounts not recommended. Vehicle ground required.
- 5. 52-54 MHz only.
- 6. 100 watts on 1-1/4 m; 200 watts on 2m and 70cm.
- 7. Gain rated in dBi.
- 8. Tunable from 144-174 MHz.
- 9. Black with adhesive-backed mount.

Duplexers and Triplexers

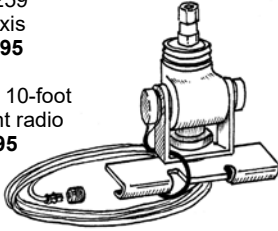
Model	Port	Freq MHz	CW watts	PEP watts	Loss dB	Isol. dB	MIX Conn.	Port Conn.	HRO Price
MX-37	LPF HPF	1.6-470 900-1300		100 50	.25 .45	45 45	N-Jack (F)	PL-259/12" cable N-Male/12" cable	\$59.95
MX-62M	LPF HPF	1.6-56 76-470		200 200	.2 .2	50 50	SO-239	PL-259/12" cable PL-259/12" cable	\$69.95
MX-72D		Similar to MX-72H, but direct connection							\$46.95
MX-72H	LPF HPF	140-150 400-460	150 100	150 100	.1 .2	60 60	SO-239	PL-259/12" cable PL-259/12" cable	\$49.95
MX-72N		Similar to MX-72H, but Type-N on UHF port							\$49.95
MX-72A		Similar to MX-72H, but Type-N on MIX Conn.							\$54.95
MX-324	LPF BPF HPF	1.6-150 220-225 400-550		800 600 500	.3 .4 .4	40 40 40	SO-239	PL-259/12" cable PL-259/12" cable PL-259/12" cable	\$89.95
MX-610	LPF HPF	1.3-30 49-470		600 500	.2 .25	45 45	SO-239	PL-259/12" cable PL-259/12" cable	\$69.95
MX-2000	LPF BPF HPF	1.6-60 110-170 300-950		800 800 500	.15 .20 .25	60 60 60	SO-239	PL-259/12" cable PL-259/12" cable PL-259/12" cable	\$84.95
MX-3000	LPF BPF HPF	1.6-160 350-500 850-1300		800 400 200	.15 .25 .30	55 55 55	N-Jack (F)	PL-259/12" cable PL-259/12" cable N-male/12" cable	\$79.95
MX-3000N		Similar to MX3000, but with Type-N male on BPF connection							\$89.95



Special Trunk Mount for 3/8 x 24 thread antennas K400-3/8C

Here's the ideal mounting system for Little Tarheel, Hamsticks™, and other medium weight antennas. A spring is recommended for stiff or heavy antennas.

Power: 350 watts RMS  
Cable: 6 1/2' RG316 Teflon® coax  
Connector: PL-259  
Adjustment: 2 axis  
HRO Price: \$73.95



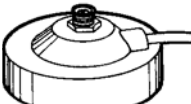
Note: Use C110, 10-foot extension for front radio installation. \$19.95

Mobile Mounts

Model	Description	HRO Price
C101	UHF base 6.5' RG316 Teflon coax w/PL-259	\$39.95
C101NMO	NMO base 6.5' RG316 Teflon coax w/PL-259	\$39.95
C101-3/8C	Replacement cable only for K400-3/8C	\$34.95
C101-3/8C Kit	Replacement cable and hardware for K400-3/8C	\$44.95
C104SMA	4' RG58/U Extension cable for PL-259. 90 degree SMA Male & SO-239	\$16.95
C105SMA	5' RG58/U Extension cable for C101/C101NMO. 90 degree SMA Male	\$16.95
C110BNC	10' RG316 Extension cable for C101/C101NMO. Use front radio installations. BNC male	\$29.95
C110SMA	10' RG316 Extension cable for C101/C101NMO. Use front radio installations. SMA male	\$29.95
C110	10' mini-8/RG8X extension cable for C101/C101NMO. Use front radio installations.	\$19.95
C211	Combination of C101 and C110. 16.5 feet cable assembly	\$49.95
C213SMA	UHF base, 13.5' RG316 Teflon Coax with PL-259	\$44.95
C213SNMO	NMO base, 13.5' RG316 Teflon Coax with PL-259	\$45.95
CRM	Stainless steel right angle mount with U-bolt	\$16.95
DPK-4NM-N	Type N Magnet. 13'5mm coax w/Type-N plug. Good to 1300 MHz.	\$54.95
HRKS	Adhesive backed UHF mount, 13.5' RG316 teflon coax with SMA and PL-259 adapter	\$71.95
K400-3/8C*	Special mount for 3/8x24 thread antenna. 6.5 feet RG316 w/PL-259	\$73.95
K400C*	Deluxe mount with UHF type base. 6.5 feet RG-316 Teflon coax w/PL-259	\$73.95
K400CNMO*	Deluxe mount with NMO type base. 6.5 feet RG-316 Teflon coax w/PL-259	\$73.95
K400S	Deluxe mount with UHF type base. 13.5 feet RG316 w/SMA (PL-259 adapter included)	\$79.95
K400SNMO	Deluxe mount with NMO type base. 13.5 feet RG316 w/SMA (PL-259 adapter included)	\$79.95
K412C	Trunk/hatchback mount. UHF base, 6.5' Teflon coax w/PL-259. 45" max	\$64.95
K412CNMO	Trunk/hatchback mount. NMO base, 6.5' Teflon coax w/PL-259. 45" max	\$67.95
K412S	Trunk/hatchback mount. UHF base, 13.5' RG316 coax w/SMA (PL-259 adapter included)	\$71.95
K412SNMO	Trunk/hatchback mount. NMO base, 13.5' RG316 coax w/SMA (PL-259 adapter included)	\$69.95
K515S	Deluxe luggage carrier mount. UHF base. 13.5 ft RG316 w/SMA (PL-259 adapter included)	\$69.95
K515SNMO	Deluxe luggage carrier mount. NMO base. 13.5 ft RG316 w/SMA (PL-259 adapter included)	\$69.95
K540KM	Deluxe Mirror/Luggage rack mount. Black, adjustable. 13' RG58C/U with PL-259	\$59.95
K550KM	Deluxe mini van luggage rack mount. Black, adjustable. 13' RG58C/U with PL-259	\$69.95
K550L	Over size version of K550	\$47.95
K600M	Tilt angle (0-9 degrees) trunk mount. Black. RG-188 and low loss 7mm cable.	\$64.95
K600S	Tilt angle (0-9 degrees) trunk mount UHF base. 13.5 ft RG316 with SMA (PL-259 adapter included)	\$62.95
K702M	Deluxe low-profile magnet/suction mount. 6.5" diameter, 13' RG58 & PL-259	\$58.95
K9000LRM	Motorized mount for luggage rack. Use C-series cable assemblies	\$109.95
K9000LRMO	Same with oversize K515 hardware	\$109.95
K9000TM	Motorized mount for trunk lid. Use C-series cable assemblies	\$109.95
SPM-35	UHF type base on heavy 1.5 lb/4" magnet, 13'5mm coax with PL-259	\$49.95



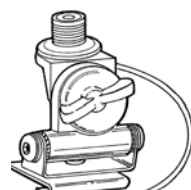
SPM-35  
SPM-NMO  
DPK-4NM-N



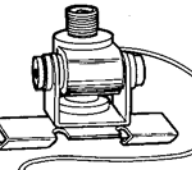
K702M



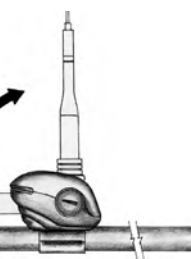
K412CNMO  
K412SNMO  
K412C  
K412S



K600M  
K600S



K9000  
Motorized Mount

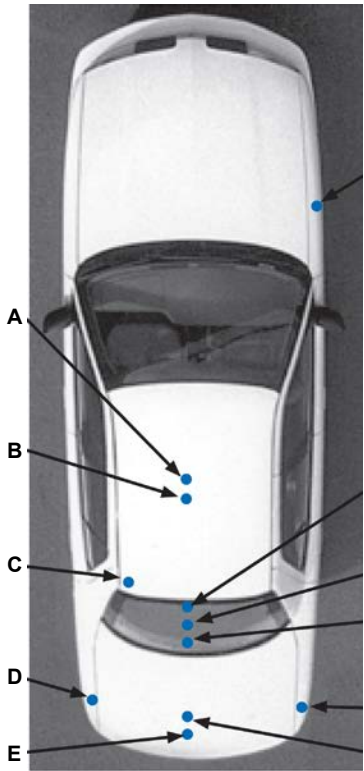






Placement of Your Larsen Mobile Antenna

Placement of your Larson Mobile Antenna is important to ensure proper performance. We recommend the following placement areas.



- A. MAGNETIC MOUNT  
Center of roof.....-0.2dB
- B. PERMANENT MOUNT (Reference Antenna)  
Center of roof.....0.0dB
- C. MAGNETIC MOUNT  
Corner of roof .....-0.2dB
- D. MAGNETIC MOUNT  
Trunk corner .....-3.4dB
- E. MAGNETIC MOUNT  
Center of trunk.....-2.1dB
- F. PERMANENT MOUNT  
Center of trunk.....-2.8dB
- G. TRUNK LIP MOUNT  
Corner of trunk.....-2.8dB
- H. ON GLASS MOUNT  
Glass low .....-3.0dB
- I. ON GLASS MOUNT  
Glass mid.....-1.2dB
- J. ON GLASS MOUNT  
Glass high.....-0.5dB
- K. MAGNETIC MOUNT  
Corner of hood.....-2.4dB

Mount Configurations

The most common Motorola NMO mounts are shown below. For more information about the mounts available please contact your local Ham Radio Outlet.

NMO B premium quality threaded.

NMO MMR mag mount, 80# pull strength.

NMO TLP heavy duty trunk lid.



NMO B



NMO MMR

NMO TLP

NMO Series Antennas

Select An Antenna

Once the base and thread type are selected, the final step is to choose the antenna.

All Larsen mobile antennas meet the industry's most demanding specs for electrical efficiency and mechanical durability.

Gain antennas are made of a coil and a whip. Quarter wave antennas are just a whip.

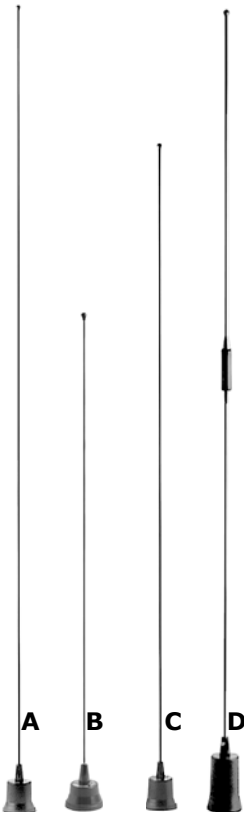
- Colors: Black coil base, chrome or all black whip.
- Made in the USA!
- 1-year No-Nonsense warranty™.

A. NMO 150 B (2m)  
Frequency.....144-174 MHz  
Gain ..... 3 dBi  
Electrical ..... 5/8 Wave  
Height ..... 49"

B. NMOQ C  
Frequency.....144-448 MHz  
Gain ..... 0 dB  
Electrical ..... 1/4 Wave  
Height ..... 22" max

C. NMO 220 B (1.25M)  
Frequency.....220-225 MHz  
Gain ..... 3 dBi  
Electrical ..... 5/8 Wave  
Height ..... 32"

D. NMO 2/70  
Frequency.....144-148 MHz  
.....442-448 MHz  
Gain ..... 3.8 dBi VHF  
..... 5.2 dBi UHF  
Electrical ..... Center Loaded  
..... 1/2 wave VHF, 5/8 UHF  
Height ..... 34 3/4"



Scanner Antenna

Tri-Band  
NMO 150/450/800

This is a great antenna for scanner operation. It is NOT tunable for amateur operation.

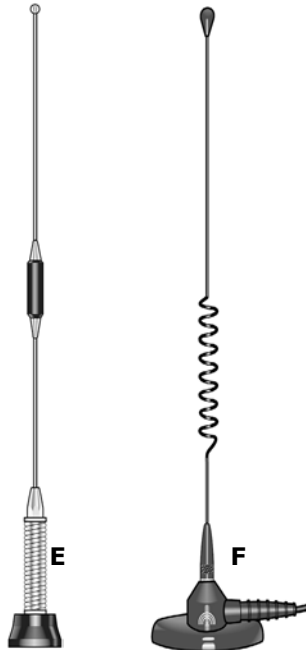
Frequency..... 150-165 Mhz  
..... 450-470 Mhz  
..... 806-950 Mhz  
Gain ..... 2.14 dBi ± 1dB  
Mount..... NMO  
Height ..... 16.5"



Dual Band Antennas

Larsen dual band antennas provide excellent performance on 2m and 70cm. Each antenna is factory preset to guarantee optimal performance with no tuning required.

- A range of dual band configurations is available.
- Kulrod copper-plated 17-7 stainless steel rods for greater transmit range.
- Soldered contacts.
- Premium materials and construction provide superior electrical performance and mechanical durability.
- 1-year No-Nonsense Warranty™



E. NMO 2/70 SH  
Frequency..... 144-148 MHz  
..... 440-450 MHz  
Gain ..... Unity  
Power ..... 100 watts  
Electrical ..... VHF Center Loaded: 1/4 wave  
..... UHF Center Loaded: 3/4 wave  
Base ..... NMO UF base B w/ spring  
Height ..... 17"

F. MM 2/70 PL  
Frequency..... 144-148 MHz  
..... 440-450 MHz  
Gain ..... Unity  
Power ..... 100 watts  
Electrical ..... VHF Center Loaded: 1/4 wave  
..... UHF Center Loaded: 3/4 wave  
Connector ..... PL-259 Installed  
Base ..... 3" Round Magnet  
Pull Strength ..... 54 lb.  
Weight: ..... 1 lb.  
Height ..... 17"

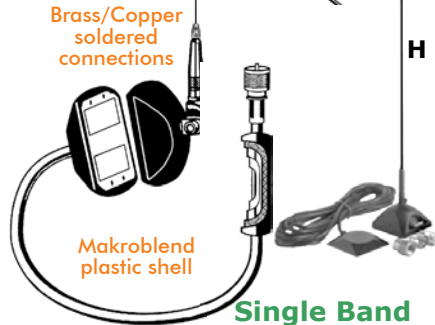
On-Glass Antennas

Larsen's advanced design techniques in glass-mount antennas result in superior transmit range plus tremendous mechanical durability. Glass mount performance is nearly identical to rooftop mounts, with no holes to drill. Properly installed on-glass antennas grip for years under demanding conditions, yet are easy to remove and remount.

Dual Band  
KG 2/70  
CX-PL

The KG 2/70 is a VHF half-wave and a UHF collinear. It comes with 14 feet of RG-58/U coax.

The antenna installs easily on any flat surface. Remove the whip without tools for car washes or low garages.



Single Band  
KG-144-UDPL

G. KG 2/70 CX-PL  
Frequency..... 144-148 MHz  
..... 442-448 MHz  
Gain ..... 2.4 dB VHF  
..... 4.5 dB UHF  
Power ..... 50 watts  
Electrical ..... 1/2 wave colinear  
Base ..... PL-259 (loose)  
Height ..... 32-3/4"

H. KG-144-UDPL  
Frequency..... 144-148 MHz  
Gain ..... 2.4 dB VHF  
Power ..... 50 watts  
Electrical ..... 1/2 wave  
Base ..... PL-259 (loose)  
Height ..... 45"

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Comet Dual-Band Antennas

Model	Bands	Gain	Max PWR Watts	Connector	Weight lb' oz"	Length ft' in"	Max Wind Speed MPH	HRO Price
Dual Band Base Station Repeater Antennas								
GP-9M*	2m/70cm	8.5/11.9	200	SO-239	5'11"	16'6"	90	\$214.95
GP-9N*	2m/70cm	8.5/11.9	200	N	5'11"	16'6"	90	\$209.95
GP-6*	2m/70cm	6.5/9.0	200	SO-239	3'8"	10'5"	90	\$149.95
GP-3*	2m/70cm	4.5/7.2	200	SO-239	2'12"	5'11"	112	\$99.95
GP-1	2m/70cm	3.0/6.0	200	SO-239	2'	4'2"	135	\$74.95
Dual Band Mobile Antennas- All Black Anodized								
SBB-7/SBB-7NMO	2m/70cm	4.5/7.0	70	PL/NMO	-	4'7"	-	\$79.95
SBB-5/SBB-5NMO	2m/70cm	3.0/5.5	120	PL/NMO	-	3'2"	-	\$58.95
SBB-2/SBB-2NMO	2m/70cm	2.15/3.8	60	PL/NMO	-	20"	-	\$42.95
B-10M/B10NMO	2m/70cm	-/2.15	50	PL/NMO	-	12"	-	\$42.95
CSB-750A	2m/70cm	3.6/6.1	150	PL	-	42"	-	\$75.95
CSB-770A	2m/70cm	4.4/6.9	150	PL	-	51"	-	\$89.95
CSB-790A	2m/70cm	5.1/7.7	150	PL	-	62"	-	\$99.95

\*Some longer antennas require additional freight.

Comet Tri-Band Antennas

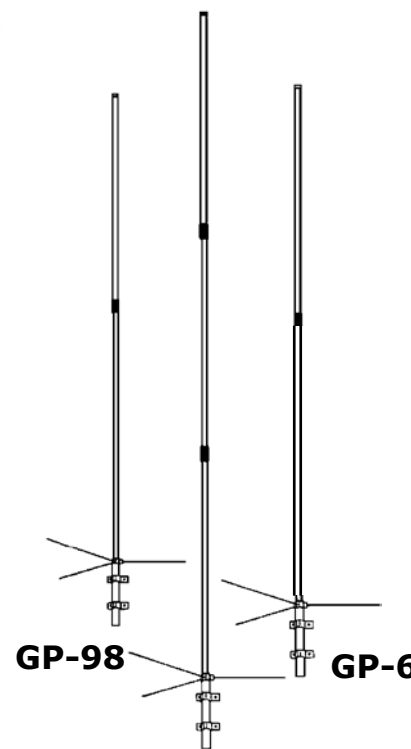
Model	Bands	Gain	Max PWR Watts	Connector	Weight lb' oz"	Length ft' in"	Max Wind Speed MPH	HRO Price
TriBand Base Station Repeater Antennas								
GP-15**	6m/2m/70cm	3/6.2/8.6	200	SO-239	2'15"	7'11"	90	\$169.95
GP-98**	2m/70cm/23cm	6.5/9.0/13.5	100	N-Female	3'6"	9'4"	90+	\$189.95
CX-333**	2m/220/70cm	6.5/7.8/9.0	120	SO-239	3'10"	10'2"	112	\$179.95
TriBand Mobile Antennas								
SBB-15**	6m/2m/70cm	2.15/4.5/7.2	120	PL-259	-	4'10"	-	\$84.95
SBB-224	2m/220/70cm	2.15/3.2/5.5	150	PL-259	-	3'1"	-	\$69.95
SBB-224 NMO	2m/220/70cm	2.15/3.2/5.5	150	NMO	-	3'1"	-	\$69.95
HF Antennas								
UHV-6**	40/(20*/(17*)15/10/6 2m/70cm	HF 0 dBi 2m 2.15 dBi 70cm 5.5 dBi	120 W SSB HF 100 W FM on 6-70cm	PL-259	Max 1'4"	Max 6'4"	-	\$169.95
L-14*	Opt 20m coil for UHV-6						-	\$31.95
L-18*	Opt 17m coil for UHV-6						-	\$29.95
L-3.5*	Opt 75/80m coil for UHV-6						-	\$34.95
CHA-250HD**	Ground Plane 3.5-57 MHz		250 W SSB HF 125 W CW	SO-239	7'11"	23'8"	67.5	\$399.95

\*\*For the UHV-6 optional bands.

\*Some longer antennas require additional freight.

6 Meter Antenna

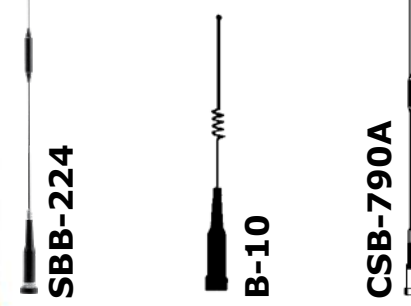
Model	Description	Freq	Gain	F/B	Max Power Watts	Conn	SWR	Length ft' in"	HRO Price
CA-52HB4**	4 element beam	50-54 MHz	-	19 dB	400 W PEP	SO-239	<1.5:1	10'6" boom	\$179.95



Dual & Tri-Band VHF / UHF

Comet developed the Super Linear Converter (SLC) to increase actual gain of dual and tri-band antennas.

- A complete pre-formed phasing coil and phosphorus copper element eliminate additional components and gain loss.
- The SLC is electrically very efficient, providing a low angle of radiation, directly to the horizon.
- Comet sectional antennas use ABS (Transparent to RF) connecting joints for the finest pattern and easiest assembly.



2 m and HT Antennas

Model	Bands	Gain	Max Pwr Watts	Connector	Length Ft' in"	HRO Price
Single Band Antennas						
SBB-25/SBB-25NMO	2m	4.1	100	PL-259/NMO	4'8"	\$54.95
HT Antennas						
CH-32 Mini Antenna	2m/70cm	-	10	BNC	1.75"	\$29.95
HT-224	2m/220/70cm	1.3/1.4/1.8	10	SMA	11"	\$39.95
SMA-501 Mini Antenna	2m/70cm	-	10	SMA	1.5"	\$29.95
SMA-3	2m/70/33cm	1.2/1.7/3.4		SMA	9.75"	\$39.95
SMA-24/SMA-24J	2m/70cm	2.15/5.3	20	SMA/Rev SMA	17.5	\$21.95/24.95
BNC-24	2m/70cm		20	BNC	17.5	\$24.95
SMA-503/SMA-503J	2m/70cm	-	10	SMA	8.5"	\$27.95

Comet High Power Duplexers and Triplexers

Zinc-alloy, die-cast, twin cavity, low input loss, high-isolation, and high-power. Modernize your station with Comet high-performance antenna products.

Model	Port	Freq MHz	CW Watts	PEP Watts	Loss dB	Isol dB	Mix Conn	Port Conn	HRO Price
CF-416A (2m/70cm)	LPF HPF	1.3-150 400-540	450 300	800 500	0.15 0.25	60 60	SO-239	PL-259 w/ leads PL-259 w/ leads	\$54.95
CF-416C (2m/70cm)	LPF HPF	1.3-150 400-540	450 300	800 500	0.15 0.25	60 60	N-Female	PL-259 w/ leads N-Male w/ leads	\$56.95
CF-4160I (2m/70cm)	LPF HPF	1.3-150 400-540	450 300	800 500	0.1 0.2	60 60	SO-239	PL-259 w/o leads N-Male w/o leads	\$52.95
CF-4160K (2m/70cm)	LPF HPF	1.3-150 400-540	450 300	800 500	0.1 0.2	60 60	SO-239	PL-259 w/o leads PL-259 w/o leads	\$54.95
CF-416B (2m/70cm)	LPF HPF	1.3-150 400-540	450 300	800 500	0.15 0.25	60 60	SO-239	PL-259 w/ leads N-Male w/ leads	\$52.95
CF-706A (2m/70cm)	LPF HPF	1.3-75 75-470	175 175	350 350	0.5 0.5	40 40	SO-239	PL-259 w/ leads PL-259 w/ leads	\$72.95
CF-530 (6m/125-470)	LPF HPF	1.3-90 125-470	350 350	600 600	0.2 0.2	45 45	SO-239	PL-259 w/ leads PL-259 w/ leads	\$78.95
CF-530C (6m/125-470)*	LPF HPF	1.3-90 125-470	350 350	600 600	0.2 0.2	45 45	PL-259	SO-239 w/o leads SO-239 w/o leads	\$76.95
CF-360B (10m/6m)	LPF HPF	1.3-30 50-470	350 350	600 600	0.2 0.2	45 45	PL-259	SO-239 w/o leads SO-239 w/o leads	\$69.95
CFX-4310C (2m/70cm/1.2)	LPF BPF HPF	1.6-60 100-150 350-500 840-1.4	600 450 300 100	1KW 800 500 200	0.15 0.25 0.3	50 50 50	N-Female	PL-259 w/o leads PL-259 w/o leads N-Male w/o leads	\$78.95
CFX-514 (6m/2m/70cm)	LPF BPF HPF	1.3-90 130-200 380-500	450 450 300	800 800 500	0.2 0.25 0.3	55 55 55	SO-239	PL-259 w/ leads PL-259 w/ leads PL-259 w/ leads	\$79.95
CFX-514J (6m/2m/70cm)	LPF BPF HPF	1.3-90 130-200 380-500	450 450 300	800 800 500	0.15 0.2 0.25	55 55 55	SO-239	SO-239 w/o leads SO-239 w/o leads SO-239 w/o leads	\$79.95
CFX-324A (2m/220/70cm)	LPF BPF HPF	1.3-150 200-320 390-500	350 350 350	600 600 600	0.2 0.25 0.3	40 40 40	SO-239	PL-259 w/ leads PL-259 w/ leads PL-259 w/ leads	\$88.95
CFX-324B (2m/220/70cm)	LPF BPF HPF	1.3-150 200-320 390-500	350 350 350	600 600 600	0.2 0.25 0.3	40 40 40	SO-239	PL-259 w/o leads PL-259 w/o leads PL-259 w/o leads	\$87.95

Dual Band

2 m/ 70 cm Mobile Antenna CA-2x4SR

The CA-2x4SR is an exceptionally wide-band VHF/UHF dual-band mobile antenna. High gain extended coverage area and excellent signal strength on both TX and RX.

The preferred antenna of many Search and Rescue (SR) volunteers due to the ability to TX and RX outside the ham bands (FRS/MURS/GMRS).

Nominal 2:1 or less SWR range 140-160MHz 435-465MHz

NMO Connector HRO Price: \$69.95 SO-239 Connector HRO Price: \$69.95

CA-SPR - optional spring. Replaces the lowest element. Protects against damage when offroad, brushes with tree limbs, garage doors, etc. HRO Price: \$20.95

Dual Band Magnetic Mount MA-721

Economical black anodized 2m/ 70 cm antenna. 19.5" tall and comes with 16.5 feet of RG-58 A/U coax. Coax terminates with an FME connector and includes BOTH PL-259 and SMA-male connectors for mobile and most handheld radios.

Gain 146 MHz: 1.7 dBi 3/8 wave Gain 446 MHz: 4.1 dBi 1/4 + 5/8 wave Max Power: 80 watts VSWR: 1.5:1 or less Impedance: 50 Ohm HRO Price: \$39.95



2M/70CM

All Female Duplexer CF-4160N

1.3-170 / 350-540 MHz duplexer with three N-female connectors allows the user to attach their own low loss jumpers in the length needed. HRO Price: \$58.95







## Mounts



### Vehicle Specific Antenna Brackets

These stainless-steel no-holes-to-drill mounts use an existing fender bolt under the hood. A 3/4-inch hole accepts a standard NMO type connector or use Comet UHF connector mobile cable assemblies. Specific mounts for most popular trucks and SUVs: Chevrolet, Ford, Dodge, GMC. Call HRO for compatibility. Pictured: DG2ANTPF Dodge Ram 1500 2009-2014 **HRO Price: \$24.95**

### Universal Mount CP-5M / CP-5NMO

These universal mounts use the heavy-duty RS-730 lip bracket. Each includes 5 meters (16'6") of deluxe 2-step coax and an antenna mount connector: gold-plated PL-259 on coax end with detachable barrel for easy installation. 18-inch lead of mini RG-174 coax for easy entry through the weather seal. Choose the model that has the connector for the antenna you are using. **HRO Price: \$74.95**

### Comet Mobile Mounting Systems

Comet has a wide variety of mobile mounts. Choose the mount and coax cable assembly that best fits your personal needs. All Comet cables have detachable connectors.

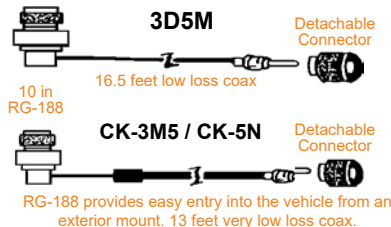
Model	Description	HRO Price
Mounts with Coax Cable Installed		
CP-5M	Universal multi-angle lip mount w/deluxe cable SO-239/PL-259 Connector	\$74.95
CP-5NMO	Same as CP-5M but with NMO/PL-259 Connector	\$74.95
HD-5M	Heavy duty version of the CP-5M	\$79.95
HD5-3/8-24	3/8-24 heavy duty lip mount w/ PL-259 Connector	\$74.95
LD-5M	Light duty lip mount, 16'4" deluxe cable assembly, UHF Connector	\$59.95
CM-5M	Standard heavy-duty mag mt w/ RG-58A/U, coax, UHF connector, max antenna height 4 ft	\$32.95
Mounting Brackets Only, No Coax		
RS-840	Heavy duty lip mount, low profile, accepts SO-239 connector	\$41.95
RS-730	Heavy duty universal lip mount, accepts SO-239 connector	\$32.95
RS-720	Medium duty universal lip mount, accepts SO-239 connector	\$29.95
RS-720NMO	Medium duty universal lip mount, accepts NMO connector	\$29.95
RS-520	Light duty universal lip mount, accepts SO-239 connector	\$29.95
Coax Cable Assemblies		
CK-3M5	17 foot high-quality cable includes 12" RG-188 to avoid water leak/cable damage. UHF Connector	\$42.95
CK-3M	Same as CK-3M5 but 9'9" of deluxe cable assembly, UHF Connector	\$37.95
CK-5N	13'6" of deluxe 2-step cable assembly, N-Connector	\$49.95
5D4N	13'6" low loss (2400 MHz) coax cable, N-Connector	\$36.95
3D4N	13'6" low loss (1200 MHz) coax assembly, N-Connector	\$32.95
Antenna Connector Adapters		
AD-25M	Turns an SO-239 mount into an NMO mount	\$15.95
AD-15M	Turns an NMO mount into an SO-239 mount	\$19.95

### IC-705/FT-818 CST-30

Mounts directly to the Icom IC-705 or Yaesu FT-817/818. Adjustable. **HRO Price: \$35.95**

### Window Gap Jumper CTC-50M

This device crosses the space between window frames. The frequency range is up to 1.3 GHz with SO-239 connectors. Max power HF100 W PEP, VHF 60 W, UHF 40 W, low loss, 50 ohm impedance. **HRO Price: \$59.95**



### Rack Mount RS-660U

This new roof-rack mount opens wider than the old version - up to 2.25 inches - and supports bigger antennas. **HRO Price: \$39.95**



## HF Antennas

### 1.7 - 50 MHz 10-Band Telescoping Antenna HFJ-350M Toy Box



- Breaks down into four convenient sections for additional portability.
- Quickly and easily change frequency by changing plug to the desired band
- 1/4λ base loaded antenna.

- Large coil for 160M (1.8/1.9MHz) operating.
- For best performance, it's recommended to use an antenna tuner and counterpoise.
- Base connector is a PL-259.
- Max Power: 75 W SSB 3.5 MHz, 100 W SSB 1.7-50 MHz.

**HRO Price: \$129.95**

Optional 2M Coil HFJ-2M: \$27.95

### Roll-Up Storage Bag CCB-HFJ

Keep your HFJ-350M antenna organized. Cloth storage bag stores all parts neatly and keeps them clean. Simple roll-up operation with velcro closure. **HRO Price: \$29.95**



### 40 m - 70 cm Mobile Antenna UHV-6

Without HF coils attached, the UHV-6 is a tribander for 6m/2m/70cm. The top of the element has a threaded socket for the 40m, 15m, or 10m coils (included), making the UHF-6 a quad-band antenna.

- Optional coils for 80m, 20m, 17m.
- Easy to mount and configure.
- Fold-over hinge included.
- GAIN on 2m: 2.15 dBi;
- GAIN on 70cm: 5.5 dBi.
- Length 48" to approx. 76".

**HRO Price \$169.95**

### 10/6/2 m & 70 cm Quad Band UHV-4

Developed for the Yaesu FT-8900. The 10m and 6m bands tune independently and will tune for SSB and FM. Length approx. 54". **HRO Price: \$119.95**



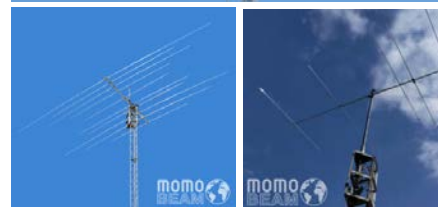
## Beam Antennas

MOMO Beam is a premier supplier of quality monobanders, multibanders, 50MHz, and WARC band beam antennas. Meticulously designed and crafted with superior materials these are one of the best engineered beam antennas available.

At Momobeam, our commitment to providing exceptional service and top-quality products has always been at the forefront.

We believe that the customer's experience should be seamless and hassle-free from the moment they receive our product to the point they start using it. With this in mind, we have implemented several key features to ensure that our antennas are a breeze to assemble.

PENTA10	10/12/15/17/20 Meters
TRI10	10/15/20 Meters
TRI7	10/15/20 Meters
DUO7	10/15 Meters
DUO4	4 Element 12/17 Meters
DIP40	40 Meter Dipole
MONO6	6 Element 6 Meters



## LCD Display

### CAA500 Mark II

Commercial Grade SWR / Impedance Analyzer Range: 1.8 - 500 MHz (including 222 MHz band). Check antenna installations in just seconds. Determine SWR and resonance instantly. New color TFT display permits easy viewing of frequency and band information, even in the dark. Also has a Band Sweep function that allows you to measure SWR across the selected ham band and view it on the display graph. Makes SWR adjustments quick and easy. Both SWR and impedance measurements are provided simultaneously. Precision analog meter provides SWR / impedance changes in real time. **HRO Price: \$439.95**



### LIMITED STOCK Color Screen VNA



### MFJ-223

Pocket-Size, Incredible Performance! Truly accurate SWR, R, X and Z! This pocket-sized wonder breaks the mold for analyzer design with user-friendly convenience, top notch accuracy, and a vivid TFT multi-color display. Don't let the size fool you, MFJ-223 is packed with all the VNA features and performance you need! For example, get data for SWR, resistance (R), reactance (X), and impedance magnitude (Z) delivered on a color-coded high-resolution bar-graph display or sharply defined swept-frequency plots. Get continuous DDS frequency coverage with 100-Hz resolution and a full selection of tuning steps and sweeps. Recharge via any USB port.



### LIMITED STOCK Graphic Analyzer



### MFJ-225

2.5-180 MHz continuous two-port Graphic Analyzer. A compact, completely self-contained handheld graphing analyzer in the field. 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 can run detailed data analysis and print out stunning color-graphic plots to document your work. Built-in back-lighted 3-inch LCD graphic display. Full screen, easy-to-view SWR bargraph, capture vivid swept displays for SWR, impedance, return loss, phase angle, and more. DDS generator.

### LIMITED STOCK Antenna Analyzers

### MFJ-213



MFJ-213 covers 1-60 MHz with digital precision. It also displays SWR, complex impedance, and impedance magnitude simultaneously all on the same easy-to-read LCD screen. Use it to measure capacitance, inductance, field

strength, frequency, plus generate test signals. You can also fine tune stubs, analyze coax, test baluns and RF transformers, and perform many other important RF-related tasks around the shack or on the road! MFJ-213 has all of the features of the popular MFJ-266C but its frequency range is 1-60 MHz.

### LIMITED STOCK

### MFJ-249D

If digital display is all you need, MFJ-249D does everything MFJ-259D does without analog meters. Same great features at a lower price. Solid metal case. MFJ-249D covers .2-230 MHz.





ANTENNAS/ROTATORS

HF Dipole Antenna

Pre-Tuned  
YA-30

This 83-foot broadband dipole provides optimum performance over 1.8-30 MHz. Usual requirements for an antenna tuner between the rig and antenna are eliminated by the unique broadband design. Handles 150 watts at an SWR of less than 1.9:1 on the amateur bands. Preamsembled and pretuned. Can be installed as a horizontal flat-top, inverted-V, or sloper. 100 feet of RG-8X with PL-259 included.

HF Mobile Antenna

Motor Tuned  
HF/VHF/UHF  
ATAS-120A

The ATAS-120A provides HF / VHF / UHF coverage with automatic motorized tuning. Control radiator length from the transceiver for best SWR. Compatible with Yaesu's FT-100, FT-450, FT-847, FT-857, FT-891, FT-897, FT-991, and FT-710.

HF Portable Antenna

Hand Tuned  
HF/VHF/UHF  
ATAS-25

The ATAS-25 has radiating elements covering amateur bands 10-40m, 6m, 2m, and 70cm. Mounts to a standard camera tripod (not included). Uses a manual tuning system. Dual frequency operation possible with a duplexer (not included). Antenna collapses to less than two feet to carry; expands to 7.2 foot maximum height. This is an ideal system to use with the FT-891, FT-818, FT-897, and FT-857 transceivers. Weight is 2.05 pounds.

Yaesu Rotators Specific...

Model	Input Voltage	Motor Voltage	Rotation Time	Stationary Torque	Rotation Torque	Maximum Wind Load	Max Vert Load	Max Mast Size	Cable Type	Weight lb (kg)	HRO Price
G-450ADC	110 VAC	29-32 VAC	51 sec	217 ft lb.	39.8 ft lb.	10 sq ft.	242 lb.	2 in.	5-wire	7 (3.2)	CALL
G-800DXA	110 VAC	24 VDC	55 sec	3456 in lb.	43-79 ft lb.	17 sq ft.	440 lb.	2.5 in.	6-wire	10 (4.5)	CALL
G-1000DXA	110 VAC	24 VDC	55 sec	5200 in lb.	79 ft lb.	22 sq ft.	440 lb.	2.5 in.	6-wire	15 (6.8)	CALL
G-2800DXA	110 VAC	24 VDC	55 sec	20,832 in lb.	219 ft lb.	34 sq ft.	880 lb.	2.5 in.	6-wire	26 (11.8)	CALL
G-5500DC	110 VAC	22 VDC	58 sec	289 ft lb.	*	10.7 sq ft.	440 lb.	2.5 in.	6-wire	20 (9)	CALL

\*Elevation 101 ft-lb, Azimuth 44 ft-lb.

YAESU  
The radio



Hi-Tech Rotator  
G-2800DXA

The G-2800DXA is a high-technology rotator designed to turn the largest tower-mounted antenna arrays.



Medium Loads  
G-800DXA

The G-800DXA rotator is designed for medium to heavy loads and antennas up to 20 square feet, with control box resets.

Computer Controller  
GS-232B

The GS-232G rotator computer interface provides digital control of Yaesu rotators G-800DXA, G-1000DXA, G-2800DXA, and G-5500.

The GS-232B contains its own PIC18C452 micro-processor with ROM and RAM and 10-bit analog-to-digital converter. The 3 wire async serial line can be configured for serial data rates from 1200 to 9600 baud. The unit has a DB-9 male connector to connect to the RS232C COM port of your computer.

Supplied items include: control cable for the azimuth rotator (5 pin to mini DIN), control cable for the Az/EI rotator (dual 5 pin to DIN cable), DC power cable, and hook and loop fasteners. Requires 12 VDC @ 110 mA.

Rotators

Yaesu's high quality rotators for amateurs include models for medium to large arrays and for satellite work. There are provisions for computer control.

Please contact your nearest HRO for more specifications and discount pricing on Yaesu products.

Large Loads  
G-1000DXA

The G-1000DXA is designed to handle bigger arrays up to 22 square feet. A great value.

VHF/UHF  
G-450ADC

The G-450A is ideal for smaller HF and VHF/UHF antennas. Features 360 degree radial compass display with overlap.



AZ/EL  
G-5500DC

This is the most popular azimuth and elevation rotator for satellite, moon-bounce or other space communications work. It provides horizontal and vertical antenna rotation in a single unit. The control box has two large meters, one showing elevation and the other azimuth. Meter aiming accuracy is within ±4%. The G-5500 provides 180° elevation rotation with a rotation time of 67 seconds. A 360° azimuth rotation takes just 50 seconds. This rotator accepts up to a 2.5" mast, a maximum 1-5/8" horizontal cross-boom and 440 pounds of vertical load. Computer controllable with optional GS-232 computer interface.

ROTATORS/ANTENNA ACCESSORIES

LIMITED STOCK

hy-gain

Rotators

HAM-VI

For medium antenna arrays up to 15 square feet wind load. Includes the DCU-2 digital auto control unit. No more terminal strips. Features cinch connector plus 8-pin plug at the control box. Maximum mast size 2 1/16".

HRO Price: \$954.95



HAM-IV

The popular Ham-IV is designed for medium antenna arrays up to 15 square feet. It features a dual 98 ball bearing race for load bearing strengths and an electric locking steel wedge brake. Maximum mast size 2-1/16".

HRO Price: \$798.95



AR-500

Designed for the use of small UHF, VHF, 6-Meter, TV and FM antennas. Has programmable antenna controller with remote-control. AR-500 remembers up to 12 antenna directions even after a power outage! Control all functions with the remote control or console. The control console displays location chosen and relative position. 120V.

HRO Price: \$198.95



For Hy-Gain  
DCU-3



Digital rotator controller allows you to program 6 beam headings. Gives fully automatic or manual control of your HyGain Ham or T2X Rotators. Has USB / RS-232 ports for computer control. Adjustable LCD sleep time. Field upgradeable firmware. Press a memory button or dial in your beam heading or let one of the popular software platforms take control for you. Bright blue LCD. Available for 110 VAC or DCU-3X for 220 VAC.

HRO Price: \$638.95

AR-40

Especially for large FM-TV and compact communication antenna arrays up to 3.0 square feet wind load area. Dual 12 ball bearing race. Automatic position sensor never needs resetting. Maximum mast size: 2-1/16". Includes MSLD light duty lower mast support.

HRO Price: \$499.95



CD-45II

The CD-45II handles up to 8.5 square feet of antenna wind load when mounted inside the tower or 5 square feet with the included MSLD light duty lower mast adapter. Has 58 ball bearing race. Maximum mast size: 2-1/16".

HRO Price: \$598.95



ACCESSORIES

Thrust Bearing  
ROHN TB4

ROHN Heavy Duty Thrust Bearings are designed to attach to the top of a tower and to antenna support masts that are intended to be rotated, for directional antenna systems used in various radio applications.



The TB-3 is used for masts up to 2 in. OD (outside diameter) and the TB-4 is used for masts up to 3 in. OD.

Roof Mount  
ROHN JRM23805



Mount with ease. The JRM is a ballast, non-penetrating roof mount that supports a 5' pipe mast. The mast is extendable to 10' and can be purchased in diameters from 2", 2.5" and 3".

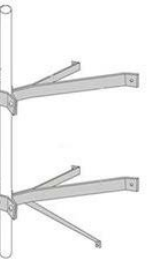
Aluminum Mast Pipe  
MAST 2x16



The perfect size/section of pipe to mount most antennas.

- 16 ft long.
- 2" O.D., 0.125in Wall Thickness.
- Corrosion resistant aluminum tubing.

Double Wall Mount  
ROHN WM24D



- Heavy duty double 'y' style brackets.
- 2 Brackets included as shown.
- Galvanized steel wall mount provides 24" clearance to the wall.
- Masts are help in place with 2 unique 'anti-twist' locking screws.
- Clamp accepts 7/8" to 2-3/4" O.D. mast tubes.
- Can be used on masonry, wood, metal, or other types of walls using up to 1/4" lag screws or bolts (not included).



# TUBULAR CRANK-UP TOWERS



## MA Series Crank-Up Masts

The premier MA-series crank-up Tubular Towers are designed to be both safe and neighbor friendly. The slender design gives a clean, flagpole-like appearance and is rated at 90 mph winds per the IBC 2006 code. Per TIA/EIA specifications, adequate safety margins are included. International Building Code calculations are available for most models.

The MA-40 and 550 models require base kits comprised of a flat base, two 1/2" x 10" anchor bolts, and a 4 ft rotor mast with rotor plate. Comes standard with a wall bracket. No guying is required when tower is properly bracketed to the eave of your roof.

MA-series towers are completely self-supporting only when used with accessory MARB or MAB series bases. The MARB series rotator base allows the entire tower and antenna to be rotated from the base (rotator not included).

This allows easy rotator maintenance plus emergency hand rotation of the entire tower and antenna.

The MA-550MDP and 770MDP models include a heavy duty motor drive with positive pull down. The MDP models provide motorized raising and lowering of the tower. A remote control unit (RMC-1000) accessory is available that allows raising and lowering from your ham shack or other remote location.

All models without motor drives come standard with manual hand winches which have load actuated brakes for maximum safety. This feature prevents the winch from free-wheeling and causing injury to you or your installation in the event that you lose your grip during raising or lowering.

All steel used at US Tower conforms to ASTM specifications. All welding is done by certified factory personnel. All of our towers are factory tested by trained personnel before shipping.

## MA-Series Crank-Up Towers

Model Number	Height Maximum	Height Minimum	Sections	Weight Pounds	Sec O.D. Top	Sec O.D. Bottom	HRO Price
MA-40	40'	21'6"	2	245	3" sq.	4.5"	CALL
MA-550	55'	22'1"	3	435	3" sq.	6.625"	CALL
MA-550MDP*	55'	22'1"	3	620	3" sq.	6.625"	CALL
MA-770	71'	22'10"	4	645	3" sq.	8.0"	CALL
MA-770MDP*	71'	22'10"	4	830	3" sq.	8.0"	CALL

All towers will handle 10 square feet WLA antennas at 50 MPH winds.

\*These tower requires purchase of MCL-100 or RMC-1000

## TMM Series Compact Towers

The TMM series has a minimum retracted height of 11'4" (may vary, depending on rotator used) and a maximum height of 47' including mast. At the tower's retracted height, visual impact is reduced to a minimum and antenna servicing is made easier. Typically the tower and antenna are below the roof line of your home when the tower is fully retracted.

The TMM series towers are lightweight, freestanding crank-up towers that allow up to 20.7 square feet of antenna in 90 mph winds per TIA/EIA specifications. The TMM-433HD allows 31.8 square feet in 90 mph winds. These lightweight towers should provide many years of trouble free service. All of our towers

have a hot dipped galvanized finish inside and out.

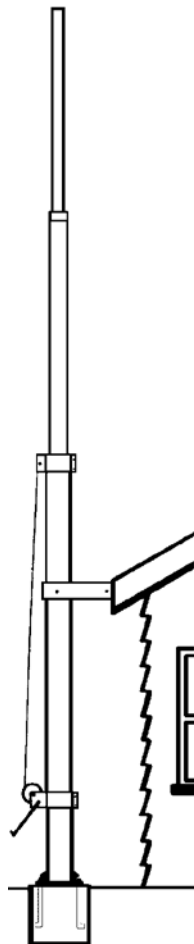
The TMM-433SS and 541SS have a 10" OD top section which will permit the installation of the Yaesu G800 and G1000 rotators inside the top section. Oversized rotators will prevent full retraction of your tower. However, they may be used if full retraction is not required.

All TMM Series towers require base kits comprised of a hinged T-base and anchor bolts, but include load actuated winch, rotator plate, and eight feet of 2" OD x .120" antenna mast.

## Compact TMM-Series Crank-Up Towers

Model Number	Height Maximum	Height Minimum	Sections	Weight Pounds	Sec O.D. Top	Sec O.D. Bottom	HRO Price
TMM-433SS	33' w/o mast	12'3"	4	315	10"	18"	CALL
TMM-433HD	33' w/o mast	12'3"	4	400	12.5"	20 7/8"	CALL
TMM-541SS	41' w/o mast	13'	5	430	10"	20 7/8"	CALL

All towers will handle 18 square feet WLA antennas at 50 MPH winds.



## Crank-Up Tower Base Information

Foundations are designed in accordance with the International Building Code (IBC) for a "non constrained" condition using Class 5 soil. Alternate or custom foundation designs are available for an extra charge. Anchor rods may be ordered from US Tower. However, reinforcing steel and rebar are not provided. Welder's certified IAW AWS D1.1. Contact US Tower for additional information.

Because of wide variations throughout the country in zoning requirements and loading conditions (snow, wind, ice, etc.), it is the responsibility of the customer to make certain that his Tower conforms to all applicable codes. We recommend you obtain all necessary permits prior to purchase.

The Customer is Responsible for obtaining all local city or county building and tower permits AND for taking the tower off the freight truck when it is delivered. Please arrange for adequate help.

## TX Series Freestanding Towers

US Tower's TX series crank-up towers are as strong or stronger than most competitors' heavy-duty models. The TX towers have 21 foot sections with 4 foot overlap to provide extra height and strength. In addition, the overlap helps prevent binding while lowering your tower in high wind conditions. The TX series towers have a large enough top section (12 1/2") to permit installation of most rotators inside the section for maximum strength while allowing the section to fully retract. Cross bracing at critical points on the tower ensures safety and additional strength. All crank-up towers have a heavy-duty, hot dipped galvanized finish both inside and out, which should provide many years of trouble free service.

The TX series towers come complete with rotator plate and Fulton hand winch, except MDP and MDPL models, which feature automatic load actuated brakes for maximum safety. Base kits are required, consisting of large steel anchor bolts and heavy-duty steel T-base that allows the tower to hinge on for easy installation. All T-bases will accept the TRX series raising fixtures for easy one-man installation. Other accessories include masts and motor drives. The TX-472MDP comes complete with MDP-750 motor drive with positive pull-down feature. The TX-489MDPL includes the MDPL-1000 motor drive and level wind feature. US Tower's TX series requires no guying. The wind loading is calculated at 90 mph.

## TX Series Freestanding Crank-Up Towers

Model Number	Height Maximum	Height Minimum	Sections	Weight Pounds	Sec O.D. Top	Sec O.D. Bottom	HRO Price
TX-438	38'	21'9"	2	355	12.5"	15"	CALL
TX-455	55'	22'6"	3	670	12.5"	18"	CALL
TX-472	72'	23'3"	4	1040	12.5"	21 5/8"	CALL
TX-472MDP*	72'	23'3"	4	1210	12.5"	21 5/8"	CALL
TX-489MDPL*	89'	24'	5	1800	12.5"	25 5/8"	CALL

All towers will handle 18 square feet WLA antennas at 50 MPH winds.

\*This tower requires purchase of MCL-100 or RMC-1000

## HDX Series Heavy Duty

US Tower's HDX series heavy-duty crank up towers have up to 2.5x more wind loading capacity than others commonly advertised. This superior strength allows for large stacked arrays, while using our commercial type bases and anchor bolts that can be easily installed and vertically adjusted. All HDX series T-bases are designed to use our TRX series raising fixtures to make installations and antenna servicing a one man job.

US Tower carries many different sizes and strengths of masts to use as accessories with the HDX series towers. The HDX-572MDPL and 589MDPL motorized towers provide dual level wind, positive pull down and heavy

duty gear box features. The HDX-589MDPL comes complete with the MCL-100 limit switch package included. All towers using MDP-750 and MDPL-1000 motor drives must use either the MCL-100 accessory limit switch package or the RMC-1000, which allows the raising and lowering of your tower from the comfort of your ham shack or any remote location.

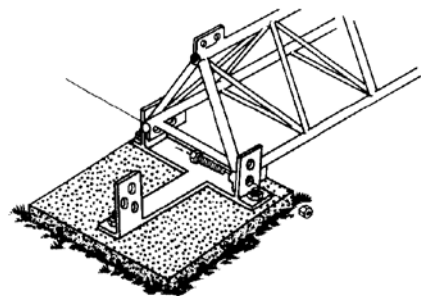
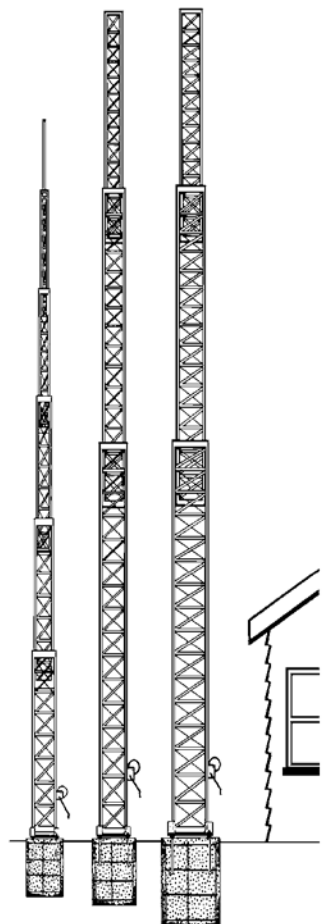
All HDX series towers come complete with rotator plate, but require base kits consisting of anchor bolts and heavy-duty T-base. US Tower's special T-base design allows the tower to hinge for easy installation. US Tower's crank towers require no guying. The HDX Series towers are rated at 90 mph winds.

## HDX Series Heavy Duty Crank-Up Towers

Model Number	Height Maximum	Height Minimum	Sections	Weight Pounds	Sec O.D. Top	Sec O.D. Bottom	HRO Price
HDX-538	38'	21'9"	2	600	15"	18"	CALL
HDX-555	55'	22'6"	3	870	15"	21 5/8"	CALL
HDX-572MDPL*	72'	23'3"	4	1600	15"	25 5/8"	CALL
HDX-589MDPL	89'	24'	5	2440	15"	30 5/8"	CALL
HDX-689MDPL*	89'	24'9"	5	3400	18"	37 1/8"	CALL
HDX-5106MDPL*	106'	25'6"	6	3850	15"	37 1/8"	CALL

All towers will handle 30 square feet WLA antennas at 50 MPH winds. HDX-689MDPL rated at 60 square feet WLA of antenna at 50 MPH winds. HDC-5106MDPL rated at 35 square feet WLA of antenna at 50 MPH winds.

\*These tower requires purchase of MCL-100 or RMC-1000



## TOWER QUESTIONS? HRO HAS THE ANSWERS!

For more information about U.S. Towers and related accessories please contact your nearest Ham Radio Outlet store. Our salespeople are happy to answer any of your questions.





The ALM Series is a patented mast system designed and manufactured by US Tower Corp. The intent of the ALM Series is to provide a versatile and highly capable mast system that can be quickly transitioned for different uses.

Using lightweight aluminum construction, the ALM Series masts can be easily loaded into a vehicle, transported to a field event, and deployed using a number of mobile mast mount options including hitch mounts and drive-on bases.

With its high wind rating, the ALM Series can also be used as a permanently installed mast attached to a house, an out structure, or installed free-standing. No guying is required for any deployment configuration of the mast.

Whether the intent is to use the ALM Series as a mobile solution, a fixed solution or both, the low maintenance, high strength, weather resistant construction of the mast ensures that you will be prepared at all times with an easy-to-use cost-effective solution.

Features:

- Lightweight aircraft grade aluminum
- Rapid Deployment
- Corrosion resistant
- Ideal for temporary or permanent installations
- Built-in pivot clevis for easy tilt-up
- Adjustable height winch
- High-ratio winch
- High strength-to-weight ratio
- Low maintenance
- 4 1/2 ft, 2" O.D. antenna mounting mast with universal rotator mount plate

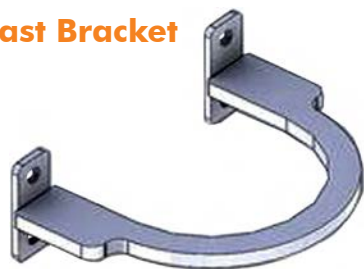
Options:

- Crank tilt-up raising feature (ALM MAF)
- ALM rotating feature (ALM MARB)
- Hitch mount fixture (ALM Hitch Mount)
- Wall mount fixture; 16" or 20" standoff arms
- Standalone base (ALM MAB)
- Drive-on mast stand (15603-0004-1012)

Four Heights Available		
Height	Rated	Load
16 ft.	50 lb.	9 sq ft. @ 65 mph
21 ft.	50 lb.	9 sq ft. @ 65 mph
26 ft.	50 lb.	8 sq ft. @ 65 mph
31 ft.	50 lb.	8 sq ft. @ 65 mph



Mast Bracket



Mast Base



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STORE HOURS

Ham Radio Outlet is open Monday through Saturday. Phone hours are 9:30AM to 5:30PM and store hours are 10AM to 5:30PM. We are closed for most major holidays.

EASY ORDERING

Each HRO store has a local phone number, a Toll-Free 800 number, a fax number and an email address. Our friendly and trained staff is eager to answer your questions and place an order for you. You can also shop 24/7/365 on our safe, secure website at <https://www.hamradio.com>.

SALES TAX

Ham Radio Outlet collects, remits, and reports sales tax in accordance with all state and local requirements. For more information go to [https://www.hamradio.com/general\\_info\\_sales\\_tax.cfm](https://www.hamradio.com/general_info_sales_tax.cfm).

PRICING

No matter if you shop online, in-store, or over the phone, you will find the same low prices. Many prices shown are below suggested list price and, in most cases, we offer significant discounts from retail pricing. Manufacturers constantly change prices, offer specials, or react to market conditions. Simply check online or call one of our stores and our staff will be happy to quote you the current selling price. Prices are subject to change without notice or obligation to the customer. Sorry, we cannot honor typos in this catalog or on our online web pricing.

PAYMENT TYPES

We accept Visa, MasterCard, American Express, Discover and PayPal both online and in-store. Money Orders, Cashier's Checks and Personal checks are also accepted. However, processing time may delay shipment by 10 days or more on unsecured funds.

When using a credit card for phone orders, please have the card in front of you since we will need specific card information. For your protection, we thoroughly investigate the validity of all credit card purchases and may require additional verification before shipment.

COD is by approval only. COD payments must be made by cashier's check or money order at the time of delivery. There is a small fee for COD shipments. Contact your local HRO for more information.

COMMERCIAL SALES & PO's

Written purchase orders will be accepted from city, state, and federal agencies. Commercial organizations require pre-approval if credit terms or open account is requested. HRO quotes prices that require payment on receipt of merchandise. Please indicate that you require terms when calling for price quotes. Typically net terms are only offered to Fortune 500 companies, Federal, State, City and local government entities.

FAST SHIPPING

HRO continually strives to ship each and every order as quickly as possible. In most cases, the shipment will be made from the location nearest to you, if stock is available. Otherwise we will ship from any location, even multiple locations, to fulfill your order. HRO is trying to provide the quickest and most efficient shipment process in the industry!

DELIVERY

**United States:** HRO provides FREE ground shipping in the continental USA on most items over \$100. Items under \$100 incur a flat rate shipping charge based on current shipping costs and conditions.

For expedited, domestic shipments HRO offers a variety of 2 day or next day service at an additional cost. A quote for these charges can be provided upon request.

**Alaska and Hawaii:** Shipments can be sent by UPS, FedEx, or the USPS. Contact your local HRO for more information.

**Canada:** We ship to Canada! Orders can now be shipped via UPS, FedEx, DHL or the USPS. Canadian shipping costs will be quoted and calculated on a per item basis. These costs will be added to your invoice. Contact us for additional details.

**International Orders:** We ship worldwide via UPS, FedEx, DHL or the USPS. Contact any of our stores with your needs. We can provide quotes and details for placing your foreign order. Payment methods include wire transfer, Visa, MC, PayPal, or check drawn in U.S. Funds from a U.S. bank. Shipments are made (depending on size) by UPS, FedEx, DHL, or International Mail. Some orders to some foreign countries cannot be insured to the full value.

**Truck:** On day of delivery, please be sure to have enough help, and/or proper equipment on hand for unloading merchandise. Truck drivers are NOT required to provide assistance. If you are not experienced at handling large, awkward items such as towers, antennas or amplifiers, please ask for properly trained people to assist you.

DAMAGED ITEMS

**UPS or FedEx:** If the item is obviously damaged, note this with the driver and refuse shipment. This item will be returned to HRO and another will be sent at no additional charge. If hidden damage is noted, contact UPS or FedEx as soon as possible. They will arrange pickup. Once the item is received by HRO, a replacement will be sent.

**US Mail:** Please contact our office immediately upon finding an issue.

**Truck:** If there is damage or the shipment is short, it is the customer's responsibility to file the claim with the trucking company. At the time of receipt of item, it is recommended that you have the driver write 'damaged' or indicate shortage on the bill of lading he gives to you. Be sure to have the same notation as well as driver's signature on his copy also.

LOST ITEMS

When your order is delivered, please carefully count items and if anything is missing, notify HRO at once. Occasionally, cartons shipped at the same time will arrive at their destination two or three days apart. If you notify HRO within 10 days, we will replace lost or damaged items after completion of proper documentation and acceptance by the shipping agency.

RETURNS

Products are not sold for evaluation. Under some circumstances and with prior approval of the store of purchase, HRO will accept an item for return. A 15% restocking fee may be applied and all freight charges may be assessed.

Refunds will be applied back to your original payment method except for cash, which will be refunded by check. HRO will pay from its corporate offices via corporate check. Refunds via corporate check may take 14-21 calendar days but often arrive sooner.

Defective merchandise may be returned within 10 days of the original purchase for exchange. Original receipt must accompany the return. Contact your salesperson for details. Software is sold on a non-returnable basis. Any software problems will be resolved under the terms of the manufacturer's warranty. Cut lengths of wire and or cable are also non-returnable.

MANUFACTURER'S NEW EQUIPMENT WARRANTY

Ham Radio Outlet supports all manufacturer's warranties. HRO will assist you with invoice copies and shipping instructions as well as warranty service center directions for items that may fail during the manufacturer's warranty period.

Ham Radio Outlet may, in some cases, provide an in-store repair on items; please contact the store of purchase for that information. It will be necessary to provide us with the invoice number and purchase date, as most manufacturers need this information to process under their FREE warranty repair terms.

NEW EQUIPMENT WARRANTY RETURNS

When returning equipment for repair, please pack the item in original packing material or something similar to provide adequate protection during the shipping process. Note on box: "ATTENTION SERVICE." Include a copy of your purchase invoice, and a complete and detailed description of the problems. Without the invoice or a complete description, delays will be experienced in providing the proper service and returning the item to you. Be sure to insure the package for its replacement cost.

HRO will have repaired or replace the defective item at our option. If the item is found to be defective under the terms of the manufacturer's warranty, no charge will be made for service or return shipping within continental USA.

It is the customer's responsibility to ship all defective items to the service center for warranty repair.

HRO EXTENDED WARRANTY

HRO now offers an optional Extended Warranty Program for most amateur radios, which must be purchased within 30 days of the purchase of the related product. The Extended Warranty Program starts at the conclusion of the new product original warranty period, and must be processed by HRO directly via any of our stores.

The Extended Warranty Program can be purchased for one (1) or two (2) additional years, does not apply to accessory items, and is available to the original purchaser only and is not transferable. Qualifying items must be sent to HRO after the manufacturers warranty expires where HRO will have the item serviced or replaced.

SUPPORT

HRO prides itself in its ability to service the customer. If you are not happy, we are not finished.

If there is a problem please contact the manager of the store from which you purchased the merchandise. If your problem cannot be remedied by that store manager, please feel free to call HRO National Sales at (800) 444-4799 and explain the situation. At this point our National Sales Manager will see that your problem is addressed.





## HF Roller Inductor



### MFJ-989D

The world's most popular legal limit antenna tuner! Easily handles 1500 watts SSB / CW, 1.8 to 30 MHz including MARS / WARC bands. 500 pF air variable capacitors, AirCore™ roller inductor with fast-tune crank knob, TrueActive™ peak-reading cross-needle SWR / Wattmeter, high voltage current balun, more! 12-7/8" W x 6" H x 11-5/8" D.



### MFJ-986

Similar to MFJ-989D, but "D" has 2-knob tuning (differential capacitor and AirCore™ roller inductor) to make tuning fool-proof and easier than ever.

## Manual Tuners



### MFJ-906 / 903

6 meter tuners. MFJ-906 has lighted cross-needle SWR / Wattmeter with bypass switch. Handles 100 W FM/ 200 W SSB. MFJ-903 is without SWR/Wattmeter and bypass switch.



### MFJ-948

Economy version of MFJ-949E, less dummy load, Lexan® front.

## HF Inductor Tuners



### MFJ-904

MFJ brings you the world's smallest full power 150 watt 80-10 meter antenna tuner. Covers 3.5 to 30 MHz – with 4:1 balun and SWR / Wattmeter! SO-239 connector. 7-1/4" W x 2-1/4" H x 2-3/4" D.



### MFJ-949E

1.8 to 30 MHz, custom inductor switch, 1000 volt tuning caps, full size peak / average lighted cross-needle SWR / Wattmeter, 8 position antenna switch, dummy load, scratch proof Lexan® front panel. 3-1/2" H x 10-5/8" W x 7" D.



### MFJ-945E

HF / 6 meter mobile tuner. Tiny 8" x 2" x 6" fits easily in car.



### MFJ-941E

Super value tuner handles 300 watts PEP, covers 1.8-30 MHz, lighted cross-needle SWR / Wattmeter, 8-position antenna switch, 4:1 balun, 1000 volt capacitors.



### MFJ-931

Artificial RF Ground. Creates artificial RF ground or electrically places far-away RF ground directly at rig. Includes 300 W tuner with cross-needle SWR / Wattmeter.



### MFJ-971

Portable / QRP tuner tunes coax, balanced line, random wire 1.8-30 MHz. 30 / 300 or 6 watt ranges. Matches MFJ QRP rigs. 6" W x 6-1/2" D x 2-1/2" H.

## HF Automatic Tuners



### MFJ-994B

600 watt Intelli-Tuner™. Like MFJ-993B, but has 10,000 VirtualAntenna™ memories and handles 600 watts CW / SSB, matches 12-800 ohms. Does not have LCD display, antenna switch or 4:1 balun.



### MFJ-998

1500 watt SSB / CW Intelli-Tuner™. Digital and analog SWR / Wattmeter, ultra-fast, automatic tuning, wide range (12-1600 ohms from 1.8 to 30 MHz), radio interfaces, built-in antenna switch for two coax / long wire, automatic bypass to protect your amplifier, field upgradeable software. MFJ-998RT with MFJ-4117 bias-tee also available for remote use.

### MFJ-926B

200 watt HF remote automatic tuner. Matches random wire or coax feed. Fully weather sealed for remote outdoor and marine use. Includes MFJ-4117 bias-tee.



### MFJ-939K

From 2 to 200 watts automatic antenna tuner. Plug and Play for ICOM, Yaesu, Alinco and other HF rigs. Has 20,000 memories, covers 1.8-30MHz, powered by transceiver and includes interface cable.

## HF Antenna Switches



### MFJ-1701

6 position antenna switch, 50-75 ohms. Handles 2 kW PEP or 1 kW CW. 1.8-30 MHz. SO-239 connectors.



## Power Supplies



### MFJ-4128

Switching power supply delivers 28 A surge, 25 A continuous at 13.8 VDC. Selectable AC input voltage 85-135 and 170-260 VAC. 5-way binding posts, cigarette lighter socket, fan "on" LED indicator. 7 W x 2.25 H x 7.5 D and 4 lb.



### MFJ-4215MV

15 amp switching power supply, 15A surge and 13A continuous. Variable 4-16 VDC with 1% voltage regulation. Backlighting volt / amp meters. 5-way binding posts for output. 5 W x 3.75 H x 7 D at 2.9 lb.



### MFJ-4225MV

Similar to MFJ-4215 but adds large 3-inch amp, volt meters and a cigarette lighter plug. 5.25 W x 4.5 H x 6 D inches. Weighs 3.7 lb.

## QRP Power MFJ-4103

Delivers up to 40 Watts (13.8 VDC at 2.89 Amps) of reliable power anywhere in the world! It's an incredibly tiny 4 1/8 x 2 5/8 x 1 3/8 inches and weighs just 10 ounces including output power cord and connector. It has an output DC cable with a standard MFJ coaxial DC power connector (2.1mm ID, 5.5mm OD). A sturdy adapter cable is also included for use with the Yaesu FT-818.



## Wire Antennas

### End Fed Horizontal Wire Antennas MFJ-1982



End-fed radiators have the unique quality of resonating on the 1/2-wave fundamental frequency plus odd / even harmonics above! Broadband matching transformer at feed point lets the entire HF spectrum be yours! SWR is so low you may never need a tuner.

Installation is fast for home, road, emergencies – just one high center or end support. Toss your EFHW over a high limb for an inverted-V, raise the far end high for a powerful sloper, or even go vertical with an inverted-L. Comes with a rugged insulated wire radiator that prevents detuning when in contact with limbs/branches. "No-sag" end insulator slides over branches and through foliage. Dark jacketed wire is virtually invisible. Don't let antenna restrictions keep you off the air! Power ratings are in watts PEP for SSB / CW modes, with 50% or less transmit time (ICAS).

MFJ-1982LP	30 W	.....QRP80-10 Meters
MFJ-1984LP	30 W	.....QRP40-10 Meters
MFJ-1982MP	300 W	.....80-10 Meters
MFJ-1984MP	300 W	.....40-10 Meters
MFJ-1982HP	800 W	.....80-10 Meters
MFJ-1984HP	800 W	.....40-10 Meters

## Cobweb Antennas

### 1/2 Wave 6-Band HF Cobweb Antenna MFJ-1836



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 9 x 9 x 1/2 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 mount on your chimney, balcony, mast. Low in cost, but big on performance.

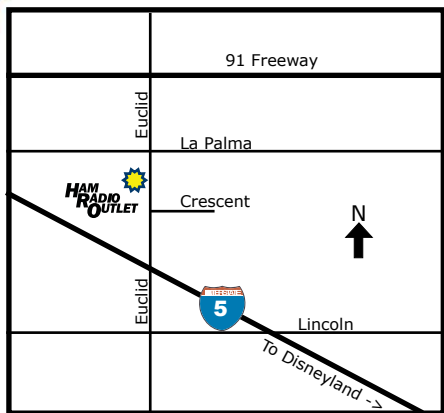
**MFJ-1836**  
MFJ-1836H legal limit model.

### 40-6 Meter Cobweb Super Heavy-Duty Antenna MFJ-1838

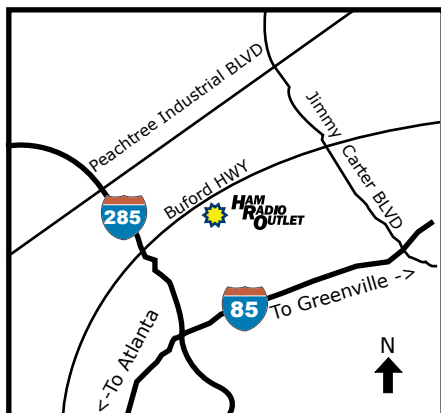


The new, super heavy-duty 40-6 meter Cobweb Antenna, MFJ-1838, is built to survive harsh northern winters, heavy snow, ice and strong winds. It has super-strong large-diameter fiberglass and heavy-duty 14 gauge stranded hard copper wire. 8-bands: 40, 30, 20, 17, 15, 12, 10, 6 Meters, 1500 watts. 12 feet, 23 lb.

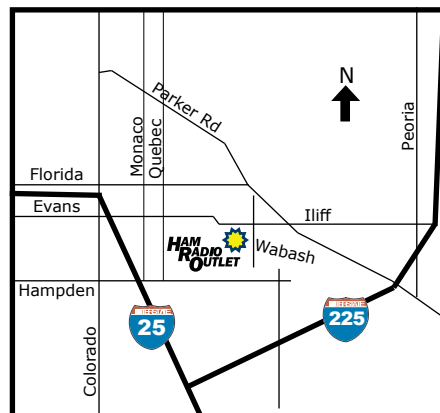




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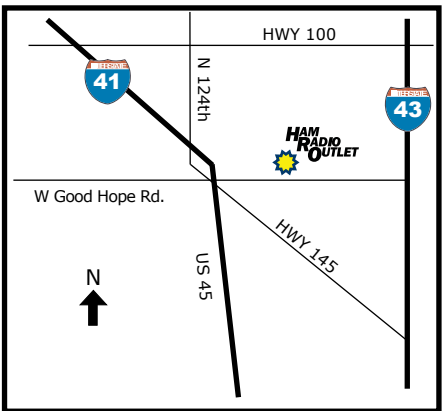
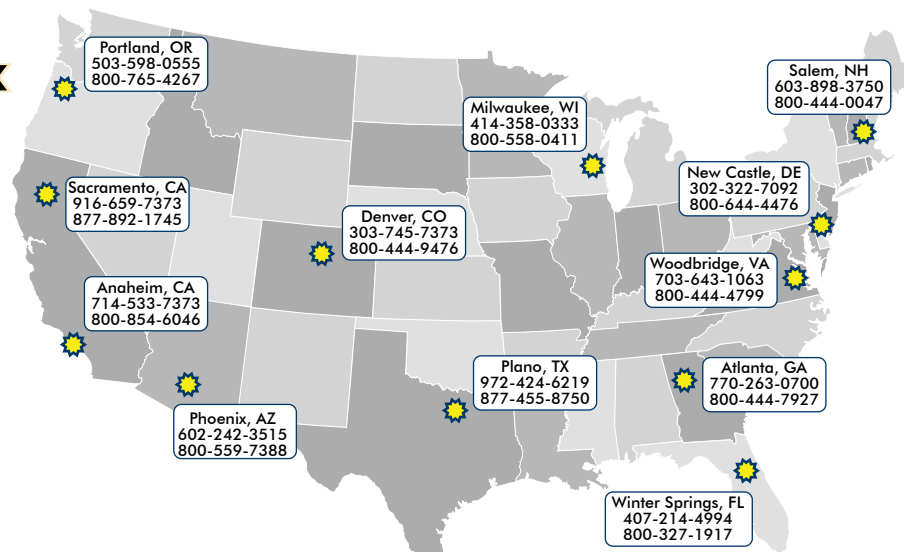


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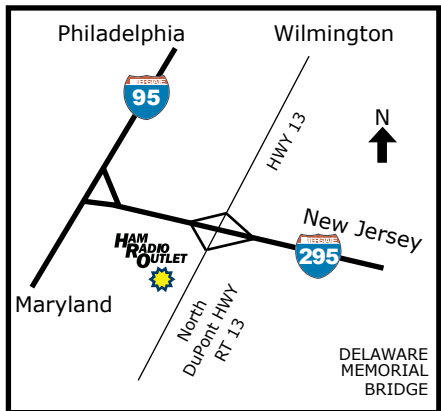


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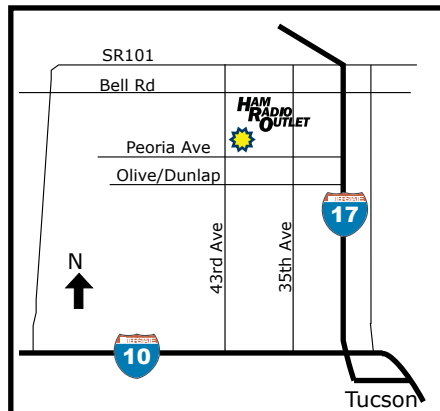
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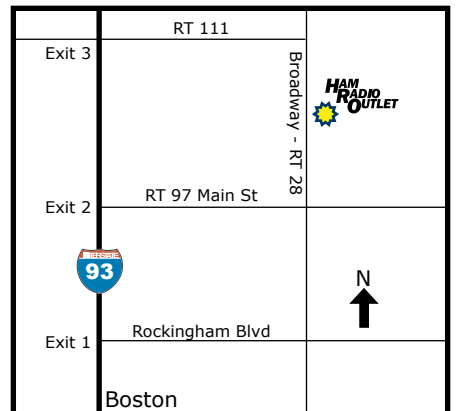
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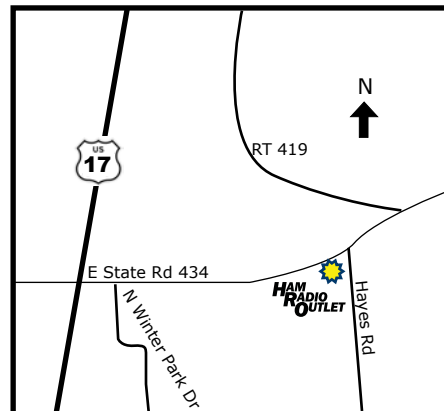
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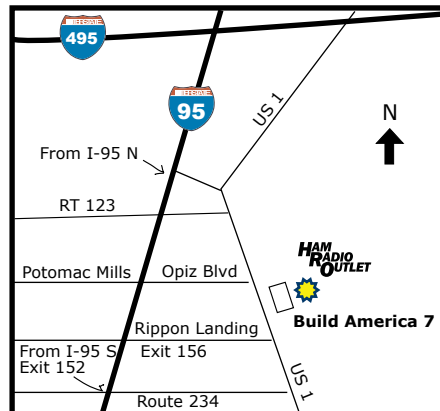
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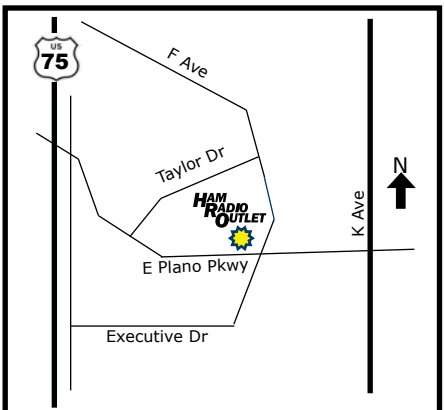
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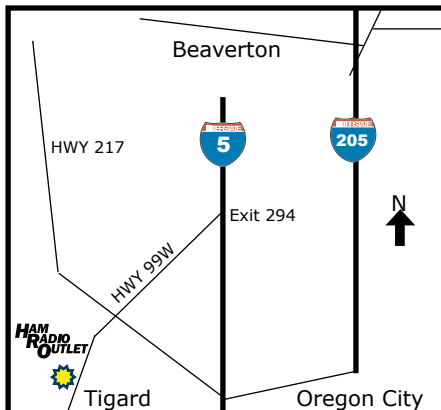
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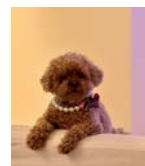
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MANUFACTURERS

12Volt Power.....	69
ABR Industries.....	73
Alinco.....	4, 5, 69, 70
Alpha Delta.....	86, 90, 94
Ameritron.....	67, 68, 75
AOR.....	31, 94
ARRL Products.....	35, 47-49
Artsci.....	47
Astron.....	69
Bioenno.....	70
Benchner.....	35
Buckmaster.....	90
Butel.....	27
Cable Xperts.....	72
CCrane.....	27
Chameleon Antenna.....	90
Coax-Seal.....	87
Coax Wrap.....	87
Comet.....	75, 94, 100-103
COMPACtenna.....	91
CQ.....	47
Create.....	94
Daiwa.....	37, 86
Davis Cable.....	73
Diamond.....	37, 69, 70, 86, 94-97
DigiRig.....	31
Farallon.....	28
Gordon West School.....	46, 48
Ham Radio Deluxe.....	29
Heil Sound.....	32-34
Hustler.....	92-93
HyGain.....	105
Icom.....	6-11, 67
JSC.....	72
Kantronics.....	29
Kenwood.....	12-13, 69
Larsen.....	98-99
LDG.....	76-77, 87
Lido.....	24
Little Tarheel.....	91
Microsat.....	29
MFJ.....	68, 103, 110-111
Mirage.....	67
Momo Beam.....	89, 103
Nifty Mini-Manuals.....	21, 24, 46-47
Opek.....	38-45, 78-85
Palstar.....	35, 37, 67, 74
Palomar.....	87-88
PolyPhaser.....	87
Prism Embroidery.....	12
Radio Today.....	46
RadioWavz Antennas.....	87, 90
Rohn.....	105
RT Systems.....	18, 21, 25
Samlex America.....	69, 71
Scanner Master.....	27, 67
SDRplay.....	14
SSB Electronics.....	67
Tarheel Antennas.....	91
Times Cable.....	72
Timewave Technology.....	30
Tunematic.....	75
Uniden.....	26
US Tower.....	106-108

Vectronics.....	75
Vibroplex.....	35-36
Yaesu.....	15-23, 69, 104
ZUMradio.....	28

PRODUCTS

Amplifiers.....	67-68, 74
Amplifiers (Pre-amp).....	67
Analyzers (Antenna).....	103
Antenna Tuners.....	7, 17, 18, 74, 77, 110
Antennas	
Bearings (thrust).....	105
Handheld.....	94, 95, 101
HF.....	88-90, 92-94, 100, 102, 104, 111
HF Mobile.....	18, 40, 91-94, 100, 104, 102
On Glass.....	99
Portable.....	18, 90, 102, 104
Repeater.....	92, 100
SWL / Scanner.....	91, 94-95, 98
VHF / UHF.....	39, 91-102
VHF / UHF Mobile.....	38, 40, 91-94, 96-102
Audio Solutions.....	32-34
Baluns / Ununs.....	76, 87-88
Batteries / Battery Packs.....	8, 12, 21, 70-71
Battery Chargers.....	8, 21, 71
Books, CDs, Magazines	
Amateur.....	21, 35, 46-49
Cables	
Audio.....	28
Cloning / Programming.....	8-9, 21
Coax.....	72-73, 80, 97, 102
Packet / Data.....	21, 28
Power.....	28, 69, 81
Rotator.....	72
Tools.....	79
Cases, Radio.....	8, 21, 27
Computer / Radio Interface.....	28, 30-31
Computer Software	
Cloning / Programming.....	18, 21, 25
Logging.....	29
Packet.....	28-30
Radio Control.....	7, 29-31
Scanner Programming.....	27
SDR Scanning.....	14
Connectors / Adapters.....	8, 9, 21, 102
Dummy Loads.....	74, 85, 97
Duplexers.....	85, 96, 101
Dust Covers.....	7, 12, 35
Headsets / Earphones.....	8-9, 21, 34
Internet / Radio Interface.....	8-9, 18, 21, 28-31
Keys / Keyers.....	35-36
Lightning / Surge Protectors.....	85-87, 97
Maps.....	48
Masts.....	93, 105, 108
Microphones (see also Headsets)	
Desk.....	7, 18, 32-33
Hand / Lapel.....	8, 21, 32
MMDVM (Digital Hotspot).....	28
Morse Code Readers / Practice.....	35-36
Mounts / Brackets	
Equipment.....	24, 27, 33, 71
Mobile Antennas.....	44, 45, 82-84, 93, 97, 98, 102
Roof Mount.....	105
Noise / Bandpass Filters.....	87

Owl.....	(Deceased)
Packet / Pactor / TNC / Digital.....	28-31
Power Panels / Outlet Strips.....	68
Power Supplies.....	12, 18, 42, 69-71, 111
Radio Control.....	7, 29, 31
Radios, Amateur	
Base.....	6-7, 10, 11, 13, 15-17
Handheld.....	5, 9, 10, 12, 22-23
Mobile.....	4-5, 8, 10, 11, 17, 19-20
Repeater.....	19
Radios, Specialty	
Scanners.....	26
Short Wave Listening.....	9, 26-27
RF Obliterator (Nuclear Powered).....	117
RFI Kit.....	88
Software Defined.....	14
Rotators.....	104-105
Solar Power.....	71
Speaker Mikes.....	8, 21
Speakers.....	6, 12, 16, 33, 74, 78
Study Aids.....	35, 46-49
Switches, Antenna.....	85, 97, 110
SWR / Wattmeters.....	37, 43, 74
Towers.....	106-108

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