ALPHA DELTA

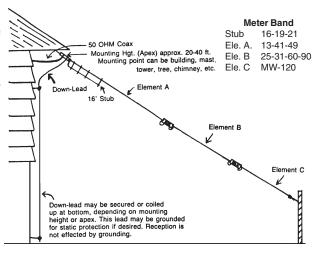
DX-SWL SLOPER

The **Alpha Delta DX-SWL** Sloper antenna offers exceptional features and performance! Hams have been using slopers for years because they offer some unique advantages not found in other antennas. Sloper (or slant) antennas require only one elevated support (25 feet or higher) while dipoles require two elevated supports. The DX-SWL Sloper offers coverage of the 90 and 120 meter bands, bands often "forgotten" by other antennas; plus medium wave too! The full-size DX-SWL covers:

Medium Wave	120 Meters	90 Meters	60 Meters
.5-1.6 MHz.	2.3-2.5 MHz.	3.2-3.5 MHz.	4.7-5.0 MHz.
49 Meters	41 Meters	31 Meters	25 Meters
5.9-6.2 MHz.	7.1-7.3 MHz.	9.5-9.9 MHz.	11.6-12 MHz.
21 Meters	19 Meters	16 Meters	13 Meters
13.6-13.8 MHz.	15.1-15.6 MHz.	17.5-17.9 MHz.	21.4-21.8 MHz.

The overall length of the slope wire is only 60 feet long. A single 50 ohm feed point (for PL259) at the apex of the antenna is provided for maximum DX reception. (User supplies their own 50 ohm coaxial lead-in). The DX-SWL is fully assembled for easy installation. It requires no adjustments or "trimming". This American made antenna has stainless steel hardware for long life and utilizes low-Q RF choke-resonators for efficient multiband frequency selection. For quality of construction, ease of erection and maximum performance, we think the Alpha-Delta DX-SWL is a great value. It is our best selling shortwave antenna.

Where less space is available, consider the **DX-SWL-S** shortened version - only 40 feet long covering the 90 through 13 meter bands.



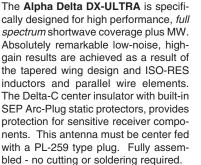
Alpha Delta DX-SWL-S (90-13m) 40 ft.

Order #2533\$117.95

See page 58 for optional preassembled lead-in cables.

LLPHA DELTA

DX ULTRA





Alpha Delta DX-Ultra (0.5-30 MHz) 80 foot Order #3377 \$158.95

Support poles shown, not included. Please see page 58 for optional preassembled coax lead-in cables.



EAVESDROPPER SWL SLOPER

The Antenna Supermarket company, famous for their **Eavesdropper** trapped dipole, also offers a sloper design antenna that covers all the major shortwave broadcast bands 120 through 11 meters plus medium wave. It requires one high support like the DX-SWL above and includes PL-259 type fitting for user supplied lead-in. 67.5 ft. long. Now includes integrated ZapTrapper™ lightning arrestor. Note: Please see page 58 for preassembled coaxial lead-in cables.

Eavesdropper SWL Sloper

Order #0013 \$114.98

Princeton Sky Wire



The **Princeton SkyWire** is a 66 foot, off center fed SWL dipole with 22 feet on one side and 44 feet on the other. It provides excellent receive performance from the AM broadcast band to 30 MHz. While its rugged construction is well suited for the harshest environments, it is equally at home indoors in an attic or overhead space. The wire may be bent, zig-zaged to accommodate limited space installations. Rope and coax cable are *not* included. **SkyWire**Order #5155

*46.95

Sky Wave

The **Princeton SkyWave** is a 50 foot long (14 gauge), end-fed shortwave listener's antenna. It features dog-bones insulators at both ends. It is fed with a 35 foot, 26 gauge plastic coated lead-in wire. It is designed to perform well on the AM band and shortwave from 3 to 30 MHz. Rope is not included. **SkyWave***34.95

HY POWER AB-SWL-SL

The new **Hy Power AB-SWL-SL** sloper will cover the 120 to 11 meter shortwave broadcast bands plus MW. With 12 gauge insulated wire and stainless hardware. This 62 foot antenna accepts either a PL-259 *or* twinlead (neither included).

AB-SWL-SL Order #5062 \$89.95

HY POWER SWL-OCF



The Hv Power SWL-OCF "Off Center Fed" antenna is an excellent general coverage antenna covering 500 kHz to 60 MHz. It is made from 136 feet of 12 gauge insulated wire for strength and longevity. The feed network is placed 45 feet from one end of the antenna. The coaxial cable for this antenna (not supplied) is coupled through an inductive matching transformer which will place your coax at DC ground provided you make a good ground connection to the shield of your coaxial cable. For best performance you should mount this antenna at least 25 feet above ground. You can bend the antenna's legs to fit your property if needed. It can be sloped from a tree down to a fence post, hung flat between two high tie points or even as an inverted vee. This antenna requires the following items which are not included: rope, lightning arrestor and coaxial lead-in cable.

SWL-OCF *Order #1496* \$99.95

Info.: 614 866-4267

Orders: 800 431-3939

www.universal-radio.com

RF systems

AA-1

The RF Systems AA-1 antenna adapter makes it possible to connect an out-



door antenna to every portable, including those that only have a whip antenna. The AA-1 is a special wideband impedance matching transformer with completely separated antenna and receiver circuits. The frequency range is 100 kHz to 30 MHz. The signal strength improvement with respect to direct connection of a piece of wire to the antenna can be as high as ten times. The signals are transferred by a magnetic field which reduces static and man-made noise. The AA-1 has an SO-239 jack at one end to accept the PL-259 from your external antenna. The output is to an alligator clip and a special plug that plugs into the earphone jack of the portable. On the other side of the AA-1 is a 0 dB to -50 dB signal level adjustment knob.

AA-1 Order #0902 \$109.95



TPA

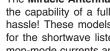


The Ameco TPA is a dual-function device. It is a sophisticated dual-gate FET preamp covering 220 kHz to 30 MHz with over 20 dB gain. And you can use the TPA as an indoor active antenna by extending the 30 inch built-in telescopic whip! Input from the external antenna and output to the receiver is RCA phono jack (coax cable to radio not suppled). The TPA runs on a 9V battery (not included) or with optional P-9T adapter.

Ameco TPA Order #1512 \$74.95 Order #0474 Ameco P9T \$9.95

The CoaxPLRCA is 3 foot RG58/U coaxial cable with an RCA phono plug and PL-259 plug. CoaxPLRCA Order #3043

Miracle Antenna MMDs



The Miracle Antenna MMDs dipoles provide all the capability of a full-sized dipole with half the hassle! These models are specifically designed for the shortwave listener. They eliminate common-mode currents and noise without the use of extra baluns. They can be installed in a dipole, sloper, vertical or inverted configuration. They can be used in a fixed or portable fashion. All models are ready-to-go with a 16 foot feed line and milspec BNC connector attached.

Model	Length	Order#	Price
MMDs18	18 Feet	#5318	\$109.95
MMDs31	31Feet	#5521	119.95
MMDs65	65 Feet	#2805	129.95

RF systems DX10 Pro

The RF Systems DX-10 Professional is an omni directional active vertical receiving antenna covering 35 kHz to 35 MHz. This unobtrusive antenna can be used indoors or outdoors so you can mount it nearly anywhere. It employs a helical element that ensures excellent sensitivity to long distance radio signals coming in at low angles. The mixed polarization reduces polarization fading. The DX-10 employs a class A, ultra linear wideband amplifier with a power dissipation of 1.6 watts. It can simultaneously handle weak and strong signals without generating spurious products. This antenna has a high 2nd order intercept point of no less than +70 dBm and a 3rd order intercept point of +40 dBm or better. The DX-10 has a leak path to ground to bleed off static and

lightning induced pulses. These protections only function when there is a proper earth ground. (The DX-10 is not protected against a direct lightning strike and cannot serve as a lightning protector). Active antennas do not need to be mounted as high as possible as long as the antenna is outside the interference field around the house. The DX-10 is 52 inches high. Includes mast clamp (mast and coax are not included). Operates from 12 VDC. Power supply not included.

DX-10 Pro Order #2868 \$459.95

RT systems

MLB BALUN

The RF Systems Magnetic Longwire Balun makes it possible to efficiently use a coaxial lead-in cable with all forms of longwires, T-forms or other

types of wire antennas, without the need for an antenna tuner. A very low loss magnetic transfer of energy from the antenna to the receiver is accomplished and static noise is reduced. Your coax is much less susceptible to interference. For receive only: 100 kHz - 40 MHz 50 ohm SO-239.

Order #1484



MLB



\$74.95

The UV resistant Ten-Tec Acro-Bat can be used to suspend either a ladder line-fed or small gauge RG-58 or RG8X coax-fed wire antennas. \$9.95 3003

Order #3720

RFsystems

The RF Systems MTA is a nonamplified vertical receiving antenna covering 500 kHz to 30 MHz. This antenna is designed for listeners who wish to monitor longwave, medium wave and shortwave, but do not have a large space for antenna. Unlike active antennas, the MTA uses passive magnetic transfer technology to deliver a good signal with low noise and complete immunity to receiver overload from nearby transmitters. The MTA provides broadband performance, vet does not require an antenna tuner, need radials or suffer from intermodulation products. The earthed antenna element together with the Magnetic Transfer technology ensures a lower background noise level, and most communications receivers offer enough sensitivity to compensate. The MTA antenna consists of a weatherproof plastic pipe, 1.5 inches in diameter and 7 feet long. The SO-239 connector in the metal base is sealed. The antenna offers little wind-resistance so the MTA, GMDSS and GMDSS-2 are sturdy enough to withstand near hurricane force conditions.

MTA

Order #3368

\$269.95

GMDSS

The RF Systems GMDSS is the same size as the MTA, but has different frequency coverage of 100 kHz to 25 MHz and is optimized for Global Marine Distress & Safety System frequencies including the long wave NAVTEX frequencies.

GMDSS

Order #4118

GMDSS-2

The RF Systems GMDSS-2 is designed in a similar fashion to the MTA and GMDSS, but has different frequency coverage and is shorter. The GMDSS-2 receives 500 kHz to 18 MHz. It is suggested for those who do not want such a tall antenna as the GMDSS or MTA. (Reception of 100-500 kHz is possible with reduced performance). The GMDSS-2 is only 4.1 feet high.

GMDSS-2

Order #2305

\$249.95

The optional AK-1 Mounting Kit provides for easy attachment of the MTA, GMDSS or GMDSS-2 to a vertical or horizontal pole. This kit includes a special bracket and 4 U bolts. Two U bolts attach to your mast, and the other two "U" bolts attach to the bottom portion of the antenna. AK-1 Order #2643



54.95

Qik Zepp

SWL-OCF1

The Qikzepp SWL-OCF1 is a 65 foot, off center fed SWL dipole with 10 feet on one side and 55 feet on the other and may be configured horizontally or as a sloping antenna. The isolation transformer provides Galvanic isolation and also converts the un-balanced signal of the antenna to a balanced signal for transport over coaxial cable. Order #1899 SWL-OCF1 \$62.95

> Info.: 614 866-4267 Orders: 800 431-3939 www.universal-radio.com



EAVESDROPPER DIPOLES

The Eavesdropper trapped dipole antenna is designed specifically for the shortwave broadcast listener. The Eavesdropper utilizes eight weather-sealed antenna traps so that it performs as though it were a number of separate antennas. Each trap is hand assembled and individually resonated to its proper design frequency. The Eavesdropper is fed at the center with 72 ohm balanced feedline (100 feet provided). The impedance to the receiver is 50-75 ohms balanced. Installing the Eavesdropper is simple ... merely unwind the elements and feedline, and suspend between two supports with the nylon rope provided. No cutting, measuring or soldering is required! Although the Eavesdropper is weatherized for outdoor use, it may be strung in an attic. The antenna utilizes heavy 14 gauge wire for maximum strength. The overall length is less than 43 feet. The Eavesdropper covers these major shortwave bands:

Rope (supplied)

60 Meters (4.75-5.06 MHz.)

49 Meters (5.95- 6.20 MHz.)

41 Meters (7.10-7.30 MHz.)

31 Meters (9.50-9.78 MHz.)

25 Meters (11.70-11.98 MHz.)

19 Meters (15.10-15.45 MHz.)

16 Meters (17.70-17.90 MHz.)

13 Meters (21.45-21.75 MHz.)

11 Meters (25.60-26.10 MHz.)

Lead-in (supplied with twin-lead model only)

The Eavesdropper is covered by a one year limited factory warranty. Made in the U.S.A. The Eavesdropper-C is identical to the regular Eavesdropper except that it includes a coax fitting (SO-239) and it does NOT include a lead-in cable. The user must provide their own coax lead-in with PL259 plug (such as RG-8/X coax cables as shown on page 58). Both models include an integrated lightning arrestor.

Eavesdropper Antenna With Arrestor \$104.98

(Twinlead Type) Order #0680

Eavesdropper-C Antenna With Arrestor

(Coax Type) Order #2864 \$109.98

EF-SWL



The Par EF-SWL is an end-fed short wave antenna optimally designed for 1-30 MHz reception. The radiator is 45 feet of genuine #1 gauge black polyethylene coated Flex-Weave wire. This material is very strong yet can easily be coiled like a rope for portable work. The UV resistant matchbox houses a wideband 9:1 transformer wound on a binocular core. Unlike other transformers, external stainless studs on the matchbox allow the user to configure the primary and secondary grounds for best noise reduction at their particular location. Output is via a silver/teflon SO239 UHF connector. The radiator also attaches via a stainless stud allowing it to be removed, or replaced with a different length radiator for experimental purposes. The newly redesigned snag-proof insulators are very strong. The included manual shows typical radiation patterns for selected frequencies throughout the HF spectrum. For receive only.

Par EF-SWL Order #2205 \$72.95

ITO ELECTRONICS INC: **KA35**

The Kaito KA35 is an active shortmedium wave. wave bar antenna that covers 100 kHz to 30 MHz. It features a telescopic whip element which is interchangeable with a Ferrite element that provides a degree of directionality. This an-



tenna has a built-in fixed battery. This battery is rechargeable via the built-in solar cell, the supplied AC adapter or via a computer USB cable. Output is to a junction cable that, in turn, has output to a 3.5mm mini plug. (Please note the BNC jack is strictly to the junction cable). This antenna is designed for indoor use only.

Kaito KA35 Order #0000 Discontinued

KA33

The Kaito KA33 is an active shortwave, wire loop antenna that covers AM plus shortwave 3.9 to 22 MHz. The KA31 has dual outputs. If your portable short-



wave radio has an 1/8 inch mini antenna jack you can plug this antenna directly in. For shortwave radios without an antenna jack, you also get simple clips for direct connection to the radio's telescopic whip antenna. The control box has an LED to remind you when the antenna is turned on. There is a Tuning Knob on the control box that should be adjusted as you change frequency. This antenna is designed for indoor use only and requires two AAA cells (not provided).

Order #3670 \$36.95 Kaito KA33

ANG

ANT-60

The Sangean ANT-60 portable "roll-up"(shortwave antenna will



improve the reception of any portable worldband receiver. The antenna wire may be extended up to 23 feet. The ANT-60 terminates with a mini-plug (3.5 mm). If your receiver does not have a mini external antenna jack, an adapter plug is provided to clip the ANT-60 to your radio's whip.

Order #3184

SEALANT

\$12.95

\$2.99

Use Coax-Seal® to protect any outdoor connection or connector. Coax-Seal is su-

\$29.95

\$1.50



perior to electrical tape or vinyl sealant for moisture protection. The 104 consumer box features one roll which is 60 inches long and ½ inch wide. It will protect 9 connectors.

Coax-Seal 104 Order #1194

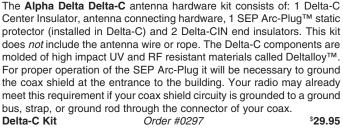
The 105 commercial box features four rolls, each of which is 12 feet long and 1/2 inch wide.

Coax-Seal 105 *Order #4960* \$19.95

The 106 commercial box features four rolls, each of which is 12 feet long and 1 inch wide.

Coax-Seal 106 Order #4961 \$24.95

DELTA-C



The **Delta-CIN** end insulators are also sold individually.

Delta-CIN Order #2420

Universal Radio 6830 Americana Pkwy. Reynoldsburg, Ohio 43068

Info.: 614 866-4267 Orders: 800 431-3939 www.universal-radio.com

Quality Equipment Since 1942 Page 44





MFJ-1020C



The MFJ-1020C indoor active antenna offers good performance from an very compact package. This antenna system can be set directly on your desk and covers 300 kHz to 30 MHz in five bands. With built-in 20 inch (50 cm) telescopic antenna. An auxiliary antenna jack is provided. When it is used the MFJ-1020C functions as a preselector. Front controls include gain, band select, tune and On/Bypass. A red LED indicates power ON. The input jack and output jack are both SO-239 type (to accept PL259). Black metal case 6.4 x 2.5 x 3.3 inches. Requires a 9 volt battery or a 12 VDC power supply such as the MFJ-1312D.

MFJ-1020C Order #1413 \$89.95 MFJ-1312D Order #2433 \$15.95



LA30



The Palstar LA30 ferrite loopstick antenna is designed for the avid longwave, medium wave, and Tropical

Band shortwave listener. A hi-Q preselector eliminates interference from powerful nearby stations. A +15 dB preamplifier pulls in weak stations, while a 15 dB attenuator prevents overload. The LA30 includes the medium wave element. The long wave (110-550 kHz) and tropical (1480-7500 kHz) elements are available as options. A switch on the rear panel can select either AC wall transformer input or a 12VDC internal AA battery pack (AA cells not supplied).

LA-30 Order #5221 \$324.95

Long wave Ele. *Order #1369* \$59.95 Tropical Ele. *Order #1368* \$59.95



The **Palstar AA-30** indoor active antenna covers from 300 kHz to 30 MHz. There is a bypass switch if you wish to use this device as an antenna tuner with an external antenna. Tuned input reduces interferences and noise. Adjustments for gain, peak and band selection. SO-239 jacks for input and output. Requires a 9 volt battery or external 12 VDC power supply. 1.75 x 5.5 x 5 inches 1 Lb. **Palstar AA-30** *Order #1492* \$129.95

Lightning surge protectors are recommended for outdoor antennas. Please see page 51.



The **MFJ-1024** is a sensitive outdoor active antenna covering 50 kHz to 30 MHz. The outdoor unit consists of a 54" telescopic whip & amplifier module (3 x 4 x 4 inches). It is connected to the indoor control unit (6 x 2 x 5 inches) by a supplied 50 foot RG-58 coaxial cable. The control unit features a 20 dB attenuator and a gain control to prevent receiver overload. A built-in receiver switch selects between two receivers and an antenna switch selects an auxiliary antenna. A red LED indicates power-on. The auxiliary input and output jacks are RCA phono type. Requires 12 VDC power supply such as the MFJ-1312D. **MFJ-1024** *Order #1132* \$144.95

MFJ-1024 Order #1132 MFJ-1312D Order #2433

rder #2433 \$15.95



MFJ-1022

The compact MFJ-1022 wideband indoor active antenna boasts coverage from 300 kHz



to 200 MHz. It includes a detachable 20 inch antenna. The output jack is an SO-239. A red LED is on the front panel to remind you that the antenna is on. This device requires a 9 volt battery (not supplied) or a 9-18 VDC external power supply, such as the MFJ-1312D.

MFJ-1022 Order #3109 \$64.95 MFJ-1312D Order #2433 \$15.95



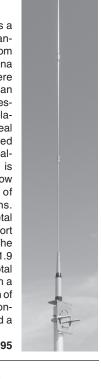
The **RF systems T2FD** tilted terminated folded dipole covers 3 to 35 MHz with only 45 feet of length. It is designed to provide much lower background noise than similar antennas. This passive antenna is assembled and ready to install. The T2FD has an SO-239 jack to accept a PL-259 plug. The lead-in is not provided.

D Order #0562 \$399.95

ApexRadio 303WA-2

The Apex Radio 303WA-2 is a quality passive receiving antenna providing coverage from 30 kHz to 30 MHz. The antenna is designed for areas where space is a problem or when an unobtrusive installation is essential. The small size and relatively lightweight design is ideal for installation in a confined space such as apartment balcony. Since the 303WA-2 is passive it provides superior low noise performance, free of cross and inter-modulations. The 303WA has a "U" bolt metal fitting that will require a short stub mast (not supplied). The mast diameter can be 0.4 to 1.9 inches. The antenna has a total height of 6 feet. It comes with a pre-assembled 30 foot length of cable with a PL259 plug to connect to the antenna base and a BNC plug for your radio.

Order #1026 \$119.95



ApexRadio 700DTA

The Apex Radio 700DTA is a compact active antenna that employs a Hi-Q manual tuning circuit plus a high gain amplifier providing 20dB gain from 500 kHz to 30 MHz in four bands: 0.5-1.6, 4-10, 7-20 and 12-30 MHz. The supplied telescopic antenna (6-23 inch) plugs into a BNC jack on top of the unit. Output to the receiver a



BNC jack. Supplied with a 10 foot BNC to BNC cable. Operation is from a 9 volt battery (supplied).

700DTA Order #3872 \$169.95

RADIOMASTER P-30

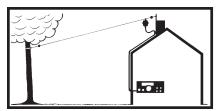


The RadioMaster P-30 is an unobtrusive 15 foot passive wideband, indoor/outdoor long wave, medium wave, shortwave wire antenna. It features a built-in matching transformer that ensures 50 ohm impedance so no antenna tuner is required. This omnidirectional antenna is very low noise. The P-30 features a 15 foot RG-174 coaxial lead-in that is part of the antenna system. It terminates in a PL-259. This antenna and lead-in are completely preassembled. A short length of white nylon cord is supplied for stringing if needed. Radiom. P-30 Order #1331

Universal Radio 6830 Americana Pkwy. Reynoldsburg, Ohio 43068 Info.: 614 866-4267 Orders: 800 431-3939 www.universal-radio.com

Shortwave Antennas

RF systems MLB-MK1/MK2



This may look like a conventional wire antenna kit at first glance, but it is much more. It consists of a heavy duty 41 foot wire, nylon rope and a quality insulator. At the feed-line end the antenna is terminated with the RF Systems' patented Magnetic Longwire Balun. This balun permits an exceptionally low loss transference of antenna energy to your coax feed line. The result is significantly reduced static noise on long, medium wave and the tropical shortwave bands (60 & 90 meters). We have tested this antenna at Universal and we are impressed. It is for receive only covering 0.1 -40 MHz. Requires 50 ohm lead-in cable not included (except MK3 and MK4 which include 49 foot coax).

MLB-MK1 Order #1465 \$129.95

66 ft. version (.1-30 MHz) for improved LW & MW. Order #0883 \$149.95 MLB-MK2

The MK3 is a stainless steel version of the MK1. MLB-MK3 Order #4067 \$269.95

The MK4 is a stainless steel version of the MK2. MLB-MK4 Order #4068 \$319.95

MLB MARINE BALUN KIT

The RF Systems MLB Marine balun kit is designed to attach to an isolated stay or length of wire (18 to 90 feet) on a sail-



boat. The balun system consists of a 3.5" inch stainless steel cylinder attached to 45 ft of RG-58 coax cable to PL259 (cable may be shortened) This will result in an efficient, self matching antenna system for receive only in the range of 100 kHz to 30 MHz. The MLB Marine is completely waterproof. Please ask for a free specification sheet. **MLB Marine** Order #1511 \$169.95

EMF



RF Systems' EMF Electro-Magnetic Field passive wire antenna is complete and ready to go covering .1-30 MHz. Only 16 ft long and with 16 feet (5 m) of coax and PL-259. Made in Holland. **EMF** Order #0743 \$169.95

RF systems MINI-WINDOM RING DIPOLE INSULATOR



RF Systems Mini-Windom is a low cost passive broadband wire receiving antenna that can be used indoors or outdoors. It receives in an omnidirectional fashion from .5 to 30 MHz. It uses magnetic transfer technology to reduce interference from computers and other man-made noise sources. Only 16 feet (5 m) long and with 16 feet (5 m) of coax and PL-259. Made in Holland.

Mini-Windom Order #3575



SA7000

The AOR SA7000 super wide range receiving antenna covers from 30 kHz to 2 GHz. This 6 foot (1.82 m) passive antenna has two vertical elements with built-in duplexer. It includes 50 feet of RG-58 coax lead-in to a BNC plug. The SA7000 is a strong choice for the AOR AR5001D, AR8200 or Order #3755 \$279.95 AR8600.



LA400

The AOR LA400 is a wide range receiving antenna covering 10 kHz to 500 MHz. There are four selectable band ranges from 150 kHz to 30 MHz that allow manual tuning (fixed operation for



from 10-149 kHz and 30-500 MHz). Exceptional 20dB gain is realized, thanks to a built-in low noise amplifier. This indoor antenna works effectively against local noise from electrical devices such as televisions, PCs, fluorescent lightening, dimmers, etc. This supplied loop element has a 1 foot diameter. Unlike previous amplified indoor loop antennas, the band switching and fine tuning controls are not tied to the loop element. With these controls now on the control box and by using the optional LA400-RCK (#4695 \$88.95) 32 foot extension cables it is possible to tune the antenna while the loop element is setup at the best location possible. Output is a BNC jack. A 3.3 foot BNC to BNC patch cable is provided. Operates from 12 VDC or via supplied AC wall adapter. List \$575.00. Order #5051 **LA400** \$519.95



Constructing a dipole is easy with the HQ-1 center insulator. Attach each "arm" of your dipole to this device and then screw your PL-259 into the center! You get easy assembly, the best connection, the strongest support and the most weatherproof fit. Budwig HQ-1 Order #1782

END INSULATOR



The Budwig HQ-2 end insulator is made of ABS copolymer, 35% glass filled. It is UV resistant and weatherproof. Each

HQ-2 is approximately 2 inches long. The distance from center hole to center hole is 1.25 inches. Sold in a package of two (2). ½ oz each. Budwig HQ-2 Order #3412

ECONOMY INSULATOR



This economy wire insulator is 1.8 inches long black and has a wire snap on one side. 0.65 oz. C-150 Order #4818 \$ 49

END INSULATOR



These popular "dog-bone" end-insulators are made of a strong plastic with high dielectric qualities, for excellent strength and excellent weatherability. 3 inches 1 oz. Sold separately in 3 colors.

JTGDOG Grav JTBDOG Black JTWDOG White Order #5269

\$.79 Order #5268 \$.79 Order #5267 \$.79

CENTER INSULATOR

Constructing a dipole is easy with these center insulators. Attach each "arm" of your dipole to this device and then screw your PL-259 into the center! Power rating is 2000



watts RMS. Now also compatible with ladder line. Sold separately in four colors.

JTCE1B Grav Order #5527 JTCE1W White Order #5526 JTCE1BK Black Order #5524 Order #5528 JTCE1B Green

\$14.95

\$14.95

\$14.95

\$14.95