Improve VHF/UHF Performance with the

IsoPole™ Antennas

Outstanding mechanical and electronic design makes the IsoPole the only logical choice for a VHF base station, especially for Packet operation. All Isopole antennas yield the maxium gain attainable for their respective lengths and a maximum signal on the horizon. Exceptional decoupling from the feed line results in simple tuning and a significant reduction in TVI potential. The Isopole also significantly reduces the potential for computer RF hash pickup on the coax outside shield surface. The IsoPole antennas are all impedance matched in the factory so no field tuning is required.

The Isopoles have the broadest frequency coverage of any comparable VHF base station antenna. This means no loss of power output from one end of the band to the other, when used with SWR protected solid state tranceivers. Typical SWR is 1.4 to 1 or better across the entire band. A standard 50 Ohm SO-239 connector is recessed within the base sleeve (fully weather protected). With the IsoPole you will not experience aggravating deviation in SWR with changes in weather. The impedance matching network is weather sealed and designed for maximum legal power. The aerodynamic cones are the only appreciable wind load and are attached directly to the support (a standard TV mast which is not supplied).

ISO 144
ISO 220

ISO 440

Specifications

MODEL	144	220	440
Freq. Coverage (Mhz)	135-160	210-230	415-465
Impedance	50 Ohm	50 Ohm	50 Ohm
2.1 VSWR bandwidth	>12Mhz @ 146Mhz	>15Mhz @ 220Mhz	>22Mhz @ 435Mhz
Power Rating	1 kw	1 kw	1 kw
Gain* (actual measurement)	3 dbd	3 dbd	3 dbd
Radiating Element Length	125.5" (3.2m)	79.25" (2m)	46" (1.2m)
Wind Area	< 1 sq. ft.	< .75 sq. ft.	< .20 sq. ft.
Maximum Mast OD	1¼" (32mm)	1¼" (32mm)	1¼" (32mm)
Minimum Mast Length**	8 ft. (2.4m)	5½ ft. (1.6m)	6" (150mm)
Shipping Weight	5lbs.	4 lbs.	2.5 lbs.
Coax Connector	PL 259	PL 259	Type N
Amateur Net Price	$49.95	$49.95	$69.95

*dbd — db gain over a dipole in free space
**mast not included

antennas

IsoPole™

The IsoPole™ is available in 144, 220, or 440 MHz versions, each yielding the maximum gain attainable for their respective lengths as well as zero-degree angle of radiation.

Superior decoupling results in simple tuning and a significant reduction in TVI potential. There is less feedline pick-up of any computer hash noise with the IsoPole than with any equivalent antenna.

Cones offer greater efficiency over obsolete radials which radiate in the horizontal plane. Additionally, the IsoPole offers broad frequency coverage. There is no loss of power output from one end of the band to the other. When used with SWR-protected solid-state transceivers, you experience a typical SWR of 1.4:1 or better across the entire band. VHF versions include a 50 ohm SO-239 connector recessed within the base sleeve for full weather protection.

An impedance matching network designed for maximum legal power. It compensates for the impedance introduced by the SO-239 connector used in the VHF models.

The IsoPole offers superb strength to withstand the harshest environments. The insulating material offers excellent strength and dielectric properties plus superb long-term ultraviolet resistance. The mounting hardware is stainless steel and the decoupling cone and radiating element are made of corrosion-resistant aluminum alloys. The aerodynamic cones are the only appreciable windload and attach directly to your TV mast.

Specifications for the IsoPole

Model*:	Iso-144	Iso-220	Iso-440
Frequency coverage	135-160 MHz	210-230 MHz	415-465 MHz
Impedance	50 ohms	50 ohms	50 ohms
Nominal power rating	1.0 KW	1.0 KW	1.0 KW
2:1 VSWR bandwidth	10 MHz @ 146 MHz	15 MHz @ 220 MHz	22 MHz @ 435 MHz
Length	125.5" (3.2m)	79.25" (2m)	46" (1.2m)
Min. mast length**	8' (2.4m)	5.25' (1.6m)	6" (50mm)
Coax connector	SO-239	SO-239	Type N
Gain (on horizon)	3 dBc	3 dBd	3 dBd

* Aircraft band and commercial versions also available
** Mast not included.

The Maximum Gain Antenna with Patented Cone Decoupling

HotRods

Get extended range and maximum gain with these high-performance telescoping handheld half-wave antennas. HotRods achieve higher gain than any 5/8 wave, two-meter telescopic antenna for handhelds.

The HR-1 is 20% shorter and lighter than a 5/8 wave antenna, which places less stress on your handheld's connector and case. It can handle over 25 watts of power, making it an ideal portable base or mobile antenna. Collapsed, the HotRods perform electrically like helical quarter-wave flexible antennas.

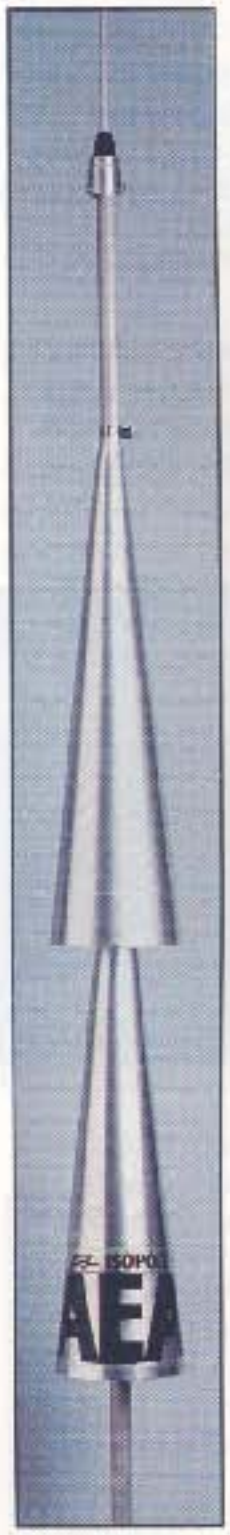
Two versions available: the HR-1 half-wave 2M, and the HR-2 half-wave 220 MHz.

Maximum Gain Antennas

Over 70,000 AEA IsoPoles have been sold to amateur radio operators around the world. The IsoPole is available in 144, 220, or 440 MHz versions, each yielding the maximum gain attainable for their respective lengths as well as zero-degree angle of radiation. The IsoPoles have the broadest frequency coverage of any comparable VHF base station antenna. IsoPoles give you unmatched performance in the VHF/UHF bands.

IsoPole™

High Performance for VHF/UHF Base Stations

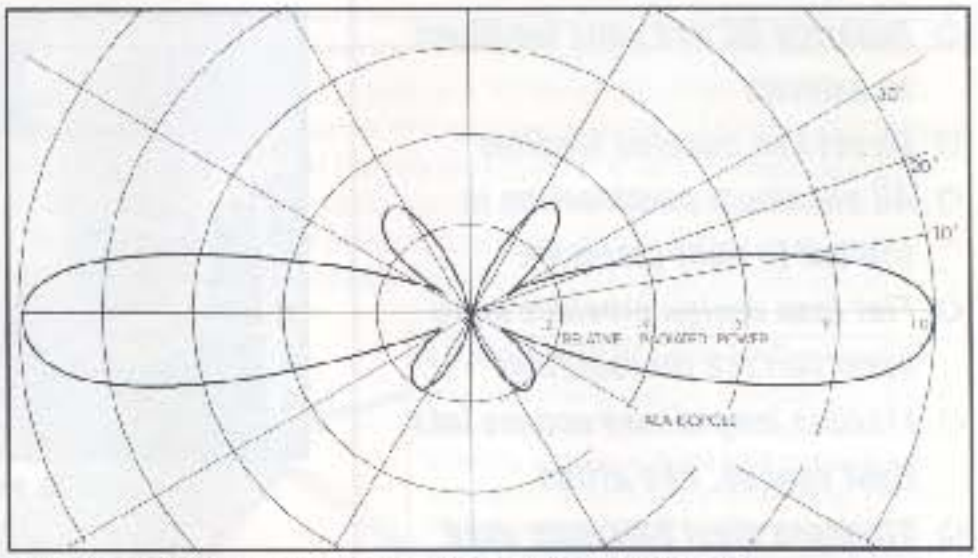


Innovative Design

The IsoPole is a gain-type omnidirectional vertical antenna with excellent decoupling, capable of accepting full legal power, impedance matched at the factory for complete coverage of respective amateur bands, with input coaxial connectors and matching section protected from the weather, all at an attractively low price. The mechanical advantages, combined with certain electrical properties of non-cylindrical sleeves, have led AEA to seek patent protection for this design.

Superior Decoupling

The IsoPole is designed so that the mounting structure and coax will not become inadvertent parts of the antenna. This is called decoupling and many antennas on the market today fail to decouple, thus ruining the radiation pattern of those antennas and making them as ineffective as a dummy load. The IsoPole's superior decoupling results in simple tuning and a significant reduction in TVI potential. There is less feedline pick up of noise with the IsoPole than any equivalent antenna.



Typical power pattern for the Iso-144, Iso-220, and Iso-440.

Greater Efficiency

Cones offer greater efficiency over radials which radiate in the horizontal plane. Additionally, the IsoPole offers broad frequency coverage. There is no loss of power output from one end of the band to the other. Typical SWR of 1.4:1 or better across the entire band. VHF versions include a 50 ohm SO-239 connector recessed within the base sleeve for full weather protection.

Maximum Power

The impedance matching network is designed for maximum legal power. It compensates for the impedance introduced by the SO-239 connector used in VHF models.

Withstands Harsh Conditions

The insulating material offers excellent strength and dielectric properties, plus long-term ultraviolet resistance. The mounting hardware is stainless steel and the decoupling cone and radiating elements are made of corrosion-resistant aluminum alloys.

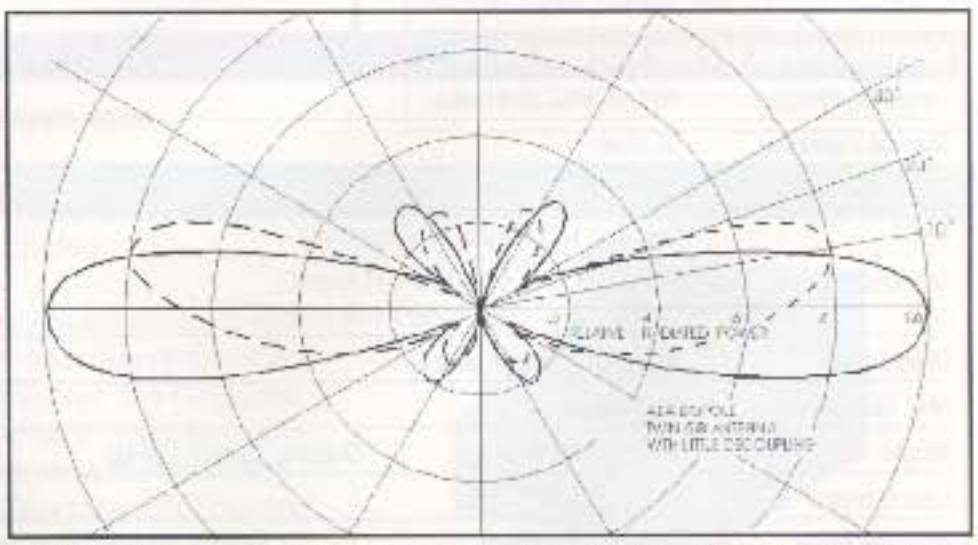
Simple Installation

The IsoPole antennas are all impedance matched in the factory so no field tuning is required. Instead of the typical 25-40 screws, the IsoPole has no more than 5 stainless steel screws to fasten, thereby significantly decreasing the time necessary for assembly and reducing the chance for errors.

Specifications for the IsoPole

Model*:	Iso-144	Iso-220	Iso-440
Frequency coverage	135-160 MHz	210-230 MHz	415-465 MHz
Impedance	50 ohms	50 ohms	50 ohms
Nominal power rating	1.0 KW	1.0 KW	1.0 KW
2:1 VSWR bandwidth	10 MHz @ 146 MHz	15 MHz @ 220 MHz	22 MHz @ 435 MHz
Length	125.5" (3.2m)	79.25" (2m)	46" (1.2m)
Min. mast length**	8' (2.4m)	5.25' (1.6m)	5' (50mm)
Coax connector	SO-239	SO-239	Type-N
Gain (on horizon)	3 dBd	3 dBd	3 dBd

*Aircraft band and commercial versions also available. **Mast not included.



Typical power pattern for the Iso-144, Iso-220, and Iso-440 compared to a twin 5/8 antenna with little decoupling.