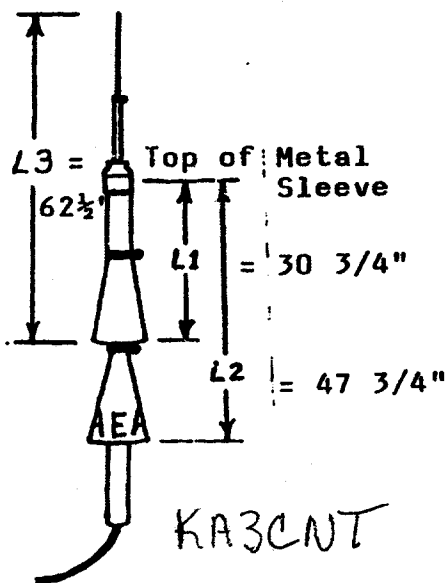


AEA ISOPOLE™ 220 ANTENNA

ASSEMBLY INSTRUCTION SHEET



The AEA ISOPOLE Antennas represent a breakthrough in vertical VHF base station antenna design. The IsoPoles offer superior decoupling in a predictable radiation pattern and the MAXIMUM GAIN POSSIBLE FOR THE LENGTH OF THE ANTENNA. The mechanical construction offers a rugged design which will withstand the harshest weather.

Each IsoPole is factory tuned and only requires adjustment of the element lengths in the field.

The IsoPole antennas were designed to mount on a low cost, standard $1\frac{1}{2}$ inch TV mast, available at most local hardware stores, TV shops, or electronics stores (including Radio Shack). Any mast with an inside diameter of at least 0.75 inches (to pass PL-259 connector) and no more than 1.275 inch outside diameter will be suitable. The maximum mast length is unlimited so far as the IsoPole is concerned, but should be no longer than good engineering practice dictates for the strength of the material used. (The 10 foot Rohn heavy duty galvanized steel mast is an excellent choice.) The minimum length of mast is approximately 5 feet for the IsoPole 220.

1. Slide the lower cone (the one with a decal) over the top of the mast and loosely secure with one of the large hose clamps about four feet from the top of the mast.
2. Similarly, slide the upper cone over the top of the mast and loosely secure with the other large hose clamp just above the lower cone.
3. Pass the feedline (with a PL-259 coax connector attached) through the mast and attach to the recessed connector in the base of the upper element section. It is recommended that RG-8 or RG-8X be used if the length of the coax is more than about 20 feet.
4. Place the base sleeve of the upper element over the top of the mast and secure symmetrically in place by tightening the three set screws.
5. Slide the lower cone into position so that the lower edge is $47 \frac{3}{4}$ inches below the top of the metal sleeve.
6. If the mast is painted, scrape the paint off from the area where the top of the cone makes contact with the mast. Apply silicon grease or Vaseline™ type petroleum jelly over the scrapped area of the mast to prevent possible corrosion.
7. Secure the lower cone tightly in position with the large hose clamp.

8. In like manner to steps 5, 6, 7, secure the upper cone on the mast in a position such that the lower rim of the cone is 30 3/4 inches below the top of the mast.
9. Insert the tip rod into the upper element tube and adjust the upper element length to 30 3/4 inches above the top of the metal base sleeve. Use silicon grease or petroleum jelly in the joint of the upper element section for additional weather sealing. Secure the joint with the small stainless steel hose clamp provided.

NOTE: The IsoPole is a broad band antenna and is easy to tune simply by following the dimensioning instructions above. However, if an SWR bridge is available and it is desired to tune the IsoPole exactly to a given frequency, it is possible (but not necessary) to do so. Simply extend L3 (by extending the upper element and upper cone equally) to decrease the resonant frequency and decrease L3 for increasing the resonant frequency. Move the lower cone a distance equal to that which the upper cone was moved.

WARNING: The antenna should be mounted so as to clear surrounding objects as much as possible while a high location is most desirable. Be sure to mount the antenna so it will neither touch nor be able to fall into near by power wiring.

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