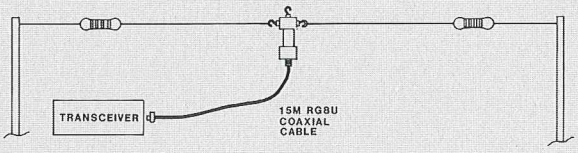
TRANSWORLD AD1-4

CENTER FED DIPOLE ANTENNAS. 2-30MHz



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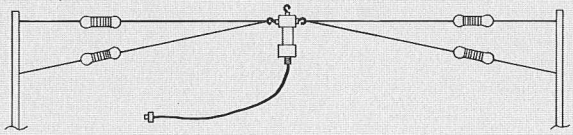

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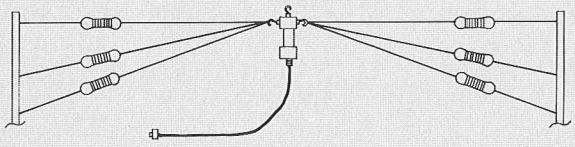

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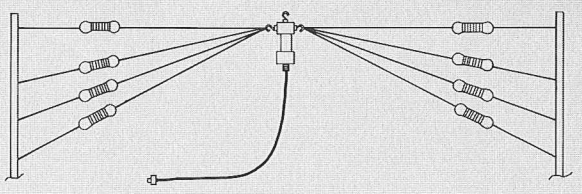
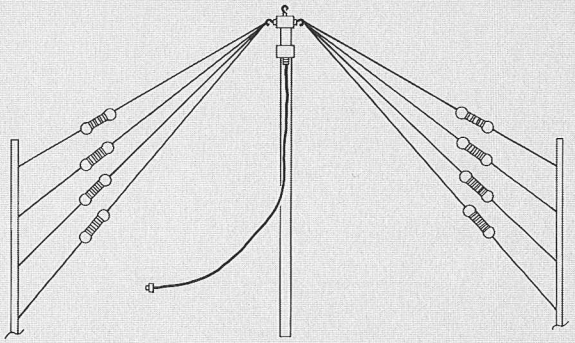


AD4



AD4 "Inverted Vee" Construction

The TRANSWORLD AD1-4 Center Fed Dipole Antennas are designed for operation on 1-4 channels in the frequency range 2-30MHz. The antennas are designed for use without antenna tuners and provide efficient operation at power levels up to 2KW PEP or 1KW average. The AD4 antennas use 1-4 different antennas using a common feedpoint and require only one coaxial connection to the transceiver. Each dipole has a bandwidth of approximately ±2% of the center frequency so that the transceiver may be operated on several different frequencies in up to 4 frequency bands. The antennas may be erected as a "flat top" or as an "inverted VEE." The antennas consist of low loss ribbed insulators at the end of each copper-weld dipole element, a center balun proving a 50 ohm unbalanced (coaxial cable) to a 50 ohm balanced match, and 15 meters (50 ft.) of RG8U type coaxial cable with PL259 UHF connectors.

Although multiple dipoles, with a common feedpoint, provide a simple and very efficient antenna system, there is often considerable interaction between the different dipole elements. It is difficult to predict this interaction which will vary widely from one installation to another. This has necessitated a time consuming, difficult tuning procedure and systems with more than 2 dipoles are usually not considered practical. Transworld has developed a simple tuning procedure using a signal generator and the broadband amplifier in their SSB transceivers. The antenna is erected, one set of measurements is made, the element lengths are then corrected according to a simple formula and the installation is complete. Full directions on this tuning procedure are supplied with each antenna.

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