YAESU YA-30 BROADBAND HF ANTENNA

The YA-30 broadband dipole antenna is designed to provide optimum performance over a wide frequency range. The usual requirements for multiple antennas or an antenna tuner between the transceiver and antenna are eliminated by the unique broadband design.

Specifications

Frequency range:	1.6 - 30 MHz
Power rating:	SSB: 150 watts PEP, AM, FM, Data: 75 watts (TX 5 minutes (max.): RX 25 minutes)
Input impedance:	50 ohms
VSWR (typical):	2:1 from 1.6-18 MHz, 3:1 above 18 MHz
Length:	25 meters (83 feet)
Antenna wire material:	Stainless Steel (SUS304)
Coaxial feedline:	30 meters (100 feet), supplied with PL-259 plug

Assembing of the YA-30

1. Refer to Figure 1 below, remove the Tie Bands, lift the insulators on the both ends of the antenna wire and carefully unroll the antenna wire.
2. Install the six spacers to the antenna wire as illustrated in Figure 2 below.
3. Connect the supplied antenna cable to the balun, and then wrap the connection with sealing tape (not supplied) to protect it against moisture ingress.

Installation of the YA-30

Refer to the drawings on the opposite side of this sheet for suggested installations. For best performance, the antenna should be installed with the radiating elements in a horizontal ("Flat Top") configuration, and as high as possible. Theoretically, the directions of maximum radiation and reception are at right angles to the radiating elements, and this should be considered when planning installation. However, this radiation pattern is based on an ideal antenna in free space, and may be considerably different in a practical situation near the ground and adjacent to other structures and power lines: some experimentation with mounting and orientation can significantly improve performance. Proximity of ground and nearby structures may also affect the feedpoint impedance of the antenna, so rearrangement of the antenna could be required to achieve a good VSWR.

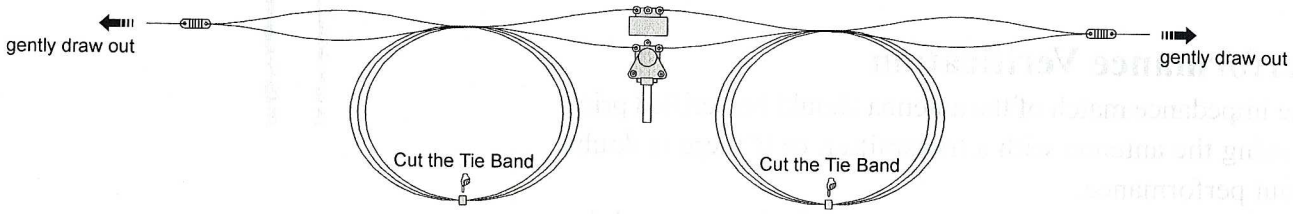


Figure 1

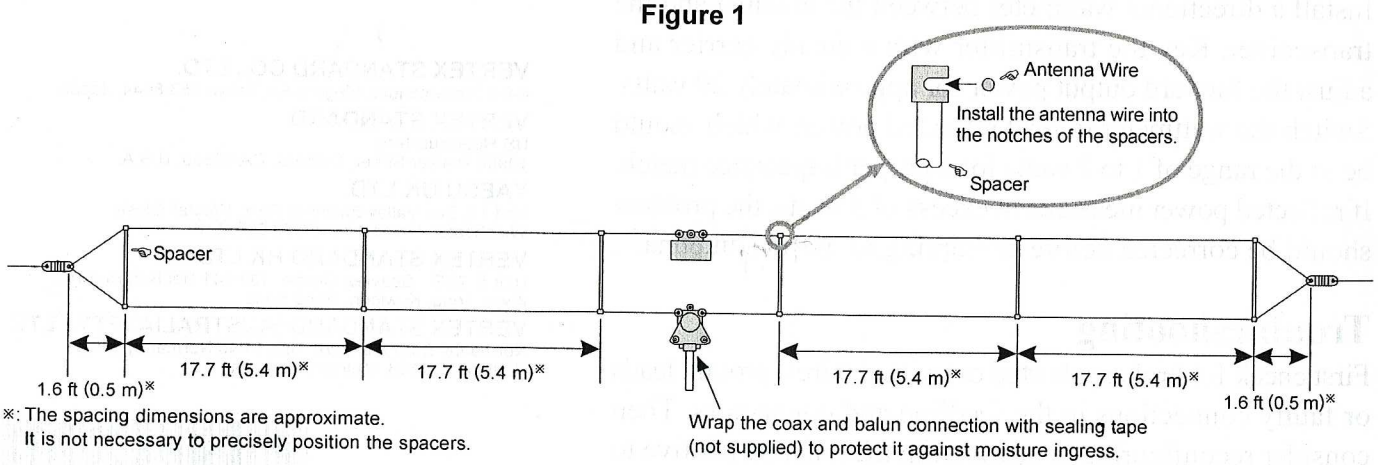
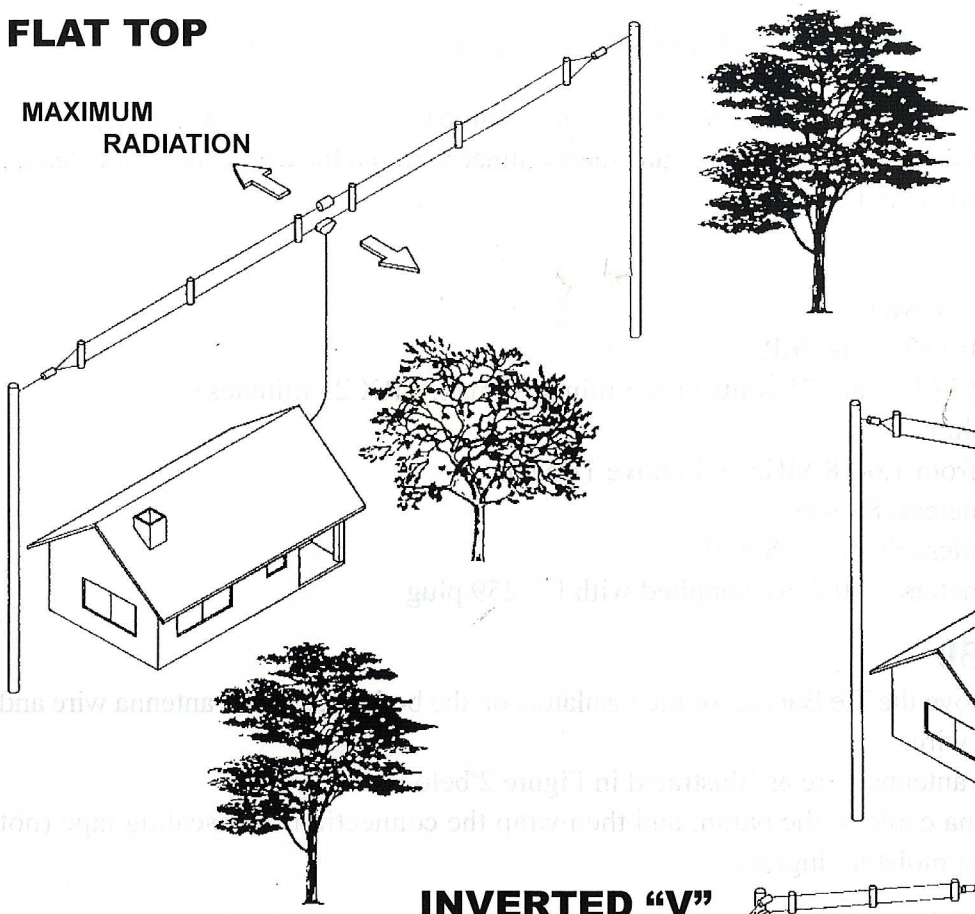
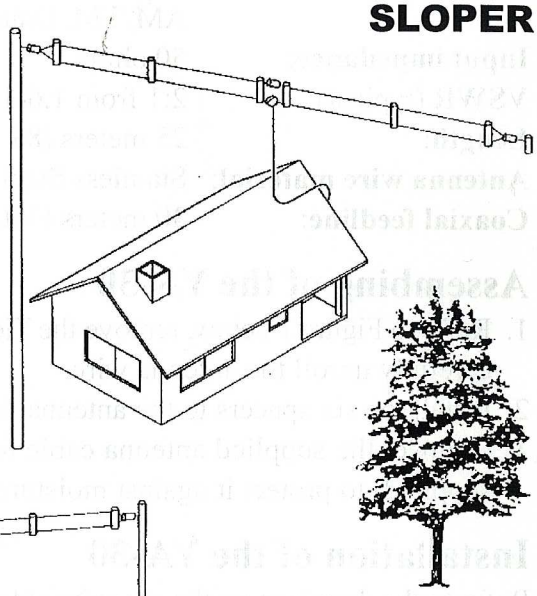


Figure 2

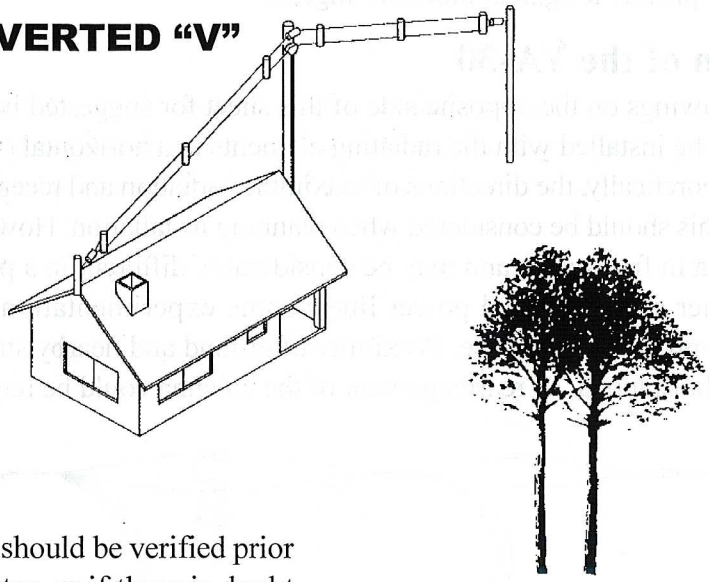
FLAT TOP



SLOPER



INVERTED "V"



Performance Verification

The impedance match of the antenna should be verified prior to using the antenna with a transmitter, or if there is doubt about performance.

Install a directional wattmeter between the antenna and the transceiver. Key the transmitter with a steady carrier and adjust the forward output power for approximately 20 watts. Switch the wattmeter to read reflected power, which should be in the range of 1 to 2 watts for a proper impedance match. If reflected power measures in excess of 5 watts, the problem should be corrected before attempting to use the antenna.

Troubleshooting

First check for broken, shorted or twisted wires, ground leads or faulty connections in the feedline and connectors. Then consider reconfiguring or reorienting the antenna relative to the ground or nearby structures.

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