DIAMOND ANTENNA

A144S5 & A144S10

2 Meter Yagi Antenna

Specifications

	A144S5 (5 Element)	**A144S10 (10 Element)**
Frequency:	144-148 MHz	144-148 MHz
Gain:	9.1dBi	11.6 dBi
Power Rating:	100W PEP, 50W FM	100W PEP, 50W FM
Impedance:	50 Ohms (Nominal)	50 Ohms (Nominal)
VSWR:	1.4:1 (Nominal)	1.4:1 (Nominal)
Front To Back Ratio:	More than 14 dB	More than 15 dB
Boom Length:	37.4″ 950mm	83.8″ 2130mm
Longest Element:	42.9″ 1090mm	42.9″ 1090mm
Driven Element diameter:	0.50″ 12.7mm	0.50″ 12.7mm
Parasitic Elements diameter:	0.37″ 9.4mm	0.37″ 9.4mm
Max. Mount diameter:	1.5″	1.5″
Weight:	1.8 lbs. 0.81 kg	2.4 lbs. 0.81 kg
Connector:	SO-239 UHF Female	SO-239 UHF Female

Antenna Assembly

(1) Remove antenna from package and adjust elements to proper position. You will find a small mark on the center of each element to aid in its positioning. Tighten each wingnut after verifying proper positioning.

(2) Weatherproofing connections. As coaxial cables tend to absorb moisture through their connectors, it is recommended that the connector be sealed. There are several products available for this purpose, including a good grade of electrical type or a rubber compound tape.

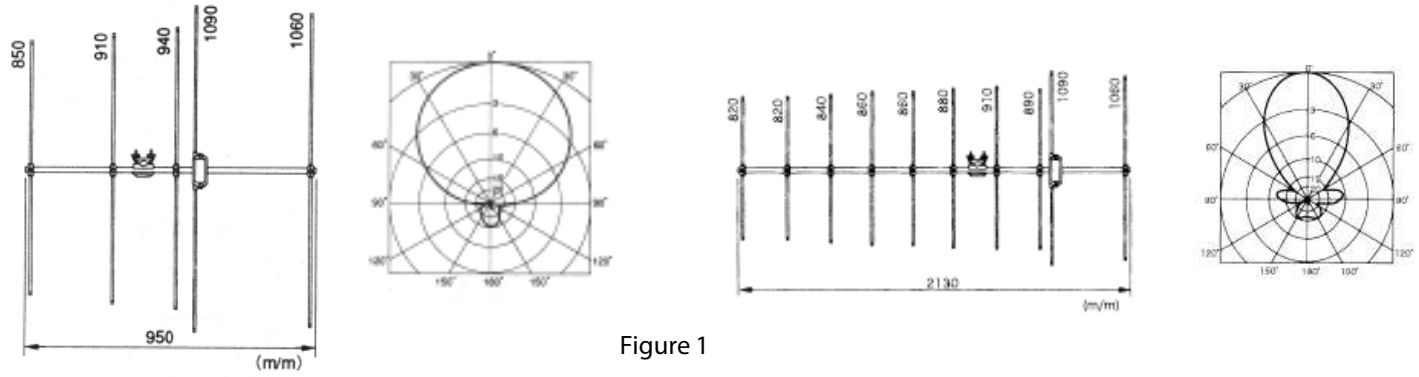
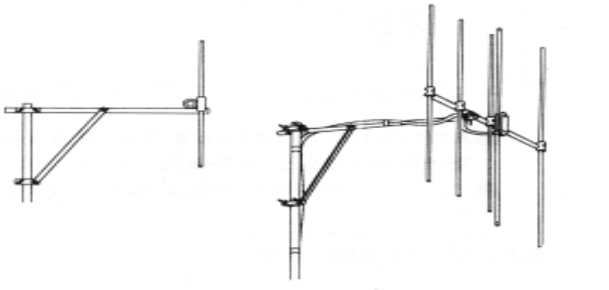


Figure 1



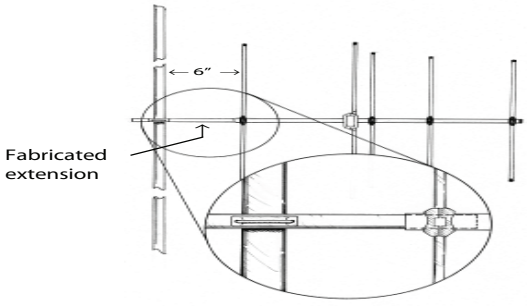


Figure 2

DIAMOND ANTENNA Products are distributed by RF PARTS COMPANY
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The Diamond 2 Meter Beam Antennas are easy to assemble and install. Only a few cautions are necessary in their installation.

The A144S5 may be installed for either vertical or horizontal polarization.

(a) Vertical polarization (preferred for FM operation): If mounting to a vertical support or pole at the boom center, be sure this support is non-metallic. A fiberglass or waterproofed hardwood extension should work satisfactorily. End mounting is a good option, as the coax cable may be run along the boom and down the vertical support. The idea is to minimize the effects of metal in the vertical plain. It will be necessary to fabricate an extension capable of sliding inside the boom, being secured by the screw passing through the boom (at the reflector element). Another way of mounting vertical beams is on a bracket to position beam away from the vertical support in order to reduce its effects. Coax should be run away from the beam at right angles (or off the reflector end). See Figure 2.

(b) Horizontal mounting to the vertical support is easily accomplished with center boom mounting.

(c) Phasing of two beams may be accomplished with a special coax phasing section using 75 ohm coaxial cable and T-connector. Length approximately 2140 mm / 84 inches. Beam separation of approximately 40"-48" is recommended.

Note that the two antennas are mounted to the stacking boom in the same position. The cable connection must enter each from the same side as shown in Figure 4.

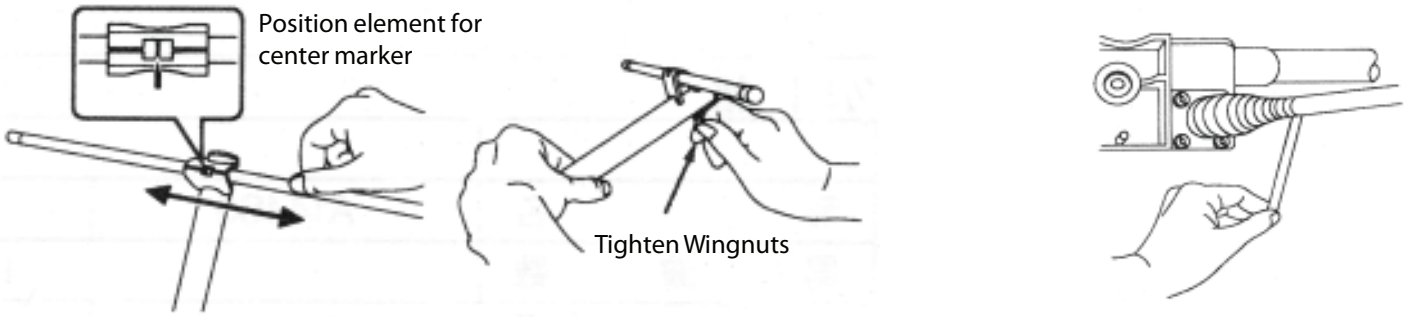

Figure 3

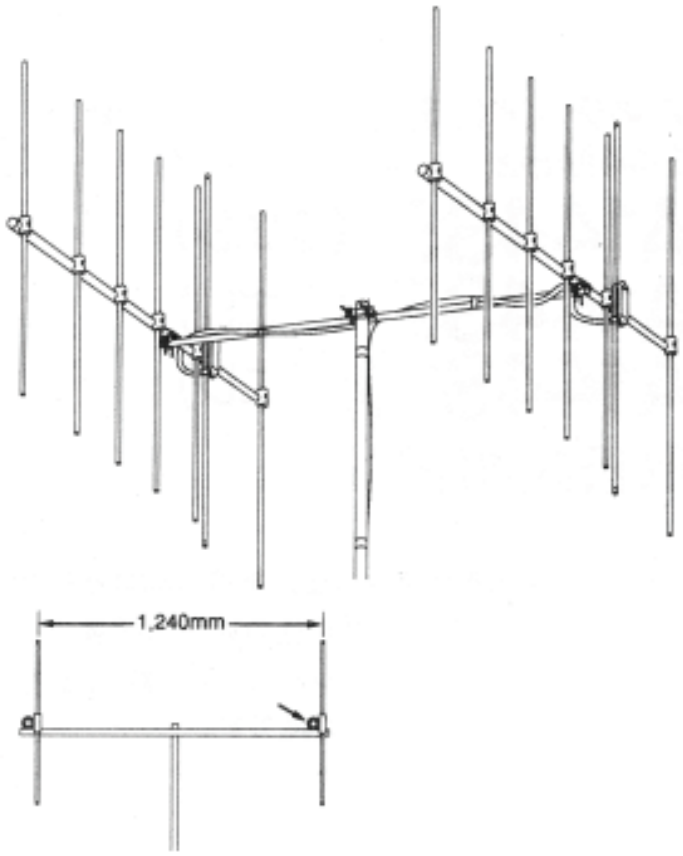

Figure 4