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## AV-14RMQ

Roof Mounting Kit for  
18VS/AVT,12AVQ,14  
AVQ/VBS

# INSTRUCTION MANUAL

### General Description

This roof mounting kit is designed for a Hy-Gain AVQ vertical antenna. The 14 RMQ provides the ground plane that is essential for optimum operation of a vertical antenna. The ground plane radials act as an artificial ground plane and serve as guy wires to support the mast.

### Construction

The radial wire is Alumoweld® # 12, which has a breaking strength of 1200 pounds. For the strongest mechanical connection, wrap the wire back on itself as shown in Figure 4.

### Installation

Install the roof mount brackets directly over a rafter near the peak of the roof. Mount the screw hooks (used for securing the ends of the radials) in a rafter.

Locate the antenna in an area on the roof where it will have a clear radiation field.

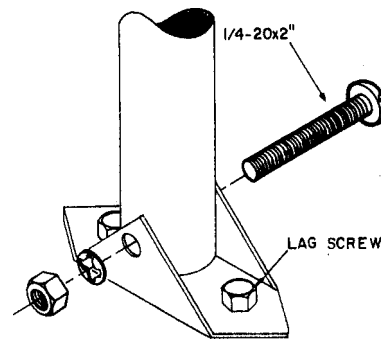
If the roof area is too small to allow the radials to extend in a straight line, they can be dropped over the edge of the roof at almost any angle without adversely affecting their efficiency.

### Step-by-Step

Before beginning, study the instructions and illustrations. Check the parts against the Parts List.

Use the lag screw provided to install the roof mount bracket. For a secure mount, the screws should enter a rafter.

Mount the mast to the roof bracket. Use the 1/4"-20 x 2" bolt, nut and lockwasher as shown in Figure 1.



Detail

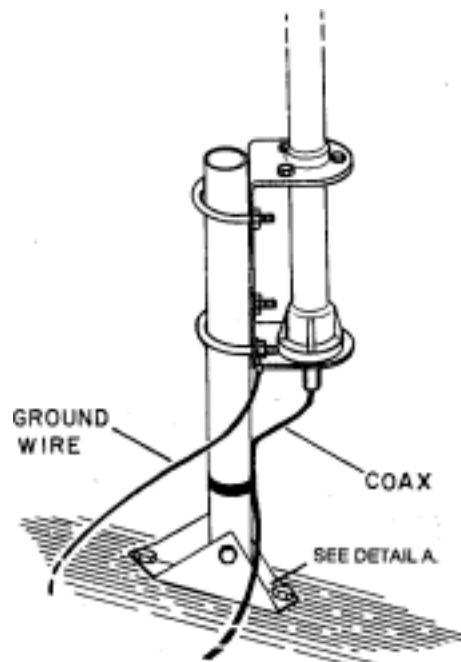


Figure 1 Installation of  
Base Detail

Mount the antenna on the mast as directed in the antenna instruction manual.

NOTE: At this point brace the antenna in a vertical position until the installation is

Cut the radial wires to the lengths indicated in Figure 2 for the 14AVQ/WB-S and the lengths indicated in Figure 3 for the 18AVT/WB-S.

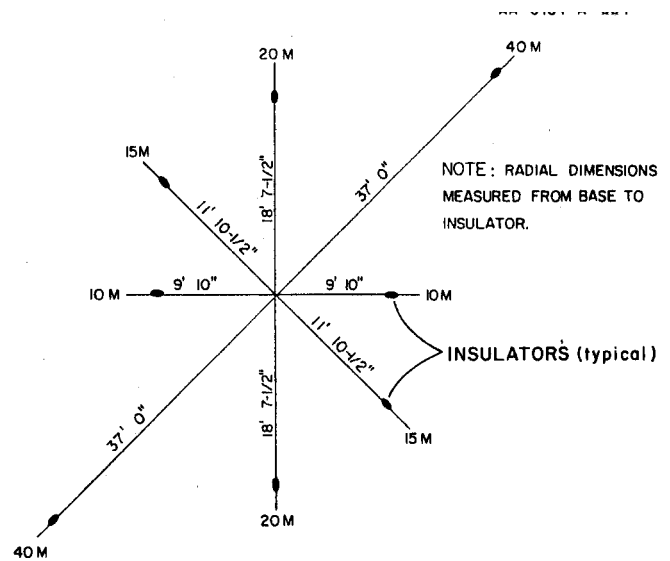


Figure 3 Radial Dimensions for 18AVT/WB-S

NOTE: For best results, the ground radial system must be grounded. Also, for your safety, the antenna must be DC grounded. Attach the base of the antenna to a suitable ground using at least #10 copper wire or #6 aluminum wire. A 1/2 inch diameter by 8 foot long copper-clad steel rod driven completely into the ground as close as possible to the base of your antenna as recommended. Consult your local city electrical code for the requirements in your area.

NOTE: The radial wires connect to the antenna base and strain insulators. Allow enough excess wire to make proper connection.

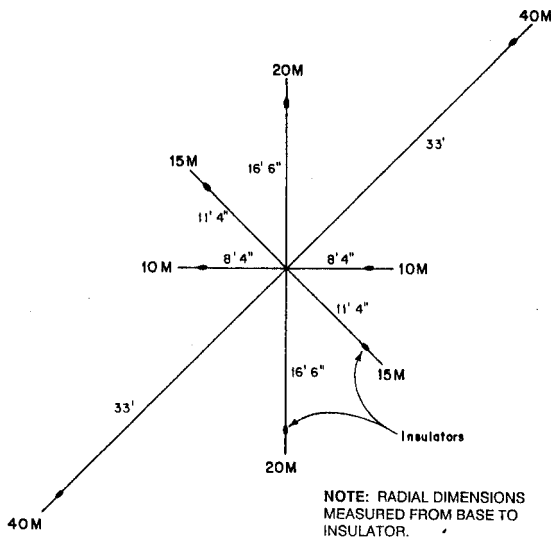
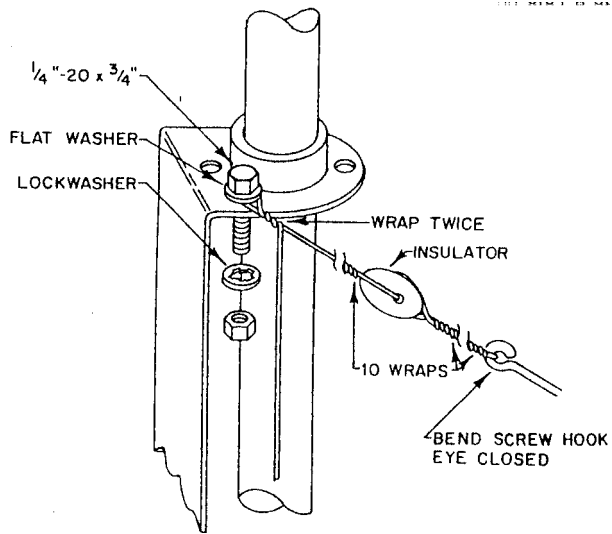


Figure 2 Radial Dimensions for 14AVQ/WB-S

Connect the radial wires to the strain insulators as shown in Figure 4. The final measurement should be measured from the antenna base to the strain insulators. (Refer to Figure 2 and Figure 3.)



NOTE: Extra wire supplied for the extension from the strain insulators to the screw hooks. For extensions over four feet long, additional strain insulators must be used

**WARNING**

**When installing your system, take extreme care to avoid any accidental contact with powerlines or overhead obstructions. Failure to exercise this care could result in serious or fatal injury.**

Figure 4 Connecting Radial Wires

Arrange the radials as shown in Figure 2 or Figure 3 and attach them to the screw hooks.

Parts List

Part No.	Description	Qty
172469	Tube, mast, 15/8" x 48" .....	1
364485	Bracket, base mountin .....	1
691067	Wire, #12 Alumoweld®, 100 ft. ....	2
450408	Insulator .....	8
871428	Parts Pack .....	1
506295	Bolt, 1/4"-20 x 2", round head .....	1
536275	Screw, 1/4"-20 x 2" lag, hex head .....	2
547275	Screw hook .....	8
556960	Nut, 1/4"-20, hex .....	1
567110	Lockwasher, 1/4", internal.....	2
567120	Washer, 1/4", flat .....	4