

# **DIAMOND ANTENNA**

## **CR8900A**

### **10m/6m/2m/70cm FM Mobile Antenna** *Optimized for Trunk Lid Mounting*

#### **Instruction Sheet**

The CR8900A is a 10m/6m/2m/70cm FM Quad Band Mobile antenna. Specifically designed to work with Yaesu model FT8900R radio. (Tuned for FM segment of each Amateur band.)

#### **Specifications**

|                  |  |
|------------------|--|
| FREQUENCY:       | 29.5-29.7/51-54/144-148/440-450 MHz                |
| GAIN:            | 2.15 dBi (10m/6m), 2.15 dBi (2m), 5.5dBi (70cm)    |
| POWER:           | 60 Watts FM  |
| IMPEDANCE:       | 50 Ohms  |
| VSWR:            | 1.5:1 (Nominal)                                    |
| ELEMENT PHASING: | 1/4 Wave (29/50), 1/2 Wave (2m), 2-5/8 Wave (70cm) |
| GROUNDING:       | Required for optimum performance                   |
| LENGTH:          | 49 1/2"  |
| WEIGHT:          | 1.2 lbs. (490g)                                    |
| MOUNT:           | UHF MALE (PL259)                                   |
| WARRANTY:        | 1 Year against defects in material or workmanship. |

***RECOMMENDED MOUNTS: K400C, K400S, K600M or K600S trunk mounts.***

#### **INSTALLATION INSTRUCTIONS**

***NOTE: THIS ANTENNA REQUIRES TUNING TO DESIRED FREQUENCY. USE QUALITY VSWR METER TO INSURE PROPER ADJUSTMENT. THE CR8900A REQUIRES PROPER VEHICLE GROUND. MOUNTING LOCATION WILL AFFECT VSWR. NOT RECOMMENDED FOR MAGNET MOUNTS OR MOUNTING IN CENTER OF ROOF.***

- (1) Remove antenna from package and inspect contents to insure it is complete.
- (2) Choose desired mounting location to insure maximum strength of mount, and proper vehicle ground to yield best performance of antenna. NOTE: MATCHING NETWORK IS COMPENSATED FOR TRUNK LIP MOUNTING AND IS NOT RECOMMENDED FOR CENTER ROOF MOUNTING.
- (3) Install antenna on vehicle. Be sure the mount has screws contacting Trunk Lid.
- (4) With quality VSWR meter, check VSWR of each band for proper tuning.

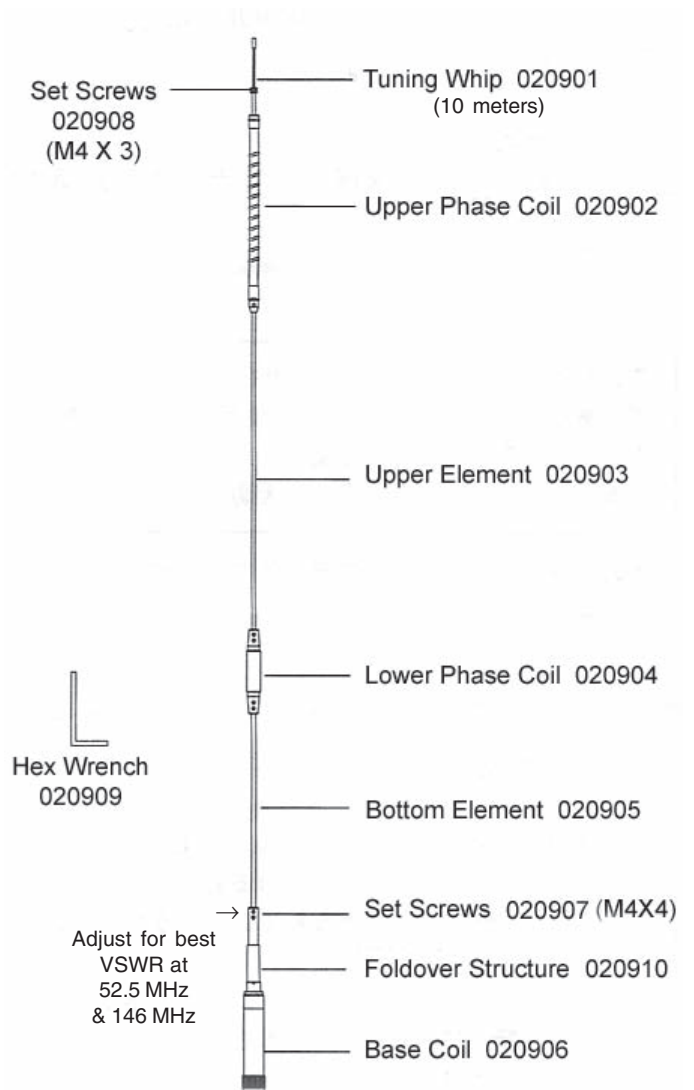
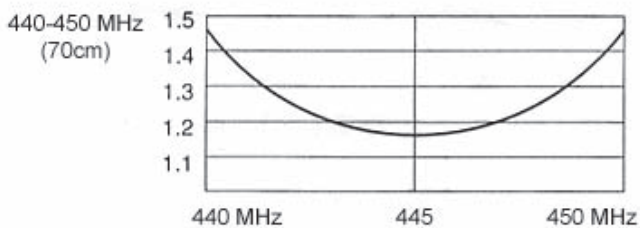
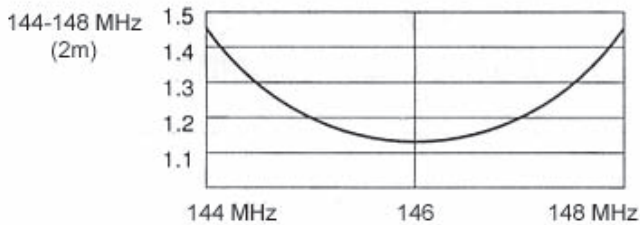
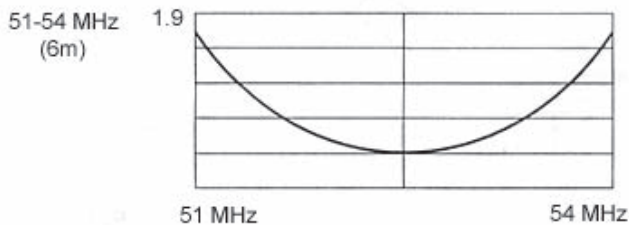
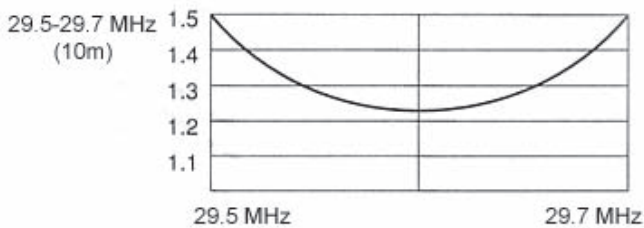
## ANTENNA TUNING:

Check VSWR on 6 meters first. Loosen set-screws (020907) on base coil (020906) to raise or lower center frequency. Upon reaching accepted VSWR on 6m & 2m, tighten set-screws (020907). Tune

..... 10m by adjusting the tuning whip (020901). Raising the tuning whip (020901) will effect both 6m and 10m center frequency. It is best to tune the 6m band first to reach optimum center frequency, then proceed to adjust for 10m optimum center frequency. Tune until satisfactory VSWR is obtained at both 6m and 10m center frequency. Verify setting results in best fit for each band. Tighten set screw (020908) using removable Loctite Threadlocker #242 or similar product to insure proper fastening of setscrews and whip section.

*Should you have difficulty in tuning the 10m & 6m bands, the cause would be most likely attributed to grounding characteristics of the vehicle trunk lid. It is sometimes necessary to add short grounding straps or copper braid from trunk lid to body panel (to lower resonant frequency).*

### Typical VSWR curves for CR8900A with Diamond K400S Trunk Mount



You may expect your results to vary somewhat, depending upon mount used, and individual grounding characteristics of trunk lid, etc.