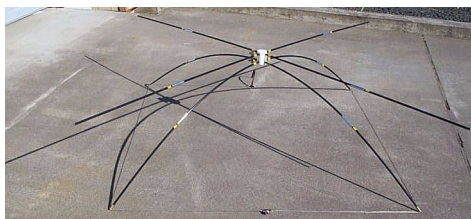
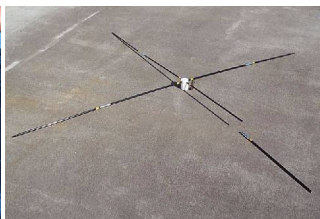


End Cap



1st Loop & spreaders for 2nd in place



Left to right: Tensioning the Loop, First set of spreaders inserted in Hub, ready to place Driven Loop, and vertical view of single Loop.

# Dunestar



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**Antenna Manual**

**Rover 6**

**Portable 6M Quad**

# Dunestar

systems

# Rover 6

## Portable Fold Up 6M Quad

Thank you for choosing the Dunestar Rover 6, 2 element 6 Meter Quad. With just a few easy steps your new portable antenna can be assembled and ready to use or just as easily disassembled for storage or transporting.

Make a quick survey of the components for the Rover 6.

Parts List:

- (8) Fiberglass spreader rod, w/ferrule
- (8) Fiberglass spreader rod, w/o ferrule
- (1) Driven Loop (coax connector & tuning stub)
- (1) Reflector Loop (tuning stub only)
- (1) Spreader Hub
- (2) 5" x 1/4-20 Stove bolt
- (2) 1/4-20 Nut
- (2) 1/4" Washer
- (2) 1/4" Lockwasher
- (1) Mounting bar



### ASSEMBLY

(1) Select the Spreader Hub. Notice that there are two holes that go clear through the material. These are the holes for the 5" mounting bolts, pass the bolts through these holes. Place the mounting bar on the bolts and follow with the flat washers, then the lockwashers and finger fit the 1/4" nuts far enough that they won't come off during assembly of the Rover Quad.

(2) Set the Spreader Hub on its end on the ground. Select (4) spreader rods w/ferrule and (4) plain spreader rods. Place the ferruled rods in each of the 4 holes on the top end of the hub. Next slip the non-ferruled rods into each of the ferrules on the first sections. The sections are a loose fit now but with the loop in place it makes a strong frame.

(3) The orientation of the spreaders and the coax feed point will determine whether the antenna operates horizontally or vertically polarized. Orienting the coax connector on the bottom of the loop (horizontal part) at right angle to the bolts in the hub will polarize horizontal which is the standard for CW/SSB weak signal operation. By placing the connector on a vertical side relative to the

mount, you will be vertically polarized, which is the standard for FM.

(4) Carefully, unroll the Driven Loop. Avoid putting kinks in the wire or smashing the brass corner caps. *HINT:* You can shake the wire a little and it helps to make the wire co-operate. If you look at the brass caps you will notice that they tip slightly in one direction. As you put the caps on the ends of the spreaders, going with that orientation keeps the wire straight. The first 3 caps do not require much effort to place. To seat the last cap, you will need to bow its spreader with one hand while you tension the loop at the cap and slip it on. This seems awkward at first and the tendency is to try and do all of the bow in the few inches at the loop end. *Remember the whole spreader bends.* See pictures on back page. That completes the first loop.

(5) To install the Reflector Loop, turn the Driven loop over face down. This will put the end of the hub up several inches off the ground where it is easier to work on. Repeat Step 2, putting spreaders in place. Repeat Step 4, using the Reflector Loop. That completes assembly.

### ATTACHING FEEDLINE

The Rover 6 can be fed directly with any 50-ohm coaxial cable with good results. For portable use, the mini-RG8 type cable makes a good compromise between weight and portability versus performance. Its losses are considerably less than the lighter RG58-types and more flexible to handle than RG8/RG213 cables. For long runs or permanent installation, use the best cable you can afford, is the rule of thumb and it still applies.

For the best VSWR use a quarter wave impedance transformer line section out of 70-75 ohm cable. RG59/RG11 type cable works well. The length is determined by the formula:  $L=2808/F*Vf$ , where F is frequency in Megahertz, Vf is the velocity factor of the cable and L is the required length in inches. The line section is attached to the driven loop and then to the main (50 ohm coax) feedline.

### ADDITIONAL INFORMATION

As shipped, the Rover 6 is tuned to the low end of 6M (50.0-50.5 MHz). If your interest is in vertical polarization and the FM portion of the band, the tuning stubs may be trimmed to favor that segment. The original stubs should be measured before you make any adjustments. In that way you can restore the original resonance if desired. The stubs are made of 300 ohm TV-type flat line.