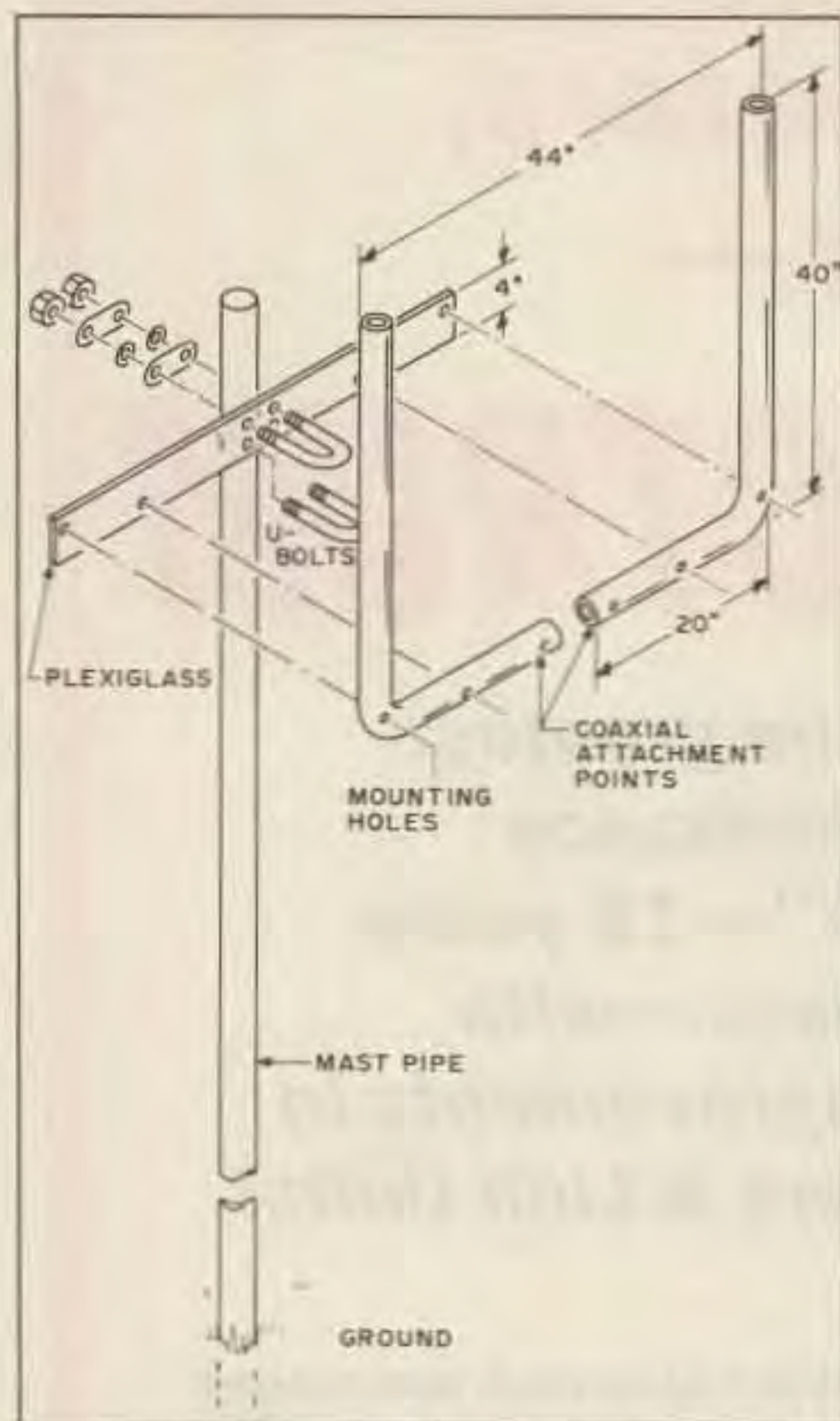


Slingshot for Two

Big 2-meter signal for under \$5.

by David Younker KA8OGD



Assembly of the 2-meter "Sling-shot" antenna.

I would like to be able to say that I ran a ream of calculations through my IBM PC to arrive at the design for this antenna, but I cannot. I used an abacus.

Actually, I was considering building an expanded quad loop—two wavelengths long but open at the top center. My friend and coworker Henry Higgins (an SWLer) suggested, however, that by reducing each element for $\frac{3}{4}$ -wave, I could do without the matching network.

He was right. The radiation pattern changes, however, from bi-directional broadside to the loop to bi-directional in the plane of the vertical elements.

Construction Procedure

To build the two meter version, obtain a length of electrical conduit ten feet long. Cut the conduit in half and bend each length into the shape of an "L" with 20 inches on the short side and 40 inches on the long side. Have a person from the hardware store do the bending for you, or you may end up with collapsed bends, as I did.

Drill mounting holes as diagrammed, or work out your own arrangement. I bolted the antenna to a piece of Plexiglas™, but a length of painted wood will serve as well. Next, attach the antenna to the mast with a pair of

muffler clamps. Then, attach the coax and operate.

Results

SWR on the sling-shot, untrimmed, is 1.5:1 across the top two MHz of the band. I get reliable coverage over a forty mile radius of the home base. Limited experimentation with a six meter version with KD8FW on the receiving end some sixty miles away gave better results than my two element beam at thirty feet (for operation on 2m).

With both the six and two meter versions, the horizontal section was a half wave or more above ground level. I have not tried any other elevations and will not until I put up the 15/10 meter job that I have planned for the summer. Fifteen meters would appear to be the upper limit for this design—after fifteen the dimensions begin to get unwieldy.

Total cost for the two meter version was under five bucks—\$3.60 for the conduit and \$1.30 for the muffler clamps. I already had the Plexiglas in the junk box.

My thanks for Charles Woods for his assistance with the diagram. 