

A SIMPLE 10 METER QUAD

BY ED MARRINER, *W6BLZ

QUAD antennas have been built using many configurations and materials. The use of bamboo poles for the Quad arms has probably been the most popular, although, they do have many disadvantages. The bamboo eventually splits and comes apart despite any method of protection. As a result of this problem, tapered fiber glass arms have become a popular construction material, but they are generally only available for the 20 meter beams.

A search was made for new ways to construct Quad antennas which would hold together. Nuplaglass rod seemed like a logical choice and the rod comes in almost any diameter. It was decided to give the $\frac{3}{8}$ inch diameter rod a try, and the results were very satisfactory. The rod could be cut easily with a saw and drilled with a twist drill. When the wire was strung there was an outward bowing effect which held the element wire tight.

Construction

Before starting you will have to order 8

* 528 Colima Street, La Jolla, California 92037.

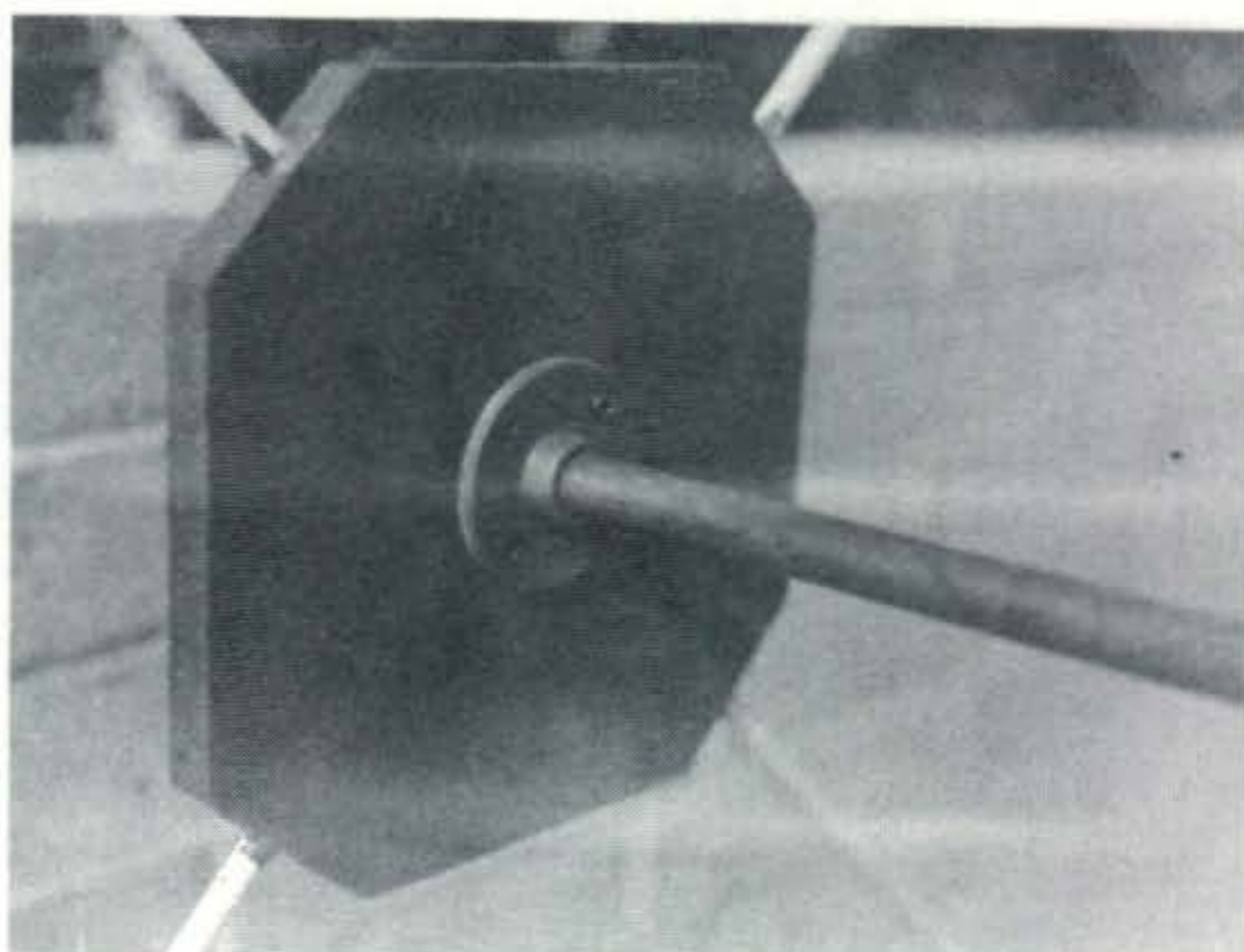
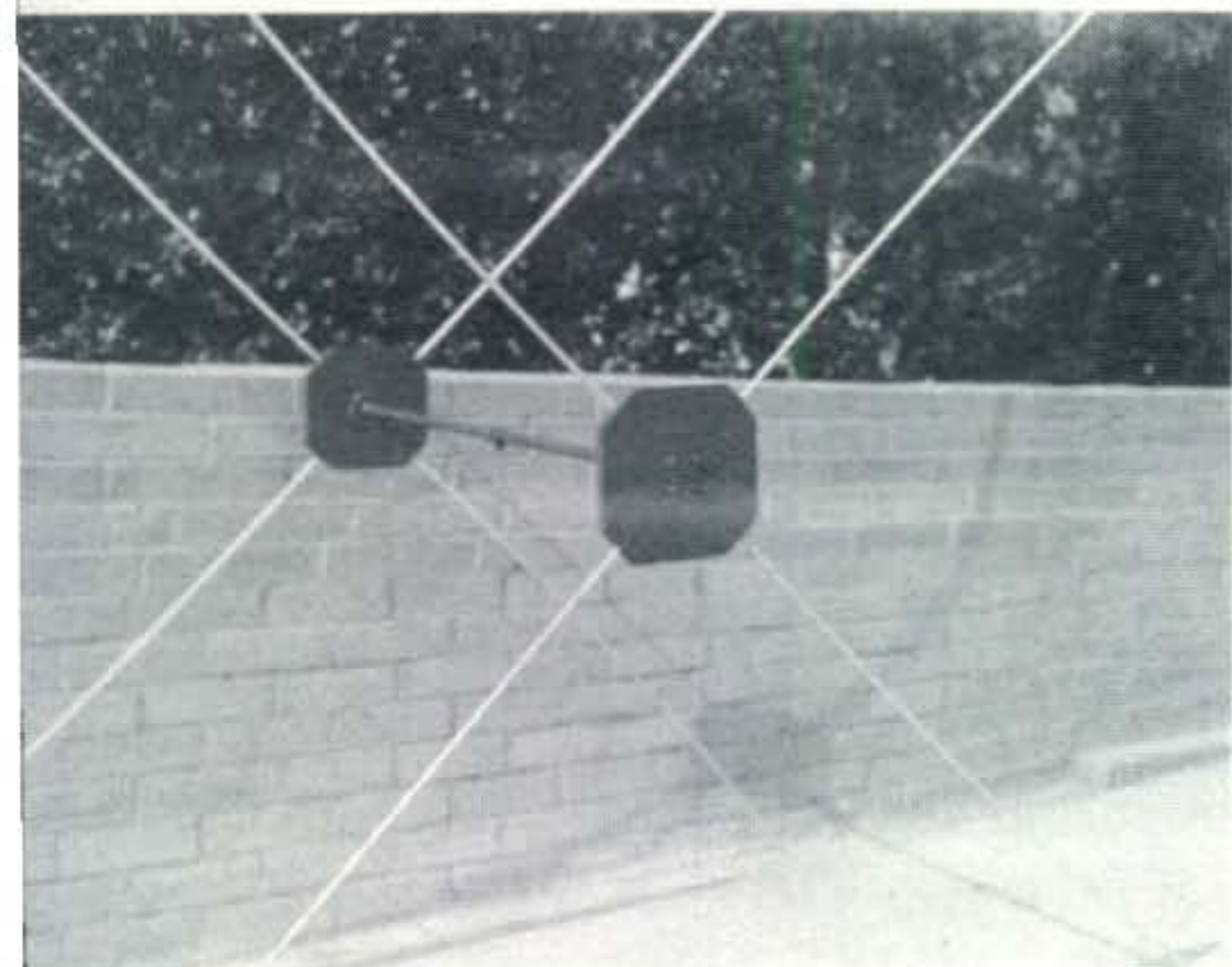


Fig. 1—Overall view (left) of the assembled 10 meter quad structure using Nuplaglass rods. On the right is a close up showing how the rods are inserted in the board and the mounting of the flange.

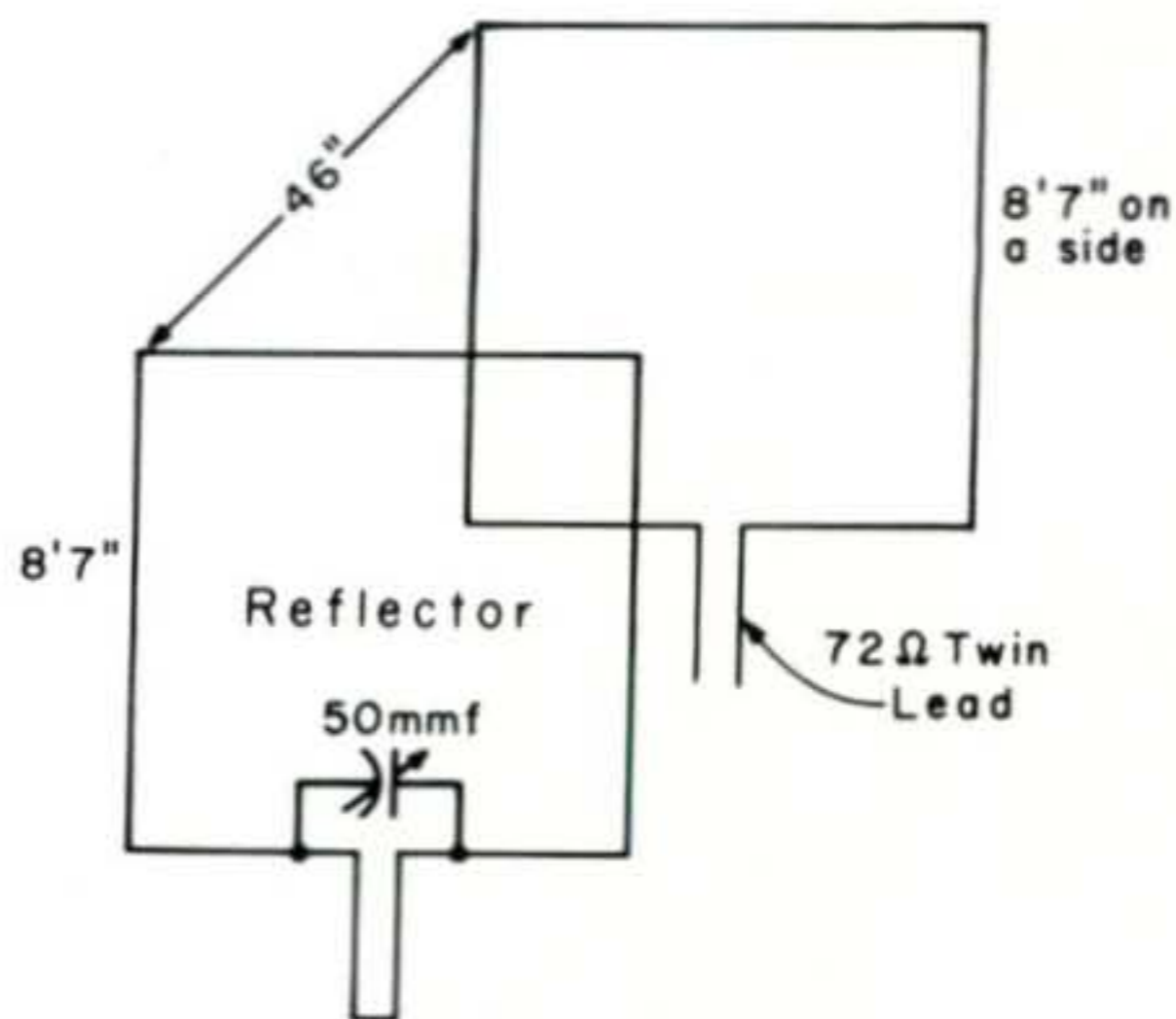


Fig. 2—Dimensions of the 10 meter quad antenna. The reflector stub is 10" long, 3" wide and made from #14 enameled as is the rest of the antenna.

pieces of $\frac{3}{8}$ inch diameter by 7' Nuplaglass rod from the New Plastic Corporation, Structural Plastics Division, 1017-27 North Sycamore, Los Angeles, Calif. 90038. Next a quick trip to the hardware store for a $\frac{1}{2}$ inch "T", two $\frac{1}{2}$ inch pipe flanges and two pieces of two foot galvanized $\frac{1}{2}$ inch pipe. At the lumber yard pick up two pieces of waterproof $\frac{3}{4}$ inch thick plywood one foot square and cut the corners off. (See fig. 1.)

With a $\frac{3}{8}$ inch drill, sink a hole at the four corners to a depth of four inches. Now apply a gob of Armstrong cement to the ends of the rods and insert them into the holes; let them set overnight.

Once the rods are set in the wood square, measure out 6'7" from the exact center of the board toward the ends of the rods and drill a hole for stringing the wire. This dis-

[Continued on page 114]

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Notes

This seemed a most appropriate time to tell about the KA Certificates, as KA9MF qualified for the *FIRST* USA-CA to an Asian station and FEARL (M) are having their annual field day 0900Z 3 July to 0900Z 5 July—See CONTEST CALENDAR by Frank, W1WY for details.

I still get much mail asking about the USA-CA Program and *USA-CA Record Books*. Yes, I issue the USA-CA Award and I'll be happy to send you a copy of the USA-CA rules. The *USA-CA Record Book* is available direct from CQ for \$1.25 and your first application for USA-CA must be made using one of these Record Books.

Under the new amateur licensing rules, new 2 letter calls are breaking out all over, and although I'd like to list the new calls of some of my close friends, I'm afraid I might offend some by failing to list them, so I will mention the only two dyed-in-the-wool COUNTY HUNTERS who have advised me of their new calls: W3NB, ex-W3AYS and WØBL, ex-WØJWD. So, why don't you take time to write and tell me your latest confirmed score and any other data on calls and also let me know, how was your month?, 73, Ed., W2GT. ■

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tance out should make the Quad 8'7" on each side of the square. As the wire is drawn tight the rods will bow out slightly and keep a strain on the wire to keep it stretched. This bowing effect will change the distance between the reflector and antenna, and the pipe wood and flanges should be adjusted so the distance between the elements is 46" as shown in fig. 2. If you make a trial assembly and measure the distance, the pipe section which is now 24 inches long, can be taken to the hardware store for cutting and rethreading. Since the cumulative errors from thicknesses of the pipe flanges, wood and bowing effect might be different for each constructor no set length can be specified for the pipe. Standard lengths of threaded pipe are 24", and one of them will have to be shortened.

Tuning

It is suggested if possible to use a Johnson Match Box tuner, by connecting the 72 ohm [Continued on page 118]

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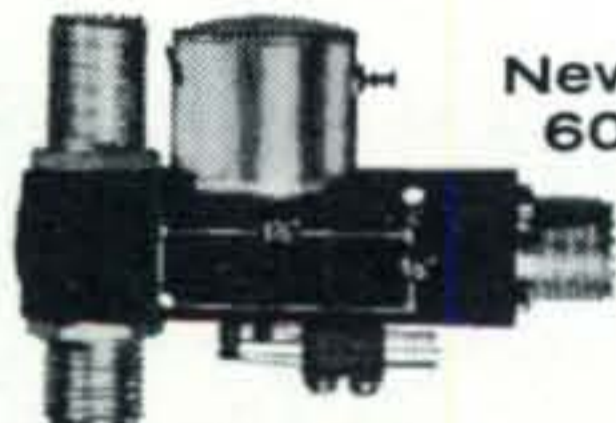
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A 10 Meter Quad [from page 114]

twin lead to the two terminals on the back. If a tuner has to be made, two links will have to be used, one from the transmitter and one from the antenna. These need only be two turns of wire.

The stub tuning capacitor on the reflector can be tuned for maximum front to back ratio or maximum forward gain, as you desire. ■

The DXpedition [from page 36]

report that *The Amateur Radio DX Handbook* (Cowan, \$5.00) should be released this month.

Wednesday dawned as all others. Awake until 4 A.M. with final preparations, we were a little "hung over" at breakfast. Perhaps that was why Jack was so casual when telling me he was unable to move his left hand or wrist since awaking that morning. A brief examination left no doubt—Jack's left hand was completely paralyzed! Although there was no evidence of impaired circulation or trauma, both sensory and motor functions were totally lacking. A careful history and more thorough exam led to the provisional diagnosis of pressure paralysis, a form of neuritis usually occurring during sleep and in individuals who were thin, like Jack. Moreover, he had just slept for the first time on some newly-constructed foam rubber cushions. If the diagnosis were correct, recovery was a matter of weeks or months, the only treatment being preventive physical therapy, immobilization, and regular, cautious exercise. More serious diagnosis could not be ruled out, although they were remote. After some soul-searching we decided to splint Jack's left wrist and depart on schedule. Larry's experience matched that of Jack, so we suggested shorter watches for Jack and slightly longer turns for Larry, Bill, and myself. Jack would have no part of this arrangement, however, insisting on his regular shifts at the helm.

Captain Booker, who had already simplified customs and immigrations formalities, along with Steve, Marjorie, Edmone, and a number of friends and officials, appeared at the dock to wish us *bon voyage*. I could sense Bill's uneasiness as we cast off and slowly drifted into position to hoist sail. Our crew of four included one who really didn't want to go and a one-armed skipper. In five minutes we were clipping along at eight knots toward Rodrigues Island. ■

Next month: Saint Brandon via the long path.