

The Indoor Quad

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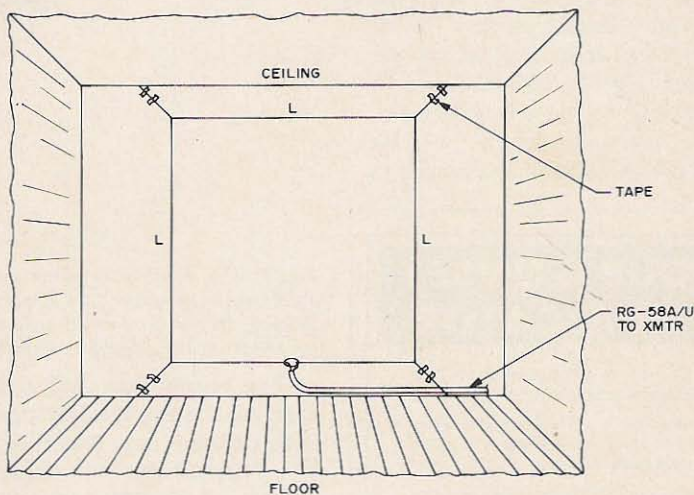


Fig. 1. Tie string at the corners and then tape to ceiling and floor. $L = \text{approx } 251/f(\text{MHz})$. I wound up with 8 ft 2 in. for each side after trimming for minimum swr.

After spending several hours on 15m with everyone telling me of the excellent openings on 10m, I decided to see if I could get some rf out on that band.

Being an apartment dweller, and having spent the entire summer erecting an inverted vee on the roof, I had my doubts as to whether or not my landlord would look kindly on my spending the winter putting up another antenna. (I would undoubtedly

be seeking permission to erect an antenna on top of the local Salvation Army Hotel had I made another trip to the roof.)

That's when I decided to try an antenna inside the shack. First I thought of trying a dipole, but since a dipole doesn't really do much for my low-power signal even when the dipole is outside, I dismissed it. My next idea was a quad and looking around the shack I found that my ceiling was 8½ ft

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high. Using the standard formula $L=251/f$, I made the driven element as shown in Fig. 1. I used string tied at the corners and taped the element to the ceiling and floor with the whole thing about 4 in. from the wall. Next, I made a similar element for the reflector and placed it $6\frac{1}{2}$ ft opposite the driven element (Fig. 2). I hooked up a 10 ft length of RG-58 to the driven element, and found I had an swr of 3:1. By trimming the driven element, I managed to

reduce this to 1.4:1. It's easy to keep the sides symmetrical by slipping the wire through the string. The string can be taped in place after trimming the antenna.

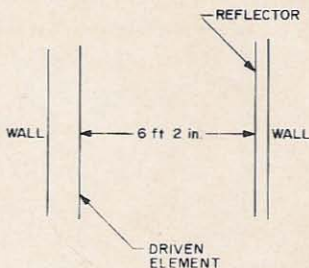


Fig. 2. The distance between the 2 walls of my shack was very close to the distance for optimum spacing. If you have room, you may experiment by trying various distances between elements.

The results were just a little short of amazing. During the first operating session with this antenna, I worked LUs, an HC, PY, 9Y4, XE and VE8. Signal reports were anything from S6 to S9+. I also worked a dozen W6s. Almost everyone said the band was on the poor side, and my signal compared favorably with others from the same area. The rig used was an HW-100.

The reflector is tuned to a frequency lower than that of the driven element. If you choose to have a director rather than a reflector, you should tune the element to a higher frequency than that of the driven element.

When switching from my inverted vee to the indoor quad, there is a 2 S-unit increase on the quad in all directions.

Incidentally, my operating position is right between the elements of the antenna.

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