

amateur existence (first license 2BAV in 1923) I relied on reports from other amateurs on the air for modulation checks. The usual receiver does not do a good job at all, as you probably know by experience. What *does* do a good job is a handy-dandy assembly as shown in Fig. 5. This set-up with a long pointer knob for good resolution between 46 mc and 50 mc makes a very useful piece of test equipment. Do not use a regular tube type of amplifier. The padded earphones are also a must. It's very simple. With your ears shielded from your own voice as far as sound goes, a good bit of audio gain, you can hear exactly what you sound like, right in your own shack, using a dummy load if you wish. Note that you are listening to yourself on a receiver and you can hear any hum, distortion, feedback, etc., can be heard instantly. You cannot pick up frequency drift or FM on such a receiver, but you can check those on a regular communications receiver.

Four element beam

This rig has been used so far with the four element beam shown in Fig. 6. This is a little firecracker and really pushes the signal up about ten times in power (10 db) in one direction while taking it away from another one, of course. I just took the beam down and measured it with a steel tape to make sure the

dimensions were exactly correct. If you make it exactly as shown, it will have the same power gain. It's shown as a rigid array, but you can adapt it to portable use with folding joints without too much trouble.

Up to now, I've been using 15 feet of TV masting out on the roof with an armstrong rotator handle just outside the window. It works fine and I'm having no end of fun with it.

So I'm on six meters again, and have chatted with dozens of old friends, and, I hope, made some new ones. I haven't moved out of the shack while building this rig, which means that my junk pile may be a little more extensive than some, after all, it does cover 45 feet long of cellar space, but I *did* look into the catalogues and add up the amateur net prices of the components for you.

It actually is possible to get on the air with VFO (this is very important. Ordinary VFO assemblies can be expensive) and 50 watts out for \$50.

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Exciter Coils

- L1. 7 turns airwound, 16 turns per inch $\frac{5}{8}$ in. diameter. B & W 3003, Air Dux 416T.
- L2. 6 turns of plastic covered No. 22, $\frac{1}{4}$ in. O.D., $\frac{3}{8}$ in. long. Inside L1.
- L3. 2 in. of $\frac{1}{2}$ in. dia. 32 turns per in. B & W 3004, Air Dux 432T.
- L4. 15 turns of No. 28 dcc wound on cold end of L5.
- L5. 13 turns airwound 8 tpi.
- L6. 2 turn adjustable link over cold end of L5.

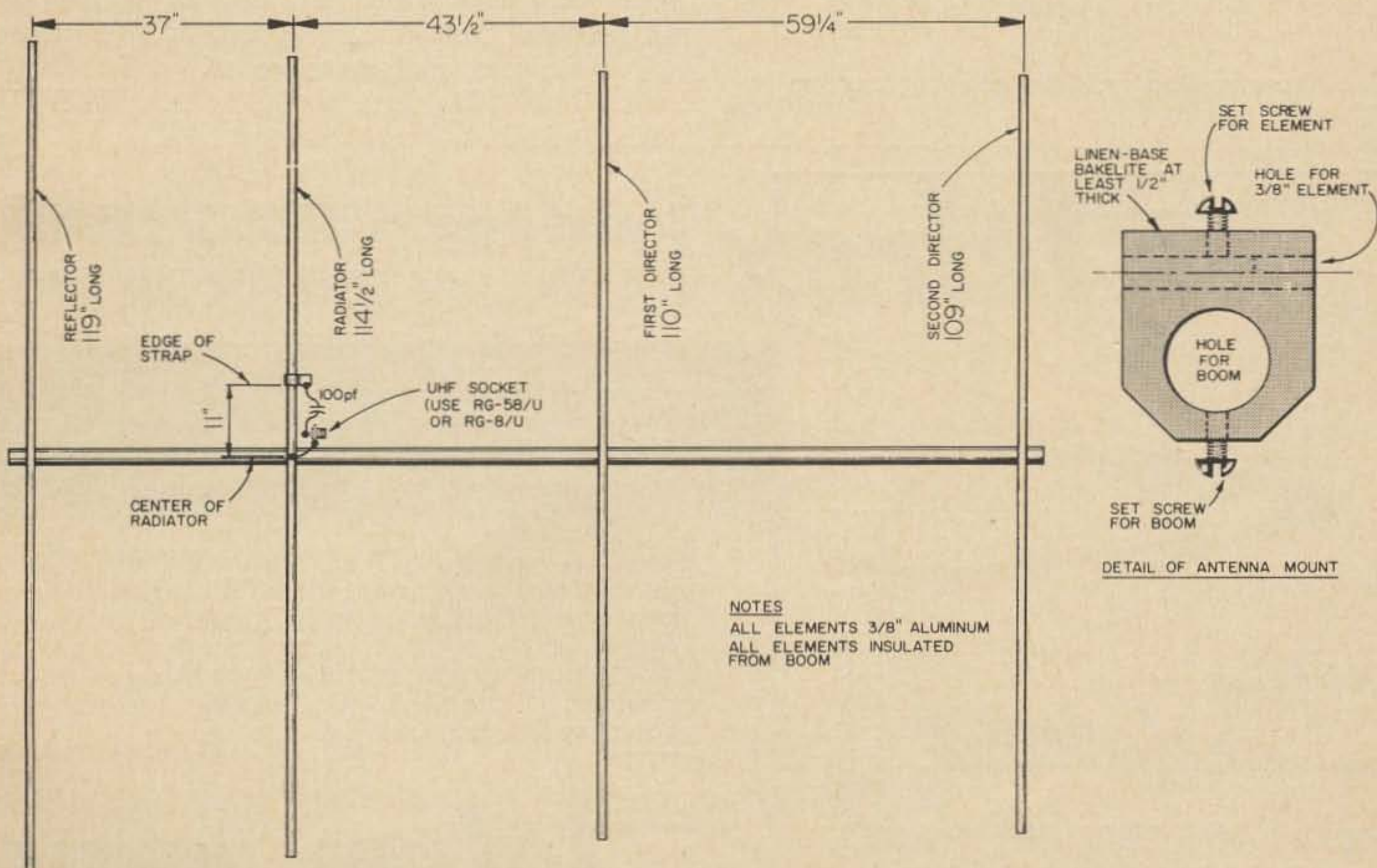


Fig. 6. Four element six meter beam. Good for about 10 db gain.