W. R. Lingenbrink W6HGX
1809 Hill Ave.
Hayward, Calif. 94541

The Link

Like to try a two meter yagi with a semi-cylindrical reflector?

If you are interested in making your "Five Watter" sound like a big rig, then read on.

The "Link" I am about to describe has been the volume producer here for sometime now and I feel that it warrants passing on to the brotherhood at large.

There is no great cost involved, in fact five dollars should cover the Link quite well.

The materials involved are a length of tubing for the boom (the boom from an old TV antenna works quite well) and a roll of aluminum clothes line wire for the elements. The rest of the hardware should be handy around the "shack."

The basic components of the design are by no means new, but putting them together in this configuration I feel is now or at least novel and for good measure it works.

The basic theory behind the antenna is a modified corner reflector used as a launching device for the yagi antenna. An added bonus is the unusual front-to-back ratio gained by this method.

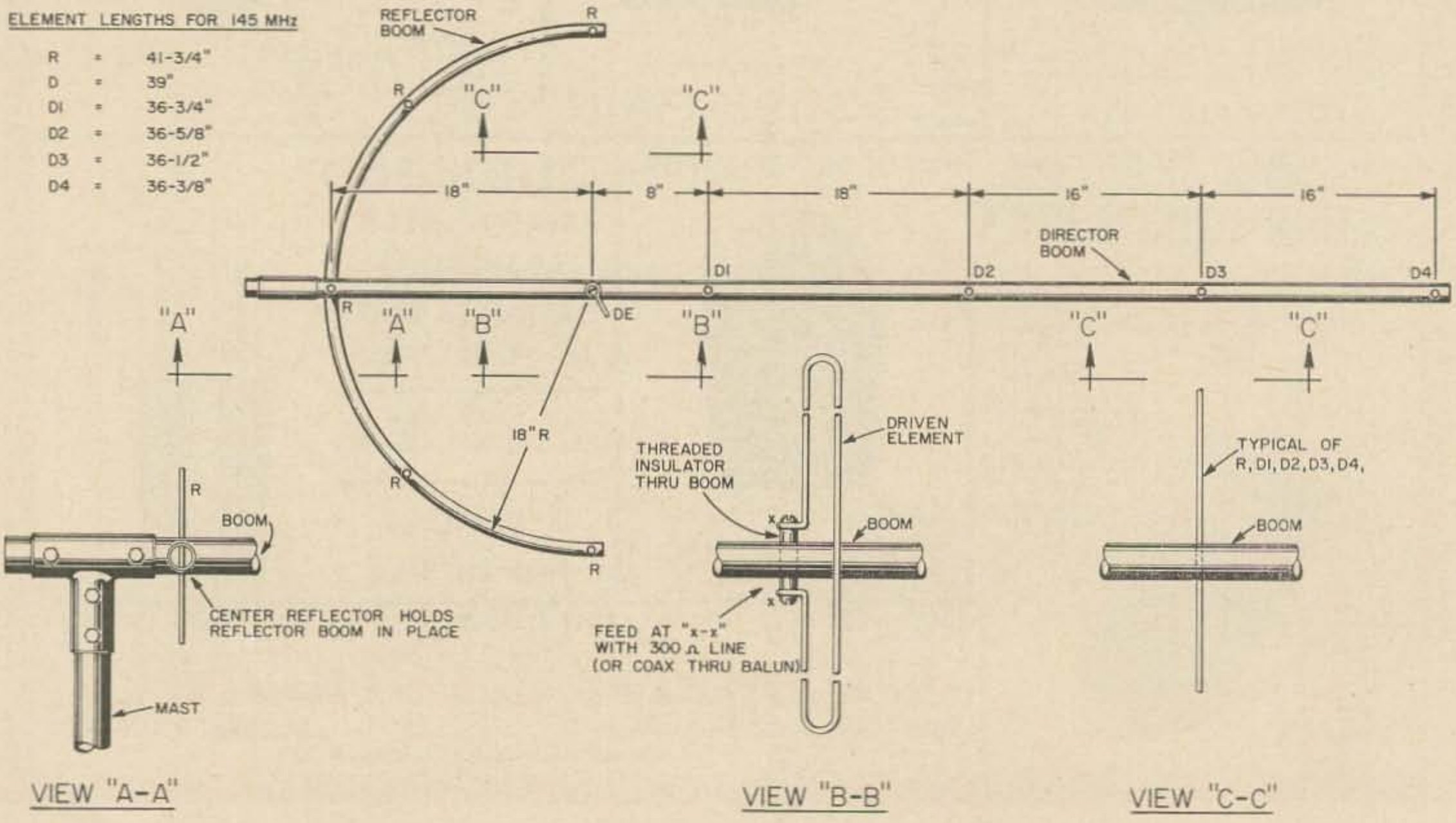
It might be well to add here that if you are only interested in local rag-chewing in the big cities and don't care to rotate your antenna for each contact, forget it and go on to the next article. This antenna is for the stations that are hard to copy.

The method of mounting the antenna makes it quite adaptable to either horizontal or vertical polarization depending on the locality.

The method of construction should be quite clear from the diagrams, but there are a few things that are hard to show in a drawing such as the method of mounting the boom for the corner reflector part of the antenna.

The boom is first drilled to take the reflector boom. When this is in place then the hole for the reflector element is drilled through both pieces of material and the reflector element set in place. This will then hold the whole assembly ragid.

The next step is the driven element. A hole is drilled in the boom and an insulator that is about one inch longer than the boom is thick is inserted through the boom. This then becomes the anchor point for the folded dipole



driven element. The beam is also fed at this point, either through 300 ohm line or with a balun.

As for tuning the antenna, well if the beam is constructed using the measurements given I think you will find little if anything gained by shifting the elements. A bit might be gained by clipping the elements for spot frequency operation, but that's up to you.

The tests given this antenna were with a fellow ham W6RGG across the valley from my location about four airline miles away.

The test equipment used for this evaluation? A "Gooney Bird" and a receiver with an S meter. The antenna was mounted on a thirty foot mast and pointed toward the receiving location, the rig was turned on and a steady tone was used for modulation.

The S meter at the receiving location was set for twenty over nine, then the antenna was rotated. The main front lobe seemed to be about thirty degrees wide. The side lobes showed a reading of S2 and the back was all but unreadable on the meter.

A word about the mounting feature. It may seem at first glance that the beam will be off balance, but in practice it has been found that with the beam so light and the advantage gained by this type of mounting there is nothing to fear.

I can only hope that those of you who construct this antenna get as much enjoyment out of it as I have had.

. . . W6HGX

William is a transmission man for the Pacific T and T Co. He enjoys VHF and UHF antenna design and construction and home building of equipment.

Stop Slipping Dial Drives

Does the cord and pulley dial drive system in your receiver slip occasionally? If so, here's a good emergency substitute for cake rosin or commercial non-slip compounds.

Place the tip of a hot soldering iron or gun on a clean area of the chassis and tilt the iron so that the tip forms a small angle with the chassis. Feed rosin-core solder into the gap. The cold metal of the chassis will conduct enough heat away from the molten solder so that the flux, instead of vaporizing, will form a "puddle" on the chassis. Remove the soldering iron, allow the flux to solidify and scrape it onto a clean piece of paper. Finally, crush the flakes of flux with a fingertip and rub the resulting powder onto the dial drive cord. . . . Bradley Thompson