

## BILAL ISOTRON 20

"Why that's just a little feller," said one of my friends when he saw the Bilal Isotron 20 antenna for the first time. Sure enough, it is just a "little feller" in size, but its performance belies its appearance. Remember David and Goliath?

Last October, I reported on the Isotron 40 and the excellent results it produced for me on that band. Anticipating a need for a 20-meter antenna to support my desire to have a small, efficient, and easily-erected antenna for use away from home, I asked Ralph Bilal to send me the Isotron 20.

Once again, I wasn't disappointed. The Isotron arrived via UPS in a rugged box with all the components neatly packed and carefully preserved by lots of wrapping material and some rugged plastic envelopes containing the nuts and bolts. Ralph takes the trouble to tape things down inside the box so they won't rattle around, and he includes assembly diagrams and instructions...not just for the antenna that's in the box, but also for the other antennas he makes.

Assembly took only a few minutes, perhaps because of the familiarity I had with the Isotron 40, but probably because it's so simple and has so few parts. Here again is a coil wrapped around a rugged plastic rod, a capacity plate, a smaller tuning plate, an rf chassis connector that mates with your standard PL-259 coax fitting, and a few bits of connecting wire with their solder lugs. Maybe ten minutes at the very most to put it all together...and when you're finished, you have, well, something that doesn't look much like an antenna or anything else you've ever seen, for that matter. My Grandma used to say "pretty is as pretty does," and the Isotron antenna does very well, indeed.

At first, I mounted it on a piece of TV mast tubing (and there is a fitting on the antenna for exactly that kind of mounting) and placed it some 10 feet outside the wall of my house about five feet off the ground. (This was partly due to the fact that I didn't have a longer piece of connecting coax made up and used what I had. Mistake! Even I should have realized that this is the worst possible situation for an antenna—five feet off the ground and shielded by proximity to a house.) It tuned okay—with a bit of fussiness to get resonance, largely because of capacitance-to-ground effects. I had expected miracles, but none were being handed out that day

and the antenna disappointed me. (Perhaps I ought to say that I disappointed Ralph by doing something that I knew better than to do.)

The next step was to put the TV mast up on the roof of the house attached to a chimney mount and to run a suitable length of coax to the transceiver. I used the MFJ Antenna Bridge to make a preliminary tune-up, setting the impedance at 50 Ohms, and found the best setting of the Isotron to be very, very close to this.

Now the antenna began to perform as it should! Stations from all over the world came roaring in (twenty was good that day). Tentatively, I called a CQ, not expecting much from this teeny little lump of inductance and capacitance...surprise! Right away an answer...589 from southern USA. Then, over the next hour, literally dozens of stations: England, Germany, USSR, France, Canada, Italy, and so on until I tired of the game. Switching between my standard 14AVQ and the Isotron 20, I found as much as two S-units difference and as little as no difference between the two antennas. Typically, when conditions are good, small antennas often perform as well as larger ones. When conditions are poor to marginal, then the larger antenna works best.

However, I should tell you that even though it is a compromise, the Bilal Isotron antenna does work well. You won't ace out any of the Big Gun DX stations, but then you didn't expect to, did you? For a Field Day portable antenna, a vacation antenna, or for a condo or apartment location, you'll find the Bilal antenna a good one. In fact, for the travel trailer or RV owner, I believe it would be nearly ideal. It is inconspicuous, does not look like an antenna (thereby not arousing suspicious neighbors), and does perform. You can cover all of the CW portion of the twenty-meter band or all of the phone portion with two different settings. You must tune it very carefully for best match to the 50-Ohm transceiver output, but a little patience here will reward you handsomely.

The Isotron 20 may be obtained through your dealer or direct from the *Bilal Company, S.R. 2, Box 62, Eucha OK 74342*. The price is \$49.95 plus \$3.50 shipping, packing, and handling charges. If you have any specific questions about this antenna or any of the other Bilal space-saving antennas, you'll find Ralph to be obliging and knowledgeable. Call him at (303)-687-2837 or (918)-253-4094.

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