



The National HRO-500

Wayne Green W2NSD/1

Perhaps I'm not the best person in the world to test something as expensive as this. When the original HRO came out some thirty-odd years ago I looked at it with awe and longing. By the time I finally could afford one they were just a little out of date . . . about two years ago.

But here I sit, through the kindness of National, with an HRO-500. True, it has to go back, but in the interim I will be able to mention to a few hundred fellows quite casually that, yes, I'm using the 500 here.

The more I use the 500 the more convinced I am that all ham receivers will eventually have to adopt the one kc per division type of tuning. The old HRO had that on some bands . . . as did the NC-101, and it is awfully easy to get used to. Collins cottoned on to this idea too.

The 500, being transistorized, snaps on immediately when you flick the switch. I like that. It gets me on the air a lot more than when I have to turn on my receiver and wait for it to warm up so I can hear what is happening. Perhaps I am more impatient than most people. Of course not only is the warm up period almost instantaneous, so is the warm up drift period. Brings to mind my old SX-28, which used to drift about 50 kc on 20 meters as it warmed up to its task. When I remember that, I guess I'm not quite as furious over the garbage eating W2 that borrowed it one day and proceeded to sell it and pocket the money.

The general coverage receivers that I've used

in the past were never quite adequate for optimum ham band usage . . . the 500, which tunes continuously from 5 kc to 30 mc, seems to sacrifice nothing for this flexibility.

The most unusual aspect of the 500 is the frequency synthesizer which permits you to tune any 500 kc segment of the five band-switching bands. The basic bands are: 0-1.5 mc; 1.5-4.0 mc; 4.0-10 mc; 10-20 mc; 20-30 mc.

As you tune the synthesizer the first numbers of the frequency you are tuning light up over the dial. The PW dial is calibrated to one kc and the 10 kc readings are indicated in the PW windows. By the way, one turn of the outside PW knob equals 10 kc, which makes tuning in QRM a snap, though it gives you a bit of a workout when you swing from one end of the band to the other. I think they said something about twelve feet of bandspread . . . that's about right. The result of all this is that you have sixty bandspread bands you can tune, all with one kc per dial division . . . and, thanks to the synthesizer, you don't have to have sixty crystals to do it.

While the 500 cycle selectivity position is fine for CW and the 2.5 kc position is great for SSB, the receiver does have a 5 kc to 8 kc position for "hi fi" listening or, I suppose, multiplex RTTY or something.

Those of you who have used the 75A4 or the 2A receivers will appreciate the value of the passband tuning on the 500. This is wonderful for SSB and CW work where QRM is a

problem . . . something not altogether foreign to our amateur bands. Another handy gadget when the interference piles up is the "Rejection Tune" control which swings a deep notch (50 db) across the passband for you, removing heterodynes.

The Automatic Gain Control system keeps the output steady within less than 10 db with a variation in input of from 5 to 50,000 microvolts: There is also an adjustment for matching the action of this circuit to various levels of background noise.

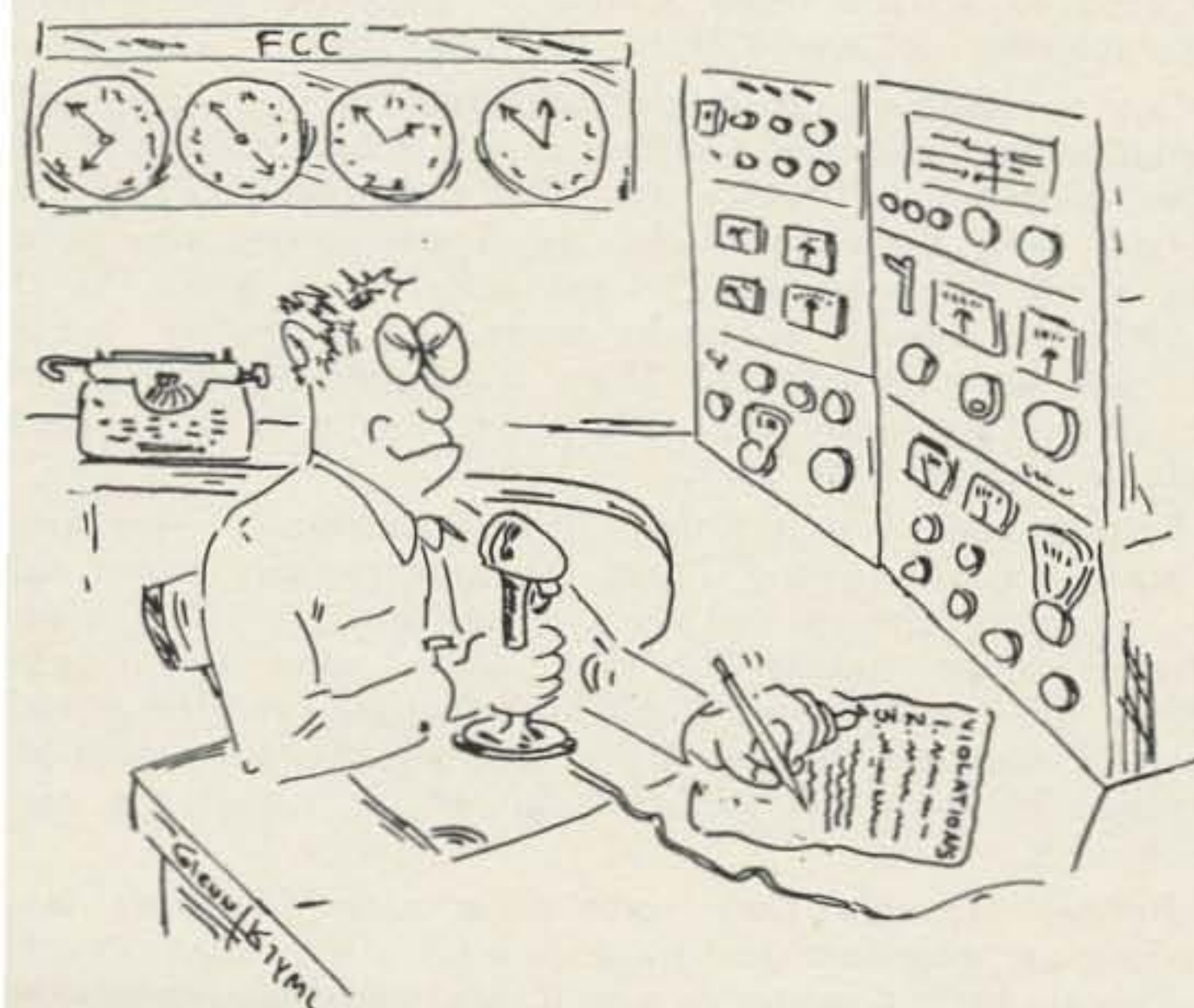
The S-meter is calibrated accurately. Who knows what will happen to us when we can believe S-meters. Imagine the impact on DX stations when you tell them what their signal strength really is! I've been doing this and for some strange reason many of them have taken a second look at their S-meters and lowered my signal reports. Hmmm. Honesty is the best policy and the 500 is honest.

Another nice feature of this receiver is that it will operate directly from a 12 volt source if you want to use it in the car or on a trip. The 100 ma that it draws doesn't even strain a small lantern battery . . . imagine, you can get far away from all line noise and hear what a radio should really sound like.

Oh, there are a lot more interesting features to the 500, but if you go out and spend \$1300 for a receiver you certainly want to have a few surprises waiting for you.

I dunno who is responsible for making the IRO-500 look so good, but they should get a raise.

. . . W2NSD/1



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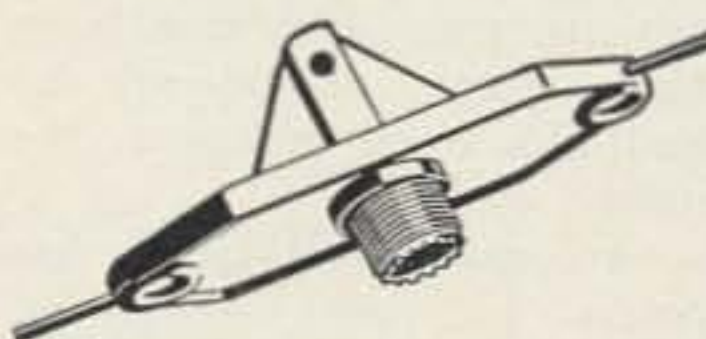
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