

Comparing the DX-160 and the GE Superadio

by Karl J. Zuk

I have owned the DX-160 for about seven years and have modified it with two transfilters in the IF section and coupled the internal loop antenna to the external antenna connection point on the rear of the set (see the Tech Guide and DXM #595). I now generally use the DX-160 for shortwave and the Superadio model 7-2880B for BCB. First, a few descriptive words. The Superadio is essentially a good quality listener's portable, and its controls --bass, treble, volume and tuning--reflect this. The DX160 is an inexpensive communications receiver, and has other controls--bandspread, BFO, RF gain, antenna trimmer, as well as an S-meter. Here is a comparison of the operation of the two sets on BCB.

The sensitivity of the Superadio is fine with its internal antenna. My set is not modified, and can pick up Caribbean stations easily almost any night (ZLZ, TIRN, 4VEH etc.). I have never owned an HQ-180 or R-390, and this is the most sensitive BCB radio I have owned. Listening on the DX-160 is a constant battle between signal strength and overload, using an external antenna, as the internal loop is not much use. The set has sufficient sensitivity, but I find that I always have to balance the RF, IF and antenna trimmer, along with a pot in the antenna line, so that I can dig between channels. I now use a 30 foot long antenna that has much less signal to offer on BCB, but seems to be as good for long-haul DX as my 300' wire. If every station within 200 miles signed off, I bet the DX-160 could really pull them in with the 300 footer, but with NYC being 50 kw heaven, I can't use all that signal. The Superadio has more useable sensitivity; it deals with signals better.

As for selectivity, my modified DX-160 gets the award, but by a hair, as it is a much more versatile receiver. It is easier to look for a split because it has a BFO; easier to tune because of its bandspread, plus a sharper "nose" in bandwidth. Thus, it seems to "see" a carrier easier than the Superadio. At sunrise and sunset when my local 10 kw, WHLI-1100 is on, I can cut away to 1090 with ease on the DX-160. The Superadio sweats it, even with the added ability to null. However, there has been almost no station that one radio can get that the other can not. Only when a deep null is necessary can the Superadio beat the DX-160. Using a DX-160 with a loop would be interesting, in fact may be the best way to go, but I can't afford one! (ed note: How about an unamplified air-core loop? Cheap if you build it yourself...)

I haven't found any individual spurs on the Superadio using the internal antenna, but connecting in the large random wire and ground swamped the set. Though there were still no individual spurs, a general hash of local stations covered the entire band, making it useless. The stock DX-160 had serious problems with spurs and overload. Replacing the antenna input diodes (see Tech guide) improved its performance greatly, but with even a short antenna I get an occasional birdie here and there. The problem is much more obvious on SW, but provided that you don't overload the front end, the set handles BCB OK. A preselector like on the Drake rigs would be a great addition for using a random wire.

As for audio quality, the GE is just superb. It can sound as good as a decent stereo, or can be shaped to sound like a communications receiver. The DX-160 has serious audio problems and there are times when this really hampers the readability of signals. Any sort of tone control would help. The DX-160 with any speaker is an audio nightmare.

Antennas are a problem for both receivers. The DX-160 needs an antenna, as the internal ferrite rod is worthless without more amplification. I would suggest a medium sized loop or other directional antenna so that you could control strong signals. I have yet to find a way to connect a random wire antenna to the Superadio that did it any good. As I said before, hooking a wire to the external antenna terminal swamps the set here in suburban NYC, and you also lose your nulls. The best way that I have found to use an external antenna is to make up a simple LC circuit and bring it near the built-in ferrite rod, coupling it for best signal transfer. My gut reaction is "who needs it?" The Superadio can take care of itself.

Dial accuracy is a problem at least in my case, with the DX-160. I have never aligned this set for calibration, and on all bands, the dial and actual frequency don't come close to tracking. You just have to learn where everything is and grow weary counting frequencies. For 19 and 31 meters, I use WWV for a reference and use tables I've developed that tell me where I am on the bandspread. On the other bands I will set the bandspread on "80" and zero-beat that with a loud local BCB station, then switch to the other band and be calibrated to my conversion charts. Pretty accurate, and pretty ridiculous in this day and age, but I can't afford an outboard digital readout. I have made a similar chart for the Superadio using the center scale "LOG" markings, and find that to be accurate. The Superadio dial is much easier to deal with. (ed note: According to DX News, Feb 1/82, a Superadio Plus, #7-2882, with digital readout, at \$139.95, is coming on the market)

The only thing I would want to add to the Superadio would be switchable selectivity, like ± 4 kHz and ± 1.5 kHz. I've already modified the DX-160

in its antenna inputs, its RF and IF gain controls and its selectivity. Future projects, which I will make public after I work them out, will be separate pots for IF and RF gain, and an added antenna gain control. A ground on-off switch is another good idea, simply done. I also want to take a hard look at what makes this set's audio so unintelligible, as this is its most serious problem for me.

Incidentally, I have access to a Dymek AM-5, Dymek DR-22 and Drake SPR-4 at work and have tried all three on BCB. The SPR-4 is much better, in some cases, than my DX-160. It has a tendency to show spurs and overload, even with its preselector however. It can really cut the cheese in selectivity, its audio quality is OK, and the notch filter is very useful. It would be nice if the preselector tracked with the tuning dial, as tuning both at once trying to band scan is trying! I like the rig overall. The DR-22 is made for lazy and rich listeners and NOT for MW DXers. It can't handle the cesspool of signals in New York City. Its wide bandwidth setting makes for hi-fi AM, but BCB sounds lousy compared to SW. The Dymek AM-5 is better for listening to the BCB, and its selectivity controls and RF controls work well, but forget it for splits and high signal areas. This has potential, if it could be modified for selectivity and signal handling.

