

M63-1-1

PUTTING YOUR DX-440 BACK ON TRACK - by L. Hyde

After reading Mark Connelly's article comparing the DX-440 with the Sony ICF-2010, it occurred to me that correcting the frequency error on the DX-440 might not be too hard, if you could find which pot or adjustment to tweak. Never one to be afraid of tweaking pots, I took the back off my DX-440, and found that the fix is unbelievably easy! In fact, if you are not averse to doing some "constructive destruction" on the back cover, it can be done without entering the rx at all!

Remove the back cover. There are five screws visible, and one under the bottom battery. It is unnecessary to remove the batteries. Note: removing the back cover will blank the display. To avoid this, hook up a 9V adaptor before doing so. Lift the cover away from the rx. There is only one wire - the antenna wire. Disconnect this to avoid breaking it.

On the board, you will see 3 crystal cans on the upper left. Beside the far right crystal, to the lower left, you will see a small IF type can. This is the frequency adjustment.

Procedure: Clip a short wire to the disconnected antenna lead. Turn the set on, and tune in the best WWV freq you can find. Set the dial at the correct setting. Filter should be on "narrow." Turn on the BFO, and set the knob at 12:00. Switch the "Lock" button to "in."

Now, using a small screwdriver (fiberglass is best), tweak the adjustment until the BFO "zero beats". Make sure you didn't move the BFO setting by accident. Tweak again as needed. Now, turn off the BFO, and check to see that the dial setting is right with the station tuned in correctly. It should be. Your DX-440 is now back on track, the way it was when you bought it,

"Constructive destruction" - to facilitate future re-tweakings, drill a small hole in the back cover directly above the frequency adjustment can. This is your decision. A cleanly drilled hole should be completely unnoticeable, and would prevent your having to enter the rx again in the case of future adjustments.

One area that Mark did not mention was audio quality. I feel this is the DX-440's biggest shortcoming. The sound is muddy at best, and worse with the filter set at "narrow." With both rx's set at the same freq, copy is far easier on my car rx than the DX-440. An outboard speaker helps.

Also, I find that the DX-440 has trouble with RF amps, and active antennae. The AGC seems to "saturate", and the rx tends to overload on strong peaks. It is always necessary to back off the RF gain to compensate, thus effectively negating the added amplification. This is especially troublesome when flutter or fast fades are involved. The AGC attack time seems too slow to be able to compensate. Slow AGC is desirable for SSB reception, but not AM.

UPDATE ON THE DX-440 TWEAKING PROCEDURE

In DXM #944, I published "PUTTING YOUR DX-440 BACK ON TRACK": a simple tweaking procedure that corrects a frequency display error, a common problem with these receivers. Here are a few additional points.

This procedure assumes that the BFO frequency is correct: i.e. center position of BFO knob denotes true IF center frequency (zero beat.) However, if the BFO frequency itself has changed, this will not give an accurate frequency setting when tweaking the adjustment. I'm sure the BFO can be calibrated as well, but such should not be tried without a signal generator. After all, using the BFO as a reference was to AVOID the need for a signal generator.

It appears that in such cases, a usable adjustment may be obtained by ear. Simply adjust until the test station seems to be tuned in correctly. The very fact that the receiver tunes in 1 kHz increments eliminates the need for tremendous precision.

Another point is that this procedure does nothing to correct for any frequency drift as the receiver changes temperature. The specification calls for +/- 1 KHz per hour: this indicates that a significant amount of drift may be encountered. If your receiver tends to drift quite a bit, it is best to turn it on for an hour before you attempt to tweak.