

Simple Modifications for the HW-12, 22, and 32

Recent articles have appeared in various publications telling how to put these transceivers on CW, and retune for the CW portion of the band. These have been good as far as they go, but they leave out the convenience of bandswitching. I have the 80-meter transceiver, modified with the Dynalab Deluxe conversion kit, and have further modified it as described here. The original purpose of the modification was to enable me to work the European phone segment of 80, while at the same time, maintaining immediate capability to get onto the local MARS frequency of 3996.5 kHz. The answer was quite simple: parallel C-130/C-131A with a fixed 60 pF and a 7-45 pF ceramic variable.

Do not run directly to ground, but instead through a switch. For those who wish to make a no-holes modification as I originally did, and for those who do not have the calibrator installed, the leads running to the calibrate switch may be removed and taped. One switch lead is then run to ground, the other to the end of the added capacitors. Operation is simple: for normal operation (on 80) leave the calibrator switch in; for the lower coverage, pull it out.

The trimmer (7-45) may be adjusted, and in doing so, you will find that you have lowered the frequency approximately 200 kHz. I imagine a more accurate means could be found, but this was satisfactory for my purposes once I established that 4.0 MHz would be 3.8 MHz on the dial in the lower position. For those persons having the Dynalab conversion (or the straight 40 and 20 meter transceivers) throwing in the added capacitance will *raise* the frequency 200 kHz. This is fine for those hams who want to work the 14.405 and 14.505 MARS frequencies, but for normal operation a somewhat different approach must be tried. In this case, after

installing the additional capacitors, pull the switch to put them into the circuit, then recalibrate in the normal manner, which is now *high*. Pushing the calibrate switch *in* will then *lower* the frequency putting you in the 40-20 meter CW band. The same could be accomplished with a subminiature toggle switch which will blend nicely into the cabinet. This modification (addition of capacitors) is easily accomplished above chassis by using one of the printed circuit mounting screws run through the hole on the trimmer case.

Other simple, but useful, modification I have installed is a three-inch round internal speaker, mounted on the right side of the case next to the top. Use a good grade speaker because the thin paper in the economy models will dry out and start to rattle quickly. A small vernier dial which was added to the panel is an excellent aid in tuning, especially when mobile. I have also added a stereo type jack on the front panel, and I can use a head-set-boom mike by simply plugging it in. Lastly, I have added sideband selector lights to go along with the Dynalab kit. Wiring is run through the unused side of the sideband selector switch and an added rotary switch section on the added bandswitch (this is necessary because the sideband switches on the various bands). To complete my rig, I am using a Knight Audio Compressor which gives an added 3 dB gain on most contacts. From my location at Ramstein Air Base, Kaiserslautern, Germany, mobile, I have worked as far as Australia and Alaska on twenty meters using the modified transceiver, HP-13 power supply and Hustler antenna. Hope you all have as much fun with your rig as I do mine—at their low cost, one can easily afford to experiment.

... DL4XO/W3BQE