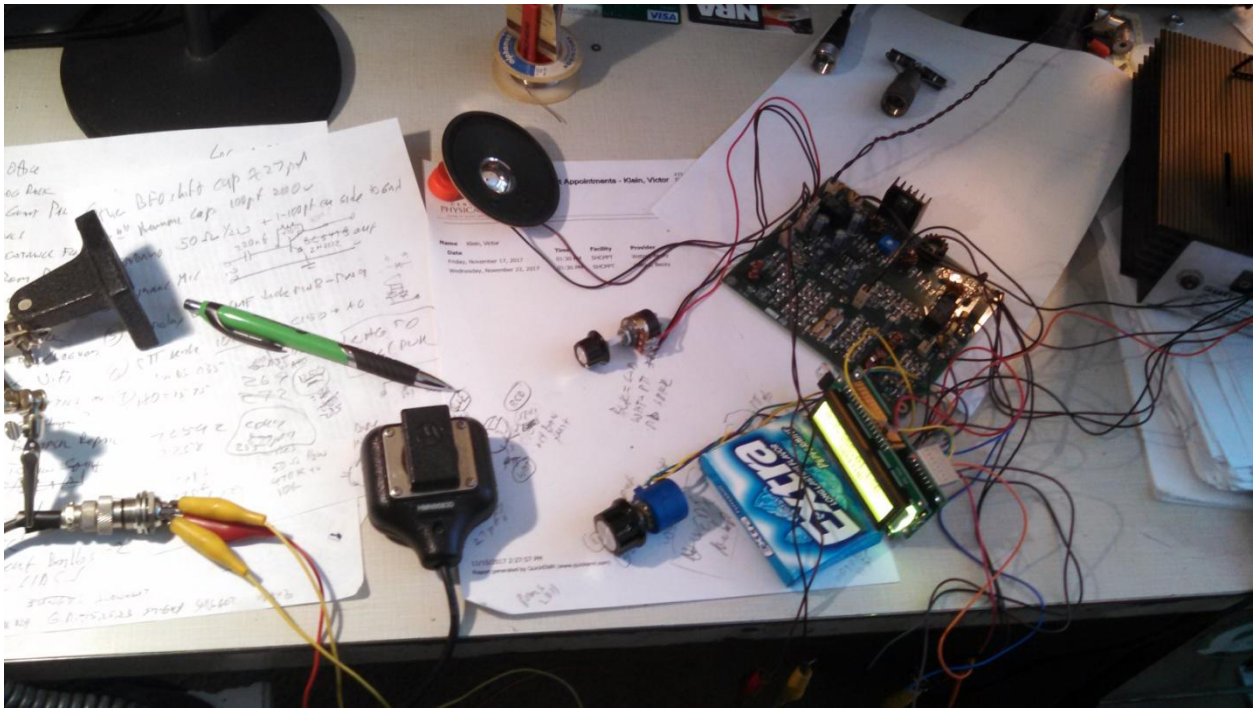
BitX radio

I have been having fun with the BitX40 transceiver, lately. This is a $59, including shipping, 40m SSB rig produced in India as a populated circuit board and a bag of parts including everything needed to get on the air except a speaker, power supply, and antenna. It even includes a DDS VFO and display. Oh, there is no case or knobs, either, but it will work as it is supplied and puts out around 7w. There is a large international group of hams on https://groups.io/g/BITX20 that provide many interesting ideas for modifications, both in hardware and software (called sketches as the DDS "Raduino" VFO is really an Arduino computer). I bought a case from China that was $10, including shipping, and have free software from a Dutch ham that provides a great upgrade to the OEM sketch with dual VFOs, RIT, mode shifting from LCW, USW, LSB, and USB so the rig can be used on digital modes, too. I have been digging around in my junkbox for most of the other stuff I needed. Great fun!

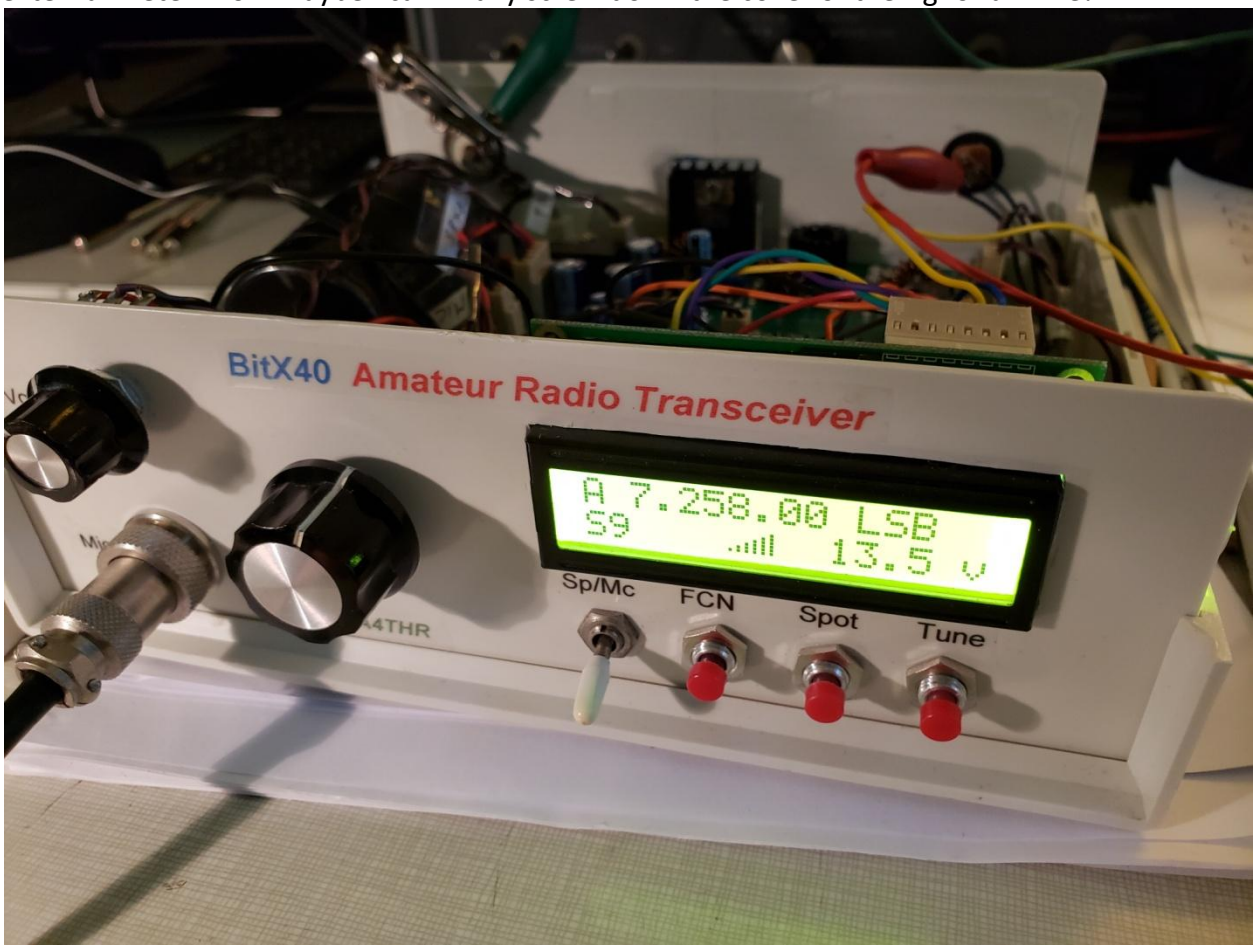
The rig has become so popular, that the designer has expanded to a new version, the uBitX (microBitX), that covers the ham bands between 80 and 10 meters. It has been about 2 months backordered, but the BotX40 is still available for delivery in about 2 weeks from ordering. You can see the rigs on their website http://www.hfsignals.com as well as how they are wired up. These are designed for experimentation and I've had a blast making both hardware and software mods, some that didn't quite work, but the "risk" is relatively inexpensive should everything go belly up. Attached are a couple of pictures, one as the rig was "haywired" for my first QSO with a station in Virginia, and the second as installed in a housing. I have even used it mobile with a hamstick in my XYL's car when we went to FrostFest in Virginia, and was able to check in to SouthCARS with the NCS in South Carolina while underway. We get a few of these rigs checking in to ECARS every week.



As the BitX40 looked making its first QSO

Appearance testing a modification to provide an S-meter

So, one of the beautiful things about these radios is that the hardware and software are both “open-sourced” and readily able to be modified. The latest for me was to add a power supply voltage meter to the front panel. As I already have a 12v regulator added for the critical boards in the rig, I can run higher voltages when available and boost the output a bit more. This was not a difficult hardware change, but did require redefining one of the analog inputs on the Raduino. You’ll also see from the last picture that I replaced a non-functional toggle switch that was for a mod that didn’t quite work with a pushbutton to allow tuning an external antenna tuner or more accurately reading SWR on an external meter. Now maybe I can finally screw down the cover of the rig for a while!



Front panel after adding the power supply voltage