## *µBitX radio*

 Last year my winter project was a BitX40 QRP SSB radio for 40 meters, and I posted an article on the ECARS website. I continue to use it and it is my "go to" radio when I am traveling in my wife's car, since I have no permanent installation there like I have in my own. This is the setup when I travelled to FrostFest in early February and I was able to have QSOs in both directions using a Hamstick on a rooftop Mag Mount.

This winter I have been building the "big brother" to the BitX40, the µBitX (micro-BitX), which covers all bands from 80-10m. The radio is available from http://www.hfsignals.com/ and costs roughly twice as much as the single band radio, but you do get a lot of features and a bit more power (10-15w). As with the BitX40, you get 2 populated circuit boards and a bag full of parts, which provides everything needed to get on the air except a power supply and antenna. The radio was only introduced last year, and is already shipping version 5 as the support forums suggest improvements and fixes and the Indian manufacturer incorporates those changes. One ham, KD8CEC, has come up with some nice improvements by rewriting the software that even allows CAT control of the rig, emulating an FT817, so it can be used in digital communications. He also identified an inexpensive touch-screen display for about $25 and provided formatting and program changes to be able to add capabilities you would only expect in a high-end radio. He has published this mod, along with many more, on his website http://www.hamskey.com/ as a service to the amateur community.

As with last winter's project, I started by "bread boarding" the components with alligator clip jumpers to make sure everything worked and to calibrate the radio. I then made the conversions needed to utilize the color display and tested that:
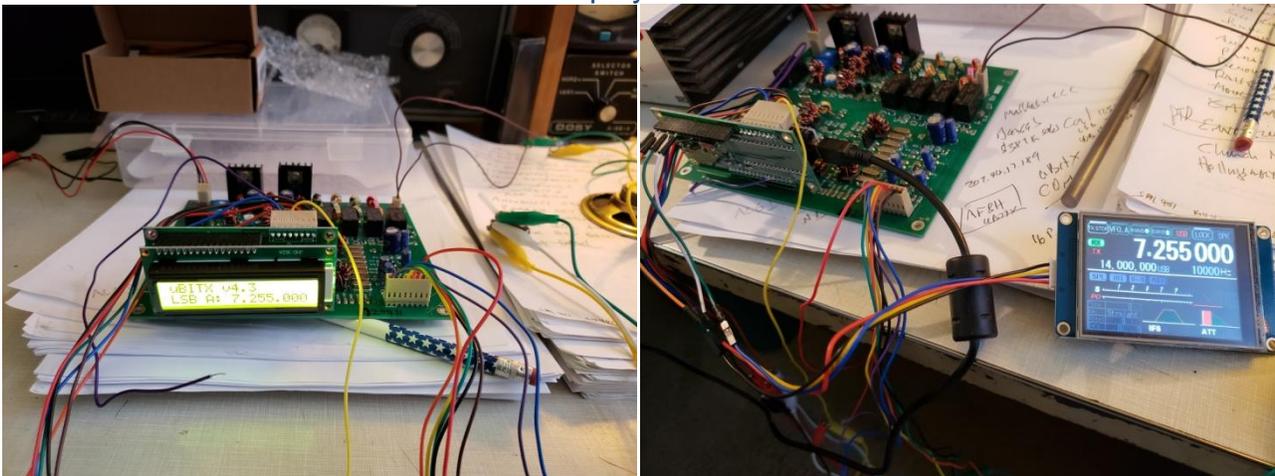
Assured that all was working, I then started making the case, using the same type of $8 plastic case from Banggood in China that I had used before (plastic is a lot easier to cut than

metal, and there are few issues with a QRP radio like this). So this is the result…except I continue to make improvements. Adding a 12v regulator and another heat sink allows the rig to be connected to power supplies of up to 24v for more power, and I also added components to get a working S-meter, which also allows features like band scanning. I am working on even more improvements, like an effective AGC system, some audio changes, and perhaps some of the filtering I added to the BitX40 to allow it to work well when mobile. I have already worked stations as far away as Lithuania on SSB with this amazing little radio.

73, =Vic=
WA4THR