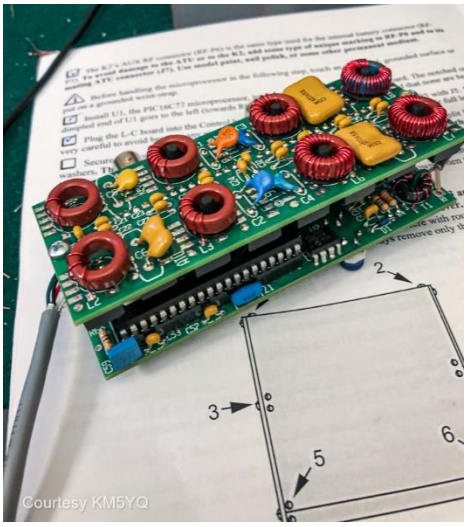
Kit Building—A Dying Breed?
A K2 Comes to Life Part IV

David Duke, KM5YQ, wraps up his series about his Elecraft® K2 build.



Now, that I had the basic K2 completed and aligned it was time to finish building the automatic antenna tuner (ATU). There were two boards to complete: a Control board and an L-C board. The L-C board was a little challenging as most of the .001 pF caps and relays were installed on one side, and the large caps and inductors were installed on the other side of the board. The challenging part of the build here was that the leads for the large caps and inductors had to be trimmed to final length before being installed as the bottom of a relay was almost always directly on the other side of the board and care must be taken for the lead to not touch the body of the relay. Controlling solder flow was somewhat important as well and I found that I needed to turn up the temperature a little and use a shorter dwell time to get clean and shiny solder joints.

These two boards are connected together with pin connectors and standoff hardware. The finished unit is then mounted to the top chassis cover. The ground connector actually scrapes away paint and provides the ground for the ATU in addition to providing a connection for an external ground.

This completed, I ran into another problem during the alignment of the ATU. After some emails back and forth with Dave at Elecraft and confirmation with my DMM, I found that I had installed the RF connector in the K2 RF board backwards! Once I removed and reinstalled correctly, I was able to complete the alignment of the forward and reverse power on the ATU. That was on a Saturday morning, nothing left to do but take my finished K2 on the road!

I found a covered picnic table at Cedar Hill State Park around 2:00 pm in the afternoon and setup my Buddipole™ as a 20m vertical. The vertical section was a full size ¼-wave—no coil needed—along with a wire counterpoise running down one of the guy lines. The ATU quickly brought the SWR from 2:1 down to a 1.0:1 match after a few seconds of clicking relays.

I checked the receiver filter settings and listened up and down the center of the band for a few minutes and then began to call CQ a few times. I didn't get any takers so I began so tune around to see if I could find others calling. I answered a CQ from Dennis, K6DF, in Freemont, California! He asked me to send my call again. (I found out later he had switched to a tuned resonant CW speaker to bring my signal up above the noise.) He gave me a 339 signal report; we had a short QSO and signed off.

Wow! I had just worked a station over 1700 miles away on a radio that I had built myself! I tuned around and soon found myself answering another CQ and getting a call back from K6KPH. I recognized the suffix of this station immediately as the costal maritime station KPH and jumped on this one. The operator was Robert, K6AAQ , and he was operating from Rio Vista. They had been off the air since March 20, 2020, due to pandemic restrictions. He was using a donated IC-718 at their improvised location so they could get back on the air.

The K2 was again on the air for Field Day 2021. I made a few contacts with particularly challenging band conditions.

I plan to add the 160M module that also adds a second receive antenna. I am still considering on whether or not to add the SSB module. I do have an Elecraft KX3 and it handles phone and data modes. Maybe a homebuilt kit amplifier… hmm?

This project was very satisfying and fun, and I really learned a lot during the process. I spent quite a bit of time on YouTube, reading the Elecraft reflector and used many other online resources to prepare for the build. Mostly, I learned how to build this kit by, well, building it.

73, David KM5YQ