

I was fortunate to live in suburban New York City during the period right after the war when military surplus flooded the market. Suddenly piles of expensive receivers and transmitters became available for a teen agers with a limited budget. In a short period of time I was able to purchase equipment that was usable on the amateur radio bands and the prospect of becoming a radio amateur became feasible.

At the same time the government passed laws which made becoming a ham much easier. The reduction of the code requirement to 5 words per minutes and a simplified written examination was a great boon to high school students like me. So just as soon as I could get my code speed up to 5 words per minute I took the exam and passed it.

Looking back almost seventy years I wonder at the sheer amount of misinformation I had at the time. The first problem was that I had no idea of how to connect a transmitter to an antenna. I thought that if I could hear a station I could talk to that station. Amateur radio operation in the 1950 s was primarily on low frequency bands. Novices were licensed to operate low power CW transmitters in the 80 meter band using Chrystal control.

Most cheap surplus transmitters which we had obtained were variable frequency controlled and designed to work into short military antennas. In contrast today's new hams can buy cheap handy talkies that connect to local repeaters so they can communicate immediately. In contrast I was faced with a steep learning curve before I made my first complete contact.

My first problem was space. Antennas available for the frequencies for which I was licensed were at least 135 feet in length. I did not have anything like that available from my bedroom window. Somehow I found the room by stringing a wire just below the power lines to tree on a neighbor's property. I learned a lot about stealth wires in the process. Antennas of that type were end fed and required a tuner. The tuner had to be coupled to the equipment I owned by a matching network. All of these devices required adjustment before a contact could made.

Frankly the learning process which was required to make that first contact proved to be a marvelous experience for all of the years I have been in this hobby. I have never had enough room or enough money to acquire more than the minimal antenna system. Through the years I have tried different solutions to the space problem. In most cases I never had more than 60 feet to run a wire antenna so I tried a variety of shortened antennas. In time I abandoned the low frequency bands and switched to 2 meters and above.

When I had my last house in the east, I had enough room to put up a G5RV dipole and a

small beam. This rekindled my interest in the low bands. When I moved to Arizona the antenna restrictions kicked in and I put up a flagpole antenna. It worked sort of and a 500 watt linear helped a lot but a move to a LaPosada retirement apartment put a stop to those operations.

Until recently I thought I was finished with low bands forever however the appearance of relatively cheap and interesting chinese radios has reactivated my interest again. For half of the price of a KX2 or 3 you can purchase a chinese low power transceiver. In addition these are often partially or completely software defined radios. The radio I picked was an Xiegu X5105. This tiny radio, about the size and weight of a brick, contained a complete 500khz to 55 mhz receiver and a 5 watt transmitter capable of working the 160 meter to 6 meter ham bands on all legal modes.

If that was not enough it also contained a competent antenna tuner and digital keyer for CW. Oh yes there were selectable filters, noise blankers and selectable AGC values. Looking through the complete list of menu items I found CW message memories and even a PSK 31 decoder.

The bug bit again and now I had everything but an antenna. From prior experience I knew how difficult to get a contact with a low power radio so I began to research alternative antenna systems. In a short time I narrowed the selection to 2 types; a compact magnetic loop and an end fed dipole. Of the two the magnetic loop seemed to be the best idea.

Magnetic loops had a major shortcoming . Because of voltage considerations they were limited to low power transmitters. Well that is what I had.....a low power transmitter. A match made in heaven. Low power loops are relatively simple to construct and several vendors offer complete assemblies. Looking on Amazon, I found a Chameleon loop antenna.

Of course I could have made the antenna myself but getting parts to-day is no longer as easy as it used to be. Radio Shack is gone and most mail suppliers have minimum orders. Having committed to many projects in the past that turned unexpectedly expensive I bit the bullet and purchased the Loop from Amazon.

Basically there are 2 loops assemblies organized around a sealed box capacitor. One assembly is made of RG8 cable and the other is made of aluminum. If you select aluminum loop, the frequency range extends from 40 meters to 10 meters. The coax loop can be extended to 80 meters.

In operation, the loop performed as I expected. Tuning was quite sharp on 40 meters but

easy to adjust. Since my new transceiver had a built in SWR scanner, I was able to test each position with visual indication of the bandwidth obtained. This was a great benefit because I knew exactly what I would get at each stage of adjustment.

Now another demon surfaced...propagation. It is summer time and the sun spot cycle is lousy so the bands are noisy and skip is scarce. 5 Watts into an indoor loop is not going to go far on SSB or even CW. Well there is an answer for that problem as well...low signal digital modes set as PSK-31 and JT8. The X5105 was designed to be compatible with computer software. With a little tinkering I got the digital cable connected to Ham Radio deluxe. The software controlled the radio easily.

Connecting the audio in and out proved more challenging but it too connected to the computer after a lot of tinkering. It soon became obvious that the software had a learning curve. Connecting the device was just the start. Ham Radio Deluxe is complex software surprisingly it decoded many digital modes but not JT8 or JT65. To use those modes I needed WISPR software. Fortunately WISPR worked through the Ham Radio Deluxe software but it too had to be configured.

I hate to admit it but all of the above effort did not result in one contact. It finally dawned that too many years had passed since I had last operated any digital mode device. It wasn't until I understood that the digital modes utilized today were usually restricted to a single frequency and contact selection was enabled by selecting a suitable signal within the passband by software that I finally made a contact with a local ham.

Of course this is the beauty of our wonderful hobby. Looking back over the years each step in the process of acquiring a license, getting or making equipment and making contacts has been a wonderful learning process. Today's marriage of computers and ham radio is a blessing that will lead to a lifetime of learning and achievement. Yes you can buy a complete station for less than the cost of a meal but learning to set it up and make contacts yourself is the whole purpose of the process. It is a good time to be a ham.

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