

Getting bored with ham radio? The author was, too, a few years ago ... so he decided to try something new and more challenging.

Musings on an Experiment in QRP

BY BOB LOCHER,* W9KNI

Let me start out with a truism that is too often forgotten: Ham radio is a hobby. That means it is supposed to be fun, or at least rewarding in ways we consider worthwhile. When what you are doing in ham radio no longer meets that test, you should be trying to figure out why, and then make changes until it is fun again.

A few years back, operating was getting a little stale for me. I decided I needed to do something new to relight the fire. In October of 1999 I bought an Elecraft K2 transceiver kit. I had seen this little box operate, had spent five minutes tuning it myself, and had been impressed. The specs looked pretty good, too. I thought something like this would be a lot of fun.

I had no idea!

A New Adventure

The K2 transceiver went together smoothly, taking just under 30 hours to assemble. On November 5, 1999 my new rig became QRV.

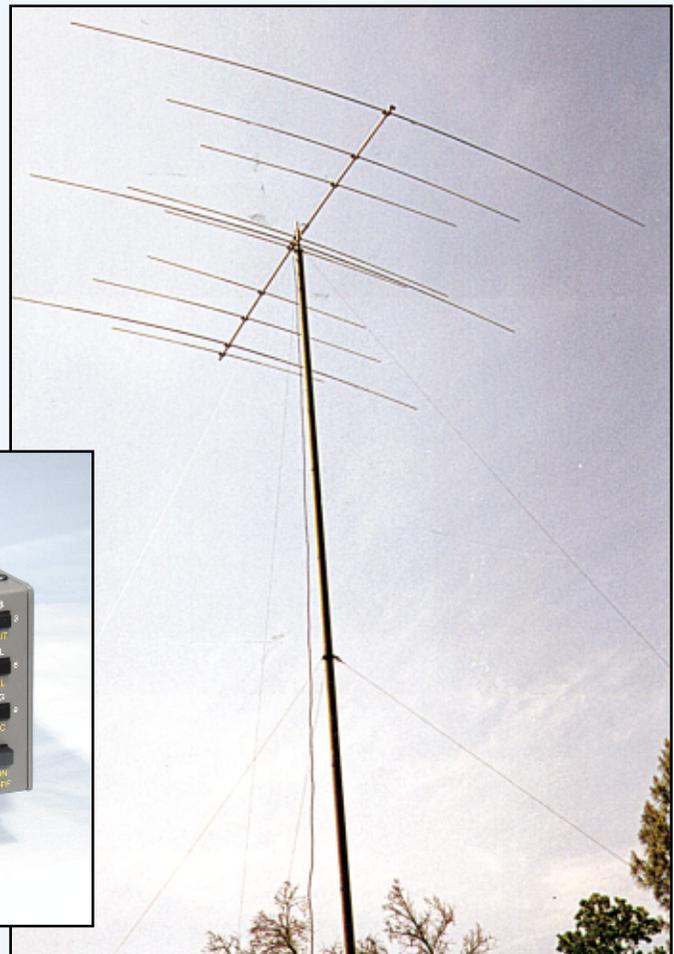
Now let me be frank about something: Many QRP operators limit themselves to 5 watts output, or 10 watts on SSB. Somehow these arbitrary numbers became the official QRP maximums. I do not subscribe to this limitation. When I hooked up the little rig, my wattmeter said I was getting 12 watts out. That worked for me.

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The author's QRP setup, an Elecraft K2 putting out 12 watts and a Bencher Skyhawk triband antenna, which provides gain on receive as well as transmit.

My first QSO was with NØSS, who was running a K2 as well. My second was with VP2V/G3TXF, then JW/ DJ3KR, followed by UT2QT. "Hey," I thought, "this stuff is FUN!" I was really hooked.

After many years of operating with maximum legal power always available (although usually at 100 watts), I found myself operating QRP (okay, at 12 watts), with the important point here being that was no easy way to go QRO. I have always been an advocate of operating QRP. I believed back then and I believe now that any operator will learn a lot trying to work stations running QRP. Lots of times in the past I had turned down the output and tried my hand at chasing DX. If I tired of it, or felt the need for more power, it was a simple matter to twist the output knob and start running 100 watts. With the throwing of a couple switches, I could be at 1500 watts output in seconds.



Operating QRP, however, with no way to turn up the wick, is different. There is no easy escape. Being forced by choice of rig to operate QRP proved to be a delicious new adventure. Okay, I will confess: One time I did do a panic switch back to the old rig—the transceiver and 1500 watt linear—when I got a phone call about a P5 station allegedly in North Korea, the last country I need. I worked him, but it soon proved to be a pirate station . . . sigh. (I have since worked several other “P5” stations with the QRP rig, but they all were pirates as well.) However, with the exception of that one QSO, all my operating since November 5, 1999 has been with my version of QRP. Thus far I have 281 countries worked with the little rig, both CW and SSB.

The Antenna

Knowledgeable DX stations I work ask what I am using for an antenna, realizing that the signal is a product of both rig and antenna. I use a Bencher Skyhawk tribander 65 feet above the ground. As near as I can figure, in terms of effective signal radiated, this is very similar to running a hundred watt transceiver to a Butternut vertical.

I have been down the DXing road before; this was not my first time. Therefore, it might be allowed that I do know a few of the tricks of the game. All that said, this time chasing countries with a home-built rig running 12 watts has been terrific fun, and all of this with no mandatory QSLing!

For what it's worth, all QRP DX QSOs were made without any kind of help—no running of the big rig, then having cracked the pile-up asking the DX to stand by for my QRP; no calling frantically signing “/QRP.” I will readily and cheerfully admit that once I have in QSO a DX station for which I had to beat out a pile-up, I get considerable pleasure in reporting that the rig is 12 watts. Really, though, that is a tribute to the antenna, not the radio.

Anyhow, my experience has given me better understanding of a few things, and that is what I want to share here.

The QRP Mindset

First of all, QRP is a mindset. As referenced above, some feel that it is only true QRP if you are running 5 watts or less on CW, or 10 watts on SSB. Some QRPers feel that using competitive antennas is not proper either, that a true QRP antenna might be a random wire fed with a tiny antenna tuner. Others feel only homebrew equipment really

counts, and that considerable virtue is gained by recycling parts, especially non-electronic parts. Many seem to have a WW II spy mentality, taking great delight in making working miniaturized transceivers in tiny containers such as match boxes, cigarette packs, tin cans, or even fountain pens—things that appear to have more mundane uses.

Some QRPers exchange 72's instead of 73's, as near as I can figure because 72 is less. Obviously, some QRPers are masochists. Some are minimalists, some are thrifty by choice or necessity, some run QRP as the only viable solution to RFI problems, some like operating handicaps. Some QRPers do much of their operating from portable locations, frequently places not easily accessible. Some look with disdain at most other forms of amateur radio; they have their own suggested frequencies on which they operate, and largely ignore the rest of the amateur radio community. Some operate primarily or exclusively mobile. As with any other successful and worthwhile avocation, there are also those who are wannabees, who talk the talk but don't walk the walk, and who invariably are the loudest in defense of QRP purity and with suggestions that no one should legally be allowed to run more than 10 watts.

Taken in sum, QRPers are a diverse lot, and certainly include some of the more interesting people in amateur radio. Beyond a doubt, QRPers are one of the most dynamic groups in HF operating today.

But . . .

Operating with 12 watts to a Skyhawk tribander is the approximate equivalent of running 100 watts to a Butternut vertical. My QRP status is reasonably intact if I run 12 watts, but completely gone if I am running 100 watts. Yet the ERP (Effective Radiated Power) is the same. If I tell other hams that I have worked 281 countries in 22 months QRP, most nod with respect. If I tell them I ran 100 watts, the respect ratio is significantly reduced.

Is this fair? Of course not. Frankly, even though the ERP of the two setups might be identical, if I was ever to have to choose, I would take the QRP and the killer tribander every time, thanks to the huge receiving benefit offered by my antenna. (The trade-off does offer a significant penalty on 40 and 80 meters however, where I have a vertical whether I am running 12 watts or 100. That is where 100 watts would be rather more welcome.)

QRP vs. QRO

Now let's compare some other aspects of running QRP and QRO—full legal power if needed.

My QRP rig has a really hot receiver, and my tribander is extremely effective for receiving as well as transmitting. The result is that there are many times when I can listen to some pretty good DX on a band that is not wide open. There are many paths, especially on 20 meters, and to a lesser extent 15 and 10 meters, where with good equipment and a good antenna a lot of DX stations can be heard, and reliably copied, particularly on CW.

On these secondary and non-prime paths, however, all I am with QRP is an eavesdropper. There is no way I can work these stations. Often they are a solid 539, but they tell their contact that they are running 400 watts or more. If I were running 1500 watts, these stations would be within easy reach. Guess what the chance is that such stations are going to hear a QRP-level signal. Speaking frankly, I did not earn my license and put up a tower and a Yagi so that I could be an SWL station.

When a major path is open on a band, this is not so important. QRP is capable of working stations, and operating can be rewarding. However, there are a lot of times when there is no major open DX path on any band, and thus for the DXer running QRP there is no real reason to be operating. With higher power, operating becomes more realistic.

Another limitation with QRP is ragchewing. I am fond of DX ragchewing with old friends and new, but doing so with QRP power levels is not a very rewarding way to go. For one thing, any QSB can wipe out copy at the other end, or at least make it difficult for the receiving station. What fun is that for him? On top of that, you get very little respect. Too many times have I been in contact with another station and had someone go “QRL?” on the frequency. I responded, “QRL, PSE QSY” and then had the other station immediately open up with a CQ on my frequency. Obviously, the station did not hear me, but it certainly is frustrating. As a result, most DX QRP ragchews are short in duration and often not terribly rewarding.

For ragchewing, if it was readily available I would indeed normally run 100 watts, and more if needed, to hold the QSO. Running a rig that maxes out at 12 watts makes that impractical.

Whether you are DXing or intent on a good ragchew, another problem can be that the station you wish to work suf-

fers from noise problems, either of the atmospheric QRN type or power-line noise. Either can conspire to render weaker signals impossible to copy. Then, frankly, some operators simply are not good when it comes to copying weak stations.

I confess I am at a point where the virtues of operating 100% QRP are waning for me. For one thing, there are not many opportunities left to work new countries on my QRP country list. There are a few on the air that I need, but none of them are easy under any circumstance—stuff such as EP, YI, 9N, J28 (but ask me about nailing YK!!!). Ragchewing is a sometimes thing, and I miss having more solid QSOs with my DX buddies. On the one hand I am ready to move on, but on the other hand I don't want to give up my QRP DX

chase either.

That may not be a problem much longer. My rig supplier has promised a 100 watt board for my transceiver, and I certainly will add that. The supplier also indicate that by pressing a button the amp board can be bypassed completely, returning the radio to the present 12 watts output. (*At press time, Elecraft had recently introduced its KPA-100 add-on board for the K2.—ed.*) I really like that. It sounds like an ideal solution for me. I can tune the bands. If I hear a legitimate North Korean station, I can be running 1500 watts in a few seconds. If I come across a buddy and want to ragchew, I can run 100 watts or more as necessary, again in a matter of seconds. If I hear a new one for my QRP DX chasing, I can push a button and run 12 watts again. The only thing I really have to pay

attention to is making sure the wattmeter is not in the 25 watt range when I turn on the linear!

Somehow, for me, turning the gain down on a 100 watt transceiver is not the same thing—been there, done that. But pushing a button that makes me QRP or not does work for me. The digital solution! I'm looking forward to it.

Give It a Try

Are you getting bored? The bands seem stale? Give QRP a tumble. There are some superb radios from a number of vendors. Some are kits; some are factory assembled and ready to go. You may or may not exhaust the possibilities of QRP in your personal operating, but either way you are pretty sure to have a lot of fun for a while. ■

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