# The NEWSLETTER

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Mercury Amateur Radio Association - MARA
North America - North East

## NOW'S THE TIME TO BE THINKING ABOUT YOUR ANTENNA WORK.

## GET IT DONE BEFORE COLD WEATHER!


**by Gil W1CJD - SK**
who for many years provided cartoons for the pages of QST Magazine.

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## OTHER STUFF



*Links that will take you to web locations referenced in this newsletter are shown in italicized blue text.*

*Past issues of the MARA NE NEWSLETTER may be viewed at http://ne.mara.net/newsletters.htm*

*Best viewed in Microsoft Internet Explorer. Chrome may not display some items in the correct place.*

*E-mail your comments, ideas, or submissions to marane@mara.net or to ve1vq@eastlink.ca*

# Grandma Mara's RAMBLINGS...

**This time of the year,** Grandma's thoughts always turn to learning and teachers and education. I remember the good teachers I had in both grade school and in university - and there were some great ones. I'm sure you have some you remember for the same reasons. There were also those people who taught me a lot of things who weren't officially "teachers", just regular people with the knack of being able to impart of their knowledge about things I was interested in.

My grandfather was one of the latter. He was a farmer who should have been a teacher, but whose family couldn't afford the money to send him away for the additional schooling. He made the best of it by reading everything he could get his hands on. He always joked that he married my grandmother because she was a school marm, who came with her own library.

When Grandpa became interested in radio, there was no one in his community who he could call upon as an "*elmer*", so he contacted the ARRL by letter, asking them for any suggestions they might have for material that he could study from. From that beginning, and the literature they sent him, along with the few books he was able to acquire that were available at that time, he studied until he felt he was ready for the exam. To learn the code, he listened for many hours over many evenings, to the family's living room radio which had several short wave bands (in addition to the normal AM broadcast band). The radio didn't have a BFO (*beat frequency oscillator*) but, using a circuit modification he found in one of his study books, he was able to cobble something together which worked after a fashion. With a key fashioned out of a piece of old saw blade, a small coil spring made from a length of piano wire, a piece of wood from an old church organ for a base, and a few brass screws, he constructed a key, and practised his sending, using that same BFO circut.

Of course, there were no VEs (*Volunteer Examiners*) back then, and because he lived within 125 miles of the nearest FCC field office) he had to attend in person. He walked to the main road, catching an early morning bus to the city, and then walked to the FCC office for the examination. He passed all his tests, and for his efforts received his *Class B ticket*.

Next came the scrounging of old radios for parts to build his own equipment. All of this took place in the mid to late 1930's just prior to the depression. Not an easy time to put a station together.

# TECH AND OTHER STUFF

**I needed additional wireless coverage** for my basement office at the house in western Canada. I'd recently had the cable internet service provider (ISP) up the speed and they replaced the modem/wireless router with a different dual band unit. Once the laminate plank flooring was down and I could move my desk and other office stuff into place, I found the upstairs wireless didn't really cut it for performance in the far downstairs corner. I thought I might add another extender like I had in the upstairs front. However, one day in early July while in COSTCO, strolling though the electronics section, I noticed a display of D-Link AC Dual Band range extenders (DAP-1520 - works with 11N and 11AC) for $19.95. One good thing about COSTCO is that if

something doesn't work, you can always take it back.

The set-up instructions looked clear enough. They recommend you use the WPS push button connection method. For that, you need to plug the 1520 into an AC electrical outlet near where your ISP's wireless modem is located. Then you push the WPS button on the modem, and within a minute press the WPS button on the 1520. Didn't work! Tried it several times. Didn't work any better no matter how many times I tried. Come to think of it - that method didn't work for the last two extenders (both NETGEAR EX6200) I tried either.

**"Thankfully, there was a manual method to try if the first method failed.**

Thankfully, there was a manual method to try if the first method failed. For that, you have to log into the extender using the wireless on your laptop or desktop computer. At least that way worked! Just like the other two extenders did.

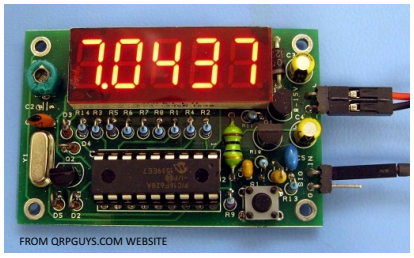
Now, I have great signal strength in my office. The laptop connects as does my HP wireless printer. With all of the other signal sources, there is nowhere in the house I can go and not have the signal I require. The only problem I can see is that you can't change the channel setting to avoid collision with other expanders. I'll have to do that with the others.

## QRP 1-WATTER TRANSCEIVERS - PART 6

I had noticed that sometimes the noise out to the ear buds wasn't as loud as I remembered it being at others. At these times, signals couldn't be tuned with the potentiometer connected to J1. Turning the power supply off and on usually fixed the problem. One day at the end of June, when I was playing with it on the bench, the off/on method wouldn't remedy it. Finally, the time had come to do something about the problem. A quick probe around the board with the new scope showed the oscillator at U5 wasn't working. This is a known problem with the forty meter version. "The fix is to add a resistor from PIN-7 of U5 to ground. This increases the current through the oscillator transistor in U5 and boosts it's gain to better start the oscillator. If you have the above problem, install the included 16K resistor."[1] There was no "included" resistor with mine so I made do with a 15K ¼ watt from my parts bins..

**"This is a known problem with the forty meter version.**

The next task is to build and connect one of the digital displays from *the QRPGuys website* to it. Once that happens, I'll move it over to my station antenna and see if I can make a contact or two with it. Perhaps that will inspire me to stick it in a case and make it all nice and pretty.



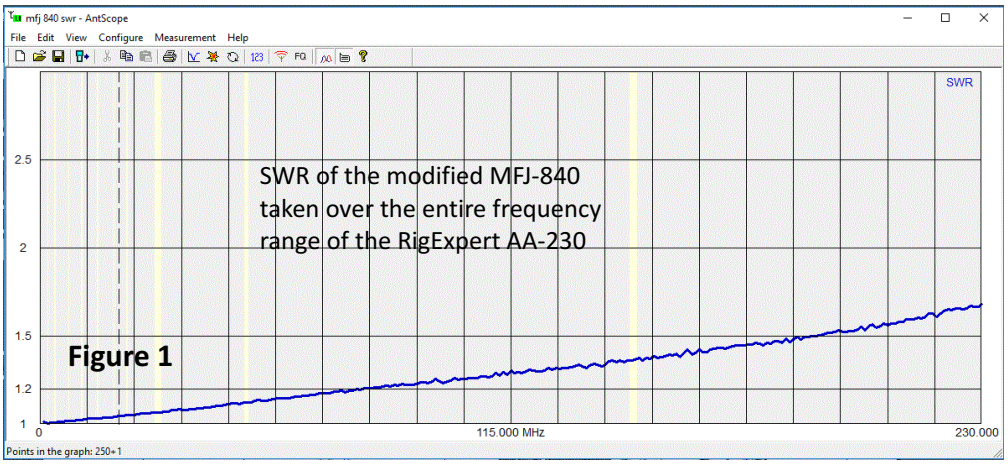
FROM QRPGUYS.COM WEBSITE

1 http://www.kitsandparts.com/1watters.com/parts_list_u40v3.txt
Scroll down to the bottom of the page.

## RETURN OF THE MODIFIED MFJ-840

I was looking at the dummy load on the QRPGuys web site, with the idea that I might place an order for one, and it came to me that I already had one - the MFJ-840 that I modified some months back. That made me wonder how flat (SWR vs. frequency) it actually was! I remembered I had a RIG EXPERT SWR analyser, and then wondered why I had never tested the dummy load with it. I think it might be an age related brain thing.

Anyway, it didn't take long to connect the two



SWR of the modified MFJ-840 taken over the entire frequency range of the RigExpert AA-230

**Figure 1**

**Figure 2**

together with a BNC to UHF adapter, and run some tests.

Figure 1 shows the SWR over the full range of the RigExpert AA-230. Out to about 190 MHz, it stays under 1.5:1. I tested it with the switch in both the meter and the DC voltage positions and could see no difference in the scans.


Figure 2 plots the impedance and reactance. The impedance slowly rises with frequency and the reactance is tending slightly higher or inductive. Certainly not lab quality but just fine for QRP power measurements I might want to do on frequencies up to and including the two meter band.

In hindsight, I now wish I had done some testing on the unmodified MFJ-840; just to have a comparison. Too late now.

**THE TROUBLE WITH SKYPE**

Skype, while touted as the answer to everybody's on-line video needs, still has its problems. I use it often to communicate with family members, and of course, the MARA guys on Saturday morning (where we turn off our video and leave the audio on), and when it works, it works reasonably well. But, when it doesn't…

I haven't noticed the garbled or out-of-sync audio or the freezing of video lately, so perhaps the development people have arrived at a solution to those things. There is still the frequent echo happening. That problem may clear up on its own or it may take a reconnection.

The Skype phrase, "improving your experience" has become an annoyance (and not only with just me), as some upgrades have definitely not improved my "experience" for the better. Whether that's the fault of Skype or of Windows 10 remains to be seen.

One of the "improvements" lowered my laptop's on-board microphone level to the point of being barely there. Searching Google for a solution shows me there are a lot of others with the same trouble. Good thing my USB headphones and mic still work normally.

**"One of the "improvements" lowered my laptop's on-board microphone level to the point of being barely there.**

Since Microsoft took it over, it seems as if it has gradually become more and more restricted, with fees now wanted for a lot of what used to be free.

In mid July, WD4HXG, WB4FLM, and K4EBY began experimenting with *EKIGA*. Last I heard, operation was not going well!

The set-up was reasonably straight forward, but that was where simplicity ended. When I connected to the on-line test, I could hear the lady's voice coming to me, and I could see audio from my laptop microphone when I talked, but I could not get it to repeat back to me. As well, I could not get EKIGA to show me any of my video no matter what laptop video source I tried. The on-line manual didn't provide much help to my problems, but only told me what I

**"The set-up was reasonably straight forward, but that was where simplicity ended.**

should see happening if it was working properly. Perhaps I didn't look enough.

As I write this, I've just un-installed it by using the Windows Restore feature. I'll wait until those smarter than me figure out the details before I try it again.

Update - mid-August - EKIGA has been abandoned as it could not be easily made to work.

**SPEAKING OF MICROSOFT…**

I've used Internet Explorer for many years and been quite happy with it. Within the last few months, some things and sites are acting a bit strange.

My banking site, several of my credit card sites, and a few others, open a pop-up screen asking me to select a server account and giving me several choices to pick from. After several months of this, it stopped asking, and I thought MicroSoft must have fixed the problem. But then, after an additional few weeks it started again.

Chrome doesn't do this.

Guess which one I'm dropping and which one I'm migrating over to?

**FIELD DAY 2017 - START PLANNING FOR IT!**

According to my calculations, the 24th and 25th of June will be Field Day weekend next year. Maybe this will be the one I get on the air!

Was anyone on the air for FD 2016? Either as part of a group or all by your lonesome? Drop me an e-mail at either of the two e-mail addresses on the first page of this newsletter with some details. Pictures would be very nice!

**ARRL - THE DOCTOR IS IN**

Back a few months ago, I mentioned a podcast the ARRL had started called, "*THE DOCTOR IS IN*", patterned after the column in QST Magazine. Every two weeks "the doctor" Joel Hallas, W1ZR, talks about a subject near and dear to the hearts of hams. Topics thus far include SWR, Grounding, All about Baluns, Are Linear Amplifiers Really Worthwhile, and more. The host for the podcast is Steve Ford, WB8IMY, the editor of QST.

You won't need your slide rulle or your calculator, as the information is presented in a friendly and informal manner.

At the end of each topic, W1ZR answers a question from "the audience". You can send in yours by going to *http://www.arrl.org/doctor* and using the convenient electronic form.

The podcast is presented by *DX Engineering* and may be listened to on your computer or tablet, and probably your smart phone.

## QUOTE OF THE MONTH

**"We must trust our curiosities even if they don't make sense right now."**

*Elizabeth Gilbert*
Writer

# DI-DAH-DI-DAH DIT

**Think about the Quote of the Month** above. Relate it to why are you an amateur radio operator. Chances are good it is because you were curious, and wanted to know more about how this radio stuff worked. To understand how, when you talked into a radio microphone or pressed a key at one end, someone you probably didn't even know, could comprehend you at the other.

Are you still curious, or have you become blasé

about it, and it no longer makes you wonder.

Even after fifty years as a ham, and being in the electronics business all of that time, I still get a thrill when I power up a circuit I've designed or a kit I've assembled, and find that it works!

I also have a belief that learning something (anything in any field) is never wasted, that somewhere, someday, you will use that bit of information you've learned, or that skill you have developed, for the good of yourself or someone else.

I may have mentioned this story before. True story! A brother of a good friend of mine had taken a *St. Johns Ambulance first aid course* (either in high school or shortly after high school). Some time later, he answered a job opening for a medic (with the first aid requirements he had from the course) on board an oil drilling ship/platform in the *Beaufort Sea*. In his spare time, he hung around the radio room. At some point in his term as a medic they needed an assistant radio op. So he applied for and got that job, as well.

This is where my memory sort of fails me. He then went off to radio school and obtained his commercial radio operators license. What I don't remember is whether he did this while working on the ship, or afterwards. This was back some years ago when commercial CW was still a requirement.

Another oil drilling company was looking for a chief radio operator for their operations on the Canadian east coast. He applied and got the job.

Who would have imagined this series of events and employment, all because of his course in basic first aid.

So the next time you get the urge to take a course in something totally different from what you are doing now, go for it. You never can tell where it will take you.

Until next month,
VE1VQ