



THE MESSENGER



VOLUME XV, ISSUE 3

NOVEMBER 2017

RADAR CHALLENGE NOVEMBER 4TH 2017, WT****!?!?!?!?!?

So as I wrote earlier, the Rapid Deployment Amateur Radio Challenge was November 4th this year.

I teamed up with Cassie KC1IAS for a hopefully 4 hour operating fun time. Well it was sort of a bust.

First, I got home from work at around 11:45pm November 3rd Friday night (03:45UTC November 4th), and I decided I should get the ATAS-120A Antenna installed and remove the Yaesu FTM-3200DR 2 meter radio from the truck. That went easy. Then I went to try to get some sleep. Key word was try. The anxiety of how much fun I was going to have kept me from sleeping until 4am. Then the alarm went off at 7am. I got up, took a shower, got dressed, woke up Cassie, who was staying over the weekend, and proceeded to load the Yaesu FT-897D into the truck, hook up the power and coax. Cassie grabbed the laptop I used at Field Day, along with the Wolphi-Link interface cable. We were looking good. Laptop, check. Radio, check. Cooler with water bottles, check. Log Sheets, check. Cables, check. HamGPS App running, check. Ready to roll out?, check. Rolling out of the driveway at 8am, 12:00 UTC.

So we went to our first stop, Attilo Vatali Nature Park down the street along the Mill River. I parked in the spot I use when fishing down here, rather good tree coverage, and quiet. Yup, quiet. 8am to 9am, I could not get a 100W SSB voice signal through over the LIDS running 1500 Watts to check in to the ECARS net on 7.255, nor any other portion of 40 or 20 meters. So we switched to WSJT-X software. This was a mistake. We spent 15 minutes before realizing it wasn't set up correctly, so switched

to the JT65-HF software from Field Day. 20 minutes later and 0 contacts, we decided to go to Dunkin Dounts and get breakfast before hitting my second spot, the Bellingham Library.

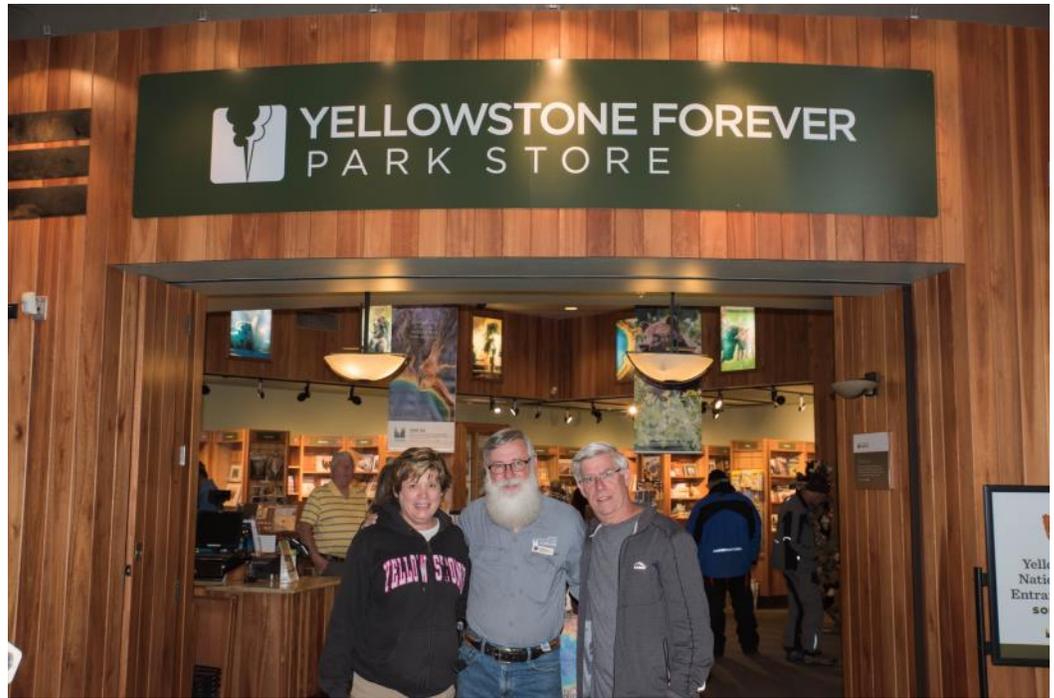
So we got to the library, backed into a parking spot, and within 20 minutes we had a contact. LY2VM on JT-65 with a signal report -15. Then we worked 10 minutes later KZ9DX, who was -07 signal report. By this time we saw 8J1RL pop up on the screen, but alas, it was not meant to be. 10 minutes more trying to work the Japanese research station in Antarctica, and they disappeared from the screen. Oh, well. We worked 2 stations via JT-65 for a total of 3 1/2 hours. Pretty discouraging, so Cassie and I decided to call it a day at 11:30am (15:30UTC).

There were lessons learned, but the fact is we tried it, and have a plan for April 2018 for the next RaDAR Challenge. Maybe this will inspire some of the club members to give it a shot also. 73 *Matt NAIQ*



INSIDE THIS ISSUE:

FROM THE PRESIDENT	2
NAIQ'S WORKBENCH	3
BVARC CHRISTMAS PARTY	4
A FEW WORDS ON USING JT65 AND FT8 MODES	4



This picture from a recent trip to Yellowstone in September. My husband Ray KC1HQB and I met up with Bill Whetstone WA1RI, a former BVARC member from RI. He now manages the “Old Faithful” visitors center in Yellowstone. We made a point of meeting up and while there had this picture taken with him. *Patty Vilnit WIAUT*

FROM THE PRESIDENT

I have to apologize for this is being written late at night, after working 44 hours the last 4 days.

First, I am glad to see that no one was hurt by the storm at the end of October. Yes it did mess up plans for folks, some had no power for days (a very sarcastic “Thanks National Grid”). The power outage also messed up our club meeting, a huge thanks to Ed N1JIL and the pastor at the Polish National Catholic Church for letting us use the basement of the church for our meeting, as the power was out in North Smithfield. Also thanks to Jonathan WW2JS for sticking around at the Slatersville Congregational Church and directing club members to the Polish National Catholic Church. I am glad I didn’t cave into the pressure to cancel the meeting, as we had quite a bit to discuss prior to November and the Christmas Party.

With Bob WB1P being absent in September due to illness, and Jim K1GND having surgery, I would like to thank Annie N1WWG for taking the helm of sending well wishes from the club to those members that are recovering from illness, injuries, or condolences for club members and their families. Also I would like to thank (I apologize I can’t remember everyone) the members composing of the Christmas Party Committee. So far things are ramping up, tickets are available through Bob WB1P, and will be on sale through the November meeting. Also to clarify, if you say you are attending and want us to hold your tickets, you must be paid up with Bob at the November meeting, unless arrangements have been made directly with him prior to the party. Long story made short, see Bob WB1P for tickets or arrangements to get tickets.

The Christmas party will be family style chick-



en dinner, with cake for dessert, and we have some door prizes and a DJ. (Thanks to Dave KC1EKX for helping with that.)

Spoiler alert: I know 2 of the door prizes are Baofeng UV-5R Transceivers that were donated to the club for the party.

Second spoiler alert: At the December Consortium, there will be another Baofeng UV-5R as a door prize, donated to the club to give away.

Last thing on the list. There has been some

discussion between the Board of Governors about the dues structure. They would like to see it streamlined and clarified. I agree with streamlining and clarification, so at the November meeting we will discuss the 2018 dues structure and hopefully we will have enough members for a vote on this important topic.

73 for now, and thank you for being an awesome club with awesome members; see you November 27th at the Slatersville Congregational Church. *Matt NAIQ*

NAIQ'S WORKBENCH

Well it has been a crazy last few months, working 8 to 12 hours a day, 7 days a week is getting old. But I have to be there to provide my knowledge and skills to help keep the US Mail moving from sender to sendee. Thus, the career I chose. Downside is I haven't had too much time to spend on ham radio projects. I did find time to reverse solder the electric mic element of the Bitx40. I resoldered it in with the correct polarity, but have zero RF output. I think I lost the IRF-510 transistor—it is sensitive to shorting out through the heatsink, but that's a later project to troubleshoot.

I did start something new. Or I should say, I had a Yaesu VX-150 2 Meter Handheld that's now in the possession of KC1IAS, forcing me to purchase a Yaesu FT-817ND to replace the VX-150. Nice radio, I had a non-ND model back when they came out in 2003, along with joining the FT-817 Blown Finals Owners group, mainly due to the bias on the push pull final transistors combined with some reflected RF back into the finals, would eat them up in a matter of months at 1 Watt, 5 watts would eat them up in a couple weeks. Nice part is they are easy to replace, and realign from the workbench. My old FT-817 is in service with another ham in Florida since 2007.

But the FT-817 is a bit of bulk for a 2 meter radio, so I went back to the workbench. I saw my old Baofeng UV-5R. I took it out of service when I was getting reports of being off frequency through the repeater while motor-

cycle mobile. I tracked that down to the helmet speaker wiring distorting my transmit audio due to the length of the cord compared to a 1/2 wave on 2 meters (it was exact and unshielded 2 conductor cord).



...THE FT-817 IS
A BIT OF BULK
FOR A 2 METER
RADIO...

Everybody knows that Baofeng HT's have a transmitted audio problem, mainly it doesn't exist. You need to speak loud into the pinhole over the microphone element in the radio, or use a speaker mic or the included earpiece with microphone they toss in the box.

But, there is a solution. It requires a T8 Torx screwdriver, a #0 phillips screwdriver, a very thin slotted screwdriver, a couple small drill bits, and a pair of needle nose pliers with very thin needle tips. Here is a link to a YouTube video on how to disassemble the Baofeng:



<https://youtu.be/uvRocFQHOy0>

Long story short, you disassemble the UV-5R and when you get the case separated, you will see the size of the hole in the front of the radio and the size of the hole in the rubber keypad, and the size of the microphone in the radio. You take a small drill bit and drill out the plastic case to about the same size as the hole in the rubber keypad. then reassemble the radio, making sure the rubber PTT and Call and Lamp Buttons are lined up and work. Once this hole is opened up, you will see the Baofeng go from no audio to sounds pretty good, hard to believe it's a Baofeng.

So far I have opened up my UV-5R and Mike KC1GYT's UV-5X3 tribander. It takes about 20 minutes the first time, after that, I have it

down to 10 minutes.

Now you could try and drill the hole without opening the case, but I advise against it. Reason is when you open the radio up, you realize how little space there is between the microphone element and the case, along with the thickness of the case. Very worse thing you can do is drive the drill bit through the microphone element, creating a bigger problem and requiring opening the radio up to replace the now broken microphone.

If you have a Baofeng and would like to open up the microphone opening, let me know and we can arrange a time to meet up and do the modification together.

More projects coming...73 Matt N1IQ

BVARC CHRISTMAS PARTY



Time is drawing near to make your reservations for the annual BVARC Christmas Party to be held December 2nd at the Pines Restaurant in North Smithfield. Cost for a family style chicken dinner is \$20.00. The absolute deadline for reservations and payment will be at the club meeting, November 27th. The evening will feature a split-the-pot, door prizes, music, and lots of comradery. The event, as always, is open to friends and family. Start

your holiday season off right by attending this year's party. Tickets may be purchased at the club meeting or by sending a check payable to the BVARC and mailing to:

Bob Jones
49 Farmview Drive
Cumberland, RI 02864

Look forward to seeing you there. *Bob WB1P*

A FEW WORDS ON USING JT65 AND FT8 MODES

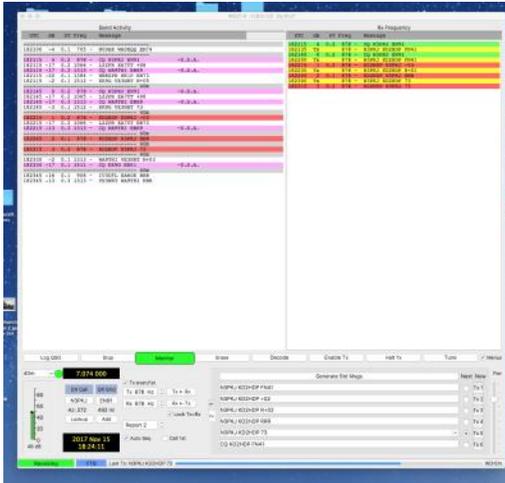
If you have read my prior articles, you know I run an ICOM IC-7300 at 100 watts with an end fed antenna from my condo in East Greenwich.

I have stuck my proverbial toes into some of the newer digital modes and thought I would recount a few tips I have learned along the way.

With the lousy propagation conditions we current face it is always nice to find a way to make some new contacts for the logs. I read about JT65 and JT8 in QST magazine and more recently heard about the currently very popular FT8 mode.

These are all SSB digital modes that use digital signal processing to pull out signals, often below the noise floor. The best way to get quickly educated is to read "Work the World with JT65 and JT9" published by ARRL. It is a quick read and quite thorough.

The first step in the process is to download the required processing software, either WSJT-X or JT65-HF. I run WSJT-X on an iMac. Macs require a shared memory "fix" that is easy to accomplish. The IC-7300 is digital ready and all that is needed is a USB cable to connect to a PC or Mac or Linux machine and the free software as indicated above. HF rigs without a



sound card digital interface require an audio interface unit such as the West Mountain Rig Blaster.

All of these modes require a precise computer system clock. Your system clock must be in sync with the system clock of the operator you are trying to communicate with. The digital messages displayed by programs such as WSJT-X show the difference in tenths of seconds between your clock and those operators currently using the selected operating mode. The Mac OS has this clock sync feature built in. Windows operators will need to install a free clock sync program. The ARRL book discusses this and gives suggestions.

The IC-7300 makes it simpler – just connect the USB cable, configure the menu settings on the radio for baud rate and such, and configure the preferences in the WSJT-X software and you should be ready to go.

Operation for JT65 and FT8 are on the lower end of the 40 meter band. The IC-7300 is operated in the USB-D for digital mode, typically at 20 watts – always USB. Most operators tend to use the lowest viable output power levels, but these are not defined as low power modes; just use the power level you need to get through without sending a distorted signal.

It took me quite a while to decipher all the required menu settings on the IC-7300 to get everything running properly for WSJT-X and my logging software of choice RUMLOG NG. There are quite a few online tutorials including

on YouTube but some are not very clear and others contradict each other. I will gladly share my setting with anyone interested.

OK – contacts are very minimal – an exchange of call signs, grid square location and the signal strength of the signal you have received. JT65 is best for long range DX. My minimal set up allowed me a confirmed 20 watt contact with an operator in Tasmania, Australia just last week. I have made contacts all over Europe and South America with these modes. JT65 is a slow process – the give and take usually takes several minutes but the range is much better than FT8 which is currently very popular and allows more rapid fire contacts than JT65.

I have attached a WSJT-X screen shot of a recent contact FT8 with N3PKJ in Pennsylvania. The left side indicates band activity for FT8 and the right my messaging with him. CQs are in pink. CQ DXs are in dark pink and my responses in yellow. Red indicates acknowledgement.

The WWW.PSKREPORTER.COM web site map will also indicate where my signal is being heard and how strong it is at that location. I have attached a screen shot of the map.

Since I made that contact FT8 is hopping: Slovenia, Italy, France, England, etc.

Get a copy of the ARRL book, give it a shot and have fun. *Al Meyer KD2HDP*

