



PAWA Lines

Portland Amateur Wireless Association Newsletter

Portland Amateur Wireless Association Repeaters

Falmouth: 146.730MHz (-600KHz) (T 100.0Hz)

Scarborough: 444.100MHz (+5MHz) (T 82.5Hz)

Portland Amateur Wireless Association Board of Directors

President	Bryce Rumery	K1GAX	K1GAX@juno.com
Vice President	John Bogner	W1JLB	JBogner1@maine.rr.com
Secretary	Tim Mitchell	KB1YBS	mitchell@smoms.com
Treasurer	Jack Ney	KC1UX	KC1UX@maine.rr.com
Chief Operator	Ross Drivas	KB1OND	rmdkb1ond@yahoo.com
Member at Large	Steve Mitchell	KB1YBT	SJMitchell@maine.rr.com
Member at Large	Jason Cote	W1WDW	W1WDW@jcwebdesign.com

Annual Potluck Dinner December 6th at 6pm

Just a reminder that the potluck starts one hour before the general meeting. Hope to see you there!

On The Web

Please visit us on the web! We have pages on Twitter, Facebook and the world wide web. Check out our addresses at the top of the newsletter's first page, follow us on Twitter, and like our page on Facebook to stay up to date on club activities. If you have something to add, please let us know!



Ham of the Year
PAWA's Upcoming
Ham of the Year
Ceremony.



Upcoming Events

Take a look at some
upcoming events.



Club Elections
Consider running
for office, and
please vote!

President's Message

This will be my last message as President of the PAWA. As Jason, W1WDW has volunteered to run for PAWA President for 2018/2019. I will be running for Vice President for 2018/2019.

It's been fun being President for a great number of years!

We are still looking for a candidate to run for Treasurer. After many years, Jack, KC1UX is wanting to step down and relax. If anyone out there in the club would like to become Treasurer please let me know as soon as possible.

73, Bryce, K1GAX

Secretary's Report

There was no quorum for the business meeting in November, therefore no voting took place. There was informal discussion on a variety of topics including ideas for a new club home, as well as our upcoming elections.

Jason S. Cote - Member at Large

Treasurer's Report

November 2017	
Beginning Balance	\$1021.16
Income	\$37.50
Expenses	\$0.00
Ending Balance	\$1058.66

A reminder: **Dues are due!**

Thanks,

73, Jack

2018-'19 Slate of Officers

Bryce Rumery - K1GAX

President - Jason Cote W1WDW

Vice President - Bryce Rumery

Secretary - Ariel Cote, KC1CCB

Treasurer - **(Open)**

Chief Operator - Ross Drivas, KB1OND

Member At Large - John Bogner W1JLB

Member At Large - Steve Mitchell, KB1YBT

UPCOMING EVENTS:

✱ Next meeting:

Wednesday, December 6th 2017 - 7pm (potluck 6pm)

Stuart Morrill American Legion Post #35 - 413 Broadway, So Portland

✱ December Contests:

1-3 160 Meter

9-10 10 Meter

17 Rookie Roundup - CW



December Meeting

Bryce Rumery - K1GAX

The December meeting is our annual pot luck dinner. Please bring a dish to share with your fellow PAWA members. You may bring a hot or cold dish or a dessert item.

The business meeting that follows the dinner will be acceptance of the reports in the newsletter followed by a vote for the 2018 dues. Next comes election of officers for 2018/2019. Finally will be the presentation of the 2017 PAWA Ham Of The Year.

Hope to see you there!

Chief Operator's Report

Found a neat fix for the Baofeng. This one is my old everyday unit, the volume control is extremely scratchy

to the point it's almost unusable. Had to adjust it to fine a "clear spot" when using the volume knob.



Looking at the back there are four screws ignore the two that are for the belt clip - the other two are torque screws and used to hold the case together.

If you unscrew the left Torx screw and look at the whole you will notice that it goes all the way through the case to the circuit board and the volume knob the rheostat has an opening there right in line with the hole.

Spray some contact cleaner, use the volume knob a few times to make sure it wipes and cleans and let it sit for 20 minutes in order for the solvent to evaporate.

It goes without saying you should take a battery out before doing this so you don't short anything. Also cover up the screw holes for the battery clip if you've taken those off. (I just put the left screw back in.)

I didn't wait and temporarily lost part of my LCD screen - lesson learned - but it came back!

Mine now sounds like new.

Ross - KB1OND

Club Elections

Ariel Cote - KC1CCB

Elections are coming up in December! Anyone interested in running for office is strongly encouraged to do so. All positions are available for nomination.

The Importance Of Emergency Power

Jason Cote - W1WDW

Backup electrical power and power line conditioning is essential for amateur radio operators both operating at a base station or a mobile or portable set up. Modern amateur radio equipment can be sensitive to voltages that are either too high or too low and also voltage transients which are sudden changes in voltage. Such transients can damage or destroy valuable amateur equipment.

Emergency power systems can consist of a simple battery of adequate size and capacity, or an elaborate Uninterruptible Power System with computerized voltage conditioning and surge protection. In most cases, amateur radio operators choose deep-cycle marine batteries or generators for emergency power systems for both base stations and portable deployments.

Mobile stations are typically run from the vehicle's electrical generation systems. These installations, while simple can introduce engine noise into the transceivers's audio and occasionally, when improperly installed, can result in damage to the host vehicle's electrical system. Extreme caution should be taken when installing amateur equipment in vehicles to ensure that polarity is correctly observed, and the electrical supply can provide sufficient voltage and current under load. The best solution in these scenarios is wiring directly to the vehicle's battery with heavy gauge, fused wire. Engine noise can be reduced with line filters available from electrical or amateur radio supply outlets.

Generators can be a quick source of emergency power, but can also be extremely dangerous if misused. Generators should always be run well away from any enclosed spaces, with proper ventilation, and should never be refueled while hot or running. Please observe all manufacturer's instructions.

Power line conditioning systems are typically found in UPS systems, and can filter incoming mains voltage to provide a level 110-120VAC with pure sine wave. This is what is considered "clean power" and will be most appropriate for sensitive electronic equipment. UPS systems also favorable because of their ability to instantly provide emergency power in the event of a utility power outage and can run equipment for up to several hours depending on load and available capacity.

Using this information, you should be able to identify the proper power solution for your specific amateur radio station.

Radiodditty GD-77

Tim Mitchell - KB1YBS

My DMR life in Maine has been very sweet so far. I have really enjoyed exploring this technology. I have the MD-380 and the CS-701. These radios have worked very well for me mostly due to the kindness and collegiality of W1WDW, Jay Cote. He has been very kind to an otherwise Analog Ham by supplying me with his well thought out, and highly functional, Code Plugs for these radios. Jay, thank you very much!! I literally could not have done it without you.



During a recent Google search, which I do from time to time, I searched for "what's new in Ham Radio". What popped up was the new Radiodditty GD-77. It was very interesting, and was the next generation of the Radiodditty GD-55

which was pretty much a flop due to problems it was having with the Tier 2 aspect of the DMR world. This radio was attractive as it was Dual band with digital and analog capabilities. Why this attracts me I do not know, because I have really become a 2 meters snob. I find 2 meters works well for me based upon the geography of my home. The GD-77 was getting initially great reviews, and the programming was available in two levels of difficulty based upon your experience creating code plugs. As you probably know, there are no 70cm DMR repeaters in Maine, but thought it would be nice to have a dual band should I travel, which I often do. The price point was also attractive at \$86.00 on amazon or the Radiodditty web site with free shipping.

In my opinion, this radio does not disappoint. Out of the box it is light relatively small, sturdy unit. The screen is not color, but still pretty functional

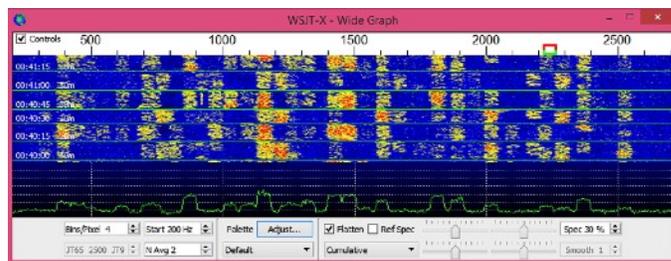
with several keypad options to make use easy and versatile. Programming a new code plug took about seven hours of work. Being the first time I did this, I relied heavily on information from the Maine DMR website, WWW.maine-dmr.org. I also watched the many available YOUTUBE videos that explain programming techniques. With these resources, my brother Steve, KB1YBT, and I were able to put together a comprehensive code plug. The programming software worked very well, and you do not have to install any drivers for the programming cable which is nice. In the process we learned a huge amount about DMR and how it works through the Maine C-bridge (the main computer system that administrates the DMR network).

So in conclusion this looks like a real nice, reasonably priced, Tier 2, dual band DMR/Analog HT. Time will tell how it performs. If you have any questions feel free to contact me at any time at Mitchell@smoms.com. If the code plug business is more than you want to tackle, We will be very willing to share our code plug with you!!!

FT-8: I'm not really feeling the magic

Dan Romanchik - KB6NU

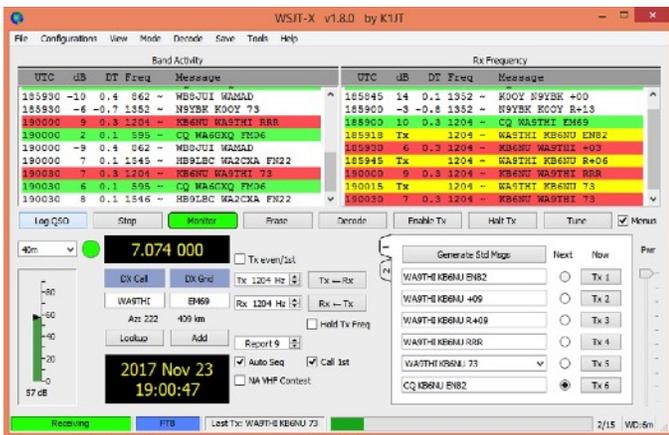
Partly out of curiosity and partly because Jeff, KE9V, shamed me into it, I setup my Signalink interface, downloaded WSJT-X from <https://physics.princeton.edu/pulsar/k1jt/wsjt.html>, and started operating FT-8, the latest "shiny object" (as the ARRL dubbed it) from the K1JT team. As you probably know, this mode has really caught on with the digital crowd, and the waterfall is chock full of FT-8 signals. Part of the reason for this is that it has some of the characteristics of JT-65, but is not as excruciatingly slow.



A waterfall display generated by WSJT-X at 7:30 pm, 11/23/17

Over the past couple of days, I've made 32 QSOs, including a couple of DX contacts. It's been fun to try something new, but to be honest, I'm not really feeling the magic.

Part of it is that I don't feel like I'm really doing anything. I downloaded the software, plugged in my digital interface, fooled around with the settings a bit, and then, the computer started making contacts. I have to click a few on-screen controls to make contacts, but even that's a step that could be easily programmed in by the WSJT-X developers. (In fact, I wonder why they haven't done that already!)



WSJT-X screenshot. The sequence of transmissions in the Rx Frequency window comprises a contact.

Take a look at the screenshot above to see how a typical contact happens. When a CQ appears in the “Band Activity” window, you double click on it. When you do this, the software begins listening for signals on that frequency. In this case, I double-clicked on the CQ by WA9THI. When I double-clicked on the CQ, the program began decoding signals on that frequency and display the transmissions in the “Rx Frequency” window.

Then, I clicked on “Enable TX” and the program began the contact sequence, sending “WA9THI KB6NU EN82.” EN82 is my grid designator. This is shown as the first yellow line in the Rx Frequency window. The transmissions that I sent are highlighted in yellow. The transmissions sent by WA9THI are highlighted in red.

The sequence of transmissions shown there comprise a complete contact, and that whole process takes less than two minutes. And, once WA9THI received my first transmission, the sequence is all automatic. You just sit there and watch the two computers talk to one another.

While I can certainly appreciate the thought and the work that went into the design of the protocol and programming to implement it, sitting and watching the computers talk to one another just doesn't excite me. On the other hand, if you're

one of those guys who wants to make contacts, but doesn't really want to talk to anyone, than this is the mode for you!

Here are a few more notes about FT-8 operation:

- Not surprisingly, synchronizing your computer with the other stations computer is very important. To do that, you need to get your computer to use the network time protocol (NTP). I failed to do this when I first installed WSJT-X, and while my waterfall was full of FT-8 signals, WSJT-X just wouldn't decode them.
- I got my PC laptop to talk ntp by installing Meinberg NTP software (<http://www.ntp.org/ntpfaq/NTP-s-def.htm>). Once I did that, WSJT-X magically started decoding transmissions.
- Most of the cool guys seem to be using Meinberg NTP, but there are other options. One of the guys in our club is using a program called Dimension 4, for example.
- Apparently, you don't have to limit your power output as you would with PSK-31. At first, I set my output power to 10 W. I had a bit of success at 10 W, but I expected more. When I asked on Twitter how much power other guys were using, most of them said that they were using more than that.
- For the last couple of sessions, I've been setting my output power to 25 W, and I've been having more success. I've now worked several Europeans on 30m.
- Even at 25 W, my signal reports are more often than not not as good as the signal reports I'm handing out. I haven't figured this one out yet. This doesn't happen to me when I'm operating CW, so I don't think it's my antenna.
- When I'm operating, I write down the calls of stations I've contacted. The reason for this is that while WSJT-X does have a logging function, it doesn't have a log window, so unless you have a great memory, you could end up working guys two or three times a session. That's probably not a

big deal since contacts are so quick, but I'd rather avoid doing that if I can.

- WSJT-X works "split." While most contacts take place on the same frequency, a station can call you anywhere in the passband of your receiver and WSJT-X will decode the signal and begin a contact. This threw me the first time or two that this happened, and I tried to change my transmit frequency to match the other station's. In doing so, I messed up the sequence. I now just let the contact proceed normally, and it works out great.
- When I work the other digital modes, I set my IC-746PRO to the USB-D mode. In this mode, the receive passband is narrower than for working phone. When operating FT-8, however, you don't want to limit that passband. Signals will appear across the entire 2.6 kHz of the USB signal, and if you narrow the passband, you won't be able to work those stations.
- WSJT-X checks the validity of call signs. This afternoon, there was a guy who had typed in his call as "WAMAD" and was calling CQ. WSJT-X wouldn't let me answer that CQ.
- Operating this mode opens up the possibility of working more stations whose callsigns spell words and adding those QSL cards to my collection. I have, for example, already worked K1GUY, N4HER, and N5SLY. I'm guessing that these guys don't operate CW.

All told, I've found this to be an interesting foray into a new digital mode. While I'm not feeling the magic that some others seem to be feeling when operating FT-8, it certainly will be a change of pace to operate this mode from time to time. Give it a shot and tell me what you think.

Dan, KB6NU, is the author of the "No Nonsense" amateur radio license study guides and blogs about amateur radio at KB6NU.Com. When he's not working FT-8, he teaches ham radio classes and operates CW on the HF bands. You can email him at cwgeek@kb6nu.com.