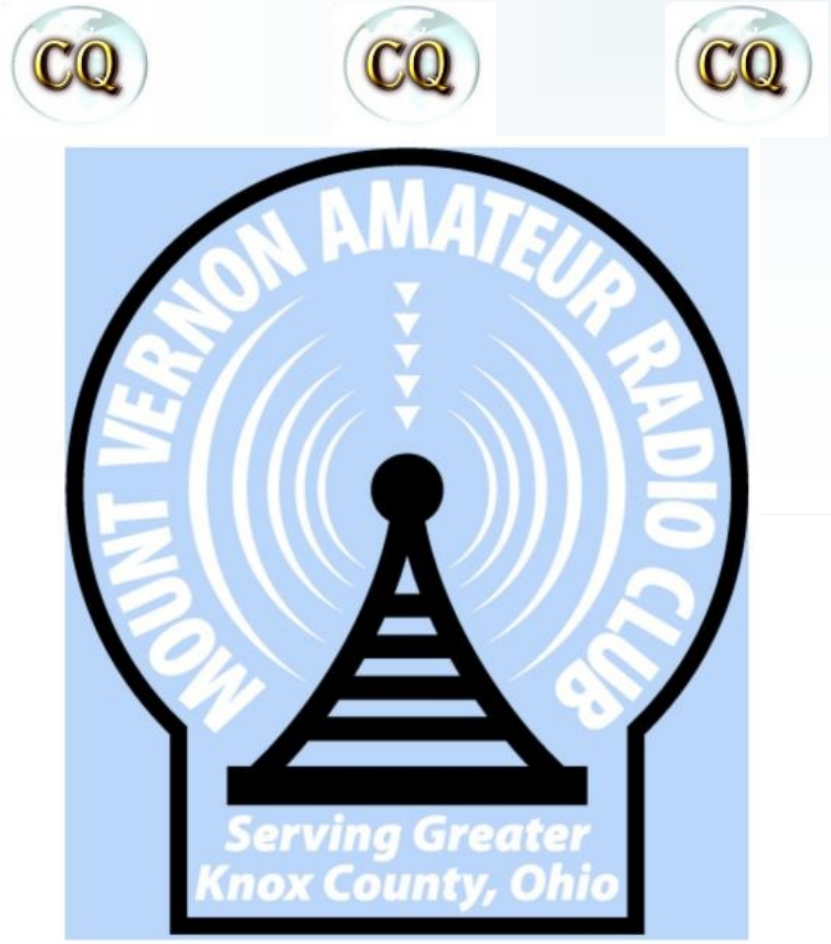
December 2023

2023 Edition 12



Inside this issue

MVARC Repeaters

K8EEN VHF Repeater
146.790 MHz
- 600KHz

K8EEN-R Echolink Node:
809800

K8EEN UHF Repeater
444.600 MHz
+5 MHz / PL = 71.9 Hz

WHEN

Sunday, December 10, 2023
6:00 PM EST
Ordering starts at 6:15PM

Where

Bob Evans Restaurant Party Room
1624 Coshocton Ave
Mount Vernon, OH 43050

President's View

Frank Counts
KC8EVS

Getting the newsletter out on time is not easy. Terry did a great job and I only hope I can do the same in the future. I have most of my computer glitches taken care of and should be on track hopefully with the January newsletter. In the minutes you will see the listing of the new officers for next year congratulate them and give them your support. We need someone to step up and fill the Secretary position. Please consider filling this position. Also, congratulations to Scott Yonally, N8SY he is now the ARRL Director for the Great Lakes Region.

I am going to cut this short and get it to Terry as he is putting together the December newsletter and I need to get working on the January newsletter. At this time, he is feeling better in between treatments and offered to help me out. Thanks Terry, KI8N.

Keep in mind we have a possible test session December 13 at 6:30p at the club station. Currently, I don't have anyone, but you never know.

Our December meeting is December 11th at 7pm. Please join us and find out what is happening in your club.

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The ARRL announces the results of the 2023 ARRL Division elections.

ARRL Great Lakes Division Vice Director **Scott Yonally**, **N8SY** (2,175 votes), of Lexington, Ohio, defeated candidate Michael Kalter, W8CI (2,023 votes), for the position of Division Director. Yonally will assume the role when Director Dale Williams, WA8EFK, who has held the seat since 2014, completes his current term at the end of the year.

In the Great Lakes Division, Roy Hook, W8REH, will be the next Vice Director. Hook ran unopposed for the seat vacated by Director-elect Yonally.

Congratulations Scott!

Meeting Minutes

Scott Yonally
N8SY

November 13, 2023

7:00pm EST – 7:49pm EST

The meeting was called to order by Frank, KC8EVS and he asked if there were any additions or corrections to the October Meeting Minutes as distributed prior to the meeting. Hearing none, the meeting minutes were approved.

The Treasurer's report was given by Frank in Terry, KI8N's absence. There were no corrections or changes and will stand as read.

Committee Reports

ARES

Frank announced Bill Stroud, KD8WHQ has taken over as E.C. Bill stated that there is lots to catch up on and he will be working on that.

ARRL

Scott, N8SY announced as of just a few minutes ago the FCC had approved the changes requested by the ARRL for the change from Symbol Rate (Baud Rate) to Bandwidth for digital modes. The FCC had pulled this up and approved the changes before the meeting that is scheduled to take place on Wednesday. This is a really great day for amateur radio and possibly the start of many more proposals to get approved before the end of the year. He also stated that he was humbled by all the support from the club and club members and stated that the election results will be announced this Friday afternoon, and an announcement will be sent out on the club's texting platform with the election results. He also stated that there are some other programs that will be coming to fruition sometime soon and one of them will most definitely help MVARC.

Repeaters

Steven, N8RLW reported the repeaters are working just fine, and the new PL board will be installed over the Thanksgiving weekend, hopefully. He stated he is expecting to have it installed by the Sunday after Thanksgiving. He also stated the 444.600 machine will be getting an update (controller) installed as well, making both machines with the same type of controller.

He is also expecting to get the amplifier up and, on the 146.79 repeater, sometime soon. Discussion followed on the issues found with it and why it has taken so long to get it on the air.

MESH / EchoLink

Don, W8PEN stated he has found some issues with EchoLink and has been working to improve it. He stated that he has changed some cabling and installed a different computer. Some discussion followed about some latency issues. He also reported that there were some issues found with the MESH network and two of the nodes were found to not be working. They have been corrected and are now working again. The hospital node will need some additional work as it's off the air right now. Some discussion followed. Don announced he and Roger will be installing a 5 GHz node at the club station soon.

"Yonally will assume the role when Director Dale Williams, WA8EFK, who has held the seat since 2014, completes his current term at the end of the year." ARRL

PIO

Steven, N8RLW reported there will be a Holiday Party on December 10th starting at 6pm at Bob Evans. Dinner will commence at 6:30pm. You will order from the menu. A show of hands was given as to how many might come. It appears that there will be around 20 or so. He also stated he will be continuing to send out reminder text messages about upcoming events. Much discussion followed.

Old Business

Nominations Committee

Michael, KE8HGE reported that he has received 4 nominations for Directors. They are: Steve Harvey, N8RLW; Roger Gorrell, KE8ICI; Tom Evans, KD8HSA and Berry Butz, N8PPF. For President: Frank Counts, KC8EVS. For Vice President: Emery Bennet, W8TW. For Treasurer: Terry Windsor, KI8N and thus far there has been no one step up for the Secretary's position.

The club agreed to have the regular business meeting on Monday, December 11th where the election of Officers and Directors will be conducted.

Lease Agreements / Meeting Room

Frank reported on the meeting space and whether we can use it or not and he stated that he was hopeful of having an answer by tonight, but unfortunately, he hasn't heard anything back.

Tech Classes / E Testing

Frank reported the next V.E. Testing session will be Wednesday, December 13th at 6:30pm here at the club station.

New Business

Possible MVARC Events

Frank brought up several possible events we as a club could do over next year. Much discussion followed.

Don, W8PEN mentioned November Sweep Stakes will be November 18 – 20 and we will be operating from the club station. He will be do a fish fry around 6pm on Saturday night with Tator Tots to go along with the fish. Discussion followed.

A motion to adjourn the meeting was made at 7:49 pm EST with no dissenting votes.

The raffle was held for a 50/50 drawing and Don, W8PEN won. He donated the money back to the club treasury.

Those present at the 11/13/2023 Meeting

Frank Counts, KC8EVS	Tom Evans, KD8HSA
Scott Yonally, N8SY	Ralph Bower, KC8REB
Steve Harvey, N8RLW	Wayne Bower, WB8WB
Scott Fields, W8HK	Sean Lehman, KE8YUS
Roger Gorrell, KE8ICI	Don Bunner, KB8QPO
Bill Bullock, KE8ZIG	Ralph Dunmire Jr. – No Call
Bill Stroud, KD8WHQ	Don Russell, W8PEN
Emery Bennet, W8TW	Ralph Hoffman, W8LFR
Berry Butz, N8PPF	Rick Gilson, K8KLW
Wendell Combs, KE8HUX	Shawn Bleiler, KD0DMJ
Michael Jacobs, KE8HGE	Michael Deane, W8OIO

ARES

Bill Stroud

KD8WHQ

Bill has graciously accepted the role of Knox County Emergency Coordinator again. Welcome back Bill.

We all need to support him in his role and cooperate with him to reestablish a working ARES group within Knox County.

CONTINUING:

This is a great time for all club members interested in ARES to review the Ohio Section ARES web pages and complete or update any NIMS ICS training courses.

To send in your NIMS or ARRL certificates please use this link to submit them to the Ohio section coordinator. http://arrl-ohio.org/upload.html

December 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					**1** 9:00 am— Breakfast	2
3 9:00 pm ARES Sunday Night Net—Don (W8PEN)	4	5	6 4:45 pm Dinner	7	8 9:00 am— Breakfast	9
10 **6:00 pm** **Christmas Party** 9:00 pm ARES Sunday Night Net	11 **7 pm** **MVARC** **Meeting**	12	13 4:45 pm Dinner	14	15 9:00 am— Breakfast	16
17 9:00 pm ARES Sunday Night Net— Michael (KE8HGE)	18	19	20 4:45 pm Dinner	21	22 9:00 am— Breakfast	23
24 *9*:00 pm ARES Sunday Night Net—) 31 *9*:00 pm ARES Sunday Night Net—)	25 **Christmas Day** 	26	27 4:45 pm Dinner	28	**29**9:00 am— Breakfast	**30**

Ham Radio Contest Calendar

Radio Activity

Don Russell
W8PEN

November was a busy month for the club. Here are some updates.

Echolink

Might as well start with the major pain; EchoLink!

In the November Newsletter, I reported that EchoLink was finally working on a Linux computer. Well, this did not last long. True to the recent issues I have been having with EchoLink, the Linux setup lasted a few days and then started acting up.

Out of desperation, I grabbed my "shack" computer to run EchoLink temporarily until I could get a credible computer to work with. Thus far, I have tried using old computers. You would think my shack computer, being only a year old and running Win10, would have no issues running EchoLink. Wrong!

This computer is an Evolve Maestro III with a 10-inch screen. It is bare bones but seems to run computer logging software decently.

EchoLink did work on this computer. However, to turn on the EchoLink transmitter, I needed to use a USB to serial port adapter. I also had to build a simple circuit acting as a switch for the PTT. This works on most computers. However, when I plugged the adapter into the USB port on the little Maestro computer, I would lose my Wi-Fi connection. And I mean the Wi-Fi card in the computer would disappear I tried updating the network card driver, uninstalling and reinstalling the network card, and just about anything else I could think of to try. I even put ferrite filters on the computer cables.

In the meantime, I bought another Evolve Mastro III computer for my shack. They were $79 at Microcenter in Columbus. Check out:

https://www.microcenter.com/search/search_results.aspx?N=&cat=&Ntt=evolve+maetro+iii&searchButton=search

So, I switched computers and put the new one on EchoLink. Same issue.

Took a while, but I finally figured out that the USB to serial adapter was drawing too much current and thus affecting other devices using USB. The cure was to use a "powered" USB extension device. This way, the USB devices have all the power they require. I just happened to have one in my junk box.

Since installing this USB extension device, the EchoLink has run flawlessly. Let's hope that continues.

"In the minutes you will see the listing of the new officers for next year congratulate them and give them your support." Frank, KC8EVS

Local Mesh Network

There are a few things going on with the Mesh Network. First off, as mentioned in the November Newsletter, the three mesh nodes at the water tower are working well. The issue we were having was loose cables.

The problem node at KCH has been replaced and was initially working well. However, currently it is not working. The crew made one last adjustment before coming in from the roof. It was not checked until everyone was back in the operating room. I checked the nodes one last time and found the 5G node at KCH was not working, it is not transmitting or receiving. Roger said he moved some wires around and one set of cables may not have been secured to the switch. My other guess is that the antenna may have moved and is not pointing where it needs to point.

I also stumbled on another issue. The firmware installed on the node is not the correct firmware for that model. No doubt I pulled a bummer on that one. However, the node was working when first installed so I believe it is either a cable, or the parabolic antenna got moved and is pointing in the wrong direction.

Since the firmware is wrong, I have decided to just replace the node when we get a chance. It will be easier to get the correct firmware installed on the work bench.

Enough said on this situation.

A few weeks ago, we installed a 2G and a 5G node on a roof deck at the Academia Administration building. The water tower is at most a quarter of a mile away and I had done some preliminary testing in the parking lot. I did not plan on having any issues with these two nodes. However, both nodes show very low signals and quality factors when pointed at the water tower.

The nodes are mounted on a short PVC pole. I may try a 10-foot pole and see what happens. This would be a pretty important link to our club room as far as the mesh network goes.

We'll see how it goes in the next couple of weeks.

Contesting

The club participated in the November Sweepstakes, SSB, on the weekend of November 18th. I reported the results in the November column and won't repeat them here.

The next contest that the club should participate in is "Winter Field Day". This contest begins January 27th at 2:00PM local time and lasts 24 hours.

Winter Field Day is much like our standard ARRL Field Day event in June. However, it is not sponsored by the ARRL. And it is much harder to set up outside. Brrrr.

Roger KE8ICI has volunteered his utility shed as a location to run Winter Field Day. Many advantages to this: It is warm, has a bathroom, plenty of room inside, it is warm. Yes, I said warm twice.

The group is thinking of running two transmitters. Each operating position will be capable of any band or mode the operator wishes to work. So, we can have SSB and CW going, or SSB and digital, or SSB and SSB. you get the picture.

Antennas will be put up on the day of Winter Field Day. That will be the only work in the cold that needs to be done. We will run on generator power.

While Winter Field Day is not as popular as The ARRL Field Day in the summer, it is growing in popularity a bit each year.

Club Shack Computer

Steven N8RLW has decided to remove Wires-X from the 70cm repeater due to lack of activity. This frees up the computer running Wires-X for other uses.

Since it is my computer, I decided it would make a good computer for our club shack. While the computer currently being used seems to be fine and has Win10 installed, it does have a broken screen and needs an external monitor to be useful. The only issue with the Wires-X computer is a bad battery pack. I will check Amazon and see just how much a new battery will cost.

In the meantime, I have installed the required software onto the Wires-X computer. I have converted a lot of our Field Day and other contest logs over to a format that our N3FJP ACLog software will recognize.

So far, I have entered over eight thousand contacts into AClog. I am missing Field Day logs for 2017 and 2018. I usually send a copy of Field Day log files to a few members. If any of you have the missing files, please let me know.

I am also missing files from contests we did at the club this year and last year. I am presuming they are still on one of the clubs logging computers. Just need to get to the club room and look.

Once I get all the contacts into AClog, I plan on setting up the club for ARRL's Logbook of the World.

That is it for December. See you at the Christmas Dinner on Dec 10th, then the meeting on December 11th.

73.

Predicting Repeater Coverage

Steven Harvey
N8RLW

Ever wonder or stopped to think how RF engineers know where to place a 2-way system or how do cell sites get selected and how far it will cover and stay reliable. Before computers became the norm, RF engineers used to have to take long drives to scout out potential sites, use a lot of USGS printed topo maps to make several HAAT (Height Above Average Terrian) calculation runs to see if putting a tower on the site made sense. It used to be the same in ham radio when requesting a new repeater site.

Fast forward to modern times, what use take hours to figure out the site location, the power needed, the type of antenna, how tall of a tower at the site and will the coverage be reliable is now all done via computer aided software called Radio Mobile online.

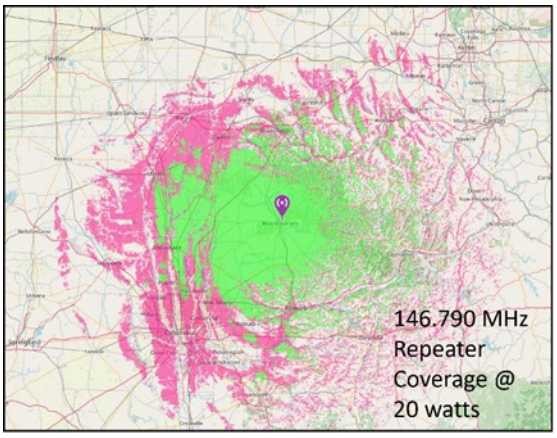
Using Radio Mobile online you can take in the site location, HAAT, topography, how reliable you want the signal to be from the site, type of antenna and transmitter power out. Why should we care as a club about such things? Well, when you look at increasing power on the repeater does it really make a difference or is it worse than keeping the current TX Power. It also allows us to make sure we are good neighbors to other repeaters in the state and we don't cause interference. This software can also show you where your potential receive coverage will be the most reliable and where it will be spotty.

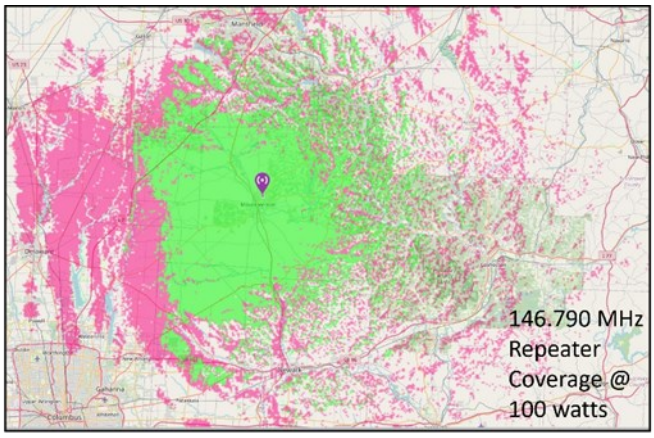
I recently did a calculation on the club's repeaters to see what both the 146.790 and the 444.600 look like with the current status and the addition of an amplifier. By setting the information in the software and making the reliability 70%, which would take in account for buildings, hill sides, dips into valleys and the weather during thunderstorm season. You can see in the charts the difference in coverage with green being 100% and red being spotty but likely to get back to the repeater or hearing it. However, this software does not consider handheld coverage, so looking at these maps and thinking your 2-watt HT will get to the repeater 28 miles away will be an unlikely situation without an outside antenna 30 ft in the air on good coax. The software does a good job of taking in the terrain as it shows how we struggle to keep Sunbury and Centerburg fully covered in location due to Rich Hill and the rolling terrain in those locations. The same is shown when you drive SR 13 to Belleville and Lexington due to terrain and FM being line of site you can't put out enough power to punch through the hill sides.

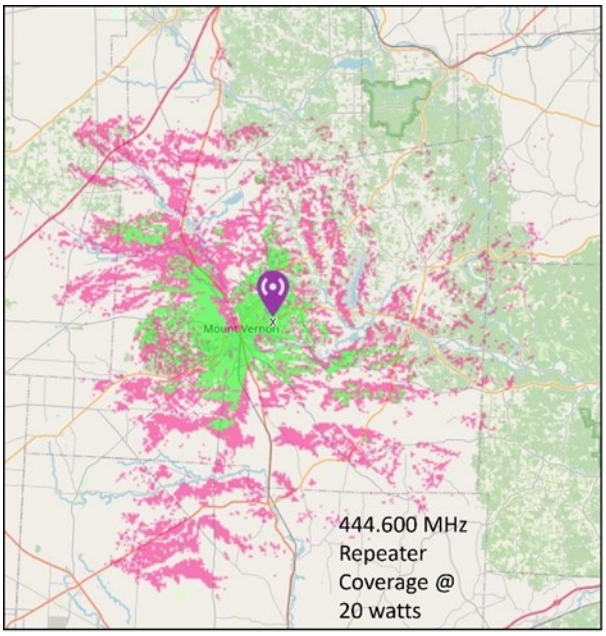
By looking at the maps you can see there is a big difference between the current TX power of 20 watts for 146.790 and the additional power of 100 watts when calculated. The same with the 444.600 current TX of 20 watts and if a 150-watt amp was added the coverage on both machines becomes very solid for all of Knox County and shows the potential receiver coverage without adding multiple receive sites.

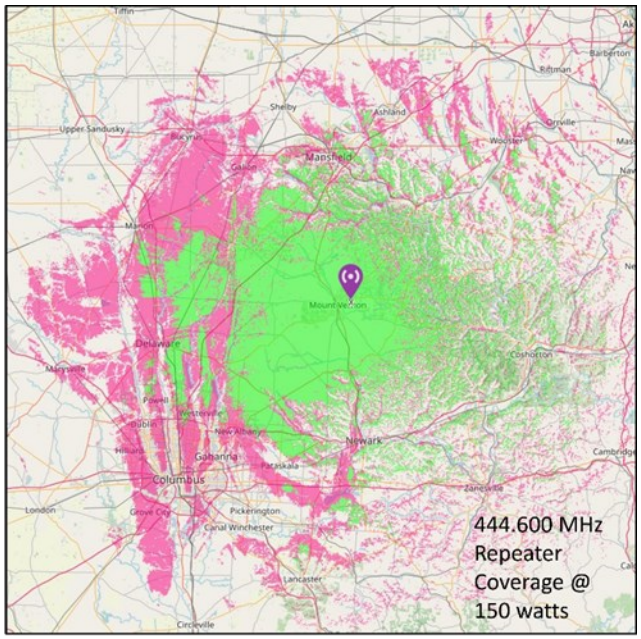
Since running these calculations in the software, I have tested it out by driving to different locations on the map with my Yaesu FT-300DR and a diamond dual band antenna with 7.8db gain on 2 meter and 4.5db on 440 and it has been spot on where the receive coverage struggles and how good of a signal you get being mobile. Some hams have used Radio Mobile online to see how far your FM base station will transmit out from their QTH to see who might be able to hear them when mobile via simplex. If you decide to use this software to check your FM signal from your home station, please keep in mind it only models Omi-directional antennas as this same software can be used in small radio station coverage. It's a great piece of software for keeping the club's repeaters running, if there was ever a need to add a remote receive site it would allow selecting the best site possible to get the maximum coverage. Give it a try for your home station, you might be surprised how far you cover with your setup with just 50 watts or less.

Radio Mobile Online:
https://www.ve2dbe.com/english1.html









"The next contest that the club should participate in is "Winter Field Day". This contest begins January 27th at 2:00PM local time and lasts 24 hours." Don, W8PEN

Miscellaneous Rambling

Terry Windsor
KI8N

I was feeling fairly well at the end of November and talked Frank into letting me work on this month's MVARC Newsletter. However in December I have two chemo treatments, one on the 4th and the second after Christmas so I know I will not be in any shape to assist then. Each chemo session typically results in a period of time not feeling well followed by about a week of feeling good again. But, I am trying to keep a positive outlook.

The two treatments in December are the last of six sessions that were scheduled every three weeks, if the PET scan, yet to be scheduled in January, shows the lymph nodes are back to normal and the cancer cured I should be able to get back into the swing of things, albeit very slowly, and hopefully be able to attend the February or March meeting.

One thing I brought up to Frank is I know how he felt being cooped up inside the summer of 2022. I am not allowed to be around people since my immune system is highly compromised so I really haven't been out of the house since August except to go to the hospital or Cathy will take me on short rides into town, but I have to stay in the car while she does what she needs to do. I am sure she is tiring of wearing a mask into stores just to make sure she doesn't catch anything and then pass it on to me.

A couple of things that having cancer has done is one cause me to lose my hair and beard. Going to need a new profile picture soon. I think I look like Lex Luthor from the 1980 Superman II movie. Also the lack of hair means my head is always cold. Second is I have absolutely no energy and get dizzy easily. I get completely worn out just going down and back up the basement stairs.

I had a good phone call with Dave Phillips, W8DEP this week as he wished me well and was checking to see how I was doing. Thanks Dave for the pick-me-up!

I haven't been very active on the radio lately since not feeling well doesn't coincide with sitting in the shack. However, I did get a new desktop computer to replace my older laptop and have been working on getting it integrated into the shack with all the software and system settings. Some of my older programs ran great under Windows 10 but are not compatible with Windows 11 so I am having to research new programs to take their place. It is nice not having to wait for what seemed a long time for the older computer to boot up as this one is ready immediately after turning it on.

When I do feel good enough, I have been trying to work mostly 12-meters as I had very few contacts on this band. I now have 61 countries and 23 states confirmed via LOTW.

Until probably February, at least from me, "Be safe and Ham it UP"!

ARRL Hails FCC Action to Remove Symbol Rate Restrictions

11/13/2023

ARRL The National Association for Amateur Radio® reports that earlier today, the FCC Commissioners unanimously voted to amend the Amateur Radio Service rules to replace the baud rate limit on the amateur HF bands with a 2.8 kHz bandwidth limit to permit greater flexibility in data communications.

"The Federal Communications Commission today adopted to incentivize innovation and experimentation in the amateur radio bands by removing outdated restrictions and providing licensees with the flexibility to use modern digital emissions," announced the FCC.

"Specifically, we remove limitations on the symbol rate (also known as baud rate) -- the rate at which the carrier waveform amplitude, frequency, and/or phase is varied to transmit information -- applicable to data emissions in certain amateur bands," concluded the FCC Report and Order and Further Notice of Proposed Rulemaking (DA/FCC # FCC-23-93; WT Docket No. 16-239) adopted November 13, 2023. "The amateur radio community can play a vital role in emergency response communications but is often unnecessarily hindered by the baud rate limitations in the rules."

Consistent with ARRL's request, the amended rules will replace the current HF restrictions with a 2.8 kHz bandwidth limit. "We agree with ARRL that a 2.8 kilohertz bandwidth limitation will allow for additional emissions currently prohibited under the baud rate limitations while providing sufficient protections in the shared RTTY/data sub bands," concluded the FCC Report and Order.

ARRL President Rick Roderick, K5UR, hailed the FCC's action to remove the symbol rate restrictions. Roderick stated that "this action will measurably facilitate the public service communications that amateurs step up to provide, especially at times of natural disasters and other emergencies such as during the hurricane season. Digital technology continues to evolve, and removing the outmoded data restrictions restores the incentive for radio amateurs to continue to experiment and develop more spectrum-efficient protocols and methods while the 2.8 kHz bandwidth limit will help protect the shared nature of our bands. We thank Congresswoman [Debbie] Lesko (AZ-08) for her efforts on behalf of all amateurs to get these restrictions removed."

In a Further Notice of Proposed Rulemaking (FNPRM), the FCC proposes to eliminate similar restrictions where they apply in other bands. "We propose to remove the baud rate limitation in the 2200-meter band and 630-meter band… and in the very-high frequency (VHF) bands and the ultra-high frequency (UHF) bands. Additionally, we seek comment on the appropriate bandwidth limitation for the 2200-meter band, the 630-meter band, and the VHF/UHF bands." ARRL has previously expressed its support for eliminating the symbol rate limits in favor of bandwidth limits where they apply on the VHF and UHF bands but suggested that the bandwidth limits themselves be reviewed considering today's technology and tomorrow's possibilities. Similarly, when eliminating the baud limits on the 2200- and 630-meter bands, consideration should be given to what, if any, bandwidth limits are appropriate.

The new rules will become effective 30 days after being published in the *Federal Register*. The FCC will announce a period for public comment on the additional proposed changes based upon publication of the FNPRM in the *Federal Register*. No date has been set for publication.

Working with JTDX

Scott Fields
W8HK

Amateur radio operators have always been enamored with modes other than SSB. For many years the only other non-verbal modes were CW and RTTY. While CW has always been a mainstay in the amateur radio service, it requires many hours of personal study and use to remain proficient. RTTY, while very efficient at transmitting large amounts of data, required bulky, specialized equipment to transmit, such as a HeathkitHD-3030 RTTY Terminal interface or the Dovetron MPC-1000R.

With the invention of the personal computer a whole new world of digital communication is possible for the amateur radio enthusiast. There are many PC digital modes to choose from. Some of the more popular were PSK31, Olivia, Pactor, HF Packet and JT65, just to name a few.

The hottest modes these days are FT8 and FT4, created by Dr. Joseph Hooton Taylor Jr.(K1JT), the American astrophysicist and Nobel Prize in Physics laureate who first gave us JT65.

FT8 and FT4 have become very popular for HF communications due to their low power standard and ease of use. QSO's of over 5,000 miles are common at QRP power levels, often with operators using only 1 watt of power. Let's take a tour of FT8 and FT4.

Getting Started

Obviously, a computer and a radio. Most of the newer radios already have a CAT port on the rear panel, so basically all that's required is the appropriate CAT cable, an audio interface and a PC.

Interfaces

A sound card. It's that simple. Audio in, audio out. The TigerTronics SignaLink USB Interface is $139.95 at various vendors and is, in my opinion, overkill and a rip-off. I use a simple $8 USB sound adapter.

https://www.amazon.com/Sabrent-External-Adapter-Windows-AU-MMSA/dp/B00IRVQ0F8/ref=sr_1_3?th=1

This sound adapter is plug-and-play; just plug it in and it works. Run an 1/8 audio cable from the headphone (or rear speaker) jack on the radio to the mic jack on the adapter. Then run a 1/8 cable from the radio mic to the speaker jack on the adapter. If you have a mic jack that is standard, you will have to buy (or make) an adapter that will accept a 1/8 phone jack. Alternatively, you can run the appropriate cable from the rear data port on the radio. PC Windows audio levels (speaker and mic) for the sound adapter are both set as low as possible; I set mine at 1 or 2. Otherwise your signal will be very wide on the waterfall. (**Note**: No external interface is needed if your transceiver has a built in sound card. You will only need a USB cable between the radio and PC to use digital modes with the correct software. Editor)

Software

There are a few software programs essential for FT8/FT4 operation. The first and most important are the WSJTx or JTDX programs, whichever you prefer. WSJTx is more basic, while JTDX has more features. However, JTDX does not have a working mode for Field Day, while WSJTx does. The software is free and open source and can be downloaded here:

WSJT

https://wsjt.sourceforge.io/wsjtx.html

JTDX

https://sourceforge.net/projects/jtdx/

The next program is Dimension 4. This is a program that will sync your PC to an atomic clock. It is essential that both the receiver and transmitter's PC's clocks be exactly on the same minute and second, UTC. A typical FT8 QSO takes 1.5 minutes, with the transmitter and receiver alternating, each at 15 second intervals, while an FT4 QSO takes 45 seconds, with the transmitter and receiver alternating, each at 7.5 second intervals.

Dimension 4

https://dimension-4.informer.com/5.3/

Install both Dimension 4 and WSJTx or JTDX software. Setup for each is simple and is not covered in this article. RTM

User guides can be found here:

WSJT USER GUIDE

https://wsjt.sourceforge.io/wsjtx.html

JTDX USER GUIDE

chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://europeanft8club.files.wordpress.com/2019/10/jtdx_user_manual_en_2018_01_08.pdf

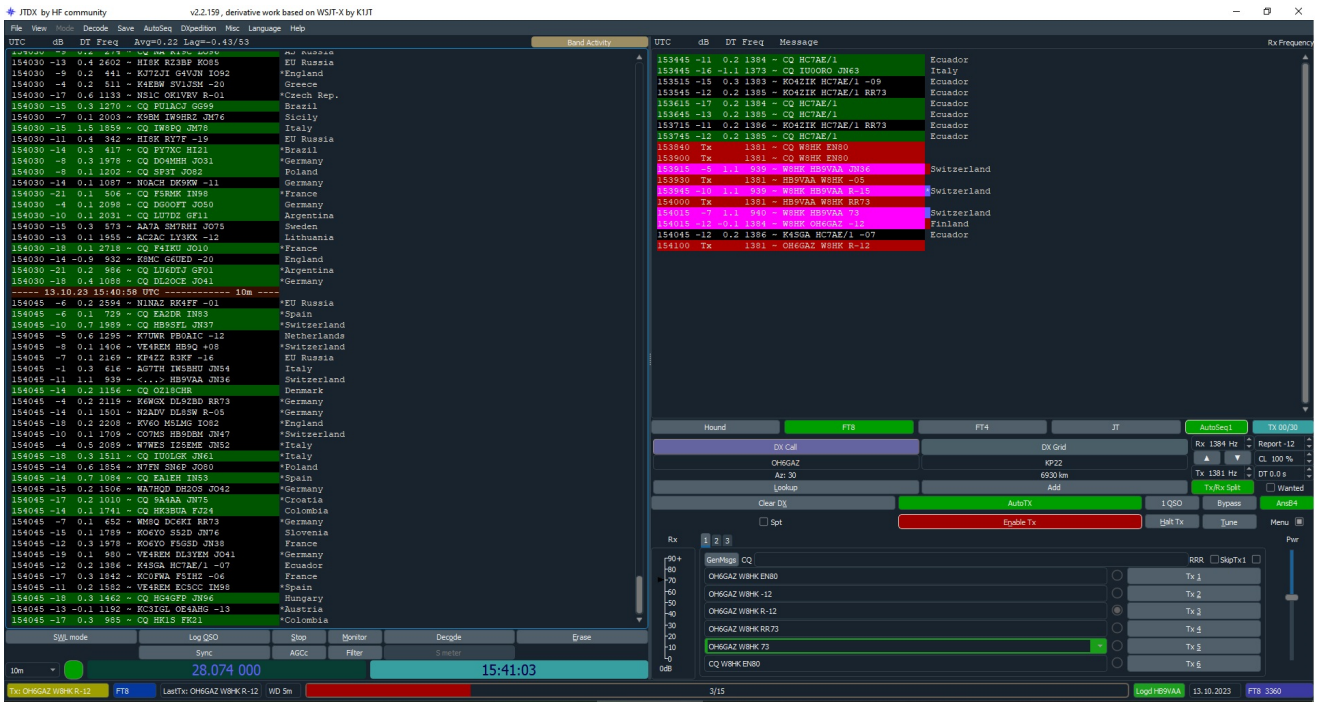
Basic operation

First, ensure all cable(s) are properly connected, the PC is on, and the radio is on. Next, sync your PC clock using Dimension 4. Now start the WSJTx or JTDX program. You will notice a window at the bottom right; this is the QSO window. All your transmitted text will be displayed here. You will notice radio buttons to the right. These are self-explanatory, labeled TX1 through TX6 with the transmitted text to the left. Clicking these buttons will transmit the corresponding text.

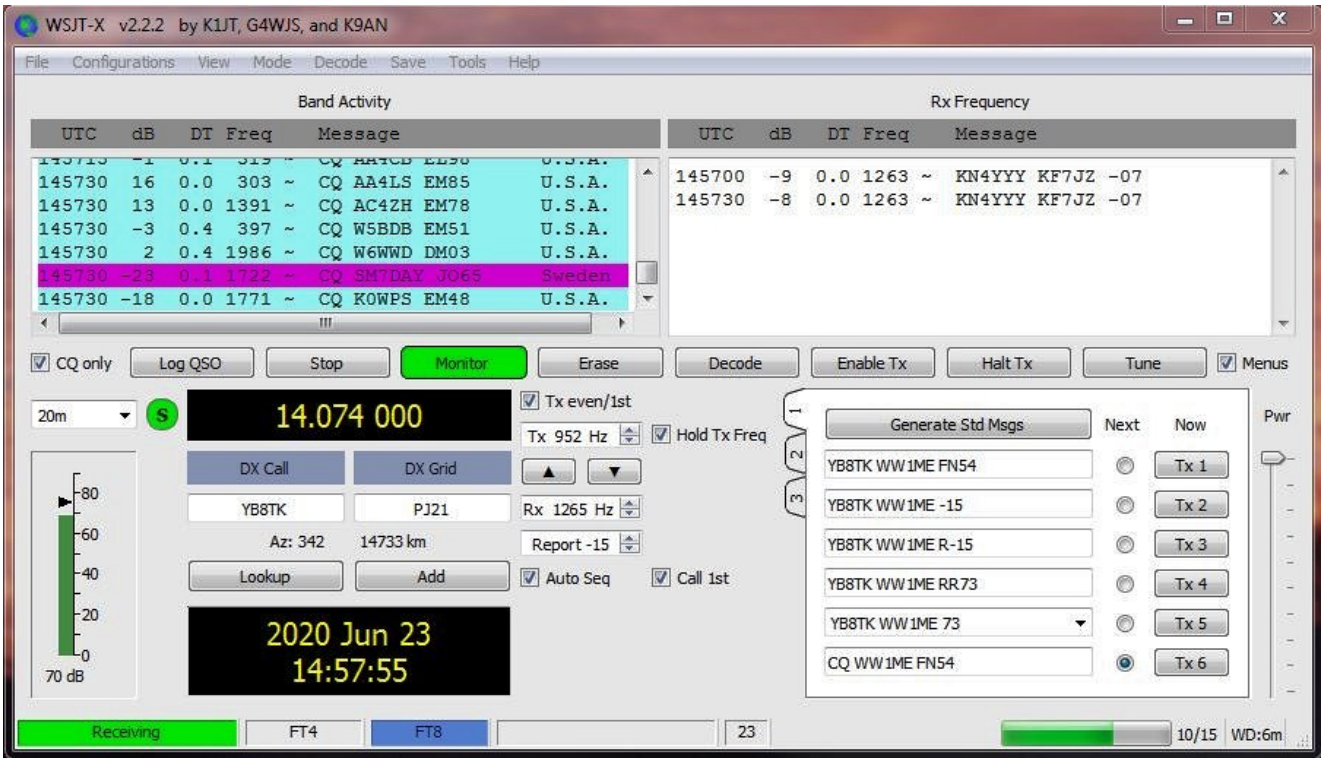
You will notice "Enable TX", "Halt TX", and "Tune" buttons. These are self-explanatory. The "Clear DX" button erases the text mentioned above.

The large window directly above the QSO text window is the "QSL" window where your CQ calls and any answer to your CQ calls will be displayed.

The large window on the left is where all decoded messages you receive will be displayed. The buttons below this window are self-explanatory, with the exception being the "Erase" button; a single click will erase all messages in the left "Decode" window and a double click will erase all messages in the right "QSL" text window.

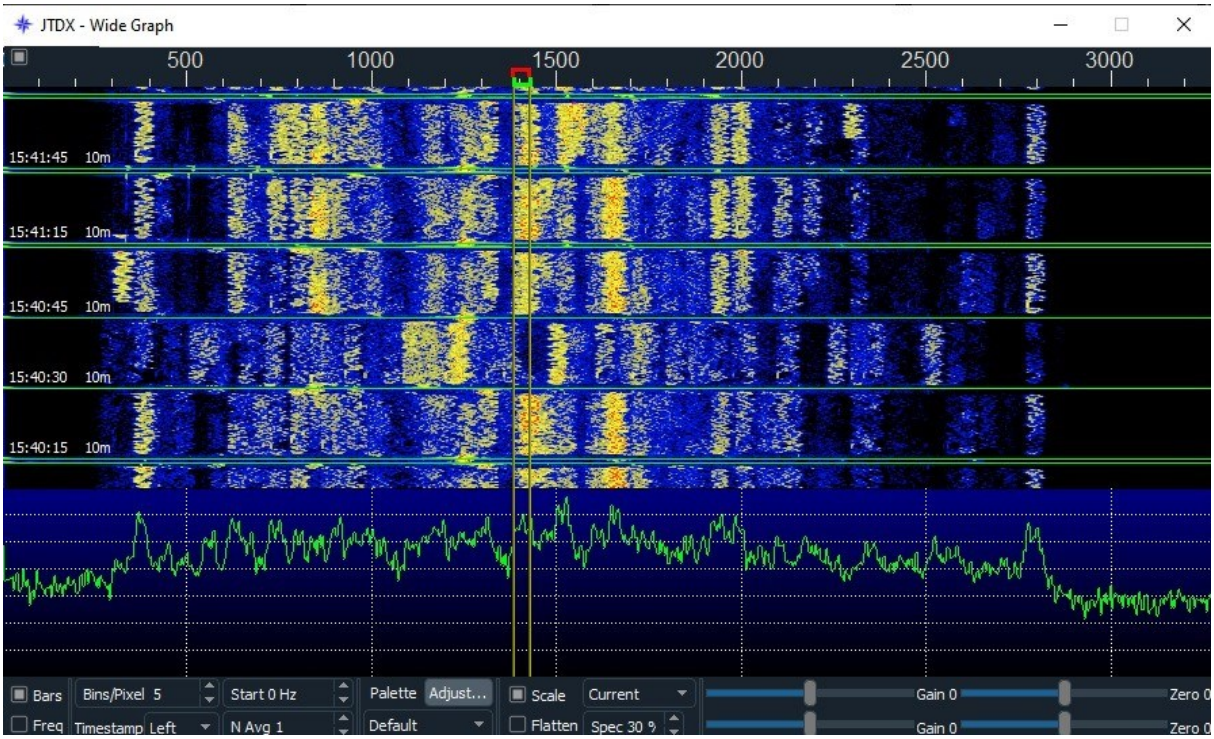


JTDX Screen



WSJTX Screen

Waterfall



All transmissions are also displayed visually on a timestamped waterfall. Pick a spot on the waterfall that is open and right click to place your transmission, which will be the red indicator. Any QSO you make will be shown with a green indicator. Waterfall colors are also customizable.

QSO Protocol

QSO protocol is very structured. Either call CQ yourself using the "Enable TX" button or double click a CQ caller in the decode window. Pay attention to the "TX Even/1st" check box. Box checked will be 1st decode, unchecked will be 2nd decode. At this point you will either call CQ or answer the CQ caller. Grid locator and signal reports are the bulk of the QSO. These are automatically sent when you click the correct button. Here is an example of a typical QSO with times for reference:

CQ W8HK EN80	01:30:00 - 01:30:15
W8HK W8TW EN80	01:30:15 - 01:3:30
W8TW W8HK -10	01:30:30 - 01:30:45
W8HK W8TW -8	01:30:45 - 01:31:00
W8TW W8HK 73	01:31:00 - 01:31:15
W8HK W8TW 73	01:31:15 - 01:31:30

Logging

You can either manually click the "Log QSO" and log the QSO or let WSJTx/JTDX prompt you to log the QSO.

That's about it. The more you use the program the better you'll get at working FT8/FT4.

Now for the cool part.

GridTracker

This is a game changer for FT8/FT4. This freeware program will show you, in real time, who's hearing your call and where. Most of your reports will start to show within 15 seconds of your first transmission.

Not only does GridTracker show your transmissions, but it also displays everyone else who's talking to each other, based on your decodes.

Not only does GridTracker give you an awesome visual display of current band conditions, but it will log all your QSO's automatically to whichever logging program you use.

I use GridTracker to simultaneously log every QSO to LOTW, eQSL, HRDlog, QRZ and Clublog. Now that is nice, yes?

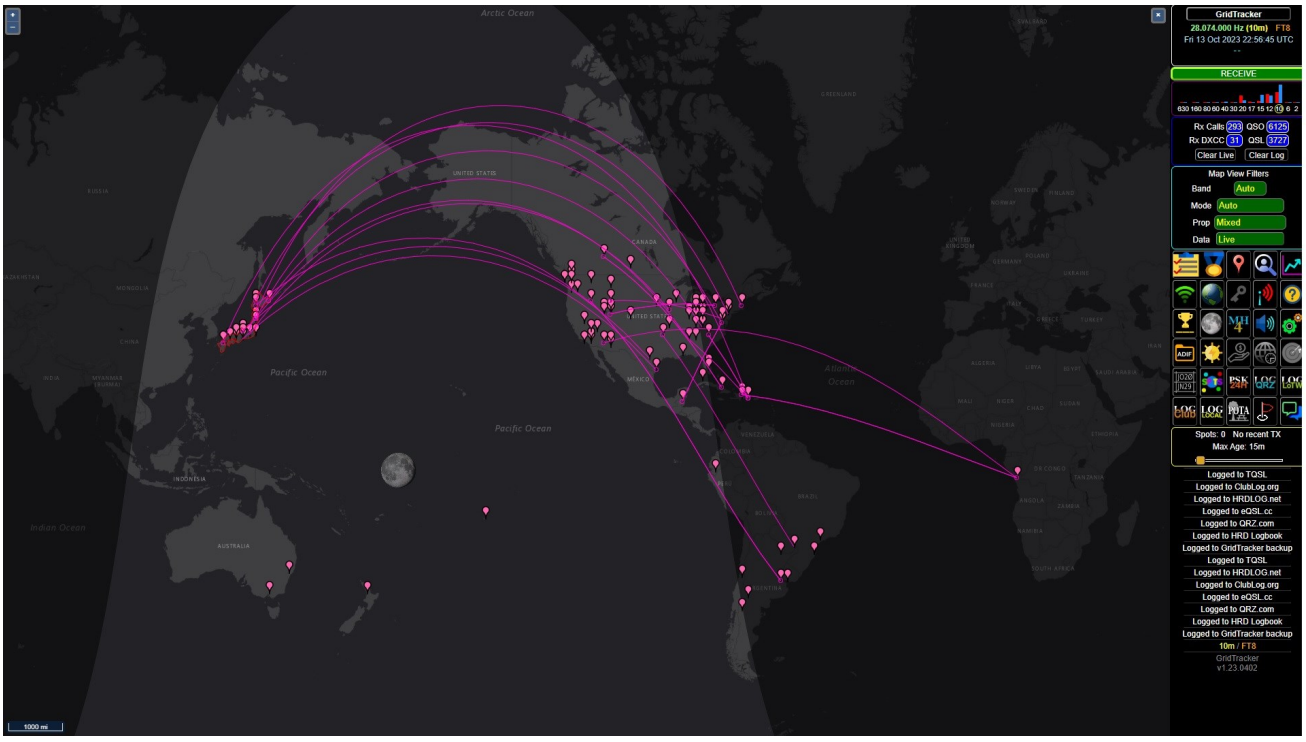
GridTracker

https://gridtracker.org/

GridTracker Setup for WSJT and JTDX

https://gitlab.com/gridtracker.org/gridtracker/-/wikis/Appendices/appendix-b-Configuring-WSJT-X-and-JTDX-for-GridTracker

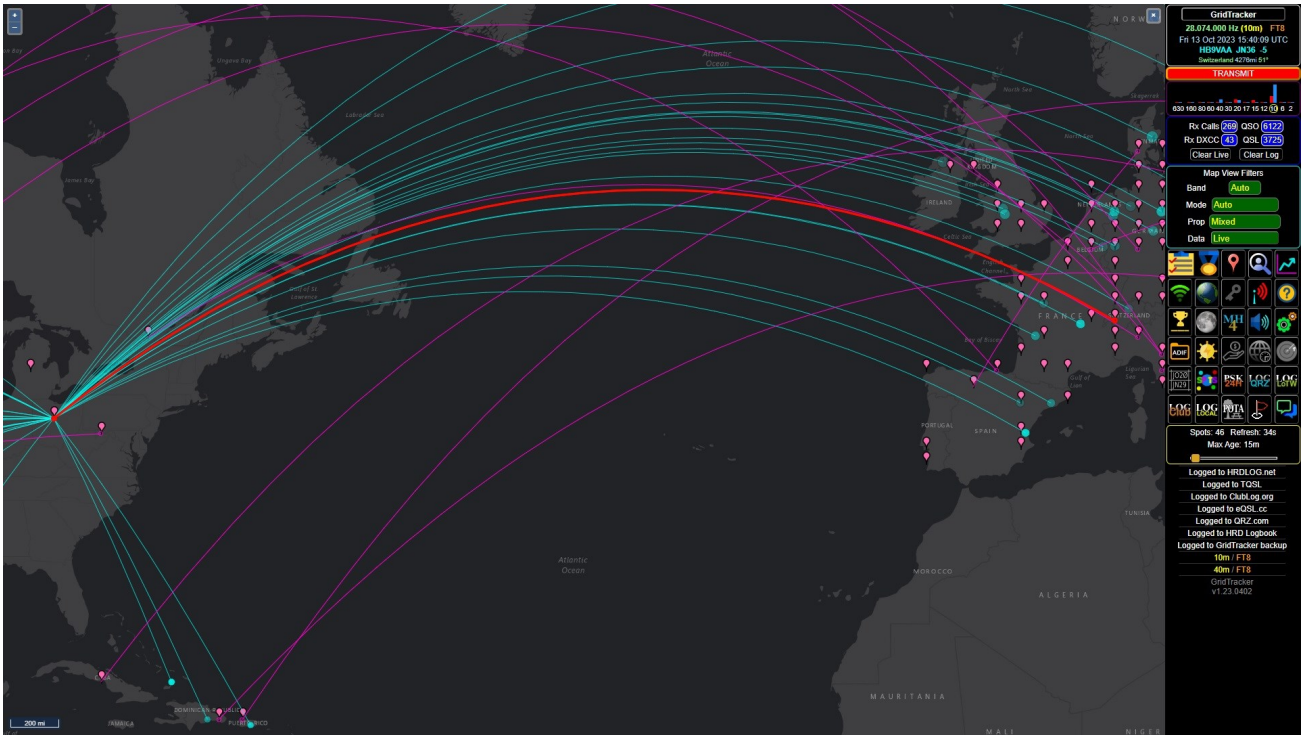
Here are some examples of GridTracker at its best!!



Who is Making Contacts

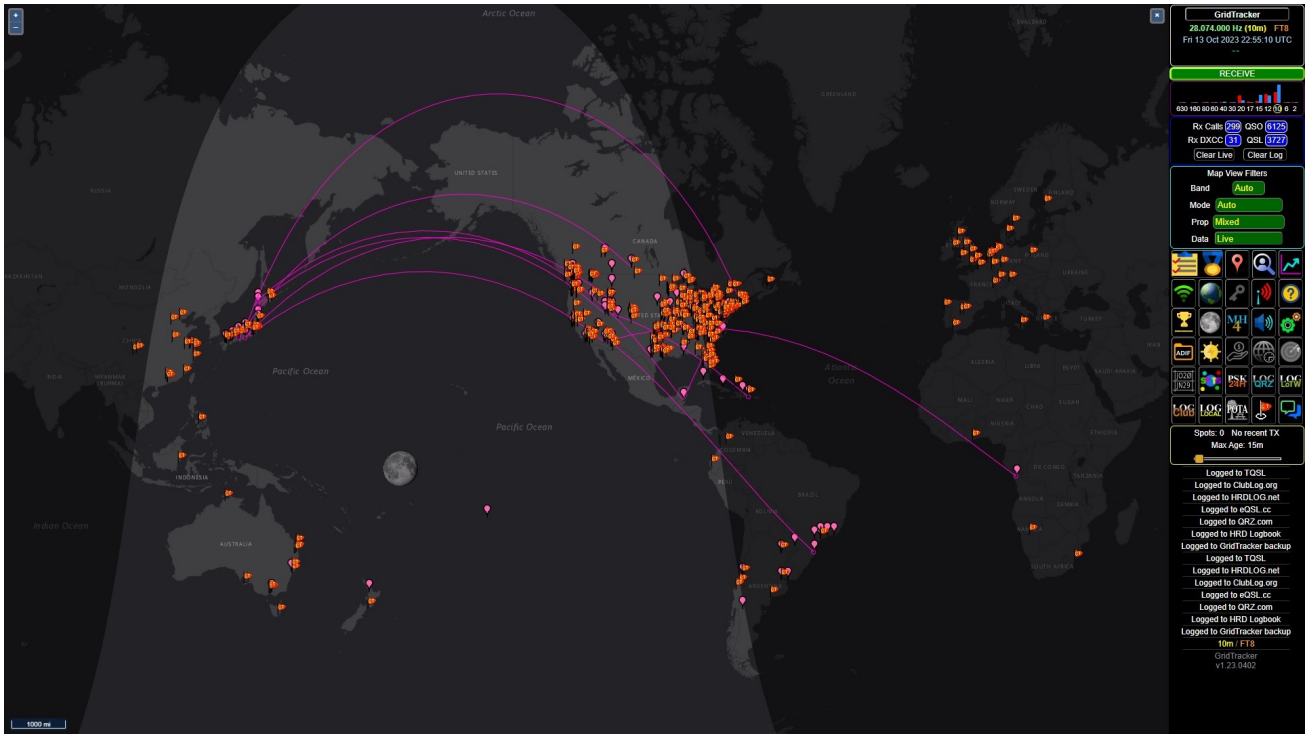
GridTracker QSOs in Progress

Hams talking to one another! The magenta lines! Europe and Asia!



W8HK QSOs

W8HK making a QSO! The thicker red line is me!



GridTracker Users

GridTracker listeners! Note the pretty orange flags!

W8HK Report

Who's hearing W8HK on 10 meters at the time of this article!! The teal lines are me!

All the colors are customizable as are the thickness of the lines. As you can see from these pictures, greyline can also be used as well as moon position! Current NOAA weather can also be toggled. You can even send text messages to other GridTracker users who are online.

I hope you will enjoy FT8/FT4 as much as I do.

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FM Repeater Nets In And Around Knox County

County	Net	Frequency	Day and Time
Ashland	No net as of 03.30.2023		
Coshocton	CCRA	147.045 PL 71.9	Every Sunday 9:00 PM
	ARES	147.045 PL 71.9	Every Monday 8:00 PM
Delaware	Monday Night Net	145.170 PL 74.4	Every Monday 8:00 PM
Holmes	No net as of 03.30.2023		
Knox	**ARES Sunday Night Net**	**146.790 PL 71.9**	**Every Sunday 9:00 PM**
Licking	N8RA Tuesday Night Net	146.880 PL 141.3 444.500 PL 141.3	Every Tuesday 9:00 PM on the 146.880 except for the last Tuesday of the month they check in on the 444.500 repeater.
Morrow	Morrow County Information Net	146.775 PL 107.2	Every Sunday 9:00 PM
Richland	IRAC Net - Mansfield	146.940 PL 71.9	Every Wednesday 8:00 PM

October Meeting Minutes

Scott Yonally
N8SY

The minutes from October are being published here as the newsletter was not distributed in November due to publishing issues.

MVARC Meeting Minutes

October 09, 2023

7:00pm EDT – 7:45pm EDT

The meeting was called to order by Frank, KC8EVS and he asked if there were any additions or corrections to the September Meeting Minutes as printed and distributed prior to the meeting. Hearing none, the meeting minutes were approved.

The Treasurer's report was given by Frank in Terry, KI8N's absence. There were no corrections or changes and will stand as read.

Committee Reports:

ARES

Frank, KC8EVS announced Terry, KI8N has resigned at E.C. due to his illness. The program is on hold for now.

ARRL

Scott, N8SY stated there were some new ARRL certificates that are on-line and ready for members to use. Some other projects are being worked on and will be announced soon. Frank, KC8EVS also announced the Director elections for Great Lakes Division and that MVARC has endorsed Scott, N8SY's candidacy for Director.

Repeaters

Steven, N8RLW reported the repeaters are working just fine. He stated the new PL board will be shipped to us soon. He stated there have been several phone calls to Henry Amplifier from Vasu on getting the tuning procedures for our amplifier. Vasu will pursue and re-tune it soon.

MESH / EchoLink

Don, W8PEN stated as far as he is aware only the 2.4 GHz side of the MESH is working right now. He reported the Foundation Park unit is down but feels that it's because of a power failure and the computer just needs to be reset to fix it. EchoLink is working fine.

PIO

Steven, N8RLW reported he still needs to get in contact with the Mt. Vernon City Council for us to give a talk on Amateur Radio. He stated it might be best for us to have our talk with them around March or April of next year, giving us time to update business cards and Scott's Director election out of the way. Much discussion followed.

Old Business:

Nominations Committee

Michael, KE8HGE reported he hasn't received any nominations for officers yet. Roger, KE8IHI and Steven, N8RLW both spoke up and volunteered to run again for Director positions. All the officer positions are still open for any nominations currently.

Lease Agreements / Meeting Room

Frank, KC8EVS reported there isn't any new news to report on either item.

Tech Classes / VE Testing

Michael, KE8HGE reported the classes are ending this week. There will be a test session this coming Wednesday with 2 people known to want to be tested.

Kroger and PayPal Accounts

It was mutually decided to suspend any further action on this project until after the new year.

New Business:

Christmas Party

The membership agreed to hold the party at Bob Evans, if available, on December 10th at 6pm. We will still have a regular membership meeting on Monday, December 11th at the Academy as normal.

Build Project

Frank, KC8EVS announced he would like to have a "build" project for the club to do sometime next year. He suggested the possibly of building an End Fed antenna. This would be useful, and you can learn many different things from it as well as ending up with a very good antenna to use.

Fox Hunt Project

Emery, W8TW suggested we do a Fox Hunt next year in the park. Some discussion followed with an agreement to do a Fox Hunt next year.

Field Day

Discussion was brought up about Field Day at Apple Valley and if the new Pickel Ball courts will interfere with us being able to have Field Day there. Some discussion followed with no decisions being made on Apple Valley or go somewhere else.

Don, W8PEN mentioned November Sweep Stakes will be November 18 – 20 and we will be operating from the club station.

A motion to adjourn the meeting was made at 7:45 pm EDT with no dissenting votes cast.

The raffle was held for a 50/50 drawing and Emery, W8TW won the money and donated back to the club treasury.

Those present at the 10/09/2023 Meeting	
Frank Counts, KC8EVS	Sean Lehman, KE8YUS
Roger Gorrell, KE8ICI	Don Russell, W8PEN
Steve Harvey, N8RLW	Michael Jacobs, KE8HGE
Tom Evans, KD8HSA	Jim Bostic, KD8IZT
Scott Yonally, N8SY	Tyler Sheets – no call
Bill Stroud, KD8WHQ	Emery Bennet, W8TW

Radio Activity

Don Russell
W8PEN

Don's Radio Activity column from October is being published here as the newsletter was not distributed in November due to publishing issues.

Welcome to November. Can't believe summer is over already. Unlike last month, there is a lot of information to pass on to members.

EchoLink

We will start with EchoLink, as that part of the repeater system probably affects the most members. After bragging at the last meeting about how well EchoLink had been working since installing the new Transceiver and computer, we had a failure.

This started out with a comment from Scott, N8SY, that EchoLink sounded funny and was dropping a lot of words. Even though he sounded just fine over the EchoLink. I immediately connected to EchoLink and indeed, at least on the receiving end, the EchoLink system was missing a lot of words, and everybody sounded slightly off (not that that is unusual HiHi).

Knowing that it could be that the internet was just overly busy, and packets were not getting through in a timely manner, I decided to wait it out and see if the problem still existed in the morning. Well, it did!

I tried several different "easy" things to start out. Rebooted the Spectrum modem, rebooted my Wi-Fi router, changed from using Wi-Fi to an ethernet connection to the computer. I also rebooted the computer. Nothing seemed to help. So, it was time to get serious.

I removed EchoLink from the computer and ran a virus scan. Then I ran my favorite registry cleaner. Reinstalled EchoLink. Problem still there. Switched to a different computer. Same problem. Switched to another computer. Same problem.

Decided to reboot my Spectrum modem and Wi-Fi router again. That seemed to finally fix it. For an hour! Decided to do a factory reset of my router and do a firmware upgrade. Nothing.

By this time, I have about five hours or more of troubleshooting invested.

Just to make sure, I bought a new router. Mine was a bit old and I thought I was having some issues with it anyway, so a good time to get a new one. That didn't really help with the Echo-Link issue, but it did improve my overall Wi-Fi access with stronger signals throughout the house with less Wi-Fi drops.

I went back to the older club computer that had performed so well for the last few months. Guess what? While setting up EchoLink on this computer I had a hard drive failure. The computer still seemed usable. But for how long? I ditched the computer!

So, as a last resort, I tried something I always wanted to do. I put Linux on one of my spare computers. Now, Linux is not compatible with Window programs, so EchoLink will not work on Linux without a little help. That help comes in the form of software called "Wine" that allows Linux to run some Window programs. But not all programs. Checking the Wines list of compatible programs showed EchoLink would run without any issues. "WINE" stands for **W**ine **I**s **N**ot an **E**mulator.

So, I installed Wine on my Linux computer. Then installed EchoLink. This seems to work very well. It took a while to figure out how to get the USB to Serial Port to work. A com port was needed for EchoLink transmitter keying. After some researching, though I finally figured it out.

Amazingly, the audio sounded pretty good too. I was able to set sound levels well enough. While there seemed to be a dropped word occasionally, it was nothing like before. I was hoping this was the answer.

I left this EchoLink system run on an unused simplex channel overnight to assure myself that the system was stable. Sure enough, in the morning, everything was still working fine. I switched the EchoLink system over to our repeater frequency. Sounded fine.

Then I decided to tweak the audio. Well, we were making progress until the soundcard stopped working altogether! Darn it.

Things were set aside for a bit, just to cool off and rethink the project. Sure enough, I turned things on the next day, and everything seemed to be working. So, as of this writing, EchoLink on the repeater is working. No guarantee for how long. It could be down before I finish writing this article for the Newsletter.

On the bright side, Steven, N8RLW, is working on a backup system to be run from his home. Since I believe at least part of my problem with EchoLink is my internet connection, Steve may soon be taking over this project. Especially if I continue to have problems.

I will say that I have been running this EchoLink system for more than ten years and never had this problem before. Even with the old computer. In fact, if the issues persist, I may try an older version of the EchoLink program just to see if it makes a difference.

Local Mesh Nodes

As if the EchoLink system wasn't being enough of a pain, some work needed to be done on our Mesh nodes. Only one of the nodes at the water tower was working. The other two had, after being intermittent for quite a while, quit entirely during the summer.

The main node was still working well. The 5 GHz link to Johnstown had quit working, as well as the 5 GHz Mt. Vernon link node. I figured it was the nano-switch up at the top of the water tower. Steven (N8RLW), Shawn (KD0DMJ). and I met out at the water tower one nice evening to do the repair. Shawn made the climb to the top and discovered that the problem was that the ethernet cables had been pulled out of the nano-switch connectors and was not making good contact. Plugging the cables back in and securing the cables in such a way that this should not happen again fixed the issues.

This was good news, as it saved the spare nano-switch for use at our East Node located on top of the hospital. Yes, one node was down at KCH. Since we needed to exchange equipment anyway, I wanted to put one of the high-powered beam antennas up for the 5 GHz node. For technical reasons, this meant that we needed to use a nano-switch so that the two nodes at KCH could talk to each other.

This time the group included Mark (KD8UEL), Frank (KC8EVS), Roger (KE8ICI), and I. We had everything running in about an hour. Everything looked good so the crew started packing up. As a last-minute attention to detail, Roger switched some cables around to make it look nicer. We didn't recheck things when he was done. Now the node isn't working correctly.

Doing some investigation, I found that this node also had the wrong firmware installed. Not good. I tried reinstalling the firmware the via RF link, but that did not work. I may need to direct connect this node to the computer to change the firmware. If that is not successful, then I have another node ready to go up.

Just means another tour up on the roof. I will gladly let the younger guys handle that.

November Sweepstakes 2023

Last month I mentioned that we have an opportunity to put the club station on the air During the SSB portion of the November Sweepstakes. The contest runs from 4:00 PM Saturday November 18th to 10:00 PM Sunday November 20.

We will schedule operators the same way we did it last year. You have to sign up to operate. I'll be filling names in on the schedule at the November meeting. You do not need to schedule if you are willing to come to the club station randomly and take a chance that no one is scheduled to operate at that time. However, the best way to ensure you can operate is to get on the schedule.

If you can't make it to the meeting but want to schedule operating time, just email me at w8pen@yahool.com and request a time slot. First come first serve. If you email first, I can let you know what is available.

That's it for this month. Happy Thanksgiving to all. Yes, it is that time of the year. 73 and see you at the November meeting.

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Miscellaneous Amateur Radio Information

Join us every Sunday night on the Mt. Vernon 146.79 repeater for our weekly MVARC ARES Sunday Night Net. Check-in starts at 9 pm.

Unable to access the repeater from where you are? We are on IRLP (EchoLink) K8EEN-R Node 809800.

Ohio Traffic Nets

The Ohio Single Side-Band Net (OSSBN)

Ohio Single Side-Band Net; Ohio connection for what is going on in the Ohio Traffic System. The Net meets on 3.972.5 MHz at 10:30 am, 4:15 pm, and 6:45 pm daily. Alternate Frequency for all sessions is 3.968 MHz.

Central Ohio Traffic Net

The Central Ohio Traffic Net is a part of the Ohio Section of the National Traffic System. They meet daily to handle traffic; all licensed amateur radio operators are welcome to check in and to learn to handle traffic. COTN meets daily at 7:15 pm on 146.970, -.600 MHz, PL 123.0. Signal Operating Instructions and frequencies given here: https://www.cotn.us/sop.

The Ohio ARES HF Digital Net—OHDEN

Tuesday at 7:45 pm 1804.5 MHZ, USB, Olivia 8-500 with water-fall frequency 1500.

"Amateur radio operators have always been enamored with modes other than SSB. For many years the only other non-verbal modes were CW and RTTY." Scott, W8HK

MVARC

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* Vice President
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* Treasurer
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Editors Notes

The MVARC Newsletter is delivered to club members via email containing a link to the MVARC webpage, Member Pages heading.

Thanks to all for your assistance with the MVARC Newsletter; in 2023 we were selected as the fourth best newsletter in the Ohio Section.

Please note the contact email for the MVARC newsletter is: **admin@mvarc.net**.

The **MVARC CQ** is the official newsletter of the Mount Vernon Amateur Radio Club.

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MVARC.net

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