SKYVIEW
Skyview Radio Society, K3MJW
K3MJW
2335 Turkey Ridge Road
New Kensington, PA 15068

Q5er – The Official Newsletter of the Skyview Radio Society

What the heck is this ?
See inside this issue for the answer.

2024 is Skyview's 64th Anniversary !!

April 1, 2024

- WSPR Explained
- From the Skyview Basement
- Balun Quality Control
- POTA POTA POTA
- Fun With Decibels
- CI-V Cables & Big RF
- Follow the FT-8 Crowd
- 1500watt RG-58/U ??
- Drowning Worms
- ARRL Technical Specialist
- Skyview's Best Friend
- And More . . . .

Sunspot Numbers Close To Peaking ??

Time to exercise the 10-12-15-17-20 Meter bands While They are Hot

Inside this issue:

The Skyview Radio Society Clubhouse is the "Every Tuesday Place" . . .

Something is going on at 'the joint' each and every Tuesday evening, from about 1900 hours to whenever.

See the general schedule of Tuesday events on the Skyview Web Page: http://www.skyviewradio.net

For the latest up-to-date plan, check the Groups.io Reflector at : https://groups.io/g/K3MJW

Directions are on: http://www.skyviewradio.net Guests are always welcome !!

From the Editor

Very busy issue. With lots of variety in the subjects. Our members are very active with various projects. It is great that they take the time to take some photos and document their activities for us.

Spring and Summer result in lots of activities. Write up some of your fair weather activities and adventures. Then send it to me to publish.

If any of the photos are too small, use your PDF Viewer Enlarge feature to increase the size of the page.

Jody - K3JZD

Remember: The number of people older than you never increases, it only decreases

Ham Radio is a Contact Sport

From the Treasurer

We received a new load of Propane. Unlike Natural Gas, Propane continues to go up in price. And delivery fees now get added. But we need it !!

If you are going to the joint during cooler weather for a shot visit to operate the radios, consider using the wall mounted unit in the Radio Room for some heat instead of heating the whole place up with the furnace. Close the door to the radio room whenever you do that.

And, for cooler weather users, please consider throwing a few bucks into the Red Propane Donation container during each visit.

For you folks with IRAs who are now taking RMDs, remember that making a 'QCD Donation' to Skyview lowers your tax bill. Your IRA Manager can assist you with that.

Skyview received a one-time $4k signing bonus from Olympus Energy for allowing them to frack under our two acre property. A big Thank You goes out to all who researched and supported that effort .

Jody - K3JZD

ADVENTURE: The respectful pursuit of trouble

Skyview Radio Society is recognized by the Internal Revenue Service as a charitable non-profit organization under Section 501(c)(3) of the IRS Code. Donations to Skyview are tax deductible to the extent permitted by law.

Continue Use the Skyview Facilities At Your Own Risk - It is Not Really Totally History Yet.

Follow https://groups.io/g/K3MJW for COVID updates.

It's not the will to win that matters — everyone has that. It's the will to prepare to win that matters. - Paul Bryant

November Business Meeting Minutes

de Don - WA3HGW

Skyview Radio Society

Monthly Business Meeting – March 05,2024

Call to Order: 7:30 PM by President Brian Manley, K3ES.

Attending – 39 Members and two visitors: WA3HGW, N3WMC, K3CLT, KC3VNB, K3JAS, W3ZVX, W3IU, KC3VCX, AB3IK, KE3IF, KA3CBA, W3BUW, K3HSE, AC3IE, W3UY, K3VRU, WA3KFS, K3JZD, K3STL, NM3A, N3DRB, AG3U, AC3KI, KG3F, NJ3R, N3TIN, N3XF, AC3GB, KC3PXQ, KE3PO, K3FAZ, KB3DVD, KC3TTK, AB3GY, AG3I, KE3Z, AJ3O, WC3O, K3ES and guests K3VL AND KD3RVR.

Prior Meeting Minutes: The minutes of the February 6, 2024 meeting were distributed for member review. A motion to accept the minutes as presented was made by N3WMC and seconded by AC3KI. The motion passed without objection.

Treasurer's Report: Treasurer Jody, K3JZD, reviewed the Financial Report of 29 February 2024. Jody noted normal expenditures for February, including $1171 for propane and tank rental minus $34 from the propane collection jar for a net cost of $1137. Also, $40 in Donations from the Building Fund Box were credited to the Restroom Remodeling. There were no Restroom Remodeling expenses. Income was from the 50/50 drawing, VE exams and kitchen. A motion to accept the Treasurer's Report as presented was made by W3BUW and seconded by AC3KI. The motion passed without objection.

Membership Report: Tom, AB3GY, advised there are no new member applications this month. Membership now stands at 149.

Radio Officer Report: Bob, WC3O, reports that all radios remain in good shape. During the recent RTTY contest the AL-1500 amplifier failed. It was temporarily replaced by an Alpha amplifier on loan from Bob. After the AL-1500 cooled down, it started working again, so the problem appears to be a thermally related intermittent. This will be investigated. (secretary's note: Maybe it requires the typical MFJ re-soldering of all the connections!) Another improvement was connecting the microphones directly to the radios instead of going through the Rigblasters. There have been some RFI problems on high power with the remote antenna switches. The control wiring to the switches will be replaced with shielded cable.

Kitchen Report: Bob, WC3O, noted the kitchen balance is at $267. $100 will be turned over to the treasury. Kitchen stocks are good.

VE Report: There were four applicants at the February VE test session. All four passed. Presently there are three persons scheduled for the next VE session on March 16.

Newsletter: The February issue of the *Q5er* is out with lots of fine articles for our members to read. Jody already has lots of good articles for the April issue, but more are welcome. Submissions by March 15 for the April issue.

Facilities: N3TIN reported nothing new for February

Building Committee: AG3I reports that all the HVAC ducting is complete in the restroom remodel with the exception of the tie-in to the existing system. This work will be completed later on when work on the existing building is done. A little more plumbing work needs to be done and electrical installations are now underway. The security system is ready to be moved from the existing location to the new exterior door location.

Operating Events Recap: Nothing to report this month.

Calendar of Events:.
March 9 – WEARS Hamfest at the Masonic Lodge in Greensburg. Good eats here!
March 16 – VE session at the clubhouse
March 16 & 17 – Rabid Racoon Race, Beaver County.
April 7 – Two Rivers Hamfest, Elizabeth, PA.
April 16 - Breezeshooters Groundwave Contest – Digital edition.
May 17 to 19 – Hamvention 2024 Xenia, OH (Plus a whole lot more!)
June 8 – Breezeshooters Hamfest (biggest in the area!) Butler Farm Show grounds.
August 3 & 4 – Pittsburgh Vintage Grand Prix, Schenley Park.
August 17 & 18 – Westmoreland County Air Show at Arnold Palmer airport.

Old Business: Nothing at this time

New Business: We discussed a date for annual Swap & Shop. It is typically the last Sunday in August. A motion to hold the Swap & Shop on August 25 was made by KC3PXQ and seconded by AJ3O. The motion passed without objection.

Weather Night:
March 12 – Emily Thornton from the NWS Storm Prediction Center in Norman, OK. on storm prediction and tracking.
April 9 – Presentation from the National Hurricane Center.
May 14 – Rich Redman from NWS PIT presenting a class on summer weather.
June 11 – Working on a presentation for this night.

Elmer Night: Nothing specific yet. Possibly something on the Heathkit DX-60 if some needed parts can be procured.

Net Report: Check-in numbers averaged 44 in February. The net control operator competition is going well. Which one can get the highest number of check-ins each month? If you want to volunteer for net control, contact K3STL or WC3O.

50/50 Drawing: The 50/50 total collected was $72. The winner of $36 was Jody, K3JZD, who donated his proceeds to the club treasury.

Meeting Adjourned: A motion to adjourn was made by W3BUW and seconded by AC3KI. The motion passed without objection. The meeting was adjourned at 7:52 PM.

Respectfully Submitted,

Don Stewart – WA3HGW
Secretary; Skyview Radio Society, Inc.

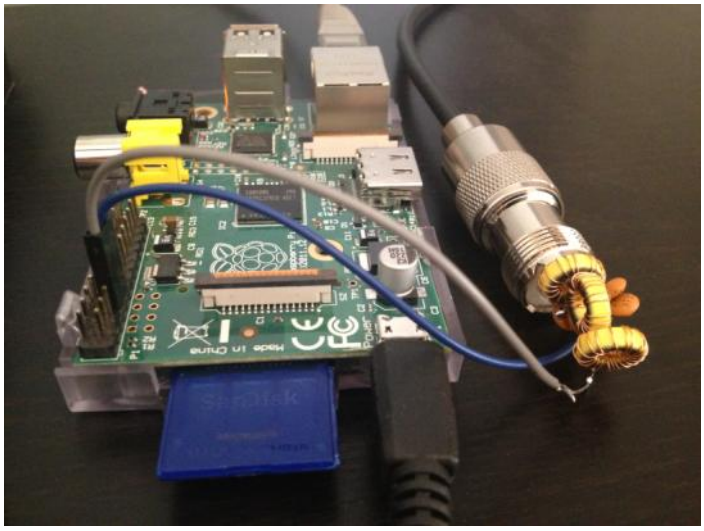
WSPR Explained - How to Get Started de Chuck - K3CLT

WSPR Explained: How to Get Started With One-Way Ham Radio

By Geoff Fox - ExtremeTech - 09/03/2019

Condensed and Updated to reflect being re-published in 2024 (Jody – K3JZD)

WSPR's biggest selling point is you can do it on the cheap. It's easy to set yourself up for not much more than $100 and often a whole lot less.



Raspberry Pi as WSPR transmitter

image credit: Gerolf Ziegenhain

UR3RM, a ham radio station in Ukraine blindly sends out a message on 7038.6 kHz. It was automated. It was text. Maybe someone would hear it. Maybe not. The "maybe not" part is easy to understand because UR3RM's transmitter was putting out 1.0 milliwatt, .01 watts. To put that in perspective, a Class 2 Bluetooth transmitter, the ones good for around 30 feet, run 2.5 milliwatts.

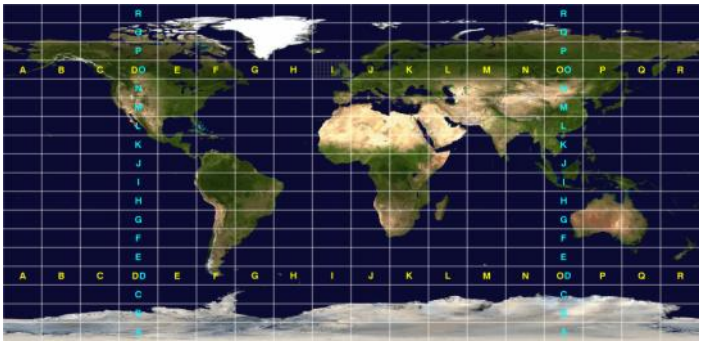
UR3RM was using a mode called WSPR (Weak Signal Propagation Reporting). Unlike most of ham radio, this is a one-way mode. There little expectation anyone will be listening. WSPR's biggest selling point is you can do it on the cheap. It's easy to set yourself up for not much more than $100 and often a whole lot less. And, though a ham radio license is needed to transmit, anyone can put up a receiver.

Most WSPR transmitters run very low power, many well under a watt like UR3RM's. But sometimes those peanut whistles go far. UR3RM's transmission was heard on the Australian island of Tasmania, a distance of 15,140 km. Stated more impressively, the transmission/reception worked out to 9,235,000 miles per watt!

This isn't being done with fancy gear and immense antennas. WSPR's greatest accomplishment is it lets this be done on noisy, unreliable, staticky radio bands. And, the protocol lets the receiver know what it's received is good without any confirmation from the sender.

There is a price to pay for making all this reliable: bandwidth. A WSPR signal is 6 Hz wide. A typical voice channel would be around 2,500 Hz wide. This allows the tiny WSPR of power to be more concentrated and much more effective. Low bandwidth also limits the signaling rate. In today's gigaworld, you'll be shocked to know WSPR runs at 1.4648 baud. No typo. The structured WSPR transmission sends 50 characters in 110.6 seconds, beginning one second after each even minute.

Each message contains the station's callsign, a grid locator and transmitter power expressed in dBm. So, when the station in Tasmania picked up the Ukrainian transmission he immediately knew where it was from and how much power got it there.



MAP of Maidenhead System

Because of their very narrow bandwidth, WSPR signals can often be received and decoded when human ears can't detect the signal is even there. It's claimed a signal 28 dB below the noise in a 2500 Hz bandwidth receiver can be decoded with WSPR. I've had the volume turned up and watched stations decoded that were totally indistinguishable from the background noise by my ears. The narrow bandwidth actually allows a receiver to hear and decode multiple stations at once, often handfuls at a time when the bands are open.

Since the WSPR receiver has no way to tell the originating stations "job well done," the WSPR packet reception is typically reported to a central hub on the Internet. Want to know what ham bands are good for contacting what parts of the world at this moment? Head over to wsprnet.org , where these are plotted out and otherwise quantified.

WSPR was produced by Joe Taylor - K1JT, a Nobel Physics prize winner. In the past, he's developed other transmission/reception methods to help with moonbounce and meteor scatter radio work. Like so many other radio advances, this one is really helped by the advent of inexpensive SDR receivers. Though the $20-ish variety of RTL-SDR Receiver sold on Amazon, eBay and others doesn't do real well on these long-distance low frequencies, more sophisticated SDR receiver models are now selling for under $100. The software to decode (and the transmit software too) is free and open source.

Prebuilt or mostly built WSPR transmitters are also widely available for under $100. Some folks have even figured out how to make a Raspberry Pi act like a 10 milliwatt WSPR transmitter (like the one pictured at the top), though some outboard filtering to make sure it only transmits where it's supposed to is necessary. Every ham radio band is different, and even when the solar sunspot cycle is down near the minimum, WSPR is so vigorous and resilient that even then worldwide communication is possible with flea power.

Here is an example of a simple WSPR Receiver that you can create yourself with a RTL-SDR Receiver and a Raspberry Pi (Example). Add a simple wire antenna and you can see what WSPR stations you can receive and decode at your location.

Skyview VE Sessions

Skyview provides VE Testing at the Skyview Clubhouse each month (Details provided later, near the end of this newsletter)

Here are some of the recent success stories

February 2024

Jim Henry KC3YMC passed the Technician exam

Matt Fleeger KB3TIX passed the Extra exam

Janice Mercier KC3YMZ passed the Technician exam

Megan West KC3YMB passed the Technician exam

March 2024

Megan West KC3YMB passed the General exam

Mark Lewis KC3QIR passed the Extra exam

David Hogue KB3APT passed the Extra exam

Christian Wildberg KC3YSN passed the Technician exam

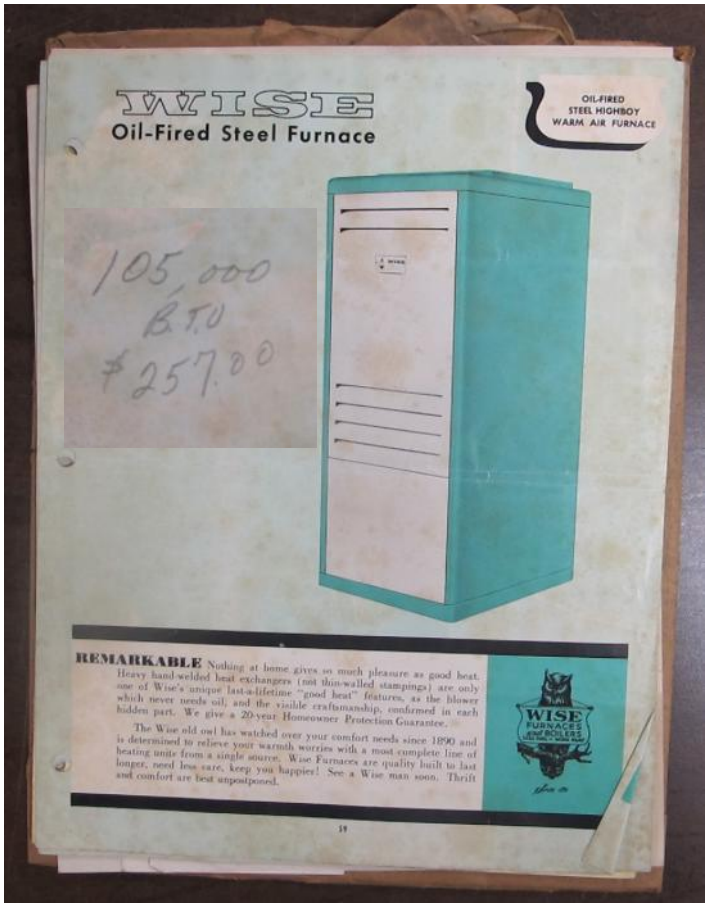
tnx : Bill - N3WMC

Tales From the Skyview Basement

de Cooky - WC3O

A new series for the Q5er! It called pictures from the Skyview basement. (OK, so we don't have a basement, but you get the idea...) A wise man once said, if you're wondering where you're going, take a look at where you've been. Enjoy the pictures!

We were poking through the old beat-up file cabinet in the meeting room the other day and I came across this piece of Skyview history. The sales brochure and manual for the old Wise oil furnace!



Those that were at Skyview at the time may remember that the radio room smelled a little like a truck stop due to heating oil seeping (Basically diesel fuel). You would be sitting in the radio room all nice and quiet. You would hear the oil pump turn on. When the oil ignited you'd hear a loud RRVOOOM! It got your attention in no uncertain terms.

The old Wise furnace was manufactured right in our own little Springdale! From what I heard, Wise furnaces were considered first-rate. The old gal served us well for MANY years and still worked just fine when it was re-

placed with the current propane furnace that was installed by our own Bob Bossio, KB3HXP.

Before Bob retired he had installed furnaces for MANY local ham's - Including mine! Also the one at my work QTH. Every time I hear that draft inducer motor spin up I think of Bob.

Bob is a great guy and his wife makes a mean zucchini pancake.

Mmmmm. I really miss seeing them at the banquet.

I'm sure there was a story about how that Wise furnace got there, but that was well before my time. Likely a Skyview member worked for Wise.

I remember one Swap N Shop years ago, the Old Timer, Bill Bell - W3RSR and another ham were sitting in the radio room shooting the bull. Bill was one of the 10 founding members of Skyview. The guy Bill was talking to didn't know who he was. The guy told Bill that he had helped install that old Wise furnace. Bill said "Oh yeah, I poured the floor". The guy said, oh.

The oil tank for the Wise furnace was in the old outhouse, long gone now. That top of the line Wise furnace was $257.00 at the time. They've gone up.

So here's to those that helped keep our little clubhouse warm over the years. Many thanks.

Enjoy the pics, and perhaps, the memories.

de Cooky - WC3O

Ed — That is the Skyview 146.64 Repeater sitting beside the Wise Furnace. Back in the old days we called it the 04-64 Repeater because we had to purchase a 146.04 Transmit Crystal and a 146.64 Receive Crystal for our crystal controlled 2M radios. Now our 146.64 repeater and its backup live out in the Repeater Shed. And with our new modern 2M radios, we now call it the 146.640 Repeater, that needs a –600 Offset.

Speed Dating

HF Coaxial Sleeve Antenna

de Dan - NM3A

I have been looking for a good, low takeoff antenna for portable use and I found the Vertical, Coaxial Sleeve Dipole. It is an ordinary, full size dipole fed in the middle and is omnidirectional in azimuth direction. That's where the similarities end.

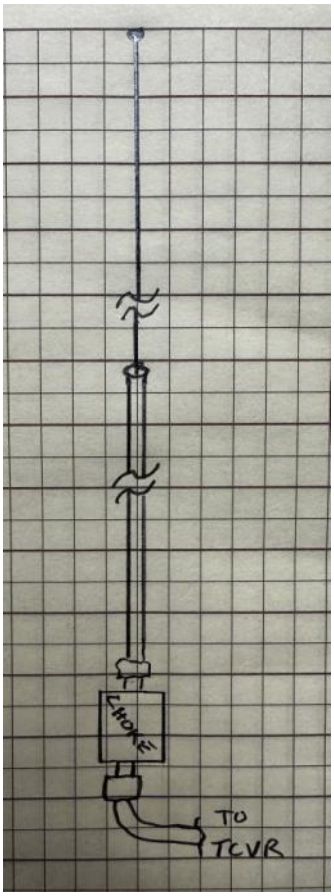
The feed line is coax, but it is fed through one end of the dipole, rather than perpendicular to the midpoint. To do this, one has to take advantage of the skin effect at RF frequencies. The inside of the coax shield and the center conductor provides for feeding power to the center of the dipole via the coax.

The outside of the coax shield also doubles as one half of the dipole, while the other half is a wire continuum of the center conductor. At the coax end of the antenna, A 1:1 unun is placed to effectively terminate the antenna at that end. A multi-turn coax choke will also isolate the antenna from the coax at that end.

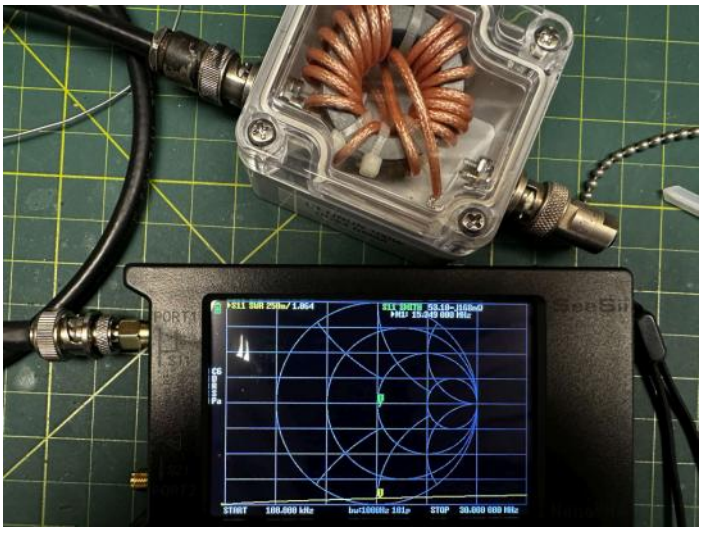
Commercially, similar antennas of this type, such as the AEA IsoPole and the similar Discone, have been marketed for VHF and UHF antennas in the past.

These antennas are typically made with a sleeve external to the coax and often in a cone shape. This effectively cuts off the antenna at the end of the sleeve. A cone will broaden the frequency response of the antenna. However, another way to limit the sleeve end length of the antenna is with a choke in the feedline at the appropriate point.

I made this antenna for 10 meters with a PL259 (BNC or N would work just as well) at the antenna end of a 1/4 wave of RG58. The center conductor of the other end of the RG58 is connected to a 1/4 wave of 20 gauge insulated wire terminated in an alligator clip, which is used to support the upper end of the antenna or to connect to links for lower frequencies. The PL259 is connected to a 1:1 unun. The antenna can be linked to wires connected to the alligator clip and extra RG58 on the other end to make a dipole for 15, 17, or 20 meters. With a tuner, 12 meters is adequately covered by either the 15 meter or the 10 meter antenna. Dimensions for my 10 meter Vertical Sleeve Dipole are: Wire half- 96 inches; Coax half- 84 inches.



The 1:1 unun is a homemade one with a T140-43 core and 19 turns of RG-316. Commercial 1:1 ununs, also known as line isolators or coax chokes are easily available.



I trimmed the antenna to get the best SWR at the wanted frequency. Make sure you start with a slightly longer antenna than you expect to end up with. It is easi-

est to trim from the center of the antenna, as you can simply shorten the coax or the wire there and then resolder the wire to the coax center conductor. I shortened the coax first to get the lowest SWR, then trimmed the wire to fine tune.

The wire end of the antenna needs to be about 15% longer than the coax sleeve end to give a reasonable load. The total length of the antenna is about 90% of a physical half wave total; that is: 468 x 0.9 / F(MHz). The physical lengths will vary somewhat depending on the band and the type of coax and wire used. The impedance on this antenna is not exactly 50 ohms and has some reactance, but SWR directly measured less than 1.5:1 from less than 28.0 to 28.9 MHz, so no tuner is necessary. The places I measured impedance it was between 35 and 40 ohms + j-4 to j-6 ohms.

This will vary somewhat depending on the height above ground. My testing was done with the bottom of the antenna about 5 feet above the ground. I did not do any antenna range testing, but modeling of a vertical dipole antenna in the ARRL Antenna Book shows a take off angle of about 10-15 degrees and about 1.5 dB gain over a 1/4 wave vertical with a secondary lobe about 30-40 degrees. This should be very good for both DX work and short skip. For portable work, a short piece of coax connects the unun to the rig.

A concern for this antenna is the vertical height, but on the 10 meter band, the antenna is only about 15 feet tall and on the 20 meter band about 30 feet tall. These can easily be supported with fiberglass push up poles or a rope tossed over a tree. I have a very backpack-able portable 10 meter (33 feet) long fiberglass mast (SOTABeams Travel Mast) that weighs about 2 pounds and collapses to about 24 inches. This easily supports my 10 meter dipole and the 17 meter version (25 feet) and would also support a 20 meter version. Below 20 meters, this becomes less practical as the heights are difficult to support with non conductive poles. For 30 and 40 meters (42 and 60 feet), it can be supported with a rope over a high tree branch but at 80 or 160 meters, even rope support from tree heights are difficult, unless you have some tall redwoods nearby.

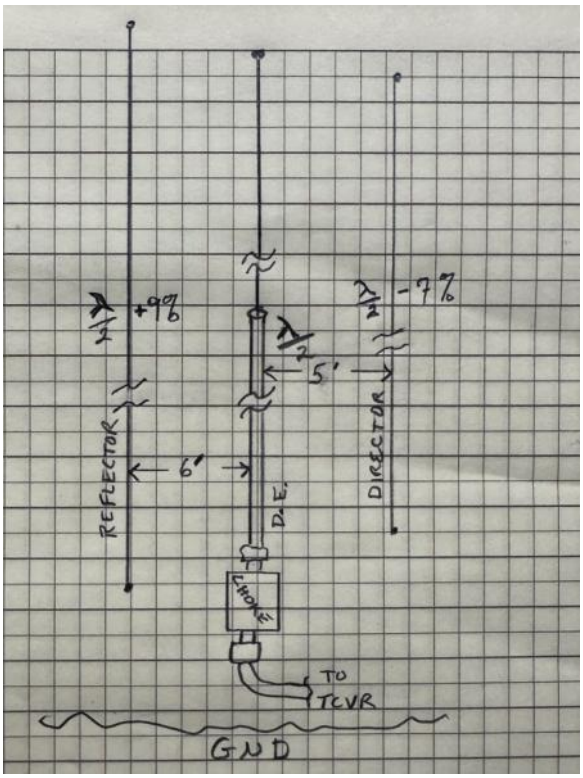
However, with the upper HF bands wide open here close to the peak of the sunspot cycle, this is a very nice, simple DX antenna that is easy to build and easy to deploy for portable operations on 20 through 10 meters. Six meters would also be a good candidate for this antenna and useful at this peak of the sunspot cycle. For two meters, this is a good antenna for public service events or emergency use, as deploying it high up is fairly easy with a rope thrown over a high tree branch.

A VHF Sleeve Dipole is shown in the picture. The PVC enclosure makes this version an all weather antenna for permanent mounting. This could also be made without the enclosure or the external sleeve for a lighter weight, more portable version.

The antenna will easily support 100 watt transmissions for CW, phone or digital, as long as the unun can handle the power. This antenna does not need any ground connection, nor radials. For permanent installations, a lightning arrester with a good ground should be placed near the entrance to your shack. Radials are not necessary, but good reflectivity by the ground in the far and especially the near field will always help radiation.

I used this antenna set up for 17 meters on Bear Cave Lookout (W3/PT-007) for the TransAtlantic Summit to Summit event on the first weekend of November of last year. My KX2 antenna tuner had no problem matching this antenna on 17m, 15m, 12m, and 10m. I am sure that the antenna pattern was quite different on the various bands, but I had no problem hearing European and west coast SOTA CW stations on each of the four bands. I got excellent signal reports from all that I worked, but breaking through the pileups with 5 watts was a challenge at times. Calling CQ got steady QSOs with good reports, but many fewer Summit to Summit QSOs that I wanted.

Although not tested, this can easily be made into a two or three element vertical Yagi-Uda type beam with appropriately spaced and length simple wires for reflector and director.



In 1972, Jerry, W2FMI (SK), noted how this can be done with ground based quarter wave antennas and this concept can easily be applied to a half wave vertical. The main advantage of a half wave system is no need for the elaborate ground system that Jerry used. His testing showed that this concept is comparable to a tower based yagi at half wavelength height. Tim, K3LR, uses this concept for a three element beam for 160 meters! His beam is electrically rotatable by using 4 elements that can be switched between reflector, director, and disconnected. More recently, a Canadian ham showed the same idea being used for a portable antenna system. The impedance of the driven element will change with the parasitic elements and may need to be transformed at the antenna base.

Advantages of the half wave sleeve vertical:

- Lightweight
- Portable
- Easy to erect
- Low Take-Off angle
- No need for ground plane
- Can be made into 2 or 3 element beam easily

Disadvantages:

- Single band
- If multiband use, need to change antenna or links for each band
- If multi element, need to physically move parasitic element(s) to rotate direction.

References:

Callum McCormick M0MCX www.m0mcx.co.uk

https://www.m0mcx.co.uk/wp-content/uploads/banana-antenna-end-fed-choked-sleeve-resonant-feedline-T2LT-dipole.pdf

James Taylor, W2OZH, "RFD-1 and RFD-2: Resonant Feed-Line Dipoles", *QST* Aug 1991

Dr. Bogdan Adamczyk and Alexander Pearson, Oct 31, 2019 https://incompliancemag.com/article/sleeve-dipole-antenna-design-and-build/

Sevick, Jerry,, "The W2FMI Vertical Beam", *QST*, June 1972

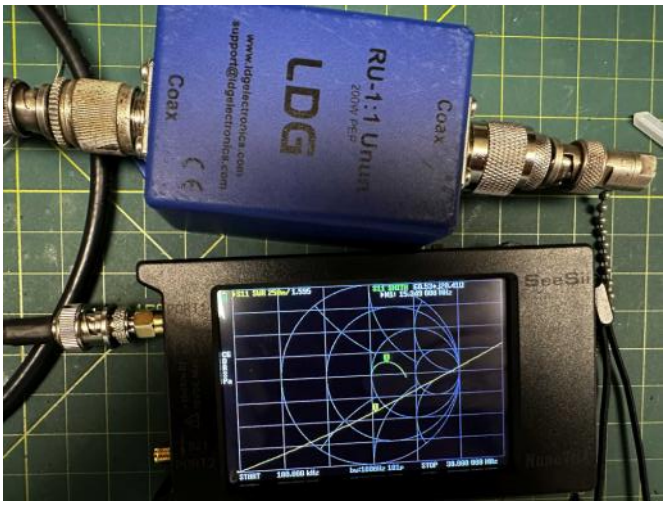
de Dan - NM3A

Balun Quality Control

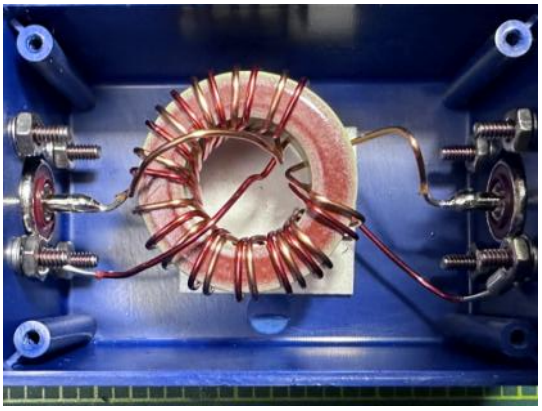
de Dan - NM3A

This is a follow up to my previous article about the Vertical Sleeve Dipole. I actually started work on this antenna in October 2023, but for months I couldn't figure out why the antenna didn't perform as expected. The antenna seemed to receive and transmit fairly well, but the SWR, at over 4:1, was much higher than expected and I couldn't figure out why. A wide range tuner could take care of that, but it still didn't sit right with me. Recently, I began to suspect that maybe the 1:1 unun that I used at the end of the antenna might not be what it was billed to be.

I decided to test this unun (an LDG RU-1:1 model - Guanella type) with my NanoVNA. I put a 50 ohm load on one end and connected to my VNA. It did not show the flat SWR curve that I expected over the HF spectrum.



It showed 1:1 at 100 kHz, but steadily rose to well over 3:1 at 30 MHz! This is not what you would expect from a commercial product. As the picture shows, all the windings were pretty much equally spread out.



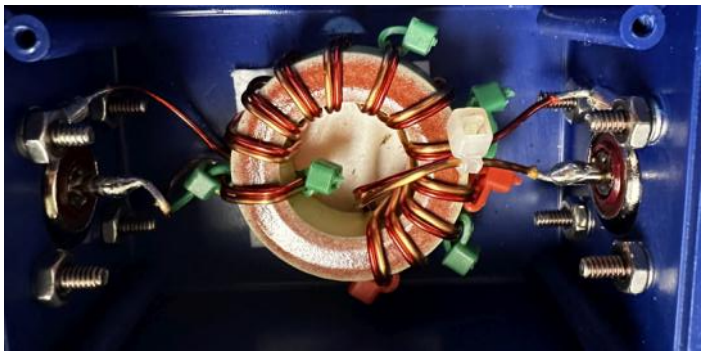
So, I began reading about Guanella baluns, chokes, and ununs. There is a tremendous amount of information out there, but I didn't seem to really understand what was going on, especially when it came to actual construction of the impedance transformers. And what little I did know about power and RF transformers did not seem to fit with baluns. I read lots of information from Balun Designs, KM3K, VU2NSB, and others. One paraphrased statement from VU2NSB stood out to me; "Forget all you know about transformers. Baluns are a different animal!" It went on to say that while regular transformers usually transfer energy through the magnetic core or are air-coupled magnetically, the Guanella balun and ununs work differently by using a transmission line (either paired wires or coax) wrapped around a magnetic core. Because of this, the magnetic core has little effect on the energy being transferred through the transmission line because the transmission line is transferring energy equally in both conductors, thereby containing the magnetic field closely to the transmission line. The main effect of the magnetic core material is on the unbalanced, common mode current carried by the transmission line. The core suppresses this common mode current without significantly affecting the transmission line currents.

After this new information, I took a look at the LDG RU-1:1 again. The windings were not closely spaced and it did not look like a transmission line. It was simply two separate interleaved windings on a ferrite core.

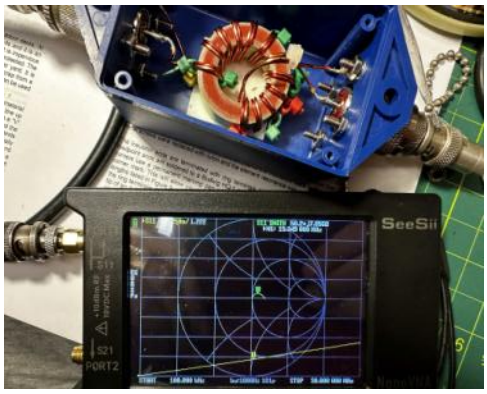
Looking at more expensive Guanella baluns, I noticed that the two wires were held tightly together by shrink wrap for the entire winding.


Model 1110du

Taking this into account, I proceeded to use wire ties to hold the paired windings together in the LDG balun.

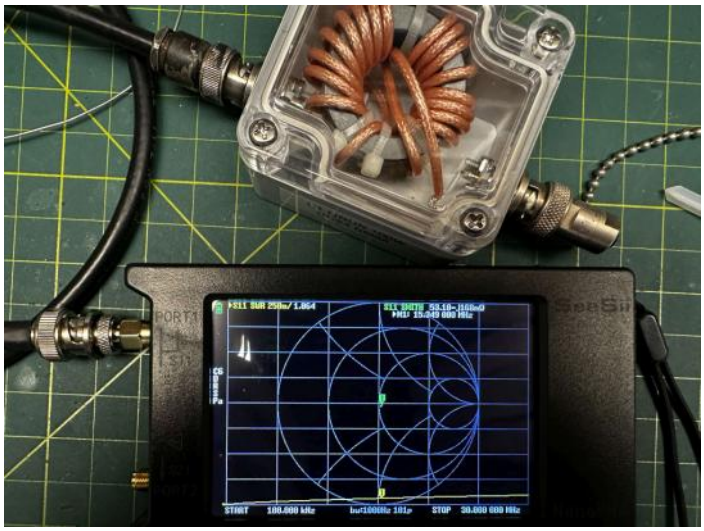


When I tested it again, the SWR at 30 MHz was markedly improved to about 1.4:1. Moving the windings together while measuring improved the match.



And I always thought the shrink-wrap was just to make it look pretty!

Subsequently, I made a Guanella isolation or choke balun out of RG-316 on an FT140-43 core.

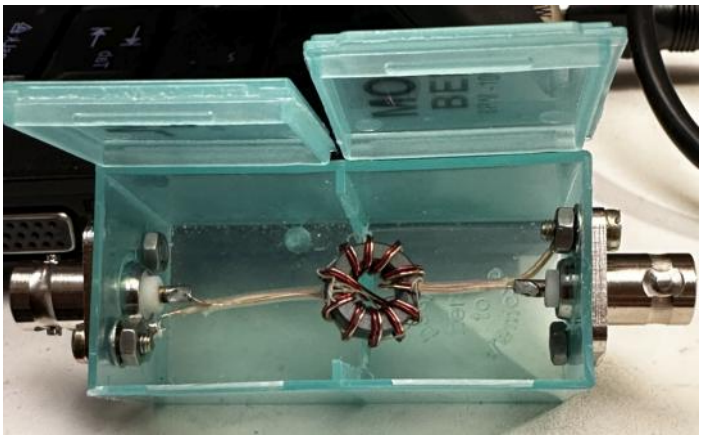


This showed less than 1.1:1 SWR from 100 kHz to above 30 MHz. Unless a coax is kinked, the central conductor and the shield always have optimal spacing, so the 50 ohm impedance is continued through all but the connections to the input and output jacks. With a twin lead type of winding, this may not be exactly 50 ohms and that is likely the reason why the wire wound one is not as flat as the coax wound one.

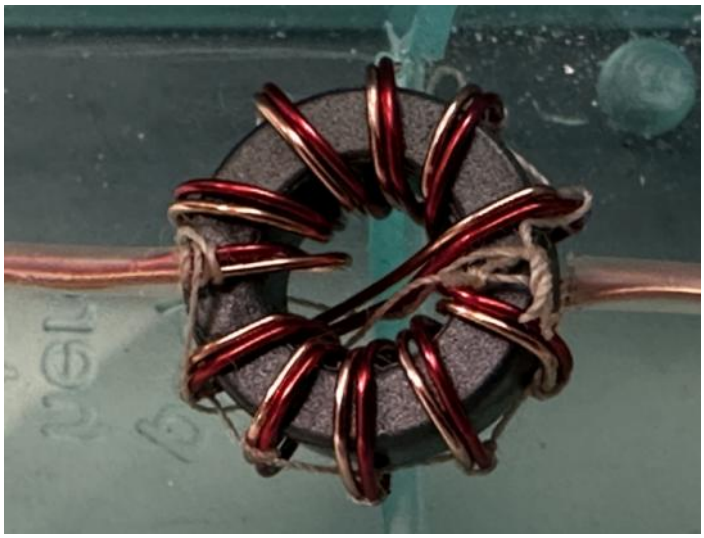
Testing this homemade coax isolation/choke balun on my vertical sleeve antenna now showed a very good 1.3:1 SWR across the 10 meter band. This is an excellent result and confirms that the inexpensive LDG baluns were not well made. In addition to poor SWR matching, this balun as bought would also dissipate much more of the power sent through the balun wires as heat in the toroid core due to the separation of the transmission line wires around the core. These baluns are rated at 300 W by LDG.

Anecdotally, one of these baluns overheated and fractured its core with prolonged transmissions at less than 50 W! This would be consistent with the poor construction techniques noted in my units. The wire in the LDG balun is enamel insulated, so likely has fairly low voltage dialectric value. This will also limit the power handling capabilities, especially with high SWR (that is, poor antenna matching) across the balun. Higher power rated baluns have much larger toroid cores and often use silicone or PTFE insulation for their high voltage ratings.

My homemade balun works very well and is good for at least 100 W continuously, but is fairly heavy at about 6 ounces. As I mainly operate QRP with no more than 10 W PEP, I decided to make a Guanella balun for that power level. I used 22 gauge wire wrapped around an FT50-43 toroid.

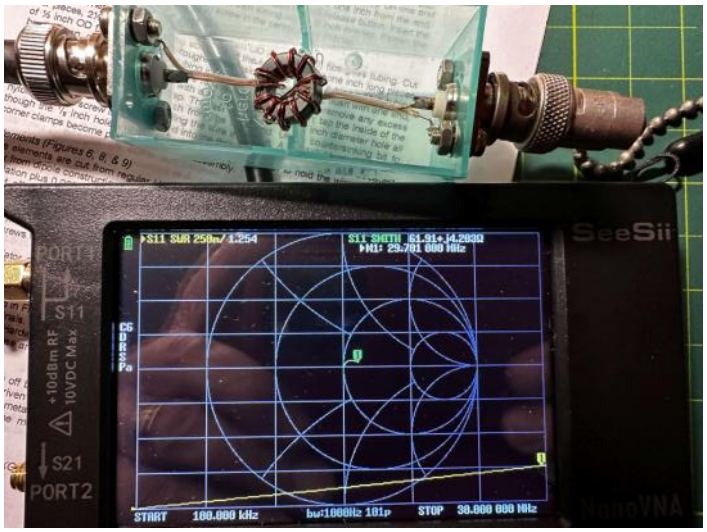


To keep the wires tightly connected throughout the windings, I tied each wrap with thread to keep them bound together.



The connecting wires were shrink wrapped together til right before the BNC connectors on either end of a small plastic box. SWR is reasonable at 1.25:1 at 30 MHz.

It weighs only one ounce and should serve well for my QRP SOTA and POTA outings.



Baluns other than 1:1 are wound differently or have more than one interconnected toroids, but the windings in more expensive 9:1 units are still grouped together.

Many have 3 or more windings, so I am not sure how that works as far as balancing magnetic fields. Windings of 9:1, 16:1, 49:1 and 64:1 seem to be wound more like a traditional transformer in many designs, so I suspect there may be other concepts at play. If so, core material and size is much more critical for these baluns to avoid over saturation and over heating with high power through put. Also, there are a few other types of baluns, such as voltage and Ruf-froth. My brain starts to hurt trying to figure all this out!


Model 9132sw

My tests of more expensive 9:1 baluns and a 4:1 LDG unun show low SWR through the entire HF spectrum. I have not done tests of loss through most of these baluns, but a test of two 9:1 QRP baluns from K6ARK. showed very low loss through them when hooked up back to back, indicating that well made baluns do not show significant insertion loss. I use these regularly for POTA and SOTA activations.

So it appears that you get what you pay for. The more expensive units do seem to be much better and test better. Balun Designs, DX Engineering and Palomar Engineering all seem to make good units. Some of the LDG units seem to test fine, but my three 1:1 units tested all had construction issues. Post purchase inspection of units is certainly in order and corrections are possible to fix issues.In addition, the choking impedance of this balun is most effective from about 14 MHz to 55 MHz, so the toroid used does not lend itself to lower HF and MF ham bands.

References:

https://www.balundesigns.com/reference/all-about-the-11-currentchoke-balun/

https://vu2nsb.com/coaxial-cable-choke-rf-noise/

de Dan - NM3A

BUILDING YOUR SHACK - Part 2

de Bill - NY9H

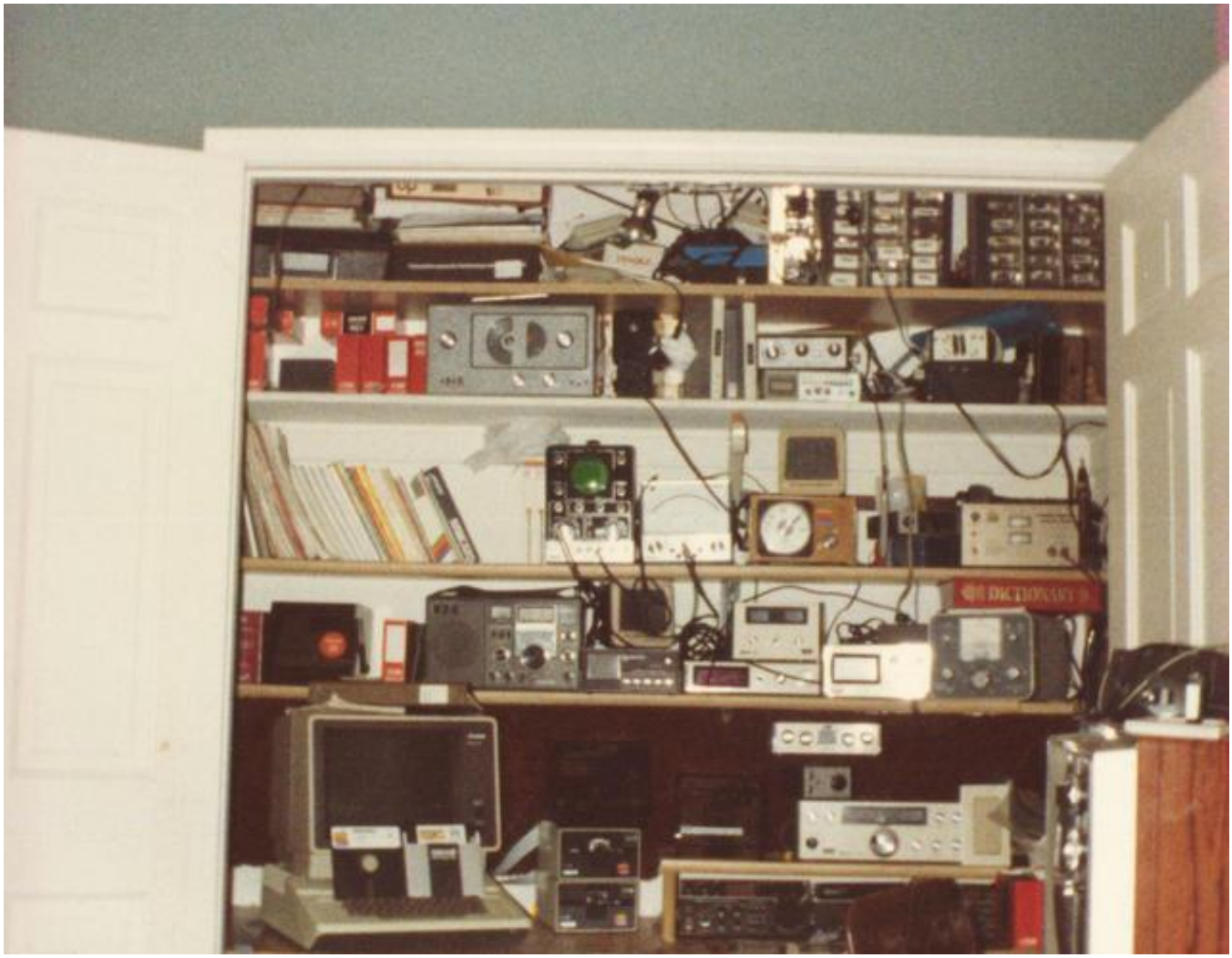
(OR HOW NOT TO BE RELEGATED TO THE BASEMENT)

1979 brings a move about 5 blocks north into a quaint little sidewalk-less road. From a small 2 bedroom cape cod to a 5 bedroom monster home on bucolic 3/4 acre in north suburban Chicago.

One late night in the very dark, the 50 foot Tower made the trip, mostly still assembled on the roof of a Ford Econoline.

The first station in the new house found itself in the guest room closet on the second floor where an ICOM 701 replaced the Yaesu FT-101 w VFO, again on a tilted shelf, accompanied by a TenTec Argonaut 5 watt, with TT 405 50 watt amp. THE CPU is an Apple II with disk drives (180K a disk). At least the shack was on the same side of the house as the newly installed tower, in fact just outside the right wall. .

Again total expense was 4 shelves . . . $15 (This was 1979). But eventually we wanted the closet empty for the guest room.



Then comes the BIG SHIFT..... from the second floor closet to the MAIN DECK. My new home had a den off the front hall, with book shelves. I created a 'cabinet' between the two existing shelving units providing enough space for my 'new' station. The cabinet's flip out desk surface was suspended with cords and eye hooks on the work surface (ugly). This was a 40+" width arrangement, between the existing bookshelves. Enclosed find An ICOM 211 2 meter and the 701 HF along with The Ten Tec 509 &

405 ,Yaesu HF FT101, and a KW antenna tuner/ SWR/Dummy load combo just left of Yaesu. Almost forgot the AIWA 6900 on top , possibly the best cassette deck EVER made, and the Bearcat scanner 210, and Sennheiser HD-414 phones.

When the work surface was flipped up (secretary desk style) the ham station went away...looked great. I had built the entire cabinet, with NO woodworking knowledge, as my wife frequently reminded me. This was basically a box built between the two existing book cases on either side. I thought it looked quite good, I used prefab Tambour doors to cover the large openings. Once again , the height of the workspace and chair height need to be carefully established. The Flip down was again particleboard, with strips of solid stained pieces across the face. First time staining and gluing slats together etc. It looked quite good when closed up, creating a favorable den atmosphere. Cabling exited through the floor into the basement where I would eventually place my workshop. My tower was located 60 feet away at the other end of the house, and the garage was on the other side of this wall. Later the adjacency of the garage would serve well.

As for the shelves, I had yet to learn to use seven layer Baltic birch plywood, hence the sagging top shelf. The bottom tilted shelf was supported across, and was rigid. The aluminum top L bracket was a feeble attempt to stabilize the top of the cabinet, but did provide space for lighting the radio's front panels, which comprised of five small 5 watt lamps with a dimmer. My coax lengths were appreciably longer, six feet to the basement, 60 feet across and 75 feet up the tower to the Ringo 2 meter antenna on top. Almost 150 feet at two meters RG-8 looses HALF power. Try to locate your shack close to your VHF/UHF antennas, while your HF antenna feed lines will not be so lossy. Always stick an extra V/U antenna in the attic.

Tune in next month for the next installment of this continuing story .....

de Bill - NY9H

Skyview Winter Field Day

2017

2024

N1MM Configuration Backups

de Bob - WC3O

So there I was, up the joint getting the logging computers all set for the upcoming RTTY Roundup RTTY contest the first weekend of the new year. We normally have three stations going simultaneously, working three different bands. Recently, we have added a fourth station at the EMCOM position.

While there's no amplifier available at this EMCOM position, we can work with 100 watts. This usually works out just fine for the upper bands such as 10 meters, while we plug away with about 1200 watts on the other stations. (Well, maybe 500 watts on the Yellow station)

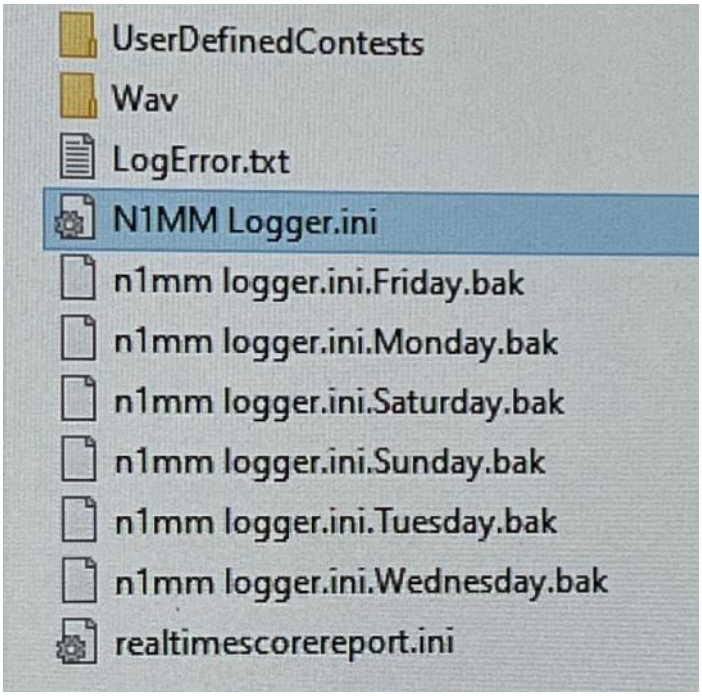
Now that all of the radios are equipped with receive protectors we can even use the forth station to work mults in-band with one of the other stations. N1MM provides a software interlock to keep two stations from transmitting at the same time on the same band. Those N1MM folks REALLY know what they are doing.

Actually, that is what this article is about. I was setting up the EMCOM station for the contest, which is a temporary operation. After the contest the forth radio is put back in the closet until the next contest. I have the program all set up. I slid the EMCOM computer out to plug in a USB cable and the computer powered off? What the? It appeared that the power connector in the back of the computer was not fully inserted. I pushed it in and rebooted the computer and brought up N1MM. No problem. I slid the computer out and the computer powered down again! It turned out to be a defective power cord. I replaced the cord and rebooted the computer, again. I brought up N1MM. Hmmmm

Remember Frosty the SnowMan? Every time you stuck that hat on his head he'd start back at the beginning. HAPPY BIRTHDAY! That is what N1MM did. The two uncontrolled power-downs screwed up the INI file and it was like I had just installed it!

All the configurations GONE ALL GONE! There was a long list of bad words. Bad, bad words. After I regained my composure... I got to thinkin.

I Googled the situation. Just as sure as Shinola those good folks that write N1MM thought of this! N1MM automatically makes backup INI files as it goes! Pick the BAK file that you think was before the problem and make it the current INI file in the program. (re-name it .INI) It worked!



God bless their souls.

Budda-beep Budda-boop, I was back in business. I will certainly keep this in mind when it comes time to replace the computers, hopefully not soon...

N1MM

Ask for it by name.

Cooky - WC3O
Radio Officer

A Clean Sweep

de Charles - KC3TTK

I have been at this hobby called amateur radio for about a year now. Getting my General ticket in May of 2023. I had my Technician ticket a little bit before that, but I did not truly get into it until I received General. One of the activities I like are some of the events I have participated in. I have participated in 13 colonies both as a chaser and an operator. Both were great fun. I did okay with 13 colonies. I had QSOs with all 13 colonies, and the bonus station out of Philadelphia Though I could not get the Great Britain and French stations.

Route 66 event was interesting. There were over 20 stations on the air for that event. I did not fare very well with Route 66 as most of the stations were out of reach of my merger station. After this event I decided I needed to upgrade my antenna to something tower mounted. But that is a discussion for another day.

I participated in the U.S. Air Force 75th annual MARS event. Having served in the Air Force, this event was near and dear to my heart. I was not able to contact them all, but I still received a B-E-A-U-Tiful certificate suitable for framing. Right there next to the diplomas and wedding photographs.

The interesting thing about this contest was that the station operators were military personnel on military installations. Each one of the calls represented each of the MARS communication districts in the United States, plus a bonus station at the Pentagon and Travis Air Force Base.

A funny side note about this event. A couple of the stations were on earlier in the event and did not show back up. A couple of people on DX Summit were posting some rather rude comments about the missing stations. Like "W1C thanks for NOT showing up". Which I thought was unnecessary and counterproductive, considering the Air Force might have gotten busy with, I don't know, perhaps defending the nations airspace or dropping bombs on someone. But what do I know, the one thing I do know is that I have found a lot of cranky people on the radio.

So- don't be cranky on the radio. It's supposed to be fun.

The most recent event I participated in was the 12 days of Christmas special event. Which is an event I stumbled upon by accident. I was scrolling around with the ever so satisfying VFO on the ICOM and heard some special event stations. There were 14 stations. The 12 Christmas gifts you know, all the birds, the dancers, pipers, and rings. Plus, two bonus stations in Canada. I did well the first couple days. As soon as a station would pop up on DX Summit, I got them within a few tries. This is not a forum for me to brag about my awesome radio skills, because I have very minimal skills. It was nothing but luck.

So, within 3 days I had 13 of the 14 stations. No problem, right? There was still several days to go until Christmas eve. Great - I have a couple vacation days and its winter so there is not much to do.

Fast forward to December 23rd. Our neighbors had invited us to a gathering. Some time for the kids to burn off some of the pre-Christmas energy. Well much like a gambler who has money riding on a game I kept checking my phone. DX Summit. Every 15 or 20 minutes, refresh… refresh… refresh.. and there it was W2R. So I looked across the table to my wife, to whom I am indebted every day, and she looked at me and said "is that last station on"

I said "Yes"

She said "then go get it"

I walked out the door and into my shack.

"W2R QRZ"

"KC3TTK"

"Station ending in Whiskey again"

"W2R QRZ"

"November 5 Charlie Xray I have you 5 9"

"W2R QRZ"

"KC3TTK

"KC3TTK W2R five golden rings I have you 5 9"

"W2R I have you 5 9 Western PA and you are my last station for a clean sweep. Thank you for being there 73"

And with that quick exchange I had filled out my entire card. My first clean sweep in an event. So with a little bit of luck, a supportive wife whom has the patience of a Chinese executioner, and being close to my shack I was able to achieve my first, of what I hope are many, clean sweep in an amateur radio event.

I retuned to the party and resumed play place at the table feeling a little bit of extra holiday cheer.

So for anyone who has had to leave a party, step away from a family gathering or ask a spouse or loved one to "hold that though" to make a contact, you are not alone.

Thanks for reading

de Charles KC3TTK

Ed - I think that there are more ham radio special events each year than there are days in the year. Probably the best place to shop for them is the ARRL Listing at :
https://www.arrl.org/special_events/search/page:1/model:Event

You do not have to be an ARRL Member to use this. The default has the special events listed by date. But you can search quite a few ways.

Add in daily hunting for POTA Activators
https://pota.app/#/

and daily Chasing SOTA Activators ,
https://sotawatch.sota.org.uk/en/

there is something happening on HF every day.

(And I did not even mention the various contests)
https://www.contestcalendar.com/weeklycont.php

Things hams know:

POTA POTA POTA !!

de Steve - K3FAZ

So, what's this POTA thing about anyway?

Parks On the Air…an enjoyable amateur radio program dating back to 2016 when the ARRL ran the National Parks On the Air during the calendar year to encourage outdoor portable operations. After NPOTA wound down, those of us who enjoyed the previous year's fun and frolic were wanting to get back out and about.

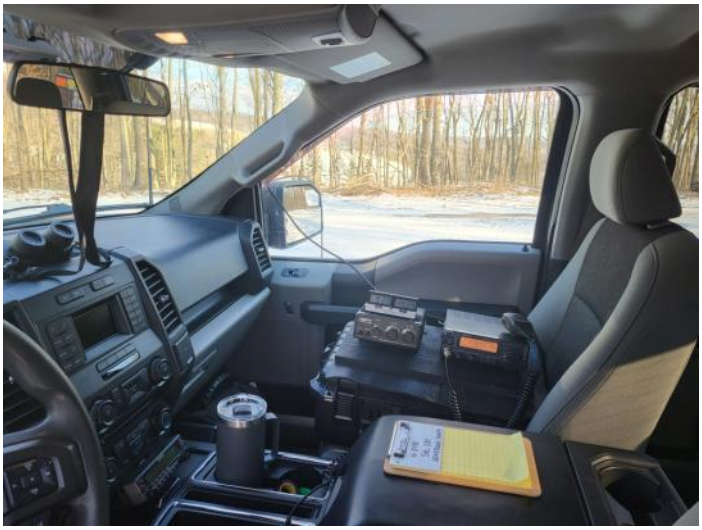
Thankfully another group took up the mantle in 2017 and we were back in business with a formal program to operate in the great outdoors. The earlier and formative days of POTA were fun albeit at a slower pace but what the heck, we were outdoors operating radio and having fun…then along came the pandemic…folks were looking for something to do and somewhere to go. The great outdoors were calling loud and clear and outdoor loving hams followed that siren song to the parks and POTA absolutely exploded!

Suddenly the bands were booming with CQ CQ CQ Parks On the Air, CQ POTA!! What had been meandering QSO pace eventually gained in tempo with pileups like rare DX…big fun was being had and POTA grew by leaps and bounds. A year or so ago most states added their respective game lands and preserves to the program essentially doubling the opportunities for locations to operate

Alrighty…those who know me are well aware of my fondness for the outdoors, Kenwood radio gear and POTA. This past Monday was President's Day (and a day off from work) so it presented a great opportunity to activate a few POTA locations in northern Armstrong county. This article will chronicle the day's preparation and events. The plan was to head out early to three state game lands to enjoy a gorgeous day and make a bunch of Qs…

K-8981(SGL287) near Widnoon, K-8804(SGL105) near Brady's Bend and K-8954(SGL259) near Cowansville were my target locations. I prefer the game lands to parks but that's just me. Something to keep in mind when out and about activating- it's good practice to let someone know of your planned whereabouts…cell phone service is not guaranteed in many areas. It's also recommended to have some snacks and beverages along because you will get thirsty and hungry, trust me. Before heading out, take a few minutes and check your gear to avoid frustration/disappointment when you arrive at the POTA location.

My POTA gear is kept in my truck in Apache cases so it's always at the ready for an activation or to just find a wide spot on a backcountry road to set up and call CQ.



So after filling the gas tank in Kittanning I made my way upriver to Templeton and began climbing towards my desired operating location at K-8981. Upon turning off the hard road I was pleased to see that my tire tracks were the only ones in the recent snow and I got busy setting up my antenna. A modified version of a popular

31 foot field vertical antenna has become my favorite when activating due to its ease of setting up plus it works like a champ! The HF radio of choice is my trusty old Kenwood TS50 coupled with a Kenwood AT130 manual tuner, the antenna is fed with 27 feet of RG8X coax. Power comes from a Dakota Lithium 18 amp hour battery.

Okie dokie…after tuning up and checking to see if the selected 40m frequency was available & spotting on the POTA website I began calling. After putting my out CQ the calls from hunters came steadily rolling in, running the frequency until it began to play out then QSY'd to 20m for a bit. I needed to be on my way to the next park so I thanked the hunters and was on my way with 64 Qs in the log.

After packing up I made my way to K-8804 near Brady's Bend but not before missing a turn and getting a bit turned around before arriving at the location. Oh well, it was a really nice day to drive around in the boonies anyway…upon arriving and having a snack I got my antenna set up and got on 20m. The band was wide open providing me with a steady pileup of hunters putting 61 Qs in the log when it was time to move on to the next one.

I made my way to K-8954 and had another snack before getting set up. Being a holiday there were quite a few

activators which made finding an open frequency a bit of a chore but finally found some room on 20m to operate. The pileup lasted the entire time with calls coming in at a very steady pace putting 79 Qs in the log when it was time to go QRT and head for home.

Phew. That was fun.

So to summarize, I made 204 Qs including 25 park to park contacts, 4 European DX, several Canadian provinces and 40 states all in about 3 1/2 hours total operating time.

Activating POTA is a very enjoyable time, running a pileup is big fun and you don't need an elaborate portable station to have a great time.

I'm an old school paper logger but there are fine computer logging programs available. To add a challenge to activating try QRP. Low power SSB can be trying at times however QRP CW is a great mode to work and if digital modes are interesting to you there are plenty of digital activations as well.

If running around hither and yon in the boonies doesn't put bubbles in your tub, try hunting POTA activations from the comfort of your own shack. The relationship between activators and hunters is quite symbiotic - activators need the hunters and hunters need the activators. All the information for POTA regarding park locations, activator spots etc. can be found on their website www.parksontheair.com

There are quite a few POTA activators in our club, feel free to ask any of us about the program, we'd be glad to have your participation.

This amazing hobby of ours has something for everyone, eh? Have fun!

Thank you for your time to peruse my article..73!

de Steve K3FAZ

Fun With Decibels

de Brian - KC3VNB

Decibels (dB for short) pop up all over ham radio discussions – whether it is antenna gain, cable loss, signal strength, or other sundry measurements. Their utility comes from being a simple representation of common logarithms (i.e. log to the base 10). In particular, for power gains (or losses), the conversion is as follows:

$dB = 10 * \log_{10}(A_p)$ where A_p is power gain, that is, output / input

Inverting, we get: $A_p = 10^{(dB/10)}$

This lets us state very large and very small numbers much more compactly and conveniently, and turns multiplication and division problems into addition and subtraction respectively. By the way, if you've ever used a slide rule, you were using those same addition and subtraction property of logs to do your math. Of course today, everyone relies on a calculator or phone app to convert to and from dBs.

Sadly, that prevents most folks from getting an intuitive feel for dBs and their equivalent values. But what if there was a trivial way to convert back and forth – so simple you could do it faster than starting your phone app? Well, there is, and it only relies on a few very easy to remember rules.

0 dB has a numerical equivalent of 1 – since $10*\log_{10}(1)$ is 0

10 dB has a numerical equivalent of 10, again using our definition for dB

A 3 dB increase corresponds to a factor of 2 increase
(note, that this is NOT exact, but so close that it is extremely useful)

A 10 dB increase corresponds to a factor of 10 increase (exactly, from the definition of dB)

We can also decrease by 3 dB to divide by 2 (approximately) or decrease by 10 dB to divide by 10 (exactly).

That's all you need – let's fill out a table of dB conversions by hand, in seconds, no calculator needed.

Here are the 'fundamental' values from the rules above:

dB	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Value	1										10								

Now, use the rule that if you increase by 3 dB, you double the value. This gets us:

dB	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Value	1			2			4			8	10		16	20		32	40		64

We can also work our way down from 10 dB, subtracting 3 dB, and halving the corresponding value.

dB	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Value	1	1.25		2	2.5		4	5		8	10		16	20		32	40		64

To get the 2, 5, and 8 dB values, subtract 10 dB from the 12, 15, and 18 dB columns, and divide the corresponding values by 10, and for 11, 14, and 17 dB values – multiply the 1, 4 and 7 dB values by 10.

dB	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Value	1	1.25	1.6	2	2.5	3.2	4	5	6.4	8	10	12.5	16	20	25	32	40	50	64

That's it – we just produced the numeric equivalents for 0 to 18 dB with ease. Of course, since one of our rules is approximate, these aren't exact values, but you may be surprised to learn that all are within 1.5%, most better than 1%. Not bad for a few seconds of work.

If you need smaller than 0 dB or bigger than 10 dB, just apply the appropriate factor of 10.

25 dB is 5 dB plus 20 dB – or 3.2 (from our table above) times 100, or 320.

-23 dB is similarly 7 dB plus -30 dB; or 5 times 0.001 yielding 0.005.

Next time you hear someone bandying about dB values, try converting in your head – with practice, you can do it faster than pulling out a calculator, or popping up an app, and over time, that abstract thing called a dB will be simple and concrete.

Please don't hesitate to reach out with questions – and share your favorite math tricks. Have fun!

de Brian - KC3VNA

CI-V Cables & Big RF

de Bob - WC3O

Hmmmmm.. . . I say hmmmmm . . .

We have a great antenna switching system up at the clubhouse. It is an intelligent system that takes the radio's date (CI-V) and puts that station's radio on the antenna that it was on, the last time the radio was on that band. In other words, if the radio is currently on the quad on 20 meters - If you switch the radio to 40 meters that antenna switch will automatically put the station on the 40 meter antenna it was on, the last time the radio was on that band - Such as the 40 meter beam. Change the radio back to 20 meters and the switch automatically switches back to the quad. Nice!

BTW CI-V stands for Computer Interface V (5)

https://www.onallbands.com/making-the-ci-v-connection%EF%BB%BF/

The Radio's data on ICOM is known as CI-V. On the back of ICOM radios it is actually called "REMOTE". Remote and CI-V are the same thing. CI-V is a two conductor bus system and uses a standard 3.5mm mono plug, such as the ones used for small speakers. These plugs are often also called 1/8 inch.

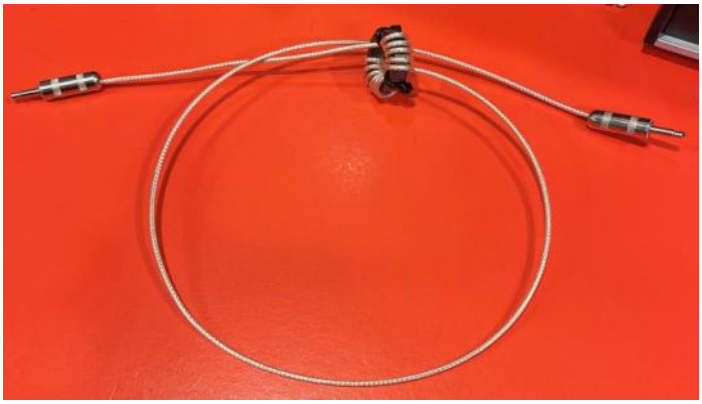
On the back of the HamPlus antenna controller heads there are also a 3.5mm jacks for the CI-V data. This makes cabling simple, you just need a cable with 3.5mm plugs on either side. While this is a two wire bus system, you can also use three conductor 3.5mm plugs.

When you play with RF you soon discover that every wire is an antenna, including our CI-V wiring! This is something that comes into play especially when you are working with high RF power levels such as when we are doing a RTTY contest with over 1000 watts. The problem we were having was that RF would get into the CI-V cable and cause the switch to not know what band the radio is on. This would show up to us as all of the "In Use" LEDs on the switch to flash rapidly and simultaneously. Sometimes it would actually get the switch confused enough that it would need rebooted to make it recover.

I was using cheap cabling that I bought off of ebay. I am sure the shielding on the inside of the cable was mighty thin. To help fix this RF issue I decided to remake the CI-V cabling with double shielded cable and high quality connectors.

This is where things got weird...

I don't know where these standards come from, but this is a new one on me. I decided to buy actual Switchcraft connectors. Switchcraft is well known in the industrial world for their high quality, well built connectors and switches. I ordered 10 2 conductor 1/8 inch plugs with metal shells, sort or... For wire I used RG-179 cable. I also added ferrite cores to the cables to help ensure RF ingress would not be a problem.



When I built up the cables they looked great! I went to put one of the plugs into the CI-V port on the back of the antenna switch and it was REALLY tight? What the? I plugged the other side of the cable into the ICOM REMOTE port and it fit tight, but well. What am I missing here? I reinstalled one of the old el-cheapo plugs and it fit just fine?

Well, I started looking at the Switchcraft website and noticed that all of their mono 3.5mm plugs are actually specified at 3.55mm? All of their stereo plugs are specified at 3.5mm? I have never heard of this? I checked the old mono and stereo jacks that I was using prior and they are both 3.5mm! Where the hell did this 3.55 come from? The jacks do fit, but they are REALLY tight.

I am using these plugs despite how tight they are. During the CQ WPX RTTY contest we had no issues like all of the LEDs blinking. We did have one switch "drop" the antenna it was on for no apparent reason. I may end up replacing all of the cabling with new, well shielded cables. Need more connectors and ferrite... I think I'll get 3.5mm plugs this time...

Furthermore

I found that the RG-179 cable's center conductor is quite brittle. It breaks very easily. I originally bought this 75 ohm coax to build RF chokes for the receive antennas. I think next time I'll pick a different cable.

Nothing's easy

Cooky - WC3O
Radio Officer

Ed - The Switchcraft 'Tini-Jax' (0.141"/3.55mm) jacks and plugs are supposedly more reliable that the normal 3.5mm jacks/plugs. Better quality materials - tighter contacts - more expensive. The Audiophiles seem to swear by them. But as Cooky found out, if you don't also have the matching Tini-Jax jacks to push your Tini-Jax plugs into -- you swear at them.

Following the FT8 Crowd

de Jody - K3JZD

Anyone who uses the high frequency (HF) bands knows what "Propagation" is. There are many different approaches to predicting propagation and many different ways of displaying propagation. There are lots of different mathematical models, and each uses lots of various parameters. Getting into bed with ones of the various propagation models usually involves some study time to understand what they are telling you and why.

But, who needs a propagation model? After using HF for a while, you begin to get a feel for which HF bands are typically good in some direction for the various time periods within each typical 24 hour period. There is a typical rotation of "good", which is generally derived from the spinning earth's relationship to the sun.

But the key word here is 'typical'. The actual propagation can deviate from typical, and the timing of the typical rotation can vary from day to day. Often the HF bands behave quite irrationally. HF band "Openings" and "Closings" will deviate from propagation models. Each day is really unique.

So, getting onto band 'x' and expecting to work into 'y' may, or may not, work for you. In addition to where we are in the solar cycle, there are a lots of unexpected daily solar weather events that will impact propagation. Some help. Some hurt. You can't model the real-time unexpected solar events.

I am not big on any of the various propagation models. I am more of the show me what is going on right now and I will adapt to it kind of a guy. So, I have started to use the free Ham Clock software to show me what's happening right now.

https://www.clearskyinstitute.com/ham/HamClock/

Originally I had this Ham Clock software running in the Inovato Quadra computer. I had purchased the convenient Inovato plug and play bundle. However, that small fan-less computer was displaying a lot of communications errors whenever it was going out to the Internet to get updated data. It also ran pretty hot, which maybe contributed to those frequent communications error messages.

The Inovato solution was to put an external cooling fan under it. I tried that. But I did not like adding that noisy fan into my shack. So I now have the Ham Clock software running on a naked RasPi Zero 2W board. No fan - just has a heat sink on the CPU. My communications errors are now extremely rare.

The Ham Clock software has lots of options for what you can display in the big window. After sampling several of them, I

chose to display the flat earth world view with the Maximum Usable Frequency (MUF) overlay. And then I added Live FT8 Spots/Paths on top of that.

Why the FT8 Spots/Paths? My Primary reason is because that is where most of the current communication activity usually is. The only other choice is WSPR. WSPR is just shot gunning signals in a one way path. FT8 paths are two way connections. I feel that the seeing the two way FT8 connections are a better indicator. And the FT8 activity often seems to defy what the calculated MUF says is possible, or not possible. The real world does not always follow the MUF model.

I don't work much FT8 anymore. But I have learned to use what I see going on with these FT8 paths to guide me whenever I'm working CW, RTTY, or SSB. The FT8 paths displayed show where live propagation from our Grid Square (FN00) is going to right now. And the Live Spots tabulation and path colors show me which bands are being used the most.

Yes, I know that FT8 communications can go where no other mode can go. But knowing where the FT8 herd is going is a good indicator of what may be possible with other lesser mode.

For example, if I see that there are currently 72 FT8 signals on 20m, 938 FT8 signals on 15m, and 2430 FT8 signals on 10m, I guess I would be smart to go to 10m, not 20m. And if I see most of those 2430 10m signals going into Europe right now, then I might want to point my antenna towards Europe.

Now, if I decide to work 10m CW based on that, pointed and pointed my antenna toward Europe, based on a whole crap load of 10m FT8 paths in and out of Europe are taking place

right now, does that mean that I will find a swarm of Europe-anstations on 10m CW? No. But, it shows that there is a good possibility of my CW signal getting there.

So, you try that and you don't hear any activity at all on 10m CW? Well, start to call CQ. Put your rig on auto-repeat and keep playing your canned CQ message over and over. Once a minute. By golly, you might just shake up a few of many listeners in Europe who are tuning around 10m CW and grumbling about the band being 'dead'.

This goes for the various other locations on the other side of the world that we like to work just because they are further away and harder to get to. Places like Japan, Australia, New Zealand, etc. Whenever you start to see the FT8 gang starting to get into those locations, it might be time to spin your antenna around and start looking for those locations using the mode of your choice. If it is quiet, then make some noise using that mode and see if you can shake out some listeners.

I recently worked the CQ WPX RTTY event with 80 watts. And I worked the ARRL DX CW event with 5 watts. During each of those events, I followed the FT8 crowd around as soon as I started to see that they were beginning to have some success in making QSOs into South Africa, South and Central America, Japan, New Zealand, and then Australia.

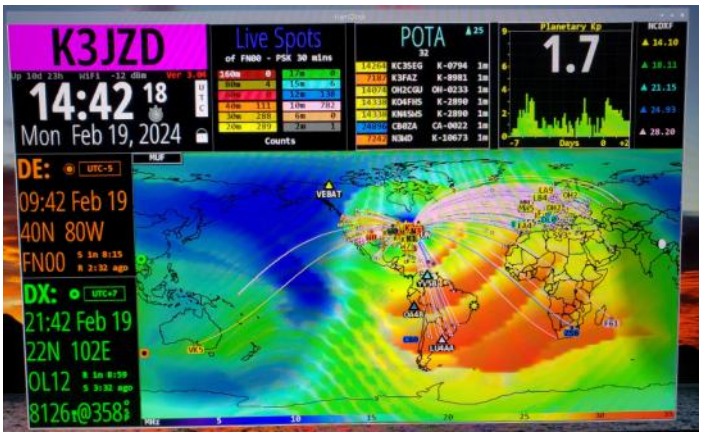
I was doing all Search and Pounce, so I started to listen for the weak ones coming from each new direction that I could see that the FT8 crowd was just starting to make QSOs. I think that doing that got me in on the ground floor because I was having a lot of success in working the initial weak signals that I heard coming in from those new directions. I was able to work many of them on my first try. For a while, I might have been the only caller that they heard.

Summary

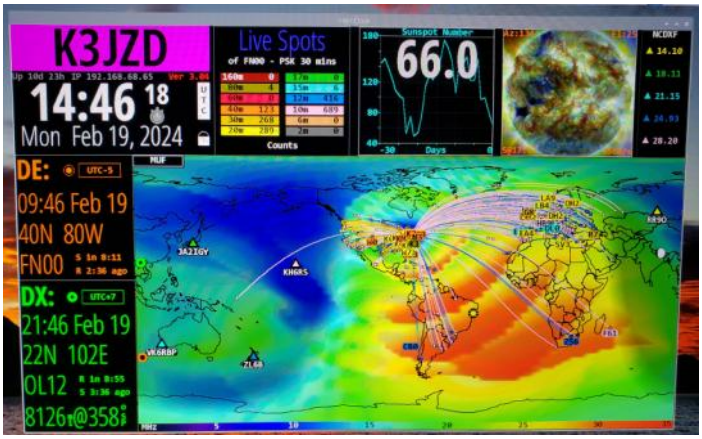
While I was initially disappointed with my Ham Clock because it did into seem real useful for someone who does not work a lot FT8, I have learned how to benefit from watching it. I keep the monitor turned on all of the time whenever I am in my shack. Whether you are doing a contest or just looking for DX QSOs, every little advantage helps.

The Ham Clock software is free. The Inovato Quadra was not the answer for me. A RasPi Zero 2W and power supply is not very expensive, and worked well. The biggest expense for me was buying a small high quality 1920x1080 flat screen HDMI monitor to use with it. You don't want to scrimp on the monitor. There is a lot of high resolution data that needs to be displayed.

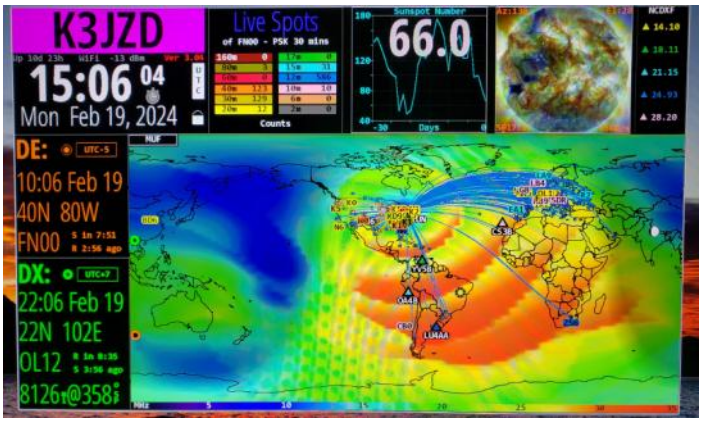
Here is how a particular day in February went :



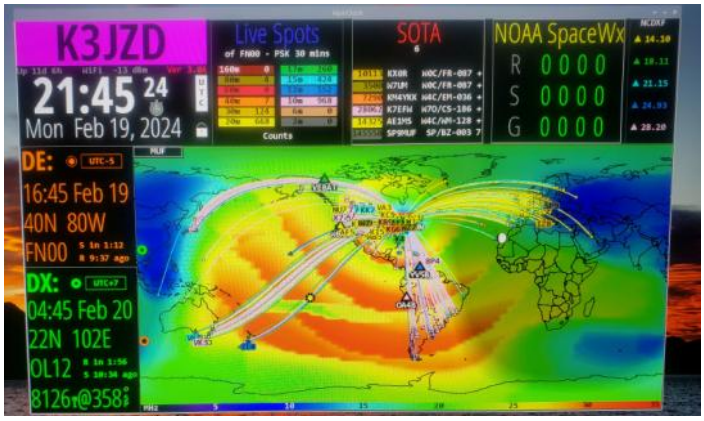
1442 UTC : Most of the activity was on 10 meters, with QSOs into Europe, South America, and Africa.



1446 UTC : Just a few minutes later, the 10 meter activity started to subside as the 12 meter activity picked up.



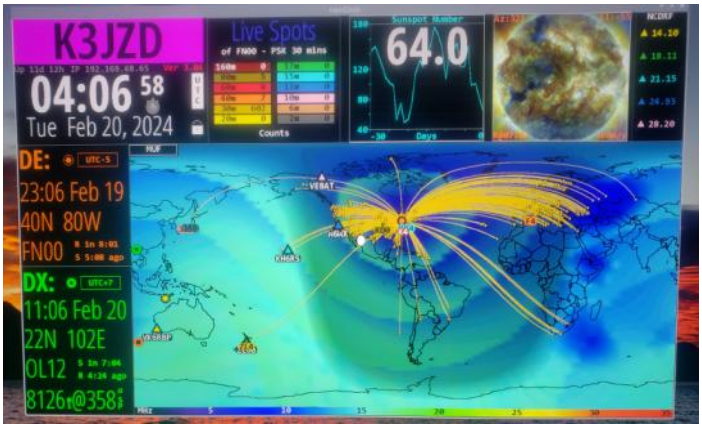
1506 UTC : 10 meters had fizzled out—all of the action was now on 12 meters. 15 and 20 meters had little to no action. Bad situation if you were doing a contest. Would be a good time to take a break



2145 : By now, 10 meters had come back. And 15 meters and 20 meters were starting to see a lot of activity, The far East (Japan, New Zealand, and Australia) were now coming in on 10 and 15 meters. The activity into Europe was all on 20 meters

0226 : 10 meters and 15 meters have shut down. 20 meters is the most active. 30 meters and 40 meters are almost as active.

0352 : 30 meters is now where the action is. Surprisingly there is almost no 40m activity. There is more activity o 80 meters than there is on 40 meters. Still a couple on 20 meters (maybe the guys who run 1000 watts on FT8 ???) .



0406 : Just a short time later, but almost no activity in 80 meters now. Still almost no 40m activity. Nothing on 20-15010 meters,

I just randomly took these pictures throughout this particular February day. No planning went into when to capture a new image. I only made sure that the 'Live Spots" table was being displayed in the left window since that is the quick place to look to see which bands are currently seeing the most action. And the pictures are all a little bit crooked just to make it interesting—kind of an artistic touch . . . . Enlarge these in your PDF viewer to see more detail.

Of course this was not a typical day. There are no "typical days" on HF. Every day is a little different. Each hour within each day is a little different. Where we are at in the sunspot cycle makes a difference. What the sun is doing that day makes a difference.

As stated earlier, picking a particular band to tune up on based on years of experience and the current time of day may not put you where the propagation is the best.

You old timers who have been around for a while know that "picking a band and tuning up" was a much larger manual effort a few years ago than it is with today's broad banded radios with auto tuners. Nonetheless, why not go directly to a band that seems to hot on the first try?

The advance propagation prediction models can get blown away by the sun doing something unexpected during any day. Thus my suggestion that even though you are not working FT8, following the FT8 crowd in real time can put you on the band(s) where you will probably get most enjoyment with whatever mode you are using.

de Jody - K3JZD

RG-58/U With 1500 Watts? - Nope

de Bob - WC3O

So there we were

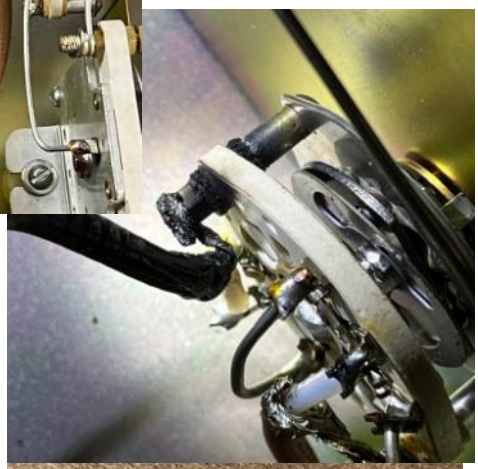
Bill, N3WMC and myself were working the CQ WPX RTTY contest. Things were rolling right along and we were chatting back and forth. Suddenly, we both heard a THUUPOP!

What the hell was that?

There was a smell of something burning. We noticed that all signals disappeared on the Blue station rig and the SWR went through the roof. That brought everything to an abrupt halt. What was that?

After some basic troubleshooting using a dummy load we figured out that the problem was in the Dentron MT-2000a antenna tuner. I stuck a barrel connector inline with the coax while I investigated what went south in the tuner. This way Bill could continue with the contest.

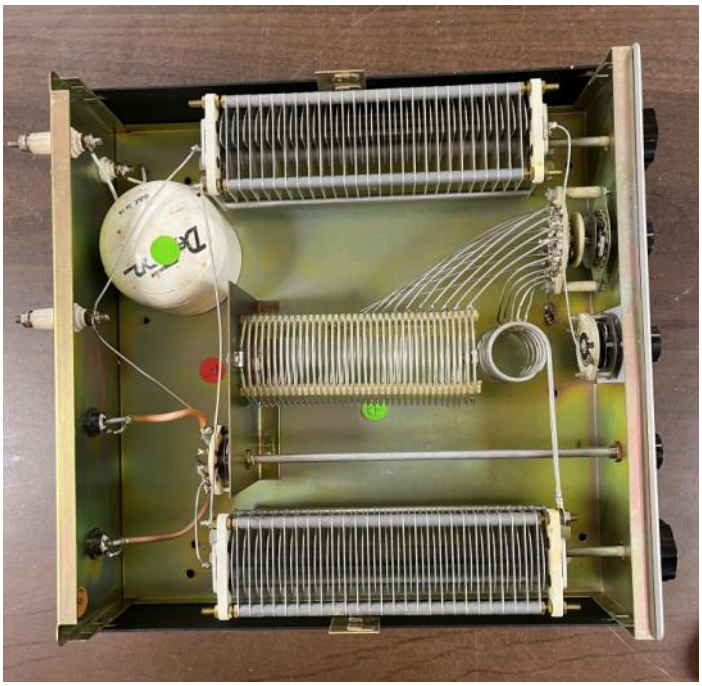
Before I popped the lid on the tuner I had a suspicion as to what had happened. I was right. We ran into this same issue on that same tuner a few years ago. The



Dentron MT-2000a is one of the best antenna tuners ever made, in my opinion. There is, however, one weak link. Luckily it's easy to repair.

There are two short pieces of thin coax that go from the coax connectors on the rear panel of the tuner and the Tuner/Bypass switch inside. I'm not sure of the exact coax, but it is about the size of RG-58. Before, one of the two pieces of coax burned up and I replaced it with a piece of RG-400. I meant to go back some time later and replace the remaining piece, but I never did.

Just as sure as Shinola that is what happened. The remaining piece of coax burned up. I replaced it with RG-400 and the tuner was back in business!



A refresher on RG-400:

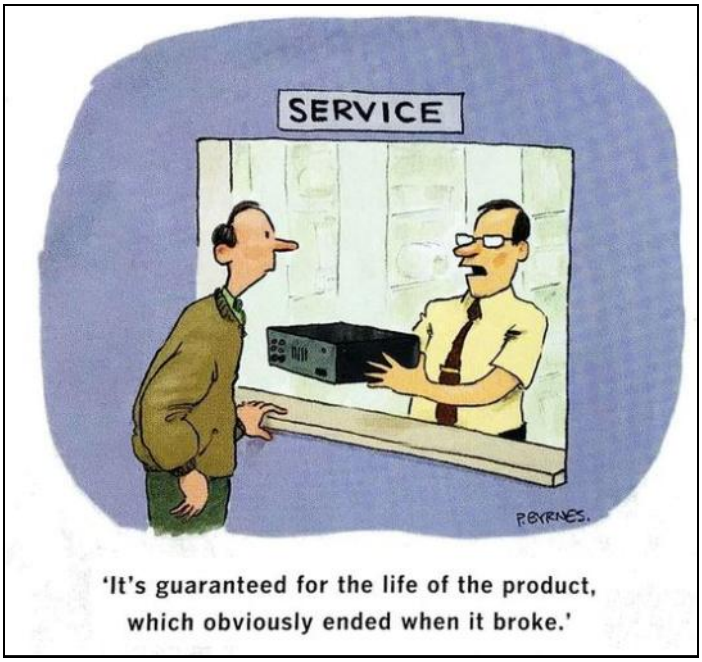
NOT to be confused with LMR-400 or DXE-400 coax - Totally different stuff. RG-400 is a thin coax, around the same diameter as RG-58. RG-58 has very limited power handling capability and is often used with CB radios. While RG-400 is the same diameter, it can handle 1500+ watts NO PROBLEM. It has a double silver plated shield and center conductor along with a Teflon insulator.

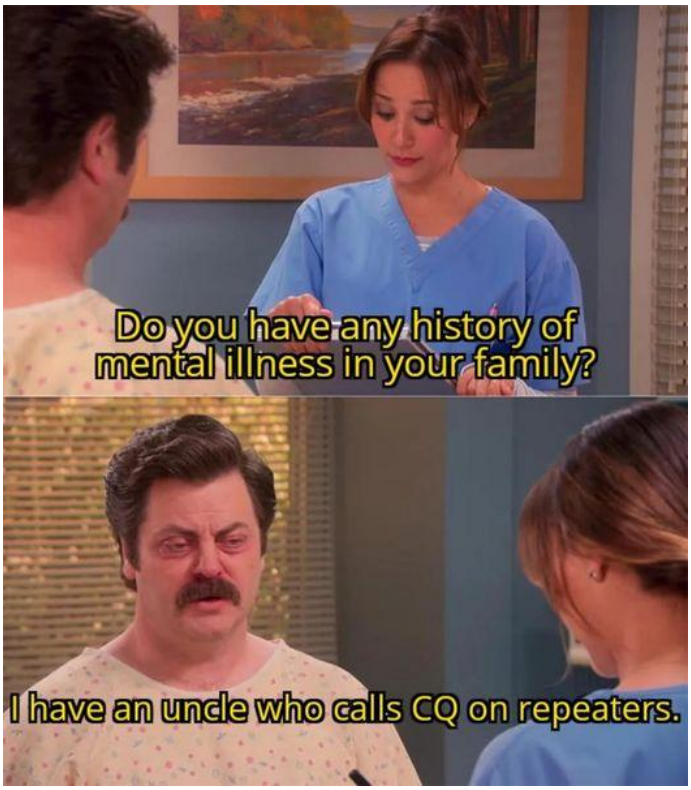
It is a little hard to work with, but it is goooood stuff.

So now that both coax jumpers are replaced, this tuner is ready to run. BTW we have a second MT-2000a on the Green station. It was already updated.

Rock on dude.

Cooky - WC3O
Radio Officer





Catch of the Day

de Brad - N3DXC, James - KB3CNS, & Jody - K3JZD

The device on the front cover is a burst NOAA Weather Balloon and the Radiosonde that it was carrying. Brad - N3DXC and James - KB3CNS made the "Catch of the Day" by retrieving this Radiosonde. Brad and James took pictures as they did the retrieval and disassembly.

All of the photos presented here were taken by Brad or James. Brad then shared these photos with Curt - WU3U. Curt forwarded the photos to me, saying that Brad and James had approved my sharing these photos with you here in the Q5er.

I'm adding a little bit of a back story here to provide some context to go with the photos. I'm no expert on NOAA Weather Balloons nor Radiosondes. Tom - AB3GY and Bill - W3BUW, who are both very active in tracking these NOAA Weather Balloons made a presentation at Skyview on 12SEP23. I am drawing from the information from that two-part presentation to provide this back story (with a little help from Google). (I'm trying to avoid making up parts of it like ChatGPT would do if I had given it this job to do).

Radiosondes are battery-powered telemetry instrument packages that are carried into the atmosphere typically by a Weather Balloon; they measure altitude, pressure, temperature, relative humidity, wind (both speed and direction), and cosmic ray readings at high altitudes.

Launching Weather Balloons carrying Radiosondes is a world wide activity. Weather Balloons are launched every day from approximately 1300 locations. The launch or no-launch decisions are made based on the current weather conditions at each location. The local NOAA Station in Pittsburgh typically launches two Weather Balloons each day; one at 0700 local and one at 1900 local.

These Weather Balloons can reach an altitude of about 25 miles (140,000 feet). However, most will top out at around 100,000 feet. While aloft, the Radiosondes continuously transmit their present location and the parameters captured from their sensors via radio to the ground stations.

According to the National Weather Service, most Weather Balloons burst after about two hours. They expand to around 20 feet in diameter before being stretched to the point where they burst. The Radiosonde has a parachute, allowing it to fall back to Earth safely.

The Weather Balloons can be tracked by anyone, at https://sondehub.org

Anyone who is interested may also monitor these data transmissions utilizing their own receiving station. The Pittsburgh Radiosonde transmissions are at 401 MHz. The format of the Radiosonde data message is publically known. So these data messages can be decoded by anyone. Decoded messages that are received by individuals can be sent to https://sondehub.org in order to expand the tracking network.

Quite a few Skyview members are tracking Radiosondes using their own tracking receivers. Tom - AB3GY has published the specifications for assembling his Radiosonde tracking receiver. It is based on a Raspberry Pi and a RTL SDR Dongle. Tom has also made his RasPi software available (See the two presentations in the Files section of https://groups.io/g/K3MJW for more information).

Brad has joined the group of hams who track the Radiosondes utilizing their own receivers. Brad, lives in Commodore, PA, which is off of Route 286, to the North-east of Indiana PA. Brad happens to be located in the direction that many of the Pittsburgh NOAA Weather Balloons will go after being launched. Often they will go over him and will go all the way up into New England. But other days they will go to the SE and end up going into Maryland, West Virginal, or Virginia instead.

But some days they do not go very far at all – it depends on the high altitude winds. Brad had been tracking this Weather Balloon whenever it suddenly burst over Commodore PA and parachuted down to a location near his QTH. So, with Brad providing the coordinates, James—KB3CNS went out, found it, and retrieved it.

Although each Radiosonde costs around $200, NOAA launches them without any expectation of ever seeing them again. So, Radiosonde finders are free to keep them. They may be freely utilized in other science projects, or parted out for personal use. (So, we can talk about Brad and James's retrieval here).

de Jody—K3JZD

So, with that back story, let's have a look at Brad and James 's photos, using the supplied captions :

I recently setup a raspberry pi to track Radiosondes

The Radiosonde launched this morning (03MAR24) landed nearby and I was able to track it to where it landed.

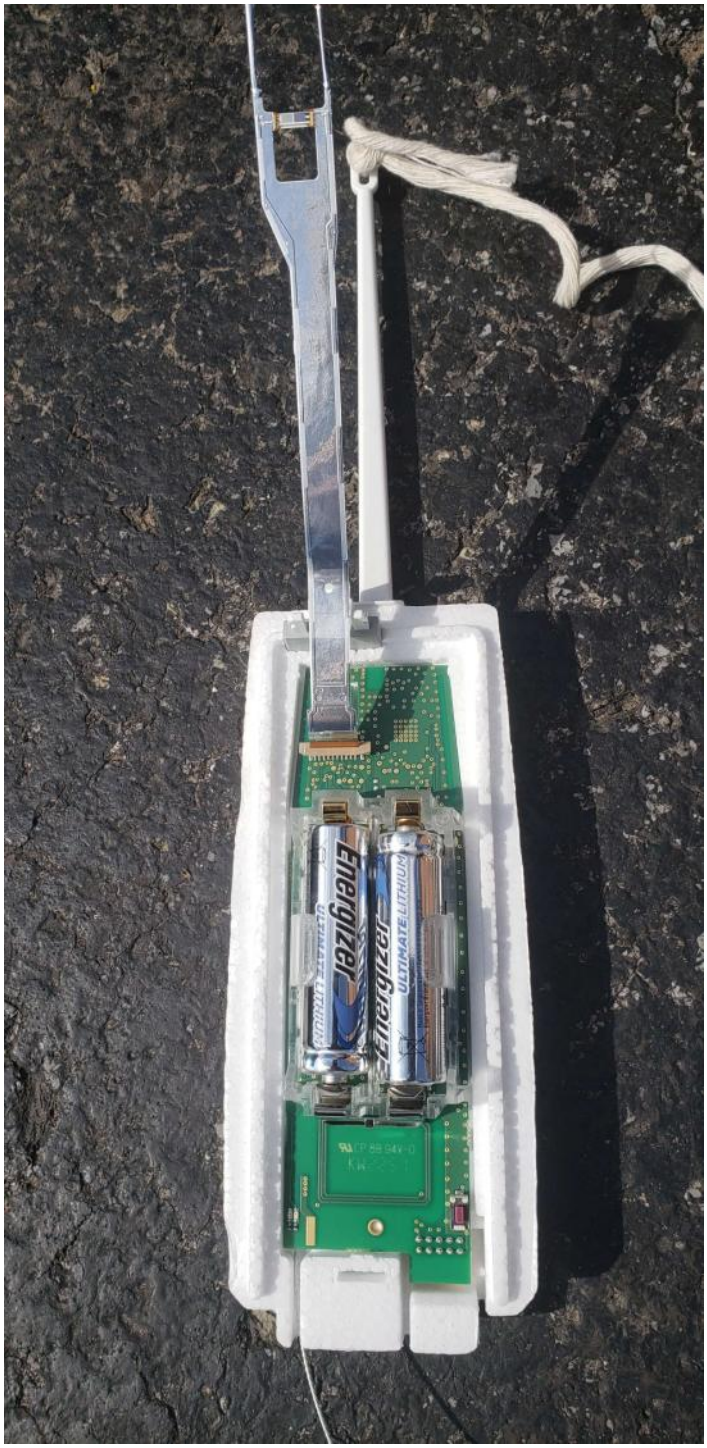
James - KB3CNS, using the GPS coordinates that I provided, was able to find this Radiosonde and retrieve it.

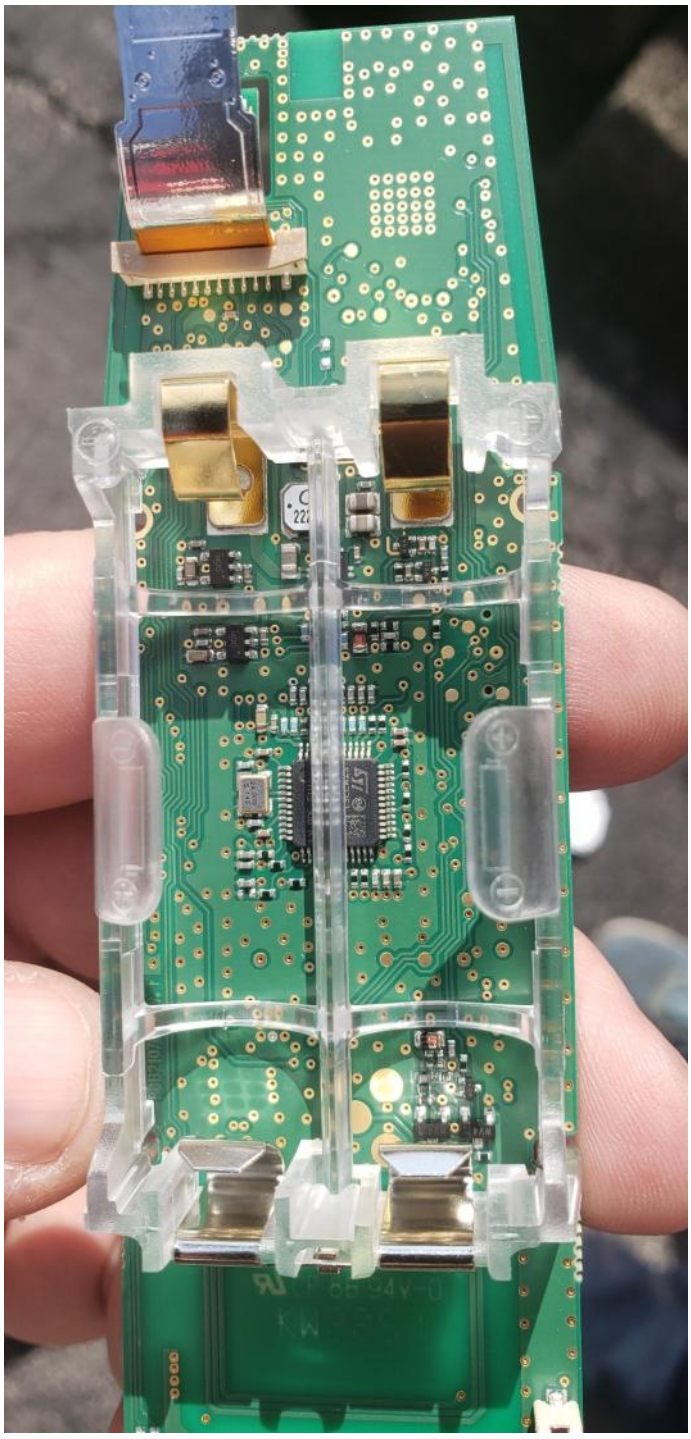
The Radiosonde Auto-RX program was logging data and sending it to the internet all the way back to the house until I opened it and pushed the power button. Then later I turned it back on and using the Baofeng I could hear it transmitting and the Radiosonde AutoRX receiver saw a good signal level but no data was being decoded. So there must be something in firmware the gets set when its powered off and back on to not send valid packets.

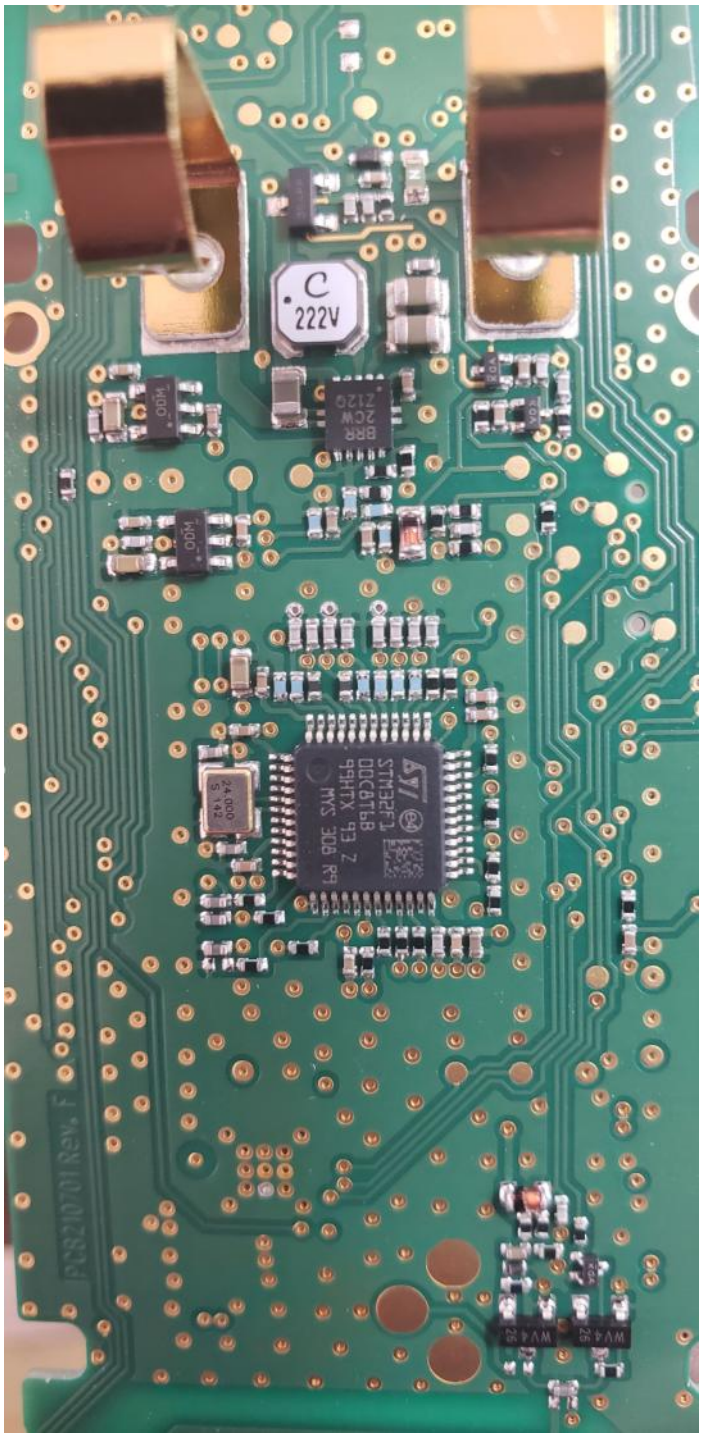
There was also a glowstick attached. The photo shows a Baofeng beside it for scale.

Here it is stretched out in the driveway

Following are some closer views of what's inside.

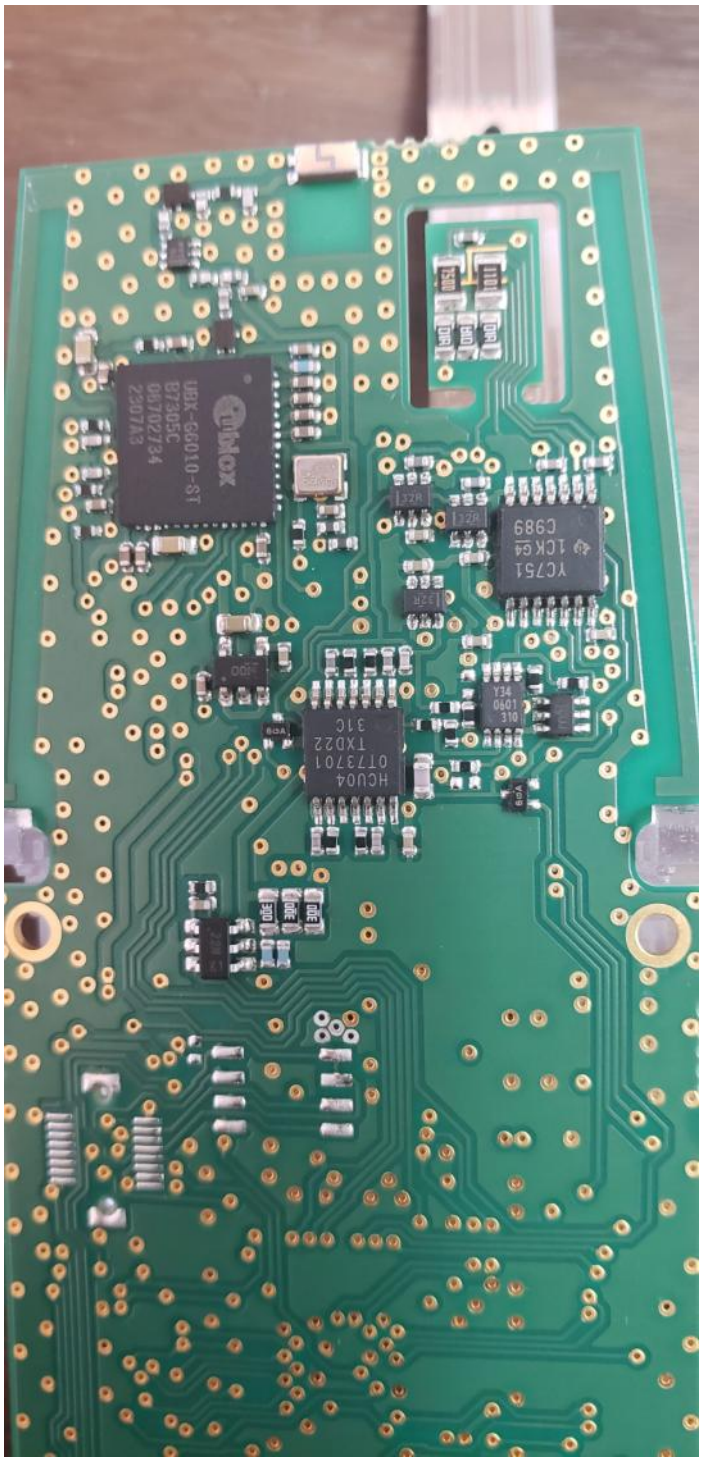






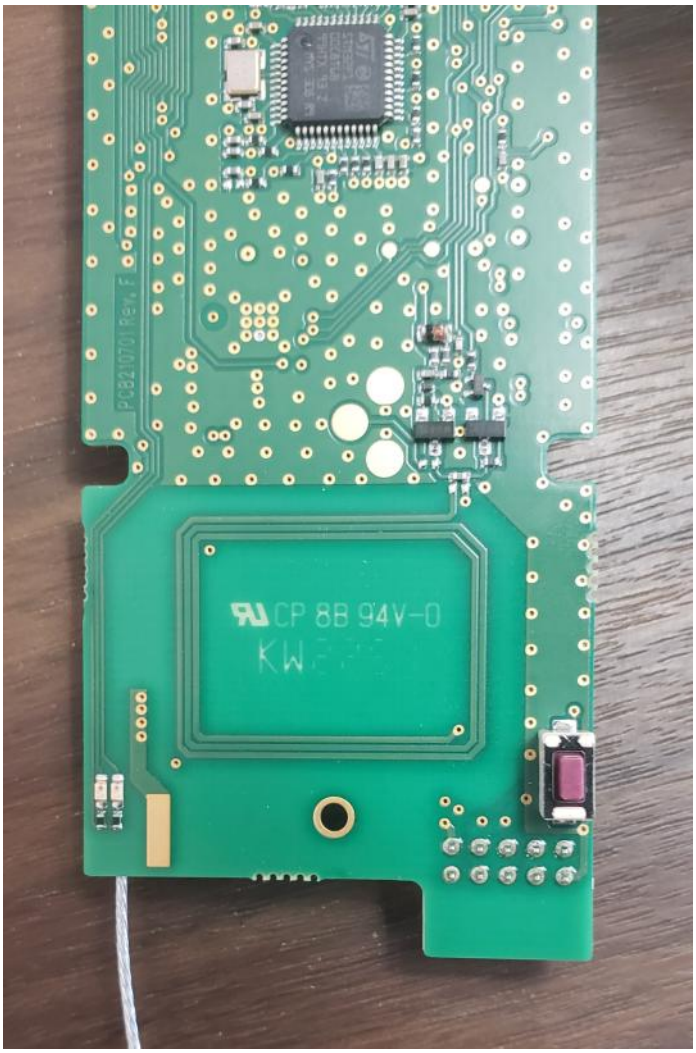
This shows the Main CPU and switching power supply circuit.

This shows the Silicon Labs Si4032 ISM Transmitter chip and antenna matching circuit. The loop I believe is the near field antenna for user configuration.



This shows the U-blox GPS chip and the device at the top of the pcb is the GPS antenna

Close up of temperature and humidity sensors. The loop is a platinum RTD temperature sensor



Transistor interface for the near field loop. Botton right is the power button. Bottom left are status LED's. Wire at the bottom left is the 400MHz antenna.

I thought you would enjoy looking at something you don't see everyday.

de Brad Baker - N3DXC

Drowning Worms

de Bob - WC3O

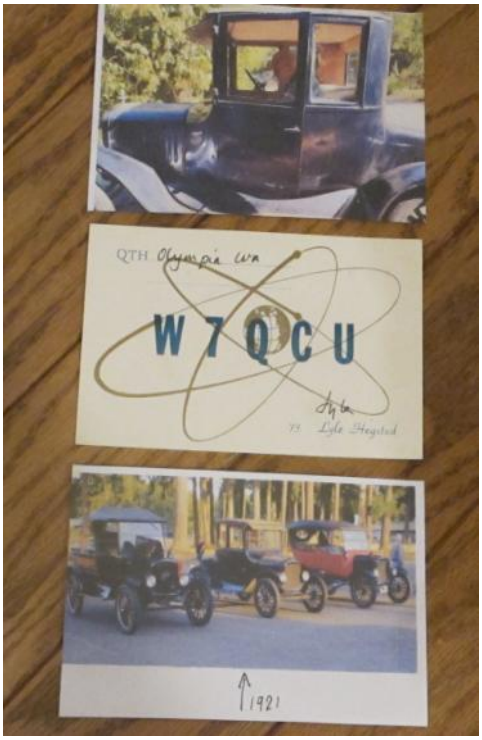
HF bandscopes are both a blessing and a curse. I always tell people, once you have a radio with a bandscope - There is no going back. On the other hand... If you look at your bandscope and see that there are no signals, the band is dead. Right?

WRONG BUCKO! The bands are usually open to a substantial degree. There's just no one talking because everyone is looking at their damn bandscope and saying the band is dead!

Well it ain't

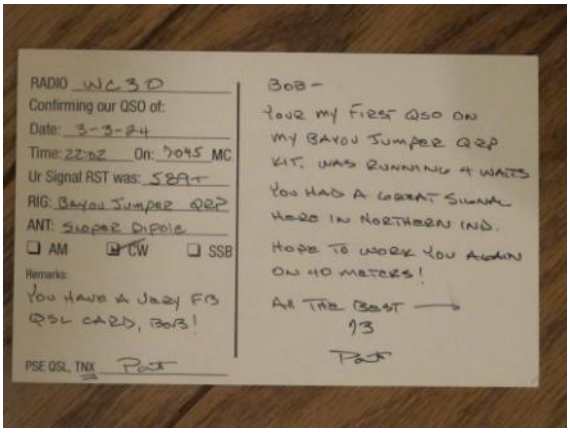
If you go fishing you may have heard people say "Let's go drown some worms". That is, let's go out on the water and see if we can't catch a fish. No worm - No fish. You NEED to take a chance if you want to catch a fish.

The radio is no different. DO NOT be afraid to call CQ. You never know what GREAT conversation you might have never had because "the band is dead..." The following are some examples of recent conversations that I have had personally. Some on phone, some on CW.



15 meters phone: I worked Lyle, W7QCU. We talked for a long time. Turns out that Lyle collects OLD cars. Look him up on QRZ. I hate cars, but we discussed a great many things. I enjoyed our conversation so much that I sent him a QSL card. Today, I received a card back from Lyle along with some pictures of his cars!

40 meters CW: I worked Pat, WA9ZXV. Pat just completed a Bayou Jumper CW QRP rig kit. As it turns out, I was his very 1st contact on his newly built radio! Why hell, I sent Pat a QSL card too. Look him up on QRZ and you can see his new Bayou Jumper, along with his other passions/activities. Just as sure as Sinola, I received a QSL card back from Pat thanking me for the contact and QSL.



40 meters phone: I was calling CQ and worked a couple of people. After each QSO there was someone else that called me because they were listening along with the last conversation/s. Then a big signal out of Canada called me. It was Mark, VE3QAM. We talked for a long time. While talking there was something about this guy? When I started poking around I found that this was a guy of international notoriety. The QAM in his callsign was not random. It appears that he was involved in the development of QAM, or Quadrature Amplitude Modulation. This is the stuff that makes your cell phone (as well as other tech) work. Mark is in the CQ Hall of Fame. Not for contesting, but being an inventor, networking pioneer and cyber security expert. He lives in Canada, but also lives in France. He says that he is now semi-retired and enjoys CW. As a matter of fact, he has a couple Begali keys! For crying out loud he's never been to Dayton!

So you see what happens when you throw a worm in the water! NONE of this would have happened IF I had never called CQ. What a GREAT way to spend time on the air. What a GREAT hobby we have!

Always look up who you are talking to on QRZ. I've also taken to searching their address and seeing if I can see a pic of their house. Look at the satellite view and see if you can spot their antenna. Is there a Street View picture of their house? Take a little virtual ride up and down their street!

So there you have it. It's time for YOU to call CQ and see what happens. Toss that worm with reckless abandon. We're at the peak of the sunspot cycle Babbo. There is no better time to have fun on the radio. Don't make me beat you until your legs don't work. (ref Mike on Breaking Bad)

Get on the damn radio and have FUN!

de Cooky - WC3O

ARRL Technical Specialist Program

Hi everyone, I would like to introduce myself as the new Technical Coordinator for the Western PA Section of the ARRL. This position neither by definition nor self-appraisal makes me technically superior to anyone in the WPA Section, actually I was not even aware that there was such a position until I was asked to take on this role.

One of the main tasks of the Technical Coordinator is to assemble a group of ARRL "Technical Specialists" throughout the section. We have such a great group of amateur radio operators in this region of which many bring some high level of specialized expertise to the many facets of amateur radio. There is a lot to learn from others and no matter how long we have been in the hobby, there is still something to learn if we will only ask and let someone help us. Often times people are afraid to ask for help, they think it shows a sign of weakness. I feel that it's quite the opposite, showing that you want to progress and get more immersed in something that you already have a passion for. I've learned a lot over the years from people that were willing to take time out of their day, evening or weekend to offer suggestions with something amateur radio related that I was about to get into. Likewise, I try and reciprocate and help anyone that I see that needs a hand, it's one of the things that the hobby is all about.

My goal is to work with the soon to be formed group of Technical Specialists so that we can be available for when clubs and individuals alike, both ARRL Members and non-ARRL Members need a hand. This may be through help with learning a new mode of operation, deciding what antenna might be best for your property, kit building, RF interference issues or speaking at a local club meeting or hamfest. I will be participating with the Technical Specialists in those aspects and not just the person that networks everyone together.

While this is not meant to compete or replace any educational or technical programs that may be happening in the local clubs, it's more of a program to fill in some gaps and possibly strengthen what's already happening in those venues and beyond. It's not too often that someone from one club does a presentation at a different club so that may be one of the things that we try to help promote and coordinate. Additionally, there may be new hams out there that are not a member of a club and we can help get them up and running as they start on their journey into this great hobby.

More information on the role of Technical Specialist can be found by a simple Google search for "ARRL Technical Specialist". I have some people already in mind that have unknowingly demonstrated their strong abilities in specific areas. Many of these individuals have more than one specialty so that's an added bonus.

The approach will be respectful and each Technical Specialist's duties will be focused on their strongest individual specialty to create an efficient network of individual resources available to one and all. This should balance everyone's participation in the program to a manageable level, all while keeping things fun and interesting.

If you have any questions, please feel free to contact me at the address below.

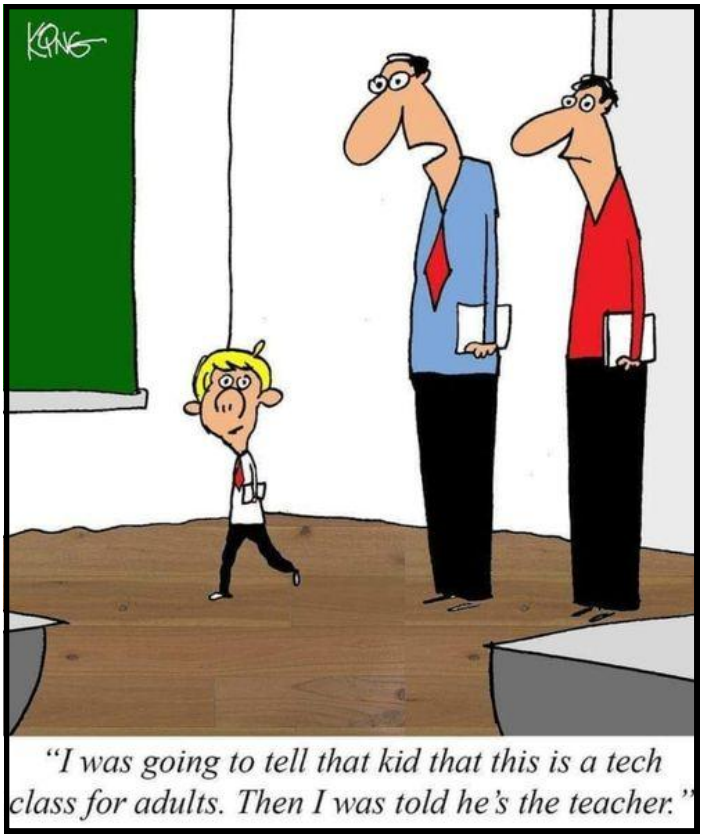
Respectfully,

Curt McCormick - WU3U

Technical Coordinator Western PA Section

wu3u@arrl.net

Photos de Bob - WC3O

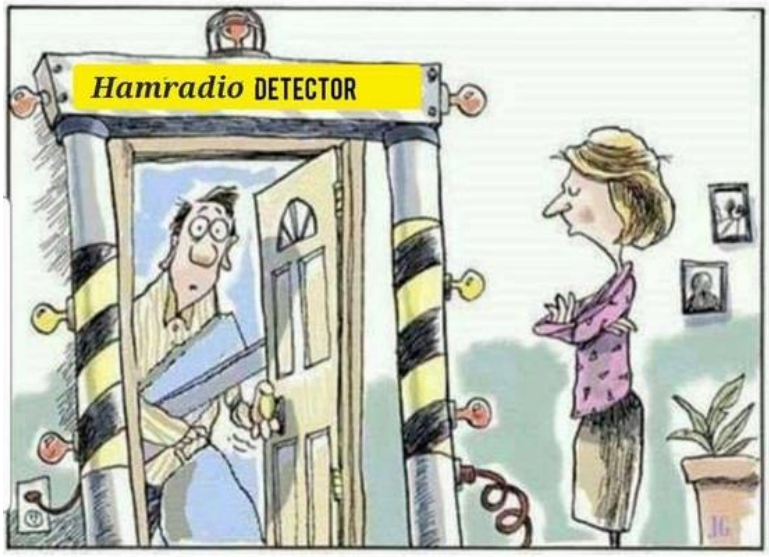


In the Strip District

Skyview's Best Friend

We will all sorely miss our good friend Baxter. Baxter was Scott, AB3GB's best buddy. Baxter was a rescue dog that had nothing but love. He would help out with VE sessions, Field Day and much more. He was a sucker for chasing deer and enjoyed a good piece of brisket. Like all of us, eventually Baxter fell victim to old age. With Scott, he lived a very good life. He will be sorely missed by many at the clubhouse and his family. Thanks for spending time with us OD. Until we meet again. Bob - WO3C

WANTED - I am a former Skyview Member and would like to become involved again. However I no longer have a car. I'm looking for someone who lives near me or comes through Squirrel Hill, who would be willing to give me a ride to/from Skyview. My phone number is 412-983-7256. **Thanks, Ted** **WA3BOJ@arrl.net**



David Bouley, influential New York chef who explored nutrition and flavor, dies at 70

Wednesday, February 14, 2024

By Julia Moskin / The New York Times

Continue to Article

William Post, who played a key role in developing Pop-Tarts, dies at 96

Wednesday, February 14, 2024

By John Yoon / The New York Times

Continue to Article

MORAL ?? - Eat More Pop-Tarts ??

Welcome New Members !!

Welcome the following Skyview Radio Society Members who have joined us since publishing the February 2024 newsletter:

KB3UIO - John Sharick - New Kensington

KG3F - Bob Boehmer - Lower Burrell

Remember that something is going on up at 'the joint' every Tuesday. Sign up for the K3MJW Groups.io Reflector to get the latest news and event announcements by email.

If you are a reader who is interested in becoming a Skyview member, then go to: http://www.skyviewradio.net/ for information.

If you are a reader who is not yet a ham, and you are interested in becoming a ham, , then go to: http://www.skyviewradio.net/ for information.

Skyview Radio Society Roster as of 31 MAR 24

NM3A	WB3HFP	WC3O	K3STL
N3AFS	WA3HGW	WO3O	KC3STV
KB3APD	KB3HPC	KC3OCA	KB3SVJ
NA0B	K3HSE	KC3OCB	KC3TEX
WI8B	KB3HXP	KC3OCC	WV8TG
N3BAH	AG3I	N3OEX	N3TIN
W3BUW	AC3IE	K3OGN	N3TIR
KF3C	KE3IF	N3OIF	W3TLN
KA3CBA	KC3IIO	KB3OMB	KK3TM
KC3CBQ	AB3IK	KB3ORO	N3TTE
W3CDW	WB3IMB	NK3P	KC3TTK
K2CI	W3IU	K3PC	AG3U
K3CLT	K3JAS	K4PDF	NS3U
K3CWE	N3JLR	KC3PIM	WU3U
K3DCG	KA3JOU	K2PMD	KB3UIO
N3DRB	ND9JR	KE3PO	N3UIW
KB3DVD	K3JZD	W3PRL	KC3UNP
K3DWS	WA3KFS	KC3PSQ	KC3UOM
KC2EGL	AC3KI	KC3PXQ	W3UY
KC3EJC	AC0KK	AC3Q	KX3V
K3ELP	W4KV	NU3Q	KC3VCX
AB3ER	KC3KXZ	WQ3Q	KC3VNB
WA3ERT	WE3L	KC3QAA	K3VRU
N3ERW	WA3LCY	KC3QWF	N3VXT
K3ES	KC3LHW	NJ3R	KC3VYK
AC3EZ	WB3LJQ	K3RAW	W3VYK
KG3F	KB3LND	KC3RIL	N3WAV
WB3FAE	K3LR	K3RMB	KC3WBN
K3FAZ	KC3LRT	KC3RMN	KC3WCJ
KC3FEI	AB3LS	KC3RPE	K3WM
K3FH	KC3LZH	W3RRK	N3WMC
K3FKI	N2MA	I2RTF	KA3WVU
KC3FWD	KC3MBM	KI2RTF	K3WWP
AC3GB	N3MHZ	KD3RVR	N3XF
N2GBR	K3MJ	K3RWN	N3YJN
AC3GE	W3MLJ	KQ3S	W3YNI
KC3GPM	K3MRN	K3SBE	KB3YRU
K3GT	N3MRU	WA3SCM	W3YS
AB3GY	KS3N	KC3SDJ	KB3YYC
KC3GZW	G4NFS	KC3SKX [SK]	KE3Z
NC3H	KB3NSH	KC3SNZ	K3ZAU
NY9H	AJ3O	KB3SOU	W3ZVX

Notes: Only Call Signs are being published. Refer to QRZ.COM for more information. (Unable to publish those without Call Signs.)

It will soon be time to trim this Roster.

Have YOU paid your 2024 Dues ??

Kul - Links

Jody - K3JZD

There is lots of stuff out on the Internet… Some of it can brighten your day. Some of it can educate you.

I can't really copy and past it all in here. But, I can point you at some of it . . . . .

For the Deep Thinkers, here is a Free Book for an 'Understanding Deep Learning' course
http://tinyurl.com/4wd2nstp

Sad Ham Radio (or maybe Ham Radio Pirate) Story
https://tinyurl.com/yc23ay39

I'll consider any Kul - Links that you find.
Email then to me at: K3JZD AT ARRL DOT NET
They might just end up in the next issue

Previous Issues

Previous Issues of the Q5er are available at

http://www.nelis.net

Next Newsletter will be June 1, 2024
Closing Date For Submissions : May 15, 2024
K3JZD AT ARRL DOT NET

Become Well Known Publish in the Q5er

The Q5er goes to other clubs and is available to all on our web site.

Submissions to : K3JZD AT ARRL DOT NET

>>>>>> WARNING <<<<<<

An Alarm System has been installed up at the joint. Do Not go in there on your own until you learn how to disarm and rearm it.

**** Skyview VE Testing ****

For Testing Dates, See :
http://www.arrl.org/find-an-amateur-radio-license-exam-session
Time: Usually 8:15 AM

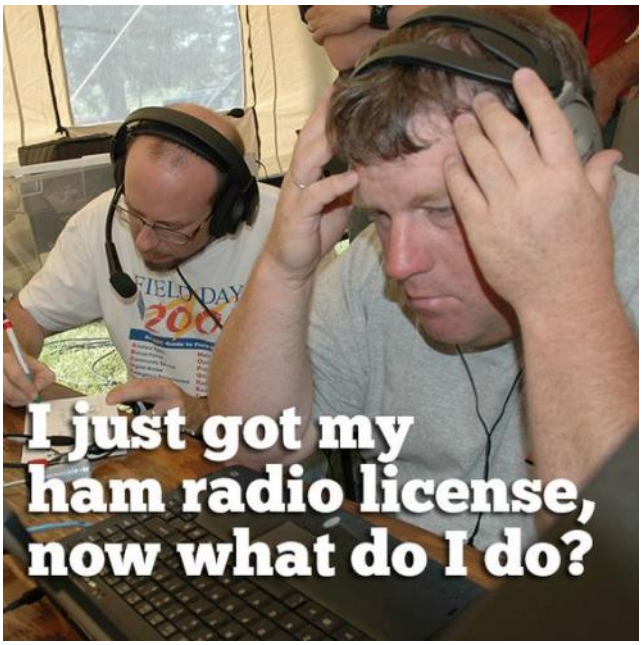
Location: Skyview Clubhouse Meeting Room
2335 Turkey Ridge Rd
New Kensington PA 15068-1936

Contact: Bill Dillen
(724) 882-9612
Email: bdillen@comcast.net
http://www.skyviewradio.net/ve-tests/

Please E-Mail or call to register!!!
While walk-ins are accepted, the exam session may be cancelled if no candidates are scheduled.

Q5er Editor & Publisher: Jody Nelis - K3JZD

email your comments and article submissions to: **K3JZD AT ARRL DOT NET**



That's Easy . . . .

Come up to the Skyview Clubhouse on any Tuesday and ask !!!

And See : https://tinyurl.com/y79tqsr8

All General Information about the Skyview Radio Society is at http://www.skyviewradio.net

Subscribe to K3MJW **groups.io** reflector for All Current News & Activities : https://groups.io/g/K3MJW
If you want to keep up with what is going on NOW, that is the place - have it forward msgs to your email

Is this how your dining room looks ??

Send in pictures of your Ham Shack