



Q5er – The Official Newsletter of the Skyview Radio Society



2023 SKYVIEW RADIO SOCIETY SWAP N SHOP!

SUNDAY AUGUST 27, 2023 8:00am until 1:00pm
LOCATED AT OUR CLUB GROUNDS NEAR NEW KENSINGTON PA
Aprox 13 miles northeast of Pittsburgh
2335 Turkey Ridge Road
New Kensington, PA 15068
Talk-in 146.640- 131.8pl
Admission \$5.00 – Table space is \$5.00 (Bring your own table)

Great prizes
Door prizes
Begali CW key raffle
Breakfast and lunch served
Get your Skyview Burger and your Skyview Dipole Hotdog!
Contact: John Italiano WA3KFS - 724-339-3821
K3mjw@arrl.net
<https://www.facebook.com/SkyviewRadioSociety>
Location is near the intersection of Rt. 366 and Rt. 380

Remember, you can't miss running into your friends here !!

2023 is Skyview's 63rd Anniversary !!

August 1, 2023

- Begali Pearl Key - Win It !!
- Sunspot Cycle - Wow!
- ChatGPT CW Poetry
- Good Suppliers
- AM Radios - At Risk?
- Skyview Workbench
- Mt. Davis SOTA Activation
- Discone Antenna
- Classic Home Computer
- Swan 350 / Swan 500
- And More . . .

**Sunspot Numbers
are Way Up
There !!!**

**Time to exercise
the 10-12-15-17-20
Meter bands**

Inside this issue:

FROM THE EDITOR	3
BUSINESS MEETING MINUTES	4
FOOLING AROUND WITH APRS	8
MOBILE RADIO INSTALL GUIDE	11
BEARCAT BC906W REVIEW	16
A NEW HAM SHACK	18
QRP-LABS QMX REVIEW	23
NEW MEMBERS	34
KUL-LINKS	35



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

Some of you might remember hearing “We have got a really good shew for you tonight”. That would have been Ed Sullivan on your TV once a week..

Anyway, I think that we have a really good issue for you this month. If you do not read it, you are certainly missing out..

We have some good articles written by some folks who are new to this hobby. They have a really good perspective on what it takes to get setup. Probably better what I can recall from my doing that many, many years ago. Lots of things have changed since I was a new ham, so my story would be stale..

And, we have our typical hands-on articles, written by some of our builders and experimenters. And a little general news from here and there

Jody - K3JZD

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

Ham Radio is a Contact Sport

From the Treasurer

The Skyview Swap & Shop is on August 27th. Support it. Send in the money for the tickets that John - WA3KFS will be mailing to you. Come out to the Swap & Shop. Buy Main Prize Raffle Tickets. Buy food and drinks. And buy some Begali Pearl Key Raffle Tickets.

If you can, come out Saturday morning and help setup. And/or help tear down Sunday afternoon. There are usually some opportunities to help out during the event. John - WA3KFS manages the work assignments.

Contribute your no longer needed ham and electronic items to the club to be sold at the **Skyview Table**. Bring your items up to the Club, preferably prior to the event day. But can be brought early on the event day.

Skyview relies on donated items for the Main Prize Raffle. You can contribute a new, in-the-box, Main Raffle Prize. Do it soon, and let John - WA3KFS know about it so he can list it on the event posters.

Jody - K3JZD

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

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

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.

Support our Swap & Shop

All you need in this life is ignorance and confidence, and then success is sure. – Mark Twain

June Business Meeting Minutes

de Don - WA3HGW

Skyview Radio Society Monthly Business Meeting – June 6, 2023

Call to Order: 7:30 PM by President Paul Krystosek, AC3IE.

Attending – 32 Members: N3WMC, K3STL, K3FAZ, AC3IE, WA3HGW, NJ3R, W3IU, N3TIN, N3OEX, AG3U, N3DRB, NK3P, KB3SVJ, KC3TTK, KG4JBB, AB3ER, K4POF, K3JZD, N3TTE, K3JAS, NM3A, N2MA, AB3GY, AC3GB, K3ZAU, AC3Q, W3ZVX, AJ3O, WC3O, KC3VNB, WA3KFS, AG3I and visitor Brian H.

Prior Meeting Minutes: The minutes of the April 4, 2023 were distributed for member review. A motion to accept the minutes as presented was made by N3WMC and seconded by KG4JBB. The motion passed without objection. Don, WA3HGW also passed around a letter to the Southern Pennsylvania Amateur Radio Club thanking them for their donation of a plaque for the 2022 PA QSP Party won by Skyview for winning the club competition in the 3 to 25 log entry. The letter was sent along with one of our K3MJW/W3GH QSL cards.

Treasurer's Report: Treasurer Jody, K3JZD reviewed the Financial Report of 31 May 2023 (Attached). Income included 50/50 drawing and from the VE session. Expenses were only for routine recurring bills and the purchase of new metal folding chairs for the clubhouse approved at a previous meeting. A motion to accept the Treasurer's Report as presented was made by AC3GB and seconded by KG3JBB. The motion passed without objection.

Membership Report: Tom, AB3GY, advised there is one new membership application. AB3GY made a motion to open the membership rolls, which was seconded by N2MA. The application is from:

Brian Sauk, KC3VNB, an extra class licensee from Murrysville, PA. A motion to accept the nomination was made by AB3GY and seconded by AJ3O. The motion passed without exception. AB3GY made a motion to close the membership rolls, which was seconded by KG4JBB. The motion passed without exception. Membership now stands at 152.

Radio Officer Report: All radios and systems are working well. The 80 meter dipole off the top of the tall tower still needs to be repaired. At the Dayton Hamvention an Astron 10 amp power supply was purchased for the radio room plus an antenna analyzer and a large spool of cord for wire antenna support.

Kitchen Report: Bob, WC3O, noted the kitchen balance is \$247. The kitchen will be stocked up in anticipation of Field Day needs.

VE Report: There were 3 candidates in May and all passed. The next VE session is June 17. Bill, N3WMC, thanked the many Skyview VEs who assisted the VE licensing session at the Breezeshooters Hamfest.

Newsletter: The June issue of the Q5er is out. Lots of articles were provided and Jody thanked all for their submissions. Jody is looking for newsletter submissions by July 15 for the August issue.

Facilities: Nothing new to report.

Building Committee: N3TIN submitted the following note from Marty, AG3I:

Given that the building addition project manager has been fully consumed learning how to run something called a "Hamfest" over the last 6 to 8 weeks, and now that the Hamfest is complete, construction is to begin at the next logical opportunity, which will be the week after Field Day. This first phase will require the exterior door closest to the rest room to be closed off for approximately 5 weeks.

Respectfully submitted,

Marty, AG3I, Project Manager

Calendar of Events:

June 24 – Rachel Carson Challenge.

June 25 & 25 – ARRL Field Day: K3MJW at the clubhouse and W3GH at the N3TIN location.

July 1 to 7 – 13 Colonies Special Event

July 18 – Ice cream social at the Joint.

July 20 to 22 – Train trip to ARRL Headquarters.

July 30 – Wacom Hamfest

August 10 & 11 – Tour to Greenbank Observatory/SETI Tour and Cass Mountain Railroad.

Q5er – The Official Newsletter of the Skyview Radio Society

August 15 – Korn Roast at the Joint.

August 27 – Skyview Swap & Shop

Old Business:

Skyview members participated in providing communications for the Pittsburgh Marathon. Everything went well and it was reported the new runner reporting system was successfully implemented.

Reports from the Dayton Hamvention were positive. A record attendance was achieved.

Also good reports from the membership on the Breezeshooters Hamfest.

New Business:

- Because the first Tuesday in July is on the 4th, the membership voted to cancel the July business meeting.
- Skyview won high score in the Breezeshooters ground-wave contest.
- John, K3STL, made a motion that the club again offer a membership special whereby anyone joining at the Swap & Shop will have their membership good through 2024. KG4JBB seconded the motion. The motion passed without opposition.

John, WA3KFS reviewed some items needed for the Swap & Shop:

- All members will receive three tickets to purchase. These will cover the minimum expenses for the event.
- We need hourly prizes. Members are encouraged to see what they can obtain for these prizes.
- We need additional main prizes. Any vendors who supply main prizes and have their company banner displayed.
- WA3KFS noted we need to rent a port-a-potty, possibly two if the new restrooms are not completed.

Weather Night:

June – Advanced Skywarn training

July – Lightning.

August – Radiosondes and weather balloons.

September – One year review of the Skyview weather group activities.

October – Making snow boards.

Elmer Night: Nothing scheduled at this time.

Net Report: The check-in numbers averaged 40.25 in April. If

you want to volunteer for net control, contact K3STL or WC3O.

50/50 Drawing: The total collected was \$61. The winner of \$25.50 was K3FAZ. Steve donated the proceeds to the club.

Meeting Adjourned: A motion to adjourn was made by N2MA and seconded by KG4JBB. The motion passed without objection. The meeting was adjourned at 8:24PM.

Respectfully Submitted,

Don Stewart – WA3HGW

Secretary; Skyview Radio Society, Inc.



Good Sources

de Jody – K3JZD

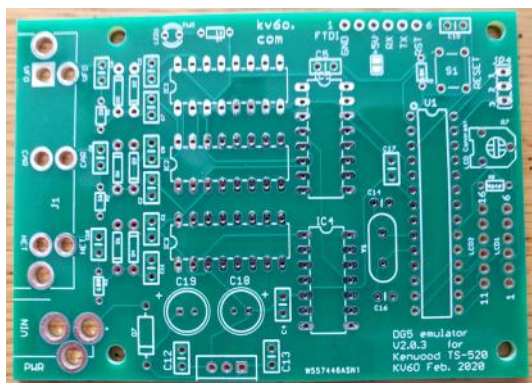
I just built what I guess you would call a semi-kit. It was a DG5 Emulator for a Kenwood TS-520S. It was designed by Steve - KV6O.

Steve had put all of the necessary design info onto GitHub. It was up to me to obtain a printed circuit board and all of the parts. But Steve had made all of that pretty easy.

I used Steve's printed circuit board design files to have PCBWay make my PCB. I had never used PCBWay before. I had either etched my own PCBs or had used perfboard construction in the past

PCBWay did a really great job. They produced a clean, ready to solder board in a very short period of time.

The price per board was very low, but their minimum order is for 5 boards. And There is a shipping cost for a very fast DHL delivery. Regardless, I highly recommend PCBWay.



Steve had provided a full detailed parts list. To facilitate obtaining the needed parts, Steve put that full parts list onto the Mouser Electronics web site. I clicked on his link and I immediately had an order all prepared for me.

There were a few parts in his parts list that were now obsolete - he had created his parts list 3 years ago. And there was one long-wait backordered

part. But I was able to find substitutes for everything whenever I was doing my ordering.

I can't say enough good things about Mouser Electronics. They tolerate small quantity orders with no minimum order and they treat you like you are ordering in quantities of thousands. I obtained customer support whenever I was choosing an alternate for just one \$0.97 part.



Mouser puts a great deal of effort into preparing and packaging an order that contains a lot of very small quantities of parts. Every part is very well marked and well protected.

The most extreme example was probably the strip of 24 snap apart header pins that I had ordered. The strip of 24 snap apart header pins was wrapped in a bubble wrap bag. And then that was put into a cardboard box!!

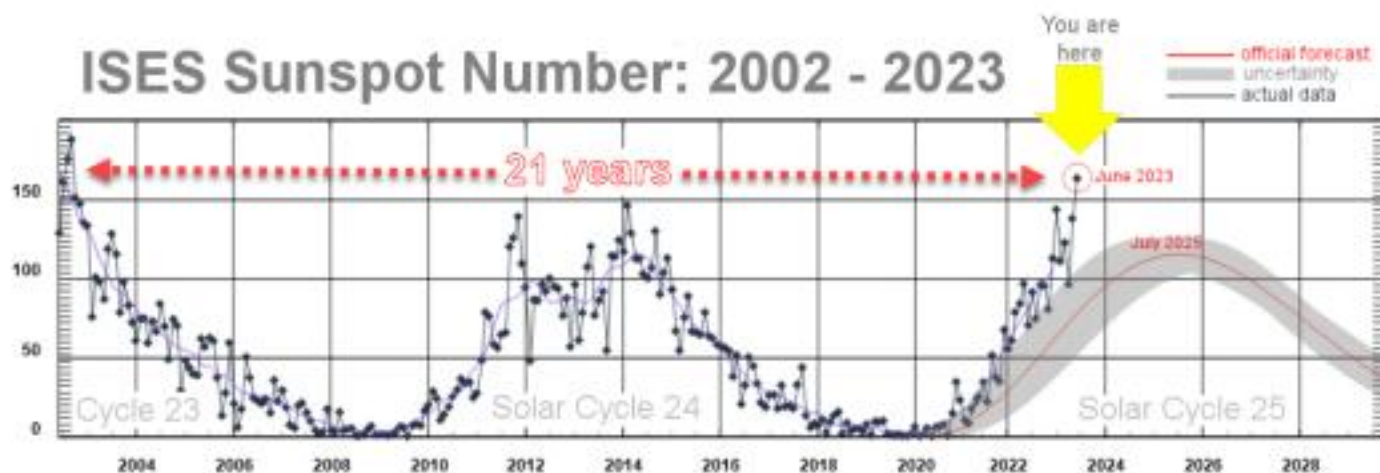
Yes, you will pay for fast shipping by UPS. But for me it is worth it.

So, I'm giving "At-A-Boys" to Steve - KV6O, PCBWay, and Mouser Electronics.

Jody - K3JZD

SUNSPOT COUNTS HIT A 21-YEAR HIGH:

It's official: The average sunspot number in June 2023 hit a 21-year high. Solar Cycle 25 has shot past its predecessor, Solar Cycle 24, and may be on pace to rival some of the stronger cycles of the 20th century. Full story @ [Spaceweather.com](https://www.spaceweather.com)



Home Computers Circa 1981 - AT&T 6300



In the year 2023, it is easy to forget what the field of personal computers looked like back in the early days of home computing (assuming that you were even alive and a computer user then).

My first PC (circa 1983) was a Sinclair ZX-80 model that had a membrane keypad, used a cassette tape deck for storage, and connected to a television display via a video converter. My first program beyond the obligatory "Hello World!" variety was one that plotted a sine wave and cosine wave on the screen.

From there, I moved on to a VIC-20, and finally to my first "real" PC, an [ATT 6300](https://www.att.com) (in 1987, while at the University of Vermont, working on my BSEE).

The ATT6300 came with two, 5-1/4" floppy disk drives and no hard drive. It was a real step up when I installed a whopping 10 MByte internal HDD, and then even added an 8087 math processor to assist the 8086 processor. Its green monochrome monitor had a really weird resolution that almost NO software was designed for, so it could cause display problems. UVM required all engineering students to buy one from them, at around \$3,000, as well as an HP dot matrix printer that cost around \$450...

Chuck - K3CLT

Fooling Around With APRS

de Luc - KC3MBM

Automatic Packet Reporting System (APRS) is a digital mode that combines FM radio with GPS. Signals take the form of short packets which are readily heard on an FM radio, at a frequency of 144.390 MHz in North America.

APRS is often used by organizers of races to locate marshals and race participants along the race course. See for example p. 58 and 74 of QST, July 2023.

APRS stations form a radio network associated with a map freely available through the aprs.fi website (Fig. 1). Each station is labeled with its callsign. Also, the nature of each station is indicated by a certain symbol. For example, a mobile station such as a hand-held radio is shown as an automobile. Digipeaters (digital repeaters) are shown as a letter D inside a star. An I-Gate connects the APRS radio network to the internet; it is indicated by the letter I inside a star.

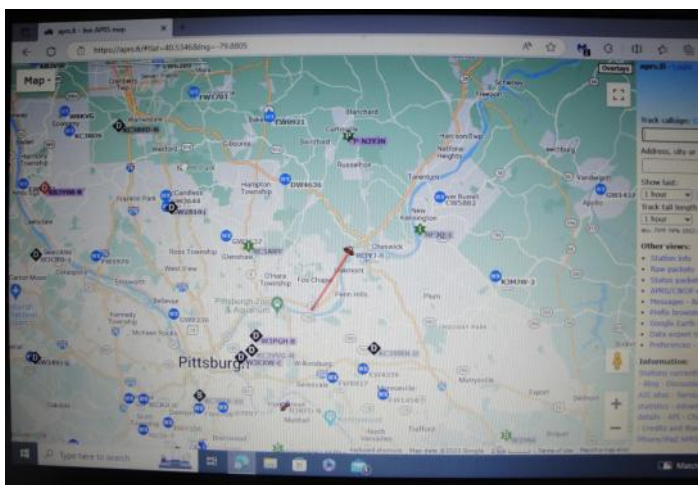


Fig.1 : aprs.fi map showing the stations which form the APRS radio network.

In order to experiment with APRS, I bought a Yeasu FT5DR digital radio (Fig.2). This is a hand-held dual-band 144/430 MHz radio. It encodes and decodes APRS and includes a GPS receiver. Maximum TX power is 5W. The radio came with a rubber duck antenna. Total cost was about \$430.

While an Operating Manual was received with the radio, I had to order a so-called Instruction Manual (APRS Edition) to obtain the more specialized information I needed.



Fig.2: On the left is the Yeasu FT5DR digital radio. On the right is the Grand Tablet from Consumer Cellular.

I programmed the radio to transmit one packet every two minutes at 5W. At first, the aprs.fi map (Fig.1) was accessed from a laptop at home.

I started by leaving the radio turned on for one hour or two, at home in Cheswick. During that time, the radio received and decoded a few stations. Most of them had a power of at least 20W. They were often located at a relatively high altitude. An example is K3MV, a 25W digipeater in Seven Springs on Laurel Ridge.

If my own transmissions had been received and decoded by the network, a car symbol would have appeared on the aprs.fi map at the location of my home. Such symbols persist for one hour after reception of the last packets. They constitute what is called the "tail" of my station.

But, even after repeated TX attempts at home and in nearby Harmarville, no trace was ever seen of my station on the map!

Possible explanations are the low 5W power of my radio, combined with the position of the house. Our house is below the cliffs surrounding the Allegheny River. This is unfavorable as VHF waves do not go easily around corners. In addition, our house has aluminum sidings. Attempts to replace the rubber duck by a quarter-wavelength vertical antenna brought little improvement.

The next step was to drive with my Yeasu HT to the 4W I-Gate NF3Q in downtown New Kensington. For about an hour, I transmitted at a few locations between zero and two miles from the I-Gate. After rushing back home, I found a car symbol on the map near the position of NF3Q. I finally knew that there was nothing really wrong with the Yeasu radio or the way I used it!

Then my wife Teresa bought a tablet from Consumer Cellular (Fig 2). Like a smartphone, it receives the internet signal directly from the cellphone network but has a much larger screen. It gives us a convenient way to consult the map while on car trips.

An additional way of testing my Yeasu HT would be to see whether one can compensate for its low TX power by transmitting from an elevated position. The 25 W I-Gate KC3ARY is in Shaler Township near Rte. 8. We drove with the radio and the tablet to Beechwood Farms, a nature preserve located 3 miles from KC3ARY. The parking lot of Beechwood Farms is convenient and is higher than most of the surrounding landscape. Soon after starting transmissions there, a car symbol labeled with my callsign appeared on the map at the expected place.

I may continue this "APRS SOTA" in the future, while increasing further the distance between my transmitter and the network.

Luc Berger— KC3MBM



Will it work ??

ChatGPT CW Poetry

de Larry - W2LJ

I came across this post on the CW e-mail reflector by Dave Ring, N1EA.

It's a poem about CW that was generated by ChatGPT (AI) at the prompt of John M0STQ. Since a lot of us will be listening to a lot of Morse this weekend:

John M0STQ says:

We've probably all heard about ChatGPT, which is a combination of coded chat bot and an LLM (large language model), trained on a huge chunk of scraped internet text up to about the end of 2021.

I gave it this prompt "write me a poem about Morse code" and it came up with this

*In a world of signals, hidden and grand,
A language of dots and dashes, hand in hand.
Morse code whispers, in rhythm and sound,
A symphony of messages, profound.*

*With a simple click, a dot appears,
A fleeting moment, to the listening ears.
Short and swift, a gentle tap,
Encoded words in a Morse code wrap.*

*Then comes the dash, a longer beat,
A bolder stroke, a message complete.
Steadfast and strong, it boldly declares,
Secrets encoded, in cryptic layers.*

*Through wires and waves, the code takes flight,
Across vast distances, day and night.
A bridge between souls, in distant lands,
Unseen connections, in invisible strands.*

*In wartime strife, it spoke of hope,
A lifeline woven through battles' slope.
Heroes tapping with strength and might,
Morse code echoes, in the darkest night.*

*But beyond the war, a hobby embraced,
A world of enthusiasts, passion encased.
Operators deftly keying with grace,
Conveying thoughts, at a steady pace.*

*Morse code, a language unique and pure,
A testament to human will endure.
In a world of beeps and boops, it shines,
A symphony of dots and dashes, divine.*

*So let us remember, this code of old,
A tale of ingenuity, daring, and bold.
Morse code, a treasure from days gone by,
Whispering secrets, reaching for the sky.*

Not bad, eh?

72 de Larry W2LJ

QRP - When you care to send the very least!

A Beginners Guide to Mobile Radio

de Chris – AC3Q

Introduction

Greetings fellow amateur radio enthusiast! Welcome to the exciting world of VHF/UHF. Hopefully, you've had your license for a while now (or perhaps, maybe you've just passed your technician exam) and you've finally decided to get serious about mobile communications. - Excellent decision!

Mobile radio is a great way to have fun and sharpen your ham radio skills while you travel. Many hams already own a HT (handheld transceiver) but still want something to use that is a more permanent fixture in their vehicle. Adding a radio to your car or truck can be very safe and effective way to improve communication while on the open road.

The following article will basically be my journey into installing a basic VHF/UHF setup in a 2019 Subaru Impreza Sedan. I've tried to recount as many details as possible to help you with your attempt, and hopefully you will find it helpful.

Getting Started: Picking Out a Radio

Most journeys begin with a destination, and so mine began by selecting hardware. My first task was to decide on which frequencies I wanted to operate, and if I needed digital. I already knew I wanted the ability to access local repeaters, and I definitely wanted to communicate between vehicles via Simplex during road trips. Band-wise, this put me on 2m and 70cm.

Now as far as digital radio was concerned, I had heard a few different opinions regarding the subject. Many felt digital radio will be the future, and cited APRS tracking as the stand-alone feature which would be most beneficial in the event of an emergency.

However, I had also heard that added features translates to added price. Add this the fact that digital technology is brand specific, and I started question the practicality. For example, in order to support D-STAR, DMR, and System Fusion, I would need three separate radios to achieve full coverage while on the road. Digital's features do excite, but I *am* on a budget. I decided to go analog.

Now, with budget being a factor, I began by looking at radios that didn't break the bank. They needed to be intuitive, and not require massive amounts of attention while driving. The brands ICOM, Yaesu, and Kenwood were my first choice. Other manufacturers such as Alinco, Motorola, AnyTone, and TYT definitely fit the price point, but prior success with the former led me to stick with what I knew – ultimately landing me on the Yaesu FTM-6000R.

This particular radio had a minimalistic front end, an easy to read backlit display, and customizable quick access menus.



It did everything I wanted and did it well, much like the FT-60R. The runner-up, the ICOM 2730A (which offered full duplex) was a close second, but was the more expensive of the two and didn't include the accessory hardware connections out of the box.

Antenna Brands, Mounts, & Placement

After finalizing a radio selection, I moved onto choosing an antenna. Since I'd already decided to utilize the 2m and 70cm bands (the two bands on which most repeaters operate), I wanted to see what the most popular brand had to offer in the way of a dual-band design.

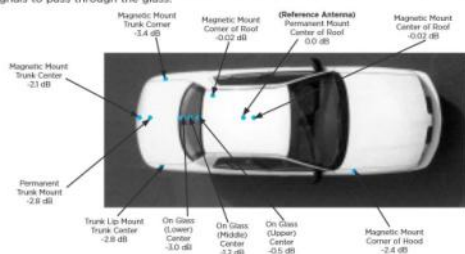
Research ensued, and I quickly saw most 2m/70cm mobile antennas came as flexible whips utilizing a well-placed coil in the middle to make them perform better. Diamond, Comet, Hustler and Pulse/Larsen seemed to lead the pack.

MFJ was ever present, but general consensus is that their quality can vary greatly between MFJ factory runs. I decided to avoid them this time, but many have had success with their other products in the past.

Which one did I pick? - Pulse/Larsen. Why? Good question. Honestly, it came down to an industry video they produced a while back discussing antenna placement on vehicles. The video was particularly helpful to me and assisted me in deciding where I wanted to install and ground the antenna. I appreciate brands who educate their customers, but don't talk down to them.

MOBILE ANTENNA PLACEMENT

Correct antenna placement is critical to the performance of an antenna. An antenna mounted on the roof of a car will function better than the same antenna installed on the hood or trunk. Knowledge of the vehicle may also be an important factor in determining what type of antenna to use. Do not install a glass mount antenna on the rear window of a vehicle in which metal has been used to reduce ultraviolet light. The metal tinting will work as a shield and not allow signals to pass through the glass.



Pulse/Larsen also offered the antenna with an NMO mount. The NMO or "New Motorola Mount" was originally designed by Motorola, the company who has set the mobile industry standard since 1930. They make quality products, and their mobile radio history is extensive.

Along with the pedigree, the NMO mount offered a few advantages the classic PL-259 coax didn't. First, NMO mounts utilize two waterproof O-rings, which help the car from rusting out and keep the connection secure. This is especially useful if you plan on drilling a hole in your trunk or roof for a through hole install.

Even their mag-mount installation (which I selected) utilizes the same rings to help seal its connection. Second, the base of the NMO mount is larger in diameter than a traditional PL-259, and only a quarter in rise in height. This creates a wide, solid base to secure your antenna that won't easily be snapped off.

Lastly, the mag mount model was chosen in order to achieve the most solid ground connection. This allowed me to route the coax cable easily through the weather seal under the trunk into the cabin without drilling any holes or further modification to the vehicle.



Putting It All Together

Now that I had my two most important components, I needed to connect everything together. The Yaesu base unit would go under the passenger seat and I planned to mount faceplate on the dash or under the center consol. The cable would be run under the center console and side panels. (Be advised though, this particular radio already included the extension cable to allow remote mounting on the dash, but other brands or models may not).

Newer Subaru Impreza's offer a few different places to mount a faceplate securely, but not all allow cable concealment. Mounting higher up on the dash meant I would have either an exposed cable, or it would need to be run behind the stock FM radio and necessitate an outlet hole drilled in the dash, which I wasn't thrilled about.

However, upon farther inspection, I noticed lower down (under the climate controls) there already existed a factory hole that would allow the cable to be stealthily run behind the radio without much effort. This appeared to be the most effect and seamless mounting option.

Power would be supplied from the battery via two 10ft 8-gauge BNTECHGO silicone coated primary wires connected to a 75-amp Andersen Powerpole adapter. I chose silicone over traditional coated wires due to the temperature tolerances and flexibility. They were high quality, and easy to work with.

The 75-amp Powerpole would then connect to a 75-amp to 45-amp distribution block. The reason for the larger gauge wire and distribution block was step-down the 75-amp to the typical 45-amp connector which was already fixed to the radio, and to avoid a voltage drop.



I also planned to install a dash mounted Andersen Powerpole access port to allow my to easily connect my HF radio in the event I decided to activate POTA from my vehicle. (Hey, why not, right?)

Now typically, stock primary wires are run to the battery through the firewall under the dash. Depending on your car model, you may or may not see a rubber boot cover-

ing the wire bundle. In my Subaru, I had two options - lay on my back and attempt to pierce through the boot under the dash (which was rather uncomfortable), or run the cables through the interior door boot and up the side of the wheel-well into the engine compartment.

I chose the latter, as it was easier to access and provided the same level of seamless installation. (A word of caution though – be careful. You do not want to damage any of the covered wire bundles that provide power to the electric windows and door locks).

The dual-port Powerpole access port I chose to install would go right next to the stock 12-volt accessory adapter in the dash. To get to this though, I had to tear apart the entire center console, interior side panels, and dash trim. It was tedious and stress-inducing.



Once removed, I used a step-bit to drill out the require mounting hole, installed the access point and re-mounted the panel. As a side note, this took longer than expected, as I initially drilled the hole two high and needed to order another part from the factory Subaru parts dealer, which took several weeks to get. OCD is not a pretty thing.

To connect the antenna, I simply ran the coax cable under the weather seal, through the trunk, into the gap in the back of the seats, and under the carpet into the radio. No muss, no fuss!

Almost Done...

Before finalizing the install, I did a quick radio check to make sure everything was working properly. Connection-wise, everything functioned perfectly, except for one issue – the speaker installed in the base unit under the passenger-side seat could barely be heard. Even at full volume, the seat muffled the audio. Add in road noise, and my on-air experience enjoyment dropped significantly.

Not losing hope, I began to look into external speakers. I already knew to specifically seek out a mobile police or ambulance speaker, as they are designed to accent the human vocal range better in noisy environments. Typically pulled from retired service vehicles and ambulances, these can be easily found most local swap n' shops or garage sales. Thankfully, I happened to "know a guy" who was gracious enough to procure one for me. (Thanks, Bob!)

Now, most external speakers should come with a pivoting (or tilting) mount that will let you mount pretty much anywhere in a variety of orientations. However, the general consensus is the higher up on the dash (closer to your ears) the better your audio will be.

In my particular installation, the speaker wire did allow enough length for me to route from under the passenger seat, under the side panels, and up into the dash, but I still wanted to avoid drilling any non-mission critical holes.

Enter my “Super-Secret Speaker Install” technique. What pray tell is that, you may ask? Well, basically, I just happened to notice there was a large void behind the stock navigation touch screen interface, and was just curious to see if the speaker fit. Turns out, it did! (Thank God! – Hi Hi)



The Final Product

Once everything was put back together, I was ready to power up the radio and enjoy the fruits of my labor. The best part is that the entire install is fully reversible, minus the Powerpole access port, which I would probably just leave if I ever sold the vehicle.



I definitely enjoyed the project and learned a lot researching the individual components. It took some time, but was worth it. I strongly encourage you to give it a shot! Remember, always to have fun and don't forget to think outside the box. You may stumble upon something that works better than expected and makes your install uniquely you.

God Bless & 73's,

Chris Vanek — AC3Q

Take a break.

The broadcast business sure isn't what it once was. Great radio shows and radio personalities have been replaced by mindless, syndicated babble. For the most part it really isn't worth listening to. But all is not lost!

Lately, I find myself tuning to the AM band. Down lower in the AM band, at night. WLW on 700. WSM at 650 and many other small AM broadcast stations. I find that AM is so nice to listen to, complete with dips in the signal level and odd noises. And AM just has that sound.

Every year before the Dayton Hamvention I clear all of the crap out of the back of my truck. This year it all landed on my back porch, much to the shagrin of my wife. As of this writing I still haven't put it all back in my truck.

The other day I was going through it "trying" to organize things. Yeah right. I was sorting through all of my potential antennas (Spools of wire that I've picked up over the years, cheap) I came across an old CHANNEL MASTER pocket AM transistor radio that I bought for a couple of bucks at a hamfest many years ago.



de Cooky – WC3O

I use it for tracking down RF noises. It's the radio that I used to track down the pole in the front of the joint with the arcing insulator not long ago. I decided to turn it on and give it a listen.

After exercising the noisy volume control I turned the tuning knob. I came across a small local station playing polka music! Sure I'm Italian, but I really enjoy listening to polka music.

So there I was on my back porch sorting out a bunch of crap, listening to polka music on a CHANNEL MASTER transistor pocket AM radio with a BIG smile on my face. It was a local announcer and he was delightful to listen to. Steve, K3FAZ can tell you who I was listening to. I forget. But it was the most fun that you can have!

It's funny. In an effort to make more money the broadcast industry has completely forgotten what made radio great. With all of the complete and total trash on the broadcast bands, here was a small, low budget gem. I'm really grateful it was on, and that I found it! Go ahead and give it a try. Let me know of your results.

Now back to sorting out my crap...

Cooky - WC3O

Recommended reading from your old Uncle Bob

WLT A Radio Romance by Garrison Keillor

Anybody else notice that some hammy things seem to have been inflated much more than others?

It seems to me that antennas made from aluminum, antenna rotators, and linear amplifiers are leading the pack in getting to very high priced.

We may soon all be using 100 watts and a wire

Jody - K3JZD

Uniden Bearcat BC906W Review

de Dan – NM3A

I often want to use my 2 meter / 70 centimeter FM radio away from my shack. I can use it in my car, but what I really want is to wander around the house and monitor and talk using this radio. For me, an HT will not be sufficient for most repeaters in my house.

A number of radios (including mine) can do cross-band repeat and can be paired with an HT to do this; in our club, K3CLT and K3FKI use this regularly. This requires 2 radios and extra transmit time on the cross-band repeater. And, in my case, a rather cumbersome way to switch between regular use and cross-band repeat.

So, I have been looking for a generic remote mic for quite a while with no luck. Well, there are some out there, but most are expensive and are BlueTooth units requiring a BT enabled radio or unique to a particular brand (e.g. Anytone BT-01): Enter Uniden.

The Uniden BC906W is a wireless speaker mic designed to work with late model Bearcat CBs. It uses a proprietary system on the 1.9 GHz band to pass information between the cradle and the handheld wireless speaker/mic. The cable for the cradle is terminated in a 6 pin round microphone connector that mates with late model Bearcat CBs, such as the Bearcat 980. This provides power to the cradle as well as mic, speaker and PTT connections. It can be found online for about \$80-\$120.

On further investigation, I found that these connections are generic - i.e. usual voltages, currents, etc - and not unique to the Bearcat 980. So, I figured that I could just rewire the mic plug and use it on most any 2m or 70cm radio. Hence, I bought the BC906W and planned to mate it to my older Kenwood TM-701A dual band radio that I use in the shack. It could be rewired for nearly any radio.



Modifying the plug was not difficult and I simply removed the six pin plug and put an 8 pin round plug in place. As there is an Audio Out line on the 701A's mic jack, I used that for the Audio In line to the BC906W. Eureka! It worked! Now I could roam about the house and still use the shack radio anywhere.

For some radios, the mic Audio Out line is squelched, but on the 701A it is unsquelched, so I was hearing hiss on the 906's speaker at all times. This was a major annoyance, so I rewired the plug with an external 1/8" plug for the Audio In line. I then wired the speaker of the 701A to a 1/8" jack and the squelch issue was resolved.

The BC906W's cradle works to hold the remote speaker/mic which has a common round button mount. While this works well from a physical point of view, it does not charge the battery of the speaker/mic. This must be done with a separate 5 volt line to a USB-mini plug. It comes with a 12 V auto power outlet charger to USB-mini. I use a separate USB-mini power supply for shack use. It can be powered from any USB-mini power source anywhere.

Generally, it works. I can use it anywhere in the house. However, battery life is not anywhere near the 8 hours that is specified in the manual. In addition, it adds distortion to the transmitted signal if used while the charger is plugged into the speaker/mic.

Pros:

- Good Range
- Good Sound
- Can be charged anywhere via USB-mini power

Cons:

- Poor battery life- nowhere near the 8 hours advertised
- Charging is very slow - takes overnight to fully charge
- Randomly loses sync and must go back to cradle to pair up mic with cradle
- Separate charger needed for speaker/mic
- - nice to have but should also charge when placed in cradle
- Can't change channels or bands remotely
- - not a big deal for me, but may be an issue for some.
- Can't transmit while charging

Conclusion:

Great idea, poor execution. Not really recommended.

Dan - NM3A

Begali Pearl



This is the Begali Pearl Key that we will be Raffle Off at the Swap & Shop.

Buy plenty of Begali Raffle Tickets. . .
. . . . even if you do not use CW.
Because if you win it, you will want to!!

TRAPS

Devices installed in antennas to collect rain-water, to keep it from running further down the antenna.

A New Ham Shack

de Charles - KC3TTK

How does the joke go in Ham radio?

What goes up but never comes down? – an Antenna.

And now I join the distinct ranks of radio amateurs who have put up antennas.

In May I was fortunate enough to pass my general exam up at K3MJW. I told myself that when I had passed my general exam I would get myself some radio gear to get myself on the air.

When I passed my technician exam, someone had given me a Baofeng radio. Which worked to get me on the air for a few local nets and to start learning the hobby. None the less I knew this was not a permanent solution. I was really after a “shack in the box” because I wanted a rig that would give me access to all the bands.

I was debating on the Yaesu FFT-991A and I was almost convinced because it fit my price point and had some good reviews. A few of the people at the club mentioned that the ICOM IC-7300 would be perhaps a better fit.

In late May I found myself in Akron for work. As all of you know I am sure, that is the home of DX Engineering. I know DX engineering is in Tallmadge, but I am not here to split hairs. I pulled into the parking lot – and for the first time in a long while I felt like a kid on Christmas morning.

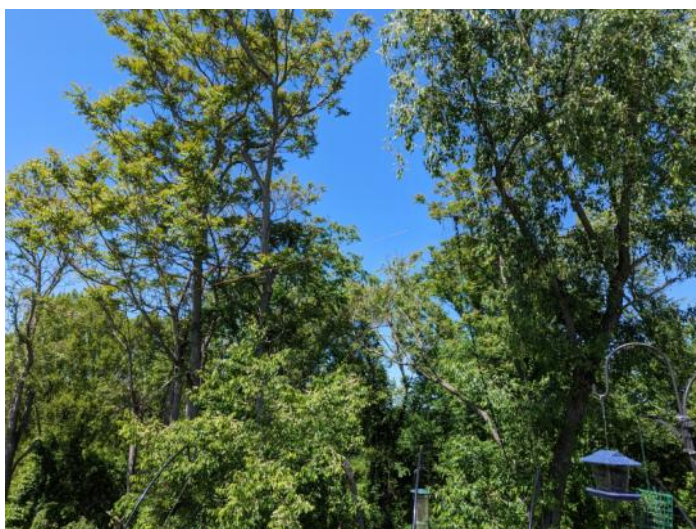
I told the associate what I was after. I told him I was debating the Yaesu and the ICOM. He told me for less than the price of the Yaesu I could have the IC 7300 and the IC 2730. The advantage of this is that I could listen to HF on the 7300 and UHF/VHF on the 2730. Not to mention the 2730 was a mobile unit that could easily be mounted in my vehicle. After the mention of the \$100 rebate from ICOM, I was sold on the IC-7300.

I left DX engineering that day with 2 radios, 2 antenna and a few pieces of Coax. Loaded it into my car and drove home.

Now the fun part began. What to do with all of this. First was the HF antenna. I decided for both cost and simplicity reasons, as well as not being sure what modes

and bands I wanted to spend my time on I picked up an MFJ G5RV multi band wire antenna. This was just a fancy way to say I bought a piece of bare copper wire about 100 feet long with a ladder line feed.

My back yard had the perfect tree. I had to do some trimming. But I hung the feedpoint from a tree.



The end of each wire radiator was supported by pieces of pipe. Since the feedpoint was connected to a tree, I had to account for movement of the tree. So I attached insulators to the pipes with springs off of a screen door. This ended up being a very helpful idea. When the wind kicks up the tree moves quite a bit. The springs absorb that movement and allow the wire antenna to continue to exist without breaking.



The feed line dropped straight down and went into a buried conduit that ran back to the shack. I left some of the conduit protruding to protect it from rodents and the weed whacker.



For the UHF/VHF antenna I picked up a Comet GP-3 Dual Band antenna.

This antenna was much easier to mount. I put it on the highest point on my property which ended up being at the top of a flagpole. This is only temporary as, above the American flag is not a place for anything to be.

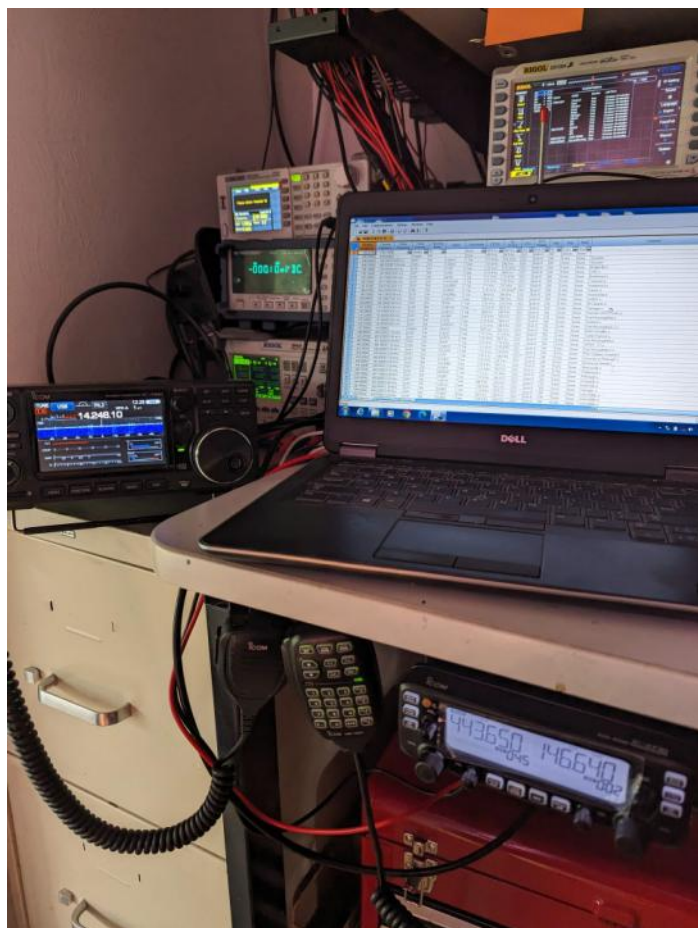


The next challenge was to get the wires into the house. This is where things got tricky. What I ended up doing was putting two 1.5 inch conduit bodies back-to-back and installing that in the soffit of my house. This allows the wires to make a smooth transition from outside to inside.

On the outdoor portion the cables terminate into a box. Inside the box is where the ground wires from my transceiver and power supply meet which then are routed to a dedicated ground rod for the shack. This also allows for further expansion of my shack when I add a few more antennas.



And finally, the most satisfying portion of this. Where to put the transceivers. I do not have an ideal place yet. But for the time being the receivers will live on my workbench. It is as fitting of a place as any.



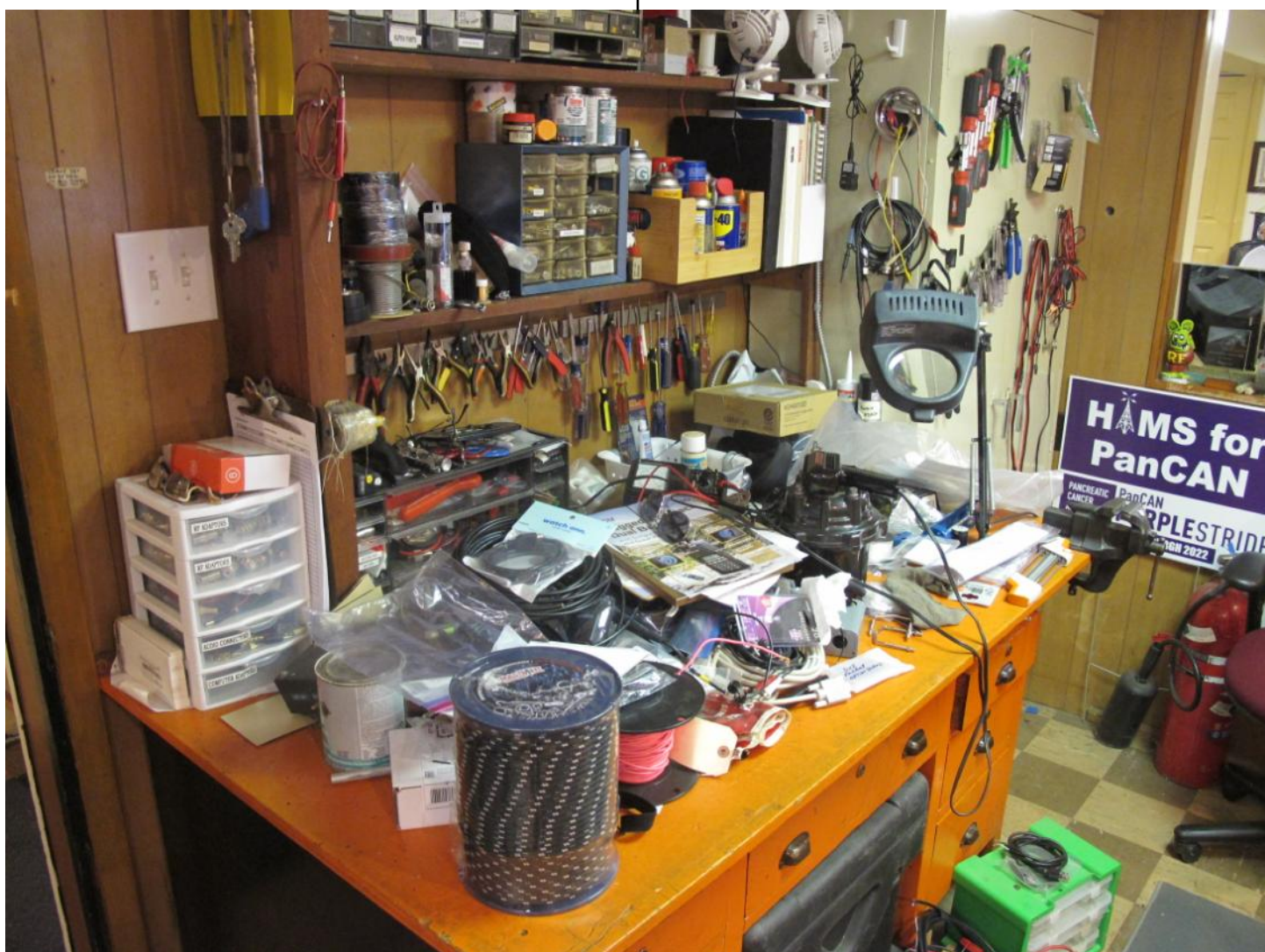
So, thank you to everyone at Skyview who has given me advice and encouragement. Everyone who has taught me something and has let me listen while they are on the air.

It has been a fun journey so far. I look forward to continuing it. Hope to hear you on the air.

73 Charles - KC3TTK

The little work bench that couldn't

de Cooky – WC3O



In the radio room at Skyview we have a workbench, sort of. You could say that the workbench is a complete and total mess. You can say that because, it is. A mess. A real mess. Some brave souls have tried to clean the bench and make it workable. They failed.

Me, I look at the workbench in a different way. I am not an organized person. If anyone ever watched me work by myself at the clubhouse they would ask "What the hell is he doing?" I'll be working on one thing, then another project will pop into my head and I'll go do something on that project because I know that I'll forget about it again unless I tackle it while I'm thinking about it. Then I might go back to the original project, unless

something else pops into my head before I get back to it. There's lots of things that need done, and I typically enjoy doing them.

I look at the Skyview workbench as a number of projects in progress. When you might look at the bench you see a bunch of junk. I see projects in various stages of completion. Let's take a look at the picture of the current state of the workbench. It very much changes over time.

- I see a rotor. It's a Yaesu 2800SDX heavy duty rotor. We purchased the rotor as New Old Stock. This rotor was on our 40 meter beam for a short period of time. I think one of the limit switches didn't work

and the rotor would not move in any direction. I switched it out with a much smaller Yaesu 800SDX rotor which is currently working, but it is near its wind load spec limit turning the 40 meter beam. I like overhead. I popped this top on the rotor, but I don't know enough about it to repair it properly. You might think I'd send it back to Yaesu? Yes and no. I have VERY little faith in Yaesu repair. I have personally had horror stories and I personally know others locally that have horror stories with Yaesu repair. It's a crap shoot. Add to that, I don't think Yaesu actually builds these rotors. I think Kenpro actually manufactures them. I am patiently waiting for the right solution to come along.

- I see a spool of rope. One side of our 80 meter dipole broke off of the balun 90 feet up on the 120 foot tower. The old rope that we shot into the tree many years ago has grown into the tree and is no longer able to be adjusted. We need to shoot a new rope. I want to use the best rope that I can get my hands on. I picked this rope up at Dayton. I hope to have the dipole repaired soon.
- I see an old thermostatic switch. Both of our repeaters, our APRS, weather station and more are in the shed. The shed is NOT temperature controlled, at all. When it's 90 out, it might be 130 inside the shed. When it's -10, it's near -10 inside the shed. All of our equipment handles it well, but I am thinking of adding a fan for in the summer that will turn on after around 100 inside the shed? That thermostatic switch has a contactor that would work nicely for that. I just need to do it.
- I see pink wire. I bought that for our receive loop antennas. Hi viz. I still want to add more receive antennas. That will be the wire I use.
- I see some computer video cables. Recently I made some changes to the Yellow station. (Read "The middle child" in the last newsletter) These are cables that I might change our other stations, from using dual DVI video cards to using DisplayPort to DVI cables. My concern is the possibility making RFI with the converter cables. Since I am using those on the middle child I'm looking at how it does with RFI issues. We'll see.

- I see chain saw sharpening tools. Tall Guy and myself have been cutting up downed trees for firewood. It is a continuing project. It pays to keep the chain as sharp as one can. There's a lot more trees that need attention.
- I see small coax. That is 75 ohm RG-6 that I have been using on receive antennas.
- I see lots more. It is not there for no reason, believe it or not. If I store it in a safe place until

I'm ready to use it, I'll never remember where the hell I put it! Too safe!

I apologize for the mess. I think someday when the workbench is nice and clean, all progress of the station will stop. But at least it will be clean.

Cooky - WC3O

Ed: We once published Ham Shack pictures, with the caveat that you could not clean up before you took your picture. Maybe we should publish workbench pictures, with the same caveat. Send them to me and I will publish them.



Skyview Forward Power Meter ?

QMX Construction & Initial Review

de Dan – NM3A

At this years FDIM, Hans Summers, of QRP Labs fame, gave a talk summarizing the kits he has developed over time. The last half of his talk was about a brand new radio that was just being introduced for the first time: the QMX.

This radio is a merger of the QCX and QDX radios. It is a 5 band radio (80m through 20m) that has both CW and single tone Digital capabilities. In addition, Hans hopes to have SSB capability eventually. The SSB would allow for multi-tone digital signals and phase shift keying as well as voice transmissions.

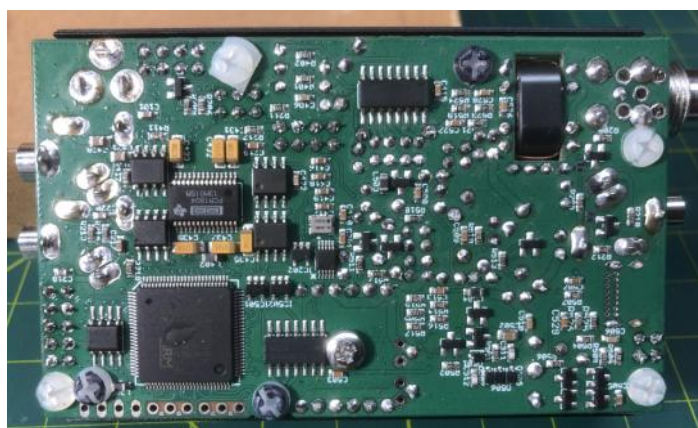


AM and FM were not mentioned, but are also possible with the method (EER - see below) being proposed. FSK keying of some digital modes may be implemented as well.

Like the precursor radios, the QMX is a nominal 5 watt, software defined radio (SDR), with ever more functions done in software rather than hardware. All three radios are capable of CAT control for integration with computer logging programs.

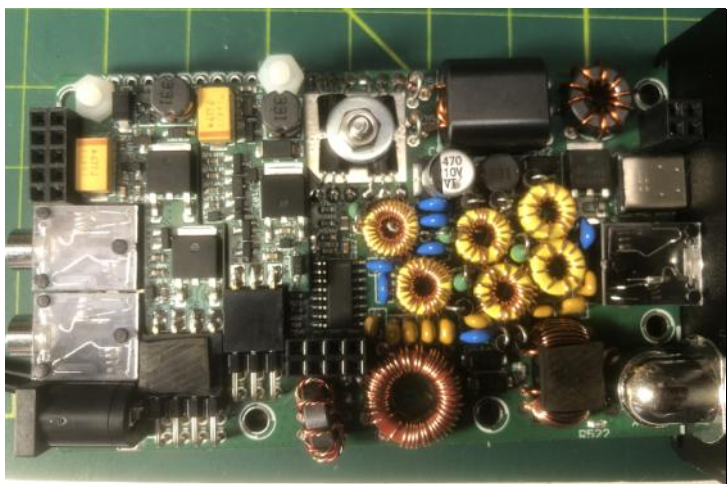
The QDX and QMX also can integrate with digital programs such as WSJT-X and FLDigi and have integral USB sound cards so separate audio cables are not required to interface with a computer for digital modes.

Like the QDX, the QMX uses a class D final amplifier. In addition, integral forward and reverse RF power sensors allow for eventual modification of power out by software to provide some protection for the finals in case of poor matching of the radio to an antenna.



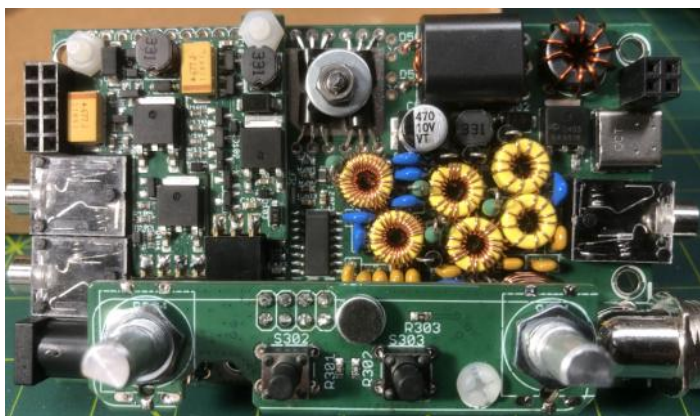
Like the QDX and the QCX-mini, much of the QMX radio is surface mount and those parts are already populated on the PCB from the factory.

Toroids, capacitors, encoders, display, and jacks are left for the builder to populate on the board. There are a moderate number of parts, but the big difference is the density of the parts placement. When completed, there is very little empty space inside the optional extruded aluminum enclosure. Hans is a genius to have shoe-horned in all of the different components.



The QMX has one main PCB and there are 4 daughter boards. As in the QCX-mini, there is a display board and a control board. There are also two small power supply boards for 3.3 and 5 volts. An additional current power supply for the PIN diodes is included on the main PCB.

These power supplies are discreet component, switching type. These types of supplies are known for being efficient, but RF noisy and these are no exception. However, their PWM frequency is controlled by the CPU and not from a free running, drifting oscillator. This allows for the known multiples of the base frequency to be moved away from the receiver frequency dynamically by the CPU. An ingenious design that eliminates the need for brute force filtering of the power supplies. It is well implemented for FT8, but needs to be further refined in firmware for the CW bands.



Although each part placement is straight forward, the density and tight tolerances make for a moderately challenging build. While price and potential functionality make it attractive for the new ham, it is probably not a project for the first time kit builder unless they have close interaction with an experienced builder. In addition, the firmware is not yet mature, so it likely will not meet expectations at first.

This initial QMX kit is best described as an Alpha project, with a couple of hardware and firmware quirks and quite a few firmware functions not implemented at this time.

Hans is known for his thorough kit documentation, both for build and function. On introduction, neither of those were available. The Assembly Manual came out a couple of weeks after his presentation, but the Operations Manual is still a work in progress, as is a lot of the functionality of the firmware.

Expect more basic functions to be implemented in firmware before an Operations Manual is released. In the meantime, a lot of operations are very similar to the QCX and QDX, which do have Operations Manuals available.

Originally, there were 4 receive Band Pass Filters sharing the five bands. After assembly, most of the builders noticed that the 20m receive sensitivity was down by about 4-5 S-units, while the other bands had excellent sensitivity. This was a big surprise as the BPFs were essentially a copy of those in the QDX, which had no issues with sensitivity.

The changes to the QMX PCB and a couple of components made for an unintentional notch filter right at the 20m band! During the last month, a large number of builders and Hans experimented with different fixes to this problem. A number of fixes were proposed, but most required significant modifications to the BPF with additional parts not included in the kit or eliminating the BPF altogether.

Hans eventually found two fixes that only required modifying the L401 BPF inductor and were easy to implement by most builders. These fixes reduced the BPFs to 3 from 4 and had 80m, 60m, and 40m all sharing the same BPF. Sensitivity is now excellent on all bands.



A separate issue was found in the 20m Low Pass Filter, which affects mainly power out on 20m. Two capacitors were switched from their intended positions in the original Assembly Manual. Swapping these capacitors improved power out on 20m to make it similar to the other 4 bands.

Unfortunately, these issues significantly delayed Hans from finishing the firmware functionality. He is now working on that and we should see major improvements in the not too distant future.

In the initial firmware release, the QMX was only fully functional on the digital side. The CW side had major click issues in both the side tone and the RF output. A second firmware release corrected those issues. A third release incorporated the BPF changes necessitated by the L401 inductor changes.

As of 14 July 2023, the basic QMX CW operations were fully functional, including the iambic keyer. Still on the way are message memories, CW decoding, battery monitoring, SWR reporting and finals

protection, S-meter display, and probably a host of other functions, such as beacons, WSPR, GPS interface, and voice functions.

DL2MAN and PE1NNZ, collaborating with Hans, had previously developed a 'uSDX' modification which allows a single band QRP Labs QCX to do CW/SSB/AM/FM by using a simple add-on daughterboard.

Since then, DL2MAN and PE1NNZ have introduced their own multiband transceiver with class E finals: the (tr)uSDX. This multiband transceiver does CW/SSB/AM/FM. It works surprisingly well, considering the limited power of the ATMEGA328, 8 bit processor that is used in those (tr)uSDX radios.



Down the road, expect similar a SSB functionality to be implemented in the QRP Labs QMX utilizing this EER (Envelope Elimination and Restoration) process.

And there is room for many other functions. The far more powerful 32 bit STM32F446 processor in the QMX is runs at 8 times the clock speed of the QCX. With it's sub processors, it will provide a much better platform for providing many additional functions.

Summary

I am constantly impressed by the quality and functionality of the products coming out of QRP Labs for the price. They have many high end features with a lightweight, small footprint, low power requirement, and easily portable package.

Each new radio addresses the limitations of previous radios and improves on them in various ways. They are great radios for the portable QRP operations enthusiast, such as SOTA and POTA.

The QCX remains a fantastic CW radio. But it is only single band and it has no protection for its finals. Those are its two significant limitations, but it is still an excellent portable ops radio.

I am very fastidious about making sure I have a good match to my antenna system and I have not lost finals in any of my QRP Labs radios. However, all it takes is one mistake and that may change.

Other QCX users have paid just as much attention, but have still had some failures. Others have had some similar issues with the QDX finals. However, QCX and QDX repairs are not that difficult.

The QDX Digital transceiver introduced a multiband operation with an onboard sound card. For a remarkable price.

We are only 2 months into this new radio. There have been a few QMX firmware glitches found and corrected so far. And Hans will need to optimize interrupts and timing of the various functions in the QMX. But I have no doubt that will come in time.

Firmware updates on other QRP Labs projects have matured over a 1 to 2 year period and I expect the same to happen with the QMX radio.

In addition, a 20m through 10m version of the QMX will inevitably be offered eventually and possibly versions for 4m, 6m, 160m, 630m, or 2200m.

Already this new QMX radio is exciting with the CW and FT8/FT4 functions that are available on 5 bands. This functionality will continue to expand with future firmware updates.

And the update process couldn't be easier. It is simply placing the QMX in firmware update mode and then copying the new firmware file to the radio (similar to the QDX). It's no more difficult than copying a file to a thumb drive. It is nowhere near as complex as doing the QCX firmware updates.

For those not interested in kit building, the QMX, along with some other QRP Labs offerings, is available as a fully completed and tested build for an additional fee but with a significantly delayed delivery.

Once the firmware has matured, this will be a good option for the ham who is not interested in building and just wants a QRP radio that works at a great price.

Dan - NM3A

<https://qrp-labs.com/qmx.html>

Mt Davis SOTA Outing

de Dan – NM3A

After sorting out my QMX hardware issues, I decided to take it for a SOTA test run. So on Tuesday, 11 July, I and my XYL, Janice, drove to Mt Davis, which is SOTA Summit W3/PT-001. It was a gorgeous day, however it took an extra 20 minutes to get to summit as the eastern access road was closed due to repaving.

We got up there about 1:30 and I set up with the QMX, 84 foot EFNRW, 4SQRP tuner, K6ARK 9:1 unun, Bioenno 12 volt LiFePO4 battery, and my American Morse Dirt Cheap Paddle.



I used the large rock next to the US Geographical Survey marker as a standing desk for a nice comfortable outing in the shade.

That began my interesting outing. I had cell service, so I spotted myself on the SOTA Watch 3 app and started calling CQ on 20m. I didn't have to wait too long for my first QSO.



I expected a mini pile-up to follow soon. That never happened. It was quite a slog and after two QSOs and another 15 minutes calling CQ, I moved to 40m without luck for another 15 minutes, then to 30 meters. I had one contact on 30m, then another long drought. So I moved back to 20m.

After struggling with the keying glitches in my QMX (since resolved), I decided to switch to using my TR-35. Another long period of no responses to my CQs, albeit much easier using the memory keyer function of the TR-35. Finally, about the 1 hour mark, I made my 4th QSO. Since I now had my minimum for SOTA and it was hot, I decided to call it quits and not try to complete a POTA activation (with 10 QSOs needed) for Forbes State Forest.

I was rather surprised that it was so difficult to get contacts and that I heard so few stations at all. Although blaming the radio might be the first thing to cross my mind, I really did not think so, as I had done a thorough check of the QMX for good power out and sensitivity just that morning after complet-

ing some hardware modifications - It passed with flying colors.

Besides, I didn't have any better luck with the TR-35. My only previous trip to Mt Davis had resulted in my only failed SOTA activation, despite lots of signals being heard. But previous that time I did not schedule my activation, and I was not able to self spot. I mused that maybe Mt Davis had some sort of Faraday cage and prevented signals from getting out.

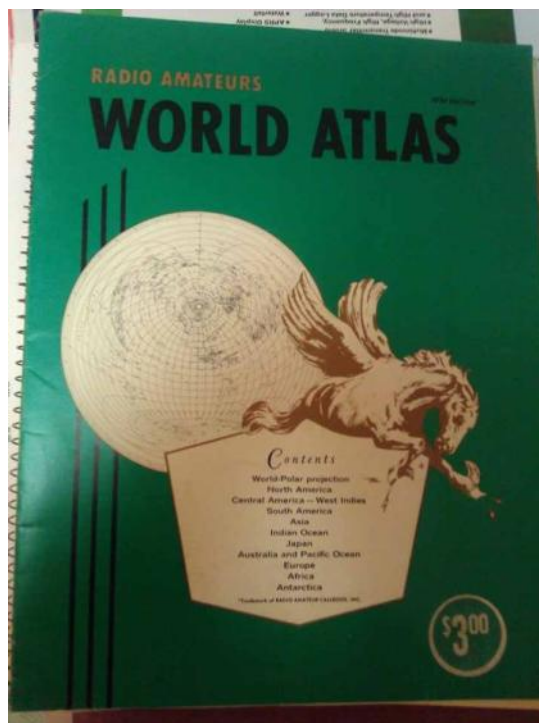
While musing about the difficult outing with Janice on the way home, she mentioned that she had heard of some space weather activity that might affect radio communications and sent aurora displays much further south than usual. Sure enough, there were numerous solar flares reported, with an M class storm that day. And the strongest activity exactly covered the time that I was up on Mt Davis.

The next day, Jody, K3JZD, emailed to see how I did and he mentioned that he was on W3/PT-008, just a few miles from me. He had a difficult time as well and failed to get the minimum for activation. Moreover, he was unable to self spot and had *NO* RBN spots the entire time on his summit!

Jody also reported noticing that other SOTA ops had difficulty that day. So I checked and sure enough, I only had one RBN spot for the entire hour I had been up there. I compared this to my prior POTA outing a couple of weeks ago and noted that I had over 25 spots in the same time period with the same exact setup, but about 2000 feet lower!

This solar cycle near maximum is giving mixed blessings, with many times the higher bands being wide open, while occasionally blacking out HF communications. Makes our hobby challenging and interesting. I look forward to great propagation next time I'm out... I hope.

Dan - NM3A



Finding Countries Before the Internet



Training

What Antenna ???

de Cooky – WC3O

Those of you that missed Jay Brassell, AK3O missed a really good guy. Jay passed away suddenly some years ago. As well as being an all around good egg, he also had a couple of classic Corvettes, he was a big gun guy, and would help out anyone any way that he could.

Every year he was there at the Breezeshooters hamfest early for setup through late helping make the Breezeshooters hamfest great. One year he paid the fee for everyone that tested at the fest.

That's the kind of guy Jay was. It was such a big loss to the area ham community when Jay passed away. He is missed.

One of the items that Skyview received from Jay's estate was a Bearcat scanner. All that we needed was an antenna to make the scanner work. I bought a little telescoping antenna for the back of the scanner. It was marginal at best. We needed something better.

At the clubhouse, we are on the top of a hill. VHF/UHF communications are received easily enough. To receive locally we really don't need much of an antenna. I personally like an antenna called a "Discone".

- Pros: They are small. Very little wind load. VERY wide frequency response. You can receive on them. You can transmit on them.
- Con: They do not have gain

So, if you just want to receive (or talk to) local area repeaters, a discone works just fine. Sure they do not exhibit any gain, but for this purpose here, who cares!

I was planning on purchasing a discone at DX Engineering on our last trip out to the candy store. I happened to be telling Bill, N3WMC of my big plan when Bill said that he had a nice Diamond discone still in the bag that he had purchased and never installed. Bill told me that the club could have it! Perfect!

Now where to install it... We already have one discone at the clubhouse. We have our second VHF/UHF radio that sports Dstar on it. On that discone it can hit all of the area repeaters well.



It is mounted on a tripod located on the roof of the clubhouse. It would be nice to install another tripod on the roof, but I caught quite a bit of hell for drilling holes in the roof for the first tripod, so I figured I'd better think of something else. (We have never had any leakage issues from the tripod, but it is never a good idea to drill holes in your roof)

One day I was sitting on the pot and thinking. Hmmm. Where to put the antenna. Hmmmm (That's where I do all of my pure thinking) Then, Suddenly and without warning, like a cinder block in the forehead it hit me! Put it up in the attic! BINGO BUCKO!

So I grabbed a-couple-a 2 by 4s from behind the shed. I grabbed a-couple-a decking screws and budda-beep budda-boop I made a mount for the antenna! That little discone fit perfectly right in the peak of the attic.



Keep in mind that you can't stand up in the attic up the joint. Wherever you go it's on your hands and knees. There is fiberglass insulation everywhere and fibers float through the air so breathing protection is HIGHLY recommended.

After mounting the antenna I grabbed a stretch of RG-8X coax and soldered on a PL-259 on one end. I connected the coax to the antenna and attempted to find where an electrical conduit came down into the radio room.

Luckily Tall Guy wandered up to the joint. John stuck a piece of RG-8 up through where the hole where the conduit goes up. I found it! So I shoved the RG-8X down, feeding it long as Tall Guy pulled from the radio room.

I came back down from the attic covered in fiberglass. I soldered the remaining PL-259 on and connected it to the scanner via an SO-239 to BNC adaptor. I fired up the scanner and shazam! All of the signals were full quieting!

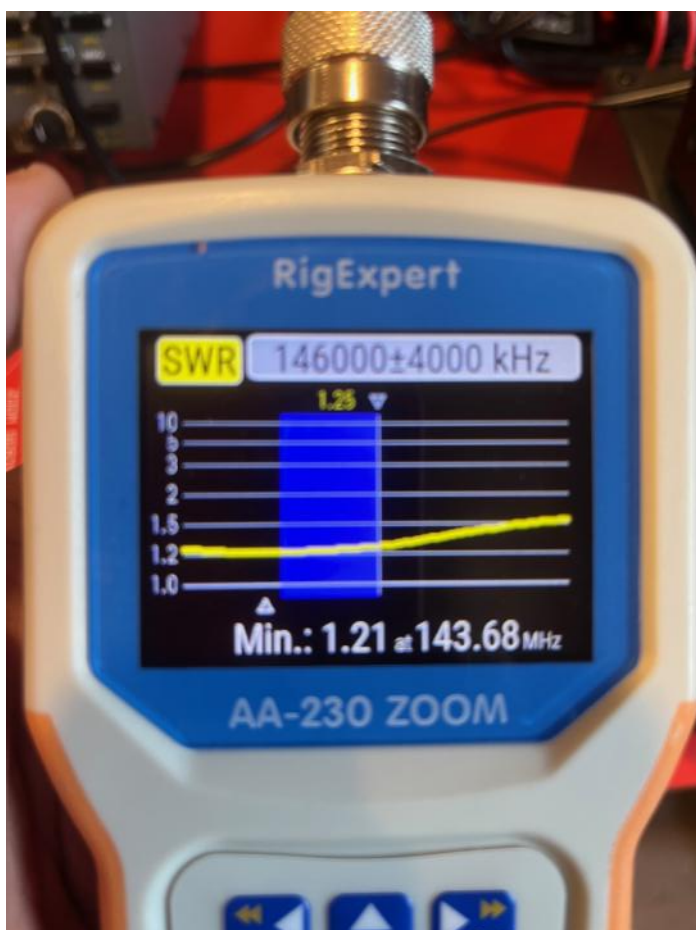
When we first obtained the scanner from Jay's estate I gave it to Paul, W3PRL to program up, as Paul is well familiar with area services. Listening to the scanner it sounds like he did a great job.

While I was at it, I took a sweep of the SWR from 2 meters and up through 230 Mhz (as far as our antenna analyzer goes).

It looked great above 126 MHz!

I really like those little discones.





And It looks great on just 2 meters.

So there you have it. Skyview has a new scanner!

Many thanks to Bill, N3WMC - Paul, W3PRL - Tall Guy, K3STL and Jay, AK3O wherever you are OM.

Cooky - WC30
Skyview Radio Officer



"Hang on a minute Larry...my SWR is jumping...I'm going outside and see what the problem is..."

AM Radio in Cars

de Chuck – K3CLT

Ed : I think some action has been taken on this since it was written, and some of the vehicle manufacturers have acquiesced. But, I think it is still interesting to see some of the arguments that were made going in.

AM radio's presence in cars will be the subject of an "educational" hearing on Capitol Hill in early June.

The Energy and Commerce Committee and its Communications and Technology Subcommittee will hold the hearing.

Statements about AM radio were issued by chair Rep. Cathy McMorris Rodgers, Republican of Washington state; the ranking Democrat, Rep. Frank Pallone of New Jersey; and the top Republican and Democrat on the subcommittee, Reps. Bob Latta of Ohio and Doris Matsui of California respectively. All four were supportive of AM radio, without commenting on specific legislation; those statements are reprinted below.

Bills have been introduced in both houses of Congress to make AM radio mandatory.

Latta noted that he and Rep. Greg Pence of Indiana recently asked carmakers for a status report on their deployment of AM and that he's hoping to have their responses by the end of the week.

Here are their statements:

Energy and Commerce Committee Chair Cathy McMorris Rodgers (R-WA): — "Communities across the country rely on AM radio services for local news, weather reports, and other critical information. It is also a key tool for our nation's emergency communications infrastructure, especially when other communication services are not available. I look forward to this timely discussion on the many benefits of AM radio as a source of information and the importance of ensuring it continues to be available in new vehicle models."

Energy and Commerce Committee Ranking Member Frank Pallone, Jr. (D-NJ) — "It's alarming that some auto manufacturers are considering opting out of installing AM radios in new cars. AM radio plays an essential role in our communities, especially during public emergencies when other alert systems that rely on the electric

grid and cellphone networks may not work. I'm looking forward to the Energy and Commerce Committee holding a hearing on this important matter next month. Corporate penny pinching is not a justification to undermine one of our nation's most reliable public emergency communication networks, and requiring consumers to pay more money for a subscription service to receive AM radio is not an acceptable alternative." — Energy and Commerce Committee Ranking Member Frank Pallone, Jr. (D-NJ)

Communications and Technology Subcommittee Chair Bob Latta (R-OH) — "AM radio capabilities are essential for Americans across the country, but especially for those who live in rural communities, like many in Ohio's Fifth Congressional District, where other forms of connectivity may not be reliable. Whether listeners tune in to listen to updates during times of emergencies, the home team's game, agricultural information, or for other reasons, it is concerning vehicle companies are taking steps to remove these stations from their electric cars. Earlier this month, I lead a letter with my colleague from Indiana, Rep. Greg Pence, to ask auto manufacturers for a status update on the use of AM radio and their plans to remove AM radio receivers from their vehicles. I look forward to receiving their responses by the end of the week. In the meantime, it is my hope that announcing this educational hearing will show the important role AM radio stations have played for decades."

Communications and Technology Subcommittee Ranking Member Doris Matsui (D-CA) — "AM radio provides Americans a crucial public service. In the face of a life-threatening disaster, Americans need to be able to rely on emergency communications to get them the information they need. AM radio has proven again and again to be that reliable tool. Whether during wildfire season or severe winter storms, in California we understand just how vital AM radio is to ensure Americans get emergency information when it matters most. I look forward to holding a hearing on this important topic."

[The Fascinating History of the Car Radio](#)

Looking For a New Home de Jody - K3JZD



Swan 350 SSB-CW-AM Transceiver

**350+ Watts PEP Input Power on SSB
(About 200 watts of Output Power)**

Built in Manual Transmatch (aka Tuner)

With 120VAC Power Supply/Speaker and Hand Microphone

The Good :

Great Audio - has worked a lot of DX

The Bad :

A little hum in Receiver - All original caps

The Ugly :

Not a great CW receiver - Is a little wide

The Great :

— Free —

Swan 500CX SSB-CW-AM Transceiver

**500+ Watts PEP Input Power on SSB
(About 300 watts of Output Power)**

Built in Manual Transmatch (aka Tuner)

With 120VAC Power Supply/Speaker

The Good :

Great Audio - has worked a lot of DX

The Bad :

**Not as clean as the 350 pictured above
and It Needs Work (Not Lighting Up)**

The Great :

— Free —

Odd and Ends de Jody - K3JZD

Recently, I pulled an old Radio Shack Micronta Analog VOM out of a little used drawer in my toolbox. I can't tell you how long it has sat there unused, but I can guarantee you that it has been sitting untouched for a very long time because I have been using newer digital VOMs. I would guess at least 25 years of sitting, maybe more.

I figured it was probably trash since it was sitting in there with batteries that have probably been leaking for years. But figured I'd open it up and check it anyway.

Amazingly, it contained two Duracell AA Alkaline batteries that were not leaking. One still had some life, the other was nearly dead. How old were these batteries? I don't know because they were made back before they started to put expiration dates on batteries.

These old Duracell International Alkaline batteries that did not leak said "Made in the USA" on them.

Today's Duracell (division of P&G) Alkaline batteries say "Assembled in the USA" on them (In English and Spanish). And have expiration dates, with Chinese characters or words above the expiration date. That probably says "good luck" in Chinese because today's Alkaline batteries will leak before that expiration date more often than not.

I put my Radio Shack Analog VOM back into my tool box. But without putting any 'new' batteries in it. Sigh . . .

Jody - K3JZD



Welcome New Members !!

Welcome the following Skyview Radio Society Members who have joined us since publishing the June 2023 newsletter:

KC3VNB - Brian Sauk - Murrysville

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 JUL 23

NM3A	WB3HFP	AJ3O	KB3SOU
N3AFS	WA3HGW	WC3O	K3STL
KB3APD	KB3HPC	WO3O	KC3STV
NA0B	K3HSE	KC3OCA	KB3SVJ
WI8B	KB3HXP	KC3OCB	KC3TEX
N3BAH	AG3I	KC3OCC	WV8TG
W3BUW	AC3IE	N3OEX	N3TIN
KF3C	KC3IIO	K3OGN	N3TIR
KC3CBQ	AB3IK	N3OIF	W3TLN
W3CDW	WB3IMB	KB3OMB	N3TTE
K2CI	W3IU	KB3ORO	AG3U
K3CLT	K3JAS	NK3P	NS3U
K3DCG	KG4JBB	K3PC	N3UIW
N3DRB	N3JLR	K4PDF	KC3UNP
KB3DVD	KA3JOU	KC3PIM	W3UY
K3DWS	ND9JR	K2PMD	KX3V
KC2EGL	K3JZD	KE3PO	KC3VCX
KC3EJC	WA3KFS	W3PRL	KC3VNB
K3ELP	AC0KK	KC3PSQ	K3VRU
AB3ER	W4KV	KC3PXQ	N3VXT
WA3ERT	KC3KXZ	AC3Q	W3VYK
N3ERW	WE3L	NU3Q	N3WAV
K3ES	WA3LCY	WQ3Q	K3WM
KB3EYY	KC3LHW	KC3QAA	N3WMC
AC3EZ	WB3LJQ	KC3QWF	KA3WVU
WB3FAE	KB3LND	NJ3R	K3WWP
K3FAZ	K3LR	K3RAW	N3XF
KC3FEI	KC3LRT	KC3RIL	W3YNI
K3FH	AB3LS	K3RMB	K3ZAU
K3FKI	KC3LZH	KC3RMN	W3ZVX
KC3FWD	N2MA	KC3RPE	
AC3GB	KC3MBM	W3RRK	
N2GBR	N3MHZ	I2RTF	
AC3GE	K3MJ	KI2RTF	
KC3GPM	W3MLJ	KD3RVR	
K3GT	K3MRN	KQ3S	
AB3GY	N3MRU	K3SBE	
KC3GZW	KS3N	KC3SDJ	
NC3H	G4NFS	KC3SKX	
NY9H	KB3NSH	KC3SNZ	

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

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

All you ever wanted to know about dB:

<https://tinyurl.com/3jadamsp>

I don't know about you, but 'Steer-by-Wire' is not something I think I would get comfortable with.

<https://tinyurl.com/yck4b6j2>

More and more electronic control of the automobile is being required by government bodies. So far, all we have had to deal with in the US is a pain in the butt adaptive cruise control. But more is coming . . .

<https://tinyurl.com/3njkxk45>

<https://tinyurl.com/mrx2jux5>

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 **October 1, 2023**
Closing Date For Submissions : **Sept 15, 2023**

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

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

This newsletter may be freely forwarded.

Permission is granted to other Amateur Radio publications to reprint articles from this issue, provided the original author and "*The Skyview Q5er*" are credited.

email your comments and article submissions to: [K3JZD AT ARRL DOT NET](mailto:K3JZD@ARRL.NET)



I just got my ham radio license, now what do I do?

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](https://groups.io/g/K3MJW) 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