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

Q5er – The Official Newsletter of the Skyview Radio Society

You and Whose Army?

Another year is shot in the butt. Where do the time go? I often hear from people that appreciate the radio amenities that there are at the clubhouse and they thank me for them.

Well, yes and no.

I just wanted to acknowledge the army of great people that keep the whole Skyview boat afloat. There's no way that I could do any of this without them.

People that know computers. People that know networks. People that know various programs. People that know DOS. People that know LINUX. People that know APRS. People that know DMR. People that help keep various computer programs up, working and up to date.

People that know machining. People that know engineering. People that know finance. People that know electronics and radio a whole lot better than I do.

People that have donated various items to the cause over the years. People that have heavy equipment and are willing to transport them to the club and use for various projects and then transport them back - No small task.

Younger people with fresh brains that have allowed me to think of things in way's I would have otherwise never thought of.

This acknowledgement and thanks certainly does not only apply to Skyview members, but also to the many friends of Skyview that have done any number of big things for the cause over the years and wanted nothing more than a thank you.

You all know who you are.

So many thanks to the amateur radio army! 2023 is upon us. Let's make it a great year. I want to thank each and every one of you for your contributions to Skyview and to amateur radio.

73

de WC3O

Your Skyview Radio Officer

2023 is Skyview's 63rd Anniversary !!

February 1, 2023

- "Immortal Battery"
- PowerPoles for QRP Labs Products
-
- Our Elecraft K2 Transceiver
-
- New VE Sections
- Repeater Shed UPS
- A Good Go Bag List

The Sunspots Are Here !!!

Time to exercise the 10-12-15-17-20 meter bands

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

Another great issue full of reader contributions. That is what keeps this newsletter going. While I will add my own contribution from time to time, I really want this newsletter to be full of contributions from others.

I will assist with any submitted article that needs a little editing. Usually my assistance just consists of formatting for readability. I will sometimes add some explanatory text if I think that readers may not be a close to the subject as the author was.

However, I can also provide more extensive editing support if required. So, don't be afraid to send me your articles. I won't let you fail :-)

Jody - K3JZD

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

From the Treasurer

Welcome to 2023. We are going into 2023 in decent shape financially. With the 2023 dues and the contributions sent in with the 2023 dues received so far, we already have all of our 2023 Fixed Expenses covered. That is where we always want to be.

If anyone wants a receipt letter for contributions that were sent in with your dues (or at anytime during the last year or this year), please request it from me. Since not every one is able to do itemized deductions, we do not automatically provide those receipt letters.

At the Skyview Banquet in January, Scott - AC3GB read off a list of all of the things that Skyview did in 2022. Wow, what a long list that was Be a participant in 2023.

We will have wait to find out what may be in store for the Skyview grounds.

Jody - K3JZD

Ham Radio is a Contact Sport

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.

Here is another issue. . . . . .

Not saying it is the last one that I will publish. But it could be . . . . Jody - K3JZD

Talking nonsense is the sole privilege mankind possesses over the other organisms. — Fyodor Dostoevsky

January Business Meeting Minutes

de Don - WA3HGW

Skyview Radio Society
Monthly Business Meeting – January 3, 2023
Call to Order: 7:30 PM by Vice President Brian Manley, K3ES.

Attending – 35 Members: WA3HGW, K3JZD, NJ3R, WA3LCY, KC3LHW, N3DRB, N2MA, K3STL, KG4JBB, K3CLT, N3OEX, KC3UIJ, AB3ER, WQ3Q, KC3PXQ, WA3KFS, W3IU, N3TIN, AG3U, KC3CGQ, K3FAZ, K3JAS, AG3I, AJ3O, W3UY, WC3O, N3WMC, K3ES, W3BUW, K3WM, NM3A, KN3P, AC3GB, K4PDF AND KB3EYY.

Prior Meeting Minutes: The minutes of the December 8, 2022 meeting 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.

Treasurer's Report: Treasurer Jody, K3JZD, presented the year-end statement and financial review (copies attached). Basically, we are in a good financial position. There is a surplus due to no additional expenses from the building expansion project. Expenses for the month included purchase of parts and modules to upgrade the Elecraft K2 transceiver which was donated to the club. Jody reminded anyone being the last person to leave and close up the clubhouse that the thermostat should be set back. There have been a few recent cases where the setpoint was set for the room being occupied. This unnecessarily uses up propane. A motion to accept the Treasurer's Report as presented was made by WC3O and seconded by KC3PXQ. The motion passed without objection.

Membership Report: Tom, AB3GY, was not present. Steve, K3FAZ, presented a brief member report. There were no new members, so membership remains at 164 for 2022. Membership renewals are doing well.

Radio Officer Report: All radios are in good working order and available for member use. There remain some computer issues with the remote IC-7300. These should be remedied soon.

Kitchen Report: Bob, WC3O, noted the kitchen balance is $215 with $200 being transferred to the treasury. The kitchen is presently well stocked.

VE Report: There were 3 candidates for the November VE session. Two passed their Technician class exams and one upgraded to Amateur Extra class. The next exam session is January 21 with no one registered as of this time.

Newsletter: The December issue of the *Q5er* is out. Jody is looking for newsletter submissions by January 15 for the February issue.

Facilities: N3TIN reported no immediate needs for building maintenance. He requested more gravel to repair the driveway in the spring.

Building Committee: Marty, AG3I, reported weather is the major factor at this time, with the ground being frozen.

Calendar of Events:
January 7 & 8 – ARRL RTTY Roundup. Club will be operating.
January 14 – 2 meter simplex contest.
January 14 - NAQP contest, CW.
January 21 - NAQP contest, SSB.
January 21 – Annual Skyview Banquet. Save the date!
January 28 & 29 – Winter Field Day. Details at https://winterfieldday.com/.

Old Business: The donated Elecraft K2 transceiver has been upgraded. Dan, NM3A, received and installed the SSB, noise blanker and audio boards. The transceiver needs alignment for the new boards. Continuing with this project will be the carry case and miscellaneous accessories to make a portable station.

New Business: At the board meeting prior to the business meeting, the board recommended three projects for 2023. These are 1) replace the steel cable on the crank-up tower. 2) Replace the chairs in the meeting room. Many are breaking. 3) Lay new gravel and grade the driveway. Once estimates/quotes for the materials and labor are obtained, votes will be taken as needed for these projects.

Weather Night: K3FAZ noted that Skywarn Recognition Day was a huge success for us in WPA. We had the highest number of participating stations in the country.
February 14 – Skywarn river ice training.
To be determined – Tour of the National Weather Service facility in Moon Twp.
June 13 – Constructing a hail gauge. Steve is looking pieces of foam insulation board to use for constructing the gauges. K3FAZ reminded us that the NWS is always looking for additional CoCoRAS volunteers.

Elmer Night: Bob, WC3O, will give his annual Dayton Ham-

vention (sound of Halleluiah Chorus) slide show presentation.

Net Report: The check-in numbers averaged 44.4 over five Thursdays in December. John, K3STL, is scheduling the rotating net control stations and they are all doing a great job. If you want to volunteer, contact K3STL or WC3O

50/50 Drawing: The total collected was $55. The winner of $27.50 was Joe, AJ3O. Joe donated the proceeds to the club.

Meeting Adjourned: A motion to adjourn was made by KC4JBB and seconded by W3BUW. The motion passed without objection. The meeting was adjourned at 8:01 PM.

Respectfully Submitted,

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

Misc Items

If you work the major contests, you may encounter some new Canadian Sections

Here's a map showing the new Sections :.

https://tinyurl.com/43ea4tam

This was announced some time ago, so all of the major contest logging programs should accommodate these new Canadian Sections.

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2023 Skyview Officers:

President: Paul AC3IE
Vice President: Brian K3ES
Secretary: Don WA3HGW
Treasurer: Jody K3JZD
Radio Officer: Bob WC3O

2023 Committee Chairs:

Membership: Tom AB3GY
Facilities: Dave N3TIN
Kitchen: Bob WC3O

2023 Board of Directors:

Chairman:	Scott, AC3GB	
5 year	Marty AG3I	Wayne K3WM
4 year	Tom W3TLN	Ron NJ3R
3 year:	Bill N3WMC	Dan NM3A
2 year	Bill W3BUW	Paul WA3LCY
1 year:	Joe AJ3O	John AC0KK

Nothin's easy. Not a damn thing

de Cooky – WC3O

In 2011 Skyview received a wonderful donation of a GE MASTR III repeater complete with duplexers. At the time we were running an old Motorola MSR2000 repeater which was having some issues. The MASTR III was a welcome addition. The MASTR III is the kind of repeater that a state or federal government would buy when money is not an issue. It is a beast of a machine. It handles power bumps, lightning strikes, high static levels, very cold temperatures, very high temperatures, very long transmit duty cycles, poor antenna loads and more and just keeps right on chugging along.

I have no idea of the numbers, but I'd guess that Motorola manufactures 50 times more repeaters than GE does. You can practically go to Giant Eagle and get repeater parts for a Motorola. A GE repeater? Not so much. And knowing someone that really knows the ins and outs of a MASTR III - Thuff to find. Coming up with the correct software and the correct way to use it for a MASTR III, not so easy. (We do have one person in house that worked on M3s for a local authority and knows them well)

Our M3 lives in a shed where there is NO climate control - None. When it's -5 degrees outside, it's near -5 inside the shed. When it's 100 degrees outside, it's maybe 130 inside the shed. It's not an easy life. However, that old M3 operated almost trouble-free from 2011 until 2022. In that time we had one power supply go bad and one power amp issue. That's pretty impressive.

We also have a complete second M3 that we use as our back-up for the main 64 machine. The idea being that we could switch modules for diagnostic purposes. Earlier this year I decided to put the back-up 64 repeater on the air for a few days just to make sure it is still fully operational since it hadn't seen action in over a year. It was. While the back-up was live, I left the main repeater running with the transmitter disabled. All was groovy until I switched the main 64 back to live. Warning lights came on for bad VCO lock (Voltage Controlled Oscillator) and the repeater was completely nonfunctional. What the hell happened? I tried this. I tried that.

Nothing worked. Damn?

I know a guy that knows a guy

It pays to know people when you're looking to get something fixed in Hamland. I was put in touch with a guy that is in the 2-way radio business and well versed in MASTR III repeaters. I yanked the repeater "shelf" and delivered it to a guy that in turn, delivered it to THE guy. After a few weeks I was informed that the repeater was fixed and ready! There is a card in the shelf called the "power supply" card. It really isn't a power supply, as such. The repeater has a big-honkin main power supply that takes 120 volts AC and converts it to around 15 volts DC, semi-unregulated. The power supply card takes that @15 volts and makes a very well regulated +/- 12 volts and +/- 5 volts required by the other cards in the repeater.

When the power supply card poops the bed, it takes out the EPROMs in the "System" card. The system card holds the programming that makes the repeater behave the way you want it. That programming is called the "Personality". Since "the guy" could not retrieve the original personality, he put together one using best guesses, which was pretty close to right. When I reinstalled the repeater I found that the audio levels were low. They needed adjusted.

This is where things went to hell in a handbasket

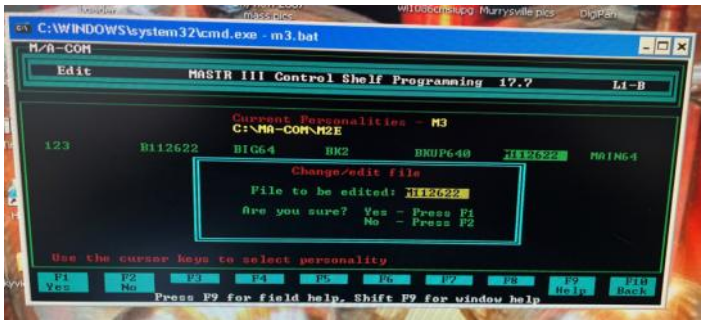
The MASTR III was developed when programmable repeaters were just starting out. The software to program them was proprietary and in the DOS operating system. Since the repeater is older, the required programs are floating around on the internet and downloadable, although not very too easy to find. That's great, but it really helps to know how to use the programs. They are not very intuitive. I got into computers just as DOS was going away and WINDOWS was coming in, thus, I am not very good with DOS.

Enter Bob, AG3U

There are three programs:

- There is a utility program that allows you to adjust audio levels. It is in DOS, so you need an

older computer that still allows the use of this old, command line based operating system. I have an old laptop that has WINDOWS XP. It seemed to work. It worked until the backlight in the computer display pooped the bed. So I had to use an external monitor.



- The second program is used to program the many other aspects of the repeater. This was harder to get going. This is a true DOS program and it needs to be run via a .EXE command line in DOS.

Once AG3U figured out how to run this program we felt our work was nearing the end. We were wrong. Very wrong...

Since we were not sure about what we were doing we decided to pull the personality on the back-up repeater first. It worked! We could open the file, make changes and reload the revised personality back to the repeater. Yipee! So we pulled the personality on the main repeater and it worked! Then we tried opening the file to make changes. The program locked up. Huh? We tried it again. Locked up

Aw for the love-a-Mike!

So is this an issue with the program? WINDOWS? The COM port? The cable? Who the hell knows?

We went back and played with the back-up personality. No problem. What the? If it works for the back-up, why would it not work for the main?

Bob felt it would be worth trying his yet older laptop with WINDOWS 98. He used his laptop.

Same issue. We tried another cable. Same issue. It appears to be an issue with the personality file... Bob, AG3U took the file home and looked it over in a text editor and in hex. Without knowing more about the file system it's hard to say. He found any number of other aspects, none of which made it work.

Aw fer cryin out loud!

We had a donation of a MASTR III handset. It looks like an old cellular bag-phone handset. It was said that you could make changes to the personality via the handset and not use any program.

Bob, AG3U found the documentation because it is not at all intuitive. We did what the instructions said and it works! We could go in and make all the changes we wanted! This is great!

Then we found out, the changes don't stick... The personality reverts back to where it started...

You son-of-a...!

I went up the next day to try some more. No joy. To add insult to injury - I went into the clubhouse to grab something, when I came back out to the shed I found that a mouse took a crap on my laptop!

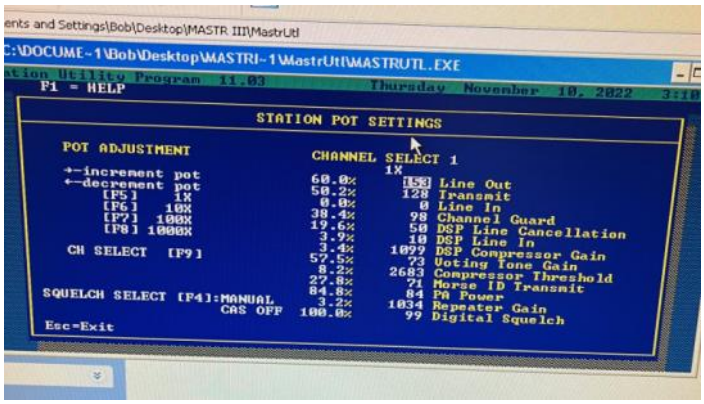
Why i otta!

Bill, W3BUW had some MASTR III programs. I installed those, but they were the same as the ones we had and still could not open the main repeater personality file...

Enter a third program: MSEDIT

This is the program that no one talks about. I had never heard of it. Bob, AG3U found it while perusing the RepeaterBuilder's website. It too is a DOS program. Bob downloaded the program.

The program was designed to be installed via 3 1/2 inch floppy discs. This produced yet more complications. After Bob figured out how to get around that, he found that there were some vital lines missing in the batch file that starts the program! After Bob figured that out, he had a working program!



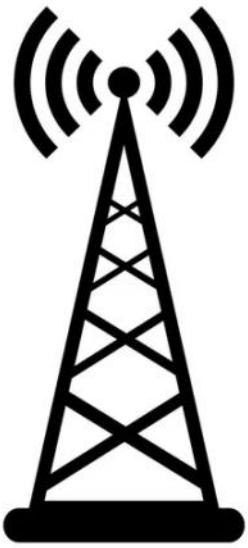
We went back up to the joint for another round of abuse. There is no instruction file for MSEDIT. We had to figure out how it was meant to be used. Again, not intuitive AT ALL! After a whole lot of fumbling around we finally figured out how the hell this was meant to work. And it DID work! We were able to make all of the changes needed to put the old 64 back to fully and correctly operational!

There, that wasn't hard...

What did we change?

- Removed the internal time-out timer since TOT is handled by the external repeater controller
- Turn ON the "Squelch Tail Eliminator". STE helps eliminate the irritating squelch noise as the repeater carrier drops.
- Turn ON the battery alert tone. This adds a beep tone during transmission to let everyone know that the repeater is on back-up power. (We never had this on before. I've been wanting this turned on for years)

In the end we have our BIG 64 back and sounding great.



Here is a list of people that were a big help along this tough path. (Hopefully not forgetting anyone) :

Mel, N3BJY - Dennis, K3PSP - Sean, KC3QWF
Bill, W3BUW - Ron, NJ3R

I can't thank enough Bob, AG3U who put in MANY hours figuring out this whole DOS program nightmare.

A thousand thanks to the contributors of the RepeaterBuilder website. An invaluable source of information.

Cooky - WC3O

QRP Labs and PowerPoles

de Dan– NM3A

As I've said before, I'm a big fan of QRP Labs. That said, there are a few places where improvements could be made: in this case, the power connectors. Proprietor Hans Summers uses 5.5/2.1mm coaxial power connectors for everything. Including for different voltages. The vast majority of amateur equipment uses nominal 12 volts (13.8 V) for power.

In North America, the small Anderson PowerPole connectors[1] have become the 12 volt standard.

I don't know if there are any 12 volt connector standards for amateur radio in Europe or other continents, but here it is mainly due to ARES and RACES, among others, adopting it as their standard. This has made emergencies, public service events, field day, during contests, and borrowing equipment so much more convenient and hassle free for everyone.

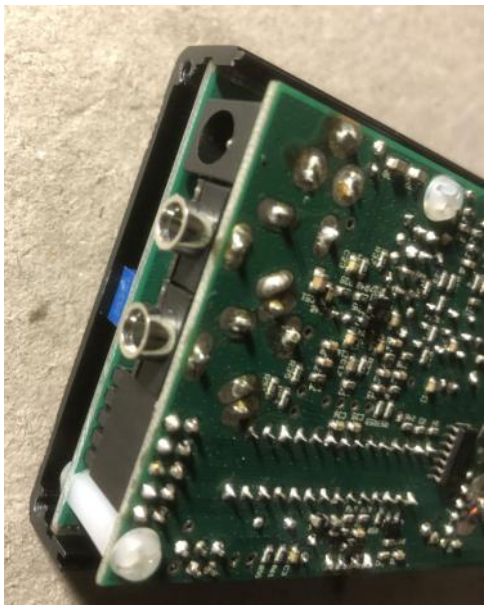
Most of us have switched to PowerPole connectors in recent years. I finally changed nearly all my Cinch-Jones, Molex, screw terminal, and other proprietary 12 volt connectors to PowerPoles about 5 years ago. Even for my shack equipment that uses older connectors, I use a dedicated, permanently attached adapter cable with a PowerPole on it. Everything is so much easier, both at home, in the car, and inter-operation with other hams. The only exception to this is my handheld units. Most still need a dedicated power plug.

So I've been thinking about how to convert all my QRP Labs rigs to PowerPoles and finally came up with a simple, easy to implement solution. There are three different implementations: for the original QCX with BamaTech case, the QCX-mini, and the QDX. These ideas can easily be adapted to other QRP Labs products and to many other ham pieces of equipment from various manufacturers.

The original QCX used screw terminals for the power connection. A German company, BamaTech, designed a very nice aluminum case for it and used a 5.5/2.1mm coaxial jack for power. This jack was prone to failure, but I put up with it for a while. For my second QCX, I bought a 3D printed case that had a dedicated area for a PowerPole connector. It was a reasonable enclosure, especially for the power jack.

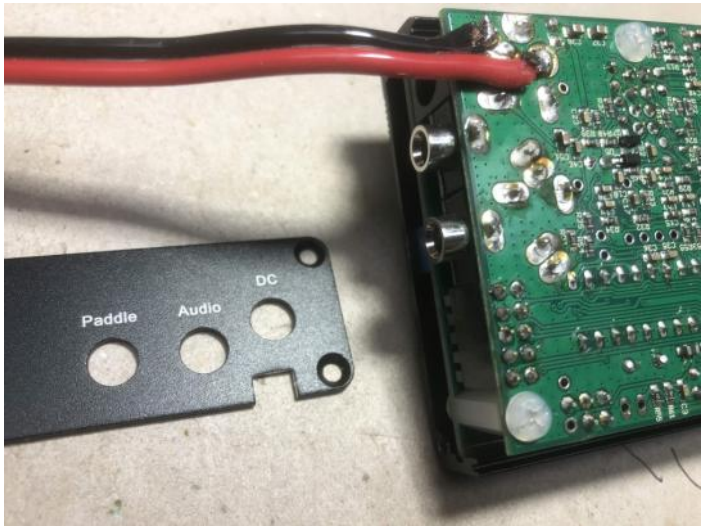
From that idea, I modified the BamaTech case by notching out the original coaxial jack hole to a rectangle just large enough to hold a PowerPole jack. A #2 bolt holds the jack fixed to the bottom of the case. This makes field connections much easier and more reliable without an extra power cable interface.

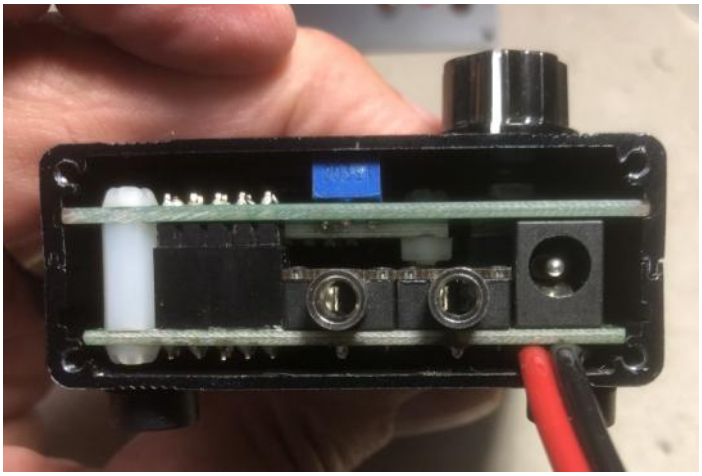
The QCX-mini presented different issues. Its coaxial jack is much better and is not prone to failure, so that is a big improvement. I still wanted to eliminate that extra power adapter cable, but the mini is much more compact. There is no extra room inside the case to put the larger PowerPole jack. Much thought and an inspiring photo from Jody, K3JZD, led me to add a short power cable with the PowerPole attached.



The original coaxial jack is left unchanged and a 6" power cord is soldered to the bottom of the QCX-mini's PCB.

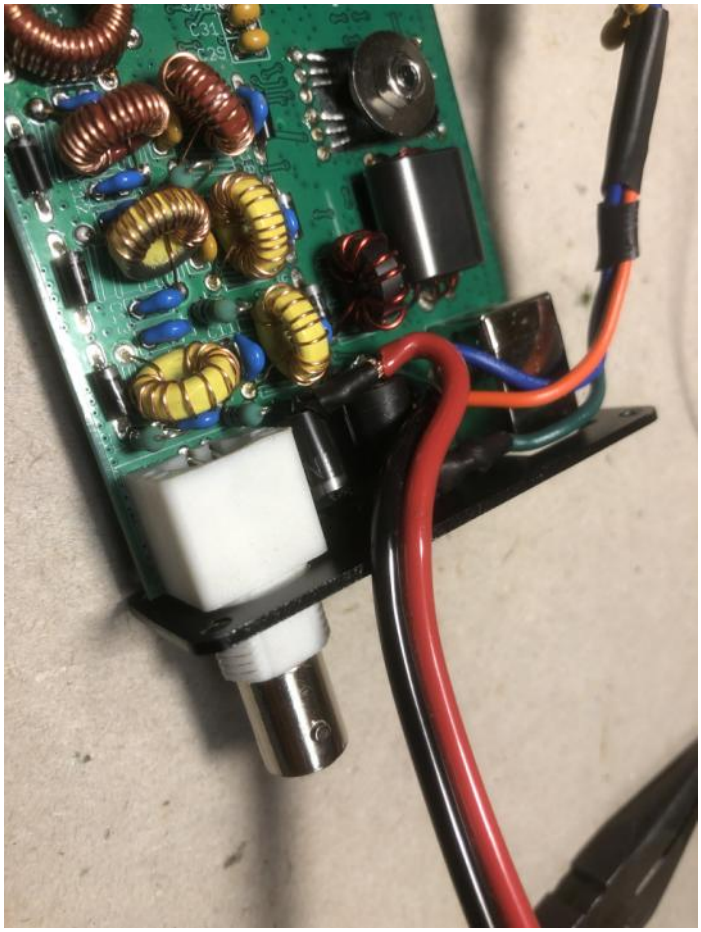
The other end sports a PowerPole connector. There is not much room between the mini's PCB and the case, so electrical tape was applied to the case bottom to avoid a short circuit from the new connection. As there was no opening in the case for the new cord, a nibbler was used to put a small notch in the end plate of the case to allow for the new cord to exit.





The new power cord easily folds up over the QCX-mini and so presents no extra volume for storage. Here is a comparison from the original to the modified mini.

For the QDX, a similar method could be used if there are no modifications to the original QDX. However, I have already modified my QDX to provide an internal 9 volt power supply from a 12 volt input. This meant that the original 12 volts could not be sourced from the bottom of the PCB, but only from the back of the original coaxial connector. Because of this, I attached the + (red) of the new cord to the 12 volt input on the back of the coaxial connector. The - (black) was soldered to the PCB ground where the coaxial connector ground is attached.



Both connections were approached from above the PCB. The end plate of the case was notched similar to the QCX-mini, but on the top, rather than the bottom, of the end plate.[ix]

I hope this info is useful and gives you some ideas for your own equipment that would benefit from using more reliable PowerPole connections.

Dan - NM3A

Those Darn Radials

de Paul – K2PMD

One of my life long ham goals is to activate a POTA park in every state in the country (and hopefully some POTA parks overseas). Traveling light and being able to set up an efficient antenna just about anywhere I travel means, for me, taking along my *M1EEC 40-6M Coil* antenna, the *Wolf River Coil* (WRC) tripod, three 33-foot radials, and a 72-inch collapsible whip (because sometimes there are no trees for wire antennas).

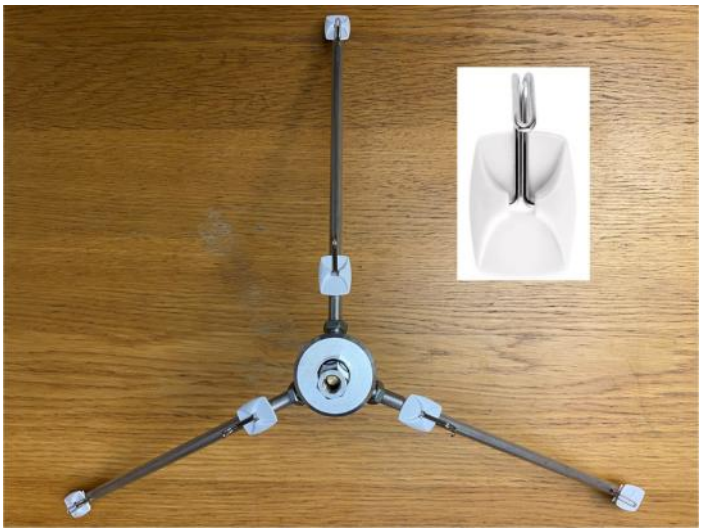
The entire antenna system fits into a nifty little *PakPod* bag and the *PakPod* will fit in just about any backpack with my QRP radio and a 25-foot length of coax. This simple set-up has never let me down.

The antenna system can be set up in about fifteen minutes. Except. When. Those. Darn. Radials get all tangled.

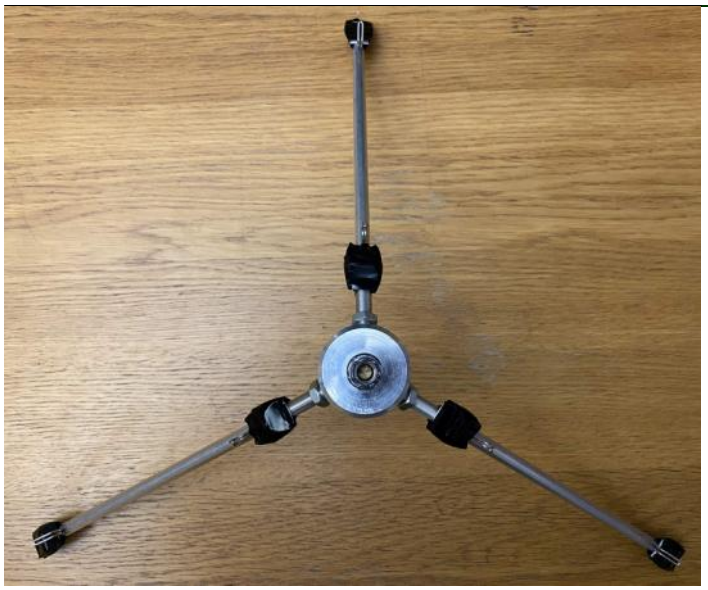
Not only is it time consuming to untangle the wires, it is frustrating, and can make a difficult activating environment even more unpleasant. Also, wrapping the wires up and trying to stuff them back in the *PakPod* can be a pain.

Over the years I have seen all sorts of different ideas posted by other hams for dealing with radials in the field. Some have come up with ingenious ways to roll the radials up or to wrap them in kite winders, etc., but all of these ideas created more bulk or didn't effectively deal with the tangling issue.

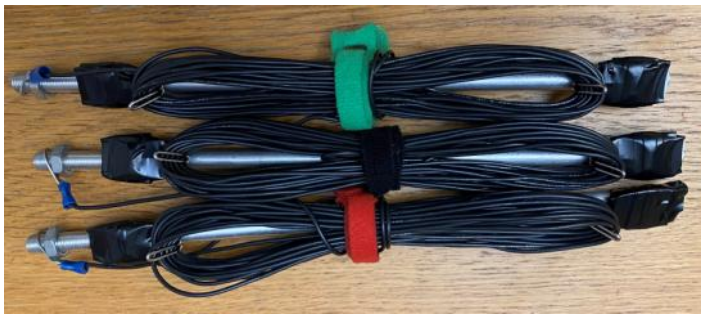
Then I had a thought that maybe I could put some clips on the tripod legs and wrap each radial to an individual leg (like the cord on a vacuum cleaner). After, looking at a few options, I settled on using *3M Small Wire Hooks* with double-sided tape and then a few wraps of electrical tape.



First, I screwed the legs into the *WRC* SO-239 hub adapter so that the *3M Clips* would be oriented correctly each time I screwed them on. Then I put electrical tape around the *3M Clips* and unscrewed them from the pod adapter. Next, I put the O-ring side of radial on to the leg and wound the radial around the clips. Now, each time I reconnect the legs to the hub adapter, I can easily unwind the radial with no chance of tangles.



Additionally, the radials now fit nicely in the *PakPod*, and I don't have to worry about tangles or trouble repacking my antenna system.



If you think of another way to make it easier to deal with radials in the field, please let me know at K2PMD@arrl.net. Better yet, write an article for the Q5'er and tell us all about it.

Paul - K2PMD

Misc Items

I almost hate to keep linking to stuff from the same web site. But whenever I see a headline like :

GE to develop 'immortal' battery with self-healing metals

I have to sit up and take notice.

While all of the interest in battery technology is not really to help out ham radio operators, any improvements in battery technology will ultimately benefit our portable operations and home station backup systems.

So, it is good to see the government and the Electric Vehicle Industry investing in developing a better battery.

I have seen many similar articles. But often the concepts described turn out to be non-profitable or non scalable and quietly fade away. One day one of these better battery schemes may succeed.

But, I have to wonder, are 'immortal' products good for the economy? I used to buy a lot of incandescent light bulbs. Now I buy very few LED light bulbs.

https://tinyurl.com/yc2y8nrf

What's In the Bag ?

de Steve – K3FAZ

Hey-what's in the bag?

. . . What bag?

Well, that can be an interesting question...

Often times we travel the highways and byways to a destination that may be somewhat urban however we may have a planned destination that may be more rural or much off the beaten path. Either way it pays to have a plan just in case...

At the time of writing, all of Western Pennsylvania is being buffeted by a powerful winter storm with strong winds and plummeting temperatures. Great weather to be hunkered down indoors, staying warm and such but for those who have daily travel or perhaps a visit to friends or relatives it pays to have some preparations in place for unforeseen circumstances that can quickly turn into an unwelcome situation.

So, back to the opening question—what's in the bag? Some may refer to them as trip bags, jump bags, day packs, roadie bags, etc but having one in your vehicle can be extremely handy when presented with an unplanned situation while motoring. An old friend of mine has a well worn saying " ya never know..." so let's look at what would be as handy as a pocket on a shirt to have on hand should the need arise.

The size and type of bag will be proportional as to the contents within but there are some items that are highly recommended. Taking nothing for granted (especially technology) and thinking outside the box will pay off in the long run. Remember it's better to have and not need than need and not have, right?

So, in no particular order of importance let's look at things for the bag:

Flashlight with good batteries
Hand warmer packets
Foot warmer packets
Space blankets (cheap to buy and insanely handy)
An extra coat and a car blanket
Gloves, beanie cap, warm socks
A full change of clothes (learned that one the hard way)
A couple plastic trash bags & grocery bags (multi use)
A couple rolls of tape (electrical tape, one inch Gorilla tape)
Zip ties & bungee straps
Compass
Waterproof matches
550 paracord
A good knife and/or multi tool
A signaling device (whistle and/or an old CD)
Hand sanitizer, paper towels, toilet paper

Not one to assume - but a basic first aid kit and basic tool kit should be standard issue in our vehicles as would be jumper cables. A tow strap is a good idea for off the beaten path excursions. How about a map book? A shovel of sorts (military type trenching tool) can be beyond priceless to have. It's also wise to let your plans and travel routes be known to those necessary. If taking any medications it would be a good idea to have some along as well. Mentioning water, remember it is equally important to be hydrated in winter as in the summer so drink up. Consider some snack type edibles/trail mixes but avoid salty items such as potato chips, etc.

Trust me, having a jump bag isn't just for cold weather travel, it is prudent to have one year round with contents adjusted for seasonal use. Having been a bazillion mile road warrior for most of my working career the trusty bag saved the day on more than one occasion. The items listed aren't cast in stone, items brought along can be determined by individual need or by known/predicted hazards.

Anyway, I hope that this brief article may be helpful as we're out and about. Being an Eagle Scout for fifty plus years has permanently instilled a sense of readiness into my gray bearded noggin.

Ya never know, eh

Steve Fazekas K3FAZ

Astron RS-35A Power Supply Repair & Modification

de Don – WA3HGW

The Astron RS-35A is a popular linear power supply in ham radio circles. It is rated for 25 amp continuous and 35 amps peak output at 13.8 volts DC. This is adequate for the typical 100 watt ham transceiver. They are well built and generally very reliable. I've been using one in my shack for close to 30 years and it's been on 24/7 most of that time.

There is also the RS-35M, which includes voltage and current meters and the RS-35M-AP which adds Anderson Powerpoles to the front panel.

Many hams like these analog power supplies because they are not associated with electrical noise, which can be a problem with some switching type supplies. Their biggest down side is the large and heavy power transformer used. The RS-35A weighs in at 27 pounds.

I picked up a second RS-35A at the Skyview Swap & Shop several years ago to have handy as a back-up. It was a good price as I bought it at the end of the day, and the seller said he didn't want to lug that heavy thing back home.

Recently I decided it was time to upgrade my shack with battery back-up power, so I purchased a Bioeno LiFe-PO_4 15 amp-hour battery and a West Mountain Radio Epic PWRgate for DC switching control.

Rather than testing these out on my normal shack power supply, I decided to check them using the back-up supply first. I'm glad I did! Due to a stupid mistake, and failure on my part to double-check, I got the polarity reversed on one of the Powerpole connectors used to hook it all together. When I hit the power switch on the RS-35A, after about a second the fuse on the power supply blew as did the fuse I added to the battery connection. To make matters much worse, it let the smoke out of the brand new Epic PWRgate. OOPS!!!

After checking all the connections and finding the reversed polarity Powerpole, I made the correction. In checking the RS-35A, I found the fuse still blew when turned on with nothing connected.

Now it's time to repair the power supply and order a another Epic PWRgate. I found one of the power supply pass transistors shorted and its associated emitter resistor open. I also found the crowbar SCR on the Astron voltage regulator board blown apart with one of its leads vaporized.

More damage than I expected! I ordered some replacement pass transistors and replaced all 4 of them. Fortunately, I already had a couple extra 0.05 ohm, 5 watt, emitter resistors from several years ago when I blew up my regular ham shack supply. How I did that is a story for another time.

The Astron voltage regulator board uses an LM723 adjustable voltage regulator chip. Its output goes to a driver transistor which in-turn drives the base of the pass transistors. Incorporated on the board is a crowbar circuit that turns on a 25 amp SCR which shorts the supply DC output to ground if the voltage goes too high. The shorted pass transistor would put unregulated 26 volts on the output, triggering the crowbar SCR.

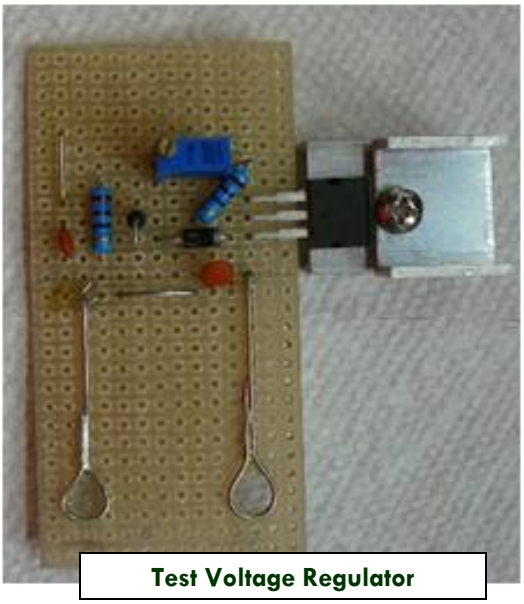
Astron Voltage Regulator Board

I'm not sure what failed on the Astron regulator board. After replacing the pass transistors and removing the damaged SCR, I was still getting the 26 volt output from the supply. I thought maybe the LM723 was fried from the reverse polarity and replaced it. Still 26 volts out.

I purchased a replacement voltage regulator board from Astron for $31 plus shipping. Well, that one did the same as the original board. The voltages on both boards were different, but neither seemed to make sense.

At that point, I decided to scrap the Astron board and build my own voltage regulator and crowbar circuit. I don't really like the way Astron implements the crowbar circuit. If it senses overvoltage, it simply shorts the DC output voltage to ground and expects the fuse on the AC power line to blow.

To my mind, that stresses everything in the supply until the AC input fuse blows. My intent is to fuse the unregulated 26 volts going to the pass transistors. If the voltage regulator fails to a high output, the crowbar will blow the fuse on the unregulated voltage. That should spare the pass transistors the stress of a very high, albeit brief, current. Should a pass transistor short, it will still kill voltage to the output terminals.

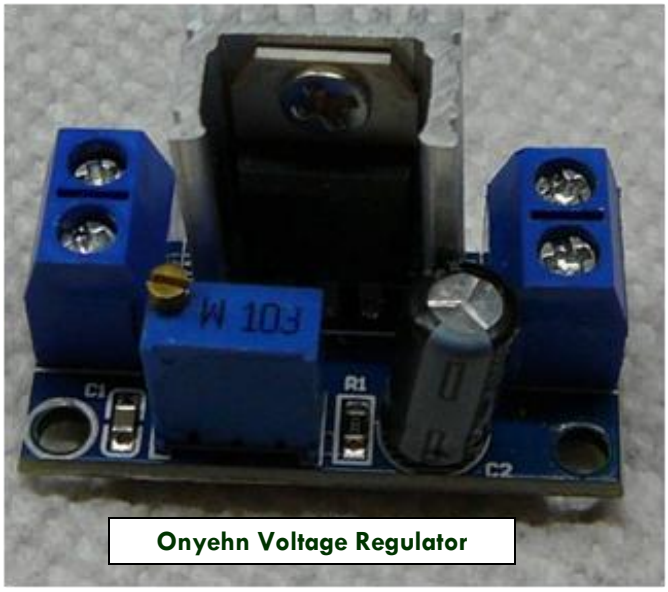


Test Voltage Regulator

I built up a voltage regulator on some perf board to be sure the concept would work. I used an LM317 three terminal voltage regulator chip. These are good for at least an amp, which should be sufficient to drive the pass transistors. More importantly they are protected from shorts and are designed to normally fail to low voltage output.

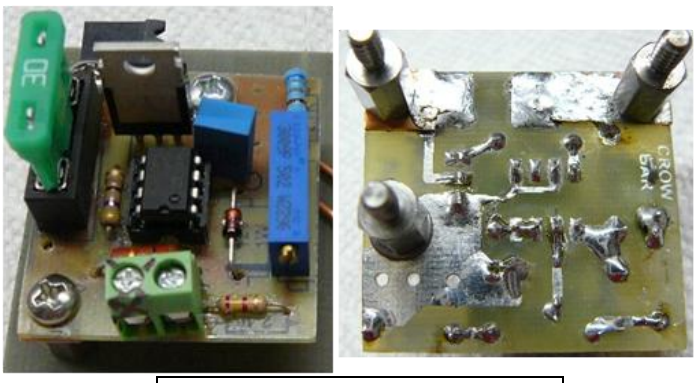
I've read complaints that the LM723 used in the Astron board can fail to high output. This perf board circuit worked well, and proved the concept. Then I needed a crowbar circuit.

While searching the web, I found FAR Circuits sells a crowbar kit with a PC board and parts for $18 plus $3.85 shipping. I ordered one. I also came across numerous voltage regulator boards on Amazon. I ended up buying Onyehn LM317 dc to dc convertor boards at 5 pieces for $9.99. At $2 each there is no way I could build anything close to that cost.



Onyehn Voltage Regulator

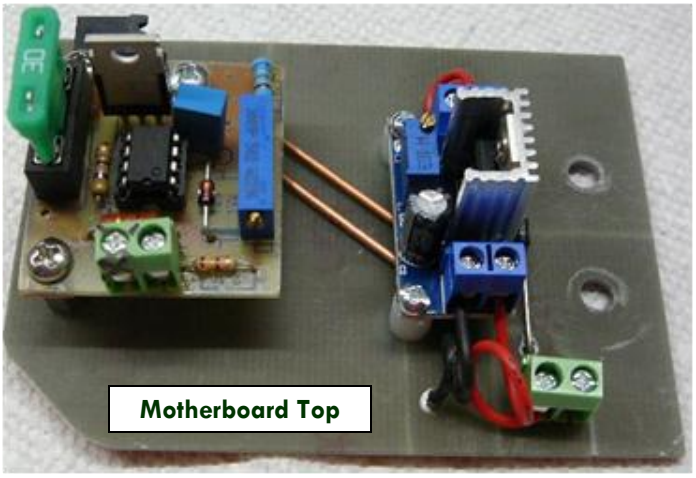
The next thing to do is build up the crowbar board and connect everything together. First, I hooked up the regulator board hanging loose with the 26 VDC to the input terminals and set 14.4 VDC on the output to the pass transistor bases. That gave me very close the 13.8 volts output from the supply. So far so good.



Far Circuits Crowbar Board

Now I needed to put this all together to install in the Astron supply. The original Astron regulator/crowbar circuit board is mounted using the terminal screws on the large filter capacitor. (Note that while my supply uses one filter cap, some other Astron RS-35 supplies use two smaller capacitors.)

I stayed with that design as it works well. Since the voltage regulator and crowbar are on their own circuit boards, I made a mother board to mount them from a piece of single sided PC board material. That gave me a way to route most of the 26 volt unregulated voltage to the two boards. The voltage regulator board has its own terminal blocks for input and output. The connections to the crowbar board are solder pads, which is also how the Astron board makes connections.

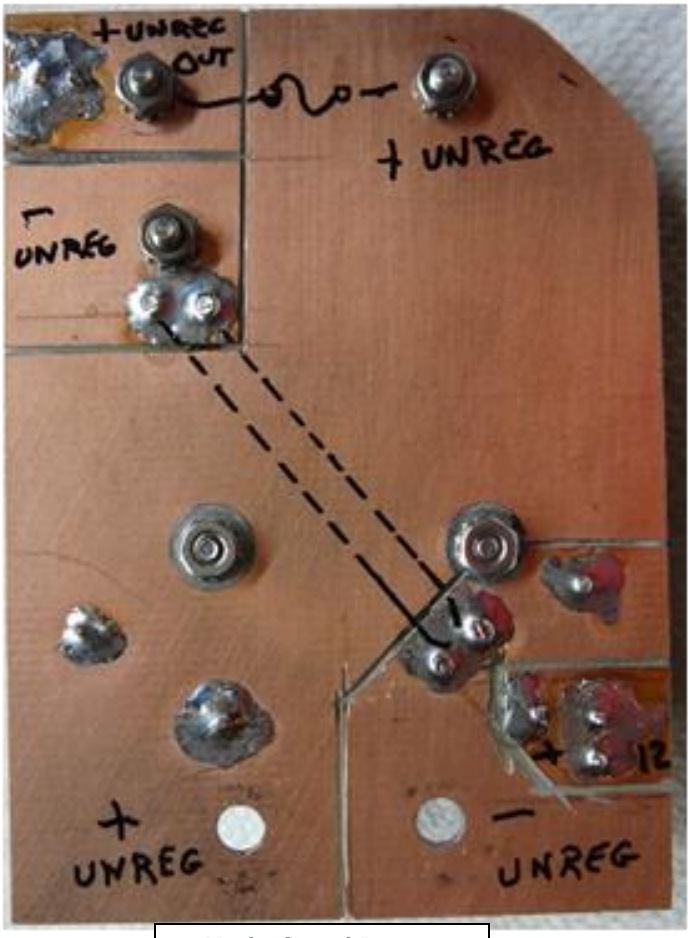


Motherboard Top

While troubleshooting the Astron boards, it was a pain to repeatedly have to unsolder and re-solder wires to the boards. Therefore, I modified the crowbar board.

Actually, I didn't like the way the crowbar circuit board was designed. It was intended for a 10 amp power supply, while the Astron is a 25 amp supply. The circuit board traces to the fuse were pretty thin and are not likely to withstand 10 amps very well, especially when the 25 amp SCR is passing the full current from a big filter capacitor to ground. I was reminded of the vaporized lead of the 25 amp SCR on the Astron crowbar circuit!

Fortunately, there was enough circuit board conductor around the fuse holder mounting points to beef-up the current capacity. I cut off a short piece of 3/8 inch diameter copper tubing and then cut it length-wise with tin snips. Then flattened the copper to make two flat tabs to solder onto the board. These tabs were cleaned to get ready for solder, and then tinned. I drilled holes for stand-off mounting screws and then soldered the tabs to the crowbar board. Then I could drill the board to accept the mounting screws. I didn't attempt to try drilling the copper tabs while they were soldered to the board. I could imagine the drill bit grabbing the copper tab and ripping the traces right off the board!



Motherboard Bottom

I used metal stand-offs for the connections to the board. It required three standoffs, one for supply negative (chassis ground), one for unregulated 26 volts in and one for unregulated 26 volts out to the pass transistors.

There is a fourth connection needed for the regulated voltage input to the SCR trigger circuit. For that regulated input voltage I mounted a small terminal block on the crowbar board. Now I could mount the crowbar board on the mother board via the three standoffs with no soldering needed. I also mounted some terminal

blocks on the mother board for the 26 volt unregulated output connection from the crowbar board fuse to the pass transistors. The only other addition was a terminal block on the mother board for connecting the voltage regulator output to the pass transistor bases. These connection blocks allow all the boards to be removed or installed without any soldering.

Once I had the modules and terminal blocks mounted on the mother board, I used a marker pen to draw out where I needed to remove copper from the board. One small problem was that to mount the crowbar board so I had room to get a small screwdriver on the adjustment pot, the negative connection was on the wrong side of the mother board.

In the event of a crowbar trigger, full current could also be on the negative connection. I put two 14 AWG jumper wires from the crowbar negative pad to the negative capacitor side on the mother board. To finish up the mother board circuit I used a Dremel tool with a cut-off wheel to grind off the insulating tracks.

Once I got everything installed, I had to check it out. The crowbar circuit needs to have the voltage trip point set. The instructions with the kit give one method to set the trip point but I came up with a different method.

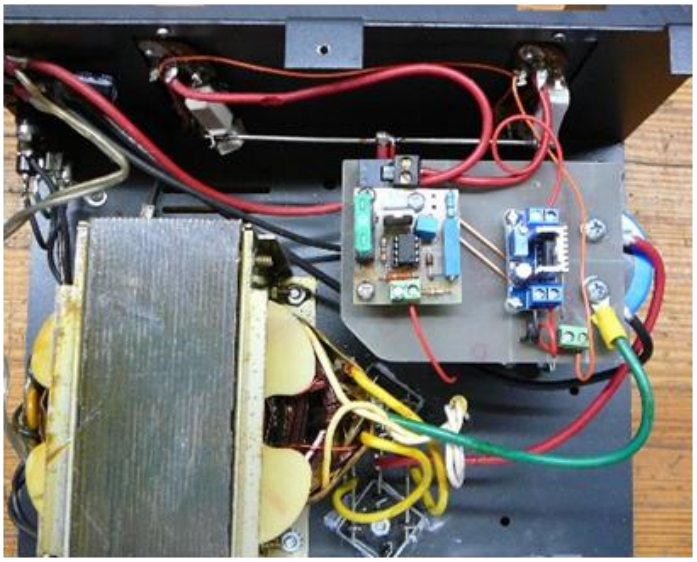
Per the instructions, you need to set the voltage input to the crowbar IC chip to 2.6 volts on pin 2 of the chip. This is the trip setpoint. I set the voltage on pin 2 to around 2.0 volts to be below the trip point. With the fuse removed to take the SCR out of the circuit, a clip lead was used to jumper the 26 volts from the input side of the fuse directly to the pass transistor connections.

I didn't want to accidentally trip the crowbar while setting it up. Then I adjusted the voltage regulator for 14.8 volts at the Astron output terminals and connected a load across the fuse terminals. The output side of the fuse block is also the connection to the SCR.

The load was an #1157 automotive stop light bulb with both filaments in series as the voltage applied would be the unregulated 26 volts.

Once that was set up, I adjusted the crowbar pot carefully until the lamp just turned on indicating a crowbar trip. Note that once the crowbar is tripped, the board must lose all voltage to be reset. I had to let the big filter capacitor discharge through the stop light bulb for several seconds, then turned the power off and on again to reset the crowbar circuit.

After that, I readjusted the voltage regulator pot to give 13.8 volts at the Astron output terminals.



That almost completed the modification. There is one very common failure point on these Astron power supplies. The small neon lamp lighting the power switch eventually fails. They usually start blinking intermittently at first, but eventually fail completely.

This was the case when I bought this supply home from the Swap & Shop. My fix at the time was to drill a small hole above the power switch and glue in a small green LED, with suitable current limiting resistor, connected to the DC output terminals. If I have a green light, I know the power is on.

I discovered that Lowes carries an almost identical lighted rocker switch which fits in the Astron power switch opening. It is their stock number 543138 and is in the section with miscellaneous lamp fixtures and hardware.

If you decide to replace your switch in which the lamp failed, be sure to do a continuity check as the Lowes replacement switch connections are not in the same order as the Astron one.

My supply now has two pilot lights.

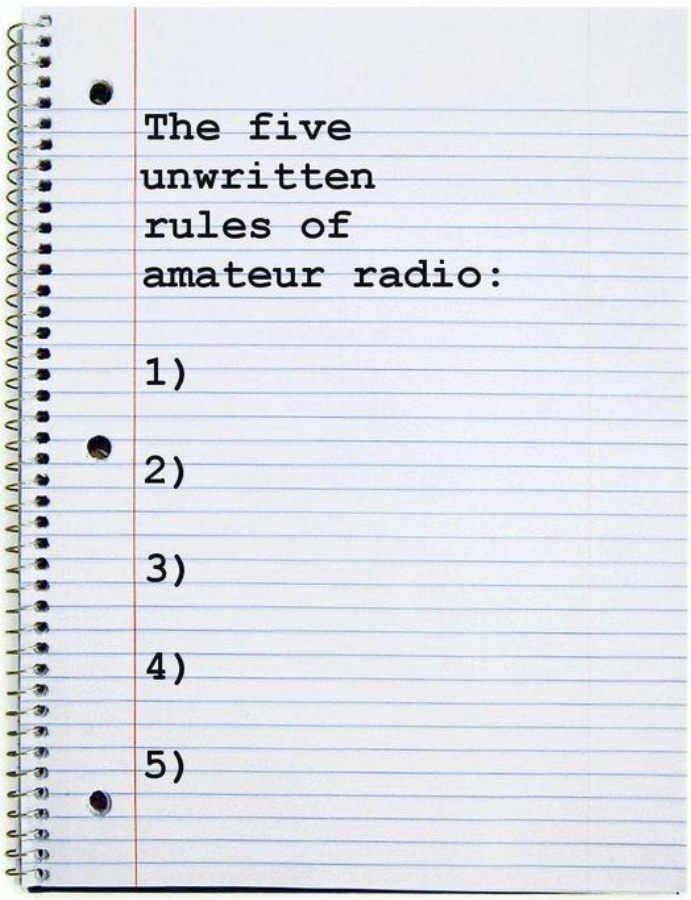
The light on the on-off switch tells me the power is on, and the green LED above the switch tells me there is DC output voltage.

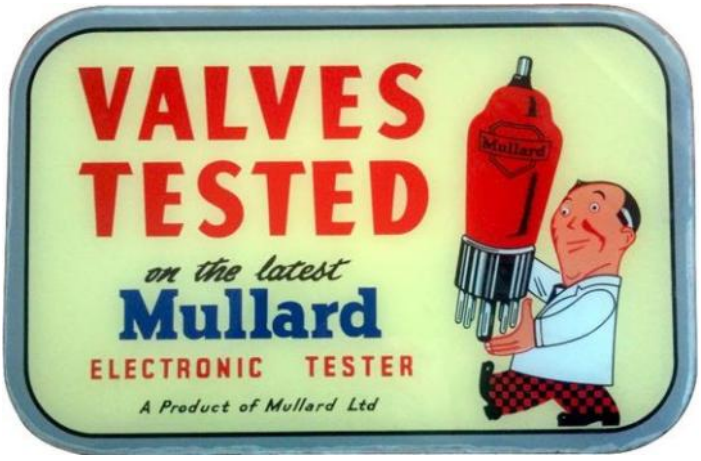
If the power switch light is on but the green light if off, then there is something wrong inside the supply, possibly a blown DC fuse.

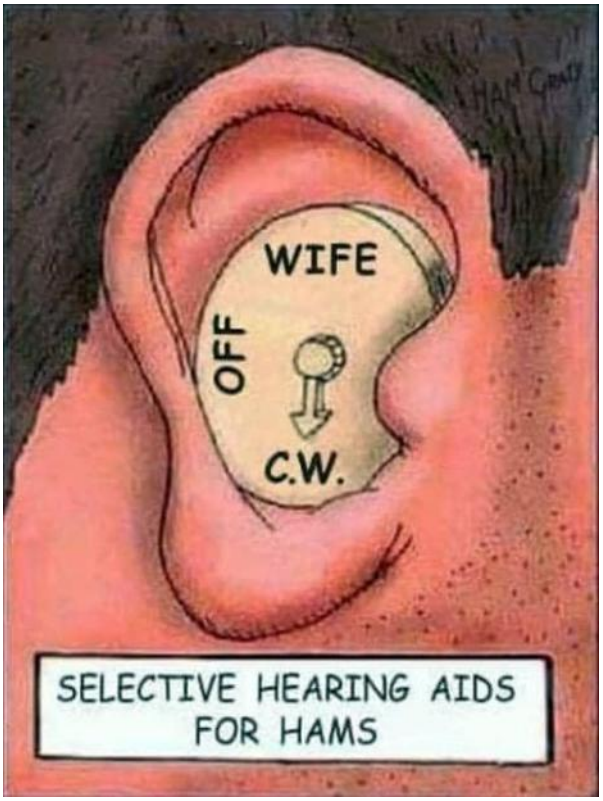
If both lights are off, well, then it could be a lot of things.

This may not be the best way to modify the RS-35A supply, but it's what worked for me!

Don - WA3HGW







A New Toy For Little Bobby

de Little Bobby – (aka WC3O)

A handheld radio is different things to different people. For me, for the most part, the only thing I use a handheld radio for is public service work such as the Pittsburgh marathon, Race For The Cure and so forth. Other than that, the radio just sits.

For many years my go-to handheld was/is my Yaesu VX-5R. Great radio. It does everything I need and not much more. To me, I don't need GPS or APRS and any of the myriad of useless features that I will very likely NEVER use. Group call, paging and who knows what else. Who cares.

I don't give two hoots about digital, no matter what flavor. I just want to use my handie for the occasional public service or EMCOM purposes. My VX-5R still works great, but she's getting pretty long in the tooth. I wanted to buy a current model rig that I feel I can depend on if or when I need it.

I've always liked Yaesu handhelds. The VX-6R and VX-7R were fine radios. But recently Yaesu seems to have lost all common sense when it comes to designing handheld radios. Volume buttons? Speakers that you can't hear? Displays that you can't see in the sun?

I have a list of features that I find very important and I'm am not willing to live without.

- - A good belt clip
- - Volume and channel select knobs on the top of the radio for easy access
- - A good-loud speaker
- - A lithium battery with good capacity.
- - A flat bottom so that when I put the radio on a table it easily stands on its own

(I knew a girl one time that had a flat bottom, but that's a totally different story, all together)

With the total lack of radios that could fill the list of my needs I just figured that I would stick with my faithful 5R. (BTW the 5R came with a terrible belt clip. But someone came up with a mod to fit a Motorola belt clip to the radio. Problem solved).

Then ICOM came out with a new handie. It seems that they read my mind! It's the ICOM T10. It essentially has everything that I have been looking for.

I bought one.

I'll give you a list of things that I like, and things I don't like about my new radio.

Likes:

- It has all of the items in my list above!
- BIG battery with around twice the capacity of my 5R
- The battery is designed in a way that the radio can take a hit and the battery won't detach and go flying across the floor.
- The speaker gets loud, not quite as good as I was hoping, but loud.
- The knobs for volume and channel select are nice and different sizes which means I don't have to look to see which knob I'm turning, I can feel it.
- Easy to program on the fly

Don't likes:

- It ain't cheap. But I'm willing to pay for quality. If this radio lasts as long as my 5R that $240 bucks will be cheap in the long run.

- The speaker output on the T10 is great, but... I've never warmed up to the Chinese radios, but I always give credit to where credit is due. For some reason the Chinese have this punchy speaker thing down pat. Many of these el-cheap-o radios have speakers that kick butt! They are similar to many of the commercial radios that you'll pay BIG money for. I don't know how they do it, but others should take note. Again, the speaker output on the T10 is just fine. It gets loud, but I was hoping for a little better.
- I am not really happy with the display. It's small and that's ok. What I don't like is the dim, low contrast backlight. It could be A LOT brighter. I'm getting old. My eyes are for crap. Despite being small, it could be A LOT brighter. (In the picture the display looks plenty bright. It's not really that brought in real life)
- There is a weather-proof cover on the side that covers the ports for the external speaker and mic. The cover is held on with two small screws? This is fine if you are only going to use the radio with or without a speaker/mic. I use the radio both ways. I'm going to unscrew this cover any time I want to switch? Then, not loose the two tiny screws and reattach the cover later? Who thought this to be a good idea?
- If you have a frequency set to decode PL tone, it takes a fraction of a second to recognize the PL tone and open the squelch. In other words - If I have our repeater memory set to decode the 131.8, when the repeater keys up and says K 3 M J W Repeater - I hear 3 M J W Repeater. It takes a bit to recognize the PL tone and cuts off the K. This is fairly common on other radios but it shouldn't do that.

In finishing - I do very much like the T10. It's going to be a great radio. I plan on owning it for a long time. And that's that.

Details for my opinions:

- Lithium battery:

Lithium batteries do not self-discharge. When your handheld sits for a while, chances are good that the battery with still be useable when you need it. However, they do have a fast drop-off when they are depleted. Li batteries have higher capacity and lighter weight. The Yaesu FT-60 is a great handheld. In my opinion, the only thing it is missing is a lithium battery.

- Volume knob on top:

If you've ever operated a public service event, you find that you are adjusting the volume constantly! The crowd is noisy. There is music playing. Jets flying overhead. You walk indoors where it's quite. Constantly adjusting the volume. What half-wit decided to make the radio with up/down volume buttons!

- A good belt clip:

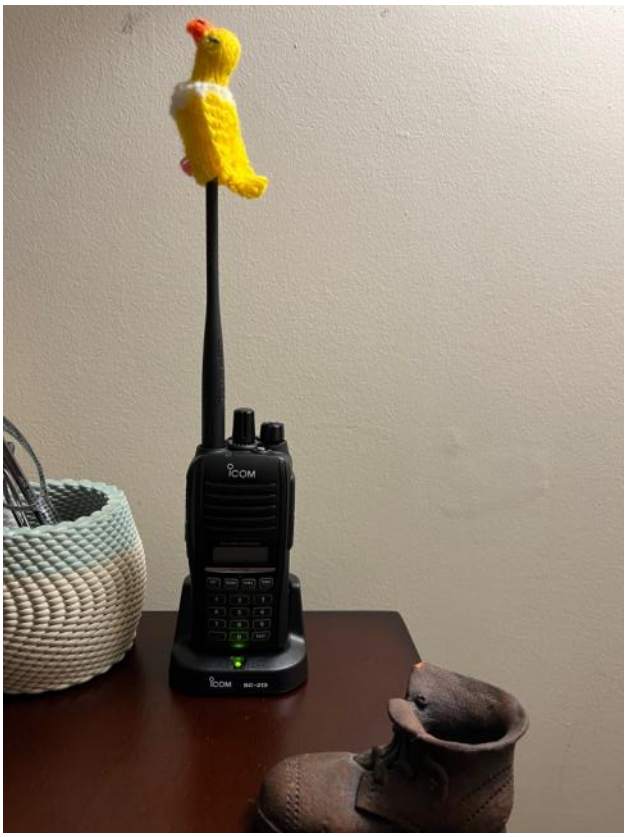
After your radio whacks off of the ground a few times you'll know why.

- A flat bottom:

At VHF/UHF frequencies signal polarization becomes more important. With the antenna vertical, everyone sounds good. Antenna horizontal, everyone looses signal strength. I've had handies that will not stand up. Not good.

- A good-loud speaker:

Again, when you are out in the crowd or any noisy environment you will want to still hear your radio. If you can hear your radio ok in your living room, you might not still be able to hear it ok outside.



Little Bobby - (aka WCO)

Why Get A General Class License ?

de Jody – K3JZD

Ed: This is an Editorial article. It may contain errors. While I touch on what I understand to be currently available to a Technician Class License, I may not be including everything.

Our current entry level license class is Technician. Many of the folks who enter our hobby start out by getting a Technician license. The Technician test is not overly complex. There is not a great deal of technical content. Minimal study is required. So, it offers a quick way to become a ham radio operator. But the Technician's privileges are limited.

Yes, there are lots of things to do as a Technician. The Technician Class license allows you to utilize the local 146 MHz and 440 MHz FM repeaters. We have lots of FM repeaters in the Southwest PA area. One can meet and chat with lot of local hams on those FM repeaters.

There are also lots of periodic 'nets' on these FM repeaters, including the Skyview net on 146.640 MHz at 2100 hrs each Thursday evening. Nets allow another way to expand your circle of local ham friends.

Putting a 146 MHz or a 440 MHz FM radio into your car provides you with a way to pass the time whenever you are out and about. Particularly when you are sitting in traffic. This type of distracted driving is legal in PA, but you have to be very careful and remember that driving is your number one priority. FM Repeater usage tends to be pretty heavy during the morning and afternoon drive times where there are a lot of folks on the way to and from work. But it tends to thin out during the rest of the time.

There are Digital Repeaters that are connected to the Internet that allow conversations with similarly connected hams all around the world. You can get onto one of these ham radio digital networks with a normal RF connection using your radio. But it is the wired Internet that does the heavy lifting to make it happen. Skyview has an Internet connected Digital Repeater on 444.525 MHz. You may use Skyview's Digital Repeater with any regular FM radio, or with a Yaesu 'Wires' Digital radio. Not all of the Digital Repeaters work that way. Many will require a specific type of digital radio.

Then there is the ham radio EchoLink network that allows you to start out on your computer and connect to EchoLink enabled repeaters all around the world via the Internet. Once you connect to one of those remote EchoLink repeaters, then you can see if you can raise anyone over the air from that repeater. But, much like the interconnected Digital Repeaters, it is the wired Internet that does the heavy lifting here also. The station at the other end may be talking over the air, but you are talking through your computer.

Some enjoy using 'FM Simplex' operation, where it is station to station communication (no repeaters involved). There is some, but not a lot of, station to station VHF and UHF SSB activity as well as FM activity. Our hills are a limiting factor.

There are amateur radio satellites that you can work through, including the International Space Station. There is some station to station VHF and UHF Digital Mode activity (ie Digital Modes like FT8). VHF and UHF Moonbounce is another mode of operation that is available to Technician Class license holders.

There are also higher frequency UHF and Microwave bands which may be of interest to some..

SSB mode operation is allowed in a portion of the 10 meter HF Band. And CW mode operation is allowed in a small portion of several of the HF Bands.

While that sounds like there are a whole lot of diverse things that you can do with your Technician Class License, it is really only the tip of the ham radio iceberg. Your privileges are actually pretty limited compared to that of a General Class License. Whenever you earn the General Class License, many additional doors open up to you. You gain access to <u>all</u> amateur privileges on <u>all</u> amateur bands. I think that by far the biggest gain that comes from being a General is being able to use all of the HF Bands and utilize all of the different modes of operation that you will find in use there.

On the HF Bands, you will be able to communicate wirelessly with other hams in other countries all around the world. To me, being able to do that wirelessly has always seemed to be much more interesting and rewarding than doing it over the Internet. As a General Class License holder, you will be able to use almost all of the space that is available in all of the amateur HF Bands (a small portion of the available space on most HF Bands is reserved for Advanced Class and Extra Class license holders).

Voice communication on the HF bands is mostly done using the SSB mode. There is somebody available to talk to on some HF Band 7x24. You can chat with someone new every day. There are more Digital Modes in use on the HF Bands than I can list here. The FT8 Digital Mode is exceptionally popular due to it providing the ability to make world-wide contacts with minimal power and/or minimal antennas.

While almost every new General Class licensee starts out using SSB and/or the FT8 Digital Mode, after a while some of the other modes will get sampled.

Once you have your HF station all setup to do the very popular FT8 Digital Mode, you have all of the hardware that you need to do any of the other available Digital Modes. The RTTY Digital Mode is very popular whenever there is a RTTY contest going on. And there are lots of them. Other Digital Modes, like PSK31 or Olivia to name just a couple, are conversational modes.

Many will learn how to use the CW mode and will take advantage of the CW mode's ability to 'get through' whenever SSB won't do the job. One can be very successful while using a lower level of power whenever using the CW mode. There is generally much less crowding in the CW portions of the HF Bands. And there is a sense of accomplishment that comes from learning to use the CW mode.

There are a lot of contests, or contest-like, events on the HF Bands. While there are all kinds of different purposes and rules for the contests, they are all essentially based on making a lot of contacts within a defined period of time. These contests will generate a lot of activity. One does not have to be a serious participant in a contest to enjoy all of that activity. I will often get on the HF Bands during DX contests and make a bunch of long distance contacts just to prove that my equipment and my antennas are still doing their job.

There are the Parks on the Air (POTA) and Summits on the Air (SOTA) programs that allow you to get out in a park or on a Summit with your portable station. Or you can just be a 'Hunter' or a 'Chaser' from your home station. Most of that activity is on the HF Bands.

I think that being able to explore new things keeps the interest in this hobby up. I think that a Technician Class licensee is going to run out of new things to explore long before a General Class licensee ever will. No statistics are available to quote, I think that more Technician Class licensees get burnt out, go silent, and let their licenses lapse than happens with General Class licensees. There is just so much more available for you to explore once you have become a General. Get burnt out on one thing? Move on to another thing and get rejuvenated.

Many of the Technician Class licensees who have hung around the Skyview clubhouse and/or have participated in and/or have observed some of the HF activities that occur at Skyview have been motivated to go ahead and get their General Class license. They have seen a sampling of what obtaining that next level of license offers to them. Once you see what can be done on the HF Bands, you tend to want more of it.

If you have not done so, come up to the Skyview clubhouse on a Tuesday evening. There is generally someone in the radio room operating on the HF Bands in some mode. Or come up to the Skyview clubhouse on a contest weekend. See for yourself a small sampling of what happens on the HF Bands.

The propagation (range/reliability) on the higher HF Bands varies in an 11 year cyclic pattern. It goes from "Lousy" to "Great" for 5.5 years. Then from "Great" to "Lousy" for the next 5.5 years.

Right now we are close to being about 2.5 years into the 5.5 years of the "Lousy" to "Great" portion of a 11 year cycle. Now that we are approaching the "Great" portion of the HF propagation period, we are starting to be able to make a lot of long distance contacts on the HF Bands with minimal power and minimal antennas. It will get better from here.

Without a doubt, now is the ideal time for all Technician licensees to consider making the effort to move on up to the General Class License to be able to take advantage of the upcoming years of "Great" HF Band propagation.

Jody - K3JZD

For Reference

2023-2027 General Class
FCC Element 3 Question Pool Syllabus
Effective 7/01/2023 – 6/30/2027

– **COMMISSION'S RULES** [5 Exam Questions – 5 Groups] 57 Questions in Pool
– **OPERATING PROCEDURES** [5 Exam Questions – 5 Groups] 60 Questions in Pool
– **RADIO WAVE PROPAGATION** [3 Exam Questions – 3 Groups] 37 Questions in Pool
– **AMATEUR RADIO PRACTICES** [5 Exam Questions – 5 groups] 60 Questions in Pool
– **ELECTRICAL PRINCIPLES** [3 Exam Questions – 3 Groups] 40 Questions in Pool
– **CIRCUIT COMPONENTS** [2 Exam Questions – 2 Groups] 24 Questions in Pool
– **PRACTICAL CIRCUITS** [3 Exam Questions – 3 Groups] 38 Questions in Pool
– **SIGNALS AND EMISSIONS** [3 Exam Questions – 3 Groups] 43 Questions in Pool
– **ANTENNAS AND FEED LINES** [4 Exam Questions – 4 Groups] 48 Questions in Pool
– **ELECTRICAL AND RF SAFETY** [2 Exam Questions – 2 Groups] 25 Questions in Pool

http://www.ncvec.org/page.php?id=369

A new/used Uninterruptible Power Supply

Cooky – WC3O

One of the main purposes for the existence of amateur radio is for use in emergency situations.

At the clubhouse we try to keep everything up and running through typical power outages. We have LOTS of short-term power outages at the clubhouse. Setting the clock on the stove is a complete waste of time. Next time you come to the clubhouse, it'll be flashing...

In the radio room we have two full sine wave UPSs in service under the radio bench. One UPS for the HF station computers and one for the EMCOM station. For years I have been using a brand called Best Power. Best Power was sold some years ago and as I understand it, Best Power became Powerware. I believe Powerware was then sold to EATON.

The model of full sine wave units I use is called the "Fortress" line. You can find them on Ebay. I also have them at home and have never had an issue with any of them. The Fortress line doesn't exist anymore.

In the repeater shed we also have a USP to keep the computer running that handles the weather station, APRS station and WIRES-X on our 444.525 repeater. The UPS that we've had in there for years was a large APC unit that was donated to the club. It was modified to have large external batteries to increase the runtime. Both repeaters have their own, separate battery backup systems. However, when the WIRE-X computer goes down - So does the 444.525 machine.

One day not long ago I found the repeater shed computer was down and out. The old APC UPS gave up the ghost. It was time for a replacement. Life is not pretty inside the repeater shed.

Many repeaters live in nice temperature controlled environments. Ours, is not one of them. In the summer it is damn hot. In the winter it is damn cold. Anything that lives in there needs to be up to the task. It's always damp. Not to mention that everything in the repeater shed is on the front lines of any lightning strikes that we take. It's a tough life.

When it was time to think about a new/used UPS I was thinking about another used Fortress. But then again, I was thinking of another Best Power UPS product line called "Ferrups". Ferrups UPSs are the ones you might find in a hospital or EOC or any facility that money is not an issue. These units are BUILT.

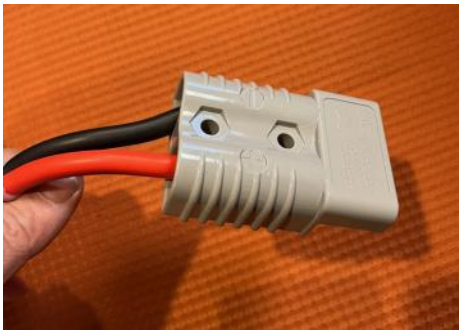
They can take just about anything that is thrown at them. They use a ferroresonant transformer, like the old indestructible power supplies that commercial repeaters used for years. All of the components in a Ferrups UPS are commercial grade.

One of the downsides to a Ferrups is that they are HEAVY! Another downside is that they tend to audibly hum. Since this is living in the repeater shed, who cares if it hums. Maybe the stink bugs will get tired of hearing it and move out!

I found a nice, clean Ferrups unit on Ebay for a reasonable price. The shipping was almost as much as the UPS! When it arrived I was not very happy. The person that shipped it did an ok job, but they didn't wrap the UPS in a plastic bag. There were little pieces of Styrofoam EVERYWHERE! On the floor of the shop. On me. On the UPS. INSIDE the UPS. EVERYWHERE. I spent hours with compressed air and a vacuum cleaner cleaning the styrofoam from everything and everywhere. Grrrrr

The next challenge was to obtain the correct DC power cable connector for the new unit. Our UPS does not use internal batteries and has a large Anderson PowerPole attachment on the rear.

The unit takes 12 volts DC input rather than a higher voltage that other units require. This means that the required current is much higher than on other units. The tag on the back of the UPS says 12 volts at up to 81 amps! The PowerPole connector is rated at 175 amps.



I was thinking long and hard on where to get cabling that would fit the bill. I put a query on the Skyview reflector and back cam Dan, NM3A! Dan had the remains of a set of automotive jumper cables.

Why didn't I think of that???

The PowerPole connector arrived from Powerwerx, Dan brought up the cable, Steve, K3FAZ came up with some heavy ring terminals and crimpers and we were off to the races!

The old UPS required 24 volts DC, so I had the two heavy AGM batteries (Also recently donated to the club) in series. I reconfigured the batteries to parallel to obtain the 12 volts at high current. Everything was set!

Well, yes and no

I plugged in the batteries, I plugged in the UPS, hit the switch and up she came! Yippee! Then, after around 30 seconds the Fault light came on and the buzzer started sending the letter C in Morse code? Huh? Turns out that the unit tells you the fault in Morse code. This was meant to

be? It turned out that fault code C is battery over-voltage error. Over-voltage?

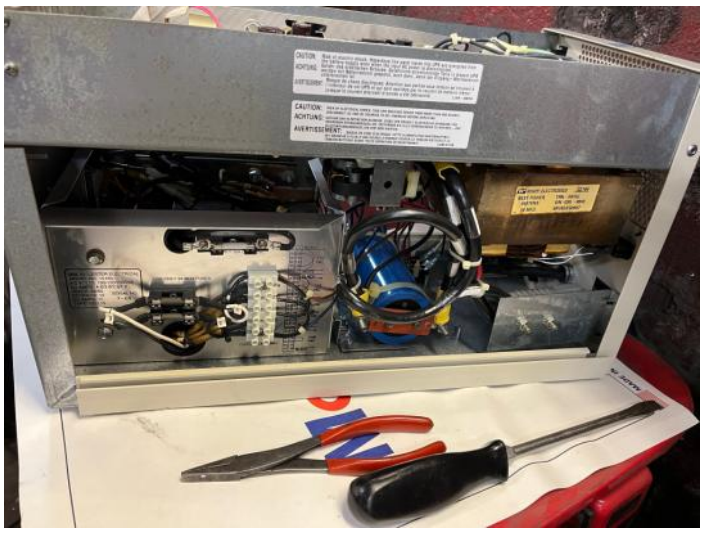
The tag on the back says 12 volts input. I re-confirmed that I had @ 12 volts from the batteries. What the hell?

Nothing's easy.

Despite this being an old Best Power unit, the tech support line is forwarded to EATON. I got to speak to a real human that knew what he was talking about. I was delighted. The man said that the unit likely needed to be recalibrated.

That is done old-school style using a terminal program through the old-school DB25 connector on the rear. Apparently the UPS was thinking that the 12 volts input was higher than it actually was. I had just about as much frustration that I could take for one day so I let it sit.

I came back up to the clubhouse on the next Saturday for the VE Session. I was talking to Bob, AG3U about the issue and Bob felt it was not a problem to re-calibrate the unit. I figured we would do this another day.



I went into the shed to check on some Winter Field Day items and while I was in there I plugged in the UPS again. It came up and I waited for the fault light to illuminate. I waited. I waited. I waited. It never came on! I confirmed that the UPS was working and switched it over to power all of the items that need to be connected. It's working as we speak!

So what was wrong? I have no flippin clue. I suspect the unit hadn't seen power for some time and something in the firmware was whazzed (That's a technical term) and got straightened out on its own.

Don't know. Don't care. It's working!

So, long story short - We got a new UPS in the repeater shed.

BTW Ferrups UPSs can still be purchased new from EATON for one arm and one leg. Same design on the inside. A little prettier package on the outside. Still great units.

Cooky — WC3O

K2 Climb

de Bob-WC3O & Dan–NM3A

No, not the mountain! Get out there and Climb On Board with our newest Skyview transceiver; the Elecraft K2.

Early in 2022, Ted, KN1CBR, a prolific kit builder in Colorado found us and donated his recently completed (spring/summer 2021) Elecraft K2 transceiver (SN 7979) with the idea of giving members a chance to use it. He wanted nothing more than to know it would have a good home and get some use for our members.

Bob, WC3O, negotiated the transaction with the idea of having a nice QRP rig for members to borrow for POTA, SOTA, Winter FD, Summer FD, or other fun times.

Late November, 2022, Dan, NM3A, went over the radio to see what, if anything, needed to be done. Turns out it is very well built and everything works very well. It was a little off frequency (400 Hz), but otherwise in great condition. The radio and filters were re-calibrated and is now within -100 Hz cold and about +30 Hz after warm up. After a few minutes warm up, it is very stable and does not drift. The CW filters are well centered on signals. According to the 'experts', this is about as good as it gets.

This is a great radio that is small, light weight (less than 4 pounds), but with full features. It was designed in the late 1990s as Elecraft's first radio, but it is still being produced and is still a very competitive radio. It has a maximum 10 watt output at 15 volts, but still can put out 5 watts down to 9 volts. It has dual VFOs and can operate split frequency. It has push-pull bipolar final transistors that are very robust. It has generous receive coverage on either side of the ham bands (in-band performance is best), but can only transmit in-band.

It has a built in iambic keyer with 9 message memories, twenty band memories, and VOX. Comes with 80, 40, 30, 20, 17, 15, and 10 meters, QSK, RIT/XIT, preamp/attenuator, and crystal IF CW filters down to 200 Hz. USB and LSB IF filters are at 2200, 2000, 1800, and 700 Hz bandwidth for voice and data.

There are multiple options available for this rig. In our K2 are a 20 watt automatic transmatch unit (ATU), an analog audio filter with real time clock, an I/O interface with automatic band info and RS232 CAT (get schooled if you want to use this), an SSB module to allow for USB/LSB transceive, a noise blanker, a fixed line level audio output, and a dedicated straight key input as well as CW paddles input for the internal memory keyer. An external battery will be used as it will be bigger and more easily replaced when its performance degrades. The builder also installed an amplifier interface board, so it can be used with many power amplifiers. This will be of limited use for portable operation.

This unit is now fully functional and is frequently at the fourth position in the radio room, so that everyone can get a chance to become familiar and have fun with this rig. There are dedicated paddles, a microphone, a clip board, battery, antenna, unun, coax, throw line, a Quick Reference card, a Checklist, and a carry case. Skyview members can sign out this **QRP HF Go Kit** and take it for their own park activations, mountain activations, or just a fun time in their shack or back yard.[i]

Our K2 has a deep menu to allow for full control over its functions, but ***none*** of them need to be used for day to day operations. Knobs and buttons on the front panel take care of 99 and 44/100 % of real world operating. Labels are self explanatory for the most part. The Elecraft K2 Quick Reference sheet nearby will jog your memory for less used items. If you need more help, get a quick tutorial or read the manual at : https://ftp.elecraft.com/K2/Manuals%20Downloads/E740001_K2%20Owner's%20Manual%20Rev%20I.pdf

Most menu items need never to be changed. However, you may find a few things that you would *like* to change for a particular outing. The following items may be changed if you find they are not to your liking:

- ST L **30** (sidetone level)
- T-R **0.02** (QSK delay)
- INP (CW paddles normal (**PDLn**), reverse (PDLr) but keep in mind, the paddles used have a reverse switch)
- RPT **2** (CW message repeat in seconds)
- IAB (Iambic mode A or **B**)
- SSBA **2** (mic gain)
- SSBC **2:1** (speech compression).

As a courtesy, please reset them to these previous values after you are done. You are always welcome to change the band frequency and message memories as you see fit at the time. No need to return the memories to previous settings.

One further comment on the menu. DO NOT CHANGE the ST P - sideband tone pitch. It's set for 700 Hz (chosen because many modern rigs are set to this from the factory) and while this may not be to everyone's liking, changing it is not as simple as changing this setting. After changing this, the entire radio and each edge of all five CW filters must be re-calibrated! (If you don't also change these, receive performance will be way down.) It's not a simple job and it can't be done in the field.

So, other than the above listed menu settings, *please*, DO NOT CHANGE MENU SETTINGS! Other menu settings may have similar issues. If you feel it is important to change any of them, let the Radio Officer know before you take it in your own hands. It will be considered and possibly changed if there is general consensus about the issue.

While this is a fantastic CW rig, it is also a great SSB rig, and we anticipate that some will want to use it for phone operations. So, we have purchased the SSB option, a mic, and the noise blanker option so that everyone can have fun with it. An audio line level out and a straight key jack were added as well.

Dan, NM3A, constructed and installed these items, calibrated the SSB filters, and tested the radio and set up the Go Kit.. In addition, our President Paul, AC3IE, Jack, K3JAS, Steve, K3FAZ, and Radio Officer Bob, WC3O have all contributed to finishing the Go Kit. It is available for CW or SSB use at Winter FD this year. It's available **now** for checkout any time for POTA, SOTA, or just plain fun! If you want it for a specific time, please reserve it with a note on the radio.

Whenever you check out the radio, pay attention to the **Checklist** in the Go Kit case. Make sure you have all you need in there. Don't forget the battery! It's plugged into the 12V jack. Make sure the radio and battery are padded and secured with velcro straps. Mic, paddles/cable, power cord should all be packed in the **QRP Go Kit**. A 72 foot EFNRW antenna, 17 foot counterpoise, 1:9 unun, throw line, and coax go in the case too. When you come back, set the radio back up in the #4 position and plug the radio and battery into the 12 volt Power-Pole outlet.

Check out the following 'Q5'er' articles that document the upgrades that we made and the QRP Go-Kit that we setup. We think you'll be very pleasantly surprised as to this rig's performance and ease of use. Stay tuned to the 'Q5'er' for more info!

Recently worked CA, WY, CO, TX, NM, MN, WA, and MT on 40m CW with 5 watts and a mediocre antenna! Also worked Indiana and New Jersey on SSB with good signal reports on the same antenna. Lots of fun here, can't wait for y'all to join in the fun. Get out there! Use it! Take pictures! Then write up a blurb about *your* fun with the K2 for the 'Q5'er'.

Bob-WC3O & Dan–NM3A

Elecraft K2 Upgrades

de Dan – NM3A

Four new items were recently added to the club's K2. We added a SSB Board to allow it to to be used on upper and lower sideband as well as CW. Also, we added a a noise blanker, a fixed line level audio out jack, and a dedicated straight key jack. There were a few other optional upgrades already in our K2 whenever we received it. I will mention them here too.

The below rear panel photo shows: (clock wise from lower left) **1**- 12 V input, **2**- CAT/Aux I/O, **3**- GND, **4**- Ant 1, **5**- Ant 2, **6**- External speaker, **7**- Fixed level audio out, **8**- Paddles input, **9**- Straight key jack, **10**- External Amp relay, **11**- Original Ant- (now disabled)

CW Straight Key Jack

With a couple of diodes, the K2 is capable of recognizing straight key input while simultaneously allowing for paddles to control the internal keyer. This is suggested as an external cable, but I wired up the necessary 1N4148 diodes and connecting cable to a dedicated jack on the rear panel. So, you die hard straight key, bug, or cootie ops can now pound brass to your heart's delight. It's also useful for those who have a favorite keyer they want to use. The jack is in the center of the lower rear panel (heat sink) and takes a mini (1/8") phone plug. NOTE: Only the tip and ring are used. (There is a separate stereo jack on the lower rear panel for paddles for the internal keyer.) You can see the cable for this on the T-R relay board photo.

Fixed Line Level Audio Jack

W8FGU makes this unit that was designed by N0SS (SK). It takes audio before the audio amplifier and volume control and puts this on a jack on the upper rear panel (top cover). Useful for recording received audio or data modes.

Amplifier T-R Relay Jack

Another W8FGU/N0SS product. This allows for keying of an external amplifier. Unlikely to be useful in our application, but that's what that jack is in the center of the rear lower panel. It is plugged into the RF Board jack for the 60 meter/transverter board, which is no longer available. The previous owner used this to key his Elecraft KPA1500 amp. So if Skyview gets a KPA1500, we will be all ready to hook it up!

9 Pin I/O Jack

This Elecraft add-on provides RS-232 level CAT function to use with a computer. It also has band level information that can be used to automatically band switch antennas or band switch an external amplifier. Because of this dual function, a common

9 pin RS-232 cable or USB adapter cannot be used directly. An interconnect cable is provided to allow for connection to a standard RS-232 or USB to RS-232 adapter. The jack is on the upper rear panel.

Wideband Automatic Antenna Tuner (ATU)

Elecraft makes excellent 10:1 antenna tuners and our K2 has their internal 20 watt tuner already in the radio. It is mounted under the top cover and has two BNC jacks in the center of the top rear panel. The Ant 2 jack is capped as it is not expected to be needed in our setup. The original BNC jack on the lower rear panel is also capped, as this is disabled when the internal tuner is installed. The Ant 1 BNC is the usual antenna connection. Holding the TUNE button on the front panel automatically matches the radio to the transmission line and antenna. The tuner also remembers prior tunes at the same frequency and automatically sets the prior LC combination. However, it does not know if you have changed antennas, so when in doubt, push (and hold) the TUNE button.

Audio Filter and Real Time Clock

This is another Elecraft option that was already installed in the radio. It provides two levels of narrow audio CW filters. When used with the narrow CW crystal filters, it steepens the effective skirt of the filter and effectively narrows the filter. This is most useful during contest conditions when signals are wall to wall. It can also be used with the wider CW crystal filters to narrow the received signals. However, it will not prevent AGC 'pumping' if there are strong signals in the crystal filter path but not in the audio filter bandpass. There is also noise reduction built in when this filter is turned on.

The real time clock is set for UTC time and date. An internal coin cell keeps the clock running even when power is off. Tapping the DISPLAY button will change the display to show Time, tapping again will show current and voltage and a third time will return display to frequency. There is some computer noise when this is displayed, so you probably will want to only intermittently check the time. It is set for UTC and can be very useful for documenting time on a POTA or SOTA outing.

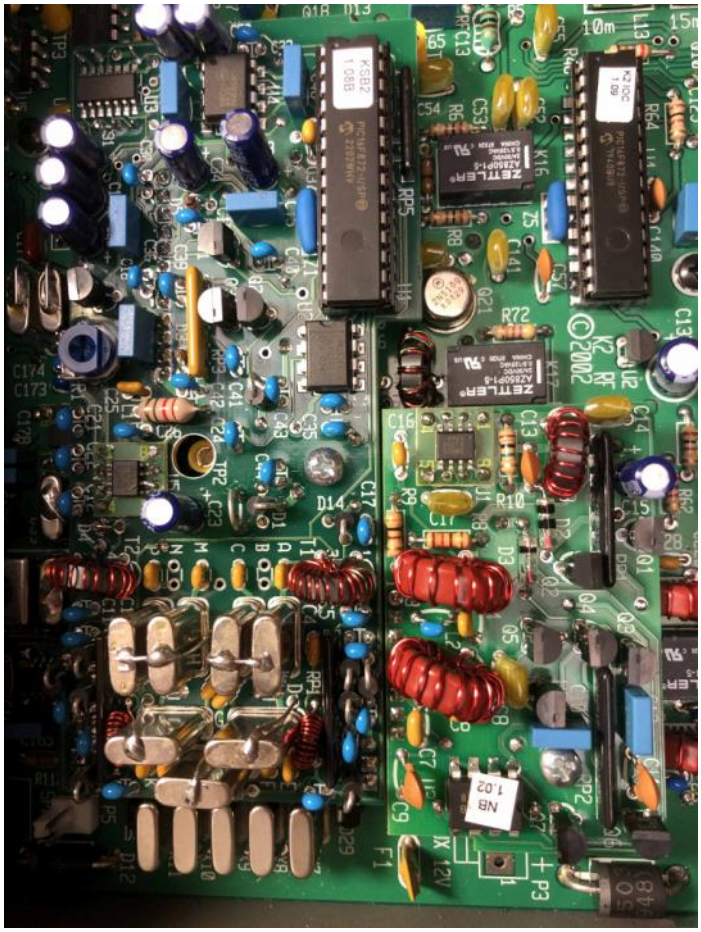
As an aside, the K2 uses sub-processors on every board. Communication between them and the main processor can provide hash (broadband noise) in the receiver. So, most of these sub-processors are in standby mode and only function when an interrupt awakens them. This means that computer bus noise does not normally impact reception of signals. Leaving the clock or date displayed is one area where this noise is noticeable.

Noise Blanker

This Elecraft option provides suppression of wideband pulse type noise from motors and vehicle ignitions. It was added as part of our K2's upgrades. Hopefully not needed much, but it is there if you do. Like other modules, it is available from a front panel switch.

SSB Module

This photo shows SSB module on lower left and NB module to its right. At upper right is the RF Board's sub-processor



I built this SSB Module and added it to the K2. It provides USB/LSB operations for the K2. It also has a dedicated 7 pole crystal filter for SSB.

The front panel PCB provides wiring options for various different microphones. I chose to wire it as a standard Elecraft electret microphone (like their MH4) for the mic and PTT only.

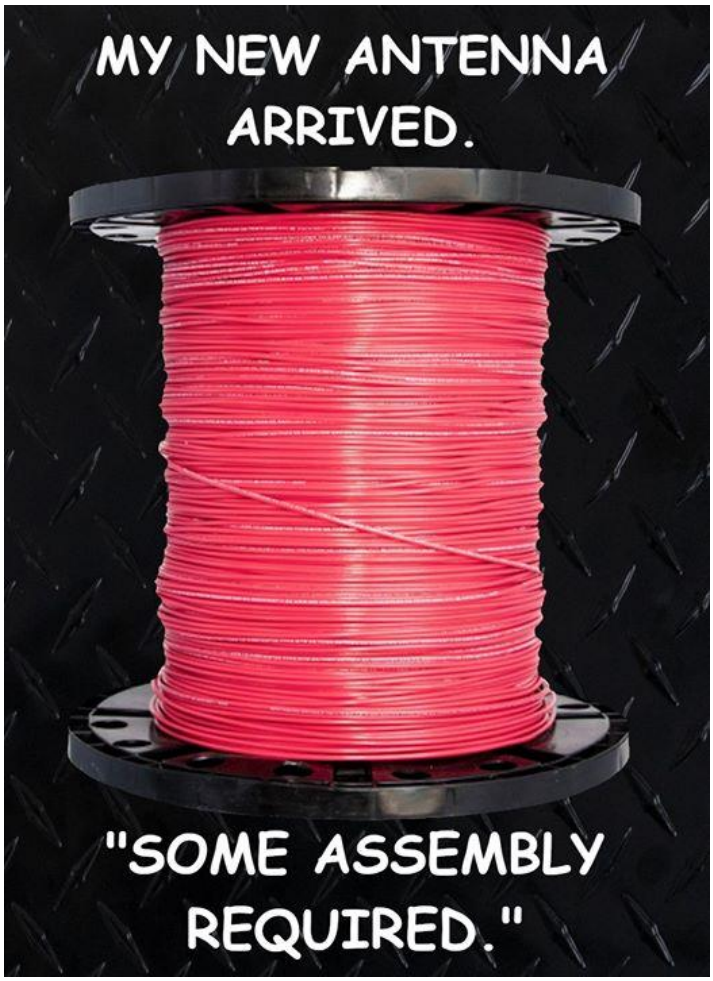
This means there is an 8 volt bias on the mic line through a 10k resistor. Mic current draw on the 8 volt regulator is in the nano amps territory and even a dead short should only draw about 1 mA. An old Kenwood mic was modified with a 10 mcF blocking capacitor to allow us to use it this radio. Bench and over the air testing has proved it is a very capable addition to this K2.

Other Features

The latest K2's (which include ours) feature as standard a few items that were optional on early units. These include a temperature compensated PLL to minimize drift, a mod to markedly reduce key clicks, and a volume control mod to minimize noise from the potentiometer.

In short, this is now a very capable full function HF CW and SSB QRP radio with high end features and very nice ergonomics that make it a pleasure to operate. QRP does provide some challenges, but it is also very rewarding as it takes a little bit more finesse to make contacts. The QSOs you do make are that much more fun.

Dan - NM3A



Portable Operation With a View

Skyview's K2 HF QRP GoKit

de Dan – NM3A

The last two articles described the Elecraft K2 HF Transceiver that we were quite fortunate enough to donated to us, and the additional components that we have added to it.

Here I would like to describe the fully functional HF QRP GoKit that has been created and is now available for Skyview members to check out and use.

This QRP GoKit consists of:

- GoKit Case- a modified Fluke protective carry case with shoulder strap
- Elecraft K2 QRP CW/SSB radio with internal ATU
- K2 PowerPole adapter cable
- 12 volt 7 Ah gel cell battery with PowerPole cable
- Miniature CW paddles with magnetic mount and cable
- Microphone
- Coax - 16 foot RG8X
- Antenna :
  - 72 foot End Fed Non Resonant Wire (EFNRW)
  - 1:9 Unun
  - 17 foot counterpoise
- Throw line and weight for getting the end of the antenna up high into a tree.
- Clip board with steel plate for the magnetic paddles and your note paper or log
- Pen, pencil, and some note paper
- Checklist of components in the kit
- Elecraft K2 Quick Reference card

What it doesn't have:

- Log book (bring your own or use note paper, your phone, or computer)
- Computer or cables and interface for data modes
- Chair (yeah, like that would fit in this case !)
- Headphones (the K2 has an internal speaker)
- Straight key
- Test gear, spare cables, battery, or other spare parts
- Fuses (K2 internally has diode reverse polarity protection and a self resetting polyfuse)
- Antenna support (trees are expected, but antenna need not be terribly high)
- Radio manuals (they are available on Elecraft web site or on paper at Skyview)

Weight is under 18 pounds, which is easily doable for POTA or back yard ops. A bit heavy for many SOTA operationss. Can reduce weight by about 3-4 pounds if you supply your own a smaller (e.g. 3 Ah) LiFePO4 battery.

Photos follow on the next page.

We encourage you to get familiar with it and use it. The radio will frequently be set up at the #4 station at Skyview so you can play with it. Ask for help if you are unfamiliar with the K2. If you are familiar with Elecraft's KX2, KX3, K3, K3s, or K4; its operation is similar, although simpler. We'll be giving a short tutorial during Elmer night when we get closer to nice, warm weather this year.

Dan - NM3A

Bottom of GoKit : Mic, Paddles, Battery, NotePad, Pen, Pencil, 12v Power Cord

Protective Bubble Wrap & Radio Strap

Radio and Coax Added

Finally the Unun, Clipboard, Antenna, Counterpoise, Throw Line, Checklist, and the K2 Reference Card

Three Short Stories

Becoming a Ham Radio Operator

Once upon a time, there was a young man named Tim who was interested in becoming a ham radio operator. He had always been fascinated by the technology and the idea of communicating with people from all over the world.

Tim decided to study for the ham radio license test. He spent hours reading the study materials and practicing with sample tests. He was determined to pass the exam and become a licensed operator.

The day of the test arrived, and Tim felt a mixture of excitement and nervousness as he entered the testing center. He sat down at a desk and began to answer the questions. The test covered everything from radio theory to emergency procedures.

Tim was relieved when he finished the test and felt confident that he had done well. He waited anxiously for the results to be announced.

When the results were posted, Tim's heart leaped with joy when he saw that he had passed! He was now a licensed ham radio operator. He was ready to start communicating with people from all over the world.

Tim thanked the volunteer examiners who had helped him and gave him the test. He knew that it was a big step to become a licensed operator but also knew that it was worth it. He was now able to communicate with people from all over the globe, make friends and even help in emergency situations.

With his license in hand, Tim set out to explore the world of ham radio, eager to make new connections and discover the many possibilities of this fascinating hobby.

A Ham Radio Operator Adventure

Once upon a time, there was a ham radio operator named John. John had been interested in radio communication since he was a young boy, and had spent many hours tinkering with radios and antennas in his backyard.

One day, while John was out on a hike in the mountains, he stumbled upon an old, abandoned cabin. Intrigued, he decided to investigate. Inside, he found an old ham radio, complete with a set of antennas and a power supply.

Excited by his discovery, John set to work repairing the radio. He replaced a few burnt-out components, and soon had the radio up and running. He adjusted the frequency and began listening for any signals.

To his surprise, he picked up a distress signal coming from a nearby mountain. The message was garbled and hard to understand, but John could make out that a group of hikers were lost and in need of help.

John quickly contacted the local authorities and relayed the message. A rescue team was sent out, and the hikers were found safe and sound.

Thanks to John's quick thinking and expertise in ham radio communication, he was able to save the day. From that day on, he was known as the "Ham Radio Hero" among the local community.

John continued to use his skills to help others and make connections through his radio. His adventure in the mountains was just the beginning of his journey as a ham radio operator, and he couldn't wait to see what other adventures lay ahead.

Three Short Stories (Continued)

Discovering Parks On The Air

Once upon a time, there was a ham radio operator named Jack. Jack was an avid outdoorsman and loved to combine his passion for hiking and camping with his love of radio communication. He had heard of a program called Parks on the Air (POTA), which encourages amateur radio operators to set up temporary stations in parks and other natural areas, and make contacts with other operators from around the world.

One summer, Jack decided to participate in POTA by setting up a station in a remote and beautiful national park. He packed his camping gear, radio equipment and antennas, and set off on his adventure.

After a long hike to his chosen spot, Jack set up his station on the top of a hill, with a stunning view of the surrounding wilderness. He erected his antennas, powered up his radio, and began listening for signals.

To his delight, Jack made contact with operators from all over the world. He chatted with hams from the United States, Canada, Europe, and even Australia. He was amazed by the power of radio communication, how it allowed him to connect with people from all over the globe, even from a remote mountain top.

As the sun set and the stars came out, Jack sat by his campfire, listening to the voices of other hams on the radio. He felt a sense of connection and camaraderie with these people he had never met in person, united by their shared love of radio and the great outdoors.

The next day, Jack packed up his station and hiked back to civilization, but he knew that he would be back to participate in POTA again in the future. He had found a new way to combine his passions and make connections with like-minded people from all over the world.

ED : Three pretty good ham radio related short stories, huh?

No, I did not write them.

No, I did not find them out there on the Internet.

Yes, I got them from the Internet.

I asked ChatGPT to write them for us.

Chat Who ??

ChatGPT is an online Artificial Intelligence (AI) program that has been trained to interact with users. It will do a lot of things. Just have to ask.

In this case I asked for stories about :

- Getting a ham radio license

- A ham radio operator adventure

- A ham discovering Parks on the Air (POTA)

And these are the stories that were generated.

You may have heard about this on the news.

It is worrying educators who assign essays.

It has been said to produce great sounding stories like these, but often with convincing falsehoods.

However, I was not able to find any falsehoods in these three generated stories. The 'adventure' story may be a little far fetched in this day and age, but stranger things have happened . . . .

Give it a try sometime. It will handle more technical questions (But, it won't tell me about any great stocks that are going to go way up soon).

https://openai.com/blog/chatgpt/

Welcome New Members !!

Welcome the following Skyview Radio Society Members who have joined us since publishing the December 2022 newsletter:

KC3VCX - Frank Semetkoskey - Apollo

KC3WVU - Tyson Semetkoskey - Apollo

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 JAN 23

NM3 A	WB3 HFP	K3 MJ	KD3 RVR
N3 AFS	WA3 HGW	K3 MRN	KQ3 S
KB3 APD	KB3 HPC	N3 MRU	K3 SBE
NA0 B	KA3 HPM [SK]	KS3 N	KC3 SDJ
WI8 B	K3 HSE	G4 NFS	KC3 SKX
N3 BAH	KB3 HXP	KB3 NSH	KC3 SNZ
W3 BUW	AC3 HZ	AJ3 O	KB3 SOU
KF3 C	AG3 I	WC3 O	K3 STL
KC3 CBQ	AC3 IE	WO3 O	KC3 STS
W3 CDW	KC3 IIO	KC3 OCA	KC3 STV
K2 CI	AB3 IK	KC3 OCB	KB3 SVJ
K3 CLT	WB3 IMB	KC3 OCC	KC3 TEX
K3 DCG	W3 IU	K3 OGN	WV8 TG
N3 DRB	K3 JAS	N3 OIF	N3 TIN
K3 DWS	KG4 JBB	KB3 OMB	N3 TIR
KC2 EGL	N3 JLR	KB3 ORO	W3 TLN
KC3 EJC	KA3 JOU	NK3 P	N3 TTE
K3 ELP	ND9 JR	K3 PC	AG3 U
AB3 ER	N4 JTO	K4 PDF	NS3 U
WA3 ERT	K3 JZD	KC3 PEM	N3 UIW
N3 ERW	KC3 KEI	KC3 PIM	W3 UY
K3 ES	WA3 KFS	K2 PMD	KX3 V
KB3 EYY	KB3 KHR [SK]	KE3 PO	KC3 VCX
AC3 EZ	AC0 KK	W3 PRL	K3 VRU
WB3 FAE	K3 KR	KC3 PSQ	N3 VXT
K3 FAZ	W4 KV	KC3 PXQ	W3 VYK
KC3 FEI	KC3 KXZ	AC3 Q	N3 WAV
K3 FH	WE3 L	NU3 Q	K3 WM
K3 FKI	WA3 LCY	WQ3 Q	N3 WMC
KC3 FWD	KC3 LHW	KC3 QAA	KC3 WVU
AC3 GB	W3 LID	KC3 QIR	K3 WWP
N2 GBR	WB3 LJQ	KC3 QWF	N3 XF
AC3 GE	KB3 LND	NJ3 R	KB3 YJQ
KC3 GIL	K3 LR	K3 RAW	W3 YNI
KC3 GIN	KC3 LRT	KC3 RIL	W3 YNX
KC3 GPM	AB3 LS	K3 RMB	WA3 YWU
K3 GT	KC3 LZH	KC3 RMN	K3 ZAU
AB3 GY	N2 MA	KC3 RPE	W3 ZVX
KC3 GZW	KC3 MBM	KC3 RPP	
NC3 H	N3 MHZ	W3 RRK	
NY9 H	KC3 MIQ	I2 RTF	

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 . . . . .

Electric Passenger Airplanes are coming. Just for short haul use—but apparently viable. (After all, electric drones have been flying for many years).
https://tinyurl.com/2m93l82l

Ever heard of "Edge Computing Devices"? Seems like new marketing buzzwords show up regularly. This was a new one for me. (Sure seems a lot like the hier-archical computer network that I was involved in designing and deploying back in in the 1990's).
https://tinyurl.com/mudp9zxc

Somehow this sounds like a new source of RFI (not an acronym that they used, but . . . . .)
https://tinyurl.com/nbc8zer3

And, yes, there are still electronics companies being started up in garages . With a CMU connection . .
https://tinyurl.com/y95h4ucv

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 April 1, 2023
Closing Date For Submissions : March 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

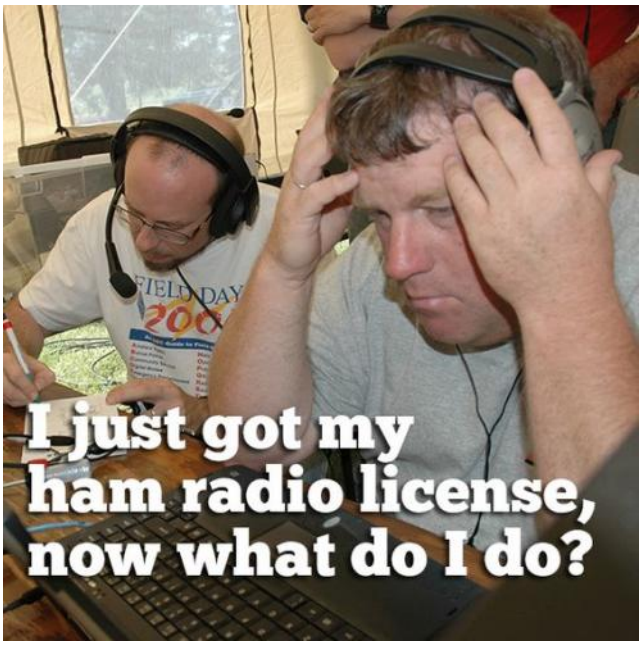
Location: Skyview Clubhouse Meeting Room
2335 Turkey Ridge Rd
New Kensington PA 15068-1936

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

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