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

Q5er – The Official Newsletter of the Skyview Radio Society

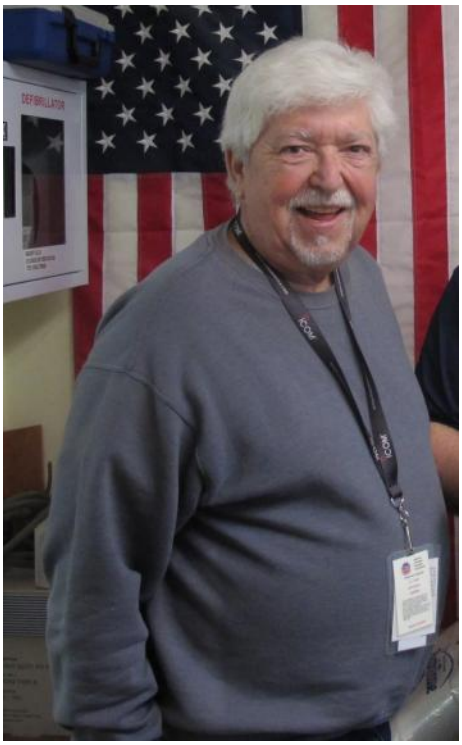
Jack Buzon - KA3HPM
(Captain Jack)
Silent Key 14JAN22

Captain was a fixture in the Pittsburgh amateur radio arena. I am sure I am going to miss a few things, but Jack was:

- President of the Breeze Shooters
- ARRL QSL card checker
- He was an OO (ARRL Official Observer program)
- Long time VE involved and helped MANY people get their amateur radio license
- Jack was one of the founding hams involved with the amateur radio station on the Requin

As for Skyview:

- Jack was a past Skyview president and was on the Skyview board
- QSL manager for Skyview. Over the years jack has sent out literally thousands of QSL cards for K3MJW, WX3SKY, W3GH, K2M 13 Colonies and MUCH more
- Jack was an Elmer for many new hams at the clubhouse
- Often Jack would give new hams equipment to help get them started



Jack was an avid DXer with well over 300 DXCC entities to his credit.

Again, I'm sure I am missing some other important things that Jack was involved with.

He will be sorely missed by his fellow hams and friends. Our thoughts and prayers go out to his family.

Very best 73 OM
Until we meet again
Bob WC3O
. . .—.—

2022 is Skyview's 62nd Anniversary !!

February 1, 2022

The Sunspots Are Arriving

Keep Trying those Dead 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

There are some articles about our member's recent accomplishments in this Issue. I wrote an article about John - K3WWP's recent accomplishment. And then John submitted an article himself, written in the third party. I decided to use both of them. Wayne - K3WM wrote about his recent success in an EME contest, accomplished with home brewed equipment. Wayne outlined some of the details that he hopes to share with us in the future. Both of these discuss interesting paths not frequently travelled, so be sure to read them.

I could not find words any better than Bob's regarding our friend Captain Jack. 73 until we meet again Jack.

PA has now lifted all pandemic restrictions EXCEPT that Mask wearing is still required for our crowded indoor location and at crowded outdoor locations.

Use the Skyview Facilities At Your Own Risk.

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

Jody - K3JZD

Ham Radio is a Contact Sport

(Minimum QSO : 6'-0")

From the Treasurer

We are looking pretty good financially. We had a successful Swap and Shop in August 2021. And so far our 2022 renewal rate is looking great. Thank you everyone who has renewed for continuing to be a Skyview Member.

However, the next issue will have the 2021 Roster shown on page 27 trimmed to reflect only those who have paid for 2022. So, if you have been procrastinating, send your renewal form to Tom - AB3GY now so that you do not fall off of the Skyview Roster.

Sure hope things get back to normal this year so that we can do all of our usual activities (didn't I say that same thing a year ago?). We did manage to get some of them done in 2021, but were not able to do all of them. We held our annual banquet in January— it was nice to get back to doing that social event.

Jody - K3JZD

If you made a tax deductable donation to Skyview in 2021, and want a receipt letter for your tax records, contact me: k3jzd@arrl.net

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. Mainly because of the submitted articles and photos.

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

Sometimes my greatest accomplishment is just keeping my mouth shut. – Anon

January Business Meeting Minutes

de Don - WA3HGW

Skyview Radio Society
Monthly Business Meeting – January 4, 2022

Call to Order: 7:30 PM by President Scott Gliebe, AC3GB.

Attending – 24 members: WA3HGW, AC3GB, K3JZD, AG3I, NM3A, WA3KFS, AB3GY, N3TIN, W3IU, AG3U, AB3ER, K3JAS, N3WMC, N2MA, KG4JBB, ACØKK, WC3O, K3STL, AJ3O, NJ3R, KC3LHW, K3RAW, AC3IE AND KC3PXQ.

Prior Meeting Minutes: The minutes of the December 7, 2021 were distributed at the meeting for member review. A motion to accept the minutes as presented was made by N3WMC and seconded by K3JAS. The motion passed without objection.

Treasurer's Report: Treasurer Jody, K3JZD, passed out the financial report as of 31 December 2021 (attached). Jody provided an overview of the report. The club fixed expenses completed the year with a surplus. Unallocated funds remain good with some income from VE session and 50/50 donations and small expenses for the December pot luck dinner lasagna and some administrative expense for envelopes and postage. There were no expenses in December for facilities maintenance or repairs. A motion to accept the Treasurer's Report as presented was made by ACØKK and seconded by N2MA. The motion passed without objection.

Membership Report: Tom, AB3GY, made a motion to open the membership rolls, which was seconded by AG3I. There is one new membership application for consideration:

Steven Fazekas, K3FAZ, Sarver, PA. Steve is an Amateur Extra class licensee. A motion to accept was made by AB3GY and seconded by AJ3O. The motion passed without objection.

AB3GY made a motion to close the membership rolls. The motion was seconded by K3JAS. The motion passed without objection. Our membership at the close of 2021 was 154. Our 2022 membership now stands at 108. The membership list as of 1 January 2022 is attached. Tom received a round of applause from the members in attendance for such good work in his first year as Membership Chair.

Radio Officer Report: All radios and equipment are working well at this time. Thanks were given to Ron Blobner, NJ3R, for work repairing the AL-1500 amplifier for the radio room. This should be back in service for the RTTY Roundup this coming weekend. WC3O purchased some materials for additional and improved receive only antennas. These include the loop-on-ground mentioned last month plus a flag antenna and some to-be-installed phased verticals. All of the radios will have receiver protection installed.

Kitchen Report: The kitchen fund balance is $267. Kitchen supplies are good.

VE Report: The next VE session is January 15. There is presently one license candidate scheduled for the VE session. The December VE session had 6 persons attending, and all passed with 5 new Technicians and 2 General upgrades. (One of the attendees passed both Technician and General exams.)

Newsletter: The December issue of the *Q5er* is out. Jody, K3JZD, is looking for newsletter submissions by January 15 for the February issue.

Facilities: Dave, N3TIN reported that one of the outside lighting lamps was replaced. Also, there are still some outstanding obsolete wiring issues in the attic that will be addressed soon.

Building Committee: The committee is still waiting for bids to come in from contractors. Once the bids are received, hopefully soon in the year, they can review them and be able to make decisions on how to proceed.

Calendar of Events:
January 8 – ARRL RTTY Roundup.
January 8 – Wireless Association of Sough Hills 2 meter Simplex Contest.
January 15 – VE Session.
January 22 – Club holiday party at the Delmont Fire Hall, 6 PM.

January 28 & 29 – Winter Field Day.
February 12 – Breezeshooters Groundwave Contest, CW.
February 27 – WASHFest 2022 at Home Ec. Bldg, South Park.

Old Business: No old business was presented.

New Business: No new business was presented.

Elmer Night: January 18. Tall Guy, K3STL, will give a presentation on the Geochron display in the radio room. The February Elmer Night will be on EME (Earth-Moon-Earth) or "Moonbounce" presented by Wayne, K3WM.

Net Report: The weekly check-in average for December 2021 was 38.

50/50 Drawing: The total collected was $31. The winner of $15.50 was Ron, NJ3R. Ron donated the proceeds to the club treasury.

Meeting Adjourned: A motion to adjourn was made by WA3KFS and seconded by AB3ER. The motion passed without objection. The meeting was adjourned at 7:55 PM.

Respectfully Submitted,

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

Membership Renewal Time

Another year has begun. It is time for all Skyview members to renew their commitment for 2022.

We have held the line on our Annual Dues. There is not any increase for any type of membership for 2022.

Membership packets were been mailed to all active 2021 members who did not receive one in person or request one via e-mail.

However, if you joined as a new member at the August 2021 Swap 'N Shop or anytime between then and the end of 2021 you are already renewed for 2022. Your packet consisted of a renewal confirmation

If you have misplaced your renewal packet, send an e-mail with your name and callsign to me at ab3gy@arrl.net and I can reply with your packet as a PDF attachment.

Why renew? Because Skyview Radio Society has something to offer all hams who want to be involved in the hobby. Whether it is operating, contesting, personal enrichment, public service or just plain fun, Skyview has something for you.

The variety of offerings reflects the diverse interests of its members. In other words, your participation is what makes this club great! Renew today !!

Tom Kerr AB3GY
Skyview Membership Chair

Congratulations K3WWP on 10,000 Consecutive QRP QSO Days

de Jody – K3JZD

(Pictures from k3wwp.com)

On December 20th, John - K3WWP reached 10,000 Days of making at least One CW QRP QSO Every Day while using only simple wire antennas.

I am going to borrow some words that Larry - W2LJ posted on his Blog (FirefliesQRP@groups.io) because Larry put it so very well.:

Think of that! 10,000 days! That's over 27 years! Not only is that mind boggling in and of itself, how many of those QSOs were made during the poor conditions of sunspot mini-mums, solar flares, and coronal mass ejections? Keep in mind that the recent phenomena of RFI pollution which plagues a lot of us with high S level background noise hasn't made this feat any easier.

For those of you not in the know, John lives in kind a row house type of house, so add to all of the above, the lack of real estate he has to contend with. Yet, here we are at day 10,000.

Other than to those who read his "diary" on a regular basis, I don't know how many QRPers out there really know about or appreciate this streak. You'd think something like this would be a hot topic for QST or QRP Quarterly, but it doesn't seem to get much mention.

I did the "QSO a Day" thing myself back in 2012. Let me tell you, by the time December 31st rolled around, I was ready to pull my hair out! Conditions were bad towards the end and I thought that I'd never make it. These things take on a life of their own and personally, I was glad it was over! How John has done this for over 27 years is beyond me! All I can say is that he is a way better operator and man than I'll ever be and may God bless him!

72 de Larry W2LJ
QRP - When you care to send the very least!

John is the co-founder of the North American QRP CW Club (NAQCC) and served as Vice President for many, many years. He wore many hats with the NAQCC until he stepped down and let others take the reins. http://www.naqcc.info/

John is a Skyview Member. John, and other WPA NAQCC Members (including Mike - KC2EGL, also a Skyview Member) have been providing a QRP demonstration at the Skyview Swap & Shop for more years that I have been associated with Skyview. Their intent is to show that QRP CW does work. Using the Skyview antennas does help some. But skill at operating CW QRP helps a lot more.

John has previously had several Daily CW QRP DX Streaks going as well. However, he began to be plagued by a high QRN level at his house. That high noise level and the lows during this last sunspot cycle made making one CW QRP DX contact every day a real chore. His most recent Daily CW QRP DX Steak went for 1980 days, from 01MAR13 to 01AUG18.

John's personal web site at http://k3wwp.com/ has more information on his various Streaks, And it has a wealth of information on QRP operation. John has succumbed to the lure of the KX3/PX3 combo, but prior to that happening he relied heavily on homebrewed QRP radios and tuners. The 1996 photo above shows some of them.

John's operation is a testament to simple wire antennas. I have visited John. He gave me a tour of his antenna. It was actually a tour of his house because his long wire antenna is largely inside of his house. Those of you who are in HOAs or have other property where stringing antennas is difficult should take note of the success that John has had with his simple wire antennas and 5 watt CW transmitters.

de Jody - K3JZD

John's 10,000 Consecutive Day QRP QSO Streak

de John – K3WWP

ED: Authored by John, but written from a reporter's perspective

August 5, 1994 through December 20, 2021 is a span of 10,000 days. On each and every one of those 10,000 days, John K3WWP made at least one QSO using CW, QRP power of 5 watts or less, and simple wire antennas including an end-fed random wire, most of which is in the attic and used on 160 through 30 meters, a 20 meters flat top inverted vee in the attic, a 15 meters vertical dipole on the side of the house also used for 17 and 12 meters, a 10 meters slanted dipole on the front porch roof, and a 6 meters rotatable dipole in the attic.

The rigs included a homebrew transmitter, a Kenwood TS-570, a Kenwood TS-480, an Elecraft K2, KX1, and KX3. All set at a power level of 5 watts or less output and only used on CW.

Here are some stats about the streak, all of which involved only the equipment listed above. John made a total of 72,190 QSOs during the 10,000 days. Involved were 20,098 different stations. Whether you worked John on one day or 100 days, you made it possible to have such a 10,000 day streak and John thanks you.

At least 2,099 QSOs were 1,000 or more miles per watt. 24,098 QSOs were DX (non W/VE) from 224 countries. All 50 states were each worked many times over, from 3,819 in Pennsylvania to 63 in Wyoming.

Most worked DX country was Germany with 1,934 QSOs. Contacts by continent ranged from 52,639 in North America to 325 in Oceania plus 18 in Antarctica. 36 of the 40 CQ Zones were worked with 4 in Southeast Asia (22, 24, 26, 28) not worked. QSOs by band ranged from 19,279 on 40 and 15,459 on 20 down to just 28 on 60 and 39 on 6.

On 7,256 of the 10,000 days, the first QSO of the day came in the 0000Z hour. The latest time to log the daily first QSO was 2311Z on February 14, 1995 when John worked EA8/DJ1OT on 30 meters. 13 other days it took until the 2200Z hour to get the QSO. Most all of those late QSOs came in the early days of the streak when it was not all that well established.

(Pictures from k3wwp.com)

John also had a DX streak within the 10,000 days. On 1,980 days from March 1, 2013 through August 1, 2018, John worked at least one DX station. Of course with the same equipment listed above. The DX station was also the QSO for the main streak that day or in addition to another main streak QSO.

The greatest satisfaction John got from the streak was the input from other hams who said the streak got them interested in operating CW and/or QRP and finding it gave them a lot of pleasure also, as it did to John. In that way it helped to preserve the wonderful mode of CW or Morse Code.

Oh and John says it is not over by any means and it will continue on to 11,000, 12,000..... or when something beyond his control ends it. You can see much more info about the streak and other aspects of CW and QRP on John's web site at [k3wwp.com](k3wwp.com).

de John - K3WWP

Top - CMOS Super Keyer II - Winkeyer USB
Bottom - Begali Blade Key - Bencher Paddle - Begali Magnetic Classic - Vibroplex Lightning Bug

EME - Earth-Moon-Earth Communication

de Wayne – W3WN

Over the last two years I have been building equipment for EME on the 1296 and 2304 MHz bands.

In October thru December I operated the ARRL EME contest and made 13 contacts on 2304 and 88 contacts on 1296.

I'm looking forward to talking to interested folks about the equipment I've built and its results. I'll be covering:

- Antenna: 14 ft dish
- Stepped-septum circular polarization feed
- Preamp, Relay, Transverter, Driver and PA
- Circuit board for control and telemetry
- Mount: Az and El gearmotors
- Liquid Cooling
- Support rack in outdoor enclosure:
- Power Supplies, Gimbal drive, remote switch, controller
- Shack: 2m transceiver, signal splitter
- ARC program for control
- 1 MHz bandwidth spectrum analysis system using program AS
- Station Monitor and Keyer: simple keyer functions
- Operating: Doppler shift; Q65, CW, Crossband

I'm looking forward to talking to you folks.

Wayne - K3WM

ED : Wayne hopes to share some information in upcoming issues of this newsletter. He is also planning a Skyview ZOOM presentation.

ED : Here is a little EME info that I found on :

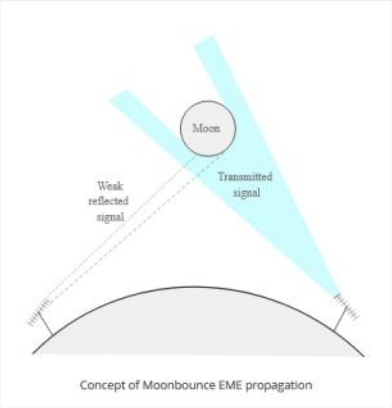
https://www.electronics-notes.com/articles/ham_radio/amateur-propagation/moonbounce-propagation-eme.php

Go there for much more information about this very interesting mode of communications

The use of E-M-E propagation or Moonbounce is a challenge to any radio amateur wanting to use this mode of radio propagation, but it can yield some excellent results. Those with the right equipment are able to make contacts with stations in many different areas of the globe when the Moon is in the right position relative to the Earth. In this way it is a particularly interesting form of propagation to use.

Moonbounce basics

The basis of operation of Moonbounce or EME, Earth-Moon-Earth is the use of the Moon as a passive reflector. In view of the very large distances involved and the fact that the Moon's surface is a poor reflector the path losses are colossal, but nevertheless it is still a form of communication that is theoretically possible to use, and one that many radio amateurs regularly use.



Concept of Moonbounce EME propagation

With radio signals being very low, it is found that galactic noise becomes a significant factor. This noise emanates from a variety of sources in the galaxy - planets, stars, etc. emit noise throughout the radio spectrum, and EME systems are very sensitive and will be able to hear this noise. The level of noise is not constant across the sky and this means that some times the sky around the Moon can be very noisy and at other times it can be much quieter.

It is found that sky noise is normally worst when the Moon is crossing the galactic plane (i.e. the Moon appears in the Milky Way) and this occurs twice each month. Fortunately software used for amateur radio EME Moonbounce indicates this and this helps choose the optimum times for any activity.

D-104 Modifications

de Dan – NM3A

Got a vintage lolly-pop Astatic D-104 (or the JT-30 and similar bullet head mics) with tall or short base? It doesn't work with your modern rig, you say?

Made from 1933 through 2001, D-104s are still easily found. (Astatic mics made after 2001 have more modern mic elements and the information below may not apply.)

But the vintage Astatic mics look so nice, it is a shame to keep them in your junk drawer. I also find them to be ergonomically and acoustically appealing. You can often find them at hamfests, sometimes at a reasonable price. However, they have a few issues.

First:

The old crystal mic elements were meant to interface with high impedance inputs such as vacuum tube rigs. The output is way too low for modern low impedance input solid state rigs. Those old mic elements are often good, they just need a modern interface for the low impedance modern rigs. (Later models did have an integral circuit to interface with low impedance rigs. See below.)

Various different mic elements have very different equalization curves. With older rigs, a mic that emphasized voice intelligibility over hi-fidelity was desirable for maximum speech power. The D-104 crystal and the Heil HC-4 were such elements. Some hams prefer a different element for nets or local rag chews that has a more natural sound. Modern rigs all have transmit equalization built in to the rig and most any mic can be made to sound as you like, so this is no longer such an issue. Because of this, Heil no longer markets the HC-4.

The crystal element in the D-104 tends to emphasize speech power rather than natural sound. This is generally a desirable feature in a communications mic and so may be just the right fit for you. If you prefer a more natural sound, your rig equalization can compensate for this.

Second:

If you have a D-104 produced from the 1960s on, you might find it has a 'pre-amp' in the base of mic. This is not so much of a pre-amp as an active impedance matching circuit with variable output levels. This mic will work with modern rigs. However, it uses a 9 volt battery to power the pre-amp. Batteries are prone to dying at inopportune times and are prone to leaking. There are often ways of eliminating the battery.

Third:

The switch in the Astatic microphones grounds the mic element when inactivated (in receive mode.) This is fine if you only want to use the mic as it came from the factory with its integral PTT (grip or press) switch, but it will not work with a separate PTT switch, such as a foot switch. Similarly, the pre-amp in the later models is only powered during PTT with the integral switch. This is done to maximize battery life but it is a problem if you are using a separate PTT switch. Both issues can be remedied with simple rewiring.

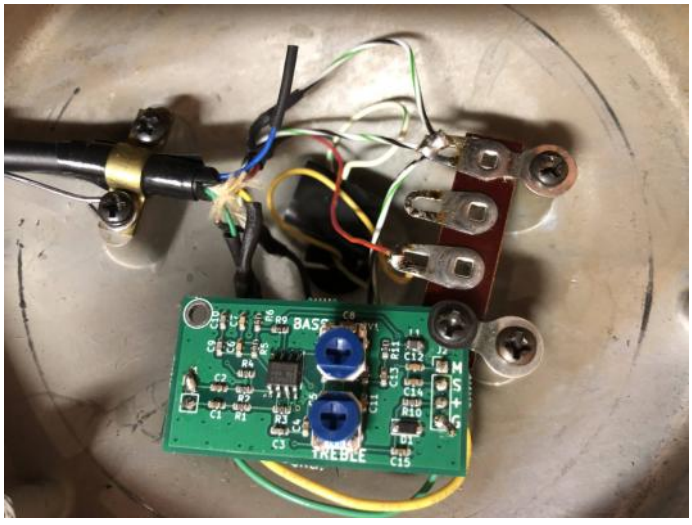
I have two D-104 mics, one with and one without the factory pre-amp. Following are a few modifications and what I did to fix the above issues.

Mod One: Replace the mic element

You can simply remove the old crystal element that came with the microphone and replace it with a new electret or dynamic microphone element. Appropriate elements are available from various sources such as Heil, eBay, Amazon, and Alibaba. Put the appropriate plug on the D-104 for the rig you are using and you are done. This approach works well and many have done that. This is the appropriate mod if you find that the original crystal element has failed. However, don't assume that the original element is bad simply because it does not work with your rig - see Mod Two below. If in doubt, swap the head with a known good, unmodified, original head to check.

Many rig mics use dynamic elements. Others use an electret element and if so, you will need to provide a bias voltage for the element which some modern rigs provide. For example, Icom normally uses electret elements and always provide bias, while Elecraft rigs come with an electret mic but can turn the bias on or off selectively.

Mod Two: Impedance matching pre-amp



As noted above, the original crystal mic element is often fine and simply needs a circuit to match it to modern rigs. You can build one yourself or you can get a pre-made board and insert it into the mic base. I purchased this one for my oldest D-104 from eBay seller, kb9nate. https://www.ebay.com/itm/D-104-Preamp/174339450360

This is from Nate, AB9TE. He provides this as a complete circuit kit that you can install yourself in the base of the D-104. It includes bass and treble controls as well. It is powered with a 9 V battery or with +V from a rig.

The small board is attached to the screws in the base of the D-104 and the D-104's mic element is connected to the input of the board. The output of the board is connected to the rig's input via an appropriate cable. I replaced the original three conductor cable and 1/4" TRS plug with an eight conductor coiled mic replacement cable. All the connections were made to an eight pin round microphone plug. Recent Icom, Kenwood, Alinco and Elecraft rigs use pin 1 as a shielded mic input line and pin 7 as the mic shield on their 8 pin round connectors, so as long as these pins are connected to the shield and mic input wires, the other connections can be connected as appropriate in the base of the D-104.

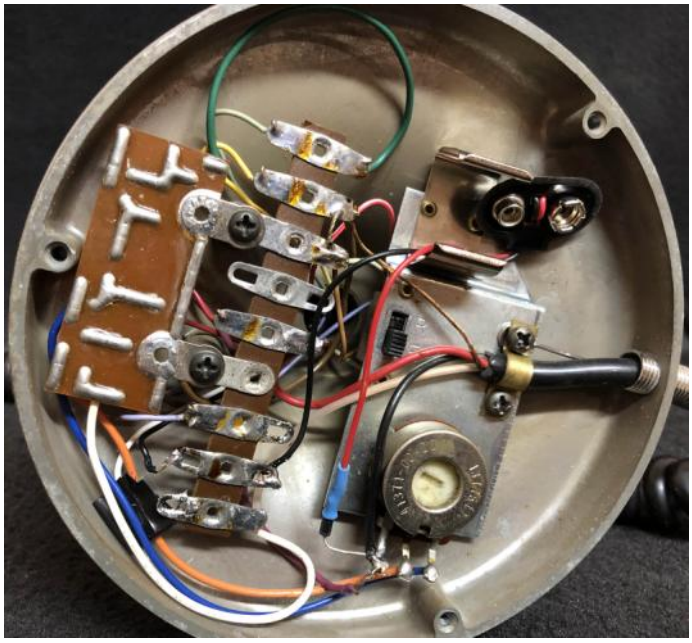
If your rig uses different pins for the mic and shield (Yaesu, other and older rigs), then different wiring for the plug or an adapter cable will be necessary. An RJ-45 cable could be used depending on the rig you have or you could use an eight pin round to RJ-45 adapter cable that are available from various sources. Whatever cable you use, make sure it is wired properly for your rig and mic.

Inside the D-104's base the appropriate connections for any particular rig are made for the microphone, mic shield, PTT, PTT ground and +V from the rig. Most rigs provide additional signals, such as UP/DWN, control, and audio out, but these are not used with the D-104. Many rigs also provide +V (on the order of +5 to +12 volts) to the microphone connector. This can be used to power the interface board. My Elecraft K3 provides +8 V at a low current level and this was used to power my pre-amp board rather than a 9 volt battery as suggested by kb9nate.

Some rigs provide bias voltage on the mic line. This is blocked by C1 and C2 on the interface board, so you don't need to worry about shorting the bias from an Icom rig to ground or providing unexpected voltage to the interface. For rigs like my K3, which have a switched bias level, it does not matter if the bias is on or off.

Mod Three: Battery elimination for the factory pre-amp

One of my D-104 mics does have the factory pre-amp in it. It uses 2 PNP Darlington transistors and the output level is adjustable via a potentiometer accessible through a hole in the base plate. This is my main mic for my Elecraft K3 rig.

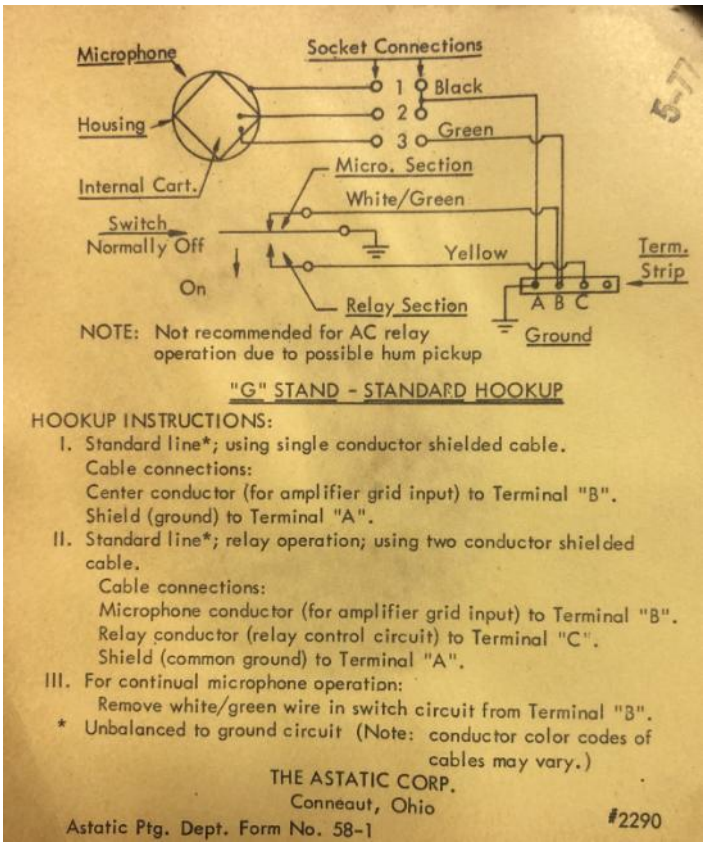


One issue here is the battery requirement. As I only needed mic, mic shield/ground, PTT and +V, I used the original four conductor cord and replaced the four pin round plug with an eight pin round plug. (Separating the mic shield and PTT ground may be necessary for some rigs. This will require at least a five conductor cable.) This allows for battery elimination in the base of the D-104. The +V line is connected to the battery + input on the original pre-amp module.

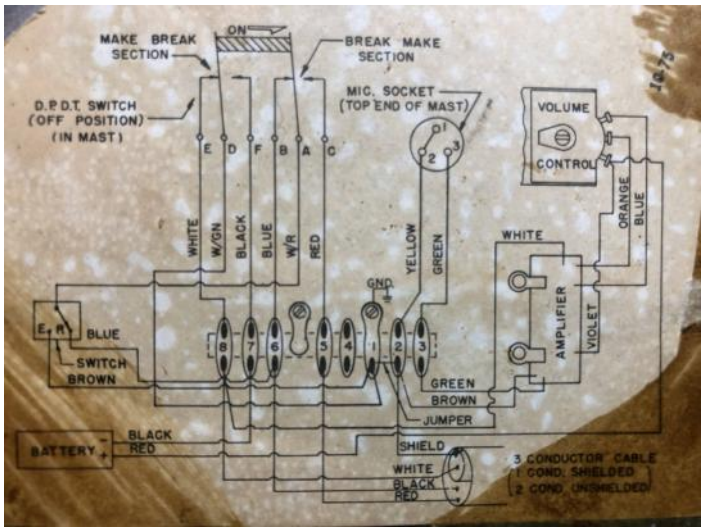
ED : Zoom In to see the details of Dan's photos

Mod Four: Eliminate mic grounding during receive

Models without the pre-amp usually have a single pole, double throw PTT switch. You can simply disconnect the wire from the mic element to the PTT switch to eliminate the mic ground on receive. On the diagram for the "G" Stand - Standard Hookup, this is accomplished by disconnecting the White/Green wire.



On models with the pre-amp, there is a double pole, double throw PTT switch. One section (A, B & C on the diagram)[6] provides PTT service - this can be left as is. The other section (D, E & F) provides for grounding of the mic line during receive and providing power to the pre-amp when PTT is engaged. This minimizes battery drain when the mic is not in use. To eliminate the mic grounding during receive, the White wire from terminal E of the PTT switch is disconnected.



Terminal F is grounded through terminal D during PTT to connect the battery negative terminal to the pre-amp ground. If an external PTT switch is used, battery power to the pre-amp will not be provided. However, if +V from the rig is connected to the + battery terminal, the pre-amp will be powered whenever the rig is on. Disconnecting the +V line will allow the original battery to be used as originally intended. A battery should not be installed if +V from the rig is connected.

With these mods and either of these mics, the D-104 can be a very successful mic for any modern rig.

Dan NM3A

So, What Is Your Story ??

Later in this issue, you will read Andrew - KC3SDJ telling his story about how he became involved in Ham Radio. Andrew shares how he has fared while operating HF from a apartment complex. And doing it with an End Fed sloping down, not up.

In the previous issue, Paul - AC3IE (WA9QXY at the time) shared his story and how his Elmer was a big influence.

We all have a similar story to tell. We all started into this hobby at some point in our lives. Some very early in life - some later in life.

Some did it with the help of a friend or neighbour who was already a ham. Some did it totally on their own relying on books or online tools.

I find all of the different circumstances and situations that made folks say "I want to be a ham" at some point in their lives to be quite interesting.

I shared my story way back in the September 2015 issue of the Q5er. Back issues are available at : http://www.nelis.net/K3JZD/Files/Skyview_Newsletters/newsletter01.html

So, as the title of this column says: What is Your Story ?

How about sharing your story with our readers.

Write it up and send it to me. Make it a short story or a long story. Send me some photos of your shack, your antennas, or whatever to accompany your story.

Tell your story in your own words—there are no rules. And your paper will not be graded !! (If you bought your license at a drugstore, feel free to embellish your story). If I have trouble reading it, I may touch up the flow or the grammar to help our readers. However, most gets published just as I have received it.

I can handle just about any word processor file format. A simple email works also. If you send me photos, please send them as separate .jpg files as they are much easier for me to handle.

What are you waiting for ? Get started.

Jody - K3JZD - Q5er Editor

Battery Maintainer

de Dan - NM3A

This ideas here are not specifically about ham radio, but it is relatable and transferable to a ham shack backup battery power system.

I have an out-shed on my property where I keep some of my yard tools, including my riding mower. As it is not heated, I was concerned about keeping the mower's battery charged over winter. As you are probably aware, a discharged lead acid battery can freeze and be destroyed in cold weather. The shed is 200 feet from any power outlet, so getting power would be a difficult task.

One option was to keep the mower in the garage which never gets below freezing. A trickle charger could be connected. But that crowded the garage, so I considered the second option of removing the battery and keeping that on a trickle charger in the garage. But removing and replacing the battery each fall and spring seemed like way too much work, so I considered a solar powered 12 volt system with a battery and solar cell. Cost seemed a bit high and as I didn't need the power for anything else, I decided to simplify the system. First off, I had a battery - the mower's - so that expense could be eliminated. Solar panels seemed somewhat expensive and a solar charge controller was even more. So at first the whole idea seemed impractical.

I kept looking for a simple option and finally found a 2 watt solar battery maintainer from Coleman at Tractor Supply, of all places. The price was right - $20, but I was concerned that 2 watts was not quite enough for the

job. (By the way, solar battery maintainers are available in a number of different sizes.) In the winter, with the leaves off the trees, the panel is exposed to the sun, but tree limbs and trunks intermittently shade the panel all day long. I estimated that the panel would only put out full power about 1/3 of the time. With the short daylight in the winter, That would really limit the capability of the panel.

A crude estimate of power available was 2 watts at 14 volts gives about 140 milliamps peak current. Useable sunlight available during the winter days would be about 6 hours. This gives about 800 milliamp-hours of power. Multiply this times the 1/3 factor gives less than 300 milliamp-hours each day. I also considered that overcast days would decrease this output even more. An average of maybe 200 milliamp-hours seemed too little power to keep the 30 amp-hour U1 battery charged.

So I kept looking for another option. Turns out Skyview RS members are a good source. Bob, WC3O's fabled 3rd floor of his garage held a neat little surprise- a 10 watt panel! A reasonable price was negotiated and I was the new proud owner. I was still skeptical that this would be enough to keep the battery charged, but all you can do is try. Due to charge controllers' expense and my sense that this panel would be barely enough to keep the battery charged, I decided to eliminate this and simply monitor the battery voltage every week or two. A charge controller could always be added later and the panel had a diode to prevent the panel from discharging the battery in the dark.

The panel was mounted on the roof of the shed facing south by south west. The first week was a pleasant surprise as the voltage stayed above 14 volts. By the second week the battery was nearly 16 volts during the day! I disconnected the panel for a few weeks to avoid over charging the battery. It was still only mid October and in those two weeks we had very little overcast skies, so I was still concerned that come December, January and February I would need the extra power. I began searching for reasonably priced charge controllers. However, I still had to disconnect the panel every 2-3 weeks to avoid overcharging all winter. Clearly, the 10 watt panel was more than enough.

About this time, I purchased a pop-up camper and installed a 100 amp-hour battery in it. Since the 10 watt panel seemed over kill for the 32 amp-hour battery, I decided to move it to the camper.

Here the panel is not shaded and should give full power for all 6 hours of sunlight. For storage, I disconnect all power drain from the camper battery except for an LED voltmeter. This works very well and keeps the batter above 12.5 volts even during prolonged overcast or rainy skies. During prolonged sunny periods, the battery never gets above 13.8 volts.

So back to the mower. I purchased the 2 watt panel and put that on the shed. Voltages stay consistently above 12.5 and below 13.5. Intermittent high voltage (14-16) charges during sunny periods followed by non-charging times at night are good for avoiding sulfating the lead plates, which is a battery killer. Turns out the amp-hours needed to maintain a battery are not all that great after all and with proper solar cell sizing, a charge controller was not needed.

This system could easily be adapted to a battery backup system for a ham shack or for a go-box. It would keep the battery in prime condition for any emergencies. It could be scaled up to a much larger solar panel with a charge controller that could keep a ham station battery fully charged even with regular power draw from radio activities.

My own station runs 100% from a 66 amp-hour 12 volt AGM battery.

([https://www.optimabatteries.com/products/bluetop-d27m)](https://www.optimabatteries.com/products/bluetop-d27m)

It is kept charged with a 25 amp power supply through a West Mountain Epic Power Gate charge controller. This system has a large reserve for station operation and a house generator can keep the system running indefinitely during commercial power outages. The Epic Power Gate has an integral solar charge controller and could be hooked to a solar panel to eliminate the need for commercial power. That is something for a future project.

Dan, NM3A

How many sunny days are there in Pittsburgh ?

SUNNY - 59

PARTLY SUNNY - 103

TOTAL DAYS WITH SUN - 162

https://www.currentresults.com/Weather/Pennsylvania/annual-days-of-sunshine.php

The SDR Conundrum

de Jody - K3JZD

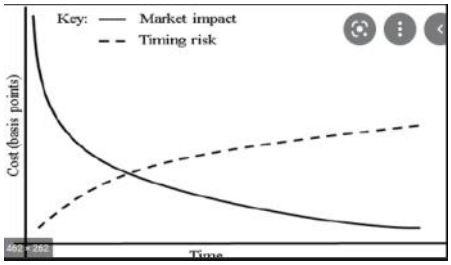
Ever since Software Defined Radios (SDRs) showed up, I have realized that the manufacturers of those transceivers now have a conundrum.

In a nutshell, a SDR removes as many physical components as possible by using the software in a computer to perform the functions that those physical components previously performed. Filtering, shaping, and improving the quality of the received and transmitted audio requires a lot of components in traditional transceivers. Those functions, as well as frequency control and managing the interface with the user, are great candidates for handing over to the software in an embedded computer.

SDR transceivers are certainly becoming more popular. I guess FlexRadio led the way with their ready-to-use commercial SDR product. While their initial efforts required you to run the software component on your computer, that was soon replaced by standalone units which contained embedded computers. Once FlexRadio made them as standalone devices, sales picked up and the larger manufacturers seemed to see an opportunity.

Icom introduced their groundbreaking IC-7300 SDR at a very low price point. It looks like Icom's IC-7600 then morphed into their IC-7610 SDR. Elecraft introduced their portable KX3 SDR and KX2 SDR. Elecraft's K3 then morphed into their K4 SDR. I do not follow the Yaesu line, but it looks like their FT-DX10 has morphed into their FT-DX101D SDR. Xiegu and various other Chinese manufacturers then came to the party with various lower priced portable SDRs. And there are also the various inexpensive small kit SDRs like the QRP-Labs products.

So, what's the attraction? Why are so many new products "SDR" now? I guess there are two major incentives: Cost to Manufacture and Time to Market. The Cost to Manufacture will certainly be lower when there are less components to purchase and less components to deal with during the assembly. Reducing Time to Market will get your new product out sooner so you can begin to see an income stream sooner.



The software in the SDRs is not free. It takes a lot of man hours to write and debug the real-time embedded software that is in SDR transceivers. Real-time software can be pretty tricky to write. There are lots of interactions and priorities which must be managed by that software. There is usually a steep learning curve.

The Time to Market is most likely going to be decreased on subsequent models because of being able to reuse a lot of the software from the current model. But not so much for the initial effort. It is never wise to pre-introduce an initial model because it will either be late to market or there will be management pressure to get it released before it is fully debugged and ready to go.

So, where is the SDR Conundrum? Well, it comes into play after the SDR transceivers are being put into boxes and sold. All SDRs are hyped as being "Upgradeable". That is, new software updates can be installed into the SDR's embedded computer to fix bugs, fix quirks, enhance features, or add new features.

That "Upgradeability" is certainly a big improvement over how it is with traditional transceivers. Once you unbox a non-SDR transceiver, what you see is what you will have until you no longer have it. Period. Buying an SDR that promises "upgrades" gives you the impression that you will have a transceiver that will have new or enhanced features as will as bugs and quirks exercised.

I follow the groups.io reflectors for the Icom IC-7300, the Elecraft KX3, the Elecraft K4, the Xeigo G90, and the QRP-Labs products. There are lots and lots of things that the submitters will grumble about. Many gripes are about features that may not operate exactly the way that they would like them to operate. Some are grumbling about quirks in the device that they do not like adapting to.

Some are pointing out legitimate bugs that that need attention. Some of these bugs are serious – some are trivial rarely ever encountered bugs (no software is ever truly bug free). Many are suggesting new features that they would like to see based on how they use the radio. The Elecraft groups seem to have the most requests for new or enhanced features. Perhaps the Elecraft owners feel justified is asking for new features due the cost of their radios. But the owners of the far less expensive IC-7300s transceivers also make suggestions about new things they would like to see and things they think could be improved on.

The SDR Conundrum is this: If you are a SDR manufacturer, how long do you continue to provide the free software upgrades that fixes bugs, fixes quirks, enhances features, and adds new features? It is actually a business conundrum. The money has been made once you have boxed up the SDR and shipped it.

Providing free software upgrades forever won't keep the lights turned on. At some point each manufacturer will have to stop doing the free software updates for anything other than some serious bug that disables the radio.

Each manufacturer will eventually realize that they will have to take all of the outstanding 'wish list' items that have showed up on these reflectors and start to think about incorporating them in their next new model. By putting those requested enhancements and new features into the next model instead of into the current model, they will be able to obtain a new revenue stream by boxing up and selling new radios.

Yes a lot of the existing SDR owners will cry the blues whenever that happens.

Elecraft likes to box and sell pricey hardware. They have already hinted that one day the embedded computer in their K4 SDR will likely "reach capacity". They will not be able to add any more features of enhancements. Or perhaps that is just what we will hear. The Elecraft hardware is designed in such a way that an owner will be able to remove the existing K4 embedded computer and replace it with a new computer board that is the same size, but which will be more powerful and more capable of doing more. Perhaps they will introduce it as a $2000.00 (plus shipping) replacement part. Or maybe it will be time for a K5 model. They will have to decide when it is time tell the faithful that the free software upgrades for the K4 have ended – it is time for them to start boxing up parts add getting some new income.

The small Elecraft KX3 ad KX2 SDR units do not appear to be designed with a dedicated embedded computer module. So, one day it will probably be time for those devices to "run out of capacity" in the KX3/KX2 embedded computers requiring the purchase of new models to get new enhancements.

Odds are the IC-7300's embedded computer will likewise "run out of capacity", and we will see a new IC-7310 SDR model appear. Maybe the IC-7310 will be about the same price, and will have the nearly same everything except it will have a higher capacity embedded computer. Doing that will get new units put into boxes and shipped instead of just providing more free software updates for the IC-7300.

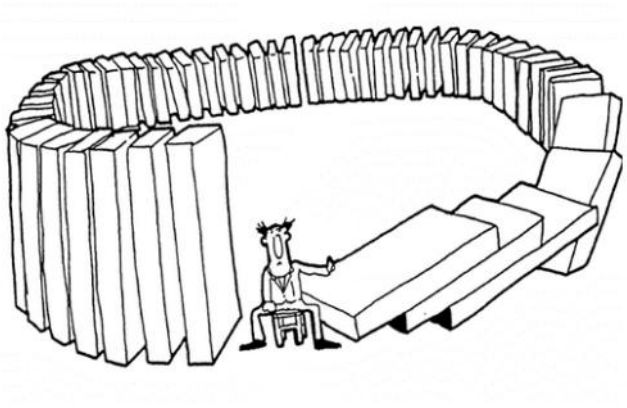
The embedded computers in the small QRP-Labs SDR kits are already stretched, making any free software releases that contain any real enhancements quite unlikely. Most likely we will see new kits that utilize larger capacity computers instead. But, we like to build new inexpensive kits and we like to support the owner of QRP-Labs, so that will not be a big problem for the QRP-Labs customers.

One manufacturer that seems to have already realized that free software upgrades do not pay the bills is Xiegu.

I saw a thread on the G90 groups.io reflector where many of the owners of the inexpensive Xiegu G90 SDRs are coming to the realization that their radios have probably already become "orphans". Xiegu has been busy developing new radios rather than addressing the

subtle bugs and quirks that still exist in their G90s. Xiegu has their very slim software development team (which may be just one individual) concentrating on getting a new radio developed so that it can be boxed and shipped. That is where the money is. While the Xiegu spokesperson on the G90 reflector suggests that they will get back to addressing the G90 issues once the new radio is out there, there are not too many who believe that will ever happen. Previous upgrades have sometimes broken more than they have fixed. And the software team will be busy dealing with the new issues that get introduced in their new radio.

So, with every improvement to the design and manufacturing process, there are unintended consequences.



The Law of Unintended Consequences

While the manufacturer's advertising hype might have suggested that the software in their SDRs can be updated and upgraded forever, that is not really a viable business plan.

Much like the old traditional pre-SDR transceivers, at some point in time the software that is presently installed in your SDR transceiver will be what you have until you no longer have it.

Will that affect resale value? Time will tell.

Jody – K3JZD

Heathkit Sixer

Part of the Benton Harbor Lunchbox Collection

It's Something New

de Bob - WC3O

At Skyview over the years we have worked on a number of new antennas at the club. All of these antennas were built with transmitting a strong signal in mind. But we were still a little lacking for good receive antennas. First of all, what are receive antennas? It stands to reason that an antenna that does a good job of transmitting would also do a good job of receiving? Well, yes and no.

As hams, we have access to a wide range of frequencies. From well below the AM broadcast band up into the gigahertz. All of those bands have different characteristics. The receive antennas I am writing about were installed with the lower frequency bands in mind, mainly 40, 80 and 160.

On higher frequency bands, having a strong signal is important. But on the lower bands we often have plenty of signal. The problem is that we also have plenty of noise! Often the noise on the band rivals or even hides signals that would otherwise be perfectly readable. The name of the game is having an antenna that receives signals but reduces the effects of noise so that we can pull out signals that we otherwise would not be able to hear. (Signal to noise ratio) Thus, we desire to have receive antennas optimized to do just that.

Good receive antennas usually are counterintuitive to what we think of when we think of transmit antennas. With receive antennas, height is often bad. A good receive antenna is usually only around 6 feet off of the ground. Sometimes they are actually ON the ground! Does that make sense?

So . . . .

I am embarking on installing receive antennas. But I really have NO experience with any of these. In these cases I look to others that do know about these things and have actual experience. Many people talk about Beverage antennas.

https://en.wikipedia.org/wiki/Beverage_antenna

Beverage antennas are great but require a lot of land. Recently, folks have been turning to small loop antennas (NOT to be confused with magnetic loop antennas).

I went with three different antennas:

1 - A VE3DO loop

2 - A LoG or loop on the ground

3 - A system that uses the DX Engineering NCC-1 phase controller.

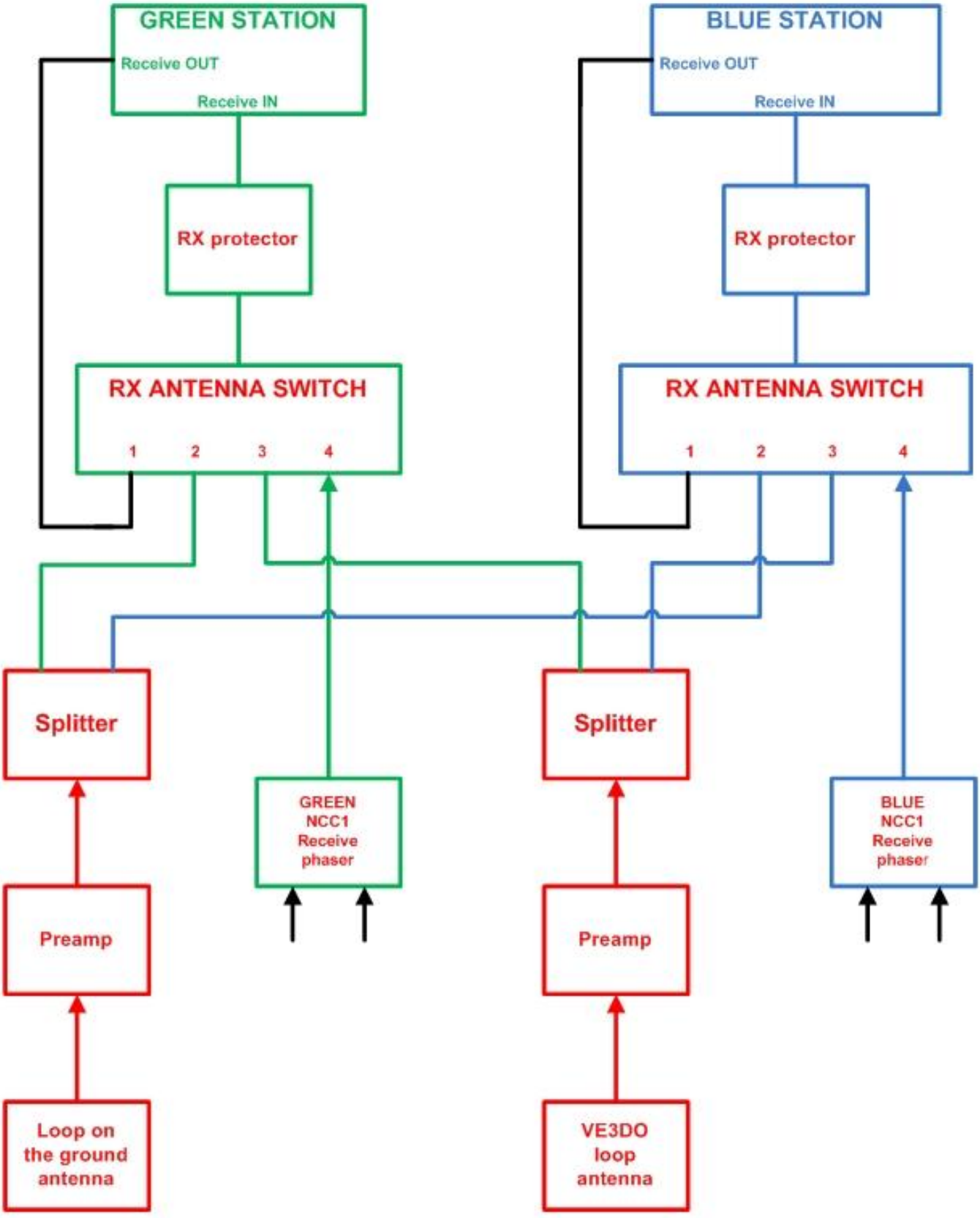
The first two antennas aren't cheap to build. They are DAMN CHEAP! Small, easy to build and fit in a small space. That's hard to beat.

Objectives:

- - Be able to QUICKLY switch between the transmit antenna and the three receive antennas for comparison.
- - Have the receive signals at approximately at the same signal levels, making it easy to compare signals - Quickly. (Without having to change the preamp setting on the radio to compare) The two loop antennas have external preamps to accomplish this.
- - Have good shielding on all cabling and good isolation between antennas.
- - An added feature - Have receive protectors on all HF radios to keep from damaging the radio front-end no matter how strong the received signal is. (It's not hard to accidentally land up with two radios on the same band at the same time. The VERY strong signal from one radio blows out the receive front-end of the other radio)

If you look at the diagram of what I came up with (Next Page), it looks very confusing. Don't worry. For the end user it is VERY simple. Read on

Ed : *It took me a while to realize that the "Receive Out" connection coming from the Station Radios and going to Position 1 on the Rx Antenna Switches is what allows you to use the Tx Antenna that is selected for that Station. Very clever !!*


GREEN STATION
Receive OUT
Receive IN
BLUE STATION
Receive OUT
Receive IN
RX protector
RX protector
RX ANTENNA SWITCH
1 2 3 4
RX ANTENNA SWITCH
1 2 3 4
Splitter
Splitter
GREEN NCC1 Receive phaser
BLUE NCC1 Receive phaser
Preamp
Preamp
Loop on the ground antenna
VE3DO loop antenna

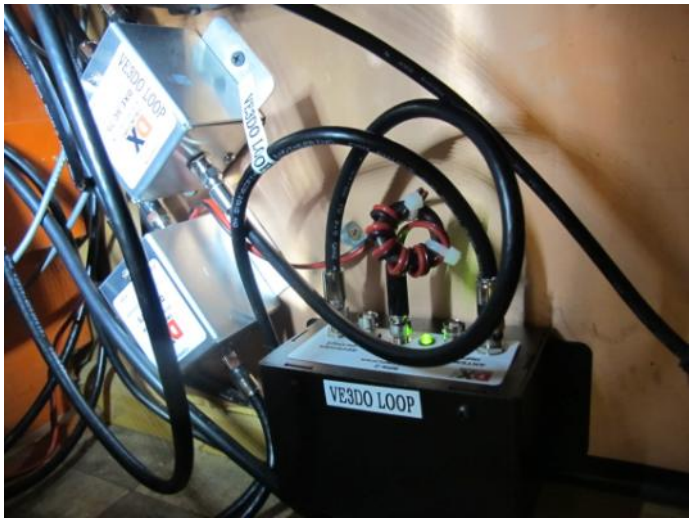
The VE3DO loop:

http://audiosystemsgroup.com/VE3DO.pdf

Tim, K3LR uses one of these. He loves it for 160 meter receive. You can build them to optimize for 160 meter, 80 meter, 40 meter, or whatever your target band is. I built ours optimized for 80 meters (20 feet by 5 feet). It still works fine on the other bands, but it is optimized for 80. It is aimed towards Europe.

I also had another influence for this type of loop based on an article in the WASH club's WASHrag newsletter by Bill, W3WH http://n3sh.org/washrag.php

Bill is a long time DXer and contester. In the article Bill compared a number of receive antennas, from cheap and easy to quite expensive. In the end he found that this simple loop gave him results as good or better than much more involved and expensive systems!



The loop on the ground:

I first heard of this antenna from Rich, K3RWN. Rich has a small lot and not much room for antennas. He swears by these LoG antennas! Again, VERY cheap to make. Rich has two of these on his property with different length wires. Sometimes one works better, sometimes the other works better. Ours is nothing more than 60 feet of wire laying directly on the ground! During the recent RTTY Round-up I was having a hard time copying a weak station on 80 meters. While switching between all of our antennas the LoG was the best!

DXE Preamp Supporting Optional Bandpass Filter

The phased vertical antennas:

The 3rd receive antenna uses the DX Engineering NCC-1 phase controller

https://www.dxengineering.com/parts/dxe-ncc-1

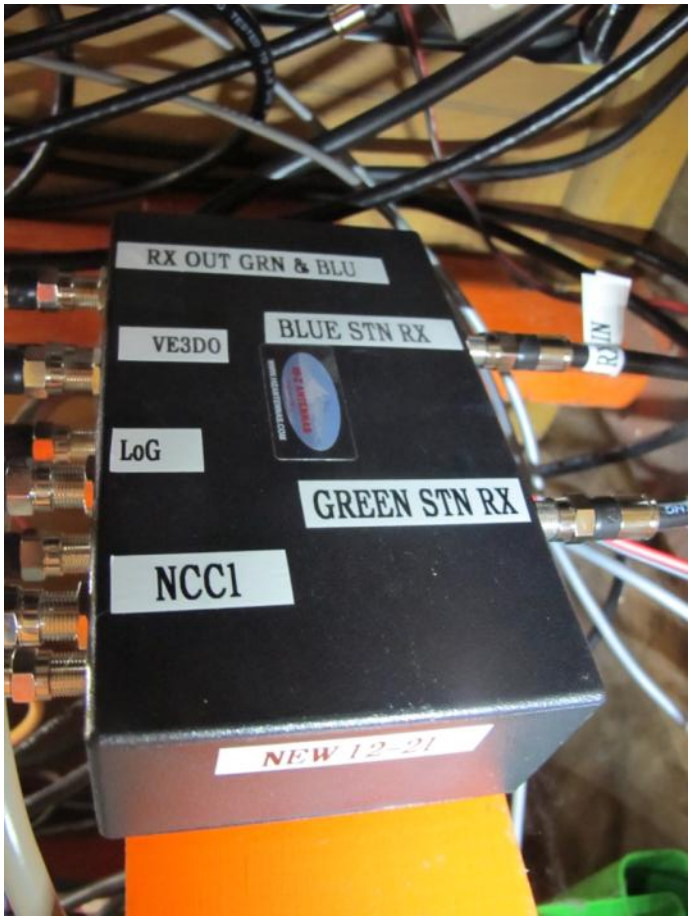
The NCC-1 uses two receive antennas that are located some distance apart. It uses phase control to electrically rotate your direction of reception. They are great for nulling out noise coming from a specific direction, like a neighbor with a noisy TV. We have two NCC-1s at the clubhouse.

As of this writing only one is currently operational, on the Green station. This one uses two active (108 inch whips have pre-amps on them) antennas installed in the lower yard area. Actually, the two antennas are installed too close to each other and thus, the phasing doesn't work very well. I made them 72 feet apart, they need to be twice that. I'll get there eventually. The system still works, but not as well as it should. Look on YouTube to see the NCC-1 in action when the antennas are farther apart. They are amazing. Both NCC-1s at the club, I was able to buy used, saving quite a bit of $$$.

DXE Receive Antenna Chokes for Future Use

Now that we covered the antennas, now we need a good switching system

The receive antenna switching system is made by Hi-Z. The actual switch unit is actually two independent 4 position switches in one box.



Hi-Z Receive Antenna Switch

Only the two outer radios have receive antennas, the Green and Blue stations. The middle station does not have any receive antenna capabilities.

Above either radio is a switch box with a rotary knob to switch between antennas. There are LEDs that indicate what antenna is being used. In the first position (Left) you are receiving off of the transmit antenna. The middle two positions you are receiving from either the VE3DO or the Log. The fourth position is the NCC-1 for that station.

AS THE END USER, THIS IS ALL YOU NEED TO KNOW:

On the switch, the first position is marked HOME. As long as you are in the HOME position, all is completely normal. You are receiving on the transmit antenna. The remaining positions are not marked as to what antenna you are on. Why? Because who cares! You are simply listening for the best signal between them. Whatever that antenna is, it is. Simple. (If you must know #2 is the VE3DO loop and #3 is the LoG. Again, #4 is the NCC-1 on that station)

Note On The Antenna Selector Switch

There is a power switch on either antenna selector switch. The antenna switch works with the power turned on or off. The power switch simply powers the LEDs so that you know what position you are in

The two loop antennas have signals shared between the two stations (Using a splitter). Thus, if needed, both stations can receive off of the same RX antenna.

Other Notes:

- The two loops are using DX Engineering preamps. These preamps have a slot in them to add band-pass filters, if needed. So far I'm not sure we need them.

- All cabling is quad shielded RG-6 75 ohm coax

- There are two chokes in line with the loops to help with any common mode RF

- A number of the items used were purchased used from Bill, W3WH at bargain basement prices

- The Blue station NCC-1 will have antennas someday in the future

- The Green station NCC-1 will have the antennas moved further apart in the future

- There is a cable junction box at the base of the 40 meter tower. Along with coax, there is also an unused (at this time) control cable so that if we want to add additional switching, preamps inside the box, or to power active antennas over the hill, this would be easy.

- I went hog-wild with the label maker to keep track of who is what.

So there you have it. Feel free to experiment. You can't hurt anything. Just put the switch back to HOME position to put everything back to normal.

Bob - Skyview Radio Officer

My Ham Radio Story

de Andrew - KC3SDJ

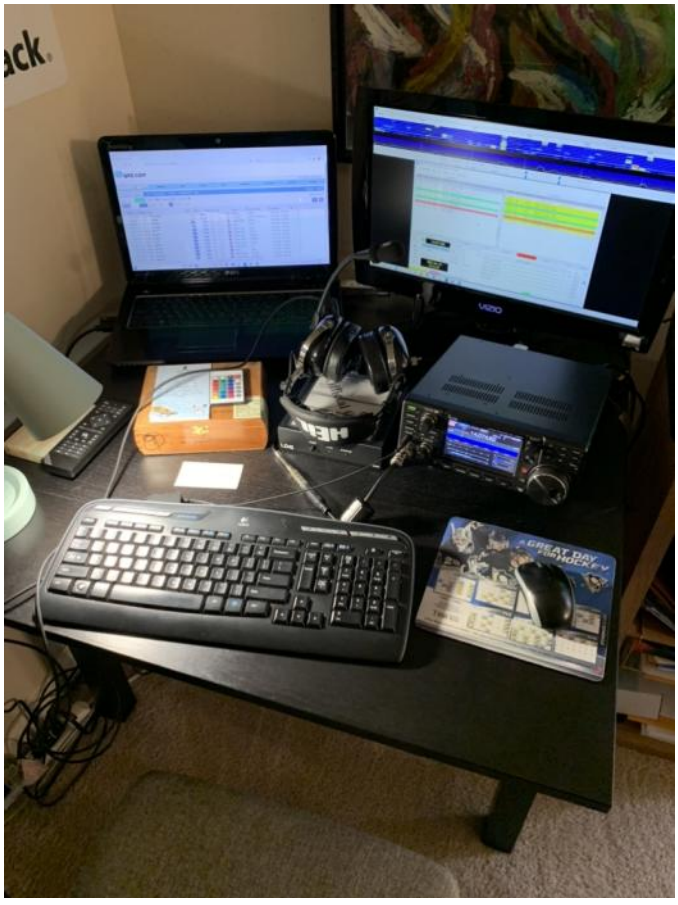
I have been interested in radio for as long as I can remember. I grew up listening to my father's CB radio and my mother's Montgomery Ward crystal-equipped handheld scanner that she carried while on duty with Rescue 8 EMS in the Township of North Huntingdon. I was fascinated at the thought of being able to hear someone in another location without needing wires. I would even tune into a Philadelphia-based AM commercial broadcast station on some evenings from Erie when propagation permitted. I was hooked! My interest in radio would continue to grow from that point.

I am not sure why I didn't get my amateur radio license as a teenager – I must have just been too busy getting through school and preparing for college. Now that I have been away from college and have been in the working world for a few years, I have more free time on evenings and weekends. I finally decided to take my Technician class exam at Skyview in May 2021. This would be the start of something truly wonderful.

My wife purchased a Baofeng HT for me as a birthday gift, and I loved being able to talk with folks through the local repeaters. I then acquired an IC-2730A that I installed in my Jeep Cherokee, and I loved being able to extend my range with a better antenna and more powerful radio. It's a great radio, and I'm very happy with the installation and setup.

After becoming an official Skyview member, Bob, WC3O, sat me down in front of the club's IC-7300 and taught me how to operate it and allowed me to make some contacts under his guidance while using the club callsign. I was delighted by how easy it was to make contacts all throughout the US on 40 meters, and I quickly became hooked on HF as well as the IC-7300.

I feverishly began studying for my General class license and passed my exam in September 2021. I also purchased my very own IC-7300, LDG Z-100A auto tuner, some RG-8X coax, an Astron RS-35M power supply, and



an Ultimax DXtreme end fed wire antenna. I knew that setting all of this up in an apartment would present challenges, and it certainly did. I setup my antenna outside of our apartment with the antenna sloping down to a tree next to our balcony, and connected all of the coax and powered everything up.

I made several contacts right away, until setting off the apartment building's fire alarm system, resulting in an impromptu visit from all of the emergency services in Hampton Township. Likely caused by common mode interference, I placed a balun in the feedline and turned my power down a bit, and the problem has not presented itself since.

Since May 2021, I have been able to participate in 2 contests from my home QTH, setup digital modes through my computer, and have started to learn CW. I have made 2,000 total QSOs thus far in a mixture of phone, CW, RTTY, FT8/FT4, and have worked all states but Alaska toward my mixed WAS award. I have also had QSOs with 60 countries, including Asiatic Russia and South Africa, all from my "compromised" end fed wire setup in my apartment.

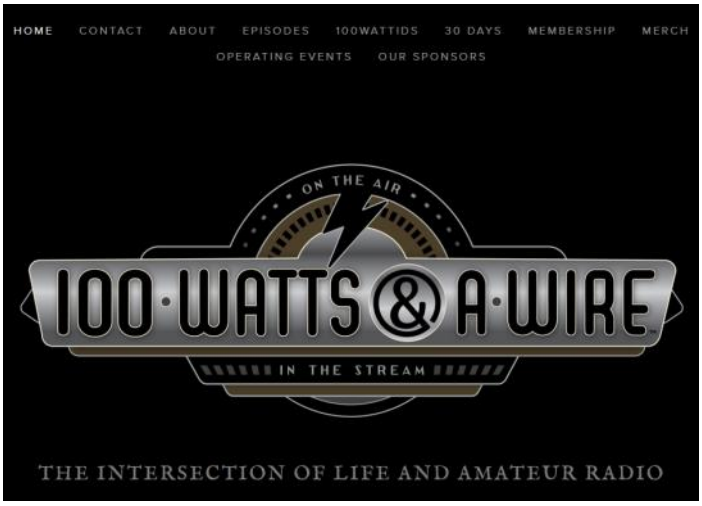
My next goals are to setup my rig for remote operation via Icom RS-BA1 software or similar, and learn to be proficient with CW.

I can't say enough about just how great it is to be a part of such a great club like Skyview, and I cannot thank all of you enough for your continued help, encouragement, and support. I love the satisfaction that succeeding in a highly technical hobby provides me with, and I look forward to being able to expand my station and its capabilities in the future.

73, Andrew Neil, KC3SDJ

With the Sunspot Cycle beginning to get back into the "Good Range" again, the world is out there waiting to hear from you.

Don't Miss Out !!



Welcome New Members !!

Welcome the following Skyview Radio Society Members who have joined us since publishing the December 2021 newsletter:

Janet Shadle - KG4JBB - Crafton

Steve Fazekas - K3FAZ - Sarver

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.

This Box is Empty

Skyview Radio Society Roster as of 31 JAN 22

NM3A	NY9H	AB3LS	K3RMB
AD3AD	WD3HAY	KC3LZH	KC3RPP
N3AFS	WB3HFP	N2MA	W3RRK
KB3APD	WA3HGW	KC3MBM	I2RTF
NA0B	KB3HPC	N3MHZ	KD3RVR
WI8B	KA3HPM [SK]	KC3MIQ	KQ3S
N3BAH	K3HSE	K3MJ	K3SBE
W3BUW	KB3HXP	N3MRU	KC3SDJ
KF3C	AC3HZ	KS3N	KC3SKX
KC3CBQ	AG3I	G4NFS	KB3SOU
K2CI	AC3IE	KB3NSH	K3STL
K3CLT	KC3IIO	AJ3O	KC3STS
K3DCG	WA3IKQ [SK]	WC3O	KC3STV
KC3DIA	W3IU	KC3OCA	KB3SVJ
KC2EGL	K3JAS	KC3OCB	KC3TEX
KC3EJC	KG4JBB	KC3OCC	WV8TG
AB3ER	N3JLR	K3OGN	N3TIN
N3ERW	KA3JOU	N3OIF	N3TIR
K3ES	ND9JR	KB3OMB	W3TLN
KC3EVT	KC3JSF	KB3ORO	N3TTE
KB3EYY	K3JZD	NK3P	AG3U
AC3EZ	KC3KEI	NX8P	NS3U
WB3FAE	WA3KFS	K3PC	N3UIW
K3FAZ	KB3KHR	KC3PEM	W3UY
KC3FEI	AC0KK	KC3PIM	KX3V
K3FH	N3KNB	K2PMD	K3VRU
K3FKI	K3KR	KE3PO	N3VXT
KC3FWD	W4KV	W3PRL	W3VYK
AC3GB	KC3KXZ	KC3PSQ	N3WAV
N2GBR	WE3L	N3PUR	K3WM
AC3GE	WA3LCY	KC3PXQ	N3WMC
KC3GIL	KC3LHW	NU3Q	K3WWP
KC3GIN	W3LID	WQ3Q	N3XF
KC3GPM	K0LIN	KC3QAA	KB3YJQ
K3GT	WB3LJQ	KC3QIR	W3YNI
AB3GY	KB3LND	KC3QWF	W3YNX
KC3GZW	K3LR	NJ3R	WA3YWU
NC3H	KC3LRT	K3RAW	K3ZAU

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 . . . . .

Nothing this month

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, 2022
Closing Date For Submissions : Mar 15, 2022
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

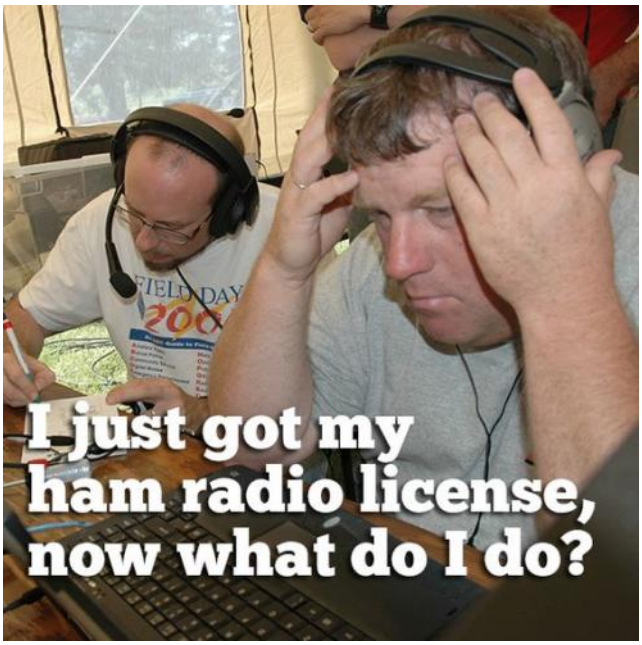
Location: Skyview Clubhouse Meeting Room
2335 Turkey Ridge Rd
New Kensington PA 15068-1936

Contact: William C. 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 !!!

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