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

Q5er – The Official Newsletter of the Skyview Radio Society

We Are Back !!!!!

2021 SKYVIEW RADIO SOCIETY SWAP N SHOP!

SUNDAY AUGUST 29, 2021

LOCATED AT OUR CLUB GROUNDS NEAR NEW KENSINGTON PA

Aprox 13 miles northeast of Pittsburgh

2335 Turkey Ridge Road

New Kensington, PA 15068

Talk-in 146.640- 131.8pl

Admission $5.00 – Table space is $5.00 (Bring your own table)

Great prizes

Door prizes

Begali CW key raffle

Breakfast and lunch served

Get your Skyview Burger and your Skyview Dipole Hotdog!

Contact: John Italiano WA3KFS - 724-339-3821

www.skyviewradio.net

Location is near the intersection of Rt. 366 and Rt. 380

From Apollo / Leechburg: Take Rt. 66 S to Rt. 380. Take 380 W to Rt. 366. Take Rt. 366 W (toward New Kensington) to the end of the 4 lane. Go ¼ mile past the end of the 4 lane. Turn right on Whitten Hollow Road. Go about ½ mile to first stop sign. Turn right on Turkey Ridge Road. Go about ½ mile to top of hill. Skyview is on the left.

From New Kensington: Take Rt. 366 E. Go about 5 miles from the Parnassas area. Look for the Hannan Building on the left. Go about 100 yards past the Hannan Building (If you get to the 4 lane, you went too far). Turn left on Whitten Hollow Road. Go about ½ mile to first stop sign. Turn right on Turkey Ridge Road. Go about ½ mile to top of hill. Skyview is on the left.

From Monroeville / Parkway: Take Rt. 286 E to Rt. 380 E. Take Rt. 380 E to Rt. 366. Take Rt. 366 W (toward New Kensington) to the end of the 4 lane. Go ¼ mile past the end of the 4 lane. Turn right on Whitten Hollow Road. Go about ½ mile to first stop sign. Turn right on Turkey Ridge Road. Go about ½ mile to top of hill. Skyview is on the left.

From Greensburg: Take Rt. 66 N to Rt. 366. Take Rt. 366 W (toward New Kensington). Cross over Route 380 and then go to the end of the 4 lane. Go ¼ mile past the end of the 4 lane. Turn right on Whitten Hollow Road. Go about ½ mile to first stop sign. Turn right on Turkey Ridge Road. Go about ½ mile to top of hill. Skyview is on the left.

2021 is Skyview's 61st Anniversary !!

June 1, 2021

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- And More . . . . . .

The Sunspots Are Coming

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

If you are a new Skyview member who would like to introduce yourself, I will publish your story. Tell us about yourself in your own words. Present or past employment, other hobbies and interests, what aspects of ham radio you enjoy are all good items to share. If you are a new ham, share what led you to our hobby and to our club. If you have a station setup, tell us about it. Pictures are always welcome. Email stuff to me ay K3JZD AT ARRL DOT NET.

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

NOTE: As this is being published, the Skyview Clubhouse is adhering to the latest PA State Government requirements.

Members Only. Use At Your Own Risk.

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

Jody - K3JZD

From the Treasurer

Financially, we remain on firm ground.

Resumption of our August Swap & Shop will support additional property improvements and property maintenance.

Jody - K3JZD

Ham Radio is a Contact Sport

(Minimum QSO : 6'-0")

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.

There are days when I think that preparing this newsletter is a lot like calling CQ while connected to a dummy load.

Although it is published electronically, it is a whole lot like keeping a terminal dinosaur on life support.

Whenever I signed up to do this job, I thought that this newsletter had a niche that could complement our real-time reflector, Facebook page, repeater, weekly net, and web site. However, I am no longer so sure that it is relevant . Now that we are using the Groups,io reflector, we can each add any attachments that we would like to share there.

Anyway, here is this issue. Not saying it is the last one that I will publish. But it could be . . . . Jody - K3JZD

You cannot get an A if you're afraid of getting an F. – Quincy Jones

A DIY SMD Vacuum Pick & Place Tool

de Jody - K3JZD

I have not had a lot of experience with Surface Mount Devices (SMDs). I have been avoiding them. A few recent through-hole component kits that I have built have come with one or more SMDs already preinstalled on the PC board. That suited me just fine.

A few years ago, I built some SOTABeams antenna trap kits. Each trap had a tiny SMD capacitor that I had to solder onto a PC board. While using my medicine cabinet tweezers to hold the first flea sized SMD capacitor in place, it suddenly went flying out of the tweezers. It landed somewhere in the carpet. I found it, but only after two hours of crawling around on the floor hunting for it. So I setup a cardboard shipping box with one of the six sides cut out of it and I worked 'in the box'. That saved me from repeating the search in the carpet as several more times a SMD capacitor similarly popped out of those tweezers and took wing. After that project, I purchased some new specialty tweezers with fine tips that were designed for doing that job.

Recently a problem with a bad SMD IC on my QRP-Labs QCX-Mini transceiver kit forced me to deal with SMDs once again. I had to remove and replace that preinstalled SMD IC. Out came my designed for the job tweezers. Although they had nice tiny tips, I still found it hard to hold onto that little SMD IC. While this particular SMD IC was larger than the SMD capacitors that I had handled previously, having the leads on two sides made it still difficult to grip with tweezers while reaching into the crowded place on the PCB where I had to go. I finally got the job done, but not without some backup and redo.

Feeling that SMDs will come back into my life again, I looked into purchasing a commercial Vacuum Pick & Place tool. Wow. That gave me some instant sticker shock. The price for something seeming simple was pretty crazy everywhere I looked. Some Google searching uncovered a few Do-It-Yourself (DIY) solutions. I selected this one that was posted by Mad Electron Engineering:

https://www.youtube.com/watch?v=qJWUUK1s_G0

I was able to buy all of my parts on eBay for a total of $26.98 including tax and shipping. Now that was my kind of price. Following the Mad Electron Engineering YouTube video, I was able to modify my aquarium pump to produce a vacuum rather than blow bubbles in about 5 minutes. The video makes that operation very clear.

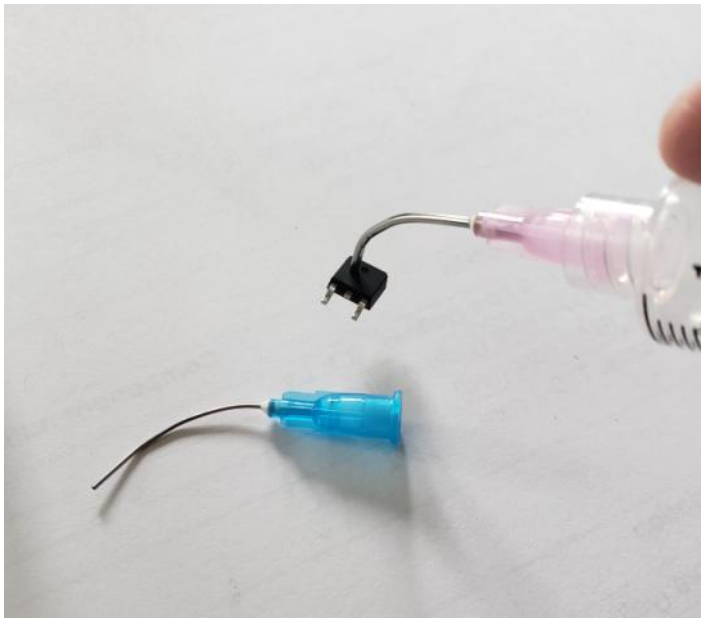
Not knowing exactly what size syringe or needles would be best, I had opted for an eBay assortment that provided five different syringe sizes (20ml, 10ml, 5ml, 3ml, and 1ml) and 3 different blunt needle sizes (2.1mm, 1.0mm, and 0.6mm). Buying that assortment worked out very well, because then I could try each of the syringes to figure out which size had the best feel. I ended up choosing the 10ml one.

Important: Do Not drill the controlling finger hole in your syringe until after you have prepared your needle.

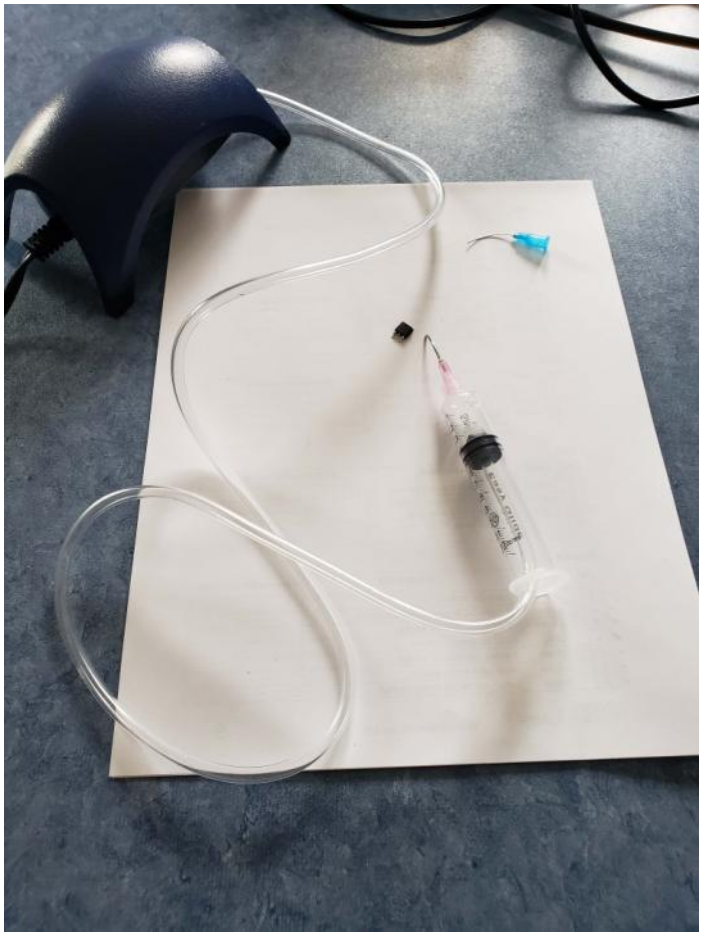
The blunt needles arrive as straight needles. You need to put a bend in them to make them useful for this job. I decided to use a 1.0mm needle. I put a paper clip into the 1.0mm needle to keep it from kinking while I was bending it. I started my bend near the attaching end and pulled the paper clip out a little as I worked my way to the other end. If you don't pull it out as you go like that, then the paper clip will get stuck in there (don't ask me how I know that). A solid copper wire of the appropriate diameter should work just as well.

The needle screws onto the syringe rather than just being pushed on. That provides an airtight connection. And it will stay on there. After you have bent your needle, snugly screw it onto your syringe. Then, while holding your syringe and needle combination in the "working position", determine where your controlling finger hole should be comfortably located and mark the spot. Then go ahead and drill that finger hole there. Since the ID of the plastic tubing is 1/8", I drilled an 1/8" finger hole in my syringe. That worked out well.

While I think that the 1.0mm needle that I prepared will work for everything, I went ahead and also bent an 0.6mm blunt needle since I had them. I used a suitable diameter solid copper wire to keep that one from kinking and closing up while bending it.



Caution: If you bend additional needles, make sure to first snugly screw the needle onto your syringe. Then bend it while it is attached to the syringe, being mindful of the position of your already-drilled controlling finger hole. The needles will repeatedly screw onto your syringe with the same orientation relative to that controlling finger hole.



I have tested my Vacuum Pick & Place device with two different SMD ICs. It picked up and held both of them just fine. I do not have any discrete SMD capacitors, resistors, diodes, transistors, etc on hand to test with. But, whenever those little critters do show up here, I should now be better prepared to handle them.

Jody - K3JZD

A gas powered van, towing a diesel generator, charging an electric car.

The future is stupid...

Connector Relief

de Bob - WC3O

Some years ago many manufacturers started using a new type of DC power connector on their HF radios. The issue that I find with these new connectors is that there is no "wing" on the retainer to remove the connector.

There is a very specific point that needs pushed in to release the connector. It's not very obvious where that point is, and it helps to have a tool or finger nails to help.

Add to that, you are often trying to do this while the rear of the radio is obscured by a shelf.

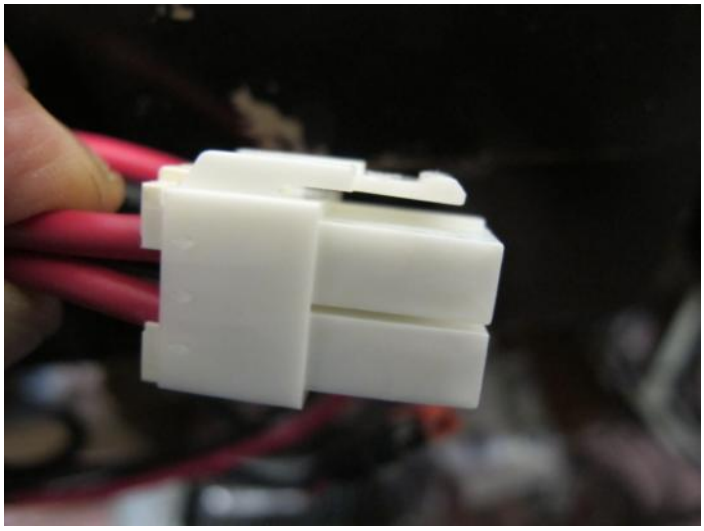
I've seen people damage these connectors (including the radio side) trying to remove the connector.

I've found that by filing the retainer barb down slightly on the connector helps. The connector is still retained, but it is MUCH easier to remove.

Also, mark the point that needs to be depressed to make it easier to locate.

Try it. You'll like it.

Bob Bastone, WC3O



AREDN™ – What's That?

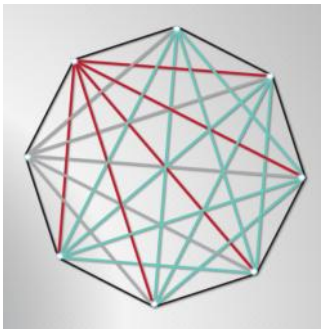
de Paul - K2PMD

I am not a prepper, but soon after becoming a licensed amateur radio operator a few years ago I realized how important ham radio would be in the case of a grid down emergency or, even worse, a real Zombie Apocalypse (probably starting not far from Skyview at the Monroeville Mall, with George Romero the first to rise). Hi Hi.

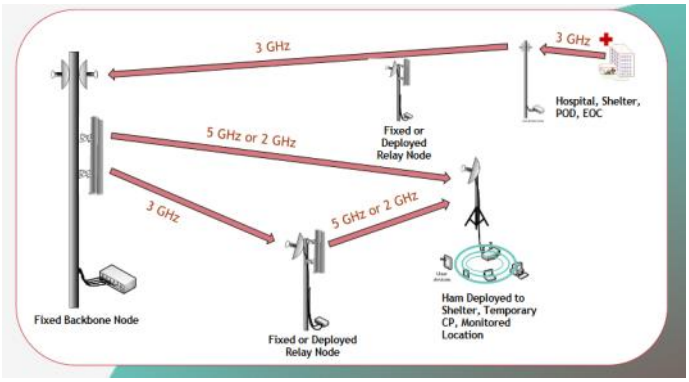
I am also not an engineer, but an ordained priest working as a full-time hospital chaplain at the VA Medical Center in Pittsburgh. So, I may not be the smartest tool in the electronics tool box. But boy have I caught the ham bug. To be honest, though, my love of radio isn't really that new. I was an O5C (Radio Teletype Operator) in the US Army in the early 1980's. I cut my teeth almost forty years ago doing RTTY, SSB, and really bad CW, with crypto gear connected to NVIS dipoles and mobile repeaters, we called *retrans*, all packed into a hut on a crazy six wheeled amphibious vehicle called a Gamma Goat. Hooaah!

My passion over the last couple of years has been portable ops, especially Parks on the Air (POTA). I have activated over one hundred times in six different states. Activating or even just operating portable is very invigorating to me, and the magic of making DX contacts with just a few watts and a wire will just never get old. Being outside and playing radio is my self-care after dealing with crises at the hospital on almost a daily basis.

What has caught my eye lately in this great hobby? AREDN™. Amateur Radio Emergency Data Network. The website says AREDN™ exists to "… provide hams a means to implement quality, high-speed data communications to support local and regional emergency communications needs." The objectives of AREDN™ are to stand up radio nodes and configure mesh networks, using low-cost reliable commercial equipment on the FCC Part 97 amateur radio bands.



Though it is not the Internet, hams connected via AREDN™ meshes can "provide typical internet or intranet-type applications to people who need to communicate across a wide area during an emergency or community event." The services that can be utilized include email, chat, texts, VOIP, streaming video, etc, all over RF on the upper UHF portions of the ham bands. The mesh networks are designed by several hams (and hopefully clubs) working together. Here's what a mesh might look like with just a few nodes set up.



Recently, I purchased a few commercial radios ($30-$60 each), flashed the AREDN™ firmware, uploaded a freeware mesh chat application, and created a Tunnel (to the regular Internet). I now have three nodes up and running at my QTH. The reason I created a Tunnel was that there are no other active AREDN™ nodes in the Pittsburgh region. In other parts of the country, and in a few foreign countries, large AREDN™ RF networks have been established and are very active.

A few hams that I know locally are interested in this project, but it is going to take about hundred hams, a few clubs, and maybe a municipal manager or two to really make this work region wide. Getting an operational AREDN™ mesh network will also take some serious planning and I do hope interest in this particular part of our hobby will be piqued by this article, and several of you will get into contact with me. Hopefully, in a couple of years our AREDN™ network will look something like the Fort Worth area mesh.

Of course, AREDN™ should garner great interest from our local and regional ARES folks, and would be really

fun to use/test at one of the many area events that a lot of hams volunteer for in the Pittsburgh region.

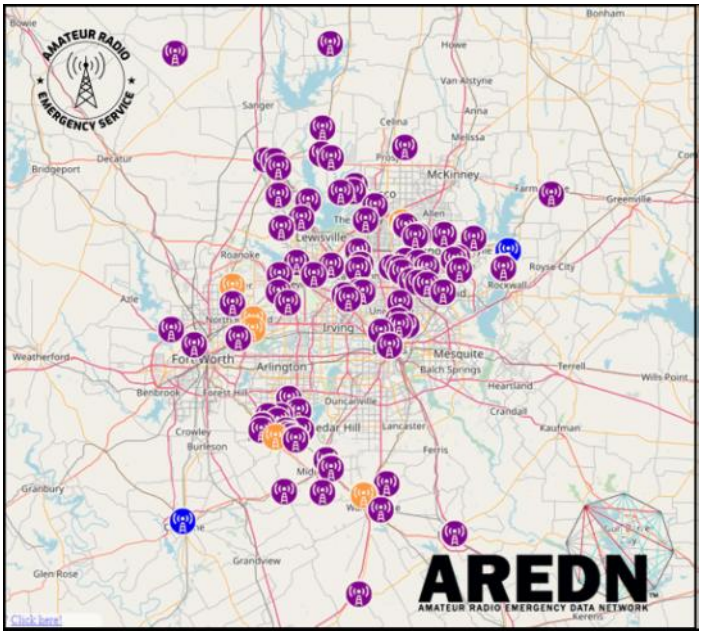
One of the great things about AREDN™ is the price point. Unlike HF or even VHF, AREDN™ radios and antennas are inexpensive. Even the larger dish type radio/antenna combos only cost a little over $100.00. Another reason AREDN™ has a real chance of catching on here is that the UHF bands are fully open to all modern licensees (Techs, Generals, Advanced, and Extras). So, what are you waiting for?

If you want more information, please visit the AREDN™ website at (arednmesh.org/) and download their detailed, but very accessible operations manual (https://arednmesh.readthedocs.io/_/downloads/en/latest/pdf/)

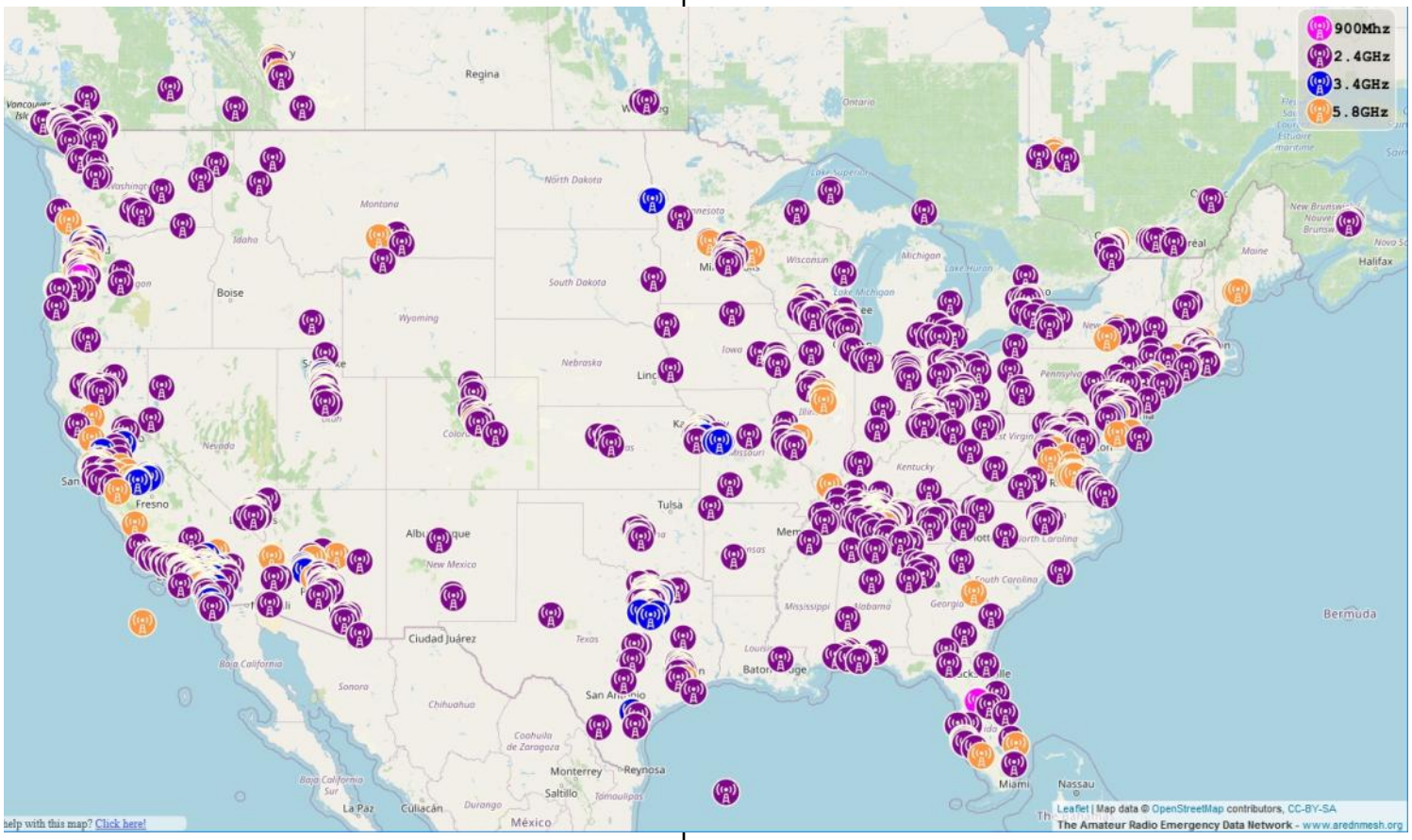
If you want to be in contact with me about AREDN™, please email me at K2PMD@arrl.net.

Paul Dordal - K2PMD

Here is what the AREDN™ Mesh Network looks like in the Fort Worth , TX area :



And Nationwide:



80 Meter Dipole Improved

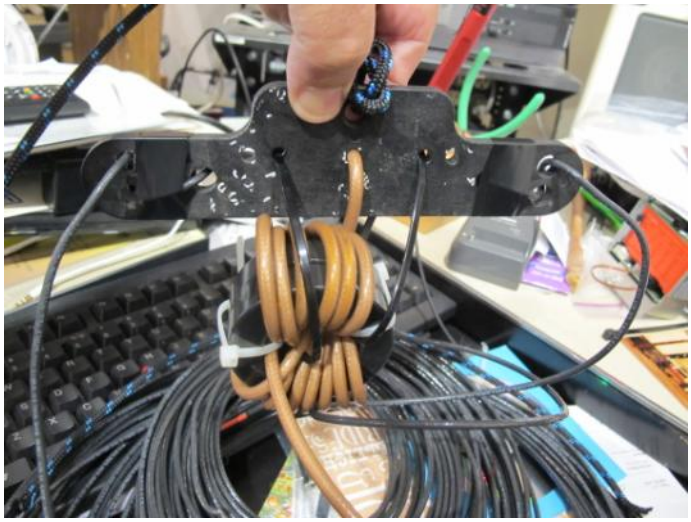
de Cooky - WC3O

Earlier this year one of the legs of our main 80 meter dipole broke. The wire needs re-attached, but that is up 90 feet on the repeater tower. The timing was particularly bad because we needed that antenna for an upcoming SET drill, and Skyview was to be involved as a Net Control station! We looked around and decided to put up a temporary "horse fence" 80 meter dipole hung from the cable that runs between the crank-up tower over to the small FM VHF/UHF antenna tower attached to the clubhouse. This made the dipole hang at around 20 feet off of the ground and that made the dipole perform well as an NVIS antenna.

Our regular 80 dipole (The currently broken one) is tuned for the bottom of the band, the RTTY section of 80 meters. ARES activities are at the top of 80 (Technically 75 meters). At the top of the band where the ARES nets are, the main dipole needs a lot of tuner to allow us to use the amplifiers. When we hung the horse fence, we tuned it for the ARES frequency. It was nice not to need the tuner for the SET drill.

Well, the NVIS antenna was nice to have so we decided to replace the temporary horse fence antenna with a permanent NVIS dipole. Something as simple as a dipole, I would prefer just to build it from scratch. I had all of the fixins to make this happen.

The first thing was to build a high-power choke. I got two 240-31 ferrite cores and taped them together. For the coax I used a stretch of RG-400 cable. RG-400 is the same diameter as RG-58 that you might find on CB antenna stuff. The beauty of RG-400 is that the center insulator is made of Teflon and can handle high power. Teflon has a very high melting temperature and the coax can be tightly wound around the ferrite core. What happens with lesser coax used in a balun is that the cable gets hot, the center insulator material melts and the center conductor migrates off-center, causing all sorts of problems in the balun from changes in impendence to a short circuit. The RG-400 solves this problem. RG-400 also is double shielded with silver plated copper. This has advantages of very low signal loss (in and out) and is very good for no intermodulation issues that we might have in our multi-op high-power contest station.



If you've ever looked into the price of RG-400 cable you'd be quoted as yelling HOLY CRAP! It's not cheap. However, the RG-400 that was used here came out of a box at a hamfest. I bought a bunch of it for $25 bucks! It's out there, you just need to recognize it when you see it. Good stuff.

The dipole center insulator was a piece that DX Engineering was selling at one of their sales. I don't know what they were used for originally, but they had a big box of there for $3 bucks each. I grabbed a few of them. They work well as a center insulator for a dipole.

The wire was from a spool that I think I bought at a yard sale years ago. It is #12 stranded. I attached everything to the dipole center and supported the balun with a couple of UV stable Ty-raps. Rather than installing the balun in an enclosure I wrapped the entire thing in two-inch wide Scotch 88 tape. This allows the whole thing to breath and keeps the sun from degrading the Ty-raps and coax outer insulation. It's not pretty, but it works great. AND it's cheap!!

The dipole is now installed and is tuned for around 3.983. When time allows I'd like to bury some counter-poise wires under the dipole to enhance the NVIS action. The antenna can be accessed via Antenna switch 1 in the pavilion, 3rd position of the remote switch. It will be great for ARES work. It will also be great for our Tuesday night nets, PA QSO Party, Field Day, 13 Colonies and more. It can be tapped into from the pavilion. Make good use of it.

Cooky - WC3O

HOA Antenna Idea

"He went to find a drug store with a tube tester in '85 and I haven't seen him ever since."

Welcome New Members !!

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

James Raabe - AC3EZ - Boyers, PA

Paul Krystosek - WA9QXY - Pittsburgh 15221

Joe Bilotta - KD3RVR - Ligonier

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.

Dead Space

Skyview Radio Society Roster as of 31MAY21

NM3 A	KA3 HPM	KB3 NSH	N3 TTE
AD3 AD	K3 HSE	AJ3 O	AG3 U
KB3 APD	KB3 HXP	WC3 O	NS3 U
NA0 B	AG3 I	KC3 OCA	N3 UIW
WI8 B	KC3 IIO	KC3 OCB	W3 UY
W3 BUW	WA3 IKQ	KC3 OCC	KX3 V
KF3 C	W3 IU	K3 OGN	K3 VRU
K2 CI	K3 JAS	N3 OIF	N3 VXT
K3 CLT	KA3 JOU	KB3 OMB	W3 VYK
K3 DCG	ND9 JR	NK3 P	N3 WAV
KC3 DIA	K3 JZD	K3 PC	K3 WM
KC2 EGL	KC3 KEI	KC3 PEM	N3 WMC
KC3 EJC	WA3 KFS	KC3 PIM	K3 WWP
AB3 ER	KB3 KHR	K2 PMD	N3 XF
K3 ES	AC0 KK	KE3 PO	KB3 YJQ
KC3 EVT	N3 KNB	KC3 PSQ	W3 YNI
KB3 EYY	W4 KV	N3 PUR	W3 YNX
AC3 EZ	KC3 KXZ	KC3 PXQ	WA3 YWU
WB3 FAE	WE3 L	WQ3 Q	K3 ZAU
KC3 FEI	WA3 LCY	KC3 QAA	W3 ZVX
K3 FKI	KC3 LHW	KC3 QIR	
KC3 FWD	W3 LID	KC3 QWF	
AC3 GB	K0 LIN	WA9 QXY	
N2 GBR	WB3 LJQ	NJ3 R	
AC3 GE	KG4 LLQ	K3 RMB	
KC3 GIL	K3 LR	W3 RRK	
KC3 GIN	KC3 LRT	I2 RTF	
KC3 GPM	AB3 LS	KD3 RVR	
K3 GT	KC3 LZH	KQ3 S	
AB3 GY	N2 MA	KB3 SOU	
KC3 GZW	KC3 MBM	K3 STL	
NC3 H	N3 MHZ	KB3 SVJ	
NY9 H	K3 MJ	KC3 TEX	
WD3 HAY	N3 MRU	N3 TIN	
WA3 HGW	KS3 N	N3 TIR	
KB3 HPC	G4 NFS	W3 TLN	

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 August 1, 2021
Closing Date For Submissions : July 15, 2021
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

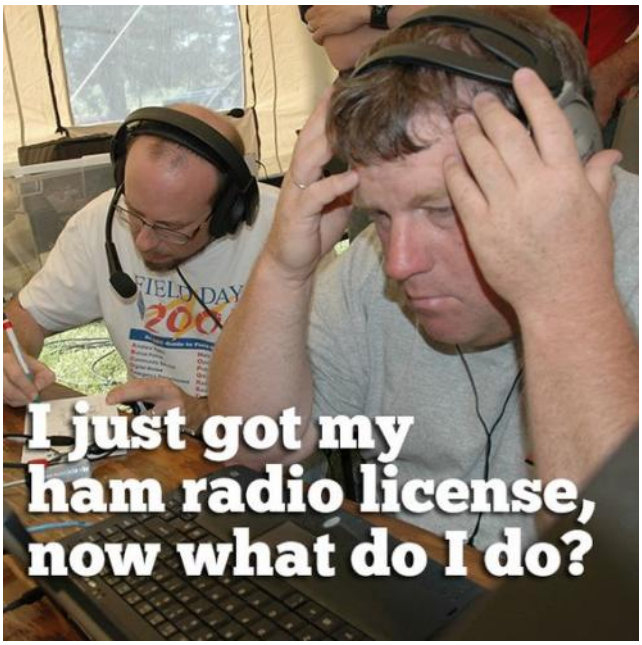
Location: Skyview Clubhouse Meeting Room
2335 Turkey Ridge Rd
New Kensington PA 15068-1936

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