ST JOHN VALLEY AMATEUR RADIO ASSOCIATION

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Watch for the Tesla coil to see where you can contribute to the

> **Mailing Address SJVARA**

Attn: Travis Devoe 3191 Aroostook Rd Eagle Lake. ME 04739





SJVARA Monthly Newsletter

The purpose of this publication is to keep you updated on club events and news as well as everything new in ham radio. It includes thoughts and ideas from our club meetings and events as well as new tech and news in the amateur radio community.

> If your not already subscribed, email sivarafk@gmail.com Attn: newsletter



Photo of the Month

Arecibo Observatory Telescope Collapse

To submit a photo, email it to sjvarafk@gmail.com Attn: photo of the month







Monthly Meeting Review

The meeting was cut short as I had something I had to take care of. The meeting lobby opened at 4:45 and as of 5:25 when I shut the meeting down no one had shown up.



ARECIBO HAS FALLEN

More info on the Arecibo Telescope

* NPR: Arecibo Collapse with drone video

* NSF: Arecibo **Collapse**

* Images of Arecibo

Petition to save <u>Arecibo</u>

 ${f S}$ ignals from the NSF's Arecibo observatory have fallen silent today for what is most likely the last time. Earlier in the year two (the first in August and the second in November) of the 18 primary support cables for the 900 ton nacelle snapped and tore gaping holes in the dish structure below. Early yesterday morning, December 1st, the remaining cables failed and the entire 900 ton platform came crashing down, again into the dish below. The NSF had already announced plans to decommission the 57 year old dish after the first cable snapped in August but had yet to develop a plan of action when the remainder of the platform fell. There were no injuries in any of the incidents.

Commissioned in 1963, Arecibo was the largest single aperture radio telescope in the world for 53 of those years only to be surpassed by the Five-hundred-meter Aperture Spherical Telescope (FAST) in China. Arecibo's 1000 foot wide dish, and 900 ton platform suspended above it, was the main telescope at the observatory. The dish was built in a natural sinkhole and the platform was suspended above via steel bridge cables and three towers, two of which stand 265 feet tall and the third at 365 feet. The top of each tower sits at

Originally, part of what is now called DARPA, [defense research] was involved in the development of the facility and the defense department's plan was to use the dish to study the ionosphere and

better understand how it might affect incoming ballistic nuclear missiles. This is the reason for the 900 ton platform suspended above the dish. Without this movable platform the effective field of view would be very narrow. This platform allowed the telescope to change it's point of view by 20 degrees in any direction.

The dish was also featured in a number of movies and shows, most notably in James Bond's Goldeneye and who could forget Jodie Foster in Contact. "CQ CQ this is W9GFO here"

The destruction of such a historic and invaluable asset to the scientific community will no doubt be felt well into the next decade. Efforts to save the observatory were not acted upon quick enough (mostly due to a dwindling budget) but, a group of supporters are circulating a petition to the US government to rebuild the facility. You can find more on that petition here.

"This might seem like a disaster, but I think we can transform it into an opportunity to make the Arecibo Observatory a better institution," Wilbert Hernández, a student at the University of Puerto Rico at

Mayagüez told Space.com. "This is where I understood my passion for planetary sciences and aerospace engineering," he said, "We will fight for it to be reconstructed and remodeled".

-kb l zpp







Club / Member Projects

Apparently no one in the club has any projects going on as I have received nothing from any of the members.

What are you working on? Let us know what projects your starting as summer heats up!



To submit your project send an email to sivarafk@gmail.com Attn: projects

Reader Submission

This section relies on you!

Do you have a new invention or idea you want to share?

Did you buy a new piece of gear you want to review, or just brag about?

Have a funny story or personal experience?

If you would like to put together a short write up about it, send it in!





"Amateur Radio Emergency Services". We are always looking for volunteers to help during a major emergency event in Aroostook County.

We have a very active team in Aroostook County and we need your help!

We hope this team is never needed but should a major problem happen anywhere in Aroostook County, Ham Radio Operators will more then likely be needed. Things like major storms Winter or Summer are crippling, especially for the Elderly. Those on oxygen or electric vents in there homes are examples. We have great ambulance services but they would not be able to get the needs covered.

Things like major flooding, which happened many times, plane crashes in a community, major fires, accidents when Police, Fire and EMS radios are completely tied up, communities will need Ham Radio Operators.

Please reach out to lend a hand. Call Roy Woods at 492-7532 for more information.





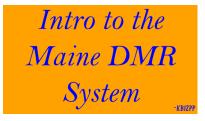
If you would like to submit something, email it to sivarafk@gmail.com Attn: reader submission



Upcoming Events

I am working on an "Intro to the Maine DMR System" online class, and the date has been scheduled for the I6th of January 2021. There are many other DMR networks out there but this class is only focused on the Maine DMR-MARC system. If you have any questions or comments about the content or format of the class let me know.

Again the date for this class is January 16, 2021 and the sign up sheet for this class is here. If you would like to attend please sign up now!



Since gatherings are still discouraged, I'm starting some classes online.

If your interested in any of these topics fill out the <u>form here</u>. If I get enough interest I will hold more of these classes. –kb I zpp

Nets in Maine

Sunday morning at 9:00 AM EST 3.940 Mhz Maine Public Service Net

Sunday afternoon at 4:30 PM EST 3.940 Mhz Maine Emergency Communications Net

If you know of any other nets in Maine, whether HF, VHF, UHF, digital or analog, let us know and we'll list it here!



To submit an event, email the description, date, and other pertinent info to siyarafk@gmail.com Attn: events

Quick Tips

Check out Dan's website at www.kb6nu.com for his updated study guides!

The tech version is still free as always and the general and extra guides are only ten bucks! All versions are updated and good through 2022 for tech, 2023 for general and 2024 for extra.



2020 version of the No Nonsense Extra Class Study Guide now available! How I got started in the study guide business.

In 2005, I was cooling my heels at the public-information table at our club's Field Day site, when up walked Bruce, W8BBS. In his hand, he had a copy of his Tech license exam study guide. What he had done was take each question in the question pool, reworded them as statements, and then reorganized them into paragraphs, adding text where appropriate to tie it all together and help it read more like a book.

We talked about how several folks had successfully used the study guide to get their licenses and how much they seemed to like his approach.

Then, we talked about how he might get the word out so that more people could use his study guide. After quickly paging through the study guide, I volunteered to post it on our club's website.

In 2006, Bruce was unable to update his study guide, so he gave me permission to do it. That version was the first issue of the No-Nonsense, Technician-Class Study Guide. In 2007, I produced the first No-Nonsense General Class Study Guide. In 2012, after much coaxing, I came out with the No-Nonsense Extra Class License Study Guide. All three study guides have been updated as time has gone on and are current with the latest question pools.

In additions, all three of these study guides are now available as PDF files, Kindle files, and ePub files. I planned to also produce iPhone and iPad versions, but I can't seem to get Apple to straighten out my iTunes developer account. You can certainly purchase the Kindle version, though, and read it on the iPhone or iPad with the Kindle app.

I can honestly say that I have helped thousands of people get their

amateur radio licenses. If you are one of them, thanks for downloading or purchasing one of my study guides. –KB6NU



Send Us Your

Tips & Tricks

Hacks & Mods

If you would like to submit your tips or tricks, email them to $\underline{sivarafk@gmail.com} \ Attn: just the tip$





A Few Words From KB6NU

How to prevent ESD damage

Here are some tips from Keysight Technologies, one of the leading electronic test equipment companies, on how to prevent ESD from damaging your electronics.

- USE A GROUNDED WRIST STRAP whenever you are handling equipment or boards. Using a grounded wrist strap prevents your body from building up charge and causing damage when this builtup charge discharges into your equipment or test boards. Make sure to connect that alligator clip to ground!
- USE GROUNDED WORK SURFACES OR MATS for your boards. Do NOT use static generating or insulating materials as a work surface. Non-grounded mats and static generating/insulated materials can inductively charge boards, especially exposed ones. When connecting a charged board to equipment, the board can cause damage by discharging into the equipment's inputs.
- KEEP CHARGED MATERIALS AT LEAST 0.3 METERS FROM EXPOSED ASSEMBLIES. This includes plastics, foam, or other materials that can build up charge. Having a charged material near an exposed assembly can inductively charge the assembly. The assembly can then discharge into the equipment's inputs.
- DISCHARGE YOUR CABLES BEFORE CONNECTING THEM TO YOUR EQUIPMENT. Electrostatic charges can build up on test probes and test leads, so it's import to discharge them before connecting them to your test equipment:
 - Ensure your device is off.
 - Connect your cable to your device.
 - Attach a 50 Ω shunt to the open end of the cable.
 - Remove the shunt and immediately attach your device to your equipment. This prevents the center conductor of your cable from discharging stored charge into your equipment. A charged assembly can charge connected cables.
- USE BOARD STANDOFFS AS NEEDED. In some situations, you need board standoffs to provide extra insulation for your exposed assemblies. This prevents your grounded mats from making unwanted connections on your board.
- NEVER USE "PINK" PACKING MATERIAL FOR BOARD TRANSPORT OR AS A WORK SURFACE. While many people think pink packing material is ESD safe, in most cases it easily builds up unwanted charge. Unless continuous, thorough testing is done, treat pink packing materials as charged.
- CAP UNUSED EQUIPMENT INPUTS to avoid accidental ESD and physical damage. Damage often occurs by accidentally contacting equipment inputs. Capping unused inputs protects them from incidental ESD damage.
- USE ESD-SAFE BAGS WHEN TRANSPORTING BOARDS. This
 protects boards from ESD damage while moving between ESDsafe locations.
- DO NOT OVERDRIVE EQUIPMENT INPUTS. Start your testing at the least sensitive input setting and zoom in on your signal. Additionally, observe the maximum input levels for your specific equipment. The least sensitive setting is the most resilient, so starting there ensures that your inputs are at safe operating levels.



After I posted this to my blog, Dave, N8SBE offered some further tips. He writes:

- Grounded heel straps also help reduce static charge. Test them with a floor tester every time you put them on. The floor needs to be somewhat conductive—not metal, that's a safety hazard—so use conductive wax on tiles, or conductive carpet to drain of electrostatic charges.
- Keep materials, such as styrofoam cups, that form electrostatic charges easily away from your workspace. A styrofoam cup can generate thousands of volts.
- Keep the humidity up in the workspace. That helps to keep static generation down as well.

I like to think that I follow ESD-safe procedures, but there are a couple of things here that I hadn't thought about before. For example, I'd never really thought about discharging test equipment cables before connecting them. I think that's a good tip

To learn more, go to https://www.keysight.com/find/PreventESD

Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the "No Nonsense" amateur radio license study guides (KB6NU.Com/study-guides/), and often appears on the ICQPodcast (icqpodcast.com). When he's not worrying about electrostatic discharge, he teaches online ham radio classes and operates CW on the HF bands.

Check out Dan's website for study guides, (Tech guide is <u>free</u>!) ham shack gear recommendations, and a daily blog.

www.kb6nu.com





Swap / Buy / Sell

The SJVARA is looking for donations for their club event trailer and "go box"

Any gear you would like to donate or let us borrow would be greatly appreciated.





We need gear to fill this section! If you have anything to sell or give away, are looking for something to buy, or just looking to see what's out there let us know!







To get your gear listed or to list what your in search of email siyarafk@gmail.com Attn: swap buy sell

Random Stuff

You'll find anything unrelated or off topic here.





I got a laugh out of this, I figured some of you might want to get your orders in before they run out of stock.

Get yours from Amazon here





If you would like to submit your random stuff, email it to sivarafk@gmail.com Attn: uh, that's random





Info / Links

Fort Kent Repeater - 146.640- 100hz

Eagle Lake Repeater - 146.715- 100hz (temporarily offline)

Echolink Node - 733919 (or search n1sjv)

Facebook - www.facebook.com/sjvara

Website - <u>www.sjvara.com</u>

Merch Store - www.teespring.com/stores/sjvara

Google Drive

Exam Study Guides - www.kb6nu.com/study-guides

Flash Cards and Practice Exams - www.hamstudy.org

Online Meeting App - FreeConferenceCall.com

Affiliates

Aroostook Amateur Radio Association

www.k1fs.org

Maine Amateur Radio Foundation

www.mar.foundation

Amateur Radio Relay League

www.arrl.org

Can Am Crown

www.can-am-crown.net

Membership Payment Links





SJVARA Attn: Carl Pelletier 22 Municipal Drive Fort Kent, ME 04743





The SJVARA is a membership of hams with the similar interest of promoting radio knowledge

Check out the club website or Facebook page for other info or events.

as well as advancing the general interest and welfare of amateur radio in the community.

Monthly meetings are held in Fort Kent but membership spans the entire valley and more.

Officer Contact List			
	Club Email	sjvarafk@gmail.com	N1SJV
President	Travis Devoe	coolman1987us@gmail.com	KB1ZPP
Vice President	Derrick Ouellette	kw1a@arrl.net	KW1A
Treasurer	Carl Pelletier	cjpmail211@gmail.com	N1EVO

Why Become An
Amateur Radio Operator?

"Ham" radio is a fun, exciting hobby that allows you to talk to the world using different technologies and modes of transmission. It's also a great way to meet people in your area with the same hobbies or interests, and exchange information and experiences.





