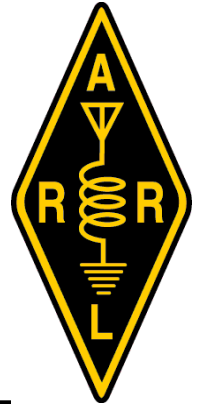




# THE BULL THISTLE BUGLE



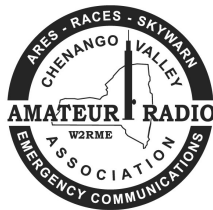
“BLOWING OUR OWN HORN” since 1965

Chenango County, NY

“We are ARRL affiliated”

Official Publication of the Chenango Valley Amateur Radio Association, Inc. Owner and operator of memorial amateur radio station W2RME/ R on 146.085T/146.685R MHZ, PL Tone 110.9, to the late Duncan “Dunc” Copley.

Published  
Monthly by  
the HAMS  
of CVARA



*The President's  
Corner de KC2SFU*



VOL. 59 September 2023

In keeping with my promise to focus on our primary goal (replacing the repeater tower) I have added some new members to the tower committee and appointed a new grant committee. Together these two committees will do the challenging work to replace our tower. I believe we will begin to see progress very soon. My sincere thanks to all the members of these committees. This work will take time but I have the utmost confidence in them.

I believe that organizations and people thrive when there are known procedures on how things should be done. While I loathe bureaucracy, at times it is necessary. I believe the CVARA is at a point where we need a LITTLE more bureaucracy. We need to stop reinventing the wheel every time we want to do something. Members need to know the accepted procedure to accomplish a task. We need to establish these norms in away that will bring our group stability. To accomplish this, I have appointed Bill Pratt, to work on a process whereby the membership can approve these procedures. We would appreciate your thoughts on this process.

Thank and 73, Tom KC2SFU

## CVARA Meeting Minutes for August 3, 2023

Called to order at 1904 by President Tom Monday (KC2SFU) held at the Grange Hall in Norwich and via Zoom

### Minutes:

Motion to accept minutes as printed in the Bugle by Lois Strong (NK2A) 2nd by Tom Mathewson (AD2TM); Motion passed

### Treasurer's Report:

Motion to accept Treasurer's Report as presented by Bill Prat (K2WMP) 2nd by Jon Englert (W2BDN); Motion passed

### Committee Reports:

#### **Youth/Education:**

**ARES/RACES:** Gus Macker follow up discussion. Things went well with no issues. Preparations for the Unadilla MX Pro Nationals are underway. Discussion followed regarding cameras, requests for traffic observers, a RACES net and usage of an SDR receiver.

**Tech Night:** All projects welcome! Public welcome... Bring a project along!

**Bugle:** Keep the good material & pictures coming!!!!

#### **Repeater:**

#### **Building & Grounds:**

#### **Membership:**

#### **VE Team:**

### Old Business:

**Insurance:** WZ2I apologized... running behind & hasn't renewed insurance yet. Will do so.

**Picnic & Awards:** We will hold a picnic on September 10, 6pm @ Norton Park in the Town of Columbus. HOY & Founder's Awards will be handed out that evening as well.

**Award Plaque/Trophy:** Bill Pratt K2WMP will check on the place in Sidney that we had previ-

ously bought our awards & plaques from. It was reported that they are no longer in business. We are hoping to get our digital files from them, at least.

**Snacks at the Shack:** Good time was had by all who showed up!

### New Business:

**Grants & Fundraising Committee:** Formation of a new standing committee to be called the Grants & Fundraising Committee was formed to seek funding opportunities, write grants & such for the club. Beginning members include NK2A, WA2LFI & WZ2I. The President is an Exofficio member as well.

**Committee for Procedures:** Discussion was had regarding setting up a committee to handle "Standard Operating Procedures". This committee would be tasked with setting up SOPs including an SOP for writing SOPs.

Suggestions were made to get feedback from inactive members as to why they are inactive. Also to generate a list of what each member is good at.

### For the Good of the Membership:

**Dues:** As a reminder: If you have not done so already, please submit your dues and/or consider a donation to the club. We have many expenses & need to cover our obligations.

**Closing:** Motion made at 20:25 by Matthew Jenne (WZ2I).

**Attendees:** AD2TM, WZ2I, NK2A, KC2SFU, WA2LFI, W2BDN, K2WMP

---

**More on the Quansheng HT Hysell K2HJ**

**John**

desire on his website, you can modify the firmware and load it locally on your radio, OR – use the website itself to update your radio directly.

Last month, I wrote a short review of the Quansheng UV-K6 SDR handheld radio. As you recall, I was pleased that the radio can easily be modified and customized in software And that the operating system/firmware are freely available on the manufacturer’s website. This month, I have more good news about this radio.

See the Hackaday article for more details: <https://hackaday.com/2023/08/13/update-your-chinese-radio-without-the-pain/>

Or visit the customizing page at: <https://whosmatt.github.io/uvmod/>

A user of the radio has developed a simple means to customize the radio. By simply selecting the Features that you

73 and happy customizing

**ARES This Month**

It has been a relatively busy summer for the ARES group, with three public service events. I would like to think all of those who participated. I think we made a good showing for ourselves.

Plans for this years Simulated Emergency Test (SET) are in the early planning stages but it is looking like we will be active with the ARRL on the first weekend in October. It has been suggested that we use the SET as an opportunity to work with other counties in the district and exercise our NVIS skills. I think with is an excellent idea.

In preparation for that I will plan an NVIS training session for this month's ARES meeting to be held on Saturday September 9th at 0900. This will be the first time we have been together in a number of months, and I look forward to seeing you all. This training

will be held in the EOC at the Norwich Police Station. The donuts are on me! 73, Tom KC2SFU

At left is one of Otsego County’s trailers, with a camera box attached for the Unidillia Motocross below Matt, K2FRY installs a camera box in New Berlin for the same event. John, N2YP and Matt, WZ2T give moral support and guidance,



Left photo, Matt, WZ2I

Right photo, Tom, AD2TM



**Local On The Air CW Practice**

Hello All in the CVARA family, I know this has been done before, but I am trying to drum up participants for On The Air CW Practice, OTACWP; let’s agree to never say or use that. One change this time around is that we will have Zoom as a fallback / coordinating room so we know what is going on other than hearing static. Ideally we will use 2m or 6m, I have a vertical for both, but we could switch to a few HF bands if people want/need to venture that direction. If anything this is a decent way to try out a simplex net, even though it is not on FM. If you are interested please email me at [KB2YSI@GMAIL.COM](mailto:KB2YSI@GMAIL.COM) for details.---... --- Don, KB2YSI

If you want to attend the meeting via Zoon Time: September 6, 2023, 07:00 PM Eastern Time (US and Canada)

[https://us02web.zoom.us/j/84435172692?](https://us02web.zoom.us/j/84435172692?pwd=MmNBaHIFZWpCK2ZCY240SHZ0NUw1dz09)

[pwd=MmNBaHIFZWpCK2ZCY240SHZ0NUw1dz09](https://us02web.zoom.us/j/84435172692?pwd=MmNBaHIFZWpCK2ZCY240SHZ0NUw1dz09)

To dial in via phone:  
+1 (929) 436-2866  
Meeting ID: 844 3517 2692  
Passcode: 712861

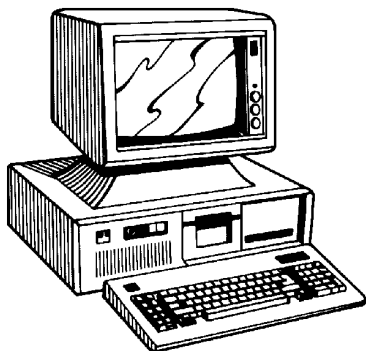
## 3D printing in nylon -a success story by John Hysell K2HJ

As many of you know, I like to print things using 3D printers and filaments with various features. I have printed a number of objects which have value in Amateur Radio (ground stakes, antenna insulators, etc) With varying degrees of success. One material that has held my interest for use with radio gear has been nylon. For me, it has been the Holy Grail of 3D printing to master this material.

Nylon has some outstanding material properties which support the uses I have planned for it, but it also demands close attention to some quirky requirements. First off, nylon is incredibly hydroscopic. That is; it like water. It likes water A LOT! In a humid room, nylon can adsorb up to 50% of its own weight in water! Then, when one prints with it, all that water turns to steam and causes all manner of printing headaches.

Nylon also requires higher nozzle temperatures than most other common filaments. Where one can print PLA at a comfortable 210' C, one must crank the heat up to 255'C or higher to print with nylon. This can exclude printing altogether if one's printer cannot reach that sort of nozzle temperature. Attempting to print nylon with printers with mostly plastic extruders is out of the question (assuming those printers can even drive the nozzle to those temperature realms. The high temperature can even damage the printer extruder beyond further use, requiring major repair or replacement.

So, using a printer equipped with an all-metal extruder is the secret? Not quite. One must also consider the nozzle material. Most common nozzles are made of brass. Some come in stainless steel and others in hardened steel. (More exotic materials exist as well – all ceramic, etc) I have found that hardened steel nozzles



hold up to nylon better than any of the others I have personally tested.

So, is that the secret recipe for printing nylon? I thought so for a long time, and tried (and failed) to create a repeatable process to print with nylon. Happily, I recently came across an article that reversed much of what I was using for a nylon print process. The 2 chief changes that I have made to my printing process are to use a printbed made of Garolite, and to keep the printbed at room temperature.

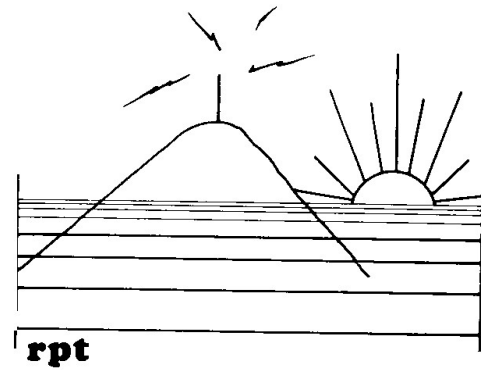
Garolite is a close relative to Bakelite. (Anyone who attends hamfest will have seen Bakelite in use. Most of the knobs and radio cases made in the 40's and 50' were made of Bakelite.)

Garolite is made of very similar chemicals as Bakelite, but is made of laminated sheets which hold very tight tolerances and stand up to heat. As a printbed material, Garolite has a lot to offer.

I had horrible issues with keeping my nylon creations stuck to the printbeds that I tried prior to using Garolite. Most often, the printed object would begin to curl from the printbed before the item was complete. Sometimes, the item would come completely loose during printing and end up sliding around still attached to the nozzle by a steadily growing blob of melted filament. (Quite a mess to clean up afterwards too!) I tested with dozens of combinations of nozzle and printbed temperatures to no avail. Switching to Garolite, along with a bed set to room temperature was the final key to my success.

In conclusion, if you have an interest in printing with nylon (And there are many reasons why you may want to.) please look into Garolite printbeds for your printer. I found mine at Amazon...

[https://www.amazon.com/gp/product/B0BY33Q7H2/ref=ppx\\_yo\\_dt\\_b\\_search\\_asin\\_title?ie=UTF8&psc=1](https://www.amazon.com/gp/product/B0BY33Q7H2/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1)



*And So It Should Be Written*

*By Ray Darling, K2DAR, CVARA Historian*

*Chapter 13*

*Welcome To - September 2023*

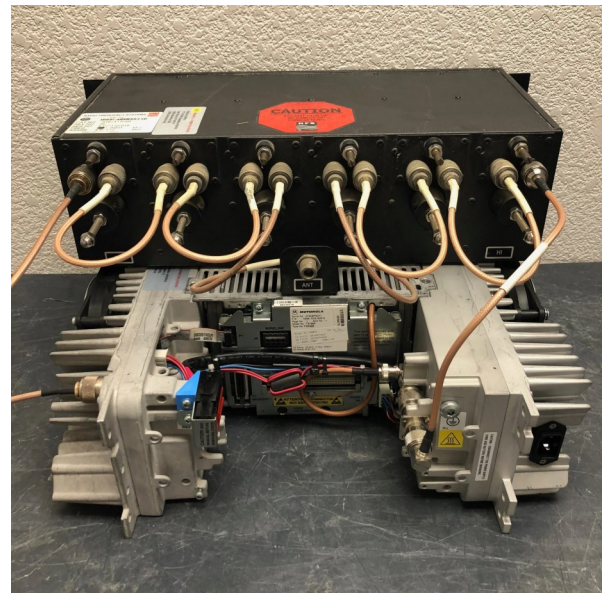
*special issue special issue special issue special issue*

*April 11, 1974*

*Excerpts From CVARA Archives*

In the spring of 1974, at a monthly meeting, it was voted on by those members present to establish the formation of a satellite organization to be known as the CHENANGO AMATEUR RADIO REPEATER ASSOCIATION (CARRA) for the purpose of establishing a 2 meter repeater within our area. This new organization is being spearheaded by Mr. Marv Druskoff, K2VIV of Mt. Upton, NY. It is planned that this mode of operation will perform a distinct public service in this area in times of natural disasters as well as other various community sponsored functions. We are at present trying to enlist any financial aid available from county agencies and the American Red Cross.

Present plans call for establishing a temporary, in house set up at the K2VIV QTH with transmissions tentatively set for 146.07 Mhz and receiving on 146.67 Mhz. A used Motorola repeater was located at Tom's Radio in Johnson City, NY and delivery has been made to the K2VIV QTH of all 400 lbs. of it. Test coverage transmissions will be conducted in the near future. Temporary authorization for operation is expected within 4 to 8 weeks.



As present plans stand, this is to be a collective club effort and it is the intent of this special issue of the Newsletter to allay any fears of a monopolistic enterprise. No one and we repeat, No one will be excluded from participating in this worthwhile club activity for lack

---

*(Continued from page 5)*

of financial ability to pay for individual gear. It is planned for all interested to get on 2 Meters with whatever form of gear their budget allows and every effort will be made to locate adequate individual equipment for a reasonable figure so that all may participate.

To provide for immediate repeater activation, while this is all still fresh in everyone's mind, I would like to announce that the repeater rig was purchased as the result of an initial gift from W2RME and praise for this generous gesture should not go unheralded.

An initial fee of \$20.00 is being asked of all members in order to establish a working capital account to meet needed expenses. All CVARA members (and any other area Hams) interested in joining this new organization are asked to fill out the form below and bring it to the next club meeting or mail to Marv Druskoff, at his home, RD#1 Mt. Upton, NY 13809

Name \_\_\_\_\_ Call \_\_\_\_\_

Address \_\_\_\_\_

Do You Have Active 2 Meter Gear? \_\_\_\_\_

I would be interested in joining this new Organization YES \_\_\_ NO \_\_\_

### *The 70's - Repeaters*

The 70's must surely be remembered as the decade of the FM repeater. Not because FM repeaters were "invented" in the 70's they actually appeared much earlier - but because it was during this decade that amateur FM repeaters on VHF and UHF "took off" and literally reshaped the 2-meter, 1 ¼-meter and 70-cm bands.

The amateur FM repeater revolution had roots much farther back in time. Repeaters had been in use on 5 meters in the 1930's but they were essentially experimental machines and never gained much popularity. 1950s AM repeaters started appearing, scattered throughout the nation. The repeater idea was sown.

It was the success of commercial FM repeater systems that gave amateur FM repeaters the greatest boost. After WW-II commercial users discovered the value of channelized FM for mobile use. Throughout the 1950's manufacturers churned out large quantities of equip-

*(Continued on page 7)*

---

---

*(Continued from page 6)*

ment designed to satisfy that new demand. As the popularity of the new systems increased, so did congestion on their bands!

In order to relieve that congestion the FCC finally required the commercial users to tighten up on their channel spacing. The commercials were obligated to do so, with the result that, throughout the 1960's large quantities of outmoded (from the commercials' standpoint), but entirely serviceable equipment became available on the surplus market. Guess what? The gear operated on frequencies close to the amateur 6 and 2-meter bands, as well as 70-cm, and was easily converted from commercial to ham use. As the installed base of amateur FM repeaters grew, mostly built of converted commercial equipment, a demand for low-cost mobile and hand-held equipment grew and was satisfied by both domestic and foreign manufacturers. The era of the ham FM repeater was in full bloom!!

Much discussion and opinions were shared over a short period of time ultimately culminating in the decision to form the repeater association and pursue 2-meter FM capabilities for Chenango County and surrounding areas. This worthwhile project was supported if for no other reason than thinking it would bring all members closer together with a common mode of operation.

Initially, our hopes this might bridge the gap between CW only and Phone only operations by providing a mutual ground for sharing ideas and promoting an interest in our hobby for all. After all, let's face it, if a 36 year veteran of brass pounding (W2RME) can get caught up in the swing of it, there must be something in it for everyone.

Yes, Marv (K2VIV) was trying to sell an idea ..... Emergency Communications. And sell he did! Trial and error, testing and more testing of the repeater concept and usage in Chenango County became a focal point as our communications system begins to grow.

\*\*\* 73, See you in October \*\*\*

---

## Hack the ARRL?

By Dan Romanchik, KB6NU

A couple of weeks ago, I attended DEFCON, which is arguably the premiere hacking conference in the world. DEFCON hosts a number of special interest groups they call "villages," which organize their own sub-conferences on topics ranging from artificial intelligence to voting. One of those villages is the Ham Radio Village, and as I did in 2022, I taught a one-day Tech class in the Ham Radio Village on Thursday, August 10.

So, what does this have to do with the ARRL? Well, one of the more popular amateur radio sub-hobbies is to complain about the ARRL. I won't list all the complaints here, but I think that most of you will agree that there are more than a few complaints out there.

Well, part of the hacker ethos is to not just complain about things, but to do something about it. The Wikipedia entry on hacker culture puts it this way, "[hackers enjoy] the intellectual challenge of creatively overcoming the limitations of software systems or electronic hardware (mostly digital electronics), to achieve novel and clever outcomes." It seems to me that we could creatively overcome some of the limitations of the ARRL, i.e. hack the ARRL, if we put our minds to it.

I think that Parks on the Air (POTA) is a good example of this. The ARRL actually gave birth to POTA with their year-long National Parks on the Air program in 2016, which celebrated the 100th anniversary of the U.S. National Park System. It was a very popular activity, but the ARRL dropped it like a hot potato once the year was over.

Fortunately for ham radio, a dedicated group of ham hackers stepped up and created the current POTA program. POTA is wildly popular and has been a real boon to amateur radio.

### Get your hacking hats on

So, what else can be hacked? One thing that I can think of off the top of my head is Logbook of the World. At one time, there was talk about making it a more real-time system. I'm not sure whatever happened to that project, but my guess is that the programming was a lot more complicated than originally anticipated, and it got put on the back burner.

Another possible ARRL hack would be to do some-

thing about the ARRL's digital magazines. This hack is particularly needed now that fewer and fewer members are going to be getting the print versions of QST, QEX, and the National Contest Journal. Making the information more easily accessible I think would end up being beneficial for the ARRL as well as ham radio in general.

### Can you hack a hamfest?

This isn't strictly an ARRL thing, but one aspect of ham radio that I would love to see hacked is hamfests. Recently, on the social media platform Mastodon, someone wrote:

"Researching local hamfests, and they're still such an old man thing. 7 am open gates. Grange fair. Fire house. Greasy breakfast cart. Noon close.

"Can we get like a 3 pm start time at a farmer's market with snacks, kombucha, and chiptune DJ?"

My reply was, "There's nothing that I know of that stopping anyone from starting something new." I would love to see someone come up with something like a hamfest that's more relevant for younger hams and easier for them to attend. It wouldn't be easy to do, but life's not easy, is it?

Ham radio needs the hacker ethos now more than ever. Hackers take on difficult challenges because they are difficult, don't they? So, let's get to it.



# CALENDAR OF EVENTS FOR 2023

- September 7, CVARA Meeting 7:00 PM Grange Hall, .Hale St , Norwich as well as online via Zoom
- September 21, Tech Night
- September 9, **Lancaster Hamfest** Location: Lockport, NY
- September 10, HOY Picnic, Norton Park . Columbus
- September 26—30, 2023 Antique Wireless Association Conference Location: Henrietta, NY
- September 28, Exam Session Norwich Grange Hall
- September 30, Elmira Hamfest Location **Horseheads, NY**
- October 5, CVARA Meeting 7:00 PM Grange Hall, .Hale St , Norwich as well as online via Zoom
- October 19, Tech Night
- October 26 Exam Session

*Do not forget that every Wednesday **night** at 7:30 local on the W2RME/R 146.085/146.685 PL 110.9. The CARES net meets.*

If you know of, or hear about any activities that should be listed here, Please pass them on to the editor.

September 2023					1	2
3	4	5	6	7 meeting	8	9
10	11	12	13	14	15	16
17	18	19	20	21 Tech Night	22	23
24	25	26	27	28 Exam Session	29	30

**Permanent committees**

- ARES/RACES: **KC2SFU**
- AWARDS: **AD2TM**
- BUGLE: **AD2TM** Chairman
- COMMUNITY SERVICE;
- NEW Ham development **K2FRY**
- FIELD DAY: **K2FRY** Chairman

- MEMBERSHIP: **K2FRY** Chairman
- PACKET:/ Digital: **KC2SFU** Chairman, **N2SPI**
- PUBLICITY/PUBLIC RELATIONS:**AD2TM**, **N2YP**, : **WZ2I**, **K2DAR**
- TECHNICAL: **WA2IZB**
- VE TEAM: **K2DAR**: **WZ2I**
- HAM OF THE YEAR: **WZ2I**
- Club Station/ Shack: **K2DAR**, **N2YP**, **KC2SFU**
- Repeater Trustee: **WZ2I**

# CVARA CLUB OFFICERS

President: Tom Monday KC2SFU  
Vice Pres: Tom Mathewson, AD2TM  
Treasurer: Emily Goehner WA2LFI  
Secretary: Matt Jenne, WZ2I  
Directors: Lois Strong, NK2A; Tom Monday, KC2SFU; Jon Englart W2BDN

Tom, AD2TM, editor of the Bugle is ALWAYS looking for submissions  
Your views, comments, and articles will gladly be considered for publication.  
Send your articles to.....

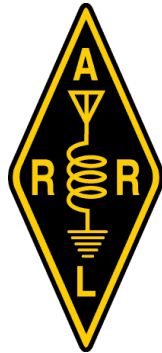
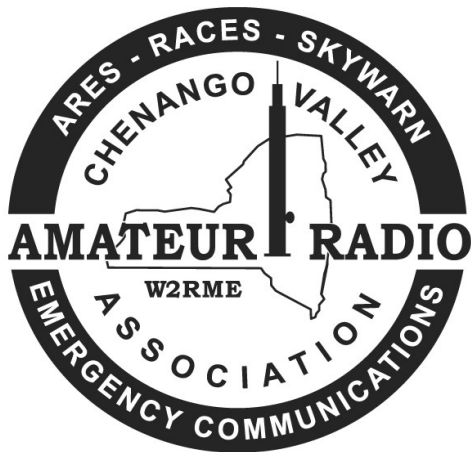
Thomas Mathewson  
680 Plymouth N. Norwich Rd  
Norwich, N.Y. 13815

Internet...ad2tm@arrl.net

We encourage promoting our organization and welcoming new members to join our group. We hope we can continue to grow and maintain a successful club. Your continued support can make this happen.

Visit the club WEB site at: <http://www.cvara.net>

**Deadline for the October 2023 Bugle is September 20, 2023**



PO Box 1324  
Norwich, N.Y, 13815