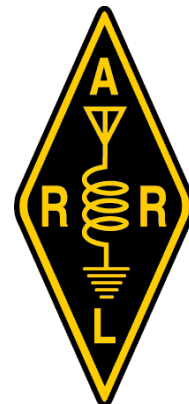




THE BULL THISTLE BUGLE



“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 KG8MOE



VOL. 59 June 2023

Saturday, May 20th we held our first Science and Technology Fair. With association turnout low, (about 25%) we put on a great show with about nine tables showing some amazing things. Tom, KC2SFU had information on safety with ARES and RACES and Fred Barnes displayed some awesome rockets. We had a couple of people from the Historical Society showing us the make up of Aspirin, which was hands on for anyone interested in making it up themselves and also some antique radios, crystal sets etc. and an original morse sounder. Clayton Kappauf and his children, Dagfinn, 11 and Calista, 10 showed us some 3D printing they had done and John Hysel K2HJ also had the association’s 3D printer on display. In fact, there were other 3D printers there as well. Don, KB2YSI showed us Tom Monday’s satellite setup which he has been working on for a while. Brian, KF6C took up 2 tables with some of his equipment, some of which is heavy, so help was needed to get the stuff into and out of the car because of his current 5lb weight limit due to recent surgery. Amongst all his, (I want to say, “Junk” but will refrain!) equipment was a collection of 4 different types of CW keys which proved popular with kids and adults alike!

Public attendance was low but that didn’t stop us from enjoying the day. Many Thanks go to Lois, NK2A, for finding and printing some comics put online by Icom and Tom, AD2TM for printing out a load of them. These were put on Tom Monday’s table for handing to the kids and quite a few were given out. Wrapped snacks and water were provided by the association with the leftovers being saved for Field Day. Tom, KC2FSU bought donuts and coffee mid-morning and I must admit I gave up and indulged! Again, Thanks to Tom, KC2SFU for dreaming this up and organizing it all. Let’s do it again next year and build on our success!



Lois, NK2A enjoying the warm sunny Saturday afterword counting canoes, M Upton St Hwy 51 Bridge, for the Scout Races part of the 2023 General Clinton Canoe Regatta. Thanks to Matt, K2 FRY for the photos.



CVARA Meeting Minutes for May 5, 2023

Called to order at 1900 by President Jean Comer (KG8MOE) held at the Grange Hall in Norwich and via Zoom

RAFFLE: Motion made by N2YP to raffle off items received late that were to be door prizes for the hamfest. Seconded by AD2TM. All ayes. Raffle began.

Minutes:

Motion to accept minutes as printed in the Bugle by Tom Monday (KC2SFU) 2nd by Carrie Wallingford (KD2VTH); Motion passed

Treasurer's Report:

Motion to accept Treasurer's Report as presented by John Rudolph (N2YP) 2nd by Carrie Wallingford (KD2VTH); Motion passed

Committee Reports:

Youth/Education: Tom Monday (KC2SFU) briefly updated the club on the upcoming "Science & Technology Fair" That comes up on May 30th. Volunteers needed for the membership table and looking for more displays.

Co-Chair Jon Englert (W2BDN) reported on working to put together an antenna building & fox-hunt exercise for the youth at the Richfield Springs Community Center. Scheduled for August 26th.

ARES/RACES: The General Clinton Canoe Regatta is coming up on May 27 & 28. The Scout races on Saturday will require our usual spotter and relay setup with net control being on the Canoe Regatta Grounds.

On Sunday for "the big race" we have been requested to provide some spotters as well some video camera footage from along the course.

There will be NO General ARES/RACES training for the next few months as we will be busy with activities instead.

Tech Night: All projects welcome! A suggestion was made to work on building a nice electronics workbench.

Bugle: Many thanks to all the contributors this month... we almost had too much material to fit in one edition!

Repeater:

Membership:

Bylaws: Bill Pratt (K2WMP) Chair of the bylaw

committee presented their cleaned up version of the club's bylaws. Adoption of the bylaws as presented was brought to the table. Motion was made by Tom Monday (KC2SFU) and seconded by Tom Robson (KD2NJI) to accept the changes to the bylaws. Motion Passed without objection.

Old Business:

New Business:

Tech Fair Snacks: A motion was made by Tom Monday (KC2SFU) and seconded by Carrie Wallingford (KD2VTH) to allocate \$200 from the Youth & education fund to be spent on snacks & supplies for the Science & Technology Fair. Motion Passed without objection.

R.C. Smith Grant: It was reported by Matt Jenne (KD2HKB) that we have received \$5,000 in funds from the R. C. Smith Foundation in response to the grant application he submitted on the club's behalf. The grant request was to build several more of the camera boxes like the ones we've been using for various ARES/RACES deployments. He said that we should be able to build 5 camera kits with the money received.

A motion was made by John Rudolph (N2YP) and seconded by Tom Monday (KC2SFU) to release the grant funds to Matt Jenne as needed so he can order the parts and pieces for the kits. Motion passed without objection.

Grange Donation: A motion was made by John Rudolph (N2YP) and seconded by Carrie Wallingford (KD2VTH) to donate \$100 to the Chenango County Pomona Grange for our use of their building throughout the year. Motion passed with one abstention.

For the Good of the Membership:

Dues: As a reminder: many have not submitted their dues... 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.

CLUB FUNDRAISER: Doug's Fish Fry, May 19th at the Chenango County Grange Hall. 11-6

Closing: Motion made at 2015 by Tom Mathewson (AD2TM), 2nd by Dave Stearns (KD2ERR).

Attendees: KG8MOR, KF6C, KD2HKB, N2YP, AD2TM, KD2ERR, KD2NJI, K2DHG, W2BDN, NK2A, K2FRY, K2HJ, K2WMP, KC2SFU, KD2VTH, KD2VNE, KT2O, N2SW, KB2YSI, Fred & a New Ham (per notes)

If you want to attend the meeting via Zoon

[pwd=MmNBaHlFZWpCK2ZCY240SHZ0NUw1dz09](https://us02web.zoom.us/j/84435172692?pwd=MmNBaHlFZWpCK2ZCY240SHZ0NUw1dz09)

Time: May 4, 2023, 07:00 PM Eastern Time (US and Canada)

To dial in via phone:

+1 (929) 436-2866

Meeting ID: 844 3517 2692

Passcode: 712861

[https://us02web.zoom.us/j/84435172692?](https://us02web.zoom.us/j/84435172692?pwd=MmNBaHlFZWpCK2ZCY240SHZ0NUw1dz09)

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 for details.--... ..-- Don, KB2YSI

First CVARA Science and Technology Fair

Our first Science and technology fair is behind us now. If you had ask me going in what success looked like, I would have told you we needed some number of people to attend. I don't know what that number would have been but I'm sure we didn't meet it. By that measure this event was a complete failure.

What I learned from this failure is that I was using the wrong metrics. What I should have been measuring was the scope and level of the conversation among those that did attend.

By that measure, this event was an amazing success! The Rocket builder interested in radio for telemetry. The 3D printer who printed a rocket. The 12 year old showing a bunch of old men how to do something new on their own equipment. I wonder, could we track the rocket with the satellite equipment? The synergy, enthusiasm and joy of building something was contagious.

I believe the maker community in our little part of the world is alive and well. It seems to me that helping them find each other will have a positive effect on our ham radio world. These are like minded people who have a common need to build things.



Fostering this need will provide a real advantage to the CVARA

73, Tom KC2SFU



CVARA Radio project Part3

IF amplifiers product detector and audio outputs.

Most of the ICs (integrated circuits) in the final IF are plastic packaged versions of the Plessey Semiconductors SL600 series. These devices were primarily built for the Plessey Clansman manpack radio. They are essentially the first ICs built specifically for radio communications. Unlike ICs today that are laid out with computers, these devices were laid out (Tapeout) using cut and strip on Ruyolith a thin red film stuck to a mylar film. James Bryant G4CLF, Plessey Applications Manager (1975) and I campaigned in the early days to get these put into plastic packages, to no avail, until the CB market arose. The CVARA radio uses some of the plastic versions of the SL600 series, the SL1600 series. The final IF is close to the G3ZVC design published in ["Ham Radio" magazine, years 1968-1990, version : T. H. Tenney : Free Download, Borrow, and Streaming : Internet Archive](#)

Figure 1 shows the schematic of this part of the radio. The input to this section is from the 455 kHz mechanical filter. U7 and U8 are amplifiers with voltage gains of 34 dB (50 times) so the total gain is 68 dB (2500 times) Together these amplifiers have an AGC (Automatic Gain Control) range of 100 dB. The output from the amplifiers is applied to U9, a double balance mixer acting as a product detector. The IF filter is centered at 456.5 kHz, so the BFO is set to either 455 kHz or 458 kHz derived from the Si5351. The Audio output from U9 is applied to the AGC circuit, and a CMOS analog switch that switches the audio to one of two filters, built around operational amplifiers in U12. U12A forms a 3kHz low pass filter for SSB while U12B forms a narrow band 600 Hz filter for CW. The ports marked 600 and 3K are controlled by the Arduino. U12 outputs have sufficient drive for headphones or an external amplified speaker. Automatic gain control is provided by U13. U13 was specifically designed for use in SSB receivers in conjunction with the SL1612s. It generates a suitable AGC voltage directly from the detected audio waveform, provides a "hold" period to maintain the AGC level during pauses in speech, and is immune to noise interference. In addition, it will smoothly follow the fading signals characteristic of HF communication.

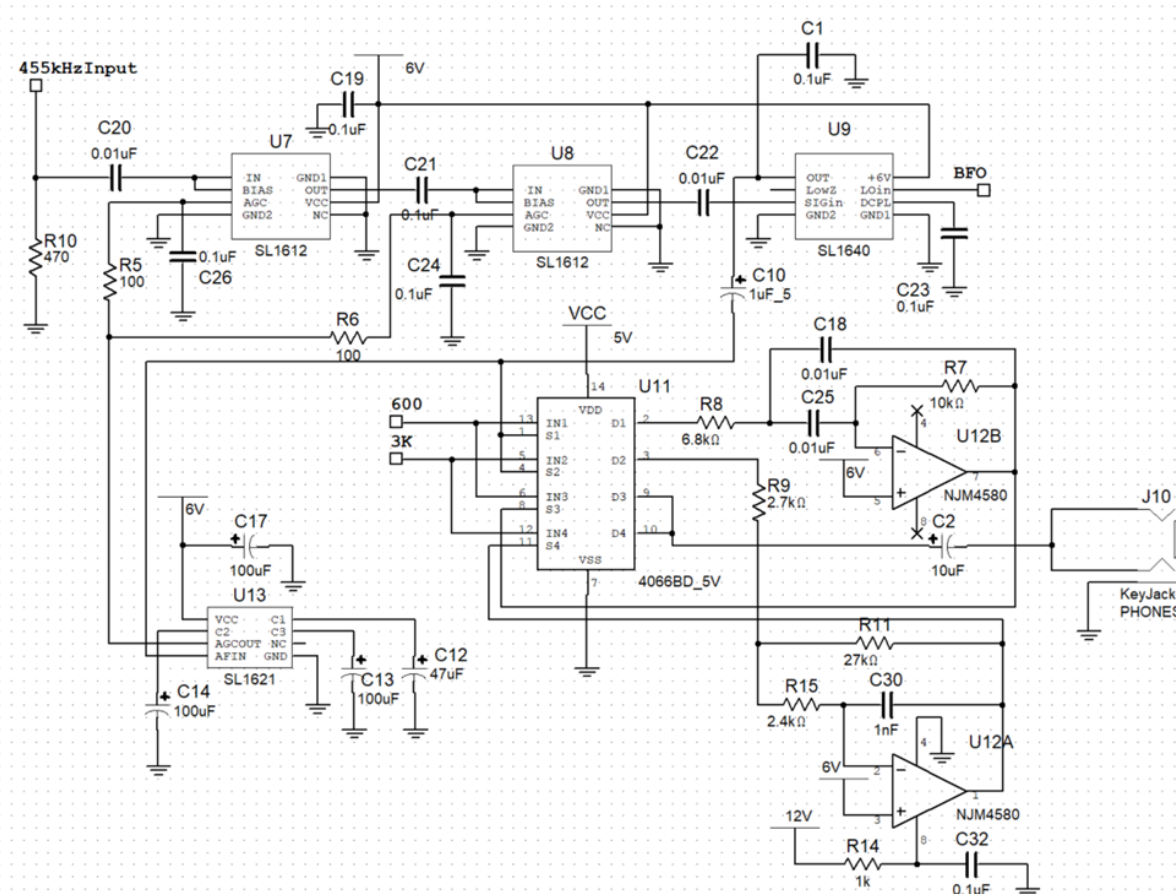


Figure 1

Brian
KF6C

And So It Should Be Written

By Ray Darling, K2DAR, CVARA Historian

Chapter 10

Welcome To – June 2023

Years ago, an old friend, influential teacher and storyteller, offered this piece of wisdom.

“To become what we want to become in life, we will all have to take certain risks which scare us. And if we feel we can survive the consequences of taking that risk and continue on in life even if we fail. I believe we should take that unknown step that scares us so much. Remember, the worst that can happen is that we fail. And what's the big deal about that?”

The excitement of and the completion of the Apollo 11 mission and manufacturing contracts caused a major shift in many career plans. As fate would have it, a huge layoff was announced and executed. Myself, along with about 70 other employees would soon be without a job, and being called back anytime soon was neither promised or expected. How quickly life can change!

While awaiting the official layoff date, my Life Insurance Agent had stopped by my home one evening to advise me that he was being promoted to a management position and was looking to recruit a candidate to take over his current territory and agent's book of business. Point blank, he asked if I would be interested in becoming a Life Insurance/A&H Sales & Service representative for the National Company he represented. The job would require moving into this sales territory which primarily included the towns of Bainbridge and Guilford. Knowing absolutely nothing about the Life Insurance business, I was very hesitant. Questions: Back to school? NY State licensing requirements? Physically moving the family to a new home/location? Establishing a mini-business in the home as well as reporting weekly to a detached office nearby? A scary situation! Should I take this risk? What if I fail?

(What was impossible yesterday could be accomplished today..go for it!!)

Decision made - With help from friends and family members, we searched the real estate market and luckily found a house in the Village of Guilford which would suit our needs, hopefully for many years. Packed up all our belongings and relocated to our new home. Ham radio gear went into storage for a time to study and acclimate myself to the new job. The district management presented me with a huge box of study manuals and a time limit of 3 weeks to prepare for the NY State Licensing exams at BCC. Wow!!!! What had I gotten myself into?? Drawing from my military college experiences, concentrated on my study manuals passing the required exams & receiving the appropriate licenses.

Not only did the move give me a new perspective on life and the business world, but provided the opportunity to meet and promote relationships with ham operators in the territory I was servicing. The hobby combined with my career established many great friendships and further opportunities, expanding my interests and capabilities both in the business world and as an Amateur Radio Operator.

The General Clinton Canoe Regatta (GCCR) had been a growing event in Bainbridge for a few years prior to my establishment as an insurance agent in the area. Word quickly spread that I was a ham radio operator, resulting in a call from an old family acquaintance inquiring of my true interests in the hobby. An invitation to the home of Howard Williams (K2MQA) proved to be a pleasant experience. Howard was obviously into ham radio and had a modest HF Station and was a traffic handler with the NY Post Office Net (NYPON). A long conversation ensued with mention of other local hams experimenting with some type of communications network benefiting GCCR officials.

Statements were made that some communications had been done in the very early years of the regatta by Citizens Band enthusiasts. This service did not work out well due to equipment, power limitations and short distance coverage and the service was terminated. My interest peaked immediately (WA2EYH), along with Bainbridge hams: John Straka, K2TEE, Dick Sloane, K2SXR, Elwyn Hitchcock, K2QHK and Sidney resident George Horton, W2JGJ.

During the off season this group arranged a gathering with regatta officials to discuss the communications needs or wants the committee would be interested in. The ideas gained from this gathering were then shared and presented to officials and members at-large of CVARA, The Oneonta ARC, the Walton ARC, the then Sidney and Walton ARC's. All were in agreement that our combined membership efforts could possibly help with tracking and forwarding pertinent information about the race entrants from selected checkpoints along the Susquehanna River to Bainbridge HQ.

The seed had been sown, with continuous development of Ham Radio involvement present. Each year adjustments would be made to accommodate the needs of race officials and training of the Ham Radio operators would become more detailed, with equipment and procedures updated accordingly. Cooperation from volunteers from local and surrounding radio clubs provide the necessary manpower to handle elevated workloads.

Supporting the Amateur Radio Emergency Service (ARES) which consists of licensed amateurs who have voluntarily registered their qualifications and equipment for the public interest when disaster strikes, or assisting with local/statewide public event communications when called upon is of vital importance.

Have you made the move to join the CVARA ARES Group and receive the valuable training available? Why not take advantage of this involved training? Who knows when or where you might be called upon to assist in an event you thought you'd never be subjected to.

Tune in for the upcoming July issue of the Bugle!!



CALENDAR OF EVENTS FOR 2023

June 1, CVARA Meeting 7:00 PM Grange Hall,
 .Hale St , Norwich as well as online via Zoom
 June 3, Rochester Hamfest, Hilton, NY
 June 10, Cortland Hamfest, Cortland, NY
 June 10—12 June ARRL VHF Contest
 June 15 Tech Night
 June 22,Ex am Session Norwich Grange Hall
 June 24—25 ARRL Field Day

*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.

July 6, CVARA Meeting 7:00 PM Grange Hall,
 .Hale St , Norwich as well as online via Zoom
 July 8, Roger’s RAGS Hamfest, Camillu , NY
 July 14, Tech Night
 July 27, Exam Session Norwich Grange Hall

August 3,CVARA Meeting 7:00 PM Grange Hall,
 .Hale St , Norwich as well as online via Zoom

August 17, Tech Night
 August 24, Exam Session Norwich Grange Hall

June 2023

				1 meeting	2	3
4	5	6	7	8	9	10
11	12	13	14	15 Tech Night	16	17
18/	19	20	21	22 Exam Ses- sion	23	24
25	26	27	28	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**,
KD2HKB, **K2DAR**
 TECHNICAL: **WA2IZB**
 VE TEAM: **K2DAR**, **KD2HKB**
 HAM OF THE YEAR: **KD2HKB**
 Club Station/ Shack: **K2DAR**, **N2YP**, **KC2SFU**
 Repeater Trustee: **KD2HKB**

CVARA CLUB OFFICERS

President: Jean Comer. KG8MOE
 Vice Pres: Tom Mathewson, AD2TM
 Treasurer: Emily Goehner WA2LFI
 Secretary: Matt Jenne, KD2HKB
 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.....

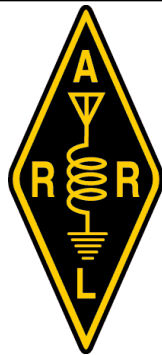
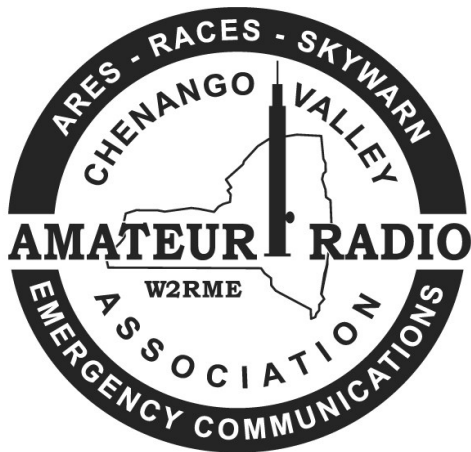
Thomas Mathewson
 680 Plymouth N.Norwich Rd
 Norwich, N.Y. 13815

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 JuLY 2023 Bugle is jUNE 20, 2023



PO Box 1324
 Norwich, N.Y, 13815