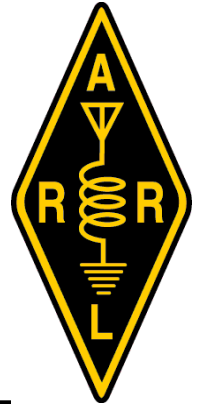




THE BULL THISTLE BUGLE



“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 April 2023

The April Meeting

Well, I'm off to a rip roaring start! The first meeting of my first term as president and I will not be there. I will be with some of my family on a seven day cruise of the Caribbean, courtesy of my first born son. As it is the Caribbean and we've never been there, we weren't going to turn that down, and besides the tickets were already purchased before this position ever came up! I will, however, be on Zoom so all is not lost. My thanks to Matt Jenne for getting me onto Zoom and I know he will do a good job for us all. Speaking of Matt, Thank you, Matt, for being the President for the last 2 years, and also to all outgoing members who served us in some sort of position to keep us running smoothly.

April's meeting will catch up on old business and also start the dialogue for Field Day and the Annual Dinner. I know my memory is not very good but I don't remember one last year. I'm hoping there wasn't one because of Covid and my memory isn't as bad as I think it is.

This means that I will not be available for the Ares/Races training meeting and the Hamvention on April 15 also. I encourage you all to attend the Ares/Races meeting held the first Saturday after the club meeting at the Police Station at 9 a.m. as it is a primary focus of Ham Radio and we can make a positive difference. It is also the reason for Field Day, as you all know.

I'm looking forward to working with you all for a great new year with a lot of fun for everyone. See you mid month.
Jean Comer
KG8MOE

*Editors Note: The text in some of the material in this issue, is smaller than normal due to space limitations..
Sorry for any inconvenience.*

CVARA Meeting Minutes for March 2, 2023 2023

CALL TO ORDER:

Meeting held at the Grange Hall in Norwich and via zoom video conference. Called to order at 7:05 pm by President Matt Jenne. 11 members present, 2 members via Zoom.

PRIOR MONTH MINUTES:

Motion to Approve the Minutes from previous meeting as posted in the Bugle by John Rudolph, second by Jon Englert. Passed without objection.

TREASURER'S REPORT:

Financial report presented by Treasurer Emily Goehner. Motion made to accept the Treasurer's Report by John Rudolph, second by David Stearns. Passed without objection.

COMMITTEE REPORTS:

- **ARES/RACES:** Tom Monday reported that Saturday's session will be at the EOC. The topic will be on WinLink.
- **V.E. Team:** Matt Jenne reported that he held 1 Laurel test session last week and that there were 2 upgrades to General class. Reminder: We will continue holding the sessions every 4th Thursday of each month (except November and December).
- **Youth/education:** Jon Englert and Tom Monday reported that they met with a youth group in Richfield Springs. They were interested in doing a Ham-related program with CVARA. They had submitted a grant to CARS. Tom is working out some details with them and CARS. If there is a need for licensing, CVARA can do a Laurel session for them. Tom reported on the new "*Chenango Valley Science and Technology Fair*" (aka "Maker Fair" looking for exhibitors for May 20th). A flyer will go out to like-minded organizations. A general discussion ensued. Tom mentioned that they will need help.
- **Bugle:** Tom Mathewson had nothing new to report ... SOS.
- **Ham Fest:** Matt Jenne and Tom Monday shared an update. Volunteers are needed. We can do a test session by ARRL or Laurel – it doesn't matter. Tom will ask Ray Darling to do an ARRL session. Tom Monday says he has a couple of people lined up to

do presentations. Any other presenters are welcome. Matt will check with the Grange about doing a food concession like last year. Parking is still a concern. It is confusing and Matt will speak with Rick to clear things up. There was a general discussion regarding parking, signage, entrances into the building, tables and security. Tom Monday offered to act as a volunteer coordinator. Matt called an organizational meeting for March 23rd at 6:00pm.

OLD BUSINESS: Founders Award: Tom Mathewson was voted as recipient of the Founders Award. Field Day: Matt reported that the General Clinton Park was unavailable this year and that we can submit a request for next year after October. There was a general discussion about alternate locations.

NEW BUSINESS: Matt spoke about and distributed flyers about the St. Baldricks Fundraiser. Jon Englert gave Contest results. John Rudolph mentioned the OARC Raffle tickets were available for \$5 each.

MOTION TO ADJOURN: Motion made to adjourn by Bill Pratt, second by Tom Mathewson. With no objections, the meeting adjourned at 8:40 pm.

Respectfully submitted,

Bill Pratt

CVARA Secretary

If you want to attend the meeting via Zoon

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Time: April 6 , 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

ARES This Month

If you were to ask a ham, what is your favorite thing to do with Amateur Radio you would inevitably get a host of answers. In fact, for many if you ask that question the answer is that there are so many things to try that it never gets old. I believe this variety is an important part of what makes ham radio useful in emergency communications.

There is nearly no facet of ham radio that doesn't have an application in emergency communications.

HF, VHF,digital, QRP, portable and even space communications all could play there part. So try them all! Have fun failing at some thing new.

You will learn from success and failure alike. You will become better technicians. You will broaden your experience and become more creative in solving problems. Working your way through a problem while in a disaster area or on top of a remote hilltop are not so dissimilar.

Odds are you will not be doing this problem solving alone. Weather it's fieldday or contesting of a public service event you will be working as a team. Being part of a team can be challenging. Over coming those challenges to accomplish a given task is an amazing event. The NFL is full of superb athletes, yet after the Supper Bowl without fail they all thank there team mates. I encourage you to come be a part of our ARES team. We will all be better for it.

This months traing will be a bit different. We will meet at the club repeater shack at 9:00 a.m. on Saturday April 8th. The goal will be to assemble a working satellite station and make a contact. This station will be demonstrated at both our hamfest and the upcoming science fair. May thanks for Don KB2YSI for working so hard to make this happen.

Thank you, Tom KC2SFU

Founders Award

At the March meeting we will be voting on our annual submission for the Dunc Copley W2RME Founders Award. The Dunc Copley Founder's Award was established by The Chenango Valley Amateur Radio Association-CVARA to recognize a member who has made a significant one time or significant long term contribution to CVARA. Dunc Copley W2RME was a founding

member of CVARA and a dedicated amateur who spent his lifetime promoting and advancing the art and science of amateur radio. It is our hope to embody in this award Dunc's dedication to amateur radio. CVARA now bears Dunc's callsign

De John Rudolph
N2YP

ARES This Month

You hear it all the time "the great think about ham radio is that there are so many things to try". I think you could argue the reverse is also true. There are so many things to do in ham radio that it is difficult to master them all.

Even in ARES the list of skills needed could be a little overwhelming. When I started in ARES my only radio was a single band HT. It was easy to learn everything about it. As I expanded into different aspects of the hobby staying up to speed on all of them became increasingly difficult. For instance, maintaining a portable digital station in a high state of readiness has been

a nearly impossible for me. So the question is what's important to ARES?

While we should all start with a good portable dual band station, after that things get a little less clear. That said, I think some of our most popular digital modes should be high on the list. Narrow Band Emergency Messaging System, and WinLink both very effective and relatively easy to implement. This months ARES Training will be mostly about WinLink. Bringing email the last mile into a disaster area can be a game changer. See you there!

73, Tom KC2SFU

And So It Should Be Written

By Ray Darling, K2DAR, CVARA Historian

Chapter 8

Welcome To – April 2023

"Self-motivation is the only motivation that really works. It forces us to answer why we should do something. Learn the joy of self-motivation, the joy of accomplishing an important goal because you wanted to do it".

It stood to reason that once introduced to this hobby, the motivation to upgrade would become imperative. The year 1968 brought out the rumor of "Incentive Licensing" by the FCC with follow-up writings through the ARRL information routes. The challenge was on and that seemed to have been the consensus of others in our local group. During the month of October 1968, two gentlemen and a youngster ventured to the Federal Building (FCC Testing Facility) in Syracuse, NY hoping to upgrade their licenses. It was no surprise that the two gentlemen were destined to succeed in their quest, with the youngster following by passing the General Class Exam. I was actually copying 13+ wpm prior to the exam, with compliments from the FCC examiner during the exam session. The written exam was a bit tougher, but I

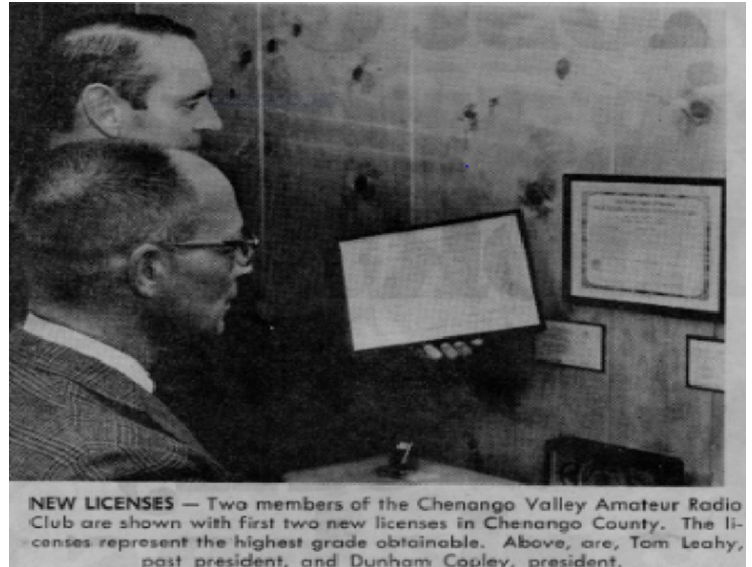
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was able to pass that portion as well. I was elated as my second goal had been attained, with an upgraded callsign to WA2EYH. See photo below with an explanation of the two gentleman's results.

The following months were filled with excitement and anticipation of the launching of Apollo 11, knowing that General Laboratory Associates would have several components on board.

During the long, cold winter of 1968 brought about the purchase of two new Ham Radio Kits, One was the EICO 720, 90 Watt CW Transmitter and the second was the EICO 717 Electronic Keyer. I knew there had to be a solution to the straight key slow speed!! That was all well and good, but one problem still existed - the straight key doesn't work with the Electronic Keyer. Well, assembly of the Eico 720 and Eico &717 went very well and hopefully, saving enough cash during the spring and early summer of 1969 might bring about the opportunity to purchase a Vibroplex Key (Paddle Version). Not an inexpensive item to say the least.



NEW LICENSES — Two members of the Chenango Valley Amateur Radio Club are shown with first two new licenses in Chenango County. The licenses represent the highest grade obtainable. Above, are, Tom Leahy, past president, and Dunham Copley, president.

Spring ahead a few months and up comes the Sherburne Pageant of Bands, the first Saturday of June each year. Along with the anticipation of the Apollo 11 launch, a different type of construction was in the planning. The group at GLA decided to participate in the 1969 Pageant of Bands with our rendition of the Wright Brothers bi-plane, propelled by a bicycle. It certainly took a lot of planning and hard work assembling this replica (?), but we made it in time for the Pageant that summer. I wanted to share the photo of the unit that I've had stored in my files since that day it was put to the test. Admittedly, I am the guide person you see on the right side of the wings, one of which was making sure the structure didn't crash and burn ... hi hi !! Unfortunately I do not remember the names of all the guys in this group, but we did have a blast that day, displaying and explaining the construction process we enjoyed. It was only one of the great times experienced while employed at GLA.

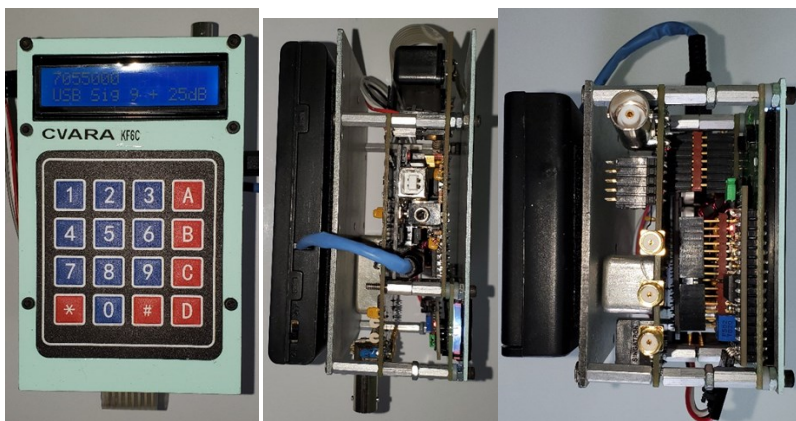


Anticipation concerning the launch of Apollo 11 came to fruition as the launch actually took place on July 16, 1969 at 13:32:00 UTC with the crew of 4: Mission Commander Neil Armstrong, with Michael Collins and Edwin Aldrin, Jr. Callsigns during the mission included: CSM: *Columbia*; LM: *Eagle*; On the Surface *Tranquility Base*. Docking date: July 16 at 16:56:03 UTC; Undocking date: July 20 at 17:44:00 UTC. Apollo 11 landed 13 degrees, 19 minutes north latitude and 169 degrees nine minutes west longitude in the North Pacific ocean southwest of Hawaii on July 24, 1969. Watching this event on TV was an experience never to be forgotten.

See you in the May issue of the Bugle - 73

The CVARA radio project.

De Brian, KF6C

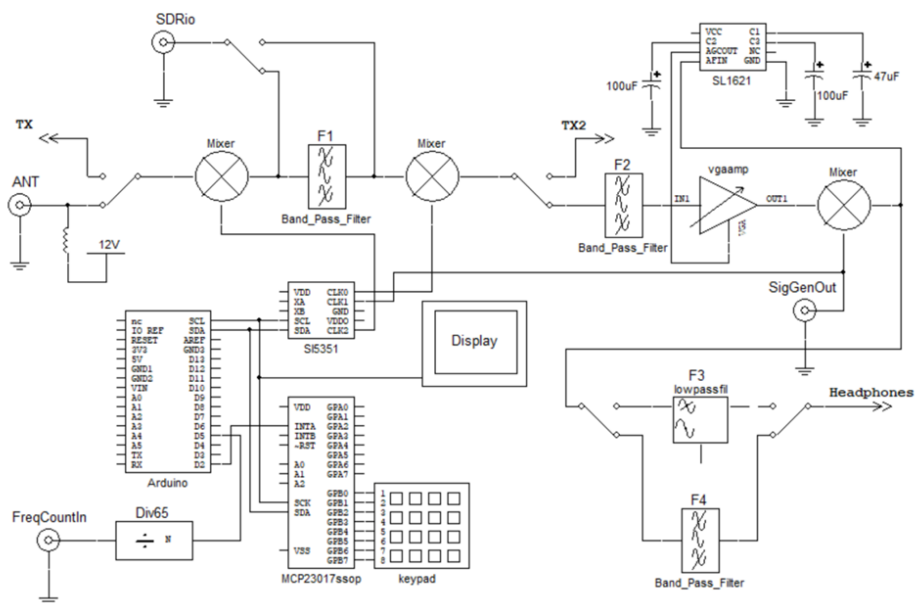


The CVARA radio project is designed to encourage youth into ham radio. The initial design is a dual conversion SSB and CW (morse code) receiver covering the frequencies from VLF to about 200 MHz. The design is based on an Arduino microcontroller together with a keypad and a 2-line display. Although this first design is a radio receiver there is no reason the project cannot be extended to make use of the microcontroller hardware and software for other purposes. The receiver is being designed so that it can easily be extended to be a CW or CW/SSB transmitter. This is not a software designed radio (SDR), it is primarily 1970 technology, however, what is learned from

this project is still valid today, even if it were to be implemented in software. Although this is not an SDR it does have provisions for the connections of low cost SDR extensions. One of the driving forces for this design is the availability of new old stock parts at no cost. There are parts available today that make some sections of this design so much simpler, that not using them is impractical. To this end some new parts are required that will cost about \$25 making the cost of building the receiver for a youth \$25.

Figure 1 shows a block diagram of the receiver.

In this receiver there is no filtering on the antenna port. This will be done either with an external preselector board, or on a transmitter board when connected. The signal from the antenna port is mixed to 10.7015 MHz which is the center frequency of the 2.4 kHz wide filter F1. This filter passes signals from 10.7003 to 10.7027 MHz. As an example, a 7.055 MHz CW signal would be mixed with 17.7556 MHz, from one of the 3 outputs of the Si 5351 oscillator chip to give a 10.7006 MHz IF (intermediate frequency), that is 300 Hz above the bottom of F1's passband. The 10.7006 MHz first IF signal is then mixed with 10.245 MHz from another of Si 5351 oscillator chips outputs to produce 455.6 kHz which is then fed into F2. F2 is a 2.4 kHz wide mechanical filter with a center frequency of 456.5 kHz, i.e. it passes 455.3 to 457.7 kHz. The 455.6 kHz IF out-



put from F2 is amplified in a variable gain amplifier and applied to the input of the final mixer. The final mixer is often referred to as a product detector. This product detector mixes the IF signal with 455 kHz from the third output of Si 5351 oscillator chip to produce an audio signal of 600 Hz. The output of the product detector is switched between 2 audio filters, one a 3kHz low pass filter for SSB, to be covered in future articles, the other a 600 Hz bandpass filter for CW. The selected output from one of these filters is the audio output to headphones or an external speaker amplifier. Output from the product detector is also applied to an audio derived AGC circuit that controls the gain of the IF amplifier. We will be going deeper into the mixing processes in future articles, including how the Si 5351 oscillator frequencies change for upper and lower sideband, and to achieve variable bandwidth for CW. Down the road we will go deeper into the workings of the receiver and why two transmitter boards, one for CW only, and one for SSB and CW are planned. There is a separate single band preselector and pre-amp that will be discussed. We will also cover what the Arduino is doing and how, with changes in the software, we can change some finer points of how we use the receiver. As an extension of this project, we will also cover how, with redesign of the two PCBs, this project could form the basis for other projects whether related to radios or not.

CALENDAR OF EVENTS FOR 2023

April 6, CVARA Meeting 7:00 PM Grange Hall,
 .Hale St , Norwich as well as online via Zoom
 April 15, CVARA Hamfest
 April 20, Tech Night
 April 27, Exam Session Norwich Grange Hall

May 4, CVARA Meeting 7:00 PM Grange Hall,
 .Hale St , Norwich as well as online via Zoom

May 18, Tech Night
 May 25, Exam Session Norwich Grange Hall

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 15 Tech Night
 June 22, Ex am Session Norwich Grange Hall
 June 24—25 ARRL Field Day

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

*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.

April 2023							1
2	3	4	5	6 meeting	7	8	
9	10	11	12	13	14	15 Hamfest	
16	17	18	19	20 Tech Night	21	22	
23	24	25	26	27 Exam Ses- sion	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.....

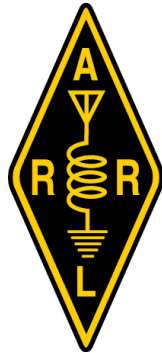
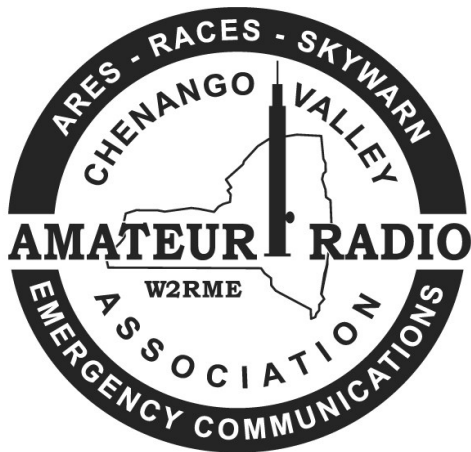
Thomas Mathewson
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 Norwich, N.Y. 13815

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 May 2023 Bugle is April 20, 2023



PO Box 1324
 Norwich, N.Y, 13815