

CrossTalk

May 2023

64 Years Of Service To Our Community

Issue 64:05



A

2023 Club Officers

President :	Jonathan Pearce, WB2MNF	Trustees - 4 year term	
Vice President :	Ronald Block, NR2B	Mark Gottlieb, KK2L	(2020-2023)
Treasurer :	Alan Arrison, KB2AYU	Robert Fields, KC6AOH	(2021-2024)
Recording Secretary :	Karl Frank, W2KBF	Charles Lanard, KD2EIB	(2022-2025)
Corresponding Secretary :	Frank Romeo, N3PUU	John O'Connell, K2QA	(2023-2026)

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Charles Colabrese, WA2TML	(2021-2023)	Jeffrey Garth, WB2ZBN	(2022-2024)
William Price, NJ2S	(2021-2023)	Chris Prioli, AD2CS	(2023-2025)
James Clark Sr, KA2OSV	(2022-2024)	James Wright, N2GXJ	(2023-2025)

General Membership Meeting

Wednesday, May 3, 2023 @ 1930 Hours

In-Person & ZOOM - Mantua Masonic Lodge

Tech Saturday Forum

Saturday, May 6, 2023 @ 0900 Hours

W2MMD Clubhouse

Fox Hunt XXVIII : Sunday, May 7, 2023

GCARC TechNet ZOOM Meeting

May 1 & 15, 2023 @ 2000 Hours

GCARC HelpNet ZOOM Meeting

Sporadic Mondays @ 1930 Hours

License Testing Session

Thursday, May 11, 2023 @ 1900 Hours

W2MMD Clubhouse

Board of Directors Meeting

Wednesday, May 17, 2023 @ 1900 Hours

W2MMD Clubhouse

Dinner @ The W2MMD Clubhouse

Wednesday, May 24, 2023 @ 1800 Hours

Tuesday Noon Day 2 Meter Net

Every Tuesday @ 1200 Hours

Tuesday & Thursday Night 10 Meter Net

1930 Hours - 28.465 or 28.475 MHz

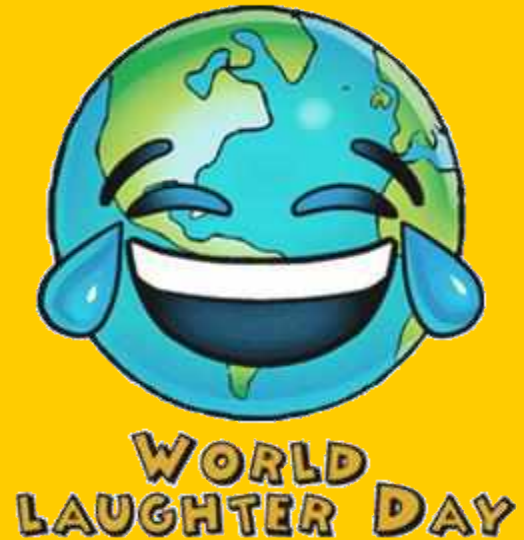
Thursday Night 2 Meter Net

Every Thursday @ 2000 Hours

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Fox Hunt XXVIII
The World's Funniest Fox Hunt
Sunday, May 7, 2023
1300 to 1400 Hours



Al Arrison, KB2AYU, is the “Fox”. He will send out an e-mail to the Club’s reflector on Saturday, May 6, 2023 with boundary directions to the search area.

These events are quite fun for the whole family, as you don’t need a license to hunt (listen). Just need the ham family member to call in to the W2MMD 2 Meter repeater (**147.180 MHz PL Tone 131.8 Hz**) asking for check-ins. You can also call in using **EchoLink : W2MMD-R**.

Check-in before the 1pm start time so we know who all is hunting, so that we will know if anyone is still hunting after an hour, to help talk them in to the finish line where we have fun exchanging hunt stories and taking a group photo. Then the transmitter is turned on, and the hunt begins!

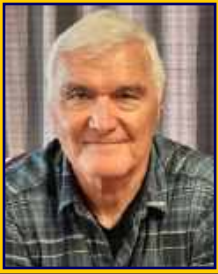
Can we count you and your family as being in on this one?

By using a “warmer / colder” technique, where the signal is strongest when you are closer, and weaker when further away, or any technique of your choosing, the idea is to find the transmitter within an hour.

The transmitter is a **Byonics MicroFox 15**. It has an approximate transmitting range of 1 mile radius. The hunt frequency is **146.565 MHz**. The transmission mode is FM simplex. When you are getting close to the transmitter, you can switch to **439.695 MHz**, which is the third harmonic, to get a better read on its location. Hunters are encouraged to team up together, as it is a great event to partner up with non-ham family members who can help drive while you home-in on the signal using your radio.

Everyone is welcome to our meetings, events, and activities.

So, who’s ready for a fun fox hunt! See you out there!



President's Letter

Jon Pearce, WB2MNF



May 2023

After months of planning and discussion the VHF tower replacement project moved into high gear in late March and early April. The tower planning team had evaluated numerous alternatives for the VHF tower, balancing tower height, wind load, and cost, and had also concluded that a crank-up tower would be necessary to allow future maintenance. After making tentative tower selections, **Al KB2AYU** fortuitously located a ham in Missouri who was selling 2 towers of the exact models that we were seeking along with many accessories that would have significantly added to the cost. Realizing that this was too good an opportunity to pass up the board quickly approved purchasing both towers, which were delivered to the Clubhouse on Monday, April 3rd. Tentative plans are to locate both towers behind the Clubhouse at approximate midpoints between the existing VHF and HF towers.

In reviewing the required zoning and building permit applications with **Stan WA2JRZ** who is a certified city planner we confirmed that the application will need to be signed by the landowner (4-H) rather than the Club, so **Ron NR2B** and I met with our 4H contacts to discuss the issue, and we're now awaiting for their decision. Assuming that we can proceed as planned, we'll submit the necessary township paperwork and begin planning the excavation and installation of the towers. Having two towers will allow us to mount all of the antennas that we had planned, which would not be possible with only a single tower.



Figure 1 : The two new tower sections

President's Letter - Continued on page 4



Figure 2 : Removing the towers from the truck

Electrical Box Support

The Clubhouse work team also use the opportunity to begin to remount the large electrical box behind the Clubhouse that houses the connections to the incoming electrical mains. That box had previously been mounted on two short telephone poles that had shifted and were pointing at an angle to the ground. Those poles were removed, and on a subsequent Saturday a massive wooden frame was erected and was placed into two deep holes that had been dug and filled with concrete. This will create an extremely solid permanent base for that box and will facilitate additional electrical connections in the future.

Trimming the VHF Tower

AI KB2AYU also used the opportunity to take the precarious step of cutting off the top section of the collapsed VHF tower and lowering it to the ground, using the forklift to manage a cable on which the tower section was suspended. As those of us on the ground held our respective breaths, AI carefully cut through each of the supporting tower sections to the last, which resulted in the top of the tower dropping several feet and then hanging from the rope, exactly as had been hoped. That section was then lowered down using the forklift and was placed with the other broken tower sections behind the Clubhouse. This will facilitate using that tower for other purposes.

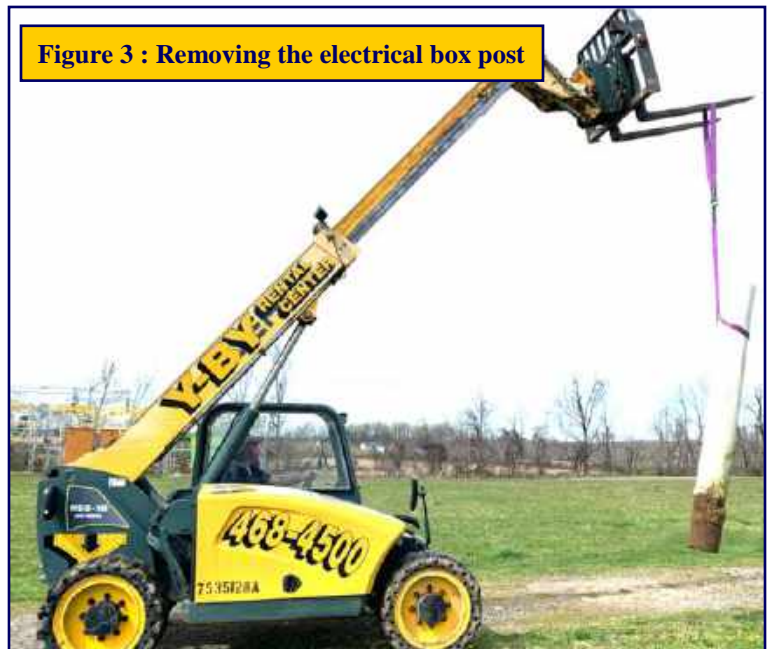


Figure 3 : Removing the electrical box post

President's Letter - Continued on page 5



Figure 4 : The frame for the electrical box

Working the ISS

Late March also provided an interesting opportunity to view, listen, and actually work the International Space Station. **Jim N2GXJ** sent an announcement that the ISS would be visible at a certain time when it was making almost a direct overhead pass of southern New Jersey. Many Club members were able to view it as it passed overhead, and several were able to listen to the FM repeater located on the ISS. And **John K2ZA** was actually successful in digipeating through the APRS digipeater on 145.825 MHz with his Yaesu FT1D HT running 5 watts. The repeater on the ISS can be heard on most passes with a HT and may be worked with an HT or mobile radio at off hours.

Field Day Planning

Planning for Field Day is underway with **Tony K3TS** already meeting with the operating teams and sketching out station locations and operating positions. An unexpected benefit came from our discussions with our 4-H contacts who proposed to trade a portion of their property during the “wine fest” which also coincides with Field Day for the use of the “front yard” parking area of the Clubhouse for a 4-H event later in July. This significantly expands the area available for Field Day from what we previously had anticipated.

President's Letter - Continued on page 6

GreenCube Satellite Contacts

The Clubhouse satellite station continues to rack up contacts with the GreenCube satellite - so many that there are few stations on each pass that haven't yet been worked. Forty-eight countries have been worked so far, which may be approaching the maximum number of stations that are operational on this satellite within the footprint that covers our area. Some European stations have reported working more than 60 stations but they may have more stations within their footprint than we do.

Coming Up in May

Our May 3, 2023 General Membership Meeting will host **Randy Smith WU2S** describing the AREDN system, a ham-based mesh-type network utilizing commercial radios reflashed with ham software. The May Tech Saturday Forum will be presented by **Chris AD2CS** and cover using the widely-available CHIRP software to program HTs and other radios.

This month we welcome the following new members :

- **Robert Bleattler, KC3VXW**, of Upper Chichester, PA
- **Bert Espanol, N3PKH**, of Swedesboro, NJ
- **Carl Jackson, KE2BEE**, of Mount Royal, NJ
- **Felicia Jackson, KE2BED**, of Mount Royal, NJ
- **Melissa Seidner, KE2BEK**, of Burlington, NJ
- **Ethan Yost, KE2AVA**, of Burlington, NJ

73 de Jon WB2MNF
President, GCARC

Figure 5 : Removing the top section of the old VHF tower

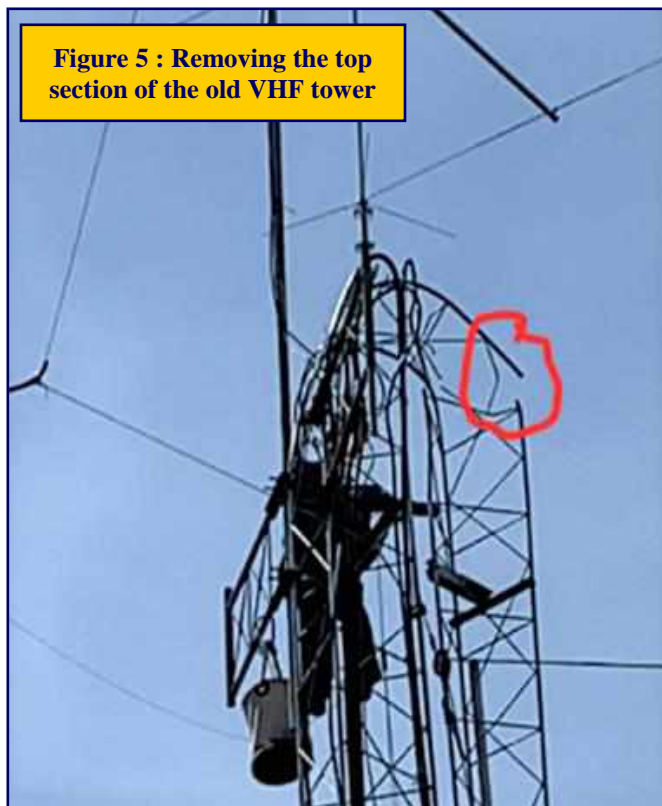


Figure 6 : K2ZA digipeats through the ISS





General Membership Meeting

Wednesday, May 3, 2023 @ 1930 Hours

Mantua Masonic Lodge
45 Mantua Boulevard, Mantua Township, NJ

Simulcast Live Via ZOOM

Randy Smith, WU2S
AREDN Networking : High Speed Ham Radio

Go to : www.w2mmd.org to download the ZOOM log-on instruction PDF for this meeting

Our guest speaker this month is Randy Smith, WU2S, the president and founder of Amateur Radio Emergency Data Network Inc. a New Jersey 501c3 corporation which supports the AREDN open-source software development project. His program, *AREDN Networking - High Speed Ham Radio*, will preview his 2023 Dayton presentation.



High-speed multimedia mesh networking is a 21st century solution for hams who provide communications support to emergency responders. It is also an excellent platform for learning and experimenting with Internet technologies. This presentation will showcase recent advancements in the AREDN project, how people are deploying it, and examples of applications and services provided.

Randy has built and maintains the AREDN website : <https://www.arednmesh.org> and the AREDN nodes for the Fair Lawn Amateur Radio Club on the 900 MHz, 2.4 GHz and 5.8 GHz bands.

Randy, his wife, Chris, and their micro St. Bernard dog recently relocated to Northbrook, Illinois near where they both grew up. In his role as Grandpere, he aids and abets Chris in her pursuit of spoiling their six grandchildren rotten.

Hmm...It's Saturday and you want to know if someone is at the Clubhouse? Why not call and find out! What!!!

W2MMD Clubhouse : (856) 244-6914

(Please, no car warranty calls!)





**Tech Saturday Forum
May 6, 2023 @ 0900 Hours
W2MMD Clubhouse**

Forum Presentation : CHIRP Radio Programming Software

**Q & A Session About All Things Ham Radio and Socializing
The HF Station Will Be Available For Local Operation**

Tech Saturday sessions are held at the W2MMD Clubhouse on the first Saturday of the month following the Wednesday Night General Membership Meeting and are designed to be hands-on collaborative events focused on using the Clubhouse resources to demonstrate various aspects of Amateur Radio and related technical areas. Previous sessions have covered USB software-defined radios, Raspberry Pi and Arduino devices, satellite operations and other similar topics.

We would like to invite all of our new members as well as our veteran members to our Tech Saturday Forums to help answer any questions and discuss any and all issues the new members have come across as they progress through the *Amateur Radio Experience*.

The Discussion Theme is a QSO starting point - a way to initiate a conversation. All Tech Saturdays are an open QSO of all subjects of Amateur Radio interest.

All questions are welcome as well as a venue for hams to show off their latest ham radio projects or gadgets. Have a problem programming that HT, we can help! Not sure what radio or antenna to buy, we can help!

All Club Members who would like Clubhouse access to use its radio equipment would have to have some brief "Elmering" on the Clubhouse rules, such as using the alarm system, the A/C and heaters, the antenna system, and the radio equipment. The Club's HF station is reserved for local use on Tech Saturday.

All are welcome - Hams and Non-Hams - Club Members and Non-Club Members.

**Tuesday & Thursday Nights 10M Rag Chew Net @ 1930 Hours
Net Control Host : Jim Clark, KA2OSV
28.465 MHz or 28.475 MHz**

**Current Website Updates : Go to this page to find out the latest
changes & updates on our W2MMD Website
<https://gloucestercountyarcc.weebly.com/current-website-updates.html>**



**Gloucester County Amateur Radio Club
YouTube Channel
<https://www.youtube.com/@W2MMD>**

May 2, 2023

happy
teacher's
day!



ABC
123

International
FireFighter
Day



4th May

STAR WARS DAY
**MAY THE 4TH
BE WITH YOU**

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Welcome New Club Members :

Robert Bleattler, KC3VXW, who has a Technician Class license and lives in Upper Chichester, PA
Bert Espanol, N3PKH, who has a Technician Class license and lives in Swedesboro, NJ.
Carl Jackson, KE2BEE, who has a Technician Class license and lives in Mount Royal, NJ.
Felicia Jackson, KE2BED, who has a Technician Class license and lives in Mount Royal, NJ.
Melissa Seidner, KE2BEK, who has a Technician Class license and lives in Burlington, NJ.
Ethan Yost, KE2AVA, who has a Technician Class license and lives in Burlington, NJ.

We are glad to have you as members of the Club and hope to see you regularly at Club meetings, events, and activities. Hope to see you at the May 3rd General Membership Meeting , either in-person or on ZOOM, the May 6th Tech Saturday Forum, and the Dinner @ The Clubhouse on the May 24th.

We also hope to “**SEE**” you on the “**AIR**” on the following nets :

- Sunday Night Skywarn Net @ 1930 Hours and the Sunday Night ARES Net @ 2000 Hours.
- The TechNet ZOOM Monday Net held semi-monthly on May 1st and 15th @ 2000 Hours.
- The HelpNet ZOOM Net, a sporadic Monday meeting @ 1930 Hours.
- Tuesday Noon Day 2M Rag Chew Net @ 1200 Hours.
- Tuesday & Thursday Night 10M Rag Chew Nets on 28.465 or 28.475 MHz.
- Thursday Night 2M Rag Chew Net @ 2000 Hours.

All 2 Meter nets are on our 147.180 MHz repeater or on EchoLink W2MMD-R.

Gloucester County Amateur Radio Club Elmers

We are still looking for some more Club Elmers. If you would to add your name to the Elmer's List, send your specialty to w2mmdgcarc@gmail.com. Here is what we have so far :

- **Tony Starr, K3TS : Antenna Construction; Contesting; CW Help and Training**
- **Ken Bozarth, KN2U : Antennas**
- **Jeff Welsh, KD2AZI : Boat Anchor Repair & Operation; Raspberry Pi; Arduino; Python; POTA; Mobile Installation & Operating**
- **Karl Frank, W2KBF : Digital Messaging (FLDIGI, WinLink)**
- **Lenny Rust, W2LJR : DMR Radios & Programming**
- **Ron Block, NR2B : Lightning protection & grounding**
- **Chris Prioli, AD2CS : Kit Building; Antenna Building; Radio Programming; PC and Electronic Troubleshooting; ham radio licensing & studying**
- **John Zaruba Jr, K2ZA : Yaesu System Fusion Radio Programming**
- **Jerry Barnish, K2EAB : Radio Astronomy**
- **Mike Thompson, KG4JYA : Radio Astronomy; VARA (HF and FM); WinLink**
- **Steve Farney, W2SEF : WSJT-X; FT-8; LoTW; TQSL; Grid Square**
- **Carl Witting, N2CRW : Audacity® Audio Editor**
- **Gary Mirkin, WA3SVW : FLDIGI; MMSSTV**
- **Jon Pearce, WB2MNF : Satellite Communications**
- **Frank Romeo, N3PUU : Toilet Installer; Jack-Of-All Trades - Master Of None**
- **John Hill, W2HUV : Local & Remote W2MMD HF Station Operation, Training & Support**



GCARC Monthly VE Exam Testing Summary April 13, 2023

Gary Reed, N2QEE reports : The monthly VE session was held April 13, 2023 with 3 candidates. All three passed their exam.

- **Marty Wilt, W2ILT of Laurel Springs upgraded to Amateur Extra**
- **Konstantin Reznitsky, KE2BDR of Voorhees obtained Technician**
- **Robert Bleattler Jr, KC3VXW of Upper Chichester, PA obtained Technician**

There was an issue with the league batch filings to the FCC and one candidate's posting was delayed. This was corrected on Monday morning and the candidate received their call sign on Tuesday morning. The other candidates received their upgrade and license Friday night. Being able to electronically submit session results has reduced the time it takes to receive candidates license. When it was mailed it was a week to ten days. The league VEC has been very receptive to solve the problems.

The participating VE's were :

- | | |
|----------------------|--------------------------|
| ♦ Chris AD2CS | ♦ Rich W2RHS |
| ♦ Jeff WB2ZBN | ♦ Earl KC2NCH |
| ♦ Mike KG4JYA | ♦ Gary N2QEE |
| ♦ Steve W2SEF | ♦ Lee N2LAM |
| ♦ Jerry K2EAB | ♦ Courtney KD2SPJ |

A big thank you to the participating VE's. The next VE session will be Thursday, May 11, 2023 at 7 PM at the W2MMD Clubhouse.



Full Flower Moon - May 5, 2023 @ 1336 Hours

The appearance of flowers in abundance inspired the name for this Moon, a term used by Algonquin and Ojibwe peoples.

Similarly, the Cree names of Budding Moon and Leaf Budding Moon celebrate the awakening of plant life. Egg Laying Moon and Frog Moon are other Cree terms for this period. Moon of the Shedding Ponies is an Oglala term. Planting Moon (Dakota, Lakota) marks the time to plant seeds and start the year's crops.

Old Farmer's Almanac - www.almanac.com

W2MMD



www.facebook.com/W2MMD



twitter.com/w2mmd_gcrc

Facebook





GCARC License Class VE Exam Testing Summary April 18 and 21, 2023

Gary Reed, N2QEE reports : A VE session was held on Tuesday, April 18, 2023 for the students of the Technician and General license preparation classes. There were 10 candidates from the classes and an additional outside candidate. Four of the students received Technician licenses and four upgraded to General. One student achieved both Technician and General. The outside candidate also achieved a Technician license. A total of five Generals and five Technician licenses were obtained. The upgrades were posted on Wednesday and the Technicians were posted on Thursday morning.

The General upgrades were :

- **Joseph Gadoury KE2AKT of Tabernacle**
- **Jean Wilson-Kinney KE2AHY of Medford**
- **Ralph Daggan III KE2AHX of Sewell**
- **Randy Testa KC3VCC of Havertown, PA**
- **James McCullough KE2BEL of Sewell passed both his Technician and General exams**

The Technician licensee's were :

- **Carl Jackson KE2BEE of Mount Royal**
- **Jacques Latoison KC3VYU of Chester, PA**
- **William Steacy KC3VYV of Philadelphia, PA**
- **Felicia Jackson KE2BED of Mount Royal**
- **Melissa Seidner KE2BEK of Burlington**

The participating VE's were :

- **Jeff WB2ZBN**
- **Courtney KD2SPJ**
- **Chris AD2CS**
- **Mike N2WOQ**
- **Jim N2GXJ**
- **Mike KG4JYA**
- **Mike N2MHO**
- **Rich W2RHS**
- **Gary N2QEE**

A VE session was held in conjunction of the Amateur Extra license class on Friday, April 21, 2023. There were six candidates for the exam from the class and three candidates achieved their upgrade to Amateur Extra license.

They were :

- **David Kappler N3DRK of Magnolia**
- **Michael Covalski N2MMC of Sewell**
- **Donald Martel Sr KE2AIB of Blackwood**

The participating VE's were :

- **Jeff WB2ZBN**
- **Chris AD2CS**
- **Mike N2WOQ**
- **Courtney KD2SPJ**
- **Earl KC2NCH**
- **Steve W2SEF**
- **Mike N2MHO**
- **Rich W2RHS**
- **Gary N2QEE**

A big thank you for those who helped with the additional VE sessions and help to support the goals of the Gloucester County Amateur Radio Club to promote Amateur Radio.

DA's and DIT's

>> Get well to **Mario Tagliaferri W3CGS** and **Chuck Colabrese WA2TML** recovering from recent medical issues.

>> Condolences to **John Zaruba Jr, K2ZA**, **Christine West, WA2MVU**, and their families with the loss of their mother **Elizabeth**. She was also the XYL of long time member and Silent Key **John Zaruba Sr, K2ZA**.

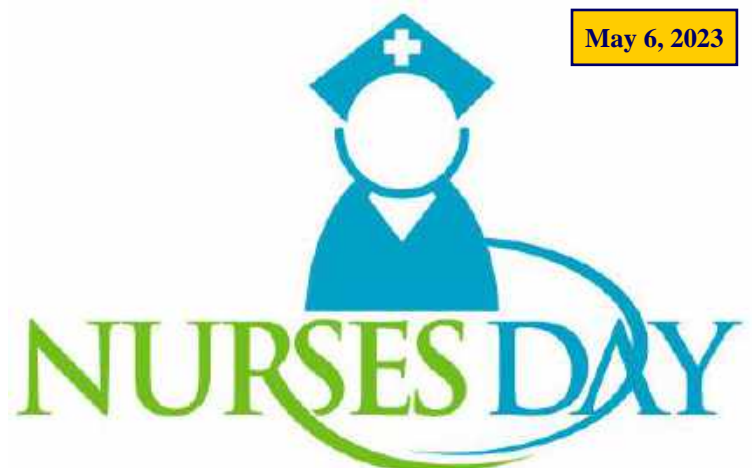
>> **Congratulations** to the following Club members who completed the License Classes and upgraded :

- **Ralph Daggan III, KE2AHX** : Upgraded from Technician to General Class
- **Michael Covalesski, N2MMC** : Upgraded from General to Amateur Extra Class
- **Joseph Gadoury, KE2AKT** : Upgraded from Technician to General Class
- **David Kappler, N3DRK** : Upgraded from General to Amateur Extra Class
- **Donald Martel Sr, KE2AIB** : Upgraded from General to Amateur Extra Class
- **James McCullough, KE2BEL** : Upgraded from Associate to Technician to General Class
- **Randy Testa, KC3VCC** : Upgraded from Technician to General Class; ARRL member
- **Jean Wilson-Kinney, KE2AHV** : Upgraded from Technician to General Class
- **Marty Wilt, W2ILT** : Upgraded from General to Amateur Extra Class

>> **Karl Frank, W2KBF**, reported on a new website called **Ham Encounters** that has among other things, a listing of the Baofeng HT settings : <https://hamencounters.com/201807/baofeng-handheld-settings>

>> **Mark Gottlieb, KK2L**, reports, A great logger for your phone is **HAMRS** which can be found in the IOS App Store and the Google Play Store. If you're operating portable, it's a simple but effective way of keeping track. It can be integrated with QRZ, HamDB, or HamQTH. In the field, it will look up call signs. When you get back home, you can export the ADIF file to your home logger or export it to the QRZ logbook. It does cost a little bit to purchase. Also go to www.hamrs.app. They have versions for macOS, Windows, Ubuntu, and Raspbian.

>> On **May 1, 2023**, the **ARRL** will launch an online survey, inviting all **ARRL members** to participate. The survey will include some short questions about raising dues and modifying the way some membership benefits are bundled. The survey will also include an opportunity to share your feedback. The participation of every member is important. Go to : <http://www.arrl.org/take-dues-survey>





The Education Connection

By Chris Prioli, AD2CS
www.ad2cs.com



May 2023

Session IV of the GCARC Ham Exam Preparation Class series is now in the books, so let's talk a little bit about the outcomes. We started out with a total of 22 students - 5 Technician (Element 2), 8 General (Element 3), and 9 Amateur Extra (Element 4). Before the classes were completed, however, two of those students, one each in the Element 3 and Element 4 groups, left the class and successfully tested out early due to family and/or job obligations.

I had learned by experience that the Element 4 classes need a full nine weeks of classroom time, while the other two Elements can be covered in the originally-planned eight weeks of instruction. As a result, I have modified the schedule slightly to accommodate this need, and I will maintain that pattern going forward. All sessions starting in September will be a total of ten weeks, which include nine weeks of instruction plus the exam in the tenth week.

So... how did the numbers shake out? Well... we had a bang-up test session on Tuesday, 18 April, with eleven of our students testing between the Element 2 and the Element 3 groups, plus another (scheduled) visitor who came by for testing at the Element 2 level. Thus, we started out with six students taking each exam, the Element 2 exam and the Element 3 exam.

All of the element 2 candidates successfully completed their exams, with one of them going on to attempt and succeed at the Element 3 exam as well. Of the six initial Element 3 candidates, five of them successfully passed their exams, with only one of them falling slightly short. That individual tells us that a retake of the exam is in the near future.

That Tuesday evening was successful in some other ways. To begin, we gained four new Club members that night, and another one the next day, all from that test session - but not all from the classes. The visiting candidate and her better half both joined the Club, and they also enrolled in the Element 3 class for Session V which begins the week of 1 May 2023. Since the test session, another one of our Element 2 students also enrolled in the Element 3 class for the next session.

Now on to Friday, 21 April 2023, and the Element 4 exam. Here we had a total of six candidates sit for the exam, with three of them successfully completing the exam. Element 4 is the most difficult material to master, and there is considerably more to cover here than there is in the Element 2 and Element 3 classes. It is to be expected that this will be a more challenging exam, requiring the most complete preparation possible. In post-exam reviews, it became evident that those who did not pass were not as consistent with taking the online practice tests than were the successful candidates. Every little bit is important when it comes to passing this test. The good news is that in all three cases, the candidates tell me that they will be studying and will come back to one of our regular monthly test sessions to re-take the exam. Best of luck to those individuals.

With Session IV in the record books, Session V is coming up right behind it, starting on 1 May 2023 and following the same Monday Technician, Tuesday General, and Friday Amateur Extra schedule as has been the norm.

Education Connection - Continued on page 15

There is still time for students to enroll in these classes, and there are still some seats open. I encourage anyone who wants to upgrade his or her license to enroll and to actively participate in the class meetings.

I also encourage all GCARC members to motivate those folks that you know have an interest in obtaining an amateur license to enroll and take the Technician class.

It is still a great bargain at a \$30.00 class fee for the program.

See you next month...

That just about does it for this month... see you all next time!

ARRL SNJ Section Convention and Hamfest

Presented By The



Celebrating Our 64th Year

www.w2mmd.org

**Gloucester
County
Amateur Radio
Club
W2MMD**



Open to the public at 8:00 AM : *Rain or Shine*

45th Annual Hamfest : September 10, 2023

CrossTalk Submissions

This is your Club Magazine. Make use of it.

If you have stories or photos of your hobby that you would like to share with the Club, please do so!

We will keep covering all of the GCARC events, but it is also nice to get those personal perspectives to include in every issue. Connecting through experiences is what makes the Gloucester County Amateur Radio Club a *REAL* Club.

All submissions, queries, comments, and editorials should be addressed to :

Jeff Garth, WB2ZBN at [djgrath1 <at> gmail <dot> com](mailto:djgrath1@gmail.com)

Submission deadline for the June 2023 issue : Saturday, May 20, 2023

Club Website www.w2mmd.org

Club E-Mail Reflector: GCARC <at> Mailman <dot> QTH <dot> Net



Regional Skywarn Websites For On-Line And In-Person Training Classes

Philadelphia/Mt Holly Skywarn : www.weather.gov/phi/skywarn

State College, PA Skywarn : www.weather.gov/ctp/skywarn

Pittsburgh, PA Skywarn : www.weather.gov/pbz/skywarn

Skywarn Forum : Skywarn Storm Spotter and Weather Discussions :
<https://www.skywarnforum.com>

Skywarn Spotter Training - Virtual Classes National Weather Service - State College, PA <https://www.weather.gov/ctp/skywarn>

Monday, May 8, 2023

1800 - 2015 Hours

Advanced Spotter Talk - Storm Science

<https://register.gotowebinar.com/register/8357481770596692824>

Thursday, May 25, 2023

1800 - 2015 Hours

Advanced Spotter Talk - Radar

<https://register.gotowebinar.com/register/3432970400416028758>

Skywarn Spotter Training - Virtual Classes National Weather Service - Pittsburgh, PA <https://www.weather.gov/pbz/skywarn-schedule>

Monday, May 8, 2023

1900 - 2030 Hours

Advanced Spotter Talk

<https://register.gotowebinar.com/register/6414904209765410144>

Registration is required. Classes are free and open to all.



ARRL Learning Center

<https://learn.arrl.org>

Discover how to make Amateur Radio your own.

Online courses from the ARRL Learning Center provide ARRL members with additional instruction and training for getting on the air, emergency communications, and electronics and technology.

GCARC Amateur Radio Test Prep Class Schedule

2023 Session V

Class Times : 1800 - 2100 Hours

Weeks 1 through 8 + VE Testing Week

Class Week	Class Date	License Class Study
Week One	Monday, May 1, 2023	Technician Class
Week One	Tuesday, May 2, 2023	General Class
Week One	Friday, May 5, 2023	Amateur Extra Class
Week Two	Monday, May 8, 2023	Technician Class
Week Two	Tuesday, May 9, 2023	General Class
Week Two	Friday, May 12, 2023	Amateur Extra Class
Week Three	Monday, May 15, 2023	Technician Class
Week Three	Tuesday, May 16, 2023	General Class
Week Three	Friday, May 19, 2023	Amateur Extra Class
Week Four	Monday, May 22, 2023	Technician Class
Week Four	Tuesday, May 23, 2023	General Class
Week Four	Friday, May 26, 2023	Amateur Extra Class
Week Five	Monday, May 29, 2023	Technician Class
Week Five	Tuesday, May 30, 2023	General Class
Week Five	Friday, June 2, 2023	Amateur Extra Class
Week Six	Monday, June 5, 2023	Technician Class
Week Six	Tuesday, June 6, 2023	General Class
Week Six	Friday, June 9, 2023	Amateur Extra Class
Week Seven	Monday, June 12, 2023	Technician Class
Week Seven	Tuesday, June 13, 2023	General Class
Week Seven	Friday, June 16, 2023	Amateur Extra Class
Week Eight	Monday, June 19, 2023	Technician Class
Week Eight	Tuesday, June 20, 2023	General Class
Week Eight	Friday, June 23, 2023	Amateur Extra Class
Review & Exam Week	Tuesday, June 27, 2023	Technician & General Class
Review & Exam Week	Friday, June 30, 2023	Amateur Extra Class

Regional (Atlantic & Hudson Divisions) Hamfests & Events

May 6, 2023 : The Antietam Radio Association, The Great Hagerstown Hamfest, Washington County Ag Center, 7313 Sharpsburg Pike (Route 65 South), Boonsboro, MD. www.w3cwc.org

May 7, 2023 : Warminster Amateur Radio Club, WARC Hamfest, ARRL Eastern Pennsylvania Section Convention, Bucks County Community College, Lower Bucks Campus, 1304 Veterans Highway (Route 413), Bristol, PA. www.k3dn.org

May 7, 2023 : Orange County Amateur Radio Club Hamfest, Black Rock Fish & Game Club, 5 Pleasant Hill Road, Mountainville, NY. www.ocarcny.org

May 20, 2023 : Thousand Islands Repeater Club Hamfest, Depauville Fire Department Community Center, 15191 School Street, Depauville, NY. www.tirepeaterclub.com

May 27, 2023 : Bergen Amateur Radio Association, BARA Hamfest, Westwood High School, 701 Ridgewood Road, Township of Washington, NJ. www.bara.org

May 28, 2023 : The Maryland FM Association, Memorial Day Tailgate Hamfest, Howard County Fair Grounds, 2210 Fairgrounds Road, West Friendship, MD. www.marylandfm.org

Department of Defense Armed Forces Day Cross-Band Test May 13, 2023

This annual event is open to all licensed amateur radio operators and will not impact any public or private communications. For more than 50 years, military and amateur stations have taken part in this event, which is an interoperability exercise between hobbyist and government radio stations.

More information can be found at : <https://bit.ly/3L6dnwz>



May 19 - 21, 2023
Greene County Fairgrounds & Expo Center, Xenia, OH
www.hamvention.org

GCARC TechNet

ZOOM Meeting

Meetings Start @ 2000 Hours

Check-ins start @ 1930 Hours

First & Third Mondays of the Month @ 2000 Hours

May 1 & 15, 2023

June 5 & 19, 2023

Tentative Upcoming TechNet Class Schedule

May 1, 2023 : Local DMR Operations By Len Rust, W2LJR

May 15, 2023 : Hotspots

June 5, 2023 : SDR Angel

**Go to : <https://gloucestercountyarcs.weebly.com/gcarc-technet.html>
for TechNet Information Resources and ZOOM Instructions**

GCARC HelpNet

ZOOM Meeting

Sporadic Mondays @ 1930 Hours

HelpNets are unstructured Q&A sessions for members who would like assistance on a particular issue or project.

If you have a subject you would like to see discussed on the HelpNet, send a message on the Club's e-mail reflector

**Go to : <https://gloucestercountyarcs.weebly.com/gcarc-helpnet.html>
for HelpNet Information Resources and ZOOM Instructions**



**Thursday Night 2 Meter Rag Chew Net
147.180 MHz Repeater
EchoLink : W2MMD-R
Every Thursday @ 2000 Hours**



Here is the schedule for the upcoming weeks

Chris Prioli, AD2CS : May 4, 2023
Mary Delemarre, W2TDS : May 11, 2023
Steve Farney, W2SEF : May 18, 2023
Gary Mirkin, WA3SVW : May 25, 2023

Chris Prioli, AD2CS : June 1, 2023
Mary Delemarre, W2TDS : June 8, 2023
Steve Farney, W2SEF : June 15, 2023
Gary Mirkin, WA3SVW : June 22, 2023
Chris Prioli, AD2CS : June 29, 2023

If anyone would
like to be a net con-
trol operator,
please contact Jeff,
WB2ZBN

Steve Farney, W2SEF : July 6, 2023
Mary Delemarre, W2TDS : July 13, 2023
Gary Mirkin, WA3SVW : July 20, 2023
Chris Prioli, AD2CS : July 27, 2023



**Tuesday Noon Day 2M Rag Chew Net
@ 1200 Hours**



**Net Control Hosts : Steve W2SEF,
Chris AD2CS, & Mike KG4JYA
147.180 MHz Repeater & EchoLink - W2MMD-R**

Here is the schedule for the upcoming weeks

Steve Farney, W2SEF : May 2, 2023
Chris Prioli, AD2CS : May 9, 2023
Mike Thompson, KG4JYA : May 16, 2023
Steve Farney, W2SEF : May 23, 2023
Chris Prioli, AD2CS : May 30, 2023

If you would like to be a control operator for this net, please contact Steve, W2SEF

One Amateur Radio Operator's View of "Volunteers on the Air"

By Tom Devine, WB2ALJ, Southern NJ Section Emergency Coordinator

The ARRL 2023 "Volunteers on the Air" event coupled with solar cycle opening of HF propagation has provided increased amateur radio activity. It's been fun to share contact with other ARRL volunteers and DX stations, almost any time of the day on HF.

"Volunteers On the Air" (VOTA) is a year long event celebrating the recognition of the ARRL's abundant volunteers support and contributions. It has inspired and increased amateur radio activity on the air. The VOTA event can be viewed as a contest or just a fun operating activity.

Operators can accumulate points for each ARRL member and volunteer supporter they contact throughout 2023. Examples of points awarded : any ARRL member 1, Section Manager 175, W1AW ARRL HQ Station 100, and Section Emergency Coordinator 30. (Detailed list available at <http://www.arrl.org/volunteers-on-the-air>). In order to acquire or grant points all operators must log contacts in ARRL Logbook of The World (LoTW) at <http://www.arrl.org/logbook-of-the-world> . LoTW is utilized to calculate VOTA total contacts, qualified contacts for point, and total points accumulated on a daily basis. Your current points can be viewed on the "Leaderboard" at <https://vota.arrl.org> .

A radio operator can have fun just by getting on the air and making contacts. VOTA operating bands include 160, 80, 40, 20, 15, 10, 6, 2, and 1.25 meters as well as 70 centimeters, VHF/UHF/SHF. Please note that Cross-band, Cross-mode, and repeater contact are not valid for points.

Each State is scheduled to be allocated to operated two W1AW/* Portable Station for a week during the year. New Jersey's operating schedules start on April 26 and August 9 for more detail reference the "State Activity Schedule" on <http://www.arrl.org/volunteers-on-the-air> .

You are encouraged to get on the air and have some fun with VOTA, plus enjoy band openings throughout the world.

Tom Devine WB2ALJ

"The VOTA event has simulated me to get on the air more, almost daily. My goal is to have fun with a few contacts and by recognize other ARRL volunteers. To date, I have given more VOTA points than accumulated which is fine. I am using indoor antennas and about 40 watts output with multiple modes and bands. I encourage all to try VOTA."



May 14, 2023



May 8, 2023



The GCARC ARRL Volunteers On The Air Contest

Yours truly has created a web page called VOTA (<https://gloucestercountycastle.weebly.com/vota.html>) where I would like to list Club member's scores during this year-long ARRL Volunteer-On-The-Air Contest.

This contest is something every ham can participate in. Even contacting our fellow ARRL members is worth 1 point.

All the information about this contest can be found on the websites below.

2023 Volunteers On The Air ARRL Website : <https://www.arrrl.org/volunteers-on-the-air>

ARRL 2023 Volunteers On The Air Home Page : <https://vota.arrrl.org>

2023 VOTA-2023 Volunteers Point Value Table : <https://bit.ly/3knSz9b>

2023 VOTA Briefing and Q&A : <https://bit.ly/3ktSCjS>

2023 VOTA W1AW Activation List : <https://bit.ly/3ZnPmW5>

So send me your scores and I will add them to the list : w2mmdgcarrc@gmail.com

Thanks

73 de WB2ZBN

Volunteers On The Air

VOTA, W1AW/2 will be operating from Southern NJ beginning April 26, 2023. The South Jersey Radio Association will be coordinating this event. Please contact Ken K2WB at the email address below to attend the planning session. He is looking for clubs or operators to help out.

There will be another activation for NJ coordinated by the Fairlawn Amateur Radio Club in August. I am hoping the Southern NJ Section will be successful in the first activation for the state.

Message from Ken K2WB,

All,

Our VOTA activity will be here before we know it. Now is the time to get a plan of operations together.

The first meeting will be this Thursday at 8:00 PM on WebEx

Pass this along to other clubs who may operators that are interested.

Thanks, Let's make New Jersey Radio Active.

73's

de Ken K2WB

ken@k2wb.com

ARRL Southern New Jersey Section

Section Manager: Tom Preiser, N2XW

n2xw@arrrl.org



At The Repair Bench...

A monthly column describing a recent repair bench event.
By Chris Prioli AD2CS - www.ad2cs.com

Brother P-touch® 1400 Label Printer- May 2023

Fairly recently, I was presented with a somewhat different type of repair. One of my fellow radio Club members asked me if I would take a look at a favorite and trusted piece of his shack equipment, namely a **Brother P-touch® 1400 hand-held label printer (Figure 1)**. The printer had stopped responding to the “Y” key, and its owner was hoping that I could repair the machine for him. Enjoying a challenge, I told him that I would take it on, but without any up-front guarantee of success.



The owner brought the machine to me, and I quickly determined that not only did the “Y” key not work at all, the other keys along the right edge of the keyboard were rather “mushy” and not crisp and quick as they should have been. I opened up the unit to find that the printed circuit board on which the key contacts were etched had delaminated at a mounting pad along its right-hand edge, directly in alignment with the “Y” key, and breaking the circuit traces for that key and one other. This was apparently a product of years of use and pressure on that portion of the board.

The keyboard consists of a matrix of conductive pads etched onto the top surface of a phenolic board that also serves as a printed circuit board for some of the related circuitry. Each key contains a carbon button on its underside that bridges the conductive pads when the key is pressed. Simple enough, right? The problem was that the board had split between its layers (**Figure 2**), tearing the circuit traces on its upper surface. I was faced with a dual problem - how to first repair the delaminated phenolic board, and then how to repair the circuit traces (**Figure 3**) so that the machine would operate properly afterwards.



Figure 2 : Delaminated PCB

The first problem was solved with some cyanoacrylate glue, applied between the layers, with the layers then being clamped together with the broken section positioned back where it belonged. I clamped it up and set it aside to cure, having placed some waxed paper between the clamp faces and the board surfaces so that the clamp would not end up glued to the board by the excess glue squeeze-out. I then started thinking about the most effective manner in which to repair the circuit traces, assuming that the glue job would hold, of which I was not certain yet.

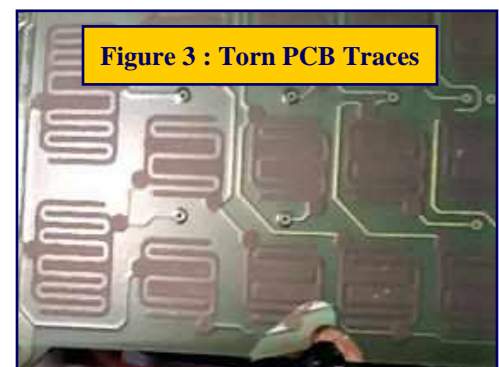


Figure 3 : Torn PCB Traces

At The Repair Bench - Continued on page 24

The most common method of repairing lifted or broken printed circuit traces, by far, is to simply scrape the trace to expose the conductive surface, and then to overlay the trace with some bare wire, and to then solder the wire to the trace. While this might work in some cases, it would clearly not be an effective repair in this situation, as one broken trace was directly in the area where the “Y” key’s carbon button would have to make contact with the board if that key were to be pressed. Any raised area of the board would be problematic in allowing the carbon button to successfully bridge the pads, which actually contain interlaced “fingers” (**Figure 4**) rather than being geometrically shaped areas. I needed a better solution.

Figure 2 : PCB Contact “Fingers”



The next day, still unsure of how to repair the traces, I removed the clamp and waxed paper to find that the board was indeed back into a semblance of its original condition. I used some acetone on a cotton swab to clean the squeezed-out CA glue from the board surface in the area of concern, and the board was ready for trace repairs to begin. Still not having a repair scheme in mind, I put it aside for the day and moved on to something else, having already sent photos of the damage to the machine’s owner and having told him that a repair might not be feasible. I went to bed that night thinking about the problem.

At some point during the night, and driven by some unknown and not understood “force”, I hit upon an idea that might just work. I had read a while back about pens that write with conductive ink, which contains powdered silver in a volatile carrier. It was well worth a try, so I ordered one of the pens from Amazon and waited another day for it to arrive. Lo and behold, when I tried the pen on some paper, and then measured the resistance of the drawn lines, I found them to be very low impedance traces, and with almost no appreciable height on the paper surface.

I tried some basic experiments to determine the current-carrying capability of the ink, and found that I could easily pass 500mA through a trace that was two pen-points in width. This looked very promising indeed! I decided to try the ink on the phenolic board.

To make this idea work, I would have to expose some of the conductive surface of the existing traces for the ink to connect into the original circuit properly. That was a chore best done with the edge of a hobby knife blade, and that is exactly how I achieved the exposure that I needed. I then laid the ink down in place (**Figure 5**) over the almost invisible cracks in the repaired surface of the board, and checked the results with an ohmmeter. So far, so good. Now for the acid test. Will the key work when coming into contact with the ink and the original traces? A quick test with the keyboard membrane laid over the board proved that it would actually work as intended.

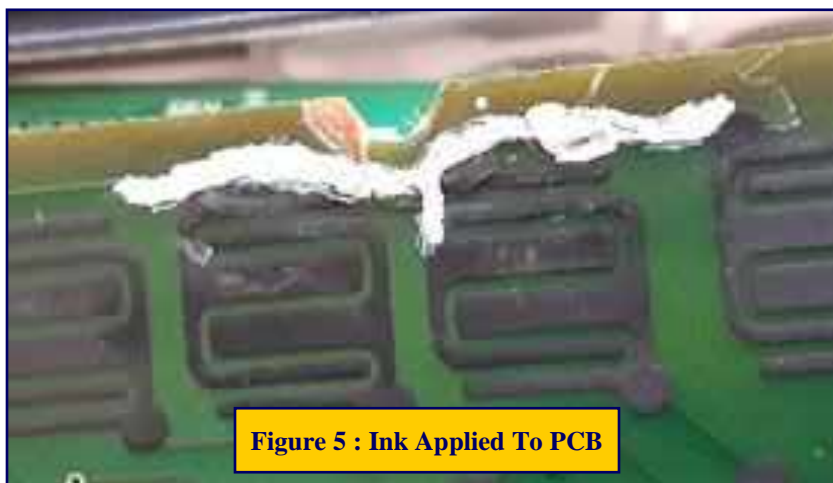


Figure 5 : Ink Applied To PCB

At The Repair Bench - Continued from page 24

After that, all that was required was to reassemble the machine with the repaired PCB (**Figure 6**) and to do a final working test of the entire keyboard. That post-assembly test proved successful, and so the repair was complete. The lessons found in this repair are two-fold.

First, think out of the box when faced with an unusual problem, as unusual problems often require unusual repair methods.

Second, do not give up too easily. Plan for the worst, but work towards the best, and let your unconscious mind work on the problem for a while.

You might just know how to achieve a repair, even if you don't know that you know how to do it!

See you next month.

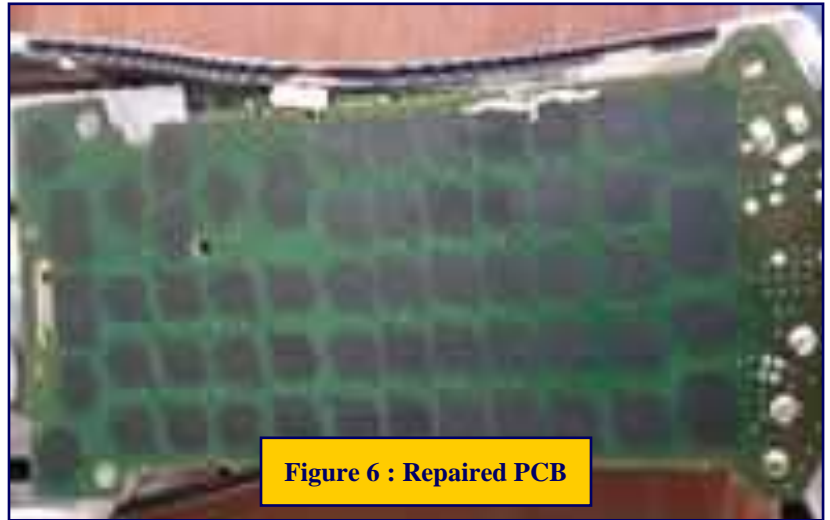


Figure 6 : Repaired PCB

May 6, 2023



May 28, 2023



Technician & General License Class Exam Night : April 18, 2023





Amateur Radio Emergency Services - May 2023

Resources - News - Updates

By Bob Keogh, KD2NEC

Gloucester County Emergency Coordinator



ARES® News

(This article in the ARES Newsletter caught my eye and it sounds like something we should plan for a Tech Saturday)

ARRL Ohio Section ARES NVIS Antenna Day

The ARRL Ohio Section ARES NVIS Antenna Day is a non-contest operating activity open to all radio amateurs. This year's event is scheduled for April 22. In the case of an emergency, amateur radio operators may need to communicate over short distances to stations within the state of Ohio and neighboring states. The value of short-distance HF communications was proven in the immediate wake of Hurricane Michael in 2018. Michael disrupted all communications along the Gulf Coast. Many radio amateurs resorted to 80-meter local contacts, including the North Florida Traffic Net, for emergency communications. Because repeaters were down, HF proved to be the workhorse for passing messages.

Temporary NVIS (Near Vertical Incidence Skywave) antennas are the technology to do this with, but which are the best designs? In addition, how does your antenna work? Experimenting with antennas is still one of the most fun aspects of the hobby. Tie the two purposes together, add a group of friends, plenty of coffee, a BBQ grill, and you have a formula for a really good time!

The Ohio State EOC Amateur Radio station in Columbus, "The Sarge" - W8SGT, will be in operation to compare signals and provide a consistent signal strength report. Remember the overall goal is still to figure out your best NVIS antenna, and contact as many other NVIS stations as possible to plot your coverage area. Take pictures! Submit your antenna evaluations : which designs you used, how they performed, etc., and submit a log report with overall number of contacts, your location and operators. - Blair ARES Alert!, April 2023 issue, newsletter of the Blair County, Pennsylvania, ARES program [Emergency Coordinator Kevin Lear, W3XOX; Editor Drew McGhee, KA3EJV]

Field Day is Around the Corner : Emergency Communications Categories

Karl Frank W2KBF (ARES Emergency Coordinator Assistant and Trusted Advisor) is working with our friends in the Red Cross, regarding "Class F" communications during Field Day this year. Also, since we have a couple of new Red Cross members in the GCARC now, it only takes one of them to visit our Club on that weekend and we get another 100 points.

ARRL Field Day is the granddaddy of all emergency communications exercises. One of the most popular activities on the ARES communicator's agenda will be held this year on June 24-25. Below are two classes of Field Day operation of special interest to the emergency communications operator or group :

- (Class E) Home stations - Emergency power : Same as Class D but using emergency power for transmitters and receivers. Class E may work at all Field Day stations.

SNJ ARES Update - Continued on page 27

- (Class F) Emergency Operations Centers (EOC) : An amateur radio station at an established EOC activated by a club or non-club group. Class F operation must take place at an established EOC site. Stations may utilize equipment and antennas temporarily or permanently installed at the EOC for the event. Entries will be reported according to the number of transmitters in simultaneous operation. Class F stations are eligible for a free VHF station. At Class 2F they are also eligible for a GOTA station. For Field Day purposes, an Emergency Operations Center (EOC) is defined as a facility established by a) a Federal, State, County, City or other Civil Government, agency or administrative entity; or b) a Chapter of a national or international served agency (such as American Red Cross or Salvation Army) with which your local group has an established operating arrangement. A private company EOC does not qualify for Class F status unless approved by the ARRL Field Day Manager. Planning of a Class F operation must take place in conjunction and cooperation with the staff of the EOC being activated. A Class F station may claim the emergency power bonus if emergency power is available at the EOC site. The emergency power source must be tested during the Field Day period, but you are not required to run the Class F operation under emergency power.

Reminder : Joint Military Base McGuire-Dix-Lakehurst

On Saturday May 20 and Sunday May 21, from 1030 to 1730, the ARRL/ARES South Jersey Section Leadership is planning a Demonstration of Amateur Radio Equipment, Capabilities and Emergency Communications. The purpose of this event is to raise awareness of Amateur Radio, as well as our ARES Program.

The Red Cross will also be there to raise awareness of their Military Support Services. If you ever watched M.A.S.H on TV, you probably noticed all the Red Cross emblems. Military Support Services is one of five branches of the Red Cross and provides care to both Active Duty and Veterans that are suffering with physical, emotional and financial problems.

ARES and the American Red Cross (ARC) NJ Region :

We are finally making progress on our preliminary Communications Plan for the NJ Red Cross. We're about to enter the initial test phase, the Radio Links between the Red Cross Headquarters in Princeton and the three Chapter Offices in North Jersey, Central Jersey and South Jersey. This test will be conducted on Monday, April 24 beginning at 2000 Local Time. The call from Princeton to Pennsauken will be via the Waterford Works Repeater on 147.345 (PL 127.3) and it should take place at approximately 2015 local time.

ARES Net

Steve Farney W2SEF (ARES Emergency Coordinator Assistant) who manages our Gloucester County ARES Net every Sunday Night at 2000 local time. He consistently averages approximately 15 radio amateurs every week, checking into this net. He is also one of the Net Control Stations on the 2M Rag Chew Nets, twice a week on Tuesdays and Thursdays. This is where Steve told me that he plans on casting his net for new ARES recruits.

So, be prepared, Steve has a tough quota, and he will be using some aggressive "Headhunter" techniques.

Maybe he'll split his commissions with those who sign up HIHI.

2023 Clubhouse Projects

Shed :

- Install Electrical Wiring
- Install Lights
- Build Ramp

Lightning Protection Project :

- Install copper strapping in Library Room
- Install copper strapping in VHF/UHF Room
- Complete grounding rod installation around Clubhouse and Towers

Painting :

- Back Steps
- Power Pole

Replace Interior Front Door

ARES Resources

Download the ARES Manual [PDF] : <https://bit.ly/3iUhJLQ>

ARES Field Resources Manual [PDF] : <https://bit.ly/3QT4PtY>

ARES Standardized Training Plan Task Book [Fillable PDF] : <https://bit.ly/3wg5kVt>

ARES Standardized Training Plan Task Book [Word] : <https://bit.ly/3ZTNDbR>

ARES Plan : <https://bit.ly/3XLokXH>

ARES Group Registration : <http://bit.ly/3XodGpX>

Emergency Communications Training : <http://bit.ly/3J2gMMf>

2022 National Preparedness Report : <https://bit.ly/3EnvcTW>

Southern New Jersey Section EOP 2022.PDF : <https://bit.ly/3SbrXol>

The Amateur Radio Emergency Service® (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment, with their local ARES leadership, for communications duty in the public service when disaster strikes. Every licensed amateur, regardless of membership in ARRL or any other local or national organization is eligible to apply for membership in ARES. Training may be required or desired to participate fully in ARES. Please inquire at the local level for specific information. Because ARES is an amateur radio program, only licensed radio amateurs are eligible for membership. The possession of emergency-powered equipment is desirable but is not a requirement for membership.

If you are interested in learning more about the Gloucester County ARES Program or becoming an ARES member, please contact Bob Keogh (KD2NEC@QSL.NET)

A club exists to go above and beyond for their communities and for Amateur Radio is what defines a Special Service Club (SSC).



They are the leaders in their Amateur Radio communities who provide active training classes, publicity programs, and actively pursue technical projects and operating activities.

GCARC has been an ARRL Affiliated Club since February 1960 and an SSC since April 2010.





Remembering Stan

By Jim Wright, N2GXJ

Here is a reprise of an article from the June 2017 Crosstalk, followed by an update.

From the June 2017 Crosstalk “Eyeball QSO (part 2)”

In the May 2017 Crosstalk, you may have noticed a simple article called “eyeball QSO”, and the question “have you had any eyeball QSOs recently?” This month, I would like to give an update.

About a month ago, I found out I was going to be traveling on business to Gdansk, Poland. Gdansk is located in the North of Poland, near the Baltic Sea. I’ve never been to Poland before, and don’t speak the language. My Uncle didn’t help my anxiety over the trip either when he suggested I look out the window when the plane landed to see if I could see the Russian fleet. Yes, the Russian border was going to be less than 50 miles away.

That’s when I thought of Amateur Radio. Like you, I keep a log of my DX radio contacts. Surely, there’s a contact or two that I’ve had with Poland, and perhaps with someone from this area? I’d had five contacts with stations in Poland, and thanks to QRZ.com, found one of those contacts was in the Gdansk area a few years ago. There was an email address listed with the entry. So, with nothing to lose, I set about sending an unsolicited email. Who knew if I would get a reply?

Hello Stan, SQ2NNN,

Thank you for our contacts back when 10 meters was good! The reason for this email is that finally I get to travel to Poland for business. I will be in Gdansk area week of May 8, 2017. It would be an honor to meet you in person after having had contact on radio! Just to say brief hello. Would you be interested?

Thank you,

73,

Jim Wright, N2GXJ

The very next day, I got a positive reply, asking me to give info day before, and he might be able to welcome me to their small radio club, SP2KDS. Wow!

Fast forward one month, and there I was, in Poland, in a hotel lobby, waiting with a copy of an eQSL card from 2012 in my hand, waiting for someone I’d never met before, in a city over 4,000 miles from my NJ home. But it was all good. Stan was great, and though he doesn’t get a chance to speak English very often, his English was very good, and we had great conversation. He graciously offered to take me to visit a place called Westerplatte. I agreed. Westerplatte is a former military area that is the site where, on September 1, 1939, Germany invaded Poland, which led Britain and France to declare war on Hitler’s Nazi state in retaliation. Westerplatte is where World War II started in Europe.

On the drive there, Stan showed me the radios in his car, which included a CB radio, which he tells me is popular for finding out where the traffic problems (speed traps) might be. We drove out past the shipyards, where Lech Walesa rose from being an electrician, to being a co-founder of Solidarity, eventually to preside over Poland’s transition from communism, as the country’s elected President.

Remembering Stan - Continued on page 30

A 2023 update :

In December last year, I was feeling a “bit nostalgic”, and went to look up Stan’s postal address on QRZ so I could mail him an old-school snail-mail Christmas card. When I did, I was stunned to see the words there “reported silent key”. This could not be. What happened? I started doing Google searches, and with the help of Google Translate, eventually found this reference (translated), along with a picture, that I recognized as him.

On June 5, 2021, Stanisław Gurniewicz, a competitor, organizer, commander of navigation rallies, died at the age of 63. Always smiling, kind, not refusing to help. Co-creator of the rules for route descriptions used in navigational and tourist car rallies. The Main Commission of Popular Sports and Tourism expresses its sincere condolences to the family and relatives

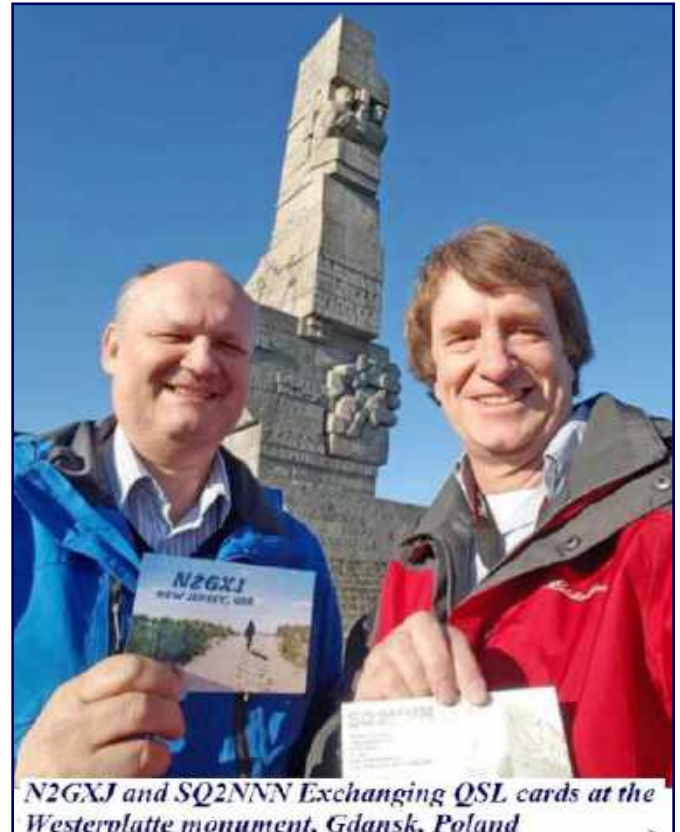
Such sad news. But I still did not know what happened. It began to eat away at me. So I started looking to try and find someone in Poland that knew him that might have more information. Stan had taken me to visit his radio club, and meet some of the guys there in Gdansk. So again, with help of QRZ, started reaching out via email, to any hams from the area that might have been in the club, or know him with more information. Last month, I received a reply.

Hello Jim!

Stanislaw died of covid 19. I had a few years break from the hobby. I don't know the details. More information can be provided: SQ2RGB, SP2HAV and SP2IPT.

73! Marcin SQ2BXI

So there it was. This great man, who survived the soviet occupation of Poland, who watched history unfold with the rising of Solidarity, who greeted me as a fellow ham with open arms and good will, done in by Covid. F-ing Covid. So unfair. Such a shame. Rest in peace, my friend Stan. Thank you for sharing your joy of this great radio hobby with me. You will always be remembered.



N2GXJ and SQ2NNN Exchanging QSL cards at the Westerplatte monument, Gdansk, Poland

Hen-Delta 6-Meter Copper Pipe Antenna

By Chris Prioli, AD2CS - www.ad2cs.com

Illustrations from the August 2022 issue of ARRL's QST magazine.

Whereas I have “built” several wire antennas, there really is not much to the building process with them. You start with a center connector, add the wire by way of insulators from the hanging system, add the antenna wires and tie them into the center fitting, add insulators at the wire ends, and finish off with UV-stable rope. Of course, the antenna needs a little bit of adjustment, but the build is really that simple. Not so with the 6-meter Hen-Delta copper pipe antenna (**Figure 1**) presented in the August 2022 issue of QST magazine. This antenna is also quite simple to build, don't get me wrong... it is not rocket science, but it does require a little bit of thought and planning.

The antenna's active components are the copper pipes, and its support structure is comprised of the plastic pipe parts. The QST article called for the use of 1-1/2" schedule 40 PVC pipe and fittings, but due to cost and ready availability, I went with 1-1/2" schedule 40 black ABS drain/waste pipe and fittings instead. The assembly requires a ten-foot length of 1-1/2" plastic pipe, sixteen inches of which will be cut off for use in forming the cross arms. That leaves one hundred and four inches of vertical support pipe for the antenna. The distance from the centerline of the cross arms to the lower anchor point of the copper antenna pipe is specified as sixty inches. The cross bar TEE and its associated fittings account for three and a quarter inches of support frame length. If the one hundred and four inch length of support tube is inserted into the bottom of the assembled TEE, and we measure sixty inches down from the cross bar centerline, the antenna tube anchor point will be fifty-six and three-quarters inches from the bottom of the assembled TEE. With three-quarters of an inch of pipe engagement into the bottom of the TEE, the anchor point will be fifty-six inches below the bottom of the TEE, and thus forty-eight inches above the lower end of the support pipe. If the support pipe is installed into an embedded length of 2-1/2" plastic EMT electrical conduit set into the ground, and if the Hen-Delta support pipe is allowed to settle down with its bottom at grade level, the top of the antenna will be approximately thirteen and seven-eighths feet high.

Of course, the antenna height can be increased by simply raising it up higher in the conduit support pipe and clamping or pinning it there. To that end, and also to help to keep the Hen-Delta from rotating in its conduit mounting pipe, I advise making a saw cut into the upper end of the plastic conduit pipe, centered across the conduit and about four inches deep. This will allow clamping of the plastic support pipe in place in the embedded conduit via a pair of stainless-steel worm-drive hose clamps, set about three inches apart over the saw kerfs.

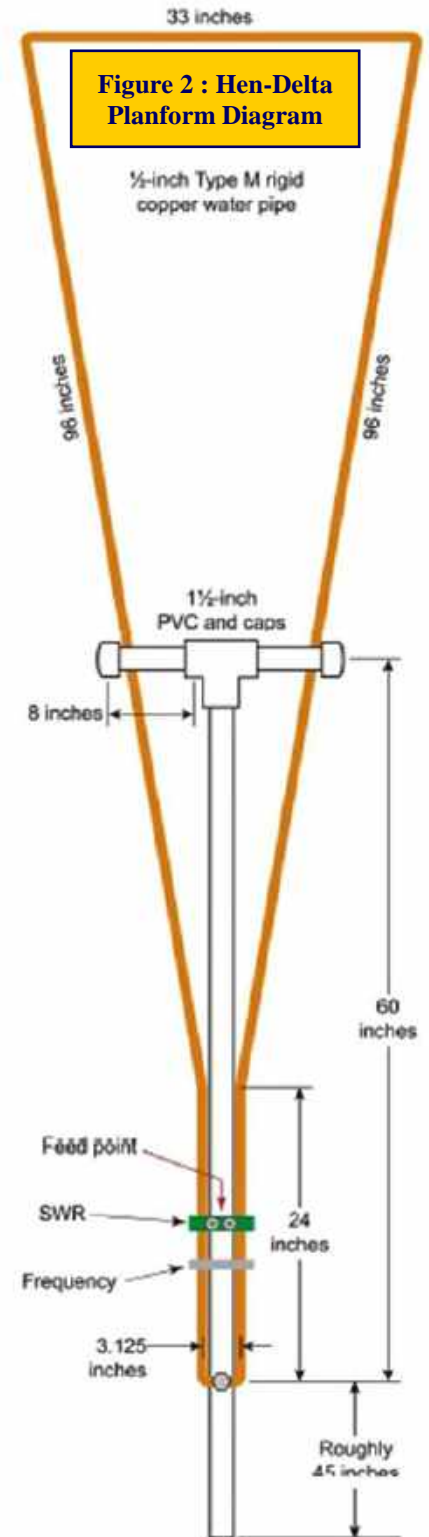


6M Copper Pipe Antenna - Continued on page 32

So let's talk about the small parts used in assembling the support frame. As I said earlier, I used black ABS waste/vent pipe for this build, which I will refer to henceforth as simply ABS. The only ABS TEE that I could easily locate that was symmetrical in form with a centered "stem" was a clean-out TEE, which has the stem port threaded internally. To connect this TEE to the ABS pipe, I used a male pipe thread to ABS adapter, whose plain end is the same OD as the 1-1/2" ABS pipe. Thus, to connect the adapter to the pipe, I used an inch-and-a-half ABS coupler. This accounts for the extra "assembled" length of the TEE mentioned above. **Figure 2** illustrates the general planform of the Hen-Delta antenna and its support system.

The QST article talks about cutting a 5/8" wide by 2-1/2" long slot in the outer ends of the cross bar tubes. No mention is made, however, of the best way to accomplish this task. Here is what I did. I started with the crossbar pipe, cut to length, placed in my V-block on the drill press table. I then drilled a 1/4" hole through the pipe, two and a half inches from the end of the pipe. Using a step bit, I enlarged the hole on each side of the pipe to its final size of 5/8". Next, I drew pencil lines from the edge of the hole along the pipe to its near end, doing this on both sides of the hole, so as to define the slot. Then, with the holes at top and bottom, the pencil lines on top, and the pipe clamped in position extending out of the V-block, I used my band saw to cut the slots, meeting the drilled holes. As the top and bottom were cut simultaneously, only two cuts were required on each pipe section to complete the task. When cementing the cross bar pipes into the TEE, be sure to orient the pipes so that the slots are at the top and bottom of the cross bar, as the copper pipe must fit into these slots. The copper pipes are held in place in the slots by the ABS caps that will be cemented in place later.

Each of the ten-foot lengths of 1/2" copper pipe are bent at about two feet from one end, so that they will form the Delta shape when the short straight lengths are placed parallel to each other. The upper end of each of these pipes is flattened, as are the ends of a thirty-three inch length of pipe that makes the top cross-tube of the Delta. It is important that the flattened ends of the cross-tube are in the same plane, as are the flattened upper ends of the verticals. It is best to flatten the ends of the verticals after the bend is made, as the pipe will then lay flat on the work surface in the plane in which the flats should be made. I chose to coat the inside of the ends of the copper pipes with liquid electrical tape immediately before flattening those ends, in the hope that this might seal the ends of the tubes against water and insect entry. The lower ends are left open and round, as they are connected together via a pair of copper pipe elbows and a 2-1/2 inch long length of the 1/2" copper pipe, which are all sweated in place together.



Each of the flattened pipe ends gets a 1/4" hole drilled through the flattened area (**Figure 3**). The cross-tube is then fastened to the two verticals via 1/4-20 x 3/4" stainless-steel cap screws with flat washers and self-locking nuts. Note that all of the hardware used in this antenna is of the stainless-steel type, so assume that any hardware referenced herein will be of that type, even if not specifically described as such. To aid in the electrical connectivity of the cross tube with the vertical pipes, I added an externally-toothed 1/4" lock washer between the flattened ends on assembly.

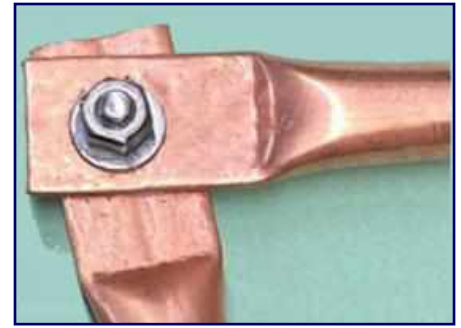


Figure 3 : Flattened Ends of Pipe

The 2-1/2-inch length of pipe gets a 1/4" hole drilled through it, perpendicular to the plane of the Delta. This hole indexes with a similar hole drilled through the ABS support pipe sixty inches below the horizontal center-line of the support frame cross bar. The two pipes are then secured together via a 1/4-20 x 3" cap screw with flat washers and a self-locking nut. Whereas self-locking nuts are not strictly required where the flattened pipes are joined, a self-locker is required where the copper pipe is secured to the support pipe. This is because tightening a standard hex nut and lock washer there would likely crush the ABS pipe before the nut was tight enough, or had compressed the lock washer properly.

Assembling the Delta onto the support pipe involves starting out with the Delta low on the support pipe, with the wide part of the spread above the notched cross bars of the support frame. Then, raise the Delta along the support pipe, guiding the sides of the Delta into the notches as the copper pipe assembly is raised, then aligning the 1/4" hole in the Delta's lower cross pipe with the 1/4" hole in the support pipe. Insert the three-inch washered cap screw through the holes and secure it with a washer and a locknut. Once the Delta is secured to the support pipe, cement the ABS caps onto the cross bars to lock the Delta into place there.

Connection of the feedline to the antenna is accomplished through the use of an insulated strip of material (**Figure 4**) onto which a pair of 1/2" copper pipe straps have been mounted. The pipe straps are installed over the parallel segments of the Delta pipe. The RG-58 cable is secured to the straps on either pipe segment by terminating the coax center conductor and its shield wire into #10 ring terminals. The straps are mounted to the insulating strip with 10-24 x 1" machine screws with flat washers and self-locking nuts. The inner machine screw on each strap gets a coax connection via a ring terminal under the nut and washer. I used a sheet of 1/8" thick phenolic sheet from which I cut a 5-1/4" x 1/2" strip for this job. The QST article called for the strip to be 5-1/8" wide, but I opted for a little more support for the outboard mounting screws. The antenna's SWR is adjusted by sliding this strip up or down the pipe segments as necessary before tightening the nuts completely.

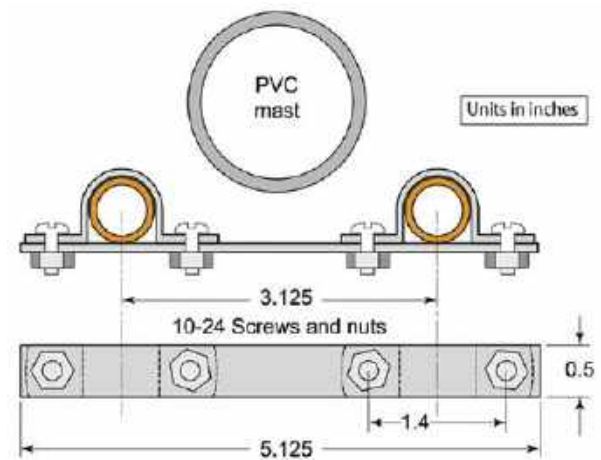


Figure 4 : Adjustment Slider Planform

In a similar manner, a resonant frequency adjuster is made of another strip and two more 1/2" copper pipe straps, this time out of a conductive strip. The material used in this case was a sheet of dual-sided copper-clad PCB substrate, 3/32" thick and cut to the same 5-1/4" x 1/2" size. The frequency adjuster is installed to the parallel pipe segments below the SWR adjuster (**Figure 5**). As with the SWR adjustment, the resonant frequency is adjusted by sliding the clamps up or down the pipes. In reality, the resonant frequency is set first, and then the SWR is adjusted.

6M Copper Pipe Antenna - Continued on page 34

The RG-58 cable referred to above should be approximately ten feet in length, with the #10 ring terminals on one end and with an appropriate connector for your system on the other end. Most builders will install a PL-259 plug there, while others might opt for an SO-239 terminating connector or a BNC connector. The antenna requires the use of a simple 1:1 choke balun which can be constructed either by installing several Mix 61 toroidal ferrites onto the coax below the antenna, or by wrapping six turns of the standing length of the coaxial cable around the support pipe below the antenna and securing them there with zip ties. An STL file is available for a 3-D printable bobbin which will fit on the support pipe and contain the six wraps of coaxial cable. This is the method that I chose to employ, as it avoids the need to leave the fairly large loop in the coax that would be required in order to allow movement of the SWR bar all the way up the parallel pipes if necessary. I simply set the SWR bar all the way up the pipes and then installed the bobbin right under the antenna. When I then slid the SWR bar into its final position, the bobbin would slide down the support pipe and keep the coax snug. For long feedline runs, transition to a less lossy cable such as RG-213 or LMR-400 at the end of the RG-58 pigtail.

If needed to disguise the true purpose this antenna, banners or flags can be attached to it without overly affecting the performance of the antenna. Thus, this is a good alternative for those hams who may be under some sort of antenna restriction.

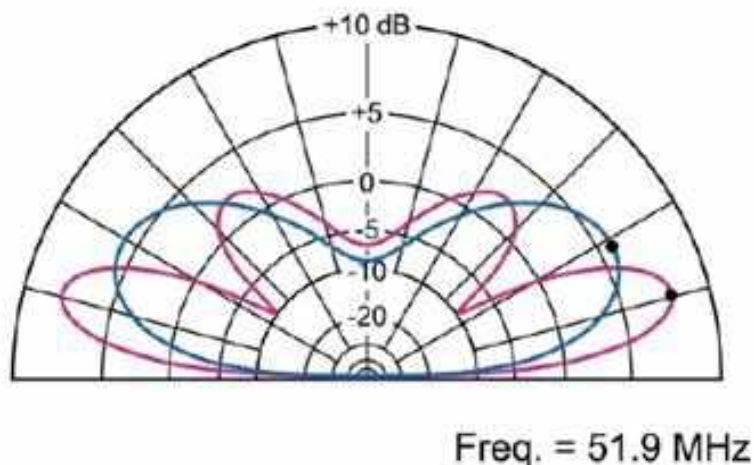
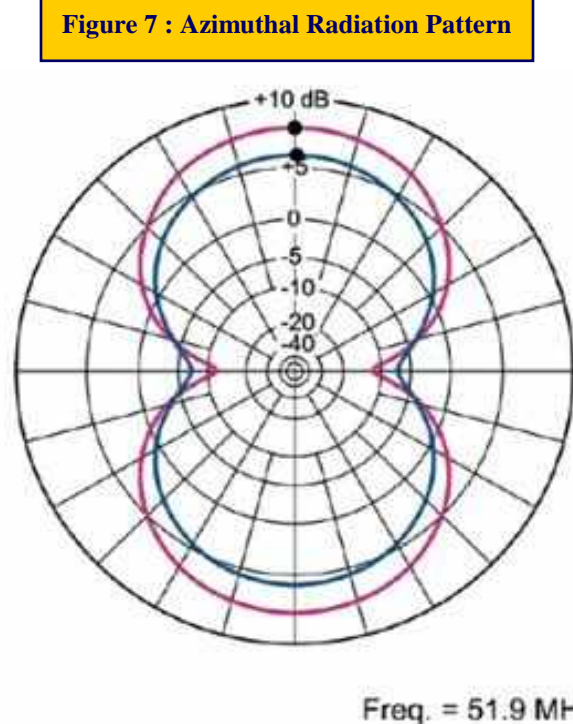
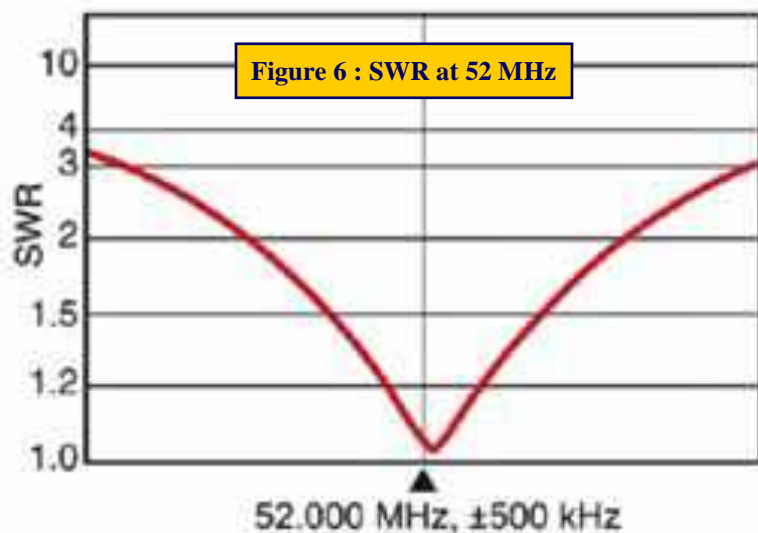
Let's talk performance now. I am going to borrow some of this, including the illustrations, from the August 2022 issue of QST, which is the source of the inspiration for this project. According to that article...

"The top of the Hen-Delta is wider than the bottom, which pushes the effective center of radiation upward. This reduces ground loss and ground sensitivity, which improves performance when ground mounted. Maximum radiation moves upward because of the proximity of the out-of-phase and equal-amplitude currents in the Hen-Delta's lower conductors, thus canceling radiation from the vertical antenna section. The electromagnetic (EM) wave from a Hen-Delta, therefore, emanates mainly from the horizontal top section, making it horizontally polarized.

As also stated in the QST article, the antenna has about 6dBi of azimuth gain, as is evident from the radiation pattern illustrations. The radiation is effectively perpendicular to the plane of the Delta. **Figure 6** shows the 500kHz SWR curve for the antenna, centered on its resonant frequency of 52MHz. **Figures 7 and 8** are the azimuthal and elevation radiation patterns, respectively. In both of those figures, the blue line indicates the one-foot pattern while the violet line indicates the ten-foot pattern. As is evident from these patterns, the antenna's pattern is somewhat similar to that of a vertical in elevation and to a dipole in azimuth. The Hen-Delta is a good compromise and a better-than-average performer for the springtime 6-meter QSO's that some hams chase.



Figure 5 : Adjustment Sliders



The build was a fun build, with just enough challenge to make it interesting. The most challenging part of this project was the bending of the copper pipes to get two symmetrical angles in the end. I am not quite sure why this was so, but only that it seemed to be more difficult than I expected it to be. The rest of the job was sheer mechanics and no problem at all. I would rate this project as an “entry-level” job that most beginners should be able to handle. Because the 6-meter band is available to all license classes, this project should have wide appeal.

This article is available on our website on the AD2CS Kit Building page at :
<https://gloucestercountyarcs.weebly.com/6m-antenna.html>

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RCA RT2770 Home Theatre Receiver Repair

By Mike Thompson, KG4JYA

<http://mikeasphere.blogspot.com>

These days it would seem as if every product were manufactured with an engineered lifespan. I find this particularly true with cheaper electronics. Parts and components of a unit typically fail at what seems suspiciously close to mere weeks after a warranty period has ended. For some, this

equates to the slow sad procession of obsolete electronics to the curb on trash night. To others like me, it lends an opportunity to open a unit up to see if something could be repaired or at least harvested for parts.



Case in point, my father gave me an old surround sound decoder he no longer wanted. I had purchased him a sound bar which better suits his needs and he simply wanted to discard the old decoder. I had asked him if it worked, and he said that it did but that it made a “funny noise”. Not deterred, I took it home and opened it up.

Once the cover was off, nothing seemed out of the ordinary. Typically, the first thing I look for is any signs of stress or wear on the components. None of the capacitors looked swollen and there were no observable burn marks or loose solder joints. So, at first glance everything seemed ok.

The next thing I did was hook the speakers up, apply power to the DUT (device under test) and then listen for or smell if anything seemed out of place. No sparks, or smoke erupted when power was applied. Furthermore, nothing seemed to burn or smell different. The speakers had a very slight hiss to them when the volume was turned up, so nothing with them sounded like a “funny noise”.

There was, however, a guttural whirling that emanated from the DUT. On closer inspection it appeared that the fan was struggling to spin. “Ahh this must be the problem!”, I thought. That seemed like a simple enough fix. Maybe even a quick blast of air could remedy things.



I popped the fan out of the DUT and gave it a good blast of air. I noted that as per the label the fan ran on 12 volts, so I decided to hook it up to a power supply to ensure that the fan was still in working order. I dialed up the voltage on the power supply and the fan snapped to life with vigor. It ran a little loud, but it moved the air just fine. I was confident that the issue had been resolved and replaced the fan in the DUT.

Upon testing, the fan performed in the same manner I had originally observed. It struggled to spin. This led me to believe that somehow the board was not providing the voltage necessary to turn the fan.

I disconnected the fan and read the voltage with a multimeter at the connection point. It was a little over 8 volts. “Well, that is not 12 volts so that HAS to be the problem.”, I thought to myself.

KG4JYA RCA RT2770 Repair - Continued on page 37

At this point I was a little over my head. Somewhere, I imagined there had to be bad components buried in the complex circuitry of the DUT. I searched with no success to find a schematic. I attempted to look at the traces on the board to get some sense of where to look next. Ultimately, I just started to randomly probe around looking for 12 volts on the board.

When none of this worked, I decided to enlist the help of fellow Club member Chris Prioli, AD2CS. He informed me that he would be happy to take some time and look at my problem.

More often than not, there is always something going on at the Clubhouse every Saturday. Whether it is a Tech Saturday presentation, the satellite station flexing its muscles on the newest satellite deployed or restoring the Clubhouse to better than former glory. The activity there is both welcoming and productive. This was the perfect place to meet up with Chris, and to get some use out of the Clubhouse's test bench.

I met up with Chris early on Saturday morning and after a few moments of discussing Chris' latest project we moved to the test bench to diagnose my issue. I explained the problem that the DUT was experiencing to him. He then did a quick search for a service manual to no avail. We also removed the board in question and did a visual examination, nothing seemed out of place.

Next, we hooked the DUT up to the test benches' isolated AC power supply. This was an interesting piece of test equipment that isolates any circuit powered by it from AC mains. It also had the ability to adjust the voltage so that a user can slowly increase the voltage up to the recommended value. The DUT powered up normally and when turned on via the front panel switch, the fan began to intermittently spin.

Up to this point the steps taken were nearly identical to what I had performed in my earlier analysis. Chris, however, took a different approach when he checked the voltage being delivered to the fan. Instead of using a multimeter he opted to use the oscilloscope instead. I asked about this and he informed me that the "scope" could give us much more information about the voltage than merely its value. For instance, it can tell us if it is flat or alternating in any form over time. For the DUT it appeared that the voltage was a flat DC value a little more than 8 volts. This led us to believe that the voltage being delivered was probably not the issue since it was constant, with little to no ripple in it.

Chris had me remove the fan again, and he visually inspected it. "Look here.", he said to me while spinning the fan blades with his finger. He continued, "The fan does not spin smoothly, there is some resistance", while flipping the power switch of his custom battery eliminator. This is a piece of test equipment that Chris had built of his own design. It allows a user to flip through a series of DC test voltages that are common battery voltages. We started low at 1.5 volts and gradually increased. The fan started to intermittently turn at around 8 volts and finally started spinning consistently around 12 volts.

Then it occurred to me that DC fans should ideally start spinning with low voltage and gradually get faster, NOT run intermittently. It seems like an obvious enough thought, but it had indeed eluded me, with my limited experience in troubleshooting. So, my original impression that the fan was the issue was correct and Chris agreed.

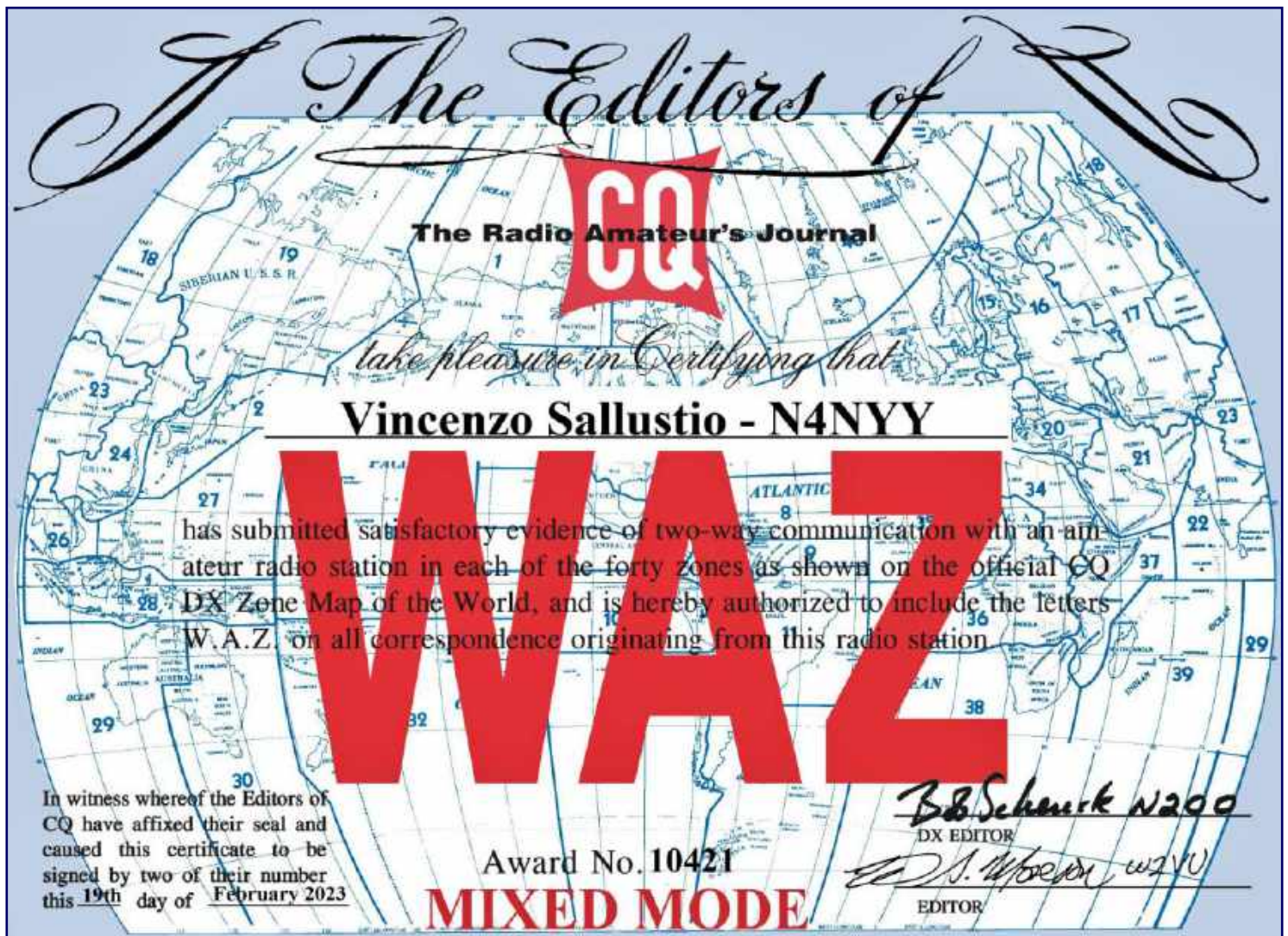


Rather than order a new fan, Chris wanted to see if we could restore the operation of the fan under test. He peeled off the label on the back of the fan to expose the electronics and bearing. He then used component cleaner and compressed air to dissolve and blow out any dirt in the moving parts. Finally, we hooked the fan up to a voltage source to get it spinning and we applied oil to the bearing. Now the fan spun smoothly as soon as voltage was applied. We reinstalled the fan and the DUT now had no issues.

There were a couple of different ways that I could have addressed the problem. I could have scraped the unit for parts, or I could have merely ordered a new fan, waited for its arrival and installed it. Either would have worked out for me, but I feel that it would have wasted the opportunity to learn and collaborate with fellow enthusiasts.



After all, isn't that what being in a Club is all about?



Yaesu System Fusion and Wires-X at Tech Saturday

By Jon Pearce, WB2MNF

Tech Saturday continued to fill the Clubhouse in April. John Zaruba Jr, K2ZA presented Yaesu System Fusion and Wires-X. John covered the basic differences between these modes and other modes like analog FM communication, Icom's D-STAR, and DMR radios. He broadly covered Pi-Star and other hotspots, which will be a topic of the June Tech Saturday. Tech Saturday provides the opportunity for more personal transfer of ideas and actual hands-on use of the technology being presented.

Upcoming Tech Saturday sessions will cover :

- May 6, 2023 : CHIRP Radio Programming Software
- June 10, 2023 : Pi-Star Hotspot Construction and Use
- August 5, 2023 : Tony Starr, K3TS - A show-and-tell session of mobile radio installations following up on his presentation at the August 2, 2023 General Membership Meeting



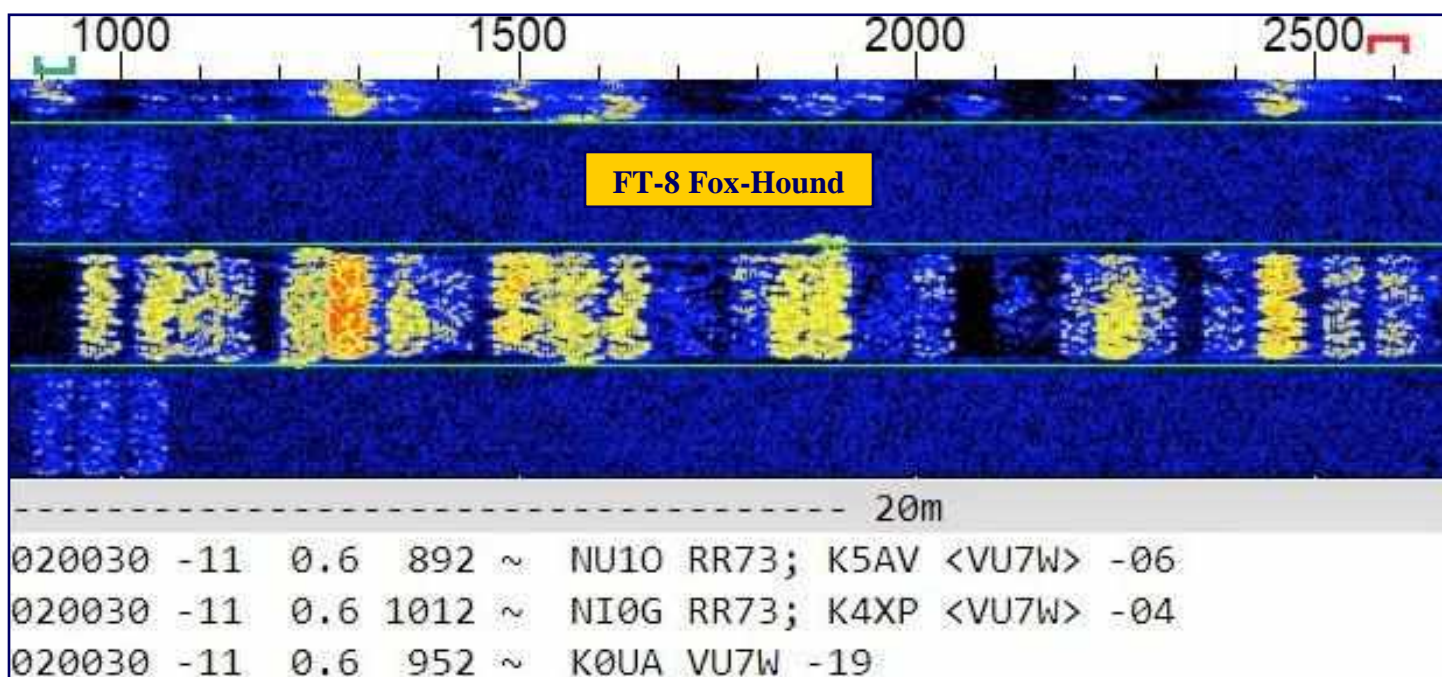
Fox-Hound or Multi-Stream, How To Reply To That DX?

By Jim Wright, N2GXJ

For those of you who venture off the standard FT-8 frequencies, to where the DXpeditions transmit, you might have been asking this same question that I had been asking, confused by what you are seeing, and not sure of what was right way to respond.

The key was knowing what to look for, which I did not, but do now. Here's the key.

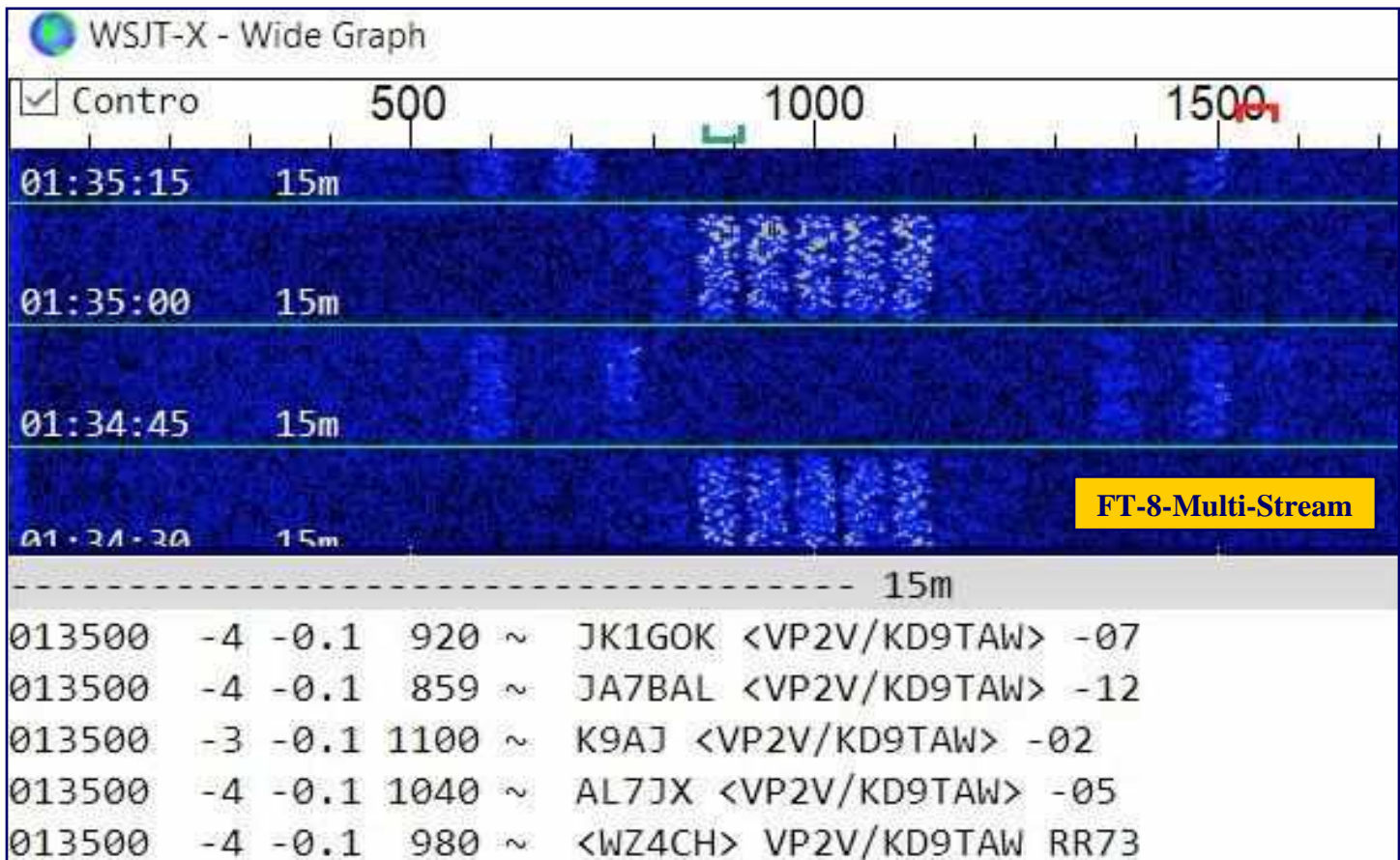
Look at the signal that is getting decoded when you are running WSJT-X or JTDX. In the waterfall, watch the 2-6 audio frequencies they are simultaneously transmitting on, and then watch the decoded content of these signals. As illustrated in the following real-world on-air examples I captured tonight, in fox/hound mode, you'll notice the DXpedition (the fox) will sometimes transmit two different messages to two different stations at the same time and on the same audio frequency. That's something that does not happen in the multi-stream signals of MSHV. That's your clue to telling these modes apart.



DX Using Fox-Hound Example

In the fox-hound example, we can see DX station VU7W in simultaneous QSO with 5 different stations using 3 different audio frequencies. That's a busy DX station! Let's look at what is being decoded in more detail. On audio frequency 892, he's giving 73 to NU1O, while giving a signal report to K5AV on that same audio frequency. On audio frequency 1012, he's giving 73 to NI0G, and a signal report to K4XP on that same audio frequency. There's also example, on audio frequency 952, where there is only one message to K0UA. That's fine. That's why you watch over time, to see if there are any examples of two different stations at the same time on the same audio frequency. That only happens in fox-hound mode. Also, if the DX has properly time sync'd, in fox-hound mode the fox can only transmit on the even periods, so that can be another clue. And in F-H mode, the fox will only answer hounds that are up 1000 Hz or more from where the fox is transmitting. So if you watch who the fox is answering and see where those guys were in audio frequency when they were calling, relative to the fox, that can be another clue too (and a hint as to which audio frequency you should use when trying to get this fox's attention too!)

Fox-Hound or Multi-Stream - Continued on page 41



DX Using Multi-Stream Example

In multi-stream example, we see 5 different audio frequencies being used, but only one normal looking FT-8 exchange per audio frequency. And if we watch over time, we'll never see two different messages transmitted at same time on same audio frequency. That's our clue that this is multi-stream, and not fox-hound. Unlike in F-H mode, in multi-stream mode, the fox can transmit on either even or odd periods, so if you find a DX transmitting on odd cycles, likely is not in F-H mode (unless their time sync is off).

So how to reply in each of these cases?

If the fox is operating in Fox-Hound mode, you should configure your WSJT-X advanced options to also be in hound mode. Then pay special attention to having the fox low in your waterfall, so that you can pick an audio frequency for your transmit that is at least 1000 Hz higher. Once the fox responds to you, the software will automatically pull your transmit audio frequency down to the audio stream used to give you your signal report. And the QSO concludes simply with them issuing an RR73 (no reply from you expected after that).

If the fox is operating with MSHV in multi-stream mode, you leave your software configured for standard FT-8. Just lock your transmit audio frequency to be somewhere other than where the DX streams are on the waterfall, and operate like standard FT-8.

Hope this helps! Good DX!

2020-2024 Element 4 Amateur Extra Class License Question Quiz

This month we continue with Subelement E2 Operating Procedures (5 exam questions out of 5 groups)
(Answers on 'Last Page Calendar')

E2D01

Which of the following digital modes is designed for meteor scatter communications?

- A. WSPR
- B. MSK144
- C. Hellschreiber
- D. APRS

E2D02

Which of the following is a good technique for making meteor scatter contacts?

- A. 15-second timed transmission sequences with stations alternating based on location
- B. Use of special digital modes
- C. Short transmissions with rapidly repeated call signs and signal reports
- D. All these choices are correct

E2D03

Which of the following digital modes is especially useful for EME communications?

- A. MSK144
- B. PACTOR III
- C. Olivia
- D. JT65

E2D04

What technology is used to track, in real time, balloons carrying amateur radio transmitters?

- A. Ultrasonics
- B. Bandwidth compressed LORAN
- C. APRS
- D. Doppler shift of beacon signals

E2D05

What is one advantage of the JT65 mode?

- A. Uses only a 65 Hz bandwidth
- B. The ability to decode signals which have a very low signal-to-noise ratio
- C. Easily copied by ear if necessary
- D. Permits fast-scan TV transmissions over narrow bandwidth

E2D06

Which of the following describes a method of establishing EME contacts?

- A. Time synchronous transmissions alternately from each station
- B. Storing and forwarding digital messages
- C. Judging optimum transmission times by monitoring beacons reflected from the moon
- D. High-speed CW identification to avoid fading

Element 4 Amateur Extra Class Quiz - Continued on page 43

E2D07

What digital protocol is used by APRS?

- A. PACTOR
- B. 802.11
- C. AX.25
- D. AMTOR

E2D08

What type of packet frame is used to transmit APRS beacon data?

- A. Unnumbered Information
- B. Disconnect
- C. Acknowledgement
- D. Connect

E2D09

What type of modulation is used for JT65 contacts?

- A. Multi-tone AFSK
- B. PSK
- C. RTTY
- D. IEEE 802.11

E2D10

How can an APRS station be used to help support a public service communications activity?

- A. An APRS station with an emergency medical technician can automatically transmit medical data to the nearest hospital
- B. APRS stations with General Personnel Scanners can automatically relay the participant numbers and time as they pass the check points
- C. An APRS station with a Global Positioning System unit can automatically transmit information to show a mobile station's position during the event
- D. All these choices are correct

E2D11

Which of the following data are used by the APRS network to communicate station location?

- A. Polar coordinates
- B. Time and frequency
- C. Radio direction finding spectrum analysis
- D. Latitude and longitude

**Armed Forces Day
May 20, 2023**



Gloucester County Amateur Radio Club

General Membership Meeting Minutes

Wednesday, April 5, 2023



The meeting was opened @ 1930 Hours by **President Jonathan Pearce WB2MNF** with the Pledge of Allegiance to the Flag. This meeting was held at the Mantua Masonic Hall because the Pfeiffer Community Center in Williamstown is under repair.

ATTENDANCE :

- In person : 29
- ZOOM : 15

Welcome To New Members :

- **Jacqueline Blanch KD2JPY**, from Manchester Township, NJ
- **Bert Espanol N3PKH**, from Swedesboro, NJ
- **James McCullough** from Sewell, NJ (Associate Member)

Welcome to first time visitor **Daniel Lenco WA2BPH** from Pedricktown, NJ

Jon reminded all that annual membership dues are due.

Topics for upcoming meetings include :

- April 8 : Tech Saturday with **John Zaruba Jr K2ZA** on Yaesu System Fusion and WIRES-X
- April 17 : TechNet on MMSSTV by **Gary Mirkin WA3SVW**
- April 19 : Board of Directors Meeting
- April 26 : Dinner at Clubhouse, 6 PM
- May 1 : TechNet on Local DMR operations with **Len Rust W2LJR**

Club News :

While looking for a replacement VHF tower, **Alan Arrison KB2AYU** found a package deal for two used crank-up towers and accessories including power winches that were available at a very reasonable cost. The BoD authorized this purchase and 5000 lbs of towers have been delivered to the Clubhouse for a total cost of approximately \$22,000. Alan estimates the cost would have been approximately \$60,000 if purchased new. Permits will now be obtained so that holes can be dug for pouring concrete.

A fork lift was rented to facilitate unloading of the towers and, while available, the fork lift was used to remove the leaning supports for the outside electrical box. Pressure-treated 6 x 6 posts will be installed later. The top section of the old, damaged VHF tower has been removed and there is a plan to install a new top plate and rotor so that the old VHF tower can be used at the 50 foot level.

Jonathan Pearce WB2MNF announced that the Clubhouse now has two hotspots, a C4FM unit assembled by **Len Rust W2LJR** and a DMR unit assembled by **Chris Prioli AD2CS**. During a recent pass of the ISS, **John Zaruba Jr K2ZA** was able to digipeat thru the ISS using only a Yaesu FT1D HT and Signalstick antenna on 145.825 MHz.

April 2023 General Membership Meeting Minutes - Continued on page 45

There will be a MS Walk in Cherry Hill on April 23. Radio amateurs wishing to assist with communications should contact Jon for more information on this event.

Starting in May, Jon wants to try changing the order of General Membership Meetings to :

1. Club Announcements
2. Presentations
3. Break
4. Business Meeting

BUSINESS MEETING :

The March General Membership Meeting Minutes were approved.

TREASURER : Alan Arrison KB2AYU noted that membership renewals were going well.

YTD Budgeted items :

- Income : \$5,795
- Expenses : \$2,137
- Net Gain : \$3,658

The Treasurer's Report was accepted.

CLUBHOUSE : Alan Arrison KB2AYU said some weed whacking and mowing is needed around the Clubhouse. Some Roundup will be sprayed next to the trailer to avoid damage to the skirts by the weed whacker.

FUTURE PROGRAMS : Ron Block NR2B reviewed the speakers for the upcoming General Membership Meetings :

- April 5 (tonight) : Since **Bob Heil K9EID** could not present tonight due to a family emergency, **Jonathan Pearce WB2MNF** will give a talk on Arduinos
- May 3 : **Randy Smith WU2S** on AREDN/MESH Networking
- June 7 : Pizza Night (no program)
- July 5 : Topic TBD
- August 2 : **Tony Starr K3TS** on Mobile Radio
- September 6 : **Chuck Colabrese WA2TML** on Radio Propagation
- October 4 : **Jim Wright N2GXJ** on design of the Club's 160 meter antenna

DX and CONTESTS : Tony Starr K3TS noted the following contests :

- April 8 - 9 : OK/OM DX SSB
- April 15 - 16 : CQMM DX Contest (CW)
- April 22 - 23 : SP DX RTTY Contest
- April 29 - 30 : Florida QSO Party

FIELD DAY : Tony Starr K3TS showed an updated plan with antennas located at the periphery of our space that would permit operation as 5A or 6A. Tony will take suggestions by email and will schedule a Field Day meeting at the Club site in May.

REPEATERS : Alan Arrison KB2AYU and several other Club members visited the site of the 220 MHz repeater in Sewell and found that a connector on the antenna feedline had been damaged, apparently by foot traffic. SWR remained high following a temporary repair so a section of feedline will have to be replaced when time permits. The 2 Meter repeater is having intermittent problems with de-sensing and crackling noise. Operators are asked to tune to the input when these problems are observed so that we can learn if interference is coming from any specific area. The Club is considering placing a SDR at the repeater site in order to view the RF environment of the repeater.

TECHNICAL COMMITTEE : Jonathan Pearce WB2MNF reported that W2MMD has now worked 38 countries, including Japan, via the GREENCUBE satellite digipeater on 435.310 MHz (the 3638 mile orbital height allows coverage of a very large geographic area). W2MMD was "rare DX" for Japanese operators, since they rarely can reach New Jersey via satellite.

EDUCATION : Licensing classes run for one more week before final testing on April 18 for Tech/General and April 21 for Extra. **Chris Prioli AD2CS** has scheduled the next round of licensing classes to begin the week of May 1.

GLOUCESTER COUNTY AMATEUR RADIO FOUNDATION : John O'Connell K2QA reports that VHF/UHF amplifiers, transverters etc. funded by the ARDF grant have been received.

CONSTITUTION COMMITTEE : Ron Block NR2B has assembled a team to prepare an updated draft of the GCARC Constitution.

OLD BUSINESS : None.

NEW BUSINESS :

The membership approved an expense of \$300 for repair of the Clubhouse alarm system and keypad replacement plus \$95.40 for the email addresses used by the Club.

The membership approved spending up to \$500 to purchase band pass filters for use during Field Day.

Frank Romeo N3PUU will be building custom cabinetry and furniture for the VHF room. The membership approved up to \$2500 for materials.

MISCELLANEOUS :

Bill Price NJ2S would like to start a "Traders Net" on the repeater and is looking for a good time slot.

Karl Frank W2KBF would like to revive the "Membership Spotlight" feature for the Club magazine, so will be sending out a brief list of questions to a few Club members each month;

Stanley Slachetka WA2JRZ is a professional planner for the State of New Jersey and is offering to assist Club members with zoning issues when they want to put up towers.

The program following the General Membership Meeting tonight will be on Arduinos by **Jonathan Pearce WB2MNF**.

The meeting concluded @ 2032 Hours.

**Respectfully Submitted,
Karl Frank W2KBF,
GCARC Recording Secretary**

*Me and delCano Travel Consultants
Two Guys Who Have Been Around the World*

**Ernest Kraus, KD2EAV
18 Saint Regis Drive
Woodbury, NJ 08096
Phone : 856-468-8537**

**E-mail : MEANDDELCANOTC@VERIZON.NET
Member : IATAN : International Association of Travel
Agents Network - <https://www.iatan.org>**



PERSONALIZED SERVICE @856.468.8537

We are proud to say we are a full service travel agency serving clients for more than twenty five years with trip planning, reservations, travel insurance, passport, visa, travel health care, and much more travel information. We talk to people and are not a faceless voice on the other end of the telephone line nor do we do business with a few keyboard clicks. Call us to find out what is missed without personal contact.

Whether planning a one or more person vacation to large groups, we can offer you personal attention as well as competitive pricing, Me and delCano Travel Consultants can handle your travel needs.

On occasion, a group leader plans a large group tour for many people and sometimes needs help to fill the group. Me and delCano Travel Consultants helps fill that group through our large client base as well as personal contacts.

There is a limited amount of space available in order to fully fill two group tours to the Galápagos Islands.

- One is a sixteen day trip that includes Quito, a Galápagos Islands cruise, and a tour of Machu Picchu in March 2024.
- A second tour is a ten day trip consisting of Quito and a Galápagos Island cruise for ten days in May 2025 with an optional extension to Machu Picchu for a total of sixteen days.

If either of these fit your bucket list trip, please contact our offices for the details.

The Galápagos are a living, bio-diverse group of islands belonging to Ecuador. The government controls the number of tourists permitted on a daily basis and limits cruise ships to no more than one hundred passengers.

Gloucester County Amateur Radio Club

Board of Directors Meeting Minutes

Wednesday, April 19, 2023



Meeting opened @ 1900 Hours by President Jonathan Pearce WB2MNF.

ATTENDANCE :

- President Jonathan Pearce WB2MNF
- Vice President Ron Block NR2B
- Treasurer Alan Arrison KB2AYU
- Recording Secretary Karl Frank W2KBF
- Corresponding Secretary Frank Romeo N3PUU
- Director Jim Clark KA2OSV
- Director Jeff Garth WB2ZBN
- Director Jim Wright N2GXJ
- Director Chris Prioli AD2CS
- Director Bill Price NJ2S
- Trustee John O'Connell K2QA
- Member Ernest Kraus KD2EAV

The minutes of the March BoD Meeting were approved.

NEW MEMBER APPLICATIONS :

The following applications were received and approved :

- Robert Bleattler KC3VXW, Technician Class from Upper Chichester, PA
- Ethan Yost KE2AVA, Technician Class from Burlington, NJ
- Melissa Seidner KE2BEK, Technician Class from Burlington, NJ
- Carl Jackson KE2BEE, Technician Class from Mount Royal, NJ
- Felicia Jackson KE2BED, Technician Class from Mount Royal, NJ
- Bert Espanol N3PKH, Technician Class from Swedesboro, NJ

TREASURER : Alan Arrison KB2AYU reported YTD Budgeted Items :

- Income : \$6,127
- Expenses : \$2,137
- Net Gain : \$3,990

The membership renewal rate has been approximately 80 percent and we have a total of 180 Renewed/Life/Honorary members. The Treasurer's report was accepted.

CLUBHOUSE : Alan Arrison KB2AYU requested help in managing weeds that are growing around the Clubhouse. The electrical box will be mounted on Saturday then the shed, transfer switch and generator will be wired. **Bill Price NJ2S** will provide information on the chip needed for the alarm system next month.

FIELD DAY : The side yard will be available this year after all so Field Day Chairman **Tony Starr K3TS** will be revising the plan.

April 2023 Board of Directors Meeting Minutes - Continued on page 49

CLUB NETS : Bill Price NJ2S is working on plans to start a Traders' Net.

PROGRAM : Ron Block NR2B summarized the programs for the next few General Membership Meetings :

- May 3 : **Randy Smith WU2S** on AREDN/MESH Networking
- June 7 : No Program, this will be **Pizza Night**
- July 5 : **Len Rust W2LJR** will present a program on computerized logging

EDUCATION COMMITTEE : Chris Prioli AD2CS reports that out of 10 students, 9 passed their licensing test and one passed both Tech and General. The next round of licensing classes begins May 1.

GLOUCESTER COUNTY AMATEUR RADIO FOUNDATION : John O'Connell K2QA reports that amplifiers have arrived for the VHF/UHF station and that **Alan Arrison KB2AYU** will be making up the necessary cabling. This leaves \$800 to \$900 of grant money that remains to be spent.

FOX HUNT : Alan Arrison KB2AYU has set the date of Sunday, May 7, 2023 for the next Fox Hunt.

OLD BUSINESS :

REPLACEMENT VHF TOWERS : Alan Arrison KB2AYU and **Frank Romeo N3PUU** presented a plan to locate the two new VHF towers in line with the existing towers, spaced 40 feet apart. Frank provided photos of these towers to the manufacturer, **US Tower**, and they will provide us with documentation that will help in obtaining permits.

Ron Block NR2B and **Jonathan Pearce WB2MNF** met with our 4-H contacts last week at the Clubhouse to discuss the tower plans. The 4-H Executive Board must approve these plans and sign the zoning application as the landlord.

The 4-H will permit us to use the side yard during Field Day in exchange for GCARC allowing our front yard to be used for part of a car show during the 4-H Fair on July 29 (we may shut down the Clubhouse on that day). Also, GCARC plans to support the 4-H by extending our WIFI coverage into the fairgrounds.

Jeff Garth WB2ZBN mentioned that the Gloucester County 4-H is hosting a Spring Festival on Saturday, May 13, 2023 and a Goliathon on Saturday, June 3, 2023 at the 4-H Fairgrounds.

CONSTITUTION COMMITTEE : Discussions continued regarding updates to the GCARC Constitution.

Ron Block NR2B collected this information and will put together a revised draft for the Constitution Committee to review.

HAMFEST TICKETS :

It was decided to charge \$10 for Admission, an additional \$10 for tailgating in an open area or \$15 for a covered area.

NEW BUSINESS :

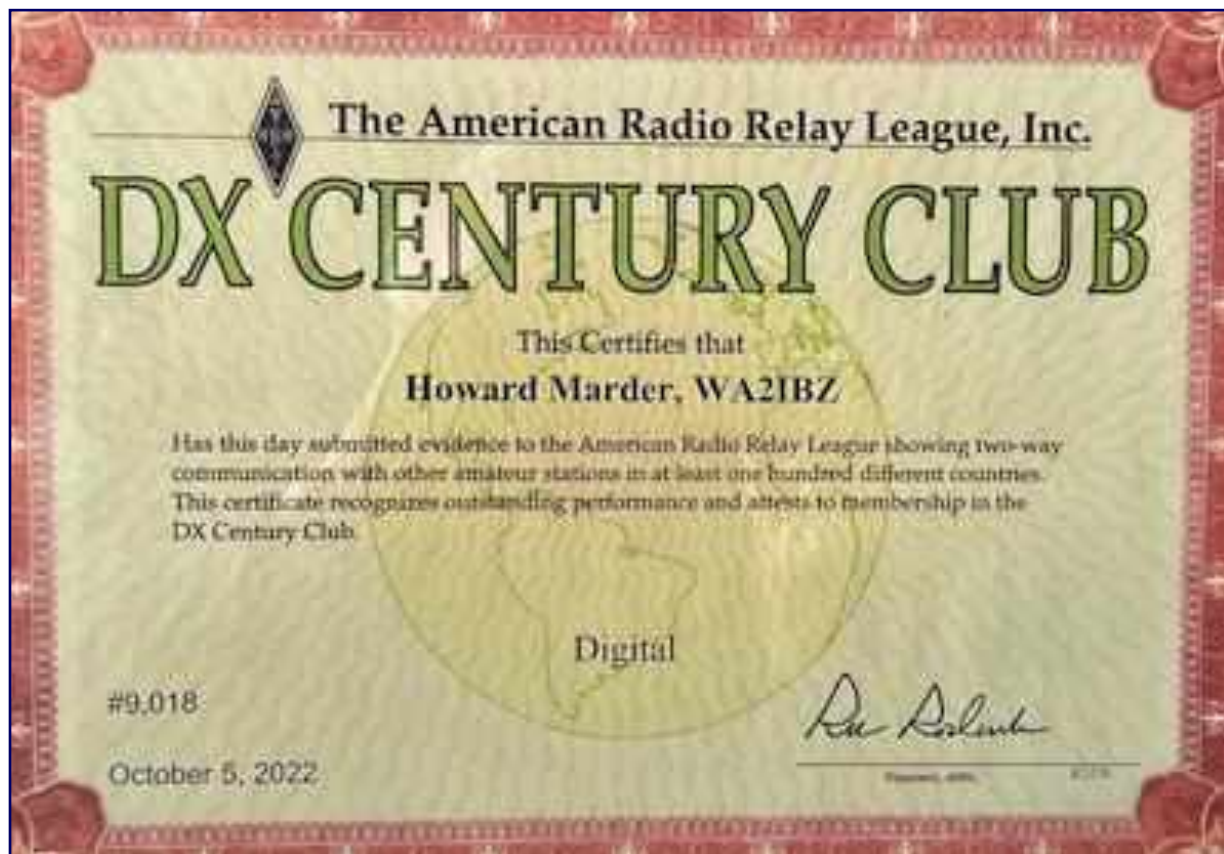
Ernest Kraus KD2EAV asked if it would be possible to place an advertisement for his travel business in The Crosstalk. The BoD decided to permit advertisements from Club members, at a rate of \$20 per quarter page, in a single monthly issue.

MISCELLANEOUS :

- The Pfeiffer Community Center will not be available for the May 3, 2023 General Membership Meeting, so **Chris Prioli AD2CS** was asked to contact **Len Rust W2LJR** to see if the Mantua Masonic Lodge can be reserved.
- The Clubhouse Rules need to be assembled and posted. **Chris Prioli AD2CS** volunteered to start this process.
- It was decided that Club Trustees should be responsible for maintaining all Club assets, not just physical assets, including passwords, TQSL information, etc.
- We need to set some criteria for the W2MMD Station License Trustee. We agreed this should be a Club member that is selected by the BoD. **Jonathan Pearce WB2MNF** will check with **Darrell Neron AB2E** to see if he wants to remain as Trustee for W2MMD.
- Finally, we need to decide what to do about Trustees that are no longer active.

The BoD meeting was adjourned @ 2116 Hours.

Respectfully Submitted,
Karl Frank W2KBF,
GCARC Recording Secretary



**CQ 160 Meter Contest, CW
January 27, 2023**

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : Single Op Assisted HP
QTH : NJ
Operating Time (hrs) : 11
Location : USA

Summary :
Total : QSOs : 572 State/Prov : 56 Countries : 35
Total Score : 147,784

Club : Frankford Radio Club **06**

Comments :
Rig : FTDX-9000D/OM Power 2000A+
Antennas :
160m inverted L - over a 100ft tree 30ft horizontal
RX- HiZ4 4-square

Hi all, I was able to spend more time than usual. Condx weren't the best on Fri evening here, but I was able to get some of the EU big guns in the log. Sat night EU condx were quite a lot better. For my setup I'm pleased with 35 DXCC, and around 60 10-point QSOs in the log. I had a few EU answer my CQs on Sat evening.

73 and thanks to all for the QSOs,
Darrell AB2E

Contest : CQ160CW
Band QSOs Pts StP DXC Pt/Q
1.8 572 1624 56 35 2.8
Total 572 1624 56 35 2.8
Score : 147,784
1 Mult = 6.3 Q's

**CQ 160 Meter Contest, CW
January 27, 2023**

Call : K3TS
Operator (s) : K3TS
Station : K3TS

Class : Single Op Assisted HP
QTH : SNJ
Operating Time (hrs) : 6
Location : USA

Summary :
Total : QSOs : 272 State/Prov : 44 Countries : 17
Total Score : 44,896

Club : Frankford Radio Club **07**

Comments :
A part-time effort, but I doubled my last year's score and worked a lot more DX. My normally atrocious local noise levels were way down this weekend, allowing me to actually hear some things on this band for a change. If nothing else, it was good practice for next month's ARRL DX contest. See you then, and 73 for now.

de K3TS

Summary :
Band QSOs Mults

160 : 21 18
80 : 171 47
40 : 124 47
20 : 115 51
15 : 107 42
10 : 19 13

Total : 557 218
Total Score : 121,426

Club : Frankford Radio Club **03**

Team : FRC Team Echo

Comments :
My best score ever, by at least 20k, but it was not much fun. A random buzzing and crackling noise assaulted my ears on every band for the duration of the contest. It was worse on some bands than others, and I think I missed many callers because of it. My apologies to those who called in if I could not pick you up. And for as high as the SFI was, I think that 10m could have been better. Still a great little contest though. Hope to be back next week for SSB, and I'm hoping that noise is gone.

73, de K3TS

**North American QSO Party, CW
January 15, 2023**

Call : K3TS
Operator (s) : K3TS
Station : K3TS

Class : Single Op Assisted LP
QTH : SNJ
Operating Time (hrs) : 10.00
Location : USA

**European Union DX Contest
February 4, 2023**

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : SOABCW HP
QTH : 8
Operating Time (hrs) : 6
Location : USA

Summary :

Band	CW Qs	Ph Qs	Countries	EU Regions
------	-------	-------	-----------	------------

160 :	0	0	0	0
80 :	36	0	22	26
40 :	116	0	33	53
20 :	68	0	32	38
15 :	20	0	14	13
10 :	80	0	23	39

Total : 320 0 124 169
Total Score : 776,157

Club : Frankford Radio Club

08

Comments :

Rig : FTDX-9000D/OM Power 2000A+
Antennas :
80m - dipole @ 90ft
40m - dipole @ 85ft
20m/15m/10m - Force 12 C3S tribander @ 52 ft on AB-577
military mast
RX antenna : HiZ4 4-sqaure array 40/80/160

This was a lot of fun. Only the 3rd running of this contest. Hard to initially get anything going because of other contests at the same time, many of whom CQ'd without specifying which contest. Great practice for ARRL DX CW in 2 weeks!

73 Darrell AB2E

Contest : EU_DXC

Band	QSOs	Pts	Sec	DXc	Pt/Q
3.5	36	321	26	22	8.9
7	116	933	53	33	8.0
14	68	565	38	32	8.3
21	20	151	13	14	7.6
28	80	679	39	23	8.5
Total	320	2,649	169	124	8.3

Score : 776,157

1 Mult = 1.1 Q's

**CQ WPX RTTY Contest
February 1, 2023**

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : SOAB HP
Class Overlay : TB-Wires
QTH : SNJ
Operating Time (hrs) : 6
Location : USA

Summary :

Band	QSOs
------	------

80 :	43
40 :	28
20 :	60
15 :	1

Total : 132 Prefixes : 102
Total Score : 30,906

Club : Frankford Radio Club

09

Comments :

Rig : FTDX-9000D/OM Power 2000A+
Antennas :
80m dipole @ 90ft
40m dipole @ 85ft
10m/15m/20m - Force 12 C3S tribander @ 52ft

Fun contest. Murphy struck early on, lost PTT on the Signalink USB. Discovered Windows changed a speaker setting on the fly. Many family things this weekend, so limited time to begin with.

73 and CU in ARRL DX CW next weekend!

Darrell AB2E

Contest : CQWPXRTTY

Band	QSOs	Pts	WPX	Pt/Q
3.5	43	94	33	2.2
7	28	102	25	3.6
14	60	105	44	1.8
21	1	2	0	2.0
Total	132	303	102	2.3

Score : 30,906

1 Mult = 1.3 Q's

“Dinner @ The Clubhouse”
Wednesday, May 24, 2023 @ 1800 Hours
W2MMD Clubhouse

To be added to the DX HONOR ROLL,
Please contact Ernest Kraus, KD2EAV
meanddelcanotc@verizon.net



Name/Callsign	DXCC
Bill Grim, W0MHK	352
Dave Strout, W2YC	349
Darrell Neron, AB2E	329
John Hill, W2HUV	263
Ken Denson, WB2P	248
Vinnie Sallustio, N4NYY	245
Tony Starr, K3TS	223
Jim Wright, N2GXJ	212
Dennis Sandole, K2SE	204
Matt Wilson, K2MFW	195
Sheldon Parker, K2MEN	194
Howard Marder, WA2IBZ	141
Christopher Wawak, KC2IEB	141
Eric Morris, N2BRJ	127
Phil Nunzio, WA3RGY	126
Rich Subers, W2RHS	119
Steve Farney, W2SEF	111
Bart Kleczynski, AC2PT	106
Chuck Capasso, WB2PGE	103
Curt Myers, K2CWM	91
Harry Strahlendorf Jr, W3DNQ	87
Jim Clark, KA2OSV	71
Lee Marino, N2LAM	62
Updated As Of 04/22/2023	



Blue, Wine & BBQ
June 24 - 25, 2023
1200 to 1700 Hours
Gloucester County 4-H Fairgrounds

More information can be found at :
<https://bit.ly/41vho2T>

Calling all Crafters & Vendors
WE WANT YOU!



Gloucester County 4-H Fair Association

SPRING *Festival*

275 Bridgeton Pike, Mullica Hill, NJ

FOOD TRUCKS | LIVE MUSIC | PONY RIDES | CRAFTERS & VENDORS

MAY 13, 10am to 3pm

Bring your family and friends and join us for
a great day of spring fun!



TO SIGN UP AS A VENDOR OR GET MORE INFORMATION CONTACT JEN COLES AT 856-466-0351

WARMINSTER AMATEUR RADIO CLUB

2023 HAMFEST & ARRL EPA SECTION CONVENTION

Sunday, May 7, 2023 (rain or shine)
Open at 7 a.m. (vendors at 6 a.m.)

Talk-in 147.09+ (131.8) / 443.95+ (131.8)

LOCATION:

Bucks County Community College -
Lower Bucks Campus
1304 Veteran's Hwy (Route 413)
Bristol, PA 19007

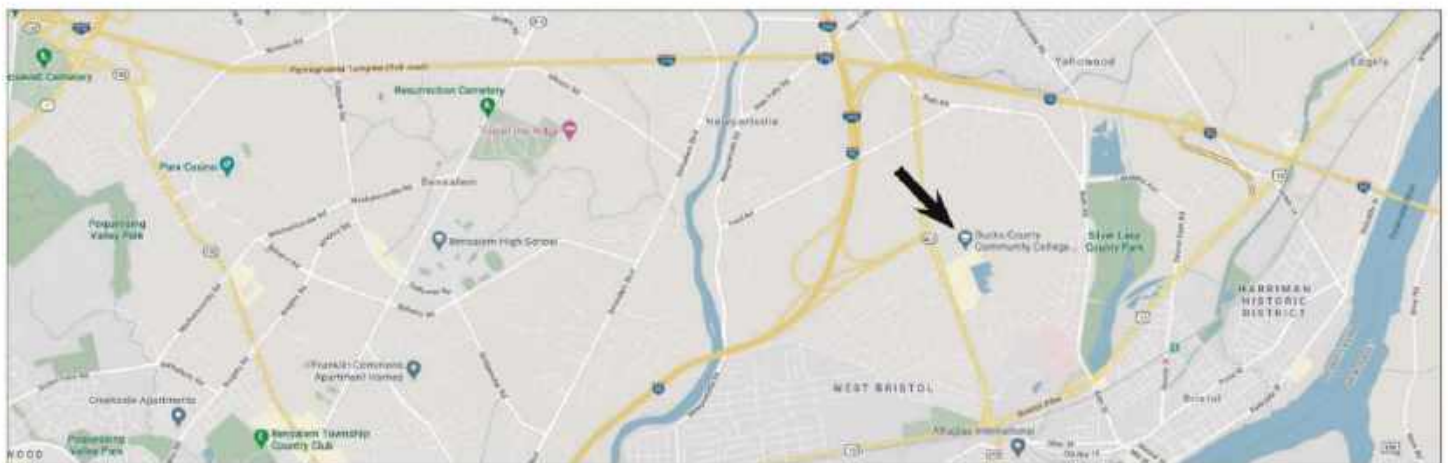
GPS Coordinates:

Latitude: 40.112755 | Longitude: -74.876504

- New & Used Ham Radio & PC Equipment
- Equipment check-out table
- VE Testing at 10:00 am
- DXCC card checking
- Door prizes every hour
- Food service available
- ARRL Guest Speaker Program
(See K3DN website: www.k3dn.org for announcement of speakers and times)



- Gate admission: \$7/person
- Unlicensed spouses & under 13 free
- Student free with valid ID
- Handicap parking available
- Tailgating: \$10/car-width space (plus admission)
- Indoor tables: \$20/table (plus admission)



For more info:
Web: www.k3dn.org
Contact: hamfest@k3dn.org

ARRL SANCTIONED
HAMFEST

May Birthdays

Congratulations to our members who are celebrating a birthday this month

Chuck Capasso, WB2PGE
Dominick Cocciolone
Holden Correia-Fisher, KD2JPV
Mike Covalesski, N2MMC
Bob Demola, KD2GFL
Adam Duncan, W3DUN
Lee Hafele, WA2LH
Carmen Inverso, WA2TRS
Ben Johnson Sr, WB2GUK
Brian Jones, KD2BXD
Bill Jones, KD2FHM
Bill Laute, KD2YNN
Joe Lee Jr, N2BNJ
Darrell Neron, AB2E (President 2005 - 2007)
Rusty Rust, K2LJR
Stan Slachetka, WA2JRZ
Tony Starr, K3TS (President 2021 - 2022)

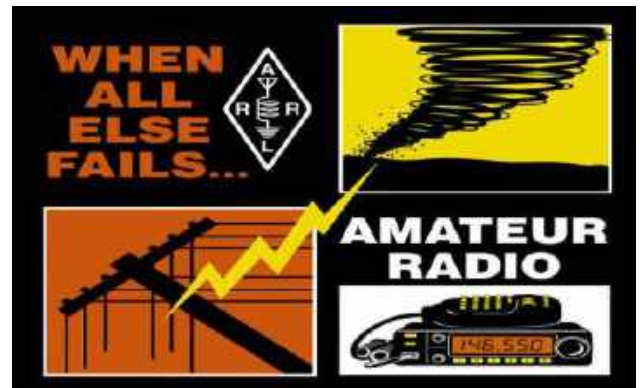
In Memoriam - May Birthdays

Silent Keys :

David Allin, N2TVR
Walton Ashton Jr, WB2OYQ
Burris Bauer
Frank Di Santo Jr, N2RHT
Bertha Farr Eggert, WA4BMC
Hyman Friend, KB2GH
Ernest Gigliobianco, KB2AB
Richard Hackett, AA2RK
Edward Leibfarth, WA2AEX (Charter Member)
James Montagno, N2WHY

Roy Peterson Jr, K2GHZ
(Club Co-Founder, Charter Member)

James Scannell Jr, KB2GTT
Joseph Schneider, KB2SVJ
Herbert Telling, N2IZM
Charles Weiler, KA2OSW
Edward Wilson, WA2SXC



Hurricane Preparedness Week
April 30 to May 6, 2023

Hurricane Preparedness

Get Moving When a Storm Threatens

weather.gov/hurricane



Protect your home: cover windows, secure doors & loose items



Determine sheltering options and consider your pets



Ready your go-bag, meds & supplies, charge phone, fill up/charge vehicle



Help your neighbors, especially the elderly & other vulnerable people



Follow evacuation orders if given



May 2023 Contest Calendar

WA7BNM Contest Calendar : www.contestcalendar.com

K1USN Slow Speed Test	0000Z-0100Z, May 1
ICWC Medium Speed Test	1300Z-1400Z, May 1
AGCW QRP/QRP Party	1300Z-1900Z, May 1
OK1WC Memorial	1630Z-1729Z, May 1
ICWC Medium Speed Test	1900Z-2000Z, May 1
Worldwide Sideband Activity Contest	0100Z-0159Z, May 2
ARS Spartan Sprint	0100Z-0300Z, May 2
ICWC Medium Speed Test	0300Z-0400Z, May 2
Phone Weekly Test	0230Z-0300Z, May 3
A1Club AWT	1200Z-1300Z, May 3
CWops Test	1300Z-1400Z, May 3
Mini-Test 40	1700Z-1759Z, May 3
VHF-UHF FT8 Activity Contest	1700Z-2100Z, May 3
Mini-Test 80	1800Z-1859Z, May 3
CWops Test	1900Z-2000Z, May 3
Walk for the Bacon QRP Contest	0000Z-0100Z, May 4 and 0200Z-0300Z, May 5
CWops Test	0300Z-0400Z, May 4
CWops Test	0700Z-0800Z, May 4
NRAU 10m Activity Contest	1700Z-1800Z, May 4 (CW) and 1800Z-1900Z, May 4 (SSB) and 1900Z-2000Z, May 4 (FM) and 2000Z-2100Z, May 4 (Dig)
SKCC Sprint Europe	2000Z-2200Z, May 4
MIE 33 Contest	2300Z, May 4 to 0300Z, May 5
NCCC RTTY Sprint	0145Z-0215Z, May 5
NCCC Sprint	0230Z-0300Z, May 5
K1USN Slow Speed Test	2000Z-2100Z, May 5
10-10 Int. Spring Contest, CW	0001Z, May 6 to 2359Z, May 7
RCC Cup	0300Z-0859Z, May 6
SBMS 2.3 GHz and Up Contest and Club Challenge	0600 local, May 6 to 2359 local, May 7
Microwave Spring Sprint	0800-1400 local, May 6
ARI International DX Contest	1200Z, May 6 to 1159Z, May 7
F9AA Cup, Digi	1200Z, May 6 to 1200Z, May 7
7th Call Area QSO Party	1300Z, May 6 to 0700Z, May 7
Indiana QSO Party	1500Z, May 6 to 0300Z, May 7
Delaware QSO Party	1700Z, May 6 to 2359Z, May 7
New England QSO Party	2000Z, May 6 to 0500Z, May 7 and 1300Z-2400Z, May 7
WAB 7 MHz Phone	1000Z-1400Z, May 7
K1USN Slow Speed Test	0000Z-0100Z, May 8
ICWC Medium Speed Test	1300Z-1400Z, May 8
OK1WC Memorial	1630Z-1729Z, May 8
ICWC Medium Speed Test	1900Z-2000Z, May 8
R5GB 80m Club Championship, SSB	1900Z-2030Z, May 8
Worldwide Sideband Activity Contest	0100Z-0159Z, May 9
ICWC Medium Speed Test	0300Z-0400Z, May 9
Phone Weekly Test	0230Z-0300Z, May 10
A1Club AWT	1200Z-1300Z, May 10
CWops Test	1300Z-1400Z, May 10
VHF-UHF FT8 Activity Contest	1700Z-2100Z, May 10
Mini-Test 40	1700Z-1759Z, May 10
Mini-Test 80	1800Z-1859Z, May 10
CWops Test	1900Z-2000Z, May 10
CWops Test	0300Z-0400Z, May 11
CWops Test	0700Z-0800Z, May 11
EACW Meeting	1900Z-2000Z, May 11
NCCC RTTY Sprint	0145Z-0215Z, May 12
NCCC Sprint	0230Z-0300Z, May 12
K1USN Slow Speed Test	2000Z-2100Z, May 12
Portuguese Navy Day Contest - CT1DBS Memorial	0900Z, May 13 to 0900Z, May 14
SKCC Weekend Sprintathon	1200Z, May 13 to 2400Z, May 14
CQ-M International DX Contest	1200Z, May 13 to 1159Z, May 14
VOLTA WW RTTY Contest	1200Z, May 13 to 1200Z, May 14
FISTS Saturday Sprint	1600Z-1800Z, May 13
Canadian Prairies QSO Party	1700Z, May 13 to 0300Z, May 14
50 MHz Spring Sprint	2300Z, May 13 to 0300Z, May 14
4 States QRP Group Second Sunday Sprint	0000Z-0200Z, May 15
K1USN Slow Speed Test	0000Z-0100Z, May 15
ICWC Medium Speed Test	1300Z-1400Z, May 15
OK1WC Memorial	1630Z-1729Z, May 15
ICWC Medium Speed Test	1900Z-2000Z, May 15
Worldwide Sideband Activity Contest	0100Z-0159Z, May 16

May 2023 Contest Calendar - Continued on page 58

May 2023 Contest Calendar

WA7BNM Contest Calendar : www.contestcalendar.com

May 2023 Contest Calendar - Continued from page 57

ICWC Medium Speed Test	0300Z-0400Z, May 16
Phone Weekly Test	0230Z-0300Z, May 17
A1Club AWT	1200Z-1300Z, May 17
CWops Test	1300Z-1400Z, May 17
Mini-Test 40	1700Z-1759Z, May 17
VHF-UHF FT8 Activity Contest	1700Z-2100Z, May 17
Mini-Test 80	1800Z-1859Z, May 17
RSGB 80m Club Championship, Data	1900Z-2030Z, May 17
CWops Test	1900Z-2000Z, May 17
Walk for the Bacon QRP Contest	0000Z-0100Z, May 18 and 0200Z-0300Z, May 19
NAQCC CW Sprint	0030Z-0230Z, May 18
CWops Test	0300Z-0400Z, May 18
CWops Test	0700Z-0800Z, May 18
QRP Minimal Art Session	1400Z-2200Z, May 18
NTC QSO Party	1900Z-2000Z, May 18
NCCC RTTY Sprint	0145Z-0215Z, May 19
NCCC Sprint	0230Z-0300Z, May 19
K1USN Slow Speed Test	2000Z-2100Z, May 19
SARL VHF/UHF Digital Contest	0300Z-0500Z, May 20 (6m) and 0500Z-0700Z, May 20 (2m) and 0700Z-0900Z, May 20 (70cm) and 0300Z-0500Z, May 21 (2m) and 0500Z-0700Z, May 21 (6m) and 0700Z-0900Z, May 21 (70cm)
UN DX Contest	0600Z-2100Z, May 20
NZART Sangster Shield Contest	0800Z-1100Z, May 20 and 0800Z-1100Z, May 21
EU PSK DX Contest	1200Z, May 20 to 1200Z, May 21
His Maj. King of Spain Contest, CW	1200Z, May 20 to 1200Z, May 21
Arkansas QSO Party	1400Z, May 20 to 0200Z, May 21
Feld Hell Sprint	1600Z-1759Z, May 20 and 2000Z-2159Z, May 20
Baltic Contest	2100Z, May 20 to 0200Z, May 21
FISTS Sunday Sprint	2100Z-2300Z, May 21
Run for the Bacon QRP Contest	2300Z, May 21 to 0100Z, May 22
K1USN Slow Speed Test	0000Z-0100Z, May 22
QRP ARCI Hootowl Sprint	0000Z-0100Z, May 22
ICWC Medium Speed Test	1300Z-1400Z, May 22
OK1WC Memorial	1630Z-1729Z, May 22
RSGB FT4 Contest	1900Z-2030Z, May 22
ICWC Medium Speed Test	1900Z-2000Z, May 22
Worldwide Sideband Activity Contest	0100Z-0159Z, May 23
ICWC Medium Speed Test	0300Z-0400Z, May 23
SKCC Sprint	0000Z-0200Z, May 24
Phone Weekly Test	0230Z-0300Z, May 24
A1Club AWT	1200Z-1300Z, May 24
CWops Test	1300Z-1400Z, May 24
Mini-Test 40	1700Z-1759Z, May 24
Mini-Test 80	1800Z-1859Z, May 24
CWops Test	1900Z-2000Z, May 24
CWops Test	0300Z-0400Z, May 25
CWops Test	0700Z-0800Z, May 25
RSGB 80m Club Championship, CW	1900Z-2030Z, May 25
NCCC RTTY Sprint	0145Z-0215Z, May 26
NCCC Sprint	0230Z-0300Z, May 26
K1USN Slow Speed Test	2000Z-2100Z, May 26
CQ WW WPX Contest, CW	0000Z, May 27 to 2359Z, May 28
K1USN Slow Speed Test	0000Z-0100Z, May 29
ICWC Medium Speed Test	1300Z-1400Z, May 29
QCX Challenge	1300Z-1400Z, May 29
OK1WC Memorial	1630Z-1729Z, May 29
ICWC Medium Speed Test	1900Z-2000Z, May 29
QCX Challenge	1900Z-2000Z, May 29
Worldwide Sideband Activity Contest	0100Z-0159Z, May 30
QCX Challenge	0300Z-0400Z, May 30
ICWC Medium Speed Test	0300Z-0400Z, May 30
Phone Weekly Test	0230Z-0300Z, May 31
A1Club AWT	1200Z-1300Z, May 31
CWops Test	1300Z-1400Z, May 31
Mini-Test 40	1700Z-1759Z, May 31
Mini-Test 80	1800Z-1859Z, May 31
CWops Test	1900Z-2000Z, May 31

2023 Club Committees

Standing Committees	Committee Chairs
Budget	Al Arrison, KB2AYU
Constitution & By-Laws	Ron Block, NR2B
Education	Chris Prioli, AD2CS
Field Day	Tony Starr, K3TS
Hamfest	Sheldon Parker, K2MEN and Bill Price, NJ2S
Health, Welfare, & Silent Keys	Bill Price, NJ2S
Hospitality	Jeff Garth, WB2ZBN
Membership	Chris Prioli, AD2CS
Membership Badges	Chuck Colabrese, WA2TML
Nominations	Jon Pearce, WB2MNF
Publicity	Tony Starr, K3TS
<i>Repeaters</i>	<i>Open Chair</i>
W2MMD Clubhouse Site	Al Arrison, KB2AYU

Activity Committees	Committee Chairs
<i>Awards & Certificates</i>	<i>Open Chair</i>
Club Publications & Historian	Jeff Garth, WB2ZBN
Contests	Tony Starr, K3TS
<i>DX</i>	<i>Open Chair</i>
<i>GCARC Family Picnic</i>	<i>Open Chair</i>
GCARC Foxhunts	Jim Wright, N2GXJ
GC-ARES Emergency Coordinator	Bob Keogh, KD2NEC
<i>Holiday Dinner Party</i>	<i>Open Chair</i>
License Testing/VEC Liaison	Gary Reed, N2QEE
Membership Roster Database	Jeff Garth, WB2ZBN
Programs : General Membership Meetings	Ron Block, NR2B
Radio Nets	Jim Clark, KA2OSV
Technical & Tech Saturday Programs	Jon Pearce, WB2MNF
W2MMD License Trustee	Darrell Neron, AB2E
W2MMD Special Event Station	Mark Gottlieb, KK2L

GCARC <at> Mailman <dot> QTH <dot> Net e-mail reflector guidelines

1. No attachments (e.g. pictures, files) are allowed on the reflector.
2. If you have Club-related pictures that you would like to share, you can send them to the webmaster, he will put them on the website and will send out a general e-mail to all the members.
3. Otherwise, the pictures will have to be sent to the members' addresses.
4. URLs/Hyperlinks are acceptable on the reflector.
5. Do not send any messages with e-mail addresses in the **BCC (Blind Carbon Copy)** field. The message will be rejected. Use only the **To:** or **CC:** fields.
6. Members are subscribed to the reflector using the member's e-mail address from the roster database. You must use that address when sending an e-mail via the reflector.
7. If you use another address on the reflector, the message will get rejected or "*bounced*", because the reflector does not recognize that address. Whenever a message sent to reflector is rejected or "*bounced*" for various reasons, the administrator has to log-in to the Mailman.QTH website and approve the message.

The W2MMD Repeaters

2 Meter Repeater

Output : 147.180 MHz

Input : 147.780 MHz

Offset : +600 kHz - PL : 131.8 Hz

(Conventional FM plus C4FM Capability)

EchoLink : W2MMD-R

70 cm Repeater

Output : 442.100 MHz

Input : 447.100 MHz

Offset : +5 MHz - PL : 131.8 Hz

(Conventional FM plus C4FM Capability)

The above repeaters are both
located in Pitman, NJ
GPS : 39.728481°, -75.131088°

1.25 Meter Repeater

Output : 224.660 MHz

Input : 223.060 MHz

Offset : -1.6 MHz - PL : 131.8 Hz

Location : Sewell, NJ

GPS : 39.746738°, -75.077094°

SKYWARN™ Net

Sunday @ 1930 : 147.180 MHz Repeater

Gloucester County ARES Net

Sunday @ 2000 : 147.180 MHz Repeater

GCARC TechNet ZOOM Meeting

1st & 3rd Mondays Every Month @ 2000 Hours

GCARC HelpNet ZOOM Meeting

Sporadic Mondays @ 1930 Hours

Tuesday Noon Day 2M Net

Every Tuesday @ 1200 Hours

Tuesday & Thursday Night 10M Net

Every Tuesday & Thursday @ 1930 Hours

Tune in on 28.465 MHz or 28.475 MHz

Thursday Night 2M Net

Every Thursday @ 2000 Hours

Meeting Calendar

General Membership Meeting

Wednesday, May 3, 2023

1930 Hours

Live & In-Person

Mantua Masonic Lodge

Simulcast Live on ZOOM

Board of Directors Meeting

Wednesday, May 17, 2023

1900 Hours

W2MMD Clubhouse

*“Ask not what your Club can do for you,
Ask what you can do for your Club”
- KA2OSV*

*“The big thing about being in a club and
being a “Ham” is to help each other
when there is a need ”
- W2SEF*

***** Badges *****

**Need a new or replacement badge
Contact “The BadgeMan”**

**Chuck Colabrese, WA2TML
colabrese <at> comcast <dot> net**

Question Pool Answers : E2D01:B; E2D02:D; E2D03:D; E2D04:C; E2D05:B; E2D06:A; E2D07:C; E2D08:A; E2D09:A; E2D10:C; E2D11:D