



CrossTalk

Issue 62:03

62 Years Of Service To Our Community

March 2021

2021 Club Officers

President :	Anthony Starr, K3TS	Trustees - 4 year term
Vice President :	Jeffrey Welsh, KD2AZI	Charles Lanard, KD2EIB (2018-2021)
Treasurer :	Alan Arrison, KB2AYU	James Wright, N2GXJ (2019-2022)
Recording Secretary :	Karl Frank, W2KBF	Mark Gottlieb, KK2L (2020-2023)
Corresponding Secretary :	Ronald Block, NR2B	Robert Fields, KC6AOH (2021-2024)

Board of Directors - 3 year term

Jeffrey Garth, WB2ZBN	(2019-2021)	Herb Dyer, KT2Y	(2020-2022)
James Clark Sr, KA2OSV	(2021)	Charles Colabrese, WA2TML	(2021-2023)
Robert Durham, W2RAD	(2020-2022)	William Price, NJ2S	(2021-2023)

This Month's Calendar

General Membership ZOOM Meeting
Wednesday, March 3, 2021 @ 1930 Hours

Tech Saturday Forum
VE License Testing Session
***** CANCELLED *****

Board of Directors ZOOM Meeting
Wednesday, March 17, 2021 @ 1900 Hours

Monday Night 10 Meter Rag Chew Net
Every Monday @ 2000 - 28.465 MHz

Sunday Night 2 Meter Nets
Skywarn Net @ 1945 Hours
ARES/RACES Net @ 2000 Hours

Monday Night 2 Meter Digital Training Net
Every Monday @ 1900 Hours

Tuesday Morning 2 Meter Rag Chew Net
Every Tuesday @ 1100 Hours

Thursday Night 2 Meter Rag Chew Net
Every Thursday @ 2000 Hours

147.180 MHz & EchoLink : W2MMD-R

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President's Message



As I write this, the snow, sleet and freezing rain are falling outside my shack window, and my back is sore from scraping and shoveling, but I know that springtime weather is just around the corner. Now is the time to start planning that antenna project, or planning that spring or summer portable operation that you wanted to do last year, but for whatever reasons, did not. The nice weather will be here before we know it.

The W2MMD station grounding project is now underway, with the inside work being the first phase, and when the weather breaks, the next phase to be done will be the outside perimeter grounding system. The final phase, improving the grounding of the towers, will be done last, possibly in the fall. This system will protect our equipment and our Clubhouse from damage in the event of a lightning strike. We are very fortunate to have our own Ron Block, NR2B, as the grounding system designer, as he is a veritable expert on the subject. We also have a great technical team to do the work, so this project will be done right.

A few weeks ago, I put out a plea for volunteers to help with this project, and got a great response from more than a dozen willing and able hands. This team will make up the HF station grounding task force. The VHF station task force is mostly comprised of members of the GCARC Skunkworks, so I am confident that the biggest hurdle that we faced on this project, which was finding the needed labor, has been cleared. The funding request for the work being done up front will be brought before the membership at the March meeting, and hopefully approved with no issues. Later phases of the project will likely require additional funding.

Field Day is less than 4 months away, which is just around the corner. The Field Day Committee, under the leadership of Vinnie, N4NYY, is currently making plans for another great event. Each year our Field Day just gets better, so if you miss it, you are missing one of the greatest benefits of being a GCARC member. It is the event that I look forward to the most. So put your name on the list to be a band chairman or operator, and make plans to get on the air with W2MMD on Field Day, always the fourth full weekend in June. It's a blast!

The planning for the Hamfest is underway, too, and the date has been set for Sunday, September 12, 2021. Mark that on your calendar, and stay tuned for more details. We already have the biggest hamfest in the Philadelphia area, but it could very well get even bigger if more people come out of isolation later this summer. The timing for us was great last year, but could be even better in 2021.

This month we welcome a new member of the Club. Joseph Novak, N2LWE, who has an Amateur Extra Class license and lives in Malaga, NJ.

That's about all I have for this month. As soon as it is practical and safe, we are going to return to having our meetings at the Pfeiffer Community Center, and the first night back will be Pizza Night. I wish I could tell you when that will be, but right now I can't. In the interim, I hope everyone is well and getting on the air whenever possible. Don't forget the ARRL DX SSB contest the weekend of March 6-7, 2021, your chance to work some new DX without having to work hard for it! 73 to all and good DX!

Tony Starr, K3TS



Fox Hunt XIX Highlights

By Jim Wright, N2GXJ

It was a brisk but clear winter day on Sunday, February 21, 2021, when members of the Gloucester County ARC set out to try and find the hidden transmitter that Al, KB2AYU, had placed somewhere in the northern corner of Gloucester County, NJ. This time, the transmitter turned out to be in Westville, NJ, in the northernmost corner of Gloucester County, easily visible from in your car once you got there, in a park along side the Big Timber Creek that feeds into the Delaware River, not far from Philadelphia.

There was a full contingent of hunters from multiple teams that checked in at the start of the event, including :

- Chuck KD2EIB
- Len W2LJR
- Chris KC2IEB
- Marc KC2VAR and Rich
- Vinnie N4NYY
- Frank N3PUU
- Bob KD2NEC
- Bruce KD2LBU
- Jim N2GXJ
- Greg W5DO
- Doug KD2VQA

In the end, congratulations go to **Frank, N3PUU**, first to find the transmitter, with Vinnie's N4NYY team in the area, hot on his heels!



Even with the fox taking to his portable transmitter for a while during the hunt to help teams get a hint as to where he was hiding, I ended up being one of the teams this time that needed to be talked in after an hour. Oh well, better luck next time! Special thanks to the Al, the fox, for finding such a good hiding spot, and for all the hunters, including some first time hunters, who came out to enjoy some radio sport on this sunny, yet brisk day! If you missed out this time, and want to get in on the fun next time, not to worry. We typically run at least one of these for each of the seasons.

Hey Frank, as first to find the fox this time, you've got the honors to hide it next time. Perhaps for a "spring has sprung" hunt this April?

[More pictures on the GCARC Fox Hunts / Fox Hunt XIX page](#)



Sunday, March 14, 2021
@ 0200 Hours



Down Jersey DXing

March 2021

By Bill Grim, W0MHK

CALL	DATES	HIGHLIGHTS	DIFFICULTY (5=MOST RARE)	DXCC ENTITY
PJ7AA	03/01 - 03/27	80-10M/CW, SSB, FT8	1	Sint Maarten
JD1	03/10 - 03/31	40 & 30M/CW, Digital?	3	Minami-Tori-shima
PJ2	03/04 - 03/23	80-6M/CW, SSB, Digital	1	Curaçao
VK9CE	03/16 - 03/23	80-6M/CW, SSB, FT8	4	Cocos (Keeling) Islands
FG4KH	03/16 - 04/01	Multi Band/Multi Mode	1	Guadeloupe
HI9/F5PLR	03/01 - 05/01	Multi Band/Multi Mode	1	Dominican Republic
TY/ZS6JS	03/01 - 06/30	Multi Band/Multi Mode	2	Benin
DP0GVN	03/01 - 03/15	Multi Band/Multi Mode	2	Antarctica
J28PJ	03/01 - 06/01	Multi Band/Multi Mode	3	Djibouti
JW/LB2PG	03/01 - 06/01	Multi Band/Multi Mode	2	Svalbard

Credits : NG3K Announce DX Operations : www.ng3k.com/Misc/adxo.html

Down Jersey DX Extra! : We are currently in a sunspot pause in Solar Cycle 25. No new sunspots have appeared in around 2 weeks. Keep the faith and look for more solar flux in the near future!

Entity Of The Month : Curaçao

Curaçao is a Lesser Antilles island country in the southern Caribbean Sea and the Dutch Caribbean region, about 40 mile north of the Venezuelan coast. It is a constituent country (Dutch: land) of the Kingdom of the Netherlands. Together with Aruba and Bonaire it forms the ABC islands. Collectively, Curaçao, Aruba and other Dutch islands in the Caribbean are often called the Dutch Caribbean. The country was formerly part of the Curaçao and Dependencies colony from 1815 to 1954 and later the Netherlands Antilles from 1954 to 2010, as "Island Territory of Curaçao" and is now formally called the Country of Curaçao. It includes the main island of Curaçao and the much smaller, uninhabited island of Klein Curaçao. Curaçao has a population of 158,665 and an area of 171 square miles; its capital is Willemstad. One explanation is that Curaçao was the name by which the indigenous peoples of the island identified themselves, their autonym. Early Spanish accounts support this theory, as they refer to the indigenous peoples as Indios Curaçaos. From 1525, the island was featured on Spanish maps as Curaçote, Curasaote, Curasaore and even Curacaute. By the 17th century, it appeared on most maps as Curaçao or Curazao. On a map created by Hieronymus Cock in 1562 in Antwerp, the island was called Qúracao. A persistent but undocumented story says that in the 16th and 17th centuries - the early years of European exploration - sailors on long voyages often got scurvy from lack of vitamin C. According to some accounts, either Portuguese or Spanish sailors who were ill were left on the island now known as Curaçao. When their ship returned, some had recovered, likely cured from scurvy after eating fruit with vitamin C. From then on, supposedly, the Portuguese referred to this as Ilha da Curaçao (Island of Healing) or the Spanish as Isla de la Curación.



www.wikipedia.org/wiki/Curacao

General Membership ZOOM Meeting

Wednesday, March 3, 2021 @ 1930 Hours

All members will be e-mailed the ZOOM log-in instructions

March 31, 2021 is the deadline to renew your membership

Welcome New Club Member :

Joseph Novak, N2LWE, who has an Amateur Extra Class license and lives in Malaga, NJ.

We are glad to have you as a member of the Club and hope to see you regularly at Club meetings, events, and activities. We hope to hear you on the Monday night 10M Rag Chew Net. Also on the Monday night Digital Training Net, the Tuesday mornings and Thursday nights 2M Rag Chew Nets on our 2M Repeater or EchoLink node : W2MMD-R.



You Can Pay Your Membership Dues 2 Ways :

- Send your check in to our PO Box 370
- Pay your dues using our PayPal Checkout page

Gloucester County Amateur Radio Club
PO Box 370, Pitman, NJ 08071

The membership dues are :

- \$30.00 - Full Membership
- \$15.00 - Family Membership
- \$25.00 - Associate Membership
- \$15.00 - Junior Membership

March 31, 2021 is the deadline to renew your membership

Need a ride to a Club meeting, event, or activity?

Just send a message to the Club's e-mail reflector asking if a member can pick you up

GCARC <at> MAILMAN <dot> QTH <dot> NET

All Club members have access to this FREE e-mail service



Tech Saturday Forum March 6, 2021 @ 0900 Hours W2MMD Clubhouse

*** **CANCELLED** ***

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.

All are welcome - Hams and Non-Hams - Club Members and Non-Club Members. Take a guided tour of our Clubhouse. Visit our HF and VHF/UHF/Satellite Operation Facilities and our vast antenna farm.

The Tech Saturday Forum is held on the Saturday after the General Membership meeting.

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 w2mmdgarc@gmail.com. Here is what we have so far :

- **Tony Starr, K3TS : Antenna construction, contesting, and CW**
- **Ken Bozarth, KN2U : Antennas**
- **Jeff Welsh, KD2AZI : Boat anchor repair and operation, Raspberry Pi, Arduino, Python, POTA, Mobile Installation & Operating**
- **Karl Frank, W2KBF : Digital Messaging (FLDigi, Winlink)**
- **Herb Dyer, KT2Y : DMR radios and programming**
- **Ron Block, NR2B : Lightning protection and grounding**

w2mmd.org



www.facebook.com/W2MMD



twitter.com/w2mmd_garc

Facebook



DA's and DIT's

>>**Gary Reed, N2QEE**, reports : There were no local VE sessions this last month. The local sessions are lacking open venues to hold the exams.

The Vineland OEM will be holding upcoming sessions on March 27, 2021 and April 24, 2021 in Vineland at 9 AM. The contact is :

- Darrin Malone, KD2ALQ
- 856-982-9346
- dbuggsy66@comcast.net

There are no walk-ins allowed, so you must preregister.

The VE group sends remembrances to Urb LeJeune's family. He will be greatly missed at the future VE sessions and his Ham Cram classes.

>>Congratulations to **Miguel Ramirez, K2MPR** (ex. KC2HMG) on his new vanity callsign.

>>Congratulations to **Steve Farney, W2SEF** (ex. WB2VFJ) on his new vanity callsign.

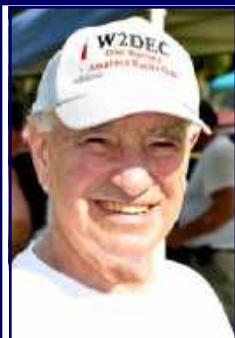
>>Congratulations to **Marc Federici, KC2VAR**, for upgrading to Amateur Extra Class license.

>>**Vinnie, N4NYY**, reports he is organizing another fox hunt, this time to find **Frank, N3PUU**'s missing portable beam! **HIHI**

Gloucester County Amateur Radio Club Winter Fox Hunt XIX
Westville, NJ, Sunday, February 21, 2021



Urban A LeJeune, W1UL (W2DEC) SK December 9, 1932 - January 22, 2021



Urb LeJeune, W1UL, joined our Club in November of 2016. From the beginning of his Club membership, Urb was a very active member. In 2017 he started the License Saturday classes at the W2MMD Clubhouse. In that first class, Urb helped license 22 new hams.

At the 2018 class, he trained 7 new Technicians, 5 new Generals, and 4 General upgrades.

The 2019 class was held at Cooper Hospital in Camden. The class had 10 candidates with 4 new Technicians, 1 General, and 3 upgrade to General Class.

Urb served the Old Barney club for many years and enjoyed helping anyone who needed it. Urb was also a charter member of NJDXA. He held the callsign of W2DEC for most of his life prior to W1UL. Urb was fundamental in getting many operators licensed through his online training website and his participation in VE testing for several organizations.

Urb's wife, Pat Vogel NJ4DV, said that there would be no funeral or service at this time but the family is planning a "Celebration of Life" sometime later this year. Urb was known by many Amateur Radio Operators in Southern New Jersey. Urb's presence will be missed by all who knew him.

*ARRL Southern New Jersey Section
Section Manager : Tom Preiser, N2XW*

"I was deeply saddened to receive this message from Tom Preiser of ARRL. Urb, W1UL, was a very active member of GCARC, as well as several other NJ clubs, and was responsible for bringing many new hams into the hobby. His passing leaves a gap in our midst, and in our hearts, that will likely not be filled for some time to come. RIP Urb, W1UL."

*Tony Starr, K3TS
President GCARC*

"Really sorry to hear about Urb. He was also active in the Straight Key Century Club (SKCC). Been to his home a couple times."

Curt K2CWM

"We spent many hours on the phone talking about ham radio. So sad to hear this big time. He was a scholar and a super Gentleman. A great for all those he helped get their license."

Bob Fields KC6AOH

Digital Training Net
147.180 MHz Repeater & EchoLink : W2MMD-R
Every Monday @ 1900 Hours

Gary WA3SVW and Bob KD2NEC have started a Digital Training Net on Monday Nights @ 1900 Hours, on the Club's 147.180 MHz Repeater & EchoLink W2MMD-R.

We have averaged 11 participants on each of the first two sessions.

The purpose of this net is to :

- Introduce more Amateur Radio operators to digital modes such as MT63, PSK31, RTTY, Olivia and many others.
- Dedicate more "on-air" time for practicing with digital modes, to become and remain proficient and prepared for emergencies.

If you are interested in joining us, please go to the "Digital Training Net" page on our website, where you download FLDIGI software from the Source Forge FLDIGI Download Site or the W1HKJ.COM site, Gary's two part training course files, and the four handouts PDFs.

Tuesday Morning 2M Rag Chew Net
1100 Hours

Net Control Operator : Steve Farney, W2SEF
147.180 MHz Repeater & EchoLink - W2MMD-R

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



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

This net has an alternating net control operator
Here is the schedule for the upcoming weeks



Steve Farney, W2SEF : March 4, 2021
Gary Mirkin, WA3SVW : March 11, 2021
Jeff Garth, WB2ZBN : March 18, 2021
Greg Ciraula, W5DO : March 25, 2021
Mary Delemarre, KD2PLH : April 1, 2021
Steve Farney, W2SEF : April 8, 2021
Gary Mirkin, WA3SVW : April 15, 2021
Jeff Garth, WB2ZBN : April 22, 2021
Greg Ciraula, W5DO : April 29, 2021

If anyone would like to be a net control operator, please notify Jeff WB2ZBN



Planning Begins On The Clubhouse Grounding Project

By Jon Pearce, WB2MNF

The initial planning is underway for the lightning protection project at the W2MMD Clubhouse. The objective of this project is to protect radios, electronic devices, and other electrical items within the Clubhouse from lightning damage. The project will be completed in three phases: an initial planning and budgeting phase, an interior construction phase, and the exterior construction phase.

The planning and budgeting phase is underway - Frank N3PUU has inventoried all of the cables coming into the Clubhouse including coaxial cables, rotator cables, Ethernet cables, and various sensor and other cables going to SkunkWorks projects. This inventory identified almost 50 cables needing protection in the VHF room, about a dozen in the HF room and several in the main room. Frank, Al KB2AYU, Ron NR2B, and I met at the Clubhouse several weeks ago to review this list and discuss a number of issues relating to the implementation of the project. Several changes were made to that list, and Ron is reviewing it to determine the cost of the devices that will need to be purchased. Ron is generously donating many materials necessary for the project; however some materials will need to be manufactured and others purchased. Those purchases will be presented to the general membership at the March meeting for the approval of the necessary expenditure of funds.

Following that meeting and the purchase of the remaining items come the interior implementation phase, which will begin with the HF room because it's significantly simpler than what's needed to protect the VHF room. Planning for that process is not yet started. The most significant effort will be the exterior implementation, in which multiple rods will need to be sunk into the ground, connected by cables, and thermally bound together. This phase will be completed in late spring and will require a significant number of people to deal with the physical effort necessary to complete this phase.

We will continue to update Club members on this project as progress continues.



Regional (Atlantic & Hudson Divisions) Hamfests & Events

March 13, 2021 : Venturing Crew 73, Warren County Hamfest, Youngsville Free Methodist Church, 179 Davis Street, Youngsville, PA. www.sites.google.com/site/kb3bsa

Special Event Station : March 14, 2021 @ 0000Z - 2359Z, David Sarnoff Radio Club, Pi Day, Princeton NJ, 14.250, 14.050, 7.200, 7.050 MHz. www.n2re.org

March 20, 2021 : Trenton Computer Virtual Festival. www.tcf-nj.org

March 24 - 30, 2021 : Last Man Standing KA6LMS Special Event Amateur Radio Station. More information at : <https://bit.ly/2N4IBsB>.

WA2MKI

The Larry Ferrari Show
CHANNEL 6
PHILADELPHIA, PA.



Larry Ferrari, WA2MKI
March 4, 1932 - November 20, 1997

Larry was not only a ham, he was also a GCARC member from the late 1970s to the late 1980s.

He was the host of The Larry Ferrari Show from 1954 to 1997 on Channel 6 in Philly. It was a weekly Sunday morning half-hour program of organ music. He was born in Boston and resided in Cinnaminson, NJ.

ARRL SNJ Section Convention and Hamfest

Presented By The



**Gloucester
County
Amateur Radio
Club**
W2MMD

Celebrating Our 62nd Year

www.w2mmd.org

Open to the public at 8 AM



43rd Annual Hamfest - September 12, 2021

2021 Clubhouse Projects

Shed :

- Paint Siding
- Install Electrical Wiring
- Install Lights
- Build Ramp
- Secure Roof

Power Washing :

- Trailer Siding
- Back Steps

Painting :

- Front Steps
- Power Pole
- Club Sign

Generator :

- Replace/Fix Radiator
- Perform Maintenance

Front Flood Lights :

- Adjust Lights

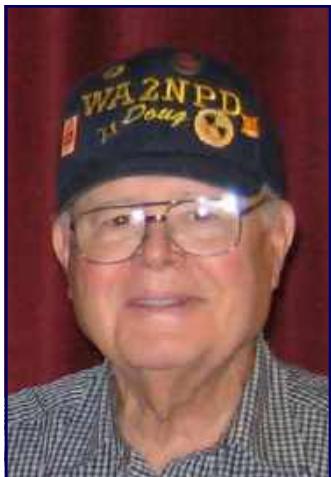
Back Steps :

- Spray Mold
- Power Wash
- Paint

Install New Door & Screen Door

Install New Toilet

We have a 5 gallon bucket of white paint in the Clubhouse. I have a power washer at home that I can bring to the Clubhouse for someone to use. For more information about these projects, please contact Jeff WB2ZBN.



Doug Gehring, WA2NPD
March 13, 1932 - October 24, 2012

Doug was a Club member from 1961 to 2012. He was a very active member. He served on many committees and held many officer positions. He was Club President in 1967, 1975, 2008, and 2009. Doug was most famous for wearing the T-shirt shown below at every Field Day.

Editor's Note : Doug's many contributions to the Club was my inspiration that motivated me to give more time to the Club.



KB6NU's Ham Radio Blog

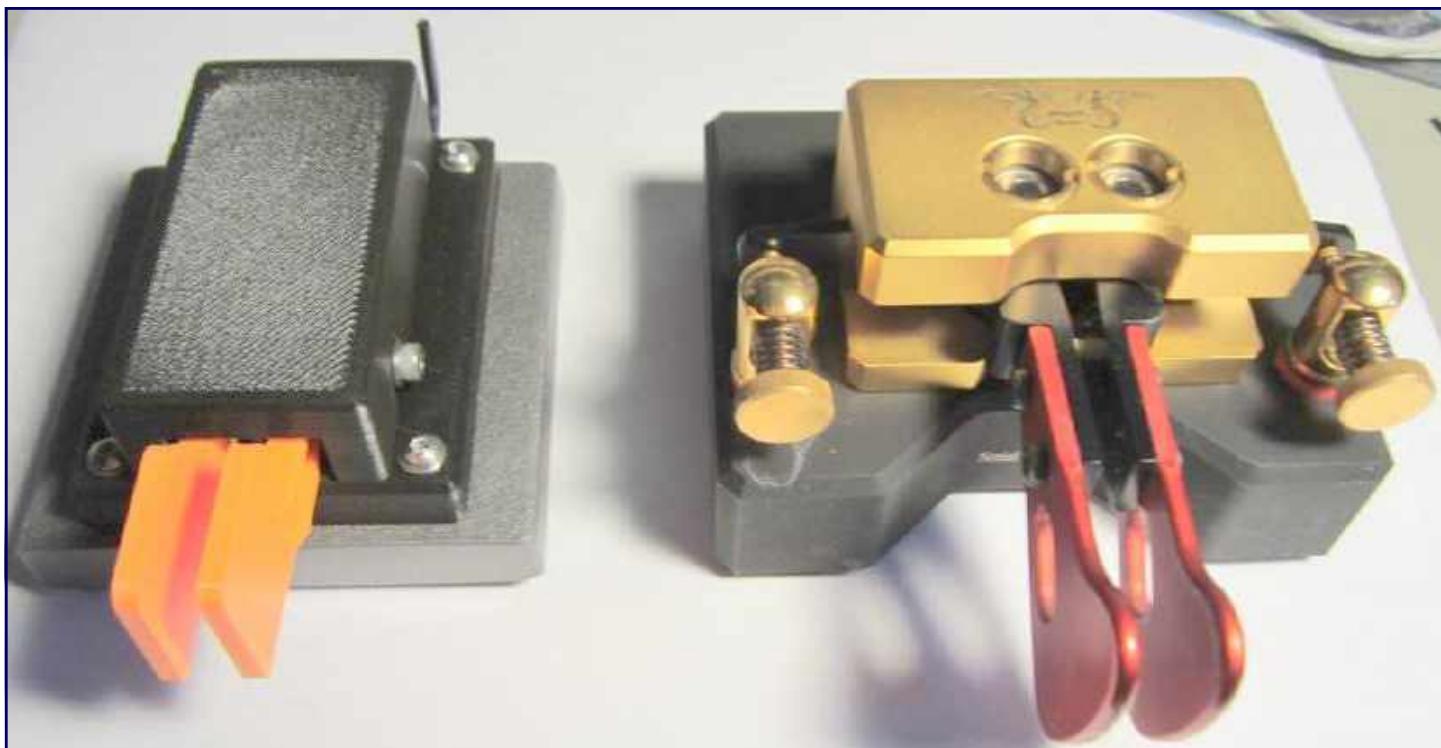


It's not a Begali, but...

By Dan Romanchik, KB6NU

One of the questions I'm most frequently asked is, "*What is a good paddle for a beginner?*" My usual answer to this question is to look for a used Bencher BY-1 at a hamfest or on one of the online venues. You used to be able to get them for \$60 or less. Now, however, there are few hamfests and the price has gone up. Now, used Benchers are close to \$80.

Another option that newcomers might consider is the CW Morse paddle (<https://cwmorse.us>), shown in photo below. They cost \$60 with a steel base (\$43 without), and are available from 3rd Planet Solar (<https://kc9on.com/product/cw-morse-iambic-paddles>) and GigaParts (<https://www.gigaparts.com/cw-morse-orange-morse-code-double-paddle-key-37-820-s.html>). I purchased one recently, and used it for a couple of days. To be honest, I was prepared to hate it, but it actually works pretty well. It's not a Begali, but it's good enough that I'd recommend it as a starter key.



It's not a Begali Magnetic Pro (right), but the CW Morse dual-lever paddle (left) is worth considering as a first key.

These keys are mostly made from 3D-printed plastic parts. You can tell this from the finish. While not as bad as some 3D-printed parts, they do look a little rough. I wouldn't be surprised if they go to molded parts, though, at some point. In high volumes, it has to be cheaper to mold the parts rather than print them.

KB6NU's Ham Radio Blog - Continued on page 14

The key does have metal parts where it counts, though. The contacts are all brass, the base is made from 1/2-in. cold-rolled steel, and the levers pivot on sealed ball bearings. My key weighed 22.5 oz (1.4 lbs.), and was quite stationary on the silicone mat that I use for my keys. The Begali is, of course, a lot heavier at nearly 60 oz. (3.75 lbs.).

A spring between the levers provides the tension. Two screws allow you to adjust the contact spacing. Unlike the Begali, whose adjustment screws have a very fine thread to give you plenty of adjustability, these screws are standard thread screws. What this means is that it can be a bit tricky to set the contact spacing. The screws are spring-loaded to prevent the adjustment from changing, but the springs don't seem to be very beefy, and I can see where the adjustment might change after a lot of use.

The ball bearings give the key a nice action. During my tests, I had the speed cranked up to 23 wpm, and this key performed well at that speed. One thing I didn't like very much is that the arms tend to flex more than I like, but I actually have the same problem with the plastic Begali finger pieces. That's why I use the aluminum finger pieces on the Begali.

Overall, though, I'm quite happy with this key. And, for sixty bucks, which is about one-fifth of the price of a new Begali Magnetic Pro, I can certainly recommend this key to newcomers getting started in CW.

Dan Romanchik, KB6NU, is the author of the KB6NU Amateur Radio blog (KB6NU.Com), the "No Nonsense" amateur radio license study guides (KB6NU.Com/study-guides), and often appears on the ICQPodcast (icqpodcast.com). When he's not testing new keys, he teaches online ham radio classes and likes to work special event stations and state QSO parties.





ARRL ARES Volunteers Were Ready To Assist In Wake Of Nashville Blast

ARRL Amateur Radio Emergency Service (ARES®) volunteers went on alert, ready to deploy in Williamson County, Tennessee, in the aftermath of an apparently intentional explosion early on Christmas Day in front of an AT&T switching facility in downtown Nashville. The blast injured several people and killed the individual believed responsible for the blast. It also damaged buildings, broke water mains, and disrupted telecommunications.



ARRL Vice Director and Williamson County Emergency Coordinator Ed Hudgens, WB4RHQ, who lives in Nashville, monitored the situation.

"The explosion did a lot more damage than was originally thought," Hudgens said in the immediate aftermath. "Since about 0730 yesterday, we have had monitoring nets up and running on the local analog repeaters and DMR repeaters. We have mainly been answering questions as best we can." Hudgens said his ARES group was among those that stood ready to deploy to the Williamson County PSC to assist with communications for various county offices.

The Middle Tennessee Emergency Amateur Repeater System (MTEARS) held nets on its DMR repeater system several times a day. The main repeater at the Tennessee Emergency Management Agency (TEMA) site was affected by the outage. Hudgens said it was fortunate that two DMR repeaters had gone online recently in Williamson County, and all communications went through them.

WCARES held a continuous net on its five-repeater linked system to assist hams as needed. The net also relayed news updates from AT&T and county governments and assisted callers on AT&T to implement wireless calling on their phones. In addition to the WCARES net, a net activated in Davidson County in Middle Tennessee.

"A big thanks to those monitoring and providing updates!" Don Williams said in a post to the MTEARS Facebook page. "I was able to turn on my HT, locate a good frequency, and get up-to-date information. This was a great help in keeping my house calm with updated info as to the AT&T outage, as both our cell and internet were affected..."

ARRL Headquarters reached out to Tennessee Section Manager David Thomas, KM4NYI, to offer assistance.

Article Credit : The ARRL Letter for January 7, 2021 - www.arrl.org



Pi Day
March 14th



Dayton Hamvention Cancels 2021 Show

Dayton Hamvention (<https://hamvention.org>) has been canceled for the second year.

"Unfortunately, several setbacks in the recovery from the COVID-19 pandemic make necessary the difficult decision to cancel Hamvention 2021," a January 11 announcement from the Hamvention Executive Committee said. Sponsored by the Dayton Amateur Radio Association (**DARA** - <http://www.w8bi.org>), Hamvention was set to take place May 21 - 23 in Xenia, Ohio.

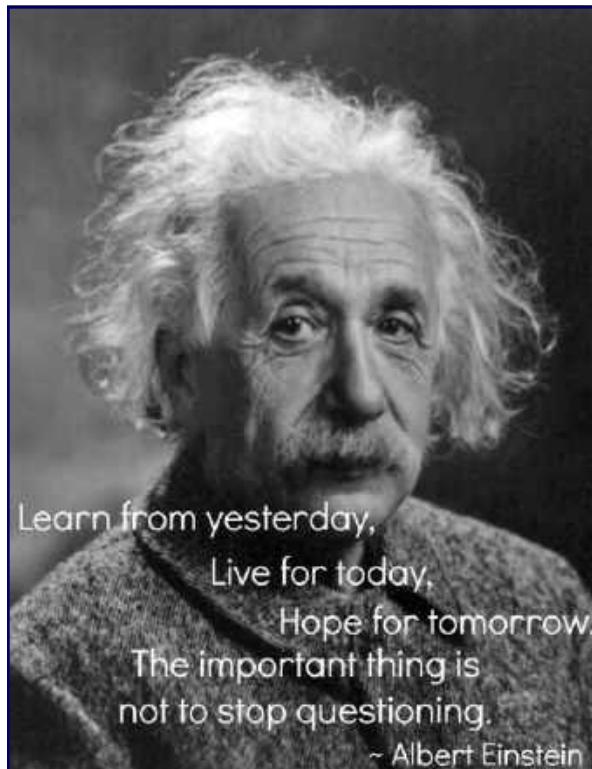


"Hundreds of volunteers have been working to do everything necessary to bring this Hamvention to the many amateur radio enthusiasts and vendors who support the Dayton Hamvention," the committee continued. "Vaccine distribution both in the United States and around the world is lagging behind what was planned. In addition, the emergence of a more communicable form of the COVID-19 virus increases the potential for further public health problems in the next few months. We make this difficult decision for the safety of our guests and vendors." Tickets deferred last year will be deferred again until 2022.

The Hamvention Committee hinted at a QSO party for Hamvention weekend. In November, Hamvention had announced that "The Gathering" would be the theme for the 2021 show.

Hamvention is the largest annual amateur radio gathering in the US, and was the host of the ARRL National Convention for its last event, held in 2019. The ARRL Hamfest and Convention Calendar (<http://www.arrl.org/hamfests-and-conventions-calendar>) includes a searchable database that includes other canceled in-person events.

Article Credit : The ARRL Letter for January 14, 2021 - www.arrl.org



Happy Birthday, Albert!

March 14, 1879

FT8 and the Other WSJT-X Digital Modes are "Tools," K1JT Says

According to WSJT-X software co-developer Joe Taylor, K1JT, the very popular FT8 and the other digital modes in the software suite "are tools, freely available to hams who want to use them. They are very good at some things, not so good at others." Nonetheless, FT8 - and, by extension, its contest-mode variation, FT4 - especially have become game-changers on the HF bands, although, as Taylor has explained, FT8 "was explicitly designed" for making contacts during weak, multi-hop, sporadic-E openings on 6 meters.

"It's extremely good at that," he added, and noted that trans-continental and intercontinental DX on 6 meters has greatly benefited from the use of FT8 over the past several years. Developed in 2017, FT8 is named after its developers - Taylor, and Steven Franke, K9AN. The numeral designates the mode's eight-frequency shift-keying format.



Taylor said that while the development team knew that FT8 would be very useful for weak-signal DXing on HF as well as on 6 meters, it did not foresee that it would have the sort of impact it's had on HF operating.

Taylor agreed that FT8 is "a mature mode," with the protocol's details published in QEX. "Details of message structure, in particular, will not change in a way that is not backward compatible," he said.



Although some FT8 fans may feel the mode is running out of room on some bands, Taylor said that as far as he and his fellow WSJT-X developers are concerned, the 3 kHz slices of spectrum suggested for FT8 use are just that - suggestions.

"There is no reason why additional slices should not be used when over-occupancy requires it," he told ARRL. "We don't attempt to dictate such usage patterns; band planning is best done by committees created for that purpose."

Many radio amateurs are taking advantage of the FT8 and FT4 modes all the time. FT8 watering holes are sometimes the only places to find signals on bands that otherwise might be considered dead.

The WSJT Development Group this week announced the general availability release of WSJT-X Version 2.3.0. It includes a new Q65 mode but does not involve any changes to the FT8 protocol. A summary of new features can be found in the [WSJT-X 2.3 User Guide](https://physics.princeton.edu/pulsar/k1jt/wsjt-x-doc/wsjt-x-main-2.3.0_en.html#NEW_FEATURES) (https://physics.princeton.edu/pulsar/k1jt/wsjt-x-doc/wsjt-x-main-2.3.0_en.html#NEW_FEATURES). The [Release Notes](https://physics.princeton.edu/pulsar/k1jt/Release_Notes.txt) (https://physics.princeton.edu/pulsar/k1jt/Release_Notes.txt) offer additional information, including a list of important program changes since the WSJT-X 2.2. Upgrading from earlier versions of WSJT-X should be seamless. [Installation packages](https://physics.princeton.edu/pulsar/k1jt/wsjt.html) (<https://physics.princeton.edu/pulsar/k1jt/wsjt.html>) for Windows, Linux, and Macintosh are available.

Article Credit : The ARRL Letter for February 4, 2021 - www.arrl.org



ARRL to Extend Field Day Rule Waivers from 2020, Add Class D and E Power Limit

The COVID-19 pandemic-modified ARRL Field Day (<http://www.arrl.org/field-day>) rules from 2020 will continue this June with the addition of a power limit imposed on Class D (Home Stations) and Class E (Home Stations-Emergency Power) participants. The news from the ARRL Board's Programs and Services Committee comes as many clubs and groups are starting preparations for Field Day in earnest. Field Day 2021 will take place June 26 - 27.



"This early decision should alleviate any hesitancy that radio clubs and individual Field Day participants may have with their planning for the event," said ARRL Contest Program Manager Paul Bourque, N1SFE.

For Field Day 2021 :

- Class D stations may work all other Field Day stations, including other Class D stations, for points. This year, however, Class D and Class E stations will be limited to 150 W PEP output.
- An aggregate club score will be published - just as it was done last year. The aggregate score will be a sum of all individual entries that attributed their score to that of a specific club.

ARRL Field Day is one of the biggest events on the amateur radio calendar. Last summer, a record 10,213 entries were received.

"With the greater flexibility afforded by the rules waivers, individuals and groups will still be able to participate in Field Day, while still staying within any public health recommendations and/or requirements," Bourque said.

The preferred method of submitting entries after Field Day is via the web applet. The ARRL Field Day rules include instructions on how to submit entries, which must be submitted or postmarked by Tuesday, July 27, 2021.

The ARRL Field Day web page contains for complete rules and entry forms, as well as any updated information as it becomes available. Join the ARRL Field Day Facebook (<https://www.facebook.com/groups/arrlfd>) page.

Article Credit : The ARRL Letter for February 11, 2021 - www.arrl.org





A “Perfect Coronal Mass Ejection” Could Be A Nightmare

A new study (<https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2020SW002489>) in the research journal Space Weather considers what might happen if a worst-case coronal mass ejection (CME) hit Earth - a “perfect solar storm,” if you will.

In 2014, Bruce Tsurutani of Jet Propulsion Laboratory (JPL) and Gurbax Lakhina of the Indian Institute of Geomagnetism introduced the “perfect CME (<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2013GL058825>).” It could create a magnetic storm with intensity up to the saturation limit, a value greater than the Carrington Event (<https://spaceweatherarchive.com/2020/08/30/a-warning-from-history-the-carrington-event-was-not-unique>) of 1859, the researchers said. Many other space weather effects would not be limited by saturation effects, however. The interplanetary shock would arrive at Earth within about 12 hours, the shock impingement onto the magnetosphere would create a sudden impulse of around 234 nanoteslas (nT), and the magnetic pulse duration in the magnetosphere would be about 22 seconds. Orbiting satellites would be exposed to “extreme levels of flare and interplanetary CME (ICME) shock-accelerated particle radiation,” they said. The event would follow an initial CME that would “clear the path in front of it, allowing the storm cloud to hit Earth with maximum force.”



The Solar and Heliospheric Observatory (SOHO) has observed CMEs leaving the sun at speeds of up to 3,000 kilometers per second, and many instances of one CME clearing the way for another have been recorded.

The CME’s 12-hour travel time would allow little margin for preparation. The CME would hit Earth’s magnetosphere at 45 times the local speed of sound, and the resulting geomagnetic storm could be as much as twice as strong as the Carrington Event. Power grids, GPS, and other services could experience significant outages.

More recent research (<https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2020SW002489>) led by physicist Dan Welling of the University of Texas at Arlington took a fresh look at Tsurutani and Lakhina’s “perfect CME,” and given improvements in space weather modeling, he was able to reach new conclusions.

Welling’s team found that geomagnetic disturbances in response to a perfect CME could be 10 times stronger than Tsurutani and Lakhina had calculated, especially at latitudes above 45 to 50 °. “[Our results] exceed values observed during many past extreme events, including the **March 1989 storm** (https://www.nasa.gov/topics/earth/features/sun_darkness.html) that brought down the Hydro-Québec power grid in eastern Canada, the **May 1921 railroad storm** (<https://spaceweatherarchive.com/2020/05/12/the-great-geomagnetic-storm-of-may-1921>), and the Carrington Event itself,” Welling summarized.

A key result of the new study is how the CME would distort and compress Earth’s magnetosphere. The strike would push the magnetopause down until it’s only 2 Earth-radii above Earth’s surface. Satellites in Earth orbit would suddenly find themselves exposed to a hail of energetic, and potentially damaging, charged particles.

Perfect Coronal Mass Ejection - Continued on page 20

Other research has indicated that phenomena such as the Carrington Event may not be as rare as once thought. A much weaker magnetic storm brought down the Canadian Hydro-Québec system in 1989.

Scientists believe a perfect CME will happen someday. As Welling et al conclude, "Further exploring and preparing for such extreme activity is important to mitigate space weather-related catastrophes."

In July 2012, NASA and European spacecraft watched an extreme solar storm erupt from the sun and narrowly miss Earth. "If it had hit, we would still be picking up the pieces," said Daniel Baker of the University of Colorado at a NOAA Space Weather Workshop 2 years later. "It might have been stronger than the Carrington Event itself."

Article Credit : The ARRL Letter for February 11, 2021 - www.arrl.org



WSJT-X 2.4.0 To Introduce New Digital Protocol Q65

WSJT-X version 2.4.0 will introduce a new digital protocol called Q65, which, according to the [Quick Start Guide \(\[https://physics.princeton.edu/pulsar/k1jt/Q65_Quick_Start.pdf\]\(https://physics.princeton.edu/pulsar/k1jt/Q65_Quick_Start.pdf\)\)](https://physics.princeton.edu/pulsar/k1jt/Q65_Quick_Start.pdf), is designed for "minimal two-way QSOs over especially difficult propagation paths." The Guide said, "On paths with Doppler spread more than a few hertz, the weak-signal performance of Q65 is the best among all WSJT-X modes. Q65 is particularly effective for tropospheric scatter, ionospheric scatter, and EME on VHF and higher bands, as well as other types of fast-fading signals."

The new protocol uses 65-tone frequency-shift keying and builds on the demonstrated weak-signal strengths of QRA64, introduced in 2016. User messages and sequencing are identical to those in FT4, FT8, FST4, and MSK144. Q65 employs a "unique tone" to sync time and frequency. "As with JT65, this 'sync tone' is readily visible on the waterfall spectral display," the Guide said.

"Unlike JT65, synchronization and decoding are effective even when meteor pings or other short signal enhancements are present. Transmit/receive sequence lengths of 15, 30, 60, 120, and 300 seconds are available. According to the Guide, "Q65 will enable stations with a modest Yagi and 100 W or more and to work one another on 6 meters at distances up to ~1,600 kilometers at most times, in dead-band conditions."

Article Credit : The ARRL Letter for January 14, 2021 - www.arrl.org



QST de W1AW
Space Bulletin 002 ARLS002
From ARRL Headquarters
Newington, CT January 29, 2021
To all radio amateurs

SB SPACE ARL ARLS002 RadFxSat-2 Satellite Signals Detected, AMSAT Engineering Continues to Assess Status

AMSAT reports that it's continuing to assess the status of the RadFxSat-2 / Fox-1E amateur radio CubeSat after a ham in Nevada reported hearing his CW signal weakly via the spacecraft's transponder on January 27. AMSAT Engineering and Operations was able to confirm the reports from Brad Schumacher, W5SAT, and determined that RadFxSat-2 is partially functioning, although signals are extremely weak.

"We also appreciate those who joined in determining whether they could detect their own or other signals in recent passes today," AMSAT said in a January 28 bulletin. "Please do not attempt to transmit through the transponder until further notice. This is very important to the next steps we are taking now."

The next crucial step in evaluating the condition of RadFxSat-2 is to determine whether or not the 1200 bps BPSK telemetry beacon is operating and, if possible, to copy telemetry from the beacon. AMSAT continues to ask that those with 70-centimeter receive capability listen on the beacon frequency of 435.750 MHz, +/- Doppler, upper sideband (USB). Use FoxTelem to capture any telemetry, and set FoxTelem to "Upload to Server" so that AMSAT will receive the telemetry data.

Recordings are welcome, with a detailed description, at : foxtel@amsat.us.

FoxTelem can be found at : <https://www.amsat.org/foxtel-software-for-windows-mac-linux>.

AMSAT stressed that keeping the RadFxSat-2 / Fox-1E transponder clear "is essential to putting all power and attention to the beacon telemetry." Available data suggest that RadFxSat-2 is OBJECT M from the Virgin Orbit LauncherOne launch, NORAD ID 47320, international designation 21-002M.

"We thank the amateur satellite community for their perseverance and assistance while the AMSAT Engineering and Operations teams work to understand and resolve the situation with RadFxSat-2," AMSAT said.



QST de W1AW
Space Bulletin 003 ARLS003
From ARRL Headquarters
Newington, CT February 16, 2021
To all radio amateurs

SB SPACE ARL ARLS003 CAPE-3 CubeSat Launched

The University of Louisiana (UL) at Lafayette student-built CAPE-3 satellite was launched on January 17. A 1-U CubeSat, CAPE-3 includes a "digipeater and experimental UHF adaptive radio." An AX-25 telemetry downlink has been coordinated on 145.825 MHz and a 1k2 frequency-shift keying (FSK) downlink has been coordinated on 435.325 MHz, "which may burst to 100 kHz bandwidth," according to the IARU Amateur Satellite Coordination page.

CAPE-3 is the third cube satellite in the CAPE series. The primary educational mission is to allow grade-school classrooms to access the Smartphone CubeSat Classroom, and run interactive experiments through an experimental smartphone ground-station grid.

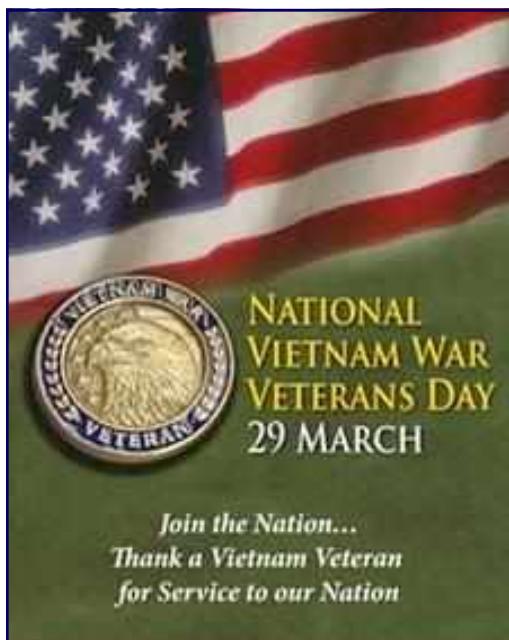
The secondary mission is to perform scientific experiments involving radiation detection and take pictures of Earth.

The solar-powered spacecraft, created by UL Lafayette's CAPE Satellite Team, was launched with nine other CubeSats as part of NASA's Educational Launch of Nanosatellites (ELaNa) program. A Virgin Orbit LauncherOne rocket attached beneath a wing of a customized Boeing 747 was dropped high above the Pacific Ocean. It climbed about 225 miles above Earth and then ejected the satellite.

Information on the ELaNa program can be found in PDF format at :

https://www.nasa.gov/sites/default/files/atoms/files/lsp_elana_20_fact_sheet.pdf.

The CAPE satellites are named for the university's Cajun Advanced Picosatellite Experiment program, designed to prepare students for careers in science, technology, engineering, and mathematics (STEM) fields.



Monday, March 29, 2021

QST de W1AW
Special Bulletin 2 ARLX002
From ARRL Headquarters
Newington CT February 3, 2021
To all radio amateurs

SB SPCL ARL ARLX002 MARS Announces Schedule of Dates for 60-Meter Interoperability

The Military Auxiliary Radio System (MARS) has announced dates in 2021 during which MARS members will operate on 60 meters for interoperability with the amateur radio community. Some dates coincide with quarterly Department of Defense Communications Exercises (COMEX).

All exercises will begin on channel 1 as the initial calling channel and move to other 60-meter working channels as may be appropriate.

"In addition to voice calls, I want to introduce passing ICS 213 messages in both voice and digital modes to enhance the overall interop experience," said US Army MARS Chief Paul English, WD8DBY.

English continues, "Our exercises will yield the frequencies to other scheduled exercises or mission activations, which may be called by other agencies for interop support (e.g., hurricane, wildfire, etc). We regularly instruct MARS members to work cooperatively with the amateur radio community during the use of the 60-meter interop channels. We will continue to track our 60-meter usage and activities." English said he plans to provide a quarterly usage report of 60-meter interoperability activities.

The interoperability schedule is as follows :

February 23 - 27

Exercise: DOD COMEX 21-1

Location: CONUS

July 5 - 10

Exercise: Interop Outreach

Location CONUS

March 1 - 7

Exercise: Interop Outreach

Location CONUS

July 20 - 22

Exercise: DOD COMEX 21-3

Location CONUS

April 3 - 10

Exercise: Interop Outreach

Location CONUS

August 2 - 8

Exercise: Interop Outreach

Location CONUS

April 30 - May 6

Exercise: DOD COMEX 21-2

September 1 - 6

Exercise: Interop Outreach

Location CONUS

May 7 - 8

Exercise: Armed Forces Day Cross-Band Test

Location: CONUS

October 1 - 31

Exercise: DOD COMEX 21-4

Location: CONUS

June 1 - 6

Exercise: Interop Outreach

Location CONUS

North American QSO Party, SSB
January 17, 2021

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

Class : Single Op LP
 QTH : SNJ
 Operating Time (hrs) : 1
 Location : USA

Summary :
 Band QSOs Mults

160 :	1	1
80 :	42	18
40 :	58	22

Total : 101 41
 Total Score : 4,141

Club : Frankford Radio Club

25

Team : FRC Team Milli

Comments :

Rig : Elecraft K3

Antennas :

All wires

160m Inverted-L @ 95ft

80m dipole @ 90ft

40m dipole @ 90ft

Hello all,

Nothing like showing up late for the party.

Best run during my 1 hour of operating was on 40m, and usually 75 is my stronger run band, but by 0530 the herd was beginning to thin.

Next outing will be CQ 160 in 2 weeks.

Hope to CU all then!

73 Darrell AB2E

CWops Mini-CWT Test, 0300Z
January 21, 2021

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

Class : Single Op HP
 QTH : SNJ
 Operating Time (hrs) : 1
 Location : USA

North American QSO Party, SSB
January 17, 2021

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

Class : Single Op LP
 QTH : SNJ
 Operating Time (hrs) : 10
 Location : USA

Summary :
 Band QSOs Mults

160 :	6	6
80 :	268	34
40 :	352	39
20 :	195	34
15 :	4	2

Total : 825 115
 Total Score : 94,875

Club : Frankford Radio Club

26

Team : FRC Team Nano

Comments : Slightly better than my August SSB performance. Got off to a good start and kept my momentum going. The most activity I have seen in this contest ever, with a seemingly endless supply of callers. Thanks to all for the QSOs!

Tony K3TS

"Ask not what your Club can do for you, Ask what you can do for your Club"
 - KA2OSV

Summary :
 Band QSOs

80 :	115
------	-----

Total : 115 Mults : 115
 Total Score : 13,225

Club : Frankford Radio Club

27

Comments : New all time high score for me, but struggled with QRM, noise, and fumble fingers on the keys! Well, if it was easy....

<p>ARRL 160 Meter Contest, CW January 29, 2021</p> <p>Call : AB2E Operator (s) : AB2E Station : AB2E</p>	<p>ARRL 160 Meter Contest, CW January 29, 2021</p> <p>Call : K3TS Operator (s) : K3TS Station : K3TS</p>
<p>Class : Single Op Assisted HP QTH : NJ Operating Time (hrs) : 4 Location : USA</p>	<p>Class : Single Op Assisted HP QTH : SNJ Operating Time (hrs) : 10 Location : USA</p>
<p>Summary : Total : QSOs : 480 State/Prov : 49 Countries : 15 Total Score : 79,168</p>	<p>Summary : Total : QSOs : 321 State/Prov : 54 Countries : 5 Total Score : 45,076</p>
<p>Club : Frankford Radio Club 28</p>	<p>Club : Frankford Radio Club 29</p>
<p>Comments : Rig : FTDX-9000D/Acom 2000A Antenna : 160m Inverted-L @ 95ft</p>	<p>Comments : A droning, buzzing, 20dB-over-S9 local RFI source cycled on and off in roughly 5 to 10 minute intervals all weekend, effectively wiping out the entire band. These 321 contacts were all made during the off intervals, which is not exactly an efficient way to operate. The FCC wants to start charging us significant fees for the licenses that we already have, as well as for new ones. I have a counter-offer : We will pay the fees if they start enforcing Part 15, instead of standing idly by while careless manufacturers sell products which pollute the radio spectrum with garbage!</p>
<p><i>Had a lot of fun with limited time. Highlights were having E7, UA2, and a few other EU call in. Best rate was first hour on Fri, rate up to 220/hr with actual at 150. Not my best score for this contest but not my worst.</i> CU in the SSB half.</p>	<p><i>de K3TS</i></p>
<p>73 Darrell AB2E</p>	
<p>ARRL 160 Meter Contest, CW January 29, 2021</p>	<p>CWops Mini-CWT Test, 0300Z February 4, 2021</p>
<p>Call : 9A5AET Operator (s) : W2HUV Station : 9A1TT</p>	<p>Call : K3TS Operator (s) : K3TS Station : K3TS</p>
<p>Class : Single Op Assisted HP QTH : Operating Time (hrs) : 22 Location : Southern Europe Remote Operation</p>	<p>Class : Single Op HP QTH : NJ Operating Time (hrs) : 1 Location : USA</p>
<p>Summary : Total : QSOs : 791 State/Prov : 7 Countries : 58 Total Score : 267,800</p>	<p>Summary : Band QSOs</p>
<p>Club : Frankford Radio Club 30</p>	<p>----- 80 : 105</p>
<p>Comments : 9A/Croatia (9A1TT) is a www.RemoteHamRadio.com station that members may operate remotely. Rig consists of a FLEX-6300 driving an OM2000A+ 1500W amp. 160m antenna is a 31.5m vertical with a top hat and 6 radials elevated 6m. W, NW, N and NE beverages did a great job of reducing RX noise. Most NA stations and I couldn't hear each other due to QRM from costal EU stations. This was my first contest using my Croatian call, 9A5AET. Remote</p>	<p>----- Total : 105 Mults : 105 Total Score : 11,025</p>
<p>Club : Frankford Radio Club</p>	<p>Club : Frankford Radio Club</p>
<p>Comments : So much noise and QRM that I almost quit halfway through. Thanks to all who called in. 73</p>	<p>Comments : So much noise and QRM that I almost quit halfway through. Thanks to all who called in. 73</p>

2019-2023 Element 3 General Class License Question Quiz

This month we start **Subelement G5 : Electrical Principles** (Answers on ‘Last Page Calendar’)

G5B01

What dB change represents a factor of two increase or decrease in power?

- A. Approximately 2 dB
- B. Approximately 3 dB
- C. Approximately 6 dB
- D. Approximately 12 dB

G5B02

How does the total current relate to the individual currents in each branch of a purely resistive parallel circuit?

- A. It equals the average of each branch current
- B. It decreases as more parallel branches are added to the circuit
- C. It equals the sum of the currents through each branch
- D. It is the sum of the reciprocal of each individual voltage drop

G5B03

How many watts of electrical power are used if 400 VDC is supplied to an 800 ohm load?

- A. 0.5 watts
- B. 200 watts
- C. 400 watts
- D. 3200 watts

G5B04

How many watts of electrical power are used by a 12 VDC light bulb that draws 0.2 amperes?

- A. 2.4 watts
- B. 24 watts
- C. 6 watts
- D. 60 watts

G5B05

How many watts are dissipated when a current of 7.0 milliamperes flows through a 1250 ohm resistance?

- A. Approximately 61 milliwatts
- B. Approximately 61 watts
- C. Approximately 11 milliwatts
- D. Approximately 11 watts

G5B06

What is the output PEP from a transmitter if an oscilloscope measures 200 volts peak-to-peak across a 50 ohm dummy load connected to the transmitter output?

- A. 1.4 watts
- B. 100 watts
- C. 353.5 watts
- D. 400 watts

General Class Quiz - Continued on page 28

G5B07

What value of an AC signal produces the same power dissipation in a resistor as a DC voltage of the same value?

- A. The peak-to-peak value
- B. The peak value
- C. The RMS value
- D. The reciprocal of the RMS value

G5B08

What is the peak-to-peak voltage of a sine wave with an RMS voltage of 120.0 volts?

- A. 84.8 volts
- B. 169.7 volts
- C. 240.0 volts
- D. 339.4 volts

G5B09

What is the RMS voltage of a sine wave with a value of 17 volts peak?

- A. 8.5 volts
- B. 12 volts
- C. 24 volts
- D. 34 volts

G5B10

What percentage of power loss would result from a transmission line loss of 1 dB?

- A. 10.9 percent
- B. 12.2 percent
- C. 20.6 percent
- D. 25.9 percent

G5B11

What is the ratio of peak envelope power to average power for an unmodulated carrier?

- A. 0.707
- B. 1.00
- C. 1.414
- D. 2.00

G5B12

What would be the RMS voltage across a 50 ohm dummy load dissipating 1200 watts?

- A. 173 volts
- B. 245 volts
- C. 346 volts
- D. 692 volts

The W1UL Ham Cram Website

www.ham-cram.com

Gloucester County Amateur Radio Club

General Membership ZOOM Meeting Minutes

Wednesday, February 3, 2021



Meeting opened @ 1931 Hours via ZOOM by President Tony Starr, K3TS.

Attendance :

- Members : 35
- Visitors : Douglas Dersch, KD2VQA

Minutes : The minutes from last General Membership Meeting were published in the Crosstalk and approved by vote without further modification.

Treasurer's Report : Al KB2AYU reported YTD income of \$2030, mostly from dues and from donations made to the Club in memory of Steve W2TDS. Expenses of \$703 included electricity, 4H Hamfest deposit, and Pfeiffer Community Center rental for a net gain of \$1327. The Treasurer's report was accepted by vote.

Clubhouse Committee : Al KB2AYU reported on the January VHF Contest that was run from the Clubhouse. We did well, beating last year's score by about 10,000 points. Operation on 1296 MHz was added this year. The Clubhouse is in good shape and the inspection report from our insurer was received. There were no citations, but there was a recommendation to increase the limit for cost of replacing the structure if damaged.

Contest Committee : Tony K3TS commented on the CQ 160 meter CW DX contest last weekend, saying there was not a lot of DX. The ARRL CW DX contest is coming up in a few weeks and the 10-10 International SSB Contest is this weekend. Tony is still working on getting someone to take over the DX Committee.

Technical Committee : Jon WB2MNF notes that lightning protection at the Clubhouse can be upgraded at a lower cost than had been envisioned previously. A budget request for Lightning Protection and other upgrades will be presented under New Business.

Hamfest Committee : Al KB2AYU sent in the deposit to reserve the 4H Fairgrounds for September 12, 2021.

Field Day Committee : Chairman Vinnie N4NYY was not present, but he will schedule a ZOOM meeting soon to begin planning.

Fox Hunt XIX : Jim N2GXJ announced that the next Foxhunt will take place from 1 to 2 PM on Sunday, February 21, 2021. Al KB2AYU will hide the transmitter and we will not have to leave our cars in order to find it.

February 2021 General Membership Meeting Minutes - Continued on page 30

OLD BUSINESS :

Ron NR2B used PowerPoint slides to review the Clubhouse Lightning Protection Plan. At the moment, we have SIX independent (non-interconnected) grounds. This is not ideal, because power can pass from one grounded system to another via our equipment, possibly causing damage. Each station should have a Single Point Ground Panel (SPGP) for AC and coax, plus surge protectors. The Single Point Ground Panels then must be tied to a ground rod then the whole system should be tied to a Perimeter Ground that surrounds the Clubhouse. This will require 1000 ft of copper straps, 60 ground rods etc. Ron envisions this being accomplished in a stepwise manner at an estimated cost of \$400 for the HF room (since Ron already donated some materials), provided that Club members with appropriate skills volunteer to carry out the work. The steps for each station (Satellite/VHF and HF) are :

- Temporarily remove equipment
- Reroute AC Power
- Install SPGP at each station on 3 of the 4 walls
- Mount coax, rotator and AC power protectors on SPGP
- Connect SPGP to an external, 8 foot ground rod located just below the station
- Re-install equipment (removing excess cabling)

Finishing the job will require installation of the perimeter ground, tower radials and interconnections.

Chris KC2IEB has an “SDS-max” power hammer that we can use for driving ground rods.

Tony K3TS said we definitely will move ahead with this. The cost will be discussed again at a later date when a more accurate estimate is available.

Jon WB2MNF commented that the SkunkWorks team can start on the inside work at the VHF/Satellite station during the cold weather months.

NEW BUSINESS :

Budget Committee : Al KB2AYU reviewed the 2021 Operating Budget, which was reviewed and approved by the GCARC Board of Directors. In brief, the budget is similar to that from past years and is balanced, i.e. projected income = projected expenses. The 2021 budget was approved by vote of the membership.

Special Projects : The Lightning Protection Upgrade and additional work proposed by the Technical/SkunkWorks Committee are not part of this day-to-day budget, so they require separate approval. Jon WB2MNF presented a plan to make repairs to satellite and HF antennas, replace a rotator on SATNOGS antennas, upgrade the project work area, upgrade lighting to the HF room etc. at an estimated cost of \$1800. This was approved by vote of the membership. Jon noted that the Club will be looking for donations of good test bench equipment for the new work area.

Closing Announcements :

Mike (formerly KD2RPE) now holds the vanity call K2MRP.

Steve (formerly WB2VFJ) now holds the vanity call W2SEF.

February 2021 General Membership Meeting Minutes - Continued from page 30

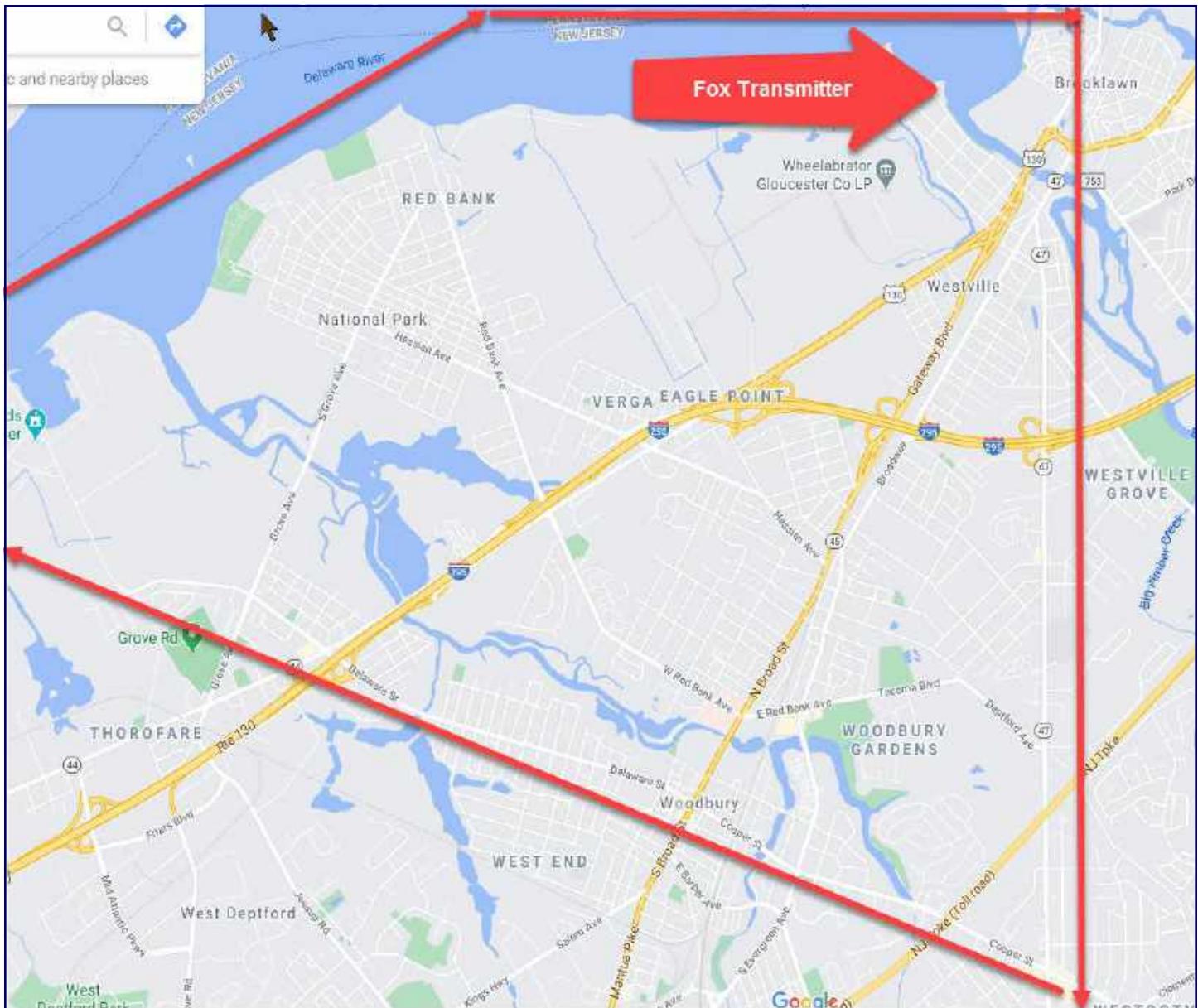
Bob KD2NEC announced that he and Gary WA3SVW would like to use the W2MMD 2 meter repeater for a Digital Training Net, probably on Monday nights. Tony K3TS and Herb KT2Y said "go for it".

Tony K3TS said that our first night back at the Pfeiffer Community Center will be a Pizza night!

Program : The meeting concluded with a presentation by Jon WB2MNF that was designed to familiarize members and visitors with the equipment, capabilities, and projects ongoing at the W2MMD Clubhouse.

Meeting adjourned @ 2133 Hours.

Respectfully submitted,
Karl Frank, W2KBF
Recording Secretary



Gloucester County Amateur Radio Club

Board of Directors ZOOM Meeting Minutes

Wednesday, February 17, 2021



Meeting opened @ 1901 Hours via ZOOM by President Tony Starr, K3TS.

Attendance :

- President Tony Starr, K3TS
- Vice President Jeff Welsh, KD2AZI
- Treasurer Al Arrison, KB2AYU
- Recording Secretary Karl Frank, W2KBF
- Corresponding Secretary Ron Block, NR2B
- Director Chuck Colabrese, WA2TML
- Director Jeff Garth, WB2ZBN
- Director Herb Dyer, KT2Y
- Director Jim Clark, KA2OSV
- Director Bob Durham, W2RAD
- Trustee Jim Wright, N2GXJ
- Member John O'Connell, K2QA
- Member Jon Pearce, WB2MNF
- Member Steve Farney, W2SEF
- Member Sheldon Parker, K2MEN

Minutes from the January 20, 2021 BoD Meeting were read and approved.

Treasurer : Al KB2AYU reported YTD income : \$2647 including \$225 donated in memory of Stephen Blasko W2TDS, and \$733 in expenses. Life Membership dues of \$400 was received from Herb KT2Y, but this is not reported as part of the income. Net increase (rounded) is \$1913. The Treasurer's Report was approved.

Committees :

DX : Tony K3TS notes that Bill Grim W0MHK has not yet responded to his invitation to chair the DX Committee, but continues to provide a DX Column for the CrossTalk.

Contests : Tony K3TS notes the upcoming ARRL CW DX contest this weekend and the ARRL Phone DX contest on March 7. These are particularly good for USA hams because DX stations can work only North American hams, not each other.

February 2021 Board of Directors Meeting Minutes - Continued on page 33

Clubhouse : Al KB2AYU reports that our insurance company (Cumberland Mutual in Bridgeton) recommends that we increase the coverage for replacement of the Clubhouse structure from \$70,000 to either \$94,000 for 80% replacement cost or to \$118,000 for 100% cost of replacement. The premium increase would be \$206 and \$324/year, respectively, for these policies. Also, the insurance company noted evidence of water leaks in the ceiling, requested that repairs be made and photos submitted once the repairs had been completed. Al was present for the inspection and informed the inspector that the roof was not leaking and that the water marks had been there for some time. Perhaps all that will be needed is to paint the ceiling and submit photos afterward.

Jeff KD2AZI said he could recommend an insurance broker that he has worked with if the Club wants to shop for insurance. Al KB2AYU said he would follow up with Jeff KD2AZI and investigate other possibilities.

Chuck WA2TML asked if the insurance increase was required or merely requested. Al KB2AYU said it was only a recommendation, and that the policy had already been paid for this year. Otherwise, everything is OK and someone stops by the Clubhouse at least once a week to make certain everything is OK.

Grounding : Jon WB2MNF reported that he, Frank N3PUU and Ron NR2B had been moving things along and that Frank N3PUU had made an inventory of all wires entering the Clubhouse, i.e. about a dozen entering the HF room, 17 into the VHF station and about a dozen for the satellite station. With help from Al KB2AYU and Jon WB2MNF, Frank N3PUU and Ron NR2B have made a spreadsheet of required materials to complete the INTERIOR work : this is estimated to cost \$1000 to \$1500. This is in addition to significant materials already donated by Ron NR2B. Tony K3TS asked for this estimate to be presented at the next General Membership Meeting for a vote of approval. Ron and Jon noted that completing the outside work will cost a few thousand dollars more, so they will need to request a larger budget later on. Tony has a list of a dozen people who volunteered to help with this work.

Tony K3TS asked how many ground rods would be needed. Ron NR2B said to estimate this, divide the Clubhouse perimeter footage by 16, keeping in mind that the grounding perimeter is 6 to 8 feet away from the structure.

Foxhunt : Jim N2GXJ mentioned that Al KB2AYU will be hiding a transmitter for the upcoming Foxhunt on Sunday, February 21, 2021 at 1300 Hours.

Field Day : No report (Vinnie N4NYY was not present).

OLD BUSINESS :

Hamfest : Sheldon K2MEN needs to confirm the date and hamfest fees so that he can apply to the ARRL for sanctioning. Al KB2AYU already paid to reserve the Gloucester County 4H facilities for September 12, 2021. Following some discussion, it was decided to charge \$10 for admission to the hamfest (same as last year), \$10 for tailgating in the parking lot (was \$8 last year) and \$12 for space by the pavilions (same as last year).

Sheldon K2MEN noted that 450 ticket stubs were deposited last year and that 150 were first-time attendees. Jeff KD2AZI asked when to begin vendor outreach. Sheldon K2MEN said this could wait until April or May.

Ron NR2B asked if we should plan to have a forum this year. Sheldon K2MEN said we should assume YES (unless we hear otherwise from the State), so Ron NR2B will need to figure out how to do this safely.

NEW BUSINESS :

Donations : Tony K3TS was notified by Curt K2CWM that a friend of his, Frank WB2KMR, is donating a TenTec Triton 544 radio to the Club. Tony K3TS suggested that we could pass it along for a low price to a member who does not have HF equipment. Curt K2CWM will drop this radio off at the Clubhouse on Saturday, February 20, 2021.

Mark KK2L is donating a CPU to the Club to support the SDR project that Bill NJ2S is putting together. Tony K3TS has been checking the cost of RTL SDR dongles suitable for HF reception and finds this to be about \$25 each. This low cost SDR project will allow Club members to log on and listen to the SDRs. A separate, dedicated vertical antenna will be used since the SDRs cannot share antennas with the main stations. Al KB2AYU cautioned that a Dongle SDR could be “smoked” once the HF linear amplifier is in operation.

Karl W2KBF requested that when the business portion of a General Membership Meeting is over, this part of the meeting be formally closed before the presentation begins. This will make it clear when to stop recording the minutes. Tony K3TS agreed.

Karl W2KBF also raised a point for discussion : according to the GCARC Constitution, the quorum for a general Membership Meeting requires at least 15 members but does not require the presence of officers or BoD members. Chuck WA2TML said this never has been an issue, because BoD members are more likely than general members to attend Club meetings. Tony K3TS said we would think about this.

New Members : Jeff WB2ZBN received an application from Joseph Novak N2LWE from Malaga and Al KB2AYU received a check for his dues. The BoD approved this application for membership.

Al KB2AYU asked if there has been any progress on a new member packet, similar to the one that Jeff WB2ZBN circulated. Tony K3TS said “no”.

Meeting adjourned @ 2004 Hours.

Respectfully submitted,
Karl Frank, W2KBF
Recording Secretary





NWS SKYWARN Webinar Training Classes

SKYWARN Training Schedule www.weather.gov/pbz/skywarn

Monday, March 1, 2021 - 1830 to 2000 Hours
Wednesday, March 17, 2021 - 1830 to 2000 Hours

Go to the SKYWARN Training Schedule website to register for these Webinar classes

ARRL Ham Radio License Exam Practice Website
www.arrlexamreview.appspot.com

Club Member DXCC Standing



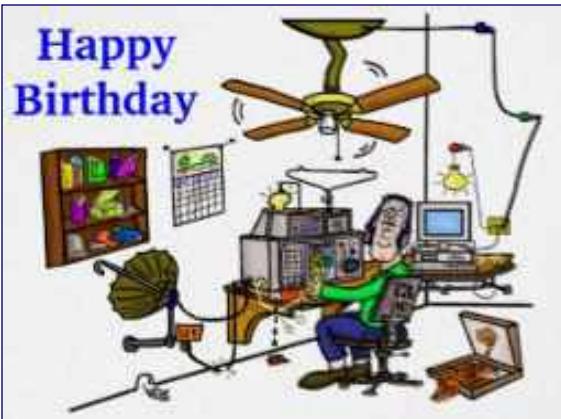
Name/Callsign	DXCC
Bill Grim, W0MHK	352
Dave Strout, W2YC	349
Darrell Neron, AB2E	327
John Hill, W2HUV	252
Ken Denson, WB2P	248
Vinnie Sallustio, N4NYY	219
Tony Starr, K3TS	207
Dennis Sandole, K2SE	204
Jim Wright, N2GXJ	179
Sheldon Parker, K2MEN	161
Eric Morris, N2BRJ	127
Phil Nunzio, WA3RGY	116
Howard Marder, WA2IBZ	116
Christopher Wawak, KC2IEB	113
Curt Myers, K2CWM	71
Jim Clark, KA2OSV	68

Contact Vinnie N4NYY if you would like to be added to the DX HONOR ROLL

March Birthdays

Congratulations to our members who are celebrating their birthday this month

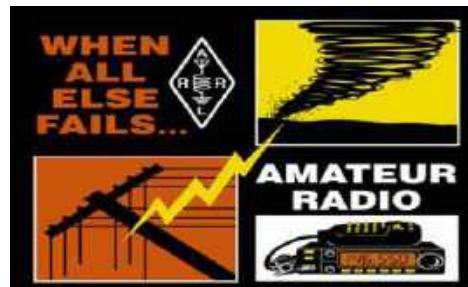
Bruce Canino, KD2LBU (President 2018)
Ed Champion Sr, N2RO
Jeff Garth, WB2ZBN
Paul Munzenmayer, K2DX
Jerry Paterson III, WW2WTF
Dave Strout Sr, W2YC
Mark Townsend, W2OC
Dan Tremolini, N2TXG
Gary Triplo, KD2EBX
Chris Wawak, KC2IEB
Mark Wilson, K1RO
Wayne Wilson, WA2LET
Jim Wright, N2GXJ (President 2014, 2015, 2016)
John Zaruba Jr, K2ZA



In Memoriam March Birthdays

Silent Keys :

Lawrence Archut Sr, K2LMN
Janice Bond, KA2CQX
James Casto Sr, N2IMH
Stuart Cleveland, N2WUP
Wayne Clifford, N2FX
John Cronin Sr, KB2ETT
Larry Ferrari, WA2MKI
Douglas Gehring, WA2NPD (President 1967, 1975, 2008, 2009)
Edwin Kephart, W2SPV
Milton Marder, WA2FGA
James Mollica Jr, K2OWE
Jerome Morrison, KF2ZA
John Oberst, W2TLO (Charter Member)
Paul Scarpa Sr, W2HSE
John Seaton Sr, KB2RXQ
Harold Steelman, W2BZI



Crosstalk Submissions

This is your Club Newsletter. 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
Jeffrey Garth, WB2ZBN at jeff <dot> garth <at> comcast <dot> net.

Submission deadline for the April 2021 issue : Saturday, March 20, 2021

Club Website www.w2mmd.org

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

March 2021 Contest Calendar

WA7BNM Contest Calendar : www.contestcalendar.com

+ K1USN Slow Speed Test	0000Z-0100Z, Mar 1
+ OK1WC Memorial	1630Z-1729Z, Mar 1
+ RSGB 80m Club Championship, Data	2000Z-2130Z, Mar 1
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Mar 2
+ ARS Spartan Sprint	0200Z-0400Z, Mar 2
+ RTTYOPS Weeksprint	1700Z-1900Z, Mar 2
+ AGCW YL-CW Party	1900Z-2100Z, Mar 2
+ QRP Fox Hunt	0200Z-0330Z, Mar 3
+ Phone Weekly Test - Fray	0230Z-0300Z, Mar 3
+ CWops Mini-CWT Test	1300Z-1400Z, Mar 3
+ VHF-UHF FT8 Activity Contest	1700Z-2000Z, Mar 3
+ CWops Mini-CWT Test	1900Z-2000Z, Mar 3
+ UKIEICC 80m Contest	2000Z-2100Z, Mar 3
+ CWops Mini-CWT Test	0300Z-0400Z, Mar 4
+ RTTYOPS Weeksprint	1700Z-1900Z, Mar 4
+ NRAU 10m Activity Contest	1800Z-1900Z, Mar 4 (CW) and 1900Z-2000Z, Mar 4 (SSB) and 2000Z-2100Z, Mar 4 (FM) and 2100Z-2200Z, Mar 4 (Dig)
+ SKCC Sprint Europe	2000Z-2200Z, Mar 4
+ NCCC RTTY Sprint	0145Z-0215Z, Mar 5
+ QRP Fox Hunt	0200Z-0330Z, Mar 5
+ NCCC Sprint	0230Z-0300Z, Mar 5
+ K1USN Slow Speed Test	2000Z-2100Z, Mar 5
+ Novice Rig Roundup	0000Z, Mar 6 to 2359Z, Mar 14
+ ARRL Inter. DX Contest, SSB	0000Z, Mar 6 to 2400Z, Mar 7
+ Wake-Up! QRP Sprint	0600Z-0629Z, Mar 6 and 0630Z-0659Z, Mar 6 and 0700Z-0729Z, Mar 6 and 0730Z-0800Z, Mar 6
+ Open Ukraine RTTY Championship	1800Z-2059Z, Mar 6 (Low Band) and 2100Z-2359Z, Mar 6 (Low Band) and 0800Z-1059Z, Mar 7 (High Band) and 1100Z-1359Z, Mar 7 (High Band)
+ UBA Spring Contest, CW	0700Z-1100Z, Mar 7
+ NSARA Contest	1200Z-1600Z, Mar 7 and 1800Z-2200Z, Mar 7
+ SARL Hamnet 40m Simulated Emerg Contest	1200Z-1400Z, Mar 7
+ WAB 3.5 MHz Phone	1800Z-2200Z, Mar 7
+ K1USN Slow Speed Test	0000Z-0100Z, Mar 8
+ OK1WC Memorial	1630Z-1729Z, Mar 8
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Mar 9
+ RTTYOPS Weeksprint	1700Z-1900Z, Mar 9
+ QRP Fox Hunt	0200Z-0330Z, Mar 10
+ Phone Weekly Test - Fray	0230Z-0300Z, Mar 10
+ CWops Mini-CWT Test	1300Z-1400Z, Mar 10
+ VHF-UHF FT8 Activity Contest	1700Z-2000Z, Mar 10
+ CWops Mini-CWT Test	1900Z-2000Z, Mar 10
+ RSGB 80m Club Championship, CW	2000Z-2130Z, Mar 10
+ AWA John Rollins Memorial DX Contest	2300Z, Mar 10 to 2300Z, Mar 11 and 2300Z, Mar 13 to 2300Z, Mar 14
+ CWops Mini-CWT Test	0300Z-0400Z, Mar 11
+ RTTYOPS Weeksprint	1700Z-1900Z, Mar 11
+ NCCC RTTY Sprint	0145Z-0215Z, Mar 12
+ QRP Fox Hunt	0200Z-0330Z, Mar 12
+ NCCC Sprint	0230Z-0300Z, Mar 12
+ K1USN Slow Speed Test	2000Z-2100Z, Mar 12
+ YB DX RTTY Contest	0000Z-2359Z, Mar 13
+ SARL VHF/UHF Analogue Contest	0500Z-0700Z, Mar 13 (6m) and 0700Z-0900Z, Mar 13 (2m) and 0900Z-1100Z, Mar 13 (70cm) and 0500Z-0700Z, Mar 14 (6m) and 0700Z-0900Z, Mar 14 (2m) and 0900Z-1100Z, Mar 14 (70cm)
+ RSGB Commonwealth	1000Z, Mar 13 to 1000Z, Mar 14
+ DIG QSO Party, SSB	1200Z-1700Z, Mar 13 (20m-10m) and 0700Z-0900Z, Mar 14 (80m) and 0900Z-1100Z, Mar 14 (40m)
+ South America 10 Meter Contest	1200Z, Mar 13 to 1200Z, Mar 14
+ SKCC Weekend Sprintathon	1200Z, Mar 13 to 2400Z, Mar 14
+ F9AA Cup, SSB	1200Z, Mar 13 to 1200Z, Mar 14
+ Oklahoma QSO Party	1400Z, Mar 13 to 0200Z, Mar 14 and 1500Z-2200Z, Mar 14
+ AGCW QRP Contest	1400Z-2000Z, Mar 13

March 2021 Contest Calendar - Continued on page 38

March 2021 Contest Calendar

[WA7BNM Contest Calendar : www.contestcalendar.com](http://www.contestcalendar.com)

March 2021 Contest Calendar - Continued from page 37

+ Stew Perry Topband Challenge	1500Z, Mar 13 to 1500Z, Mar 14
+ EA PSK63 Contest	1600Z, Mar 13 to 1600Z, Mar 14
+ TESLA Memorial HF CW Contest	1800Z, Mar 13 to 0559Z, Mar 14
+ QCWA QSO Party	1800Z, Mar 13 to 1800Z, Mar 14
+ Idaho QSO Party	1900Z, Mar 13 to 1900Z, Mar 14
+ QRP ARCI Spring Thaw SSB Shootout	2200Z-2300Z, Mar 13
+ North American Sprint, RTTY	2300Z, Mar 13 to 0300Z, Mar 14
+ UBA Spring Contest, 2m	0700Z-1100Z, Mar 14
+ Classic Exchange, Phone	1400Z, Mar 14 to 0800Z, Mar 15 and 1400Z, Mar 16 to 0800Z, Mar 17
+ Wisconsin QSO Party	1800Z, Mar 14 to 0100Z, Mar 15
+ 4 States QRP Group Second Sunday Sprint	0000Z-0200Z, Mar 15
+ K1USN Slow Speed Test	0000Z-0100Z, Mar 15
+ OK1WC Memorial	1630Z-1729Z, Mar 15
+ Bucharest Digital Contest	1800Z-2059Z, Mar 15
+ RSGB FT4 Contest Series	2000Z-2130Z, Mar 15
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Mar 16
+ CLARA Chatter Party	1700Z, Mar 16 to 1700Z, Mar 17 and 1700Z, Mar 20 to 1700Z, Mar 21
+ RTTYOPS Weeksprint	1700Z-1900Z, Mar 16
+ QRP Fox Hunt	0100Z-0230Z, Mar 17
+ Phone Weekly Test - Fray	0230Z-0300Z, Mar 17
+ CWops Mini-CWT Test	1300Z-1400Z, Mar 17
+ CWops Mini-CWT Test	1900Z-2000Z, Mar 17
+ NAQCC CW Sprint	0030Z-0230Z, Mar 18
+ CWops Mini-CWT Test	0300Z-0400Z, Mar 18
+ RTTYOPS Weeksprint	1700Z-1900Z, Mar 18
+ BCC QSO Party	1930Z-2059Z, Mar 18
+ QRP Fox Hunt	0100Z-0230Z, Mar 19
+ NCCC RTTY Sprint	0145Z-0215Z, Mar 19
+ NCCC Sprint	0230Z-0300Z, Mar 19
+ K1USN Slow Speed Test	2000Z-2100Z, Mar 19
+ BARTG HF RTTY Contest	0200Z, Mar 20 to 0159Z, Mar 22
+ Russian DX Contest	1200Z, Mar 20 to 1200Z, Mar 21
+ AGCW VHF/UHF Contest	1400Z-1700Z, Mar 20 (144) and 1700Z-1800Z, Mar 20 (432)
+ Virginia QSO Party	1400Z, Mar 20 to 0400Z, Mar 21 and 1200Z-2400Z, Mar 21
+ Feld Hell Sprint	2000Z-2159Z, Mar 20
+ UBA Spring Contest, SSB	0700Z-1100Z, Mar 21
+ Run for the Bacon QRP Contest	2300Z, Mar 21 to 0100Z, Mar 22
+ K1USN Slow Speed Test	0000Z-0100Z, Mar 22
+ OK1WC Memorial	1630Z-1729Z, Mar 22
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Mar 23
+ RTTYOPS Weeksprint	1700Z-1900Z, Mar 23
+ SKCC Sprint	0000Z-0200Z, Mar 24
+ QRP Fox Hunt	0100Z-0230Z, Mar 24
+ Phone Weekly Test - Fray	0230Z-0300Z, Mar 24
+ CWops Mini-CWT Test	1300Z-1400Z, Mar 24
+ CWops Mini-CWT Test	1900Z-2000Z, Mar 24
+ CWops Mini-CWT Test	0300Z-0400Z, Mar 25
+ RTTYOPS Weeksprint	1700Z-1900Z, Mar 25
+ RSGB 80m Club Championship, SSB	2000Z-2130Z, Mar 25
+ QRP Fox Hunt	0100Z-0230Z, Mar 26
+ NCCC RTTY Sprint	0145Z-0215Z, Mar 26
+ NCCC Sprint	0230Z-0300Z, Mar 26
+ K1USN Slow Speed Test	2000Z-2100Z, Mar 26
+ FOC QSO Party	0000Z-2359Z, Mar 27
+ CQ WW WPX Contest, SSB	0000Z, Mar 27 to 2359Z, Mar 28
+ UBA Spring Contest, 6m	0600Z-1000Z, Mar 28
+ K1USN Slow Speed Test	0000Z-0100Z, Mar 29
+ QCX Challenge	1300Z-1400Z, Mar 29
+ OK1WC Memorial	1630Z-1729Z, Mar 29
+ QCX Challenge	1900Z-2000Z, Mar 29
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Mar 30
+ QCX Challenge	0300Z-0400Z, Mar 30
+ RTTYOPS Weeksprint	1700Z-1900Z, Mar 30
+ QRP Fox Hunt	0100Z-0230Z, Mar 31
+ Phone Weekly Test - Fray	0230Z-0300Z, Mar 31
+ CWops Mini-CWT Test	1300Z-1400Z, Mar 31
+ CWops Mini-CWT Test	1900Z-2000Z, Mar 31
+ UKETCC 80m Contest	2000Z-2100Z, Mar 31

2021 Club Committees

Standing Committees	Committee Chairs
Budget Constitution & By-Laws Field Day Hamfest Health, Welfare, & Silent Keys Hospitality Membership Membership Badges Nominations Publicity Repeaters W2MMD Clubhouse Site	Al Arrison, KB2AYU Ron Block, NR2B Vinnie Sallustio, N4NYY Sheldon Parker, K2MEN and Bill Price, NJ2S Bill Price, NJ2S Jeff Garth, WB2ZBN Bob Fields, KC6AOH Chuck Colabrese, WA2TML Tony Starr, K3TS Bob Fields, KC6AOH Herb Dyer, KT2Y Al Arrison, KB2AYU
Activity Committees	Committee Chairs
Awards & Certificates Club Publications & Historian Contests DX GCARC Family Picnic GCARC Foxhunts GC-ARES Emergency Coordinator Holiday Dinner Party License Testing/VEC Liaison Membership Roster Database Programs : Meetings & Tech Saturdays Radio Nets Technical W2MMD License Trustee W2MMD Special Event Station	Robin Herrmann, KD2LSH Jeff Garth, WB2ZBN Tony Starr, K3TS <i>Open Chair</i> Laurie Love, KD2EYW Jim Wright, N2GXJ Karl Frank, W2KBF Jennifer Robinson, KD2EYR Gary Reed, N2QEE Jeff Garth, WB2ZBN Jeff Welsh, KD2AZI Jim Clark, KA2OSV Jon Pearce, WB2MNF Darrell Neron, AB2E 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.
8. 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. If the admin recognizes the address as belonging to a Club member, the message is accepted and passed on to the reflector.

For more information about the e-mail reflector, goto : www.mailman.qth.net

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 2 repeaters are all 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 @ 1945 : 147.180 MHz Repeater

Gloucester County ARES/RACES Net
Sunday @ 2000 : 147.180 MHz Repeater

Monday Night 2 Meter Digital Training Net
Every Monday @ 1900 Hours

Tuesday Morning 2M Rag Chew Net
Every Tuesday @ 1100 Hours

Thursday Night 2M Rag Chew Net
Every Thursday @ 2000 Hours

Monday Night 10M Rag Chew Net
Every Monday @ 2000 Hours
Tune in on 28.465 MHz or 28.475 MHz

Meeting Calendar

General Membership Meeting

Wednesday, March 3, 2021

1930 Hours

ZOOM Meeting

Board of Directors Meeting

Wednesday, March 17, 2021

1900 Hours

ZOOM Meeting

“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 : G5B01:B; G5B02:C; G5B03:B; G5B04:A; G5B05:A; G5B06:B; G5B07:C; G5B08:D;
G5B09:B; G5B10:C; G5B11:B; G5B12:B;