



CrossTalk

Issue 61:02 61 Years Of Service To Our Community February 2020

2020 Club Officers

President : James Clark Sr, KA2OSV
Vice President : Anthony Starr, WA2FZB
Treasurer : Alan Arrison, KB2AYU
Recording Secretary : John Zaruba Jr, K2ZA
Corresponding Secretary : Ronald Block, NR2B

Trustees - 4 year term
Robert Fields, KC6AOH (2017-2020)
Charles Lanard, KD2EIB (2018-2021)
James Wright, N2GXJ (2019-2022)
Mark Gottlieb, KK2L (2020-2023)

Board of Directors - 3 year term

Charles Colabrese, WA2TML (2018-2020)	Jeffrey Welsh, KD2AZI (2019-2021)
William Price, NJ2S (2018-2020)	Robert Durham, W2RAD (2020-2022)
Jeffrey Garth, WB2ZBN (2019-2021)	Herb Dyer, KT2Y (2020-2022)

This Month's Calendar

- General Membership Meeting**
Wednesday, February 5, 2020 @ 1930 Hours
Pfeiffer Community Center
- Tech Saturday Forum**
Saturday, February 8, 2020 @ 0900 Hours
W2MMD Clubhouse
- 10 Meter Swap Meet**
Saturday, February 8, 2020 @ 2000 Hours
Tune-In on 28.465 MHz or 28.475 MHz
- VE License Testing Session**
Thursday, February 13, 2020 @ 1900 Hours
Franklin Township Public Library
- Board of Directors Meeting**
Wednesday, February 19, 2020 @ 1900 Hours
W2MMD Clubhouse
- 10 Meter Rag Chew Net**
Every Monday @ 2000 Hours
Tune-In on 28.465 MHz or 28.475 MHz
- 2 Meter Rag Chew Net**
Every Thursday @ 2000 Hours
Tune-In on the 147.180 MHz Repeater

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President's Message



Dear Fellow Members;

It was a pleasure to see everyone at our first meeting, although attendance was down. Myself, the Officers and All Committee Chairpersons will do our best to ensure that this is another successful year for GCARC. Is it Spring time yet? The best time of the year.

If there is any present Chairperson who wishes not to serve this year, please let me know, as soon as possible, so a replacement can be found and appointed.

Up coming events for the New Year thus far, is as follows :

- Pizza Night : June 3rd General Membership Meeting
- Field Day 2020 : June 27 es 28
- Annual Club Picnic : Sunday, August 16th
- Hamfest 2020 : Sunday, September 13th (subject to possible change)

Tickets for the Hamfest this year are as follows :

- General Admission - \$10.00
- Tailgating - \$8.00
- Under the Pavilion - \$12.00



This year we will be joined at Field Day by the Williamstown Boy Scout Troop #161. They will be operating our GOTA station run by John Zaruba Jr, K2ZA. This will give us several bonus points added to our score.

The Budget Committee presented their Budget for 2020 to the Board of Directors at the January BOD meeting with the Board approving said Budget. The Budget will now go to the General Membership for final approval at the February 5th General Membership Meeting.

Need a ride to our Meetings? Just send a request on the Club's Reflector.

If anyone has an idea for our monthly programs, please pass that info on to Tony Starr, WA2FZB, Vice President GCARC.

That's it for now. I hope to see you all in the pile-ups.

73 es God Bless Us All

JIM CLARK, USN (Ret.), KA2OSV, President GCARC

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



February 5, 2020

General Membership Meeting

Arduino vs Raspberry Pi

Comparison & Overview

In preparation for the Tech Saturday Forum

Presented By The GCARC SkunkWorks Team

Welcome New Club Members :

Jerry Blachniak, KD2KIA, (Returning Member), who has a Technician Class license and lives in Sewell, NJ.

Lenny Rust III, W2LJR, who has a Technician Class license and lives in Sewell, NJ.

Adam Sigmund, who is an Associate Member and lives in Pitman, NJ.

We are glad to have you as members of the Club and hope to see you regularly at Club meetings, events, and activities.

Our General Membership Meetings are broadcast live on Periscope.TV

If you have an Android or iOS device, go to the app store and download the Periscope application

Using the search function, just search for W2MMD

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

Arduino and Raspberry Pi sessions at February GCARC Meeting and Tech Saturday By The GCARC SkunkWorks Team

By popular request the February GCARC meetings will focus on the two small programmable devices that many hams have found useful - the Arduino microcontroller and the Raspberry Pi computer. At the Wednesday night meeting, we'll present a comparison of those devices and a detailed overview of the functionality and options for using the Arduino. Since Arduinos are generally single-purpose devices configured for a specific function we won't get into details of their application except for some examples implemented at the Clubhouse. If there's interest we may produce an Arduino session for a later Tech Saturday Forum.



At the Tech Saturday session we'll do a hands-on Raspberry Pi implementation, reviewing the basics of getting started with a Pi, installing an operating system and configuring it for "headless" use (operating it from a PC or Mac instead with its own monitor, keyboard and mouse). We'll then run thru the typical application installation process using the APRS program Direwolf as the example, giving participants a functional APRS receiver and transmitter controller at the end of the process.

Attendees have three options to participate :

1. First, you can order your own Raspberry Pi. Here's the Amazon link : <https://amzn.to/2GifR8C>, and bring it to the Saturday session. We're going to use the 3b because it's most familiar, and because we have a bunch of them available for loaners. We'll have some SD cards configured onto the Clubhouse WIFI and with VNC and SSH enabled so that you can get started quickly (please be prepared to make a \$5 donation to cover the cost of the cards). Also bring your laptop with the programs described below installed. **Please email : wb2mnf@arrrl.net if you'll want to participate so we can save you a seat at the table.**
2. If you don't want to buy a Pi but still want to participate you can borrow a Pi from us (we have about 5 spares). You can use the supplied SD card for the Direwolf installation and plug it into a Pi that you purchase later. **Please email : wb2mnf@arrrl.net so we can save you a seat and bring a Pi for you.**

In either of the above cases, bring your RTL-SDR radio if you have one - Direwolf supports them and you can use that radio to listen to the APRS frequency. We'll have a couple of spares if you don't have that radio.

3. Finally, you can simply attend and watch the participants from the chairs behind the table.

You'll need to have the following programs installed on your laptop in advance so that you can operate the Pi headless :

- PuTTY : <https://www.putty.org>
- VNC : <https://www.realvnc.com/en/connect/download/viewer/windows>
- Win32 Disk Imager : <https://sourceforge.net/projects/win32diskimager>. It's also useful to have an SD image writer like this one, although we won't use it in this session.



Sunday, February 2, 2020



Gloucester Co ARC In Club Competition For The January VHF Contest

By Jim Wright, N2GXJ

During the third weekend in January, some of your Club members banded together as a team to enter a club score for Gloucester Co ARC during the ARRL's January VHF contest. Some members operated together as a multi-op station from the Clubhouse, while others contributed their individual scores from their home stations in our local area for a combined team score. How good did we do compared with other clubs in this category? We'll just have to wait until the scores are published to see. But it really doesn't matter, as it was billed as a learning experience, and the key was we all had fun. But even with all those caveats, I think we might have done quite well! Given the radio conditions, our combined score certainly exceeded my expectations!

Burning up the airwaves from the Clubhouse on 4 different bands, from a dedicated 6 meter station, and a separate "2 meters and up" station, were Al KB2AYU, John K2QA, Herb KT2Y, Frank N3PUU, and myself N2GXJ. Coincidentally, at the other end of the Clubhouse, Bruce KD2LBU was making separate contacts on HF for fun, as part of the North American QSO Party which overlapped with the VHF contest on Saturday night. Though it was snowing Saturday night, that didn't stop a number of people from dropping in at the Clubhouse that evening, making it quite the place to be! And the food... a special thank you to Frank and his wife for the dinner at the Clubhouse Saturday night, and for the pot of chili that kept us warm the next day!

Putting in fantastic home station efforts for the VHF contest were Sheldon K2MEN and Mark KK2L, who had also pre-registered with the ARRL to be able to submit scores naming Gloucester Co ARC as their home club as part of this combined team effort. Thanks guys!

And then there was Jim KD2QYE and Lee ND2G. Did I happen to mention that it was snowing Saturday night? Let me copy here an email received from Jim to indicate why that's relevant :

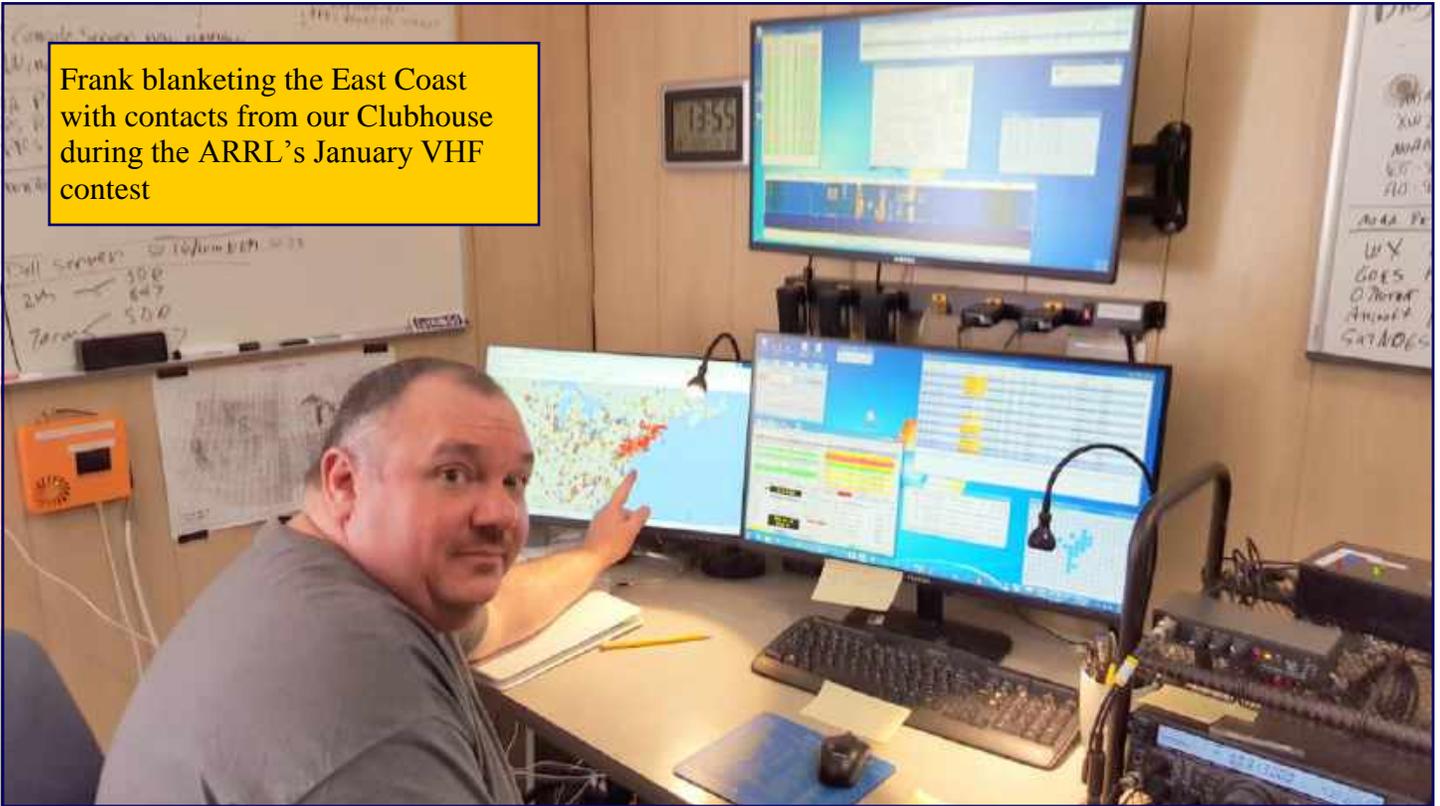
"Lee and I set up portable at a location about 2 miles from the Club in Heritages vineyard. It's elevation was around 150 feet above sea level. We set up Lee's Kenwood TS-590sg for 6m with a Shark 44" 6m antenna on a 20' mast off the hitch of my pickup. We then switch radios to my Yaesu FTM-400 XDR and used a J-Pole I made from 1/2" copper pipe on a 10' mast for VHF. See attached for the contacts we made. I hope this helps the Club! Great day in the snow for my first contest, Jim KD2QYE"

Now that's the crazy spirit! First contest - portable - outside in a SNOWSTORM, no less. Wow! Congratulations you guys! You know, there is a big event called Field Day each year, in June, where we set up as many stations as we can in the fields around our Clubhouse to make contacts with other clubs doing the same thing all over the USA and Canada that weekend. Maybe you, and others reading this article, might be interested in participating and helping our Club score in that event too? By June, it should be a little warmer!

Thank you again for the fun times in this contest. Hope to catch everyone next when we try and find the hidden transmitter that Frank is going to hide during the next fox hunt!

GCARC January VHF Contest - Continued on page 7

Frank blanketing the East Coast with contacts from our Clubhouse during the ARRL's January VHF contest



Our Clubhouse's tower mounted rotatable beam antennas for 2M, 222 MHz, and 432 MHz, with separate 6M antenna with rotator used to contribute to our Club score during the ARRL VHF contest.



Fox Hunt XVI - Chase The Ground Hog!!! Sunday, February 9, 2020 - 1300 to 1400 Hours

Ever want to try something new with ham radio? Mark your calendars, here's your chance! It is a hand-held radio version of "hide and seek"!

Fellow Club member, Frank Romeo, N3PUU (who won Fox Hunt 15), will be the "fox" that will hide a transmitter for us "hounds" to find. What devious plan does he have in mind to try and stump us? We might have to work together as a "hunt pack" to find him!

For those that have not tried one of these fox hunts before, the idea is simple, and is quite fun. You can even bring the whole family along. It goes something like this.

A day before the hunt, Frank will send an email to the Club reflector. In it, he will give directions that will narrow down search area we have to hunt in to something no larger than approximately 4 square miles, here in southern NJ. Then, by 1 pm on February 9th, we drive into that area, and wait to hear from him on the W2MMD 2 Meter repeater (147.180 MHz PL Tone 131.8 Hz) asking for check-ins. You can also check-in using EchoLink : W2MMD-R. Each car full of us will check in with him on the repeater, so that he'll know who all is hunting, and can give clues if anyone gets lost. Then the transmitter is turned on, and the hunt begins!

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. If anyone is still searching after an hour, he'll talk us all in using the Club's repeater, so that all hunters will have the chance to meet up with him and laugh about our adventures!

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.

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



Al KB2AYU, Jim N2GXJ, and John K2QA, working the "Bridge" during the January VHF Contest.

Looks like "flannel" was the dress code of the day for this contest!

Thanks Sheldon



ELAD-FDM Duo 7 Watts @ W2MMD Clubhouse

December 28, 2019 - By Mark Gottlieb, KK2L

“Not much DX activity with the Canadian contest covering the entire band. Got some good results in the beginning however. All contacts were 7 Watts or less.”

Time	Call	Band	Freq	Mode	Grid ²	Location	Comment
21:17	WQ500	20M	14.253	SSB	EM32sj	Pineville, LA	Sparky Contest Club
21:06	WR7DW	20M	14:205	SSB	DN28kx	Rexford, MT	Donald W Johnson
21:02	VE4MG	20M	14.194	SSB	EO00gs	Canada	Malcolm Leroy Timlick
21:01	VA7QI	20M	14.166	SSB	CO70ja	Canada	Erik Skovgaard
20:53	VE5RAC	20M	14.200	SSB	DO70qk	Canada	Radio Amateur Du of Canada, Inc.
20:49	VE7SAR	20M	14.174	SSB	CN89oc	Canada	Surrey Amateur Radio Club
20:32	VE6SV	20M	14.280	SSB	DO33lm	Canada	Gordon Richard Kosmenko
20:15	VE7NZ	20M	14.250	SSB	CN89oh	Canada	Adrian Paul Stimpson
20:07	VE7ROC	20M	14.181	SSB	DN09eu	Canada	Orchard City Amateur Radio Club
20:02	VE7OGO	20M	14.165	SSB	DN09eu	Canada	Orchard City Amateur Radio Club
19:58	VE7WNK	20M	14.167	SSB	CO82sx	Canada	Bob Holowenko
19:57	VE6FI	20M	14.157	SSB	DO33er	Canada	Evan Mills Cameron
19:50	VE4SG	20M	14.277	SSB	EN19jv	Canada	Sunday Satiada
19:41	VE7UF	20M	14.237	SSB	CN79mq	Canada	Duane Benjamin Sandmeyer
19:38	VA7RR	20M	14.215	SSB	CN89og	Canada	Gary Caldwell
19:36	VE4RAC	20M	14.205	SSB	EN19kv	Canada	Radio Amateur Du of Canada, Inc.
19:35	VA5DX	20M	14.222	SSB	DO62ta	Canada	Douglas Allan Renwick
18:46	N5LZB	20M	14.074	FT8	CN87tm	Seattle, WA	Chris W Hines
18:34	AD9P	20M	14.074	FT8	EN54eu	Rothschild, WI	Albert C Schneebeli Sr
18:18	VP2MNI	17M	18.155	SSB	FK86vq	Montserrat	John Frankie Morgan
18:15	V51WH	17M	18.140	SSB	JG87mi	Namibia	Gunter Hartmann
17:40	6Y6Y	17M	18.157	SSB	FK08tg	Jamaica	Lester B Veenstra



Barry Shelley, N1VXY, is ARRL Interim CEO

At its January 17 - 18 meeting, the ARRL Board of Directors did not elect Howard Michel, WB2ITX, as the ARRL Chief Executive Officer.

As of January 20, Barry Shelley, N1VXY, became interim CEO. Mr. Shelley was ARRL's Chief Financial Officer for 28 years and CEO during 2018 before his retirement.

The Board has created a search committee to select the next CEO. More details on this and other matters that took place at the Board meeting will be released shortly.

Article Credit : The ARRL Letter for January 23, 2020 - www.arrl.org





Best Down Jersey DX Picks

February 2020

By Bill Grim, W0MHK

CALL	DATES	HIGHLIGHTS	DIFFICULTY (5=MOST RARE)	ENTITY
9G5GS	02/01 - 02/06	160-20M/SSB, FT8	3	Ghana
TI9A	02/02 - 02/08	HF/All Modes	4	Cocos Islands
5H	02/04 - 02/08	HF/All Modes	3	Tanzania
C21	02/05 - 02/08	160-6M/Mainly FT8	3	Nauru
E44CC	02/05 - 02/17	160-10M/Many Modes + FT8	4	Palestine
4K6	02/07 - 02/12	HF/CW, SSB, FT8	3	Azerbaijan
TX4	02/11 - 02/17	160-10M/CW, SSB, FT4, FT8	2	French Polynesia
8Q7	02/19 - 02/24	80-15M/CW, SSB, FT8	3	Maldives
VK9NR	02/20 - 02/25	160-10M/CW, SSB, FT4, FT8	3	Norfolk Island
VP8PJ	02/20 - 03/05	80-10M/CW, SSB, FT8 Multiple Stations	4	South Orkney Island

Down Jersey DX Extra! : TI9A, E44CC, and VP8PJ are all very rare ones despite our solar minimum. At least take a listen for them!!!

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

Entity Of The Month : Nauru

Nauru, officially the Republic of Nauru and formerly known as Pleasant Island, is an island country in Micronesia, a subregion of Oceania, in the Central Pacific. Its nearest neighbour is Banaba Island in Kiribati, 190 miles to the east. It further lies northwest of Tuvalu, 810 miles northeast of the Solomon Islands, east-northeast of Papua New Guinea, southeast of the Federated States of Micronesia and south of the Marshall Islands. With only a 8.1 square mile area, Nauru is the third-smallest country in the world behind the Vatican City, and Monaco, making it the smallest state in the South Pacific Ocean, the smallest state outside Europe, the smallest island state, and the smallest republic. Additionally, its population of 10,670 is the world's third smallest, after the Vatican City and Tuvalu. Settled by people from Micronesia and Polynesia c. 1000 BCE, Nauru was annexed and claimed as a colony by the German Empire in the late 19th century. After World War I, Nauru became a League of Nations mandate administered by Australia, New Zealand and the United Kingdom. During World War II, Nauru was occupied by Japanese troops, and was bypassed by the Allied advance across the Pacific. After the war ended, the country entered into United Nations trusteeship. Nauru gained its independence in 1968, and became a member of the Pacific Community (SPC) in 1969.



www.wikipedia.org/wiki/Nauru

DA's and DIT's

Gary Reed, N2QEE, reports about the January 9, 2020 VE Licensing Session :

- 1 Candidate :
 - ◆ Fred Mattison III, KD2TEI - Upgrade to General, of Millville

The VE's attending were : Frank W2FJM, Chuck WA2TML, Urb W1UL, Lee N2LAM and Mike N2MHO.

The VE report for 2019 :

- There were 14 sessions with 43 candidates participating.
- 37 licenses were earned; 6 candidates not receive a passing score.
- This represents that 84% of the candidates received a license.
- A total of 52 exam elements were administered.

14 VEs participated in 2019 : Gary N2QEE; Mike N2MHO; Frank W2FJM; Chuck WA2TML; Urb W1UL; Ed N2RO; Bob KD2UJ; Jim N2GXJ; Chris N2IVN; Jennifer KD2EYR; Alex K3CIM; Jeff WB2ZBN; Peter W2QB; Woodrow W2WDY

The question pool for the Amateur Extra Class exam will be updated on July 1, 2020.

Thank you to all the VEs who helped make the Volunteer Examiners program successful.

Raspberry Pi Useful Links

By John Zaruba Jr, K2ZA

Raspberry Pi Foundation : <https://www.raspberrypi.org>

Adafruit Learning System : <https://learn.adafruit.com>

Adafruit Industries (Pi's, parts, etc.) : <https://www.adafruit.com>

Sparkfun Electronics Tutorials : <https://learn.sparkfun.com/resources>

Sparkfun Electronics (Pi's, parts, etc) : <https://www.sparkfun.com>

Raspberry Pi Projects : <http://www.raspberryconnect.com>

Amazon : <https://www.amazon.com>

Mouser Electronics : <https://www.mouser.com>

Digi-Key Electronics : <https://www.digikey.com>

Newark Electronics : <https://www.newark.com>

WA9ONY Amateur Radio Raspberry Pi Projects : <http://www.stargazing.net/david/RPi/hrrpi.html>

WA9ONY Raspberry Pi Computer Projects : <http://www.stargazing.net/david/RPi/index.html>



Snake Antenna - Follow-up

In the January 2020 CrossTalk, I published an article by Harry Brown AC8S about his adventures with snake antennas. I send him a copy of CrossTalk and here are his responses to his article:

January 1, 2020

“Hi Jeffrey, That, is, wonderful!!!! I'm thrilled you published my article in the news letter, thank you so much for doing that!!!! Whatever it takes to get every ham, in the world, on the air, that's what I am in it for, because if it wasn't for the snake, I would have had to give up my license, and not be a ham today. I am talking to a ham who says he can make the snake, just like Paul, GM6MEN, says that it should be made. I'm going to order 1 and try it, this month. If it works, then, I don't have to fool around with connectors like I had to do with the snake I made, then, I will let you know, and, then, hams will be able to order snakes, of any length, how about that!!!!”

I'm glad you enjoyed it my friend!!

Happy new year to you as well!!!!”

January 2, 2020

“Hi Jeffrey, Wow!!! I just read my article in the newsletter, and it is fabulous, thanks to you for doing that!!! Now below, I've pasted in the latest version of that article, and I have 2 new tests of lengths of snake that work, fabulously!!! 82 feet works great, I'm using that length of snake, on my own station, and, 12 foot works fantastic as well, used one of those lengths on my station as well. Also, I have made more contacts since September, which you'll see, because it's now up to 167 contacts.

Enjoy, and I will keep you up to date!!!”

January 10, 2020

“Hi Jeff, Well my friend, there is now a company that makes the snake antenna!!! It's the DX store. It's in Arizona, and Jim, does a great job making them. I just ordered my first one from him, last week, and got it yesterday! He makes them any length a person wants. The number to call is 866-899-3947.

*73,
Trippy, AC8S”*



Sunday, February 2, 2020

Regional (Atlantic & Hudson Divisions) Hamfests & Events

February 1, 2020 : Hoosick Falls Amateur Radio Club, Hoosick Amateur Radio Club HamFest, Hoosick Falls High School, 21187 Route 22, Hoosick Falls, NY. www.qsl.net/hoosickarc

February 22, 2020 : New Providence Amateur Radio Club, New Providence Radio Club Auction, New Providence High School, 35 Pioneer Drive, New Providence, NJ. www.nparc.org

February 23, 2020 : Wireless Association of the South Hills Radio, Washfest 2020, Home Economics Building, South Park, 3735 Buffalo Drive, South Park Township, PA, www.n3sh.org

February 23, 2020 : Long Island Mobile Amateur Radio Club, Long Island Hamfest & Electronics Fair, Levittown Hall, 201 Levittown Parkway, Hicksville, NY. www.limarc.org



Richmond Frostfest - Saturday, February 1, 2020
Richmond Raceway Complex (Richmond, Virginia)
The Frostfest website at www.frostfest.com has all the details



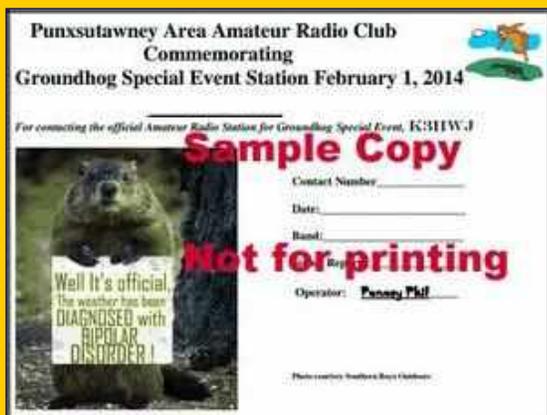
North American Shortwave Association

NASWA Winter SWL Fest
February 27 - 29, 2020

Doubletree Guest Suites Philadelphia West
Plymouth Meeting, PA
www.swlfest.com

February 1, 2020 : Punxsutawney Area Amateur Radio Club
K3HWJ Groundhog Special Event Station, 14.330 and 7.235
MHz, 1400Z - 2100Z. www.punxvclub.com

**Editor's Note: For the past few years, the Punxsutawney Area Radio Club's Groundhog Special Event Station has also been using their 147.390 MHz repeater which is on the W3WAN Repeater System which in our area is on the 441.700 MHz repeater in Philly. So give that a try if you cannot get on HF.*



The W1UL Ham Cram Website
www.ham-cram.com



FCC Amending Amateur Radio RF Exposure Safety Rules

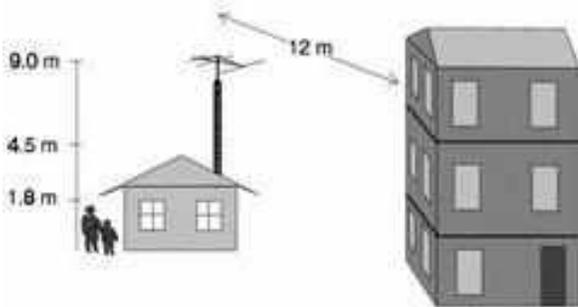
The FCC is amending its Part 97 Amateur Service rules relating to RF exposure safety. In a lengthy document (<https://docs.fcc.gov/public/attachments/FCC-19-126A1.pdf>) in ET Docket 19-226 released on December 4 and addressing a broad range of RF safety issues, the FCC said current amateur radio RF exposure safety limits will remain unchanged, but that the amateur-specific exemption from having to conduct an RF exposure evaluation will be replaced by the FCC's general exemption criteria. Radio amateurs have always had to comply with RF exposure limits, but certain stations have been exempt from having to conduct evaluations based only upon power and frequency. The Commission indicated that, by and large, if an RF source was "categorically excluded" from routine evaluation under the old rules, it will most likely still be exempt under the new rules, which are expected to take effect in the next couple of months.



"For applicants and licensees in the Amateur Radio Service, we substitute our general exemption criteria for the specific exemption from routine evaluation based on power alone in Section 97.13(c)(1) and specify the use of occupational/controlled limits for amateurs where appropriate," the FCC said.

"The sky is not falling here," ARRL Lab Manager Ed Hare, W1RFI, commented. "The major aspects of the rules will not impose major new burdens on the Amateur Radio Service. As in all regulatory matters, though, the devil may be in the details, so the ARRL technical staff, legal staff, and the experts on the ARRL RF Safety Committee are carefully evaluating this FCC document."

Under the revised Section 97.13(c)(1), "In lieu of evaluation with the general population/uncontrolled exposure limits, amateur licensees may evaluate their operation with respect to members of his or her immediate household using the occupational/controlled exposure limits in Section 1.1310, provided appropriate training and information has been accessed by the amateur licensee and members of his/her household," the amended rule says.



An FCC OET Bulletin 65 illustration of how to determine exposure distances.

"RF exposure of other nearby persons who are not members of the amateur licensee's household must be evaluated with respect to the general population/uncontrolled exposure limits. Appropriate methodologies and guidance for evaluating Amateur Radio Service operation is described in the Office of Engineering and Technology (OET) Bulletin 65, Supplement B," (<https://transition.fcc.gov/bureaus/oet/info/documents/bulletins/oet65/oet65b.pdf>) the revised rule concludes.

The FCC said it was not persuaded by ARRL's argument in its comments that the routine evaluation exemption for amateur radio stations operating below a certain power threshold should be maintained. "Amateur radio licensees operate a variety of installations of different size, power, and frequency, which can be located in close proximity to people, giving rise to various RF exposure concerns," the FCC noted.

FCC Amending RF Exposure Rules - Continued on page 15

In a meeting with FCC OET Chief Julius Knapp and senior staff in early November, ARRL asked the FCC to make available on the internet a calculator to facilitate making the correct calculations the rules require. ARRL said that would be preferable to unofficial third-party calculators, the results from which might not be accorded the same degree of deference in local disputes. Several software programs were suggested as models.

The FCC did not single out amateur radio in drafting its latest RF exposure rules. The rules affect multiple services, and exemptions for many other services were also deleted as part of a broader policy driven by a proliferation of RF devices, some resulting in situations where gain antennas are sited much closer to people than was expected in 1996 when the rules were last revised.

Article Credit : The ARRL Letter for December 12, 2019 - www.arrl.org



ARRL CEO Challenges Members: "Dare to Imagine"

In his January 2020 QST "[Second Century](#)" editorial, ARRL CEO Howard Michel, WB2ITX, challenges members to imagine what ARRL and amateur radio will look like in 5 years and beyond and to dare to imagine change.



"Younger hams are not just younger versions of you or me," Michel writes. "They have grown up in a different world." He points out that 75% of non-members hold Technician licenses. "But more than license class, their interests are different. Their demographics are different. They are different, and they want different things," he said. His approach is to target specific interest groups, which he calls "verticals," that will allow ARRL to provide individual members what they want. "We can try to mold the future generation of hams to our image, or we can embrace new hams for what they are," Michel asserted. "ARRL needs to do the latter."

In addition to initiatives such as the new On the Air magazine, debuting this month in print and digital editions, and the Lifelong Learning program to engage new licensees, Michel is proposing verticals focusing on radiosport, experimentation, and emergency communication. He's recommending a new family of "mini-magazines" to reach niche membership interests. "To jump start the mini-mag revolution," he said, "We will offer NCJ and QEX in digital form to everyone." ARRL also plans to hire a national club coordinator this year.

"Our focus will be on developing ways, and an infrastructure, that members can use to organize themselves in ways they want, to do things that they consider meaningful," Michel said.

He has invited (ceo@arrl.org) members' comments.

Article Credit : The ARRL Letter for January 9, 2020 - www.arrl.org



Radio Amateurs of Canada Announces a New Section

The number of Sections needed for a clean sweep in the ARRL November Sweepstakes (SS) will rise to 84 in 2020, with the addition of a new Prince Edward Island (PE) Section. Radio Amateurs of Canada (RAC) (www.rac.ca) has announced that the new Section will become effective on April 1.



Prince Edward Island has been in the Maritimes (MAR) Section. RAC said its Prince Edward Island members have been working for some time to create a separate Section for RAC ARES activities there. The provinces of Nova Scotia and New Brunswick will remain in the Maritimes Section.

In addition to Field Day and Sweepstakes, the new Section in Canada will affect the ARRL 160-Meter Contest but not the ARRL 10-Meter Contest, which uses individual states/provinces for US and Canadian multipliers. The change will mean that logging software developers will have to update their software to include the PE Section as a valid exchange element for any affected operating events.

RAC also announced an adjustment in two of its Ontario Sections. Effective April 1, radio amateurs in the City of Hamilton and in the Regional Municipality of Niagara will shift to the Greater Toronto Area (GTA) Section from the Ontario South (ONS) Section.

Article Credit : The ARRL Letter for January 9, 2020 - www.arrl.org



**2019 Holiday Dinner
Party Highlights**

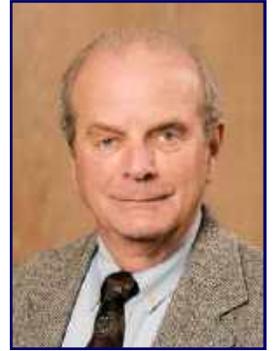
**Great Food & Great
People**





Volunteer Monitor Program Coordinator Looks Forward to a Positive 2020

In a holiday season message to ARRL leadership and to members of the new ARRL Volunteer Monitor (VM) program, its coordinator, Riley Hollingsworth, K4ZDH, expressed his gratitude to all involved for their contributions to getting the program off to a solid start in January.



"It will be a good year," Hollingsworth said. "We will have fun, you will enjoy it more than you probably think, and -- thanks to the talent and generosity of one of our VMs -- a computer program will make your reporting much easier (there will be no need for bi-monthly reports!)," he wrote. "This is our opportunity to help amateur radio last another hundred years and to pay forward this wonderful avocation that joyfully occupies our lives. This could be our legacy if we do it with all the energy and devotion that characterized the Official Observer (OO) program for decades."

Hollingsworth said the success of the OO program convinced the FCC to trust ARRL with the responsibilities now to be taken up by the Volunteer Monitor program. "Those of you who are former OOs have an extra reason to be proud, and amateur radio is grateful to you more than you will ever know," Hollingsworth concluded. "Thank you. It will be a privilege to work with you this new year."

Approved by the ARRL Board of Directors in 2018, the Volunteer Monitor program supplants the venerable OO program. The VM program represents a formal agreement between the FCC and ARRL in which volunteers trained and vetted by ARRL will monitor the airwaves and collect evidence that can be used to correct misconduct. The program also will recognize exemplary on-air operation, something not done during the OO program. Cases of flagrant violations will be referred to the FCC by ARRL for action in accordance with FCC guidelines.

The FCC proposed the new program in the wake of several FCC regional office closures and a reduction in field staff. It will give enforcement priority to cases developed by the Volunteer Monitor program without ARRL's having to refer cases through the FCC online complaint process.

Article Credit : The ARRL Letter for January 9, 2020 - www.arrl.org



HamCation 2020
Central Florida Fairgrounds and Expo Park
February 7 - 9, 2020
www.hamcation.com



ARRL On the Air Podcast Premieres January 16

ARRL's new On the Air podcast for those just getting started on their amateur radio journey will debut this Thursday, January 16, with a new episode posted each month. The podcast is a companion to the new bimonthly [On the Air](#) magazine, which is already on its way to member subscribers. On the Air magazine's Editorial Director Becky Schoenfeld, W1BXY, will be the host of the new podcast. Both the podcast and the magazine are aimed at offering new and beginner-to-intermediate-level radio amateurs a fresh approach to exploring radio communication.



Listeners can find the On the Air podcast at [Blubery](#), [Apple iTunes](#) or by using your iPhone or iPad podcast app - search for On the Air), and [Stitcher](#) (or through the free Stitcher app for iOS, Kindle, or Android devices). [Episodes](#) will be archived on the ARRL website.

Each On the Air podcast will take a deeper dive into the articles and issues raised in the magazine, including advice and insight on topics covering the range of amateur radio interests and activities: radio technology, operating, equipment, project building, and emergency communication.

Supplementing On the Air will be a new [Facebook](#) page for those who share a love of radio communication and are looking to learn and explore more about their interests.

The biweekly Eclectic Tech podcast for experienced radio amateurs will launch on February 13. Hosted by QST Editor Steve Ford, WB8IMY, Eclectic Tech will highlight topics involving amateur and non-amateur technology, offer brief interviews with individuals involved in projects of interest to amateurs, and include practical information of immediate benefit to today's hams. Eclectic Tech will be available via [iTunes](#) and [Stitcher](#).

The ARRL Mags apps including QST and On the Air are now live on Apple iTunes and Google Play. The [digital edition](#) of On the Air magazine is also live and linked from the On the Air page on the ARRL website.

Article Credit : The ARRL Letter for January 16, 2020 - www.arrl.org



Happy Chinese New Year
2020
Year Of The Rat
Saturday, January 25 to
Tuesday, February 11, 2020



Puerto Rico Earthquake Relief Effort Continues, with Help from Ham Radio

In Puerto Rico, Amateur Radio Emergency Service (ARES) volunteers continue to operate from the American Red Cross distribution center in Yauco - one of the towns hit the hardest by the recent earthquakes and ongoing aftershocks on the island. The Red Cross requested assistance last week to identify undeclared refugee camps and to report on closed or damaged roadways and bridges. ARES District 5 Emergency Coordinator Herb Perez, WP4ZZZ, who is among those volunteering for the Red Cross at Yauco, reported on January 14 that he, Melvin Velazquez, WP4RAP, and Yolanda Garcia, WP4QZF, were on duty there.



Volunteers Eduardo Hernandez, WP4RAF (left), and Herb Perez, WP4ZZZ. [Photo courtesy of Oscar Resto, KP4RF]

"Today, we were able to occupy our space with no major incident other than the usual shaking of the entire structure. More than 10 per hour," Perez said. "One of our members, Jared Martinez, KP4LCO, was able to search near his hometown of Lajas and was able to locate more than 10 unidentified campsites around the area." Perez said such reports enable the Red Cross to provide necessary assistance to those left homeless as a result of the earthquakes.

Perez said volunteers were able to collect food from a church-run food pantry in Sabana Grande for isolated communities in the mountain region. He said local members of the General Mobile Radio Service (GMRS) and Citizens Band radio communities have been pitching in.

Operations from Yauco have been on VHF and UHF, although commercial telecommunication services remain in operation for the most part. Another station has been established at the Red Cross Headquarters in the capital of San Juan, which is not in the earthquake zone. Puerto Rico Section Manager Oscar Resto, KP4RF, said the stations are operating as a backbone, in the event of new or stronger earthquakes. HF equipment has been safely stowed if communications fail, Resto said. Most of Puerto Rico now has power and water.



Puerto Rico Section Manager Oscar Resto, KP4RF, installs an antenna at Red Cross Headquarters in San Juan.

ARRL is shipping six VHF/UHF base/repeater antennas and six 50-foot rolls of LMR-400 coax through the Ham Aid Fund (<http://www.arrl.org/ham-aid>). Resto said a new Red Cross warehouse will be placed in Mayagüez, where he will install a third station for backbone communication. "That is the reason for the new antennas," he said. "We already have the radios. In case we need to escalate to HF, we are ready with ARRL go-kits from Hurricane Maria."

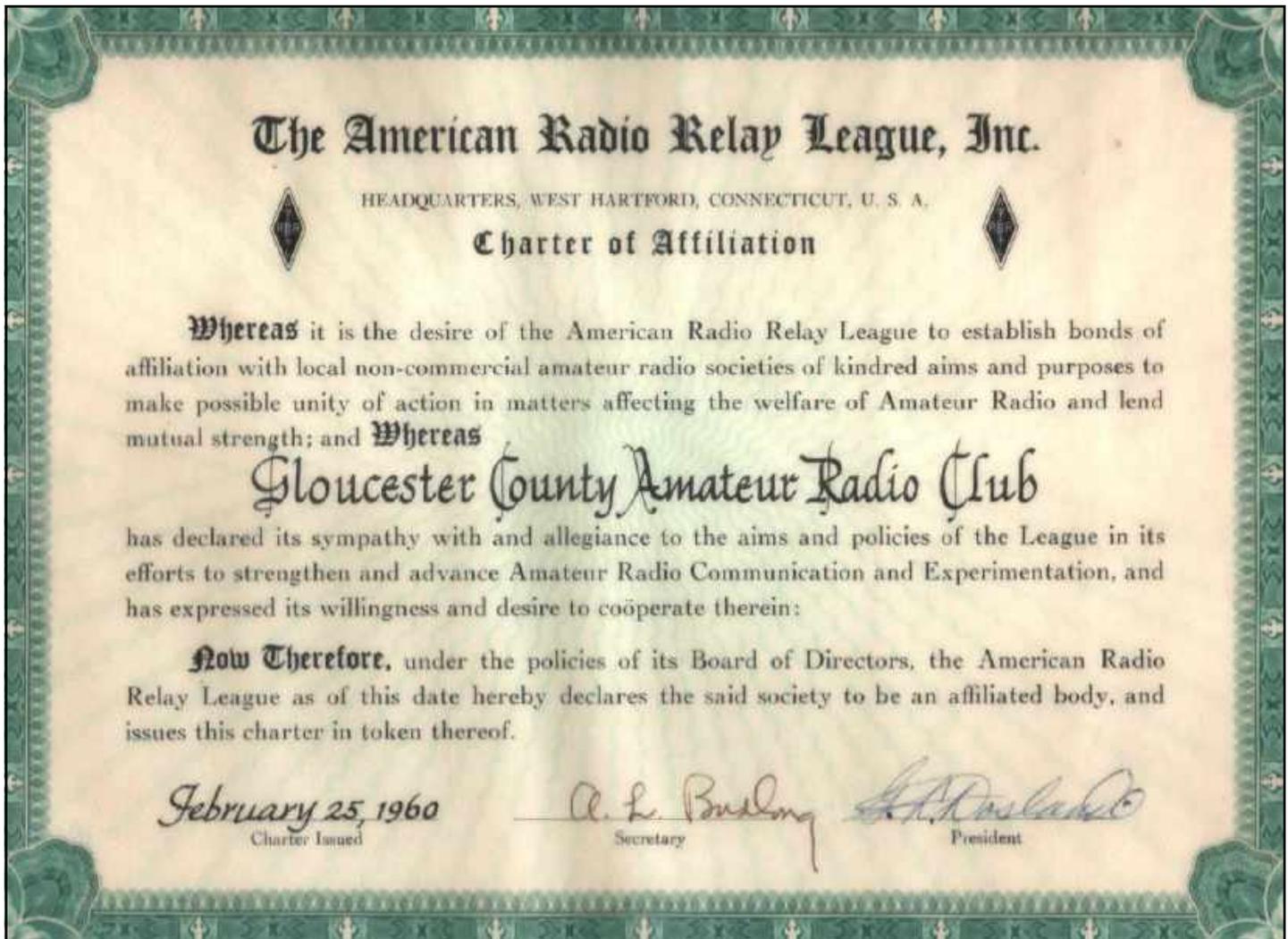
A lot of seismic activity was reported on January 15. "Many more or less 3.1 quakes were felt during the day," Perez said. That included a magnitude 5.1 temblor that shook the facilities.

Puerto Rico Earthquake Relief - Continued on page 20

The ARES team in Yauco has also been handling health-and-welfare traffic from the earthquake zone. Operations are running from 9 AM until 5 PM each day.

A magnitude 6.4 earthquake struck the southwestern part of Puerto Rico on January 7, fast on the heels of a magnitude 5.8 tremor the day before. The worst-impacted cities were Guayanilla, Peñuelas, Yauco, and Guánica, where most homes are no longer habitable.

Article Credit : The ARRL Letter for January 16, 2020 - www.arrl.org



February 25, 2020 marks the 60th Anniversary of our Club being an ARRL Affiliated Club.

Tom Preiser, N2XW, Southern New Jersey Section Manager will be presenting a plaque to our Club at the March 4, 2020 General Membership Meeting to commemorate this milestone in our Club's History.

Please pass this information on to your fellow hams and local clubs.

This will be an excellent opportunity to meet our SNJ Section Manager.



ARES Volunteers Establish "Plan B" Communication Network In Puerto Rico

Amateur Radio Emergency Service (ARES®) volunteers in Puerto Rico continued over the weekend to report for daily duty at an American Red Cross (ARC) distribution center in Mayagüez and at ARC Headquarters in San Juan. The two sites are ready to provide a "Plan B" communication backbone in the event the seismic situation worsens. A magnitude 6.4 earthquake struck southwestern Puerto Rico on January 7, fast on the heels of a magnitude 5.8 tremor the day before, damaging homes in Guayanilla, Peñuelas, Yauco, and Guánica. ARRL Puerto Rico Section Manager Oscar Resto, KP4RF, told ARRL this week that the situation is relatively "calm and quiet" for now and starting on January 22, volunteers began monitoring from their homes or vehicles, permitting most, including Resto himself, to get back to their jobs and homes.



ARES volunteers had been deployed to an ARC distribution center in Yauco, but that part of the operation was shifted to Mayagüez over the weekend, because it was considered safer there. An ARRL-provided VHF/UHF radio and antenna have been set up at the Mayagüez facility. Resto said a second operating position is being added at the San Juan ARC Headquarters site.

Resto said Red Cross officials know that they can rely on amateur radio, if the situation calls for it, but for now commercial communications are fully operational, although aftershocks from the January 7 quake persist. "In case the situation escalates, the ARES team will immediately mobilize at the ARC sites and establish communication (VHF/UHF or HF) as required," Resto said.

Last week, the Red Cross had requested assistance from the ARES volunteers as well as volunteers from the CB radio and GMRS communities, to identify undeclared refugee camps and to report on close or damaged roadways and bridges. Resto said the ARES volunteers "did a marvelous job" that earned praise from Red Cross officials.

Resto said about two dozen volunteers have made themselves available in the Mayagüez area. In the event they're needed, Resto said, he has seven or eight HF radios and 15 VHF/UHF transceivers left over from the Hurricane Maria emergency response. He said the HF equipment has been safely stowed for use in case of another major earthquake, when they might be needed.

He was expecting additional antennas and feed lines provided through ARRL's Ham Aid program to show up this week.

Article Credit : The ARRL Letter for January 23, 2020 - www.arrl.org



The ARRL Ham Aid program provided this antenna, installed in Mayagüez. [Oscar Resto, KP4RF, photo]

QST de W1AW
ARRL Bulletin 3 ARLB003
From ARRL Headquarters
Newington CT January 24, 2020
To all radio amateurs

SB QST ARL ARLB003 ARRL to Argue for Continued Access to 3-GHz Spectrum as FCC Sets Comment Deadlines

At its January meeting, the ARRL Board of Directors instructed the League's FCC counsel to prepare a strong response to protect amateur access to spectrum in the 3 GHz range. In its Notice of Proposed Rule-making (NPRM) in WT Docket 19-348, the FCC proposed to relocate all non-federal operations, including amateur uses, to spectrum outside the 3.3 - 3.55 GHz band. The Commission anticipates auctioning this spectrum to expand commercial use of 5G cellular and wireless broadband services, if agreement can be reached on relocation of "or sharing with" the federal incumbents that operate in the same band. Publication of the NPRM in the Federal Register on January 22 established deadlines of February 21 for comments and March 23 for reply comments.

The FCC has requested comment on the uses radio amateurs make of the spectrum and appropriate relocation options. Complicating matters is the fact that radio amateurs must consider the possibility that the immediately adjacent 3.1 - 3.3 GHz band is included in the spectrum that Congress has identified for similar study. FCC Commissioner Michael O'Rielly, in a December statement, referenced the fact that the lower band may also be considered for non-federal reallocation, potentially limiting relocation possibilities.

Amateurs make substantial use of the 3.3 - 3.5 GHz band that would be hard to replicate elsewhere, and they have filed more than 150 comments before the designated comment period even began. Among users looking at options are those who use this spectrum for Earth-Moon-Earth (moonbounce) communication, mesh networks, experiments with communication over long distances, radiosport, and amateur television. A portion of the band also is designated for use by amateur satellites in ITU Regions 2 and 3 (the Americas and Asia/Pacific).

A report is due by March 23 from the National Telecommunications and Information Administration (NTIA) evaluating the feasibility of having federal users share all or part of the 3.1 - 3.55 GHz band with commercial wireless services. This report is required by the Making Opportunities for Broadband Investment and Limiting Excessive and Needless Obstacles to Wireless (MOBILE NOW) Act. The results of the NTIA report will impact how much spectrum ultimately may be re-allocated for auction to wireless providers.

ARRL urges amateurs who comment to inform the FCC about the uses they make of the 3 GHz spectrum. Short comments and longer statements may be filed electronically. Visit the FCC "How to Comment on FCC Proceedings" page for more information. Commenters should reference WT Docket 19-348.

The how-to comment page can be found at : <https://www.fcc.gov/consumers/guides/how-comment>.



QST de W1AW
Special Bulletin 12 ARLX012
From ARRL Headquarters
Newington CT December 30, 2019
To all radio amateurs

SB SPCL ARL ARLX012 Two Solar Cycle 25 Sunspots Appear

New Solar Cycle 25 is on the way, but just when the transition from Solar Cycle 24 to Solar Cycle 25 will take place is not entirely clear.

On December 24, two new sunspots - one in each hemisphere - emerged on the face of the Sun that exhibit the reversed magnetic polarity marking them as belonging to Solar Cycle 25. According to Hale's Law, sunspot polarities flip-flop from one solar cycle to the next, the National Center for Atmospheric Research explains.

"The Sun is currently in solar minimum - the nadir of the 11-year sunspot cycle," Tony Phillips said in his article, "Reversed Polarity Sunspots Appear on the Sun" on the Spaceweather.com website. "It's a deep minimum, century-class according to sunspot counts." The remarkable sunspot scarcity has prompted discussion of a possible "extended minimum" akin to the Maunder Minimum in the 17th century, when no sunspots appeared for decades, Phillips said. "Such an event could have implications for terrestrial climate."

This article can be found online at :

<https://spaceweatherarchive.com/2019/12/25/reversed-polarity-sunspots-appear-on-the-sun>.

"Today's new-cycle sunspots (along with isolated new-cycle spots earlier this year) suggest that the solar cycle is, in fact, unfolding normally," Phillips wrote, adding that a new Maunder Minimum does not appear to be in the offing.

Earlier this month, the NOAA/NASA-co-chaired international Solar Cycle Prediction Panel released its latest forecast for Solar Cycle 25. The panel's consensus calls for a peak in July 2025 (+/- 8 months), with a smoothed sunspot number of 115 and the solar minimum between Solar Cycles 24 and 25 occurring in April 2020 (+/- 6 months). If this solar minimum prediction is correct, it would make Solar Cycle 24 the seventh longest on record at 11.4 years.

The forecast can be found online at : <https://www.swpc.noaa.gov/news/solar-cycle-25-forecast-update>.

Climate scientist David Archibald speculates that the Solar Cycle 24/25 minimum could occur as late as March 2021, and that Solar Cycle 25 maximum might not happen until 2027.

"We are well into the Solar Cycle 24/25 minimum but [Cycle] 24 may not have ended yet," Archibald said in a December 22 update on the "Watts Up With That?" website. "A solar cycle isn't over until the heliospheric current sheet has flattened. And that could be as late as March 2021. Solar cycle amplitude does matter with respect to climate and the amplitude of Solar Cycle 25, from projecting trends from the last three cycles, looks like being about 80 in 2027."

The Solar Cycle Prediction Panel agreed that Solar Cycle 25 will be of average intensity and similar to Solar Cycle 24.

ARLX012 Bulletin - Continued on page 24

In an article posted on NOAA's Space Weather Prediction Center site, Scott McIntosh, the Director of the High Altitude Observatory at National Center for Atmospheric Research ([NCAR - https://ncar.ucar.edu](https://ncar.ucar.edu)), stresses that Solar Cycle 25 will happen, "but a sunspot cycle could be small."

Predictability comes with some physical understanding of the underlying process, McIntosh asserts. "The sunspot cycle is erratic," he said in his presentation, "provocative of a chaotic, turbulent solar interior where sunspot progressions with time and latitude are the only tracers..."



Packed House at the January 11, 2020 Tech Saturday Forum. Special thanks to Jon WB2MNF & The GCARC SkunkWorks Team for presenting the Introduction to RTL-SDR Hardware & Software Hands-on class.

SOS Actual Recording-535 Souls Rescued!

Thanks to **Bill Szkromiuk, W4WCS**, for sending in this article

This is a very interesting story of rescue and a recording of the actual SOS CW message. I thought our CW capable members might enjoy listening and trying to copy the message. Maybe even pique some interest in learning code amongst the NON-CW capable members (I am one of those). The Radio Operator actually violated the orders of the ship's Captain in transmitting the SOS! The Captain was worried about his ship being fair game for "salvage" as opposed to the lives of his passengers and crew.

SOS! CW Saves the lives of 535 Passengers and Crew

Fire in Engine Room, Abandon Ship! ms PRINSENDAM October 4, 1980, shows what international cooperation can accomplish, USAF, USCG, Canadian Armed Forces, EMTs from Sitka, Alaska, and the US and other Merchant Marines combined resources to accomplish a miracle. 535 people saved from life boats with no fatalities from chilly waters of Gulf of Alaska

During the evening of October 4, 1980, in the Pacific Ocean nearly 330 miles from Valdez, Alaska, a fire engulfed the engine room of the Prinsendam, a Holland America cruise ship carrying 320 passengers, most of them elderly. As the fire raged out of control, the ship's captain faced the most dire decision of his career: Could he give the order to abandon ship in the face of a typhoon bearing down on the Prinsendam's position? The full story of this disaster at sea, and of the near-miraculous rescue that ensued, is available on the internet. A few links are below.

Chief Radio Officer, Jack van der Zee sent an "Urgent Message" to United States Coast Guard Communications Station Kodiak, Alaska. The CG advised him that due to the late hour and most of the ship's in the vicinity only have one operator who was off radio watch, that an SOS should be sent preceded by the international auto alarm to activate the autoalarm receivers on nearby ships and ring a bell on the bridge and in the Radio Officer's cabin. A short while later CRO van der Zee sent out an SOS. What is most remarkable about this is that the Captain of ms Prinsendam directed him to only send out the message as an Urgent message or XXX. CRO van der Zee was unsuccessful in convincing him that an SOS was needed, but the Captain remembered that once a ship sent out SOS it entitled rescuing vessels to salvage rights. CRO van der Zee literally feeling the heat from the deck through his shoes made the courageous decision to accept the penalty of disobedience which was loss of his license, fines and imprisonment and sent out the Captain's message as an Distress or SOS message instead of an Urgent or XXX message as he was ordered. CRO van der Zee reasoned: "If I send this as an XXX no one will hear it besides the Coast Guard, if I send it as SOS I will send the autoalarm signals and the

Prinsendam - Continued on page 26



nearby cargo ships will be notified that there is a distress. If I lose my license, get fined, and go to jail, at least I will be alive and so will the passengers and crew, God willing." Queen Beatrix eventually awarded CRO Jack van der Zee the Order of Netherlands Lion, a type of knighthood for his courageous actions in willing to do the right thing despite the possible consequences of jail and losing his livelihood, his pension and his financial security for him and his family.

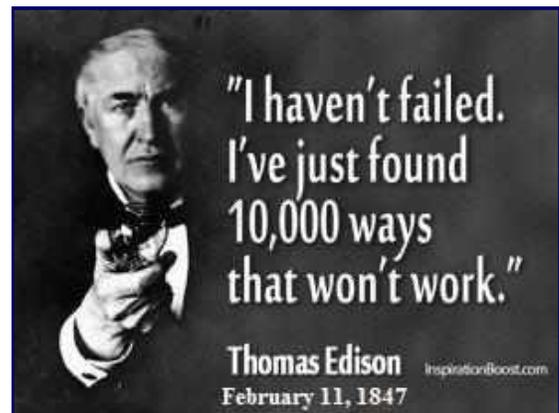
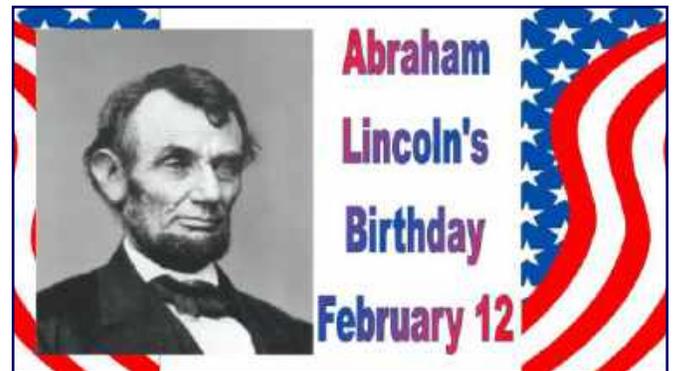
The link below contains an audio introduction and the actual recordings. Great listening. Note this worked properly for me using the Google Chrome browser only. Internet Explorer and Firefox would not play the "Urgent Message/XXX" for me. Your choice.

Reference :

<https://archive.org/details/SosMsPrinsendamOctober41980>

Readers Digest Article : http://www.alaska.net/~jcassidy/Readers_Digest.htm

News Coverage on TV on the event : http://archive.org/details/MsPrinsendamSosDistressOct.41980_292



6 - 7 Watts @ W2MMD Clubhouse

January 4, 2020

By Mark Gottlieb, KK2L

“Conditions were good today. Some pileups were just too much for 6.5 Watts”

Time	Call	Band	Freq	Mode	Grid ²	Location	Comment
22:25	N6OKU	20M	14.235	SSB	DM13as	Garden Grove, CA	Willy Bustamante
22:17	WP3R	20M	14.205	SSB	FK68oj	Puerto Rico	Angel M Vazquez Jr
22:07	W5MTN	20M	14.260	SSB	DN40fh	The Woodlands, TX	Todd D Rogers
21:43	KM6TS	17M	18.145	SSB	DM04xn	Palmdale, CA	Elliot P Quick Jr
21:22	AC2AC	20M	14.250	SSB	FN30as	Weston, FL	Fabio Augusto G Ferreira Dos Santos
21:18	W5ZZ	20M	14.254	SSB	EM31sh	Alexandria, LA	Sergey A Semeykin
21:07	XQ6CF	15M	21.014	CW	FF46rq	Chile	Wladimir Wlad Rosas Aguila
20:47	ZS1SBW	20M	14.313	SSB	JF95fu	South Africa	Shawn Billy Williams
19:42	8P6NW	15M	21.260	SSB	GK03ed	Barbados	Glenroy D Corbin
19:41	8P5AA	15M	21.260	SSB	GK03fd	Barbados	Philip Als
19:30	ZD7FT	15M	21.260	SSB	IH74db	Saint Helena Island	Peter Constantine



“The Clubhouse now has a big 6 Meter Yagi antenna (30ft boom length) up on a 40ft mast. It was a perfect day for the job with mild temperatures and almost no wind. Big thanks to Frank, N3PUU for many hours of help getting all the hardware in place and assembled. Thanks also to Bruce KD2LBU and Jon WB2MNF who were pressed into service working the guy ropes as the mast was raised into position. There is still a lot to do in the VHF radio room to get everything hooked up and running smoothly.” Al KB2AYU

Club Membership Stats - 2019 Year In Review

We now have 160 members.

We had 18 members join the Club in 2019

A Big THANK YOU to the new and returning members of the class of 2019!

We have 141 Full, 3 Family, 5 Associate, 1 Honorary, and 10 Life Members.

117 of our flock are ARRL members, 16 of which are ARRL Life Members.

We have 21 Technician Class, 50 General Class, 10 Advanced Class, and 76 Amateur Extra Class licensees in our Club.

The average age of our membership is 63 years old.

There were 4 Silent Keys in 2019 :

Current Members :

- **Joe Everhart N2CX**
- **Ron Hermann KC2FRE**
- **Ken Newman N2CQ**
- **Herb Schuler K2HPV**

Location Stats :

- The grid square with the most members is FM29kt.
- Williamstown leads the way as the home of 13 members, Sewell has 10, West Deptford has 6, and Woodbury has 6 members.
- 19 members live out of state:
 - 8 in Pennsylvania
 - 3 in Delaware
 - 3 in Florida
 - 1 each in Georgia, South Carolina, Kentucky, Illinois, and New Hampshire.



I guess there are no ham radios on this street unless they are battery powered.

Maybe this is where Eddy Grant lives (*Don't ask, Google it*)

Thanks Gary WA3SVW

ARRL Sweepstakes Contest, SSB
November 16, 2019

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

Class : SO Unlimited HP
QTH : SNJ
Operating Time (hrs) : 17

Summary :
Band QSOs

80 : 417
40 : 327
20 : 19
15 : 6

Total : 769 Sections : 82
Total Score : 126,116

Club : Frankford Radio Club 12

Comments :

Rig: FTDX-9000D/Acom 2000A

Antennas: All wires.

10/15m Homebrew Fan Dipole @ 75ft

20m delta loop @ 70ft

40m delta loop @ 75ft

75m dipole @ 90ft

Planned to operate just to get a sweep. Never did, having missed EWA!

Missed the first 2 hours wrapping up yard work. Although 20 shut down early, and 40m was terrible Sat early evening, 75m more than made up for it. Went to bed at 0800 when things slowed down, but overslept and woke up just in time for church. Didn't make it back on the air until 1730Z but was on a solid 8 hours then. Nice runs on 40m Sun afternoon. Never did get much going on 20.

Wish I had thought ahead to put in a real serious effort. This turned out to be my best score in SSB SS since the mid-90s and had I been able to put in the full 24 this would have likely been my best showing.

This was a nice warmup for next weekend for building endurance in the chair for CqWW CW!

73 to all, Darrell AB2E

CWops Mini-CWT Test - 0300Z
November 21, 2019

Call : WA2FZB
Operator (s) : WA2FZB
Station : WA2FZB

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

Summary :
Band QSOs

80 : 84

Total : 84 Mults : 84
Total Score : 7,056

Club : Frankford Radio Club 15

Comments : High local noise levels made this 80m run a real challenge. Thanks to all who called in, and sorry if I could not copy you thru the noise. 73 Tony WA2FZB

CWops Mini-CWT Test - 1900Z
November 27, 2019

Call : WA2FZB
Operator (s) : WA2FZB
Station : WA2FZB

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

Summary :
Band QSOs

40 : 19
20 : 54

Total : 73 Mults : 73
Total Score : 5,329

Club : Frankford Radio Club 20

Comments :

ARRL Ham Radio License Exam Practice Website

www.arrlexamreview.appspot.com

**CQ Worldwide DX Contest, CW
November 23, 2019**

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

Class : SO (A) AB HP
QTH : SNJ
Operating Time (hrs) : 36
Location : USA

Summary :

Band	QSOs	Zones	Countries
------	------	-------	-----------

160 :	45	12	30
80 :	264	24	100
40 :	208	26	103
20 :	382	25	109
15 :	69	21	56
10 :	6	4	5

Total : 974 112 103
Total Score : 1,350,845

Club : Frankford Radio Club 16

Comments :

Rig: FTDX-9000D/Acom 2000A
 Antennas: All wires
 160m Inverted L @ 100ft over tree
 80 dipole @ 90ft
 40m delta loop @ 70ft
 20m delta loop @ 70ft
 10m/15m homebrew fan dipole @ 70ft

First year in awhile that I could put in a full effort. Friday night was the best for the low bands, and Sat just so so. Stayed up all night Friday and took a nap about 1PM Sat. Went to bed about 0700Z Sun because the low bands were either noisy or poor propagation.).

Highlights - 3 band DXCC (20,40,and 80. Worked the following stations, only 2 made it in the log on 6 bands, congrats! 3 bands HQ9M, VE2IM, and many more 4 bands 3B8M, YN2CC, CN3A, VP2VWW, D4C, MD4K, TK0C, P33W, E7DX, NP2P, 5 bands V47T (no 10m), VP2MDM (no 10m), PJ2T, PJ4A, P40W (no 10m), 6V7A, VP5M, P40C, ZF1A, CR3DX, 8P5A, TI7W, 6 bands V26K, HI3CC

Great to hear so many friends calling in. Best runs were Fri night on 80m, and Sat and Sun mornings on 20m. The rest was all S&P.

Special thanks to all the folks who travelled on DXpeditions to activate so many of our mults. See you all next time,

73 Darrell AB2E

**CQ Worldwide DX Contest, CW
November 23, 2019**

Call : W2YC
Operator (s) : W2YC
Station : W2YC

Class : SOAB HP
QTH : NJ
Operating Time (hrs) : 31
Location : USA

Summary :

Band	QSOs	Zones	Countries
------	------	-------	-----------

160 :	68	15	52
80 :	192	24	92
40 :	370	30	110
20 :	535	29	130
15 :	144	22	75
10 :	18	10	13

Total : 1,327 130 480
Total Score : 2,271,030

Club : Frankford Radio Club 17

Comments :

**CWops Mini-CWT Test - 0300Z
November 28, 2019**

Call : WA2FZB
Operator (s) : WA2FZB
Station : WA2FZB

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

Summary :

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

80 :	83
------	----

Total : 83 Mults : 83
Total Score : 6,889

Club : Frankford Radio Club 21

Comments : *Really noisy here tonight. Apologies to those I could not pull out, and thanks to all who called in. Happy Thanksgiving! Tony WA2FZB*

2019-2023 Element 3 General Class License Question Quiz

This month we continue with **Subelement G2 : Operating Procedures** - (Answers on 'Last Page Calendar')

G2B09

Who may be the control operator of an amateur station transmitting in RACES to assist relief operations during a disaster?

- A. Only a person holding an FCC-issued amateur operator license
- B. Only a RACES net control operator
- C. A person holding an FCC-issued amateur operator license or an appropriate government official
- D. Any control operator when normal communication systems are operational

G2B10

When is an amateur station allowed to use any means at its disposal to assist another station in distress?

- A. Only when transmitting in RACES
- B. At any time when transmitting in an organized net
- C. At any time during an actual emergency
- D. Only on authorized HF frequencies

G2B11

What frequency should be used to send a distress call?

- A. Whichever frequency has the best chance of communicating the distress message
- B. Only frequencies authorized for RACES or ARES stations
- C. Only frequencies that are within your operating privileges
- D. Only frequencies used by police, fire, or emergency medical services

G2C01

Which of the following describes full break-in telegraphy (QSK)?

- A. Breaking stations send the Morse code prosign "BK"
- B. Automatic keyers, instead of hand keys, are used to send Morse code
- C. An operator must activate a manual send/receive switch before and after every transmission
- D. Transmitting stations can receive between code characters and elements

G2C02

What should you do if a CW station sends "QRS?"

- A. Send slower
- B. Change frequency
- C. Increase your power
- D. Repeat everything twice

G2C03

What does it mean when a CW operator sends "KN" at the end of a transmission?

- A. Listening for novice stations
- B. Operating full break-in
- C. Listening only for a specific station or stations
- D. Closing station now

General Class Quiz - Continued on page 32

G2C04

What does the Q signal “QRL?” mean?

- A. “Will you keep the frequency clear?”
- B. “Are you operating full break-in?” or “Can you operate full break-in?”
- C. “Are you listening only for a specific station?”
- D. “Are you busy?” or “Is this frequency in use?”

G2C05

What is the best speed to use when answering a CQ in Morse code?

- A. The fastest speed at which you are comfortable copying, but no slower than the CQ
- B. The fastest speed at which you are comfortable copying, but no faster than the CQ
- C. At the standard calling speed of 10 wpm
- D. At the standard calling speed of 5 wpm

G2C06

What does the term “zero beat” mean in CW operation?

- A. Matching the speed of the transmitting station
- B. Operating split to avoid interference on frequency
- C. Sending without error
- D. Matching the transmit frequency to the frequency of a received signal

G2C07

When sending CW, what does a “C” mean when added to the RST report?

- A. Chirpy or unstable signal
- B. Report was read from an S meter rather than estimated
- C. 100 percent copy
- D. Key clicks

G2C08

What prosign is sent to indicate the end of a formal message when using CW?

- A. SK
- B. BK
- C. AR
- D. KN

G2C09

What does the Q signal “QSL” mean?

- A. Send slower
- B. We have already confirmed by card
- C. I acknowledge receipt
- D. We have worked before



Gloucester County Amateur Radio Club General Membership Meeting Minutes Monday, January 6, 2020



Meeting opened @ 1932 Hours by President James Clark Sr, KA2OSV.

Attendance : 27

Visitors : None

Previous meeting minutes approved as published in Crosstalk by voice vote of members present.

Treasurer's report :

- YTD Income : \$ 396
- YTD Expenses : \$ 0
- Net : \$ 396

Budget will be submitted for approval at the February General Membership meeting.

Changes in fee structure by propane supplier.

Treasurer report approved by voice vote of members present.

Committee Reports :

Clubhouse : Newly installed 6 meter Yagi on a 40 foot mast.

Contests : 1/11/20 North American QSO Party CW, 1/18/20 NAQP SSB, 1/24-26 CQ 160 CW. 1/18-20/20 VHF Contest, 1/24-26/20 Winter Field Day

DX : 1/1-15/20 Fiji 3D2DJ, 1/6-14/20 Palestine E44RU, 1/7-13/20 Palau T88AQ, 1/12-31/20 Norfolk Island VK9NK

Old Business : None

New Business : None

Meeting adjourned @ 1947 Hours.

Program : Jon Pearce WB2MNF "RTL-SDR Overview".

**Respectfully Submitted,
John Zaruba Jr, K2ZA
Recording Secretary**

Gloucester County Amateur Radio Club Board of Directors Meeting Minutes Wednesday, January 15, 2020



Meeting opened @ 1905 Hours by President James Clark Sr, KA2OSV.

Attendance :

President Jim Clark Sr, KA2OSV
Treasurer Al Arrison, KB2AYU
Recording Secretary John Zaruba Jr, K2ZA
Corresponding Secretary Ron Block, NR2B
Director Chuck Colabrese, WA2TML
Director Bill Price, NJ2S
Director Bob Durham, W2RAD
Director Jeff Welsh, KD2AZI
Director Jeff Garth, WB2ZBN
Director Herb Dyer, KT2Y
Trustee Mark Gottlieb, KK2L
Member John O'Connell, K2QA

Previous minutes approved as read by voice vote of directors present.

Treasurer's Report :

- YTD Income : \$351
- YTD Expenses : \$0
- Net : \$351

Notes : None

Treasurers report approved as read by voice vote of directors present.

Committee Reports :

Hamfest : 9/13/2020 may have a conflict with another 4-H activity that will impact parking. Al Arrison KB2AYU will investigate further. 9/20/2020 is a tentative backup date. Bill Price NJ2S discussed some ideas for incorporating a fox hunt to the hamfest.

Field Day : Jim Clark KA2OSV would like to have a Field Day pre-meeting in April.

Budget 2020 : See pages 36 and 37.

Discussion of various budget categories and decision process.

Budget approval motion, seconded, and approved by voice vote of directors present.

Old Business : None

January 2020 Board of Directors Meeting Minutes - Continued on page 35

New Business :

Jeff Garth WB2ZBN contacted Tom Preiser, N2XW, ARRL SNJ Section Manager regarding the Club's 60th anniversary as an ARRL Affiliated Club, ARRL to supply a plaque.

Mark Gottlieb KK2L discussed solar proposal for Clubhouse, more discussion ensued.

New Members :

- Gerald Blachniak KD2KIA Sewell, NJ
- Adam Sigmund No call Pitman, NJ
- Leonard Rust III W2LJR Sewell, NJ

Meeting adjourned @ 2040 Hours.

**Respectfully submitted,
John Zaruba Jr, K2ZA
Recording Secretary**



2019 Holiday Dinner Party - Record Attendance - A Good Time Was Has By All!

GCARC Budget

Dec 12, 2019 (committee draft version) Budget Income	2020 BUDGET	2019 BUDGET	Notes/comments	Actual last 3 yr ave	Actual 2019	Actual 2018	Actual 2017
Income Sources			# club membership	\$5,831.33	\$ 5,892	\$ 5,842	\$ 5,760
Hamfest	\$5,800	\$5,560	Based 3 yr ave, incl return startup cash	\$2,788.75	\$ 2,844	\$ 2,647	\$ 2,875
Dues	\$2,800	\$2,600	With No Dues Increase (Same as '19)	\$313.00	\$ 321	\$ 298	\$ 320
Donations at club mtgs 50/50	\$300	\$290	in line with 3 year average	\$72.33	\$ 80	\$ 55	\$ 82
Other donations [General, unspecific]	\$60	\$50	in line with 3 year average	\$0.00	\$ -	\$ -	\$ -
Coffee Club	\$0	\$0	Budget based on 3 year average	\$39.28	\$ 37	\$ 38	\$ 43
Interest	\$35	\$50	in line with 3 year average	\$0.00	\$0.00	\$0.00	\$0.00
Donations [specific]	\$0	\$0	if get any, will be bonus	\$0.00	\$0.00	\$0.00	\$0.00
Additional Fundraising, grants, advertising, sponsorships	\$0	\$0	None planned	\$0.00	\$0.00	\$0.00	\$0.00
Budget Income	\$8,995	\$8,550		\$9,045	\$ 9,174	\$ 8,890	\$ 9,080
Budget Expenses			Notes/comments	Actual last 3 yr ave	Actual 2019	Actual 2018	Actual 2017
Club House			# Clubhouse Operations Chairman	\$1,084.89	\$ 1,524	\$ 886	\$ 844
Electric	\$1,700	\$1,000	Increase for 2020 based on 2019	\$690.00	\$ 500	\$ 570	\$ 1,000
Grounds	\$1,000	\$1,000	Based on prior full moving fees	\$646.27	\$ 850	\$ 717	\$ 372
Internet (Comcast)	\$1,200	\$1,200	same budget as last year	\$292.44	\$ 292	\$ 292	\$ 293
Alarm Monitor	\$295	\$295	294/year. Wireless incl.	\$433.54	\$ 438	\$ 566	\$ 297
Maintenance	\$430	\$400	in line with 3 year average	\$2.00	\$ 2	\$ 2	\$ 2
Lease	\$2	\$2	It is \$2	\$54.33	\$ -	\$ 163	\$ -
Propane	\$200	\$100	LP '16,'16,20. Every 2 yrs. \$200 to fill.				
Clubhouse projects	\$0	\$0	Ask membership when needed.				
Total Club House	\$4,827	\$3,997		\$3,203	\$ 3,606	\$ 3,196.01	\$ 2808.39
Hamfest Expenses			# Hamfest Chairman	\$900.00	\$ 900	\$ 900	\$ 900
Venue Rental & Reservation	\$900	\$900	same budget as last year	\$733.33	\$ 1,000	\$ 700	\$ 500
Gate Startup Cash	\$1,000	\$700	same startup cash as '19	\$415.13	\$ 275	\$ 275	\$ 695
Other Hamfest, includes door prizes	\$300	\$300	same budget as last year	\$223.00	\$ 234	\$ 230	\$ 205
Tickets	\$234	\$230	based on last year actuals	\$0.00	\$ -	\$ -	\$ -
Advertisement	\$0	\$0	Lump in with club's public relations budget				
Total Hamfest Expenses	\$2,434	\$2,130		\$2,271	\$ 2,409.00	\$ 2,105.00	\$ 2,300.39
Jan 10, 2019	2020 BUDGET	2019 BUDGET	Notes/comments	Actual last 3 yr ave	Actual 2019	Actual 2018	Actual 2017
Corporation			# Club Treasurer	\$865.33	\$ 915	\$ 885	\$ 796
Insurance	\$920	\$885	Budget based on 2019 actual	\$50.00	\$ -	\$ 50	\$ 100
Public Relations	\$50	\$50	same budget as last year	\$24.97	\$ 64	\$ 62	\$ 75
Safe Deposit Box Rental	\$0	\$0	No charge at new bank (FNB Elmer)	\$62.67	\$ 72	\$ 156	\$ 62
P.O. Box Rental	\$64	\$62	Budget based on 2019 actual	\$75.88	\$ 25	\$ 26	\$ -
Web Site	\$200	\$128	72/yr email, +112 web/2yr pd in '18	\$33.67	\$0.00	\$ -	\$ 51
Annual Corp. Fees - NJ	\$25	\$26	Budget based on 2019 actual	\$12.40	\$ -	\$ -	\$ -
General/Office Expenses	\$50	\$50	miscellaneous	\$3.10	\$ -	\$ (5)	\$ 37
Bank Fees	\$0	\$0	none expected				
Member Badge Supplies	\$0	\$0	Ask membership when needed.				
Total Corporation	\$1,309	\$1,201		\$7,128	\$ 1,076	\$ 1,173	\$ 1,135

GCARC Budget

Programs & Activities	#	Programs & Activities Chairman	\$	\$	\$	\$	\$
Pfeifer Center Rental (new 2020)	\$240	\$20/month, new for 2020	\$152.69	\$117	\$170	\$170	\$171
Programs	\$400	External presenter meal + pizza night	\$126.57	\$45	\$156	\$156	\$178
Summer Picnic	\$225	In line with last year's budget	\$0.00	-	-	-	-
ARRL Support	\$100	same budget as last year	\$0.00	-	-	-	-
Awards	\$150	Expecting awards to be given '20	\$0.00	-	-	-	-
Health and Welfare, Sunshine	\$10	same budget as last year	\$0.00	-	-	-	-
Other activities	\$0	Ask membership when needed.	\$0.00	-	-	-	-
Total Programs & Activities	\$1,125		\$279	\$162	\$326	\$326	\$349

Field Day	#	Field Day Chairman	\$	\$	\$	\$
Food	\$400	same budget as last year	\$339.94	\$329	\$360	\$360
Gasoline	\$90	Expecting generator use in '20	\$0.00	-	-	-
Other Field Day	\$150	Expecting scout in '20 (incl port-a-potty)	\$0.00	-	-	-
Total Field Day	\$640		\$340	\$329	\$360	\$331

Repeater	#	Repeaters Chairman	\$	\$	\$	\$
Maintenance, repair, upgrade	\$100	maintenance at repeater sites	\$0.00	-	-	-
Total Repeater	\$100		\$0	\$-	\$-	\$-

Budget Expenses	\$10,435.00		\$4,694.81	\$7,582	\$7,160	\$7,160	\$6,924
Budget Income (from above)	\$8,995		\$5,986.70	\$9,174	\$8,880	\$8,880	\$9,080
Overall Net (Income-Expenses)	-\$1,440	2020 is not balanced budget proposal	\$1,291.89	\$1,592	\$1,720	\$1,720	\$2,156

2020 Budget 2019 Budget 3 yr. ave. Actual 2019 Actual 2018 Actual 2017

2020 budget committee members met on 12-12-2019 at GCARC clubhouse
 In attendance:
 Jim (President), Al (Treasurer), Mark, Jon, Jim

Lost Words From Our Childhood

By Ray Martin, W2RM

Mergatroyd! : Do you remember that word? Would you believe the spell-checker did not recognize the word Mergatroyd? ***Heavens to Mergatroyd!***

The other day a not so elderly (I say 75) lady said something to her son about driving a ***Jalopy*** and he looked at her quizzically and said, "What the heck is a Jalopy?" He had never heard of the word jalopy! She knew she was old, But not that old.

Well, I hope you are ***Hunky Dory*** after you read this and chuckle.

About a month ago, I illuminated some old expressions that have become obsolete because of the inexorable march of technology. These phrases included :

- ***Don't touch that dial***
- ***Carbon copy***
- ***You sound like a broken record***
- ***Hung out to dry***

Back in the olden days we had a lot of ***Moxie***. We'd put on ***Our best bib and tucker; To straighten up and fly right.***

Heavens to Betsy!; Gee whillikers!; Jumping Jehoshaphat!; Holy Moley!

We were ***In like Flynn*** and ***Living the life of Riley***; and even a regular guy couldn't accuse us of being a ***Knucklehead***, a ***Nincompoop*** or a ***Pill. Not for all the tea in China!***

Back in the olden days, life used to be ***Swell***, but when's the last time anything was swell? ***Swell has gone the way of beehives, pageboys and the D.A.; of spats, knickers, fedoras, poodle skirts, saddle shoes, and pedal pushers.***

Oh, my aching back! Kilroy was here, but he isn't anymore.

We wake up from what surely has been just a short nap, and before we can say, "***Well, I'll be a monkey's uncle!***" or, "***This is a fine kettle of fish!***" We discover that the words we grew up with, the words that seemed omnipresent, as oxygen, have vanished with scarcely a notice from our tongues and our pens and our keyboards.

Poof, go the words of our youth, the words we've left behind. We blink, and they're gone. Where have all those great phrases gone?

Long gone : Pshaw, The milkman did it. Hey! It's your nickel. Don't forget to pull the chain. Knee high to a grasshopper. Well, Fiddlesticks! Going like sixty. I'll see you in the funny papers. Don't take any wooden nickels. Wake up and smell the roses.

It turns out there are more of these lost words and expressions than ***Carter has liver pills***. This can be disturbing stuff!(***Carter's Little Liver Pills are gone too!***)

Lost Words From Our Childhood - Continued on page 39

Leaves us to wonder where Superman will find a *Phone booth*...

See ya later, alligator! Okidoki.

You'll notice they left out "*Monkey Business*"!!!

We are the children of the fabulous 50's (or 40's). No one will ever have that opportunity again! We were given one of our most precious gifts : Living in the peaceful and comfortable times, created for us by the "GREATEST GENERATION!"

5 Steps To Greater Happiness

1. Get a ham radio

2. Get a second ham radio, if one makes you happy, imagine how happy you will be with two!

3. Get a third ham radio.
More radios more happiness, right?

4. Tell yourself "no more ham radios".
Are you crazy?
You can only talk on one at a time.

5. Give in and get a fourth ham radio.
You were going to do it anyway and who are you to stand in the way of fate.



February Birthdays

Congratulations to our members who are celebrating their birthday this month

Wayne Ashton, WB2OYQ
Greg Ciraula, KC3NDJ
Chuck Colabrese, WA2TML
Ed DeFonzo, W2DE
Nicholas Klein, KD2PZN
Jennifer Robinson, KD2EYR
Vinnie Sallustio, N4NYY
Bill Szkromiuk, W4WCS
Mario Tagliaferri, W3CGS
Christine West, WA2MVU

In Memoriam February Birthdays

Silent Keys :

Philip Bakanowsky WB2ONS
Barbara Bielecki N2SBP
Marla Bozarth N2DWR (President 1992, 1995)
Thomas Cusack KC2THO
Milton Goldman K3WIL (President 1963)
Robert Grimmer Sr KN2QWO
Richard Hawkins N3RYO
Harry Lauer N3ISO
William Lewitt N2NLK
Harold Mathis NJ2C
Harry McCormick Sr WA2SEA
George Munns Jr KB2GW
Richard Munyan Sr W2RCM
Herbert Schuler K2HPV (President 1977)
William Uhland K4IDJ
John Yeager Jr N2PKF
Alvin Zipkin KZ2N



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 March 2020 issue : Thursday, February 20, 2020

Club Website www.w2mmd.org

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

February Contest Calendar

WA7BNM Contest Calendar : www.contestcalendar.com

February 2020

+ Vermont QSO Party	0000Z, Feb 1 to 2400Z, Feb 2
+ 10-10 Int. Winter Contest, SSB	0001Z, Feb 1 to 2359Z, Feb 2
+ Black Sea Cup International	1200Z, Feb 1 to 1159Z, Feb 2
+ F9AA Cup, CW	1200Z, Feb 1 to 1200Z, Feb 2
+ Mexico RTTY International Contest	1200Z, Feb 1 to 2359Z, Feb 2
+ FYBO Winter QRP Sprint	1400Z-2400Z, Feb 1
+ Minnesota QSO Party	1400Z-2400Z, Feb 1
+ British Columbia QSO Party	1600Z, Feb 1 to 0359Z, Feb 2 and 1600Z-2359Z, Feb 2
+ AGCW Straight Key Party	1600Z-1900Z, Feb 1
+ FISTS Winter Slow Speed Sprint	1700Z-2100Z, Feb 1
+ North American Sprint, CW	0000Z-0400Z, Feb 2
+ RSGB 80m Club Championship, SSB	2000Z-2130Z, Feb 3
+ ARS Spartan Sprint	0200Z-0400Z, Feb 4
+ QRP Fox Hunt	0200Z-0330Z, Feb 5
+ Phone Fray	0230Z-0300Z, Feb 5
+ CWops Mini-CWT Test	1300Z-1400Z, Feb 5 and 1900Z-2000Z, Feb 5 and 0300Z-0400Z, Feb 6
+ UKEICC 80m Contest	2000Z-2100Z, Feb 5
+ NRAU 10m Activity Contest	1800Z-1900Z, Feb 6 (CW) and 1900Z-2000Z, Feb 6 (SSB) and 2000Z-2100Z, Feb 6 (FM) and 2100Z-2200Z, Feb 6 (Dig)
+ SKCC Sprint Europe	2000Z-2200Z, Feb 6
+ NCCC RTTY Sprint	0145Z-0215Z, Feb 7
+ QRP Fox Hunt	0200Z-0330Z, Feb 7
+ NCCC Sprint	0230Z-0300Z, Feb 7
+ CQ WW RTTY WPX Contest	0000Z, Feb 8 to 2359Z, Feb 9
+ SARL Field Day Contest	1000Z, Feb 8 to 1000Z, Feb 9
+ Asia-Pacific Spring Sprint, CW	1100Z-1300Z, Feb 8
+ Dutch PACC Contest	1200Z, Feb 8 to 1200Z, Feb 9
+ SKCC Weekend Sprintathon	1200Z, Feb 8 to 2400Z, Feb 9
+ KCJ Topband Contest	1200Z, Feb 8 to 1200Z, Feb 9
+ YLRL YL-OM Contest	1400Z, Feb 8 to 0200Z, Feb 10
+ OMISS QSO Party	1500Z, Feb 8 to 1500Z, Feb 9
+ FISTS Winter Unlimited Sprint	1700Z-2100Z, Feb 8
+ RSGB 1.8 MHz Contest	1900Z-2300Z, Feb 8
+ Balkan HF Contest	1300Z-1700Z, Feb 9
+ Classic Exchange, Phone	1400Z, Feb 9 to 0800Z, Feb 10 and 1400Z, Feb 11 to 0800Z, Feb 12
+ CQC Winter QSO Party	0100Z-0259Z, Feb 10
+ 4 States QRP Group Second Sunday Sprint	0100Z-0300Z, Feb 10
+ ARRL School Club Roundup	1300Z, Feb 10 to 2359Z, Feb 14
+ NAQCC CW Sprint	0130Z-0330Z, Feb 12
+ QRP Fox Hunt	0200Z-0330Z, Feb 12
+ Phone Fray	0230Z-0300Z, Feb 12
+ CWops Mini-CWT Test	1300Z-1400Z, Feb 12 and 1900Z-2000Z, Feb 12 and 0300Z-0400Z, Feb 13

February Contest Calendar - Continued on page 42

February Contest Calendar

WA7BNM Contest Calendar : www.contestcalendar.com

February Contest Calendar - Continued from page 41

+ RSGB 80m Club Championship, Data	2000Z-2130Z, Feb 12
+ PODXS 070 Club Valentine Sprint	0000Z-2359Z, Feb 14
+ NCCC RTTY Sprint	0145Z-0215Z, Feb 14
+ QRP Fox Hunt	0200Z-0330Z, Feb 14
+ NCCC Sprint	0230Z-0300Z, Feb 14
+ ARRL Inter. DX Contest, CW	0000Z, Feb 15 to 2400Z, Feb 16
+ Russian PSK WW Contest	1200Z, Feb 15 to 1159Z, Feb 16
+ Feld Hell Sprint	1900Z-2059Z, Feb 15
+ AWA Amplitude Modulation QSO Party	2300Z, Feb 15 to 2300Z, Feb 16
+ Run for the Bacon QRP Contest	0200Z-0400Z, Feb 17
+ QRP Fox Hunt	0200Z-0330Z, Feb 19
+ Phone Fray	0230Z-0300Z, Feb 19
+ CWops Mini-CWT Test	1300Z-1400Z, Feb 19 and 1900Z-2000Z, Feb 19 and 0300Z-0400Z, Feb 20
+ AGCW Semi-Automatic Key Evening	1900Z-2030Z, Feb 19
+ NCCC RTTY Sprint	0145Z-0215Z, Feb 21
+ QRP Fox Hunt	0200Z-0330Z, Feb 21
+ NCCC Sprint	0230Z-0300Z, Feb 21
+ CQ 160-Meter Contest, SSB	2200Z, Feb 21 to 2200Z, Feb 23
+ REF Contest, SSB	0600Z, Feb 22 to 1800Z, Feb 23
+ UK/EI DX Contest, CW	1200Z, Feb 22 to 1200Z, Feb 23
+ SARL Digital Contest	1400Z-1700Z, Feb 23
+ High Speed Club CW Contest	1500Z-1700Z, Feb 23
+ QCX Challenge	1300Z-1400Z, Feb 24 and 1900Z-2000Z, Feb 24 and 0300Z-0400Z, Feb 25
+ SKCC Sprint	0000Z-0200Z, Feb 26
+ QRP Fox Hunt	0200Z-0330Z, Feb 26
+ Phone Fray	0230Z-0300Z, Feb 26
+ CWops Mini-CWT Test	1300Z-1400Z, Feb 26 and 1900Z-2000Z, Feb 26 and 0300Z-0400Z, Feb 27
+ UKEICC 80m Contest	2000Z-2100Z, Feb 26
+ RSGB 80m Club Championship, CW	2000Z-2130Z, Feb 27
+ NCCC RTTY Sprint	0145Z-0215Z, Feb 28
+ QRP Fox Hunt	0200Z-0330Z, Feb 28
+ NCCC Sprint	0230Z-0300Z, Feb 28
+ Feld Hell Sprint	0000Z-2359Z, Feb 29
+ UBA DX Contest, CW	1300Z, Feb 29 to 1300Z, Mar 1
+ South Carolina QSO Party	1500Z, Feb 29 to 0159Z, Mar 1
+ NA Collegiate Championship, RTTY	1800Z, Feb 29 to 0559Z, Mar 1
+ North American QSO Party, RTTY	1800Z, Feb 29 to 0559Z, Mar 1

w2mmd.org



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Facebook



Club Committees

Standing Committees	Committee Chairs
Membership and Publicity Hamfest Repeater Hospitality W2MMD Clubhouse Site Field Day Nominations Health, Welfare, & Silent Keys Budget Constitution and By-Laws Membership Badges	Bob Fields, KC6AOH Sheldon Parker, K2MEN and Bill Price, NJ2S Herb Dyer, KT2Y Jeffrey Garth, WB2ZBN Al Arrison, KB2AYU Al Arrison, KB2AYU Jim Clark Sr, KA2OSV Bill Price, NJ2S Al Arrison, KB2AYU Ron Block, NR2B Chuck Colabrese, WA2TML

Activity Committees	Committee Chairs
GC-ARES Emergency Coordinator GC-RACES Emergency Coordinator Club Publications License Testing/VEC Liaison Programs Membership Roster Database Club Historian GCARC Family Picnic Foxhunts W2MMD License Trustee Contests and Nets Holiday Dinner Party W2MMD Special Event Station	Karl Frank, W2KBF Ed Champion, N2RO Jeffrey Garth, WB2ZBN Gary Reed, N2QEE Tony Starr, WA2FZB Jeffrey Garth, WB2ZBN Jeffrey Garth, WB2ZBN Laurie Love, KD2EYW Jim Wright, N2GXJ Darrell Neron, AB2E Tony Starr, WA2FZB Jennifer Robinson, KD2EYR 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 he 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.

FYI...If you use Comcast e-mail, you are limited to 100 addresses per message.
 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

10 Meter Rag Chew Net

Every Monday @ 2000 Hours

Tune-In on 28.465 MHz or 28.475 MHz

2 Meter Rag Chew Net

Every Thursday @ 2000 Hours

Tune-In on the 147.180 MHz Repeater

10 Meter Swap Meet

2nd Saturday of the Month @ 2000 Hours

Check-in on 28.465 MHz or 28.475 MHz

Meeting Calendar

General Membership Meeting

Wednesday, February 5, 2020 @ 1930 Hours

Pfeiffer Community Center

301 Blue Bell Road

Williamstown, NJ

(Everyone is welcome)

Board of Directors Meeting

Wednesday, February 19, 2020 @ 1900 Hours

W2MMD Clubhouse

(All members are welcome)

February 5, 2020 General Membership Meeting

Arduino vs Raspberry Pi

Comparison & Overview

**** Badges ****

**Need a new or replacement badge
Contact "The BadgeMan"**

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

Question Pool Answers : G2B09:A; G2B10:C; G2B11:A; G2C01:D; G2C02:A; G2C03:C; G2C04:D; G2C05:B; G2C06:D; G2C07:A; G2C08:C; G2C09:C

73

Gloucester County Amateur Radio Club - P. O. Box 370 - Pitman, NJ 08071

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