

THE YCARS TRANSMITTER



Ham Radio News, Events and Information

YCARS Club House - 2051 Squire Rd. Rock Hill, SC 29732 – Mailing Address YCARS PO Box 4141 C.R.S., Rock Hill, SC 29732

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April 2023 Club Activities

- Every Wednesday 18:00 local – Club open House
- Lunch Social 1130h local – locations vary
- Thursday April 6 – Contest / Fun Night –
- Thursday April 13, Business Meeting clubhouse and virtual 19:30
- Friday April 14 – Monthly Simplex Net 146.580MHz – 21:15
- Saturday April 15 – VE testing at the clubhouse 09:30
- Thursday, April 21, YC ARES Meeting – clubhouse and virtual 19:00
- Thursday April 27v Presentation Meeting – Clubhouse and Virtual 19:30 – Craig Ramsey VOACAP

2023 YCARS Officers

- PRESIDENT – AB1CD
HILLARY RAMSEY
- VICE PRESIDENT – K4TTM
THEO MOORE
- TREASURER – K4DQP
DARCY PACH
- SECRETARY – KG9V
SCOTT PUTNUM
- CUSTODIAN – KD4RNP
WAYNE REEVES
- TRUSTEE – NJ4Z
JOHN GENDRON

YCARS Net Schedule

- 2 Meter Morning Net
Weekdays Mon-Fri
11:00 K4Ytz Repeater
147.030MHz (-) pl 88.5
- 2 Meter Evening Net
Weekdays Mon-Sun
20:30 K4Ytz Repeater
147.030MHz (-) pl 88.5
- ARES 2 Meter Weekly
Net Mondays 19:30
K4Ytz Repeater
147.030MHz (-) pl 88.5
- Monthly Simplex Net –
2nd Friday of the month
21:15

Welcome to the YCARS TRANSMITTER

Vol.3 No.4 April 2023

Hello everyone,

This month, in the Transmitter, editor NJ4Z talks about improving Ham Skills like CW, contesting and mentoring in "From NJ4Z's Hamshack"

The DX Radio Expedition Calendar is really heating up, even with Bouvet being over, there is plenty of rare DX out there to hunt.

Speaking of DX hunting and chasing Special Event Stations, NJ4Z provides a crash course on working split in our Getting on Air feature.

We also have an Ask an Elmer question this month about POTA and portable Antennas.

YCARS was out in force supporting the Sandblast Rally down in Kershaw, SC. We got a recap of the event by David, KX4UV in our YCARS in Action feature.

As always, our contest corner and local hamfest announcements are here on page 2 and we have YCARS AWARE, detailing all of the upcoming events and goings on with in the YCARS and Ham Radio World.

Please consider writing and article for the newsletter, as the saying goes, "Many Hands Make Light Work,"

We would also like to thank those who contributed this month to the Transmitter.

Until next month, all the best and much DX....

73

The Transmitter Staff

April 2023

Contest Calendar

4/1 – Louisiana QP 14:00
UTC
4/1 – Mississippi QP TBD
4/1 - Missouri QP14:00 UTC
4/4 - NA Sprint SSB -00:00
UTC 4/8 – NM QP 14:00
UTC
4/8 – GA QP 18:00 UTC
4/15 – CQMMDX – RTTY
09:00 UTC
4/15 - Michigan QP 16:00
UTC
4/15 – Ontario QP 18:00
UTC
4/29 – Florida QP 16:00
UTC
**BOLD TEXT INDICATES MAJOR
CONTEST (WORLD WIDE)**

Upcoming

Local Hamfests

4/8 - Raleigh Hamfest – RARS
– NC State Fairgrounds,
Raleigh, NC

4/15 – Ridge Amateur Radio
Club Tailgate Party – 340 E.
Columbia Ave, Leeville, SC
08:00

4/15 – Winston-Salem Spring
Fest – Forsyth ARC -
Robinhood Rd Baptist Church
– 5422 Robinhood Rd. 07:00 –
11:00



From NJ4Z's Hamshack

Musings from the Editor

This past month, I have been working to improve several of my Ham Radio skills, so I can be my best ham. The first skill I started working on was my CW copy and send. I am a weird bird with CW, some days I have it and some I do not. I mean, there are just days the music of the code just flows through my head like my favorite tunes and other days, it is just a cacophony of dits and dahs. I know some of the discrepancy is due to mental fatigue and lack of consistent practice. The reason to improve my CW is two-fold. First, I joined the Swamp Fox Contest Group (SFCG) back in December to help me improve my overall contesting skills and secondly, I know it will help be more successful in working DX, especially those rare stations. Joining SFCG put some pressure on me to work more contests. I know if I want to complete with the guys there and others around the world, I have to be able to work CW contests proficiently. I worked the ARRL WW CW contest in February. It was fun and hellish at the same time. I logged just over 250 QSO's in 5 hours of contesting. I learned that the only way I am going to get better is to be consistent in my practice and to take a CW course. I am registered for the fall session of CW OPS. While I am practicing, I am still chasing that DX, I managed to work some rare ones for me in the last month including CY0S Sable Island, 3B7M St. Brandon Islands, HD8M Galapagos Islands, and TR8CR the Gabon, Africa all CW. I am pretty happy with that.

I am working on my contesting skills. I am fairly competent and can hold my own in a pile-up. Where I lacked knowledge is tools, tactics and strategies. What I lack there I make up in brute force of high-rate count when the opportunities arise and my pigheaded determination to just muscle through the lean hours. I know if I gain some insight into the tools and strategy and employ some tactics, I can really elevate my contesting. It is kind of work smarter and not harder approach. After some encouragement from the folks at SFCG, I started to deploy N1MM contesting software with more of the tools. I will tell you that is a very powerful tool in a contest environment. I am still learning its full capabilities and I am sure I will be a much better contester overall when I get up to speed. I ran the CQ WPX SSB contest the weekend of March 25 and 26. I set my self an either-or goal, 1000 QSO's or 1,000,000pts, I figured this would put me in the top 4 or 5 of the SFCG single operator stations. I was amazed at how much N1MM helped me, even in the limited set up and time I had spent with the program. I was definitely more efficient and agile in search and pounce. It was much easier to get calls right the first time while running (calling CQ), with the call super check service running. I really want to get someone who knows this software to the club to do a presentation, I think many YCARS members can benefit from this and help us maybe get a Multi/Multi team going to compete in some of these big contests.

Lastly, I have been working on my mentoring skills, I really am trying to learn how to teach HAM Radio to others. I can answer questions all the time or tell people where to look or who to see if I do not know the answer to the question. That is quite different than teaching someone step one to step Z of Ham Radio. Sitting with someone at a radio and showing how it works and what they need to know, is problematic for me, but I am working on it. Until next month, "Be Your Best Ham!!!" de NJ4Z

“Getting on the Air”

Helping New Hams Advance

Last month we reviewed the operation of your radio on receive, to help you better operate in contests, hunting DX or in crowded band conditions. This month we are going to talk about another technique to help improve receive and make operations easier if you create big pile ups. Most seasoned operators know from experience that DX stations, especially rare ones, special event stations like 13 Colonies, and even some POTA activations can create huge pile-ups. They are difficult to work as the calling station and frustrating for the hunting stations trying to work the calling station. There are many undisciplined and quite frankly rude operators out there that create problems in a pile-up. Whether they continually call over other stations, call when not appropriate, act as self-appointed band police, or are deliberately creating QRM, these turn pile-ups into a nightmare.

There are several techniques stations can use to work a pile-up effectively, one is calling by the numbers, meaning they only ask for stations with a certain number in their call to respond to them. Of course, that only works if everyone is playing by the rules. The second is calling only for specific areas of the world like North America, Europe, Africa, Caribbean, Asia, South Pacific, etc. The third technique is called working split, which is what we want to cover in this column.

What is working split? Operating split frequencies involves transmitting on one frequency while listening on another. The idea is to separate the transmitting frequency from the receiving frequency. How will you know if a station is working split? Typically, if you hear a station on side band give their call and say listening up, 5up, 5-10 up or listening on a specific frequency. If they are working CW they will send their call with the word up after it. If you hear this that station is working split. They will be transmitting on the frequency, to which you are currently listening and will be listening for calling stations on another frequency usually for SSB 5MHz higher in the band or more or they could be on a specific frequency. Most CW stations will listen 1 to 2 MHz up from where they are calling. Using split frequencies will help to reduce interference from other stations.

For the most part when DX and Special event Station (SES) run split, you as the hunting station can hear the DX or SES when they call QRZ and it makes it easier to hear who they are coming back to for a QSO. Many times, you will operators who do not understand what split means and they begin to call over the DX or SES, please avoid the pitfall of becoming the band police and yelling “He is working split or he is working up” on to the DX frequency, there will be enough of those idiots already. All those self-appointed band police are doing is creating more QRM making it harder to hear the DX or SES. Most stations making the mistake will quit calling after five or six calls thinking the guy cannot hear them or they realize that he is working split.

For rare DX like the recent expeditions to Bouvet or Crozet Islands, the splits will get very wide, because there are so many stations calling the operator needs to break up that wall of callsigns. I believe the

split at one point on SSB for Bouvet was 5 - 30MHz up and when I tried them on CW and it was 1 - 15MHz up. That is an insane pile up.

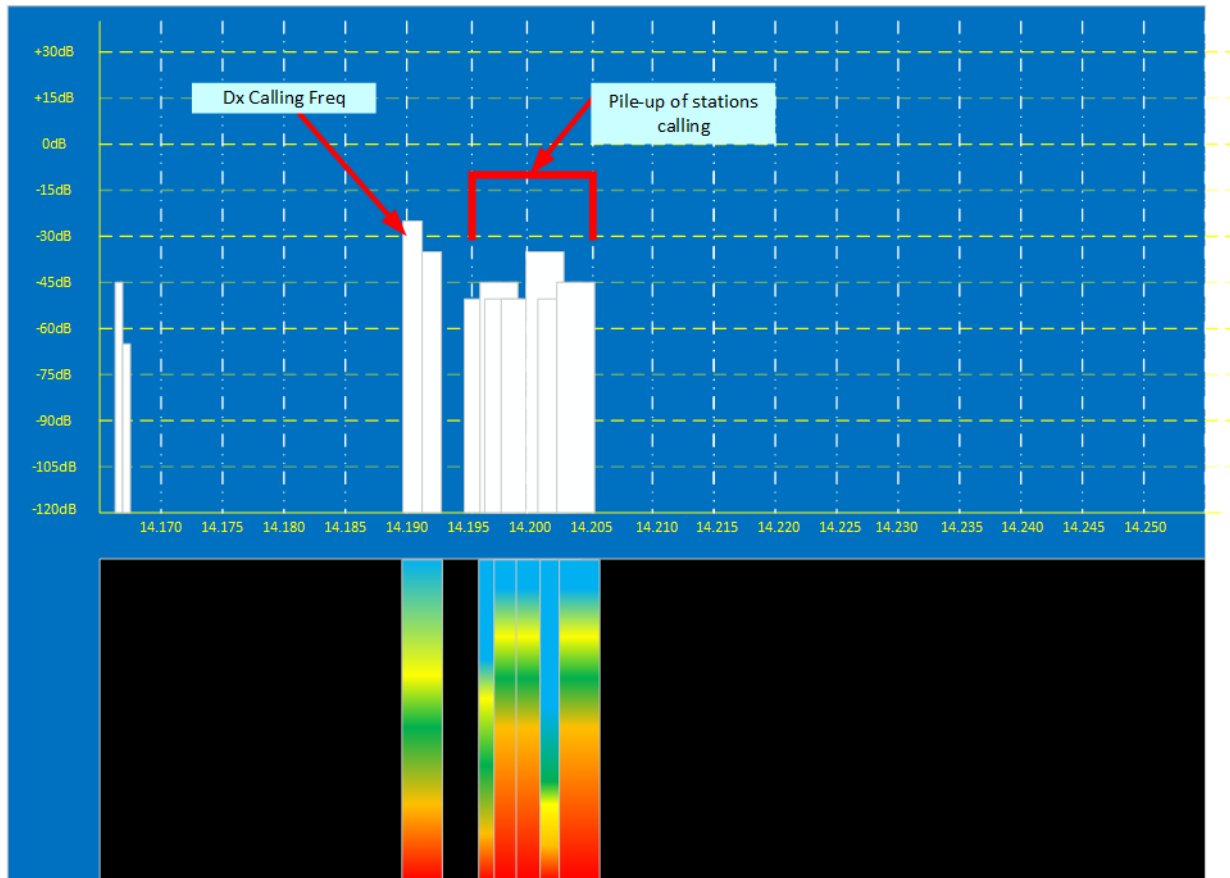
Now that we know what working split is, how do the hunting stations work split to try and contact the DX or SES? Most modern transceivers will have a button or menu setting on the rig that is marked "SPLIT" if you engage this button on SSB it should put the VFO you are working on into receive only mode and the second VFO on the radio into Transmit mode. It should also automatically move the second VFO frequency up 5MHz. An example, on the Icom IC-7300 on the right side of the radio on the second row of buttons the first one is marked "SPLIT".



VFO A becomes receive (RX) only and VFO B becomes the transmit (TX) side of the radio. You can adjust the TX frequency on VFO B engaging the A/B button next to split to use the Main VFO knob on to adjust VFO B.

Another way to work split is to use the Transmitter Incremental Tuning (XIT for most HF radios and ΔTx on ICOM radios). The XIT or ΔTx move the transmit frequency on the current VFO independent of the receive frequency. This is a neat trick and for me is easier than trying to set up the proper split. I simply just engage the XIT or ΔTx on VFO A and move my transmit window to where the DX or SES is listening. You can use either method to set your transceiver into split mode, these methods work for CW just the same as SSB. Once you are set up, when you transmit it will be on frequency the DX or SES is hopefully listening.

Notice In that last statement I used the word **hopefully**, in these pile-ups the wall of calls coming to the operator is very chaotic, and can be 30, 50 or 100 stations at the same time. That is why the DX or SES station will say "5 to 10 up" this allows those calls to split up in hopes the operator can pull out a call or partial call to work. See the diagram showing how this would look on the scope. Regardless how big the pile-up is, you need a place to be heard by the station. There are a couple of tricks I can share with you that can help you be heard even with a 100watts and a wire.



First, it is best to use headphones to help eliminate background or ancillary noise in you shack. Listen a bit to both sides of the pile up, by switching the RX from VFO A to VFO B so you can hear the stations. This becomes much easier using a radio that has dual receivers. You can listen to each of the VFO's at the same time. This way you can see if the station is working the loudest station, first caller, last caller or where he is listening within the pile-up frequencies. The key to this is to learn how the DX or SES is operating.

Once you have a strategy on how you are going to work the station, get ready to call on the frequency you think he is listening. If you are using a spotting cluster look to see if someone posts QSX with the DX spot that is the frequency they worked that station on, or they might list the split they worked them on. An example spot for our diagram would be: **DX:** M0MCX, **DE:** NJ4Z **Freq:** 14.190MHz **Comments:** 5-10 up QSX 14.1975. meaning I worked M0MCX on 14.1975.

It is funny how most inexperienced split operators will either park themselves to transmit on exactly 5MHz if it is a 5up split, or if it is 5 – 10 up some will park 5MHz or 10MHz up. It is best not to get directly on any of those frequencies, because everyone is piled on top of each other in the same 3 or 6 KHz. Try to go off frequency a few KHz in a 5up split. If the split frequency is 14.195 try calling at 14.194 or 14.196 you will be off frequency a bit but it may make you stand out. Same goes for a wider split, try somewhere in the middle of the chaos. 14.1975, 14.198, etc. That operator will be moving around within the that 5 to 10KHz of bandwidth.

Another trick is to give a little bit of time for the pile-up to die down a bit before you call, most folks will key up as soon at the DX or SES calls QRZ, and that is a place where only the loudest stations will be heard.

Also be persistent, sometime if the pile-up is huge you may have to try for 30 minutes or an hour to make the contact. I tried several times for as long as I could copy 3Y0J with no contact, but my patience paid off when trying to work 3B7M on CW 10 meters (Agalega and St Brandon Islands) in the Indian Ocean. It is a rare DX entity and took me several days and almost an hour on the successful attempt to contact them.

The final key is to practice setting your radio up and working stations that have pile-ups even if they are not split. Parks on the Air late shift activations are a great opportunity to practice your pile-up breaking skills.

A couple last thoughts always remember before your key up to work that rare DX or all time new one (ATNO), check to make sure you are in split mode, otherwise you will hear it from the band police. I know because I have made that mistake on more than one occasion, it never hurts to double check.

And never ever, ever try to match or tune your antenna on the DX or SES calling or listening frequencies, move away and come back. It is rude and there is no excuse for it, **do not be that HAM.**

I hope this helps you work those rare dx and ATNO's and brings much enjoyment to your operating.



One of the questions I get from a many new hams and from those new to POTA is what is the best antenna to take out to a park. That is a loaded question, it really depends on how you are going to operate and which park you are activating.

In some parks you cannot put anything in the trees, some you cannot put anything into the ground like stakes, so those factors are going to influence your antenna choice for that activation. If you operating QRP versus 100w station you may want a different antenna. My approach to the problem was to try the shotgun approach. Meaning I have a plethora of antennas. When I go to activate, I have a specific bag of antennas and supports I take to cover all the different kinds of challenges a site may present.

I would suspect most "Hardcore POTA" folks take the same approach. The fact that you may not have the opportunity to scout your site prior to your arriving for the activation, means you need flexibility. Google maps street views will only get you so far in fleshing out what the site may look like. It is best to have options.

When I started out, my first purchase was a portable vertical antenna system that was multi-band, easy to set up and did not require to put anything in trees or in the ground. The Alpha Antenna "Portable 6-80M HF Antenna" was first portable I chose. It is easy to set-up and requires no real added support. It does have a ground stake and a counterpoise stake but I was able to use some value engineering to escape the need of the stakes.

The antenna is an expensive solution but works. It can be a purchase once solution for most applications, but may not be for everyone.



The DX Commander Expedition deployed on St John

The best Vertical solution I have found so far for POTA is the DX Commander expedition model. It is small, lightweight, is easy to set up and requires no tuner on the bands you equip it for. The antenna is primary designed for 10, 12, 15, 17, 20 and 40 meters. I have traveled quite a bit with this antenna, including trips to Florida, Ohio, North Carolina, South Carolina and the Caribbean Island of St. John. The antenna just flat out works. I have worked the world with it and 100 watts and have logged over 4000 q's during activations.

In addition to the two vertical solutions (DXC expedition and Alpha Antenna), I carry a third vertical option it is a Wolf River Coils set. I have a tripod, silver bullet 1000 coil, sporty forty coil, 213" whip, 120" whip, The spike and a set of radials. This set up gives me flexibility and is easy to set-up. The big drawback to this type of loaded vertical is it requires tuning for band or mode changes. Because it is a coil loaded antenna it is "High Q" and narrow banded. So if you want to switch modes within a band you will more than likely have to adjust the antenna and if you change bands you will have to adjust the antenna length and coil. It is a good antenna just requires a bit

of work. There are many activators who use "Buddi-poles and Buddi-sticks" and they work well but suffer from the same issues as the Wolf River coils and require a lot of adjustments. The Buddi-pole solutions are quite expensive for what they are

With the vertical options covered, I spoke with many an activator and many suggested an half wave end fed (HWEF) antenna. Typically, they will work on multiple bands. They are simple to deploy and work well, so I have tried a few of those from manufacturers and home brew antennas using a Balun Design and Palomar Engineers baluns and lengths of wire. I have also tried the N9SAB HWEF antennas and for a light weight 100watt capable HWEF I have not found anything better. I have two versions in the bag, the first is a 10-40 at 66ft long and a 10 – 80m version at 130ft long. Why two versions? Well flexibility, the site may not be large enough to put up 130ft antenna, so use the 66-foot antenna. There are a host of HWEF antennas that are commercially made and available from different sources, MFJ, Myantennas, Pak-tenna, and others are very popular. I have found for my money Tim Ortiz, N9SAB's antennas are best for light-weight, 100watt antennas. You can find these on eBay. [N9SAB HF Ham Radio Antenna | eBay Stores](#)



10-40m OFC Dipole deployed on the 7m Sotabeam mast

As 5 antennas wasn't enough, I also carry two off-center fed dipole antennas, produced by N9SAB. I carry a 10-40m 66ft and a 10-80m at 135ft long. These two antennas give me a little better performance than the HWEF antennas, and provide more band coverage than a standard dipole antenna. The one drawback to these antennas is they do require at least two points of suspension, preferably three points of support. As with other antennas, there are plenty of manufactured pieces and you can always home brew something.

So what else is in the antenna bag, there is a bunch of other equipment, my wrist rocket 2 band slingshot with fishing reel and a throw line / throw weight (14oz) kit to launch lines into trees to support the antennas when necessary. I carry about 300ft of 550 paracord and 300ft of 3/16 Dacron rope to support they antennas. I have tent stakes and Nite-iez cam-jam carabiners, cable ties all for support of antennas or masts. I carry a Sotabeam 7m heavy duty tactical mast and support kit, and a 5m collapsible fishing pole to support the HWEF far end or the center of the OCF dipoles. I also carry about 250ft of antenna wire and a host of 5- and 10-meter radials. Not carried in the bag, but with me most activations is a 12m Spiderbeam heavy duty mast. It is way too long to fit in the bag at about 42" long collapsed, it without a doubt is a get support. There is also several rolls of 50ft coax (RG-8X and RG-58) and a host of connector adapters and couplers.

As I am continuing to build out this antenna bag one of the next items I am considering is a drive on mast support to eliminate some of the need to use stakes or my concrete anchors for supporting the masts.

In the end it is best to have flexibility in your antenna choices for any activation, you never know what you are going to run into. you can build your antenna arsenal over time and as budget allows. As you gain experience as an activator, you will learn what works for you and your activations. The object is to have fun and experiment. If you have questions about POTA antennas or any other Ham Radio related topics feel free to send them to the YCARS Transmitter and we will get them answered in this column.



YCARS Members assist in the 2023 Sandblast Rally - David McLaren – KX4UV

The 2023 Sandblast is in the books. Thank you to all the 14 YCARS Members and family for coming out to support and to enjoy the event. There are many HAMs from around the South East that came out and all of our participation helps ensure the safety of the public watching, the Race teams participating and by reporting of Racers on course, of problems and emergencies on and off track. All while we get to watch Rally Racing from unique locations. Mary Hunt (N4MH), was Net Control and her team did a great Job corraling the cats that we Ham Radio Operators can be.



This year started with a windy and rainy night resulting it what was a nice sand packed route for the start of the racing, but the unusually warm season dried things out quickly and the sand tracks got dusty as the cars roared down the tracks adding their dust to every growing Yellow Pine pollen already dusting everything. I think I will be cleaning pollen out of my gear all summer. HA! We started early with the meeting at the High School at 6:20am. We were huddled into our teams, assigned earlier in the week in pre-event conference calls, and were advised of any changes of information. We then followed our Team Captains out to the assigned courses marshal points where we were dropped off and began to secure the intersections or spectator areas. Some worked Start/Finish spots assisting tracking of the cars. Once we had things setup and ready, the racing began along with the fun and excitement with it. Seeing those Bikes, Buggies and Cars go flying by is a great sight to be seen. We are supposed to keep track of racers as they passed, but those bikes are moving fast and the assigned numbers are small (and my eyes not as sharp). I just had to count the bikes instead, but the car's bigger numbers was not a problem at 60+ MPH. We never lost any racers, but that's why we keep track. Some areas are not visible so keeping track helps us find where they were last seen so we can get them assistance if necessary.

By days End we had 9 Stages (individual rally's) completed with the last of the bikes and cars finishing in the dark. Watching the bright lights of racers coming at you thought the trees is a special treat to watch and experience to be part of. Once the Rally is done, the Team Captain's come by and have you take down the Tape and dismiss you from your position and thank you for helping by sending you to the Big Party they have in the town of Cheraw, SC for Volunteers and Racers. And I assure you a great time is had by all and by those from YCARS (Bill (K4CIJ), Less (KN4KBZ), Devin (KQ4DAE), Shelia (KQ4DOU), Tim G. (K6FNV) with Ladonna and Corey, Hillary (AB1CD) & Daniel (WD2DW), Jack (KJ4BKI), Jamie, Theo (K4TTM) and Afton. If you haven't volunteered at this event, I encourage you to do it next year. It can be a long fun day full of a lot of down time between Rally's, but I always leave with a smile and good memories of the experience.

YCARS News and Updates

Be YCARS Aware

YCARS 2023 Summer Field Day Planning Update

The Summer Field Day Committee met on Sunday 3/12/2023 to discuss location, plans and logistics for the event. The event will be held at Westminster Park in Rock Hill. This location has hosted the event for the last 5 years and is a great place for the gather and participate.

The club is planning to run for the full 24 hours period, with 2 primary stations and one "Get on the Air" stations (GOTA). The club will be running emergency power and will be considered a "2A" station. The club will also welcome the public during the event from 13:00 – 19:00 local on Saturday June 24th and again on Sunday June 25th from 09:00 until 12:00.

More information with greater detail on the plans will be forth coming in the May newsletter, as the field day committee will be meeting again on Sunday 4/16 at 19:00 local.

If you would like to be on the committee, please reach out to Hillary e-mail is AB1CD@YCARS.org.

RESCHEDULED - YCARS Contesting Meeting – Discussing Parks on the Air Plaque Event – Planning Discussion Thursday April 6, 2023

Wade Parker, KO4IVS and John Gendron, NJ4Z will be leading the planning discussion of YCARS defense of the Support Your Parks plaque event during the monthly contesting presentation on Thursday evening February. Bring your thinking caps because we are going to run through some stuff on this one. We are in every other teams' sights and they all want to take that plaque away!

RESCHEDULED – YC ARES Crossband Repeat Exercise

David McLaren, KX4UV (EC York County) has rescheduled the York County ARES crossband repeater exercise for 0900h local at the clubhouse. Saturday April 22, 2023. The event originally scheduled for March 25th, was canceled due to expected heavy rain during the exercise which would have potentially put participants at risk. There will be a planning session for the event held during the April ARES meeting on April 20, 2023 on teams and in-person at the clubhouse 1930h local.

YCARS YouTube Channel Update

The recoding of the March Presentation Meeting with Special Guest Kyle Kreig, AA0Z, with the basics of Node Red applications for Ham Radio will be up April 1st, 2023 on YouTube YCARS Channel.

YCARS – Welcomes **6** new club members in MARCH 2023– continuing to grow. **18** total for 2023

Please extend a very warm welcome to all of our new members from February 2023

W4UMW*	Ron Adams
K1DVB*	David Biggers
KK4QOA	Ruben Landa
KQ4GJB	Steven McCart
KO4MDM	Rocky Norkum
No Call Yet	David Henson

*Returning past Member

SAVE THE DATES –

May 13, 2023 - YCARS will be supporting communications at the 2023 Mike Doty Run



June 3 – 4, 2023 – Parks on the Air – SYP Plaque Event

June 23 – 25, 2023 – Summer Field Day

Oct 6 – 7, 2023 – Rock Hill Hamfest

YCARS Weekly Lunch Social Schedule for April – Brent, K4BSC

4/6 - Helen's Hot Chicken - Mt Gallant Rd

4/13 - Ouzo's - Celanese Rd

4/20 - Taqueria El Manhattan - 1919 Cherry Rd

4/27 - Pop's Cafe - Ebenezer Rd.

Don't Forget the NEW YCARS – YCARS 75th Anniversary SWAG on the YCARS SWAG Store

The YCARS store has new 75th anniversary logo T-shirts, Mugs, Hats and Jackets. As well as all the other branded T-shirts, sweatshirts, jackets, mugs and more you can purchase. Proceeds go to the general operating fund of YCARS.



YCARS SWAG store is [Store 1 — YCARS - York County Amateur Radio Society](#)

The York County Amateur Radio Society

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