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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May 2023 Club Activities

Every Wednesday 18:00 local – Club open House

Every Thursday Lunch Social 1130h local – locations vary

Thursday May 4 – Contest / Fun Night –

Thursday May 11, Business Meeting clubhouse and virtual 19:30

Friday May 12 – Monthly Simplex Net 146.580MHz – 21:15

Saturday May 13 – Mike Doty Run Fort Mill 0600 – 1200h

Thursday, May 18, YC ARES Meeting – clubhouse and virtual 19:00

Thursday May 25 Presentation Meeting – Clubhouse and Virtual 19:30

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.5 May 2023

Hello everyone,

This month, in the Transmitter, editor NJ4Z talks about POTA and quick pop-up activations in "From NJ4Z's Hamshack"

The new rules for RF exposure take effect on May 3, 2023. We cover what you need to know to be compliant in our Getting on Air feature.

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

We also get some exciting news from David, KX4UV YC ARES EC about upcoming activities and new repeaters.

Theo, K4TTM shows us how he put a fox in the clubhouse in our "On the Workbench" 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.

There are also a few items in the YCARS Boneyard to tempt your wallet.

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

MAY 2023

Contest Calendar

5/6 – 7th Area QP 13:00 UTC

5/6 – Indiana QP 16:00 UTC

5/6 - Delaware QP 17:00 UTC

5/6 – NE QP -20:00 UTC 5/20 - Arkansas QP 14:00

5/27 – CQWPX CW 00:00 UTC

BOLD TEXT INDICATES MAJOR CONTEST (WORLD WIDE)

Upcoming Local Hamfests

5/6 – Chris Keen Memorial Hamfest – Goldsboro, NC 1100 1st PH Church Rd Goldsboro, NC 27530

5/13 – Columbia Amateur Radio Club -Spring Swapfest – Carolina Military Museum – 1National Guard Rd, Columbia, SC 29201 1000 -1600h.

7/15 – 50th Annual Cary Mid-Summer Swapfest Ritter Park 301 W. Lochmere Dr. Cary, NC 27511

7/29 – WCARS Hamfest Fest – Smoky Mountain Event Center (Heywood County Fairgrounds) 758 Crabtree Rd. Waynesville, NC 28785



From NJ₄Z's Hamshack

Musings from the Editor

This past month I have been thinking quite a bit about Parks on the Air. The program is amazing for not only how it has revolutionized portable operating but how it has energized Ham Radio. Everyone seems to be excited about POTA, well almost everyone. There are a few "Sad Hams" or "Ungrateful Hams" that seem to have a problem with how much activity is on the air with POTA. That said I managed four activations in the past month, albeit they were simple pop-up quick activations. What I mean by pop-up is I have been driving to and from business meetings in different parts of the Carolinas and Georgia. I make note of any parks along the way that are close to the roads I travel. If time allows, I pull into the park, find a spot and I activate the park from my truck. I run a Yaesu FT-891 and a Yaesu ATAS-120 screwdriver antenna, in the truck. I normally can generate a quick pile-up by spotting myself on the POTA app. I will stay there until I make my 10 contacts or the pile-up dies. Then I hit the road again. With no set-up time I can usually get an activation complete in 10 to 20 minutes and not affect my travel time to greatly. I have activated the Battleship NC Monument twice, Lumber River State Park, and the Lighthouse Wildlife Management area on Folly in SC in the last month each activation was less than 30 minutes from spot to QRT and all were successful and averaged 20 contacts, just a bunch of fun in a short time without killing my schedule.

I strongly believe if I tried this same type of operation in early 2017 before the Parks on the Air program, I would not have many people calling back to my CQ. My guess, depending on the time of day, my options would be to check into one of the many daytime nets or listen to the dead air while calling CQ. The downward trend in the solar cycle 24 would not have helped the situation. Now that we are in the strong upswing of Cycle 25, there is a fairly good chance I would get some callers without POTA, but certainly, it would not be the type of pile-ups this program is generating for portable operators. I for one am certainly grateful for the program and the folks who are both activating and chasing.

As we swing into May, I am still finalizing plans for our team in the POTA Plaque Event. I am not sure why they separated this from the Support Your Parks weekend in July. I have listened to many of the YouTube explanations for the date change, and I still haven't heard a solid reason, but hey it is their program and we are just participants. I really do hope conditions are good, the YCARS teams perform well and we bring home the hardware again.

I am really looking forward to June and July. They will be radioactive months for me as we have the POTA Plaque Event, ARRL Summer Field Day in June and I will be an operator for 13 Colonies K2L team and the second round of the South Carolina VOTA Station W1AW/4. So, look for both K2L and W1AW/4 on the air.

Until next month, "Be Your Best Ham!!!" de NJ4Z

"Getting on Air"

Ham Radio Advice and Tips

In May of 2021, the FCC changed its stance on the RF Exposure rules exemption for Amateur Radio stations. This rule change goes into effect May 3,2023. If you were unaware of the rule change or still don't understand how they apply to your station here is what you need to know.

The new rules, which go into effect on May 3, 2023, do not change the existing limits on human exposure to radio frequency (RF) electromagnetic fields, but they do change the way you have to evaluate and demonstrate compliance with those limits.

The new rules eliminate the categorical exclusion that previously exempted amateur radio stations from routine evaluation for RF exposure, based on power and frequency. Instead, the new rules require that all stations, regardless of power or frequency, be evaluated against the FCC guidelines, unless they qualify for an exemption based on a simple formula. The formula takes into account the transmitter power, antenna gain, frequency, and distance to the nearest human.

If your station does not qualify for an exemption, you will have to perform a routine environmental evaluation to determine the maximum permissible exposure (MPE) levels at your station and in the surrounding area. You can use various methods and tools to perform this evaluation, such as online calculators, software programs, or published tables and formulas. You will also have to keep records of your evaluation and make them available upon request by the FCC or other authorized parties.

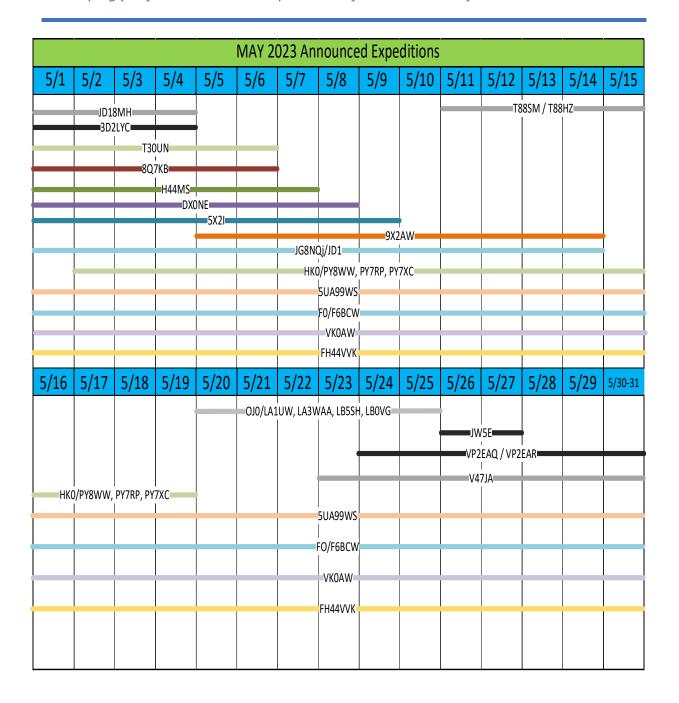
If your station exceeds the MPE limits, you will have to take measures to reduce the exposure levels, such as lowering your power, changing your antenna location or orientation, installing signs or barriers, or limiting access to your station. You will also have to re-evaluate your station whenever you make changes that could affect the RF exposure profile, such as adding or modifying antennas, increasing power, or changing frequencies.

The new rules apply to all new stations and modifications after May 3, 2021. For existing stations that were previously excluded from evaluation, you have until May 3, 2023 to complete your evaluation and ensure compliance. The FCC has provided various resources and guidance to help amateur radio operators understand and comply with the new rules. You can find more information on the FCC website or on the ARRL website. Link to the ARRL RF Exposure Calculation tool: RF Exposure Calculator (arrl.org)

The new FCC RF Exposure rules are intended to protect the public health and safety from potential hazards of RF electromagnetic fields. By following these rules, you can enjoy your amateur radio hobby while ensuring that you and others are not exposed to excessive levels of RF radiation.

Radio Expedition Calendar

Helping you find the DX – most up to date information can be found at DX-NEWS.com



CALLSIGN	LOCATION	DATES
JD81BMH	Chichi Jima	5/1 – 5/4
3D2LYC	Yanuca Island, Fiji	5/1 – 5/4
T30UN	Kirbati, South Pacific (Tarawa)	5/1 – 5/6
8Q7KB	Maldives, Indian Ocean	5/1 – 5/6
H44MS	Solomon Islands, South Pacific	5/1 – 5/7
DX0NE	Spratly Islands, South China Sea	5/1 – 5/9
5X2I	Uganda, Africa	5/1 – 5/10
JG8NQJ/JD1	Marcus Island Tori Shima	5/1 – 5/15
5UA99WS	Niger Africa	5/1 – 5/31
F0/F6BCW	Huahine Island, French Polynesia	5/1 – 5/31
VK0AW	Antarctica	5/1 – 5/31
FH4VVK	Mayotte Island (Fr.) Africa Indian Ocean	5/1 – 5/31
HKO/PY***	San Andres Island (Columbia)	5/2 – 5/19
9X2AW	Uganda, Africa	5/5 – 5/14
T88SM/t88HZ	Koror Island (Palau)	5/11 – 5/17
OJ0/LA****	Market Reef	5/20 – 5/27
J47JA	Saint Kitts Island (Caribbean)	5/23 – 5/31
VP2EAQ / VP2EAR	Anguilla Island (Caribbean)	5/24 – 6/1
JW5E	Svalbard Island (N. Atlantic)	5/26 – 5/28

YC ARES UPDATE

Hello everyone. The ARES Meeting was held at the York County Emergency Management and York County 911 Communication Center. York County ARES was invited to hold the meeting at the facility by John Carter, KC4KPJ. John is the Electronics Communications Manager with York County Public Safety Communications. It was a great meeting and we really enjoyed the Tour of the 911 operations and of the YC EOC facilities. John and York County Public Safety are in the process of updating of some York County repeaters and adding a new one in Fort Mill. The ultimate goal of the upgrades is to provide for better coverage and ease of operations for YC ARES if needed in an emergency situation. These upgrades will also allow for better coverage for events held in York County like the upcoming Mike Doty Memorial Run and Skywarn operations. Eventually the existing repeaters and the new Fort Mill Repeater will become a linked system, providing county-wide coverage. The county-wide coverage will also benefit local amateurs and those traveling though York and the surrounding counties with robust coverage for amateur radio use.

Currently the City of York and Bullock Creek (south Western York Co) repeaters are operational. They have generator power back-up and with an elevation of 400ft provide amazing coverage. The Fort Mill is currently in testing and located at the 911 center connected to a rooftop antenna. The repeater should be relocated to its permanent home by the end of April and should be ready to support our efforts to provide communications for the Mike Doty Memorial. Once operational at its Fort Mill Location, coverage will be tested for the run.

John has advised that YCARS is welcome to use the repeaters for a back-up to the current SC Heart K4YTZ (147.030) repeater. John is hopeful that the repeaters will be used by local hams and YCARS members in particular.

The repeater info is as follows:

York Repeater: W4PSC - 147.270 Offset (+) Tone D156 Bullock Creek Repeater – W4PSC - 147.375 Offset (+) Tone D156 Upcoming Fort Mill Repeater – W4PSC - 146.970 Offset (+) Tone D156

Cooperation with YC EM and Public Safety Communications could provide YCARS with some amazing opportunities and we welcome the relationship.

We also have two events in May – May 13th is the Mike Doty Run benefitting Keystone Substance Abuse of Rock Hill.

The Pre-event meeting is Tuesday May 9 at 17930h and is mandatory for volunteers



Please follow the two Signup links below (1 is YCARS and other is Keystone) to register. We are short YCARS help and need a few more people to help out that day. You need to be on the list to get the required T-Shirt you have to wear as a volunteer that day.

Everyone that has already signed up was sent the meeting invite for the Pre Meeting. If you did not get that, it might be we do not have you signed up yet. Please do so this week, and we can add you to that Pre Meeting were we discuss details of the event before that Saturday.

https://www.signupgenius.com/go/9040D44A5A82EA2F49-detmike1 (Start Here to sign up)

https://www.trisignup.com/Race/SC/FortMill/DetectiveMikeDotyMemorialRun (after you have completed Signup Genius, KeyStone Volunteer registration with this link and put in "YCARS" on one of the address line)

May 19 and 20 YC ARES and YCARS Community Service will be providing communications for the St Philip Neri Italian Festival in Fort Mill. There will be a pre-event meeting on Tuesday 5/16/2023 at 1930h, attendance is mandatory for the volunteers working on the event. There is a online sign up form SIGN UP: YCARS: St. Philip Neri Festival (signupgenius.com)

David McLaren - KX4UV Community Support & VE Test Coordinator



The Workbench Ham Projects

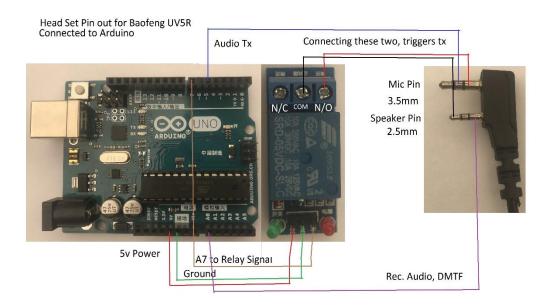
There's A Fox in The Clubhouse! By Theo Moore, K4TTM

Recently, I was having a conversation with AD3I about how cool it would be to have the YETi group to have their own fox for use in foxhunts with the kids. I am sure most hams are already familiar with the concept: using a small, weak transmitter with a compromised antenna that will transmit a signal that can be used as a "fox" for operators with directional antennas ("hounds", of course) to hunt. We discussed purchasing one as they do come to your door, ready to go, but I thought wasn't a very "YETi" like way to do things. I thought the very build of a fox was itself a great way to showcase our hobby in a very visual way to the kids we hope to inspire. Nothing seems to encourage interest and confidence more than someone doing something and then showing how they did it. The "if I can do it, you can too!" mentality takes over. So, I decided to build one. The goals for my build were:

- 1) Simple design. I wanted this to be something that just about anyone could replicate.
- 2) Relatively inexpensive.
- 3) Functional. It has to work 😊
- 4) Make it visible. (More on this when we get to it)

I confess I consulted the great repository of human knowledge on ham radio, the internet and I looked for designs. There are quite a few designs out there, but again, I wanted mine simple. So, I chose a simple design using an Arduino board, a microphone/speaker cable, a relay, and a Baofeng (I heard one called a "Bao-fiend" recently. Hysterical) UV-5R. I borrowed a wiring diagram and plan from Whitecourt Amateur Radio (https://wcar.ca/pg/fox-tx/) which provided the following wiring diagram:

https://wcar.ca/wp-content/uploads/PhotoGallery/FHTX/Arduino-Layout.jpg



If you assemble this, be sure to carefully test your mic connector and wires so that you get them hooked up correctly. I actually labelled them with a small bit of tape indicating which contact on the plug they were for, and it saved me a lot of headaches. Also, leave as much wire as you reasonably can when you cut the out the PTT in the cable. It took me a couple of tries to successfully solder the wires as the ones in the control cable are awfully thin.

Once it was wired up, I used the Arduino sketch from the page above and installed it on my Arduino. You do have to configure it to see the correct callsign and there are settings you can adjust (e.g., how long between sending signals), but the sketch itself is very well documented and easy to change.

Essentially, the Arduino controls the voltage to the relay which in turn either sends or stops current to the PTT of the radio. At the same time, a signal is sent to the radio mic circuit with the appropriate signal, 30 seconds of sound, followed by the callsign and followed by "FOX".

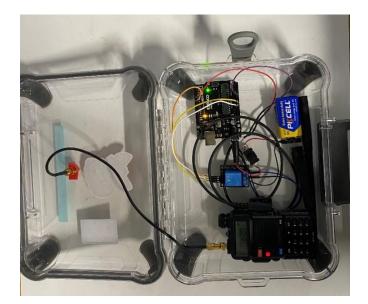
I confess I had a bit of fun with the relay. After getting myself completely goofed up and confused trying to follow the articles on the internet, I went to see the other great repository of human knowledge on ham radio, Barnes (W4GOY) who cleared it up for me in about 2 minutes. Once I got the relay hooked up correctly, it worked perfectly.

So, now I had a simple, relatively inexpensive transmitter, that worked. Three out of four criteria solved! However, I wanted it to be visible. I wanted it to be easy to see the components in it and then be able to point to them when explaining what it was doing. I wanted the watcher to see the amber light blinking out the same signal that was being transmitted. Hillary (AB1CD) suggested using a sealed camping box. I search around and found one that is watertight and clear plastic with plenty of room to spread the components around. It was perfect.

I also purchased a short, soft Retvis antenna that will help reduce the gain a bit. Mostly b/c when close to the fox, even the lowest power setting made it hard to determine direction (I added an attenuator to my list of future projects).

So, here is the finished product:





ACAKS News and Obdates ACAKS News and Obdates

Be YCARS Aware

YCARS 2023 Summer Field Day Update

Summer is rapidly approaching and we are excited for Summer Field Day. The summer Field Day team has been working hard to organize SFD this year.

We will be having Summer Field Day out at Westminster Park.

Set up: Friday June 23rd – need help setting up antennas Operating: Saturday June 24th thru Sunday June 25th Tear Down: Sunday June 25th – need help tearing down antennas and cleaning up the area that we occupy.



This year Summer Field Day will be an operating event vs. a contest. The goal is for everyone to have the opportunity to get on the air, ask questions and learn.

If you would like to camp out at Summer Field Day, that is an option. If you are interested in camping, please fil out this form:

https://forms.office.com/r/ju49SXRDyR

Summer Field Day will be open to the PUBLIC on: Saturday June 24th – 1pm – 7pm Sunday June 25th – 9am -12pm

Invite your friends and family to come out and get on the air...

Members will be present during the whole event.

Here is a webpage you can share with friends and family: <u>Summer Field Day — YCARS - York County Amateur Radio Society</u>

We have also published Summer Field Day Swag to the online store so that everyone has time to order their YCARS Summer Field Day T-Shirts Store 1 — YCARS - York County Amateur Radio Society (scroll to the bottom)

We will update with more information as we get closer to Summer Field Day! If you have any questions, please let me know.

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



YCARS to host its first Youth STEM/STEAM – Ham Summer Camp this July.

In July, YCARS Youth Engagement Team (YETi) will be hosting our first ever Summer Camp! We'll be bringing a group of 12–18-year-old young adults into the clubhouse for a day of radio and STEM related fun and activities. The YETi group is actively looking for counselors who are willing and able to spend a day "elmering" 2 or 3 kids. Some of the planned activities involve a foxhunt, many STEM experiments that relate to radio, and a project to build and test a 2M dipole antenna. It will be a full day of fun and learning, with lunch provided. Many details are still being worked out, so stand by for more information. We are actively looking for counselors to help mentor the participants. As a Counselor, you will be expected to:

- 1. Complete YCARS Youth Protection Training
- 2. Show up for the day camp day as scheduled
- 3. Elmer 2 or 3 students through projects

At a minimum, we expect to need 4 counselors. We'll also need some other people for various tasks like picking the food, managing this and that, but this specifically refers to 4 people who can commit to working directly with the kids. The estimated 4 is for a ratio of 3-1, but we'd really prefer 2-1. We hope to have our list by May 22nd

If anyone has any questions or can help us out as a counselor, please reach out to Vicki, AD3I or Theo, K4TTM

YCARS Contesting Meeting – Discussing Parks on the Air Plaque Event – Planning Discussion Thursday May 4, 2023 and Thursday June 1, 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 meeting for May and June. Bring your thinking caps because we are going to run through some stuff on this one. We are in every other team's sight and they all want to take that plaque away!

New YCARS Member Orientation Scheduled for Tuesday June 6, 2023

The YCARS WHI committee will be holding a new member orientation meeting (and member refresher) covering all the benefits of being a YCARS Member, also familiarizing new members with club operations, technology, and policies. This will be a virtual meeting on the Clubs Teams platform. Look for an upcoming E-mail reminder.

The meeting will start at 1830h. see link below to the meeting:

https://teams.microsoft.com/l/meetup-

join/19%3ameeting MDlkMWlzNTQtMmY1NS00MTA0LWJmMzctMGExNDQ1NzJmMjQ0%40thread.v2/0?context=%7b%22Tid%22%3a%2248f00488-a7c8-4f94-995e-

f8b9a1250e6f%22%2c%22Oid%22%3a%22e94c75b3-f121-43b2-8fc6-b7709a76653d%22%7d

YCARS Presentation Meeting Update:

The YCARS Communication team is proud to announce the upcoming guests for our May, June and July presentation meetings:

May 25, 2023 – our very own – **Jason Faulhefer, K4HEF** will be presenting on the Amateur Radio Emergency Data Network –"AREDN"

June 22, 2023 – **Adrian Ciuperca, KOSSCA** will be joining us via ZOOM. Adrian is a legend in the DX community and was part of the 3Y0J team on the 2023 Bouvet expedition. Check out his QRZ page for more information oh his amazing HAM Resume. <u>KOSSCA - Callsign Lookup by QRZ Ham Radio</u>

July 27, 2023 – **Dr. Bob Heil, K9EID** will be joining YCARS via Zoom. This will be Bob's third visit with the club and we are looking forward to see what is going with Bob since his last visit in 2021. A huge thanks to Jim Warren, KY4GJ for asking Dr. Bob to join us again.

More special guests to follow in the months ahead.

YCARS at the Range on 5/6/2023

Club Member Vic Belanger KN4JYY has invited YCARS Members to his private range Saturday May 6, 2023.

The Range is located at 7165 Narrow Lane Rd. Smyrna, SC 29743 Vic is an NRA Certified Senior Training Counselor.

(This is not an official or sponsored YCARS Event)

The Event info and likely timeline:

- 09:00 11:00 Orientation instruction for inexperienced persons needing basic introduction
- 11:30 12:30 Mandatory Range Safety Instruction (for everyone)
- 12:30 13:00 Lunch (Bring Your Own)
- 13:00 16:00 Shooting

YCARS Members are invited to bring out their own firearms and ammunition (Handguns only, please). If you do not own a handgun, one can be provided at the range. Please bring your own ammunition

Please RSVP - Vic Belanger - 609-638-9063 e-mail - kn4jyy@ycars.org

YCARS – Welcomes 4 new club members in April 2023–continuing to grow. 22 total for 2023

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

KQ4HOD	David Stevens
No Call Yet	Don McHose
KD4ESS	Deidre Mazzoni
KQ4HWA	Dave Michaeli

YCARS – Welcomes New Hams from the April 15, 2023 test session

David R Moser: KQ4HXS (Technician)

Josue Barbaran: KQ4HXO (Technician)

• Lary B Irwin: KQ4HVZ (Technician)

• Keith Belk: KQ4HVU (Technician)

• David Michaeli: KQ4HWA (Technician)

• Robert K Munn: KQ4HVT (Technician)

SAVE THE DATES -

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

June 6, 2023 – New Member Orientation

June 23 – 25, 2023 – Summer Field Day

Oct 6 - 7, 2023 - Rock Hill Hamfest

YCARS Weekly Lunch Social Schedule for May - Brent, K4BSC

5/4 - Sonny's BBQ - 2781 Cherry Rd, Rock Hill

5/11 - Passmore's - 4303 Saluda Rd, Rock Hill

5/18 – Eggs Up Grill – 2732 Celanese Rd Rock Hill

5/28 - Marty's Café - 1349 Firetower Rd Rock Hill

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

ACHER BONEAHLD

Brent Case, K4BSC - 40', 450 OHM 16AWG 19 Stranded Ladder Line (New, never used)

\$35 Used for (example): https://youtu.be/MbXmAcf9MmI

Andy Moran, AA0AM - Complete DMR setup for mobile or home. DMR set up includes an Tri-Band Anytone 578 UV III plus. Less than 5 hours use on it. Holds 500,000 contacts.

A Skybridge Dual Band Digital Hotspot and battery. Bought at the same time as the 578 plus. An Anytone BT01 Bluetooth Microphone with belt clip and programming cables. Brand new, never used unit.

A Nagoya 701 antenna.

Comet CSB 790 a dual band mobile antenna

\$ 825.00 for Club Members plus I'll split the shipping. Whatever it turns out to be.



The York County Amateur Radio Society

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