



The **RADIOGRAM**

When All Else Fails ~ Amateur Radio Works

~ Official Newsletter of the Portage County Amateur Radio Service, Inc. ~

PCARS - the 2018 Hamvention® Club of The Year

April 2024 - Volume 19 Number 04



PCARS K8BF

The Club that puts the FUN in Ham Radio!





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From the President



Mike, KP4VZ
PCARS President



It's not uncommon for northeast Ohio to experience snow in April. However, considering the mild winter we've had and the current pleasant temperatures, we can be optimistic that winter is behind us and spring has finally arrived.

APRIL EVENTS

In April, we have a variety of events taking place. These include the VE testing session, Net night at the club site, the Florida QSO and 7th Area QSO parties, as well as the Punderson State Park "[ParkPedition](#)" on April 20. These events are in addition to our weekly SIGs meeting. We highly encourage your participation, so please make sure to allocate some time to attend and experience the company of the finest group of Amateur Radio Operators. For further details, please refer to our online [Calendar](#).



HAMVENTION YOUTH FORUM

Thank you to everyone who donated in support of the Hamvention Youth Forum. Donations are still being accepted for the RCA Youth Activities (Hamvention youth forums). Please ensure that checks are made payable to PCARS. Cash donations or checks can be brought to the April general meeting.

FIELD DAY



[Field Day 2024](#) is approaching soon and we could definitely use your help! We need more operators, as there are many time slots available. On March 20th, the field day team held their second planning meeting, and it appears that everything is progressing as planned. The site has been reserved, antennas are currently being updated, and the coordination of food is underway. Ken, WA8LRW is in the process of designing and creating a network consisting of multiple Wi-Fi antennas for utilization during the Field Day event.

Field Day Dinner will take place on Saturday, June 22, 2024. The reservation form will be uploaded to the website during the third week of April. Please note that the deadline for making dinner reservations is no later than June 8. Attendance for members is free of charge, while guests will be charged \$5. Further details will be communicated through QSTs.



In 2023, the total expenses for Field Day amounted to \$2,794. This year, we are estimating the cost to be \$2,500. As in previous years, a [PayPal donation](#) link has been included on our website for those who wish to contribute towards covering the expenses.

During our scheduled meeting on June 10th, Tony and the field day team will provide a comprehensive overview of the preparations for the upcoming field day. This event holds great significance for PCARS, and it would be truly remarkable to have the participation of each and every one of you. If you are uncertain about how you can contribute, please feel free to reach out to Tony, WA8AR, or any of our station captains.

NET NIGHT AT THE CLUB SITE

The Net Night event at the club site in March was highly successful, with a great turnout from our members. Special thanks to Tom Sly, WB8LCD, for providing pizza for the event.

ANTENNA BUILDS



We have planned two antenna builds for this year. The first one, scheduled on April 27 from 0900-1200, will involve constructing a **4:1 hybrid Ruthroff-type balun/choke antenna**. Brandon Mercer, KE8ARB, will be leading this build. This antenna is quite versatile, capable of handling 100 watts and working on frequencies ranging from 80-10m. It can be used for a delta loop or an off-center fed antenna. The cost for participating in this build is **\$40**, which covers everything except the antenna wire. The build process is expected to take around 3-4 hours. To join, please RSVP to bmercer@eutonian.com and payment will be required upfront. Further details will be communicated through a QST message.

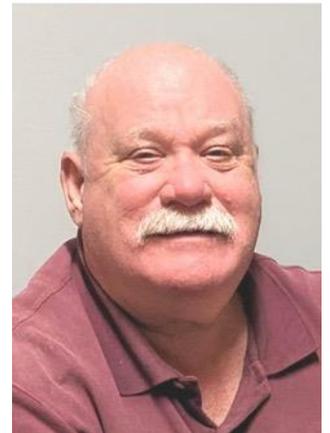
The second build, scheduled for June 8, will involve constructing a **roll-up J-pole antenna**. John Myers, WG8X, will be leading this build. More information will be available on our website and will also be shared through a QST message.

Thank you for the support we've received thus far. I encourage everyone to engage more actively with the club. Looking forward to seeing you all at the upcoming April general meeting.

From the Vice President



Ken, WA8LRW
PCARS Vice President



March Activity Report

We had a great presentation by the Antenna, Portable Operations, and Digital Modes SIG moderators on what each SIG is about at the Monthly meeting. That theme will continue for the April Meeting with the DX/Contest, HF, and Coiuld be Anything SIG moderators.

The fourth Icon 7300 is now operational at the club site and was used for K8BF to participate in the Idaho QSO party and achieved our goal, a better score than last year. Thanks to all the operators. Due to snow on Sunday, we did not participate in the Wisconsin QSO party.

The Net Night at the Club Site had much-improved attendance than last month. I think rumors of pizza may have attracted many people. As the weather improves and the days get longer, I hope to see larger crowds. Remember you can always check into the net via the VHF desk at the club site.

Happy Birthday PCARS Members

PCARS members having their birthday in **April**:

AD8IR	Agnes
KC8FQV	Mark
KW8KW	William
KE8EGG	Alice

KE8LWL	Mark
WB2DFC	Dave
KD8GHB	Joe

W8YIH	Sylvester
N8QE	Bob
K1ZZ	David



Schedule of Events



- April 1st - PCARS Board Meeting at PCARS Club Site – 7 pm
- April 8th - PCARS meeting at the Kent American Legion - 7 pm
- April 20th - ParkPediton to Punderson SP – 10 am – 4 pm

Special Interest Groups at the Club Site

- First Tuesday Odd Months - **Digital Special Interest Group** - Moderator: Rick, K8CAV
- First Tuesday Even Months - **HF WAS & DX Nets Special Interest Group** - Moderator: Gene, W8NET
- Second Tuesday - **Portable Ops Special Interest Group** - Moderator: John, WG8X
- Third Tuesday - **Antenna Special Interest Group** - Moderator: Bob, N8QE
- Fourth Tuesday - **DX & Contest Special Interest Group** - Moderator: Chuck, W8PT
- Fifth Tuesday - **Could Be Anything Special Interest Group** - Moderator: Rick, KD8WCK

Fourth Thursday - Net Night at the Club Site - 6:30 pm - Moderator: Tom, WB8LCD

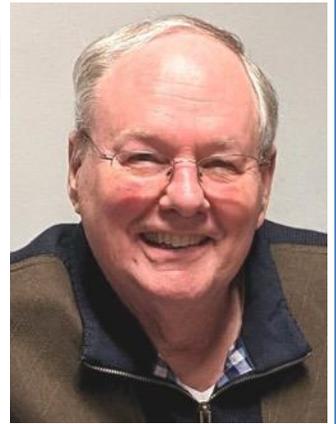


PCARS K8BF
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Tech Tips – Tape Measure Yagi – Part 2

Jim, AC8NT



The most common use of a tape measure Yagi is for fox hunting. Last month we talked about building it, now we will talk about hooking it up for a fox hunt. When fox hunting you need a radio to receive the fox's signal. It should be inexpensive because they get dumped into water, stepped on, or be otherwise damaged by the user. Keeping them out of water can be

accomplished by properly picking a location. To protect them from being dropped I hang them from a lanyard the operator wears. This also allows the user free use of both hands.



Note the picture of the radio setup. Two key features. First is the link shown in the oval. If the lanyard gets caught in a tree for instance, this link will open the loop protecting the user from getting hurt. This feature is very important if the users are children. The second feature shown in the rectangle is using a cable tie to connect the antenna coax to the lanyard. This will protect the antenna connector on the radio from damage if the antenna is dropped. Remember to make sure the coax from the antenna is at least 5 feet long so the antenna can be dropped without pulling on the lanyard.

Last you will need to program the radio for the hunt. The most common radio used is the ubiquitous Baofeng UV-5R. You should program three memories starting at memory one if you are using the recommended offset attenuator. Channel one is set to the frequency of the fox. Memory two is set to the frequency of the fox plus 4 MHz. Memory three is set to the frequency of the fox plus 8 MHz. This can be easily done with the Chirp program. While in Chirp go to the radio setup and disable transmit on both the VHF and UHF modes. This eliminates the possibility of the user illegally transmitting.

To decrease signal strength, select memory two. Turning the attenuator knob to the right will decrease signal strength. If you need further attenuation, select memory three and again use the knob to adjust strength.

Next month we will discuss the setup the fox.

Jim, AC8NT



Spring ParkPedition

John, WG8X



The Spring Support Your Parks weekend is coming up this month; April 20th to be exact. We are again heading out to Punderson State Park (K-1985) to do a ParkPedition. The pavilion by the marina has been reserved, and we're ready to have some fun!

First of all, we'll be at the Punderson shelter. The easiest way to find it is to enter the park from Kinsmen rd., and follow the signs for the marina, or the archery range, or the shelter. They are all grouped together, and easy to find.

Officially, the time for the event will be **10AM – 4PM on April 20th**. There's plenty of room for antennas, but please run QRP, and space those antennas out please.

The campground is closed for renovation, so if you are planning to make an extended weekend of it, sorry! We'll be cooking out during the day. That's still something we're discussing, but I'll likely be bringing out my portable grill.

It's open to all. See you there. 73 DE WG8X



PCARS Custom Coffee Cups - Limited Edition - Get One NOW

PCARS has obtained a **limited** number of special, custom made coffee cups that are available only to members.



Supply is limited. If you are a current (PAID) member of PCARS you get one coffee cup for **FREE !!** The only catch is you have to claim it from the **Treasurer - Greg, KA8TOA.**

Greg has a list of current members and will check off your name when you get your **FREE** PCARS coffee cup.



There are a **very limited number of extra coffee cups** for sale at \$5.00 each.
Contact Greg for all of the details: Treasurer@portcars.org

PCARS IO Group

Members are reminded that PCARS has a IO Group site dedicated to PCARS. It's a great site to sign up for and get on the mailing list for important PCARS information.



Check out the PCARS IO Group at: <https://groups.io/g/PCARS>

Two things every member should do.

1. Check the PCARS web site every day, maybe a couple of times a day, to see new info that's posted.
2. Join the PCARS IO Group. That's a great place to post message when you are looking for information or have a question about something. Try it - you just may like it!!

20-Meters Field Day

We're getting closer to Field Day! We have size time slots open so if you're interested in operating the 20M station this year, email me at n8wpc.us@gmail.com. You don't need to be a seasoned contester to work Field Day and all licensed hams are welcome to participate!

We're going to change things up a bit this year. If 20M is quiet at night, we'll have 80M and 160M available to keep those contacts rolling!

Mike, N8WCP
20-Meter Station Captain



Field Day 2024 Flex Station Operations



Rick, K8CAV
Flex Station Captain

Field Day is just shy of three months away and the FLEX Station is still looking for operators. Saturday from 10:00 PM to midnight is open and on Sunday, the 8:00 AM to 10:00 AM and noon to 2:00 PM slots are open as well. The current schedule is shown below. If you would like to operate at FLEX, send me an email to k8cav.com@gmail.com and I'll get you on the schedule.

DAY	TIME	OPERATOR
SAT 22 JUN	1400-1600	AC8NT / KC8JC
SAT 22 JUN	1600-1800	N8QE
SAT 22 JUN	1800-2000	WA8LRW
SAT 22 JUN	2000-2200	WA8LRW
SAT 22 JUN	2200-0000	OPEN
SAT 23 JUN	0000-0200	KD8WCK / KE8KBJ
SAT 23 JUN	0200-0400	KD8WCK / KE8KBJ
SAT 23 JUN	0400-0600	KP4VZ
SAT 23 JUN	0600-0800	W8NET / KE8MXR
SAT 23 JUN	0800-1000	OPEN
SAT 23 JUN	1000-1200	N8QE
SAT 23 JUN	1200-1400	OPEN

Field Day 2024 CW Operations

PRELIMINARY FIELD DAY CW POSITION SCHEDULE ADDITIONAL OPERATORS NEEDED

We need several more CW operators to complete the 24 hours of Field Day:

UTC	LOCAL	OPERATOR
1800-2100	1400-1700	K3GP
2100-2400	1700-2000	K8FF
0000-0300	2000-2300	N8NB
0300-0600	2300-0200	K8RR
0600-0900	0200-0500	
0900-1200	0500-0800	
1200-1600	0800-1200	WB9LBI
1600-0800	1200-1400	N8QE

CW operations are in an enclosed trailer, out of the sun and rain. Keep in mind that average CW speed in during field day is moderate (15 to 25 WPM).

Each CW contact is worth 2 points, providing a significant contribution to our final score.

Contact me at rttyfan@gmail.com to join the CW crew - The above schedule may be changed to accomodate individual preferences.

If you want to brush up your CW skills beforehand, consider making CW contacts on Parks on the Air (POTA). Like Field Day QSOs, these contacts are very brief. You can locate POTA CW spots at the following link: <http://pota.app>

George, K3GP
PCARS CW Captain

Hamfest Calendar

Here are the current listings of local hamfests. Please note that all are **subject to change**. Stay current by checking the sponsoring club's web page before making your travel arrangements.



=====
04/13/2024 – Cuyahoga Falls Amateur Radio Club Hamfest – Location: Cuyahoga Falls, OH – Sponsor: Cuyahoga Falls Amateur Radio Club, Inc. – Details: <http://www.w8vpv.org/hamfest>

=====
04/28/2024 – Athens Hamfest – Location: Athens, OH – Sponsor: Athens Country Amateur Radio Association – Website: <https://www.ac-ara.org/>

=====
05/05/2024 – Lucas County ARES Trunk Sale & Swap Meet – Location: Toledo, OH – Sponsor: Lucas County ARES – Website: <http://lucasares.org>

=====
05/11/2024 – 05/16/2024 – RV Radio Network – Location: Millersburg, OH – Type ARRL Hamfest – Sponsor: RV Radio Network – Website: <https://www.arrl.org/hamfests/rv-radio-network-2>

=====
05/16/2024 - Four Days In May - Location: Holiday Inn - 2800 Presidential Drive - Fairborn, OH 45324 Website: <http://qrparci.org/fdim> - Sponsor: QRP Amateur Radio Club International - Public Contact: David Cripe , NM0S - 118 Hilltop Dr. NE Mount Vernon, IA 52314 - Phone: 319-651-5879 - Email: nm0s@nm0s.com

=====
05-17/18/19-2024 Dayton Hamvention 2024 - Greene County Fairgrounds, Xenia, OH - Website: <https://hamvention.org/>

=====
08/18/2024 - Warren Hamfest - Location: Trumbull County - Fairgrounds - 899 Everett Hull Rd. - Cortland, OH 44410 - website: <https://www.w8vtd.com/> - Sponsor: Warren Amateur Radio Association - Talk-In: 146.970 - (100hz normally off) - Public Contact: Andrew Juchnowski , AB8MO - PO Box 809 Warren, OH 44482 - Phone: (234) 238-2312 - Email: hamfest@w8vtd.com

=====
09/08/2024 – Findlay Hamfest – Location: Findaly, OH – Type: ARRL Hamfest – Sponsor: Findlay Radio Club – Website: <https://w8ft.org>

=====
09/22/2024 – Cleveland Hamfest – Location: Berea, OH – Type: ARRL Hamfest – Sponsor: Hamfest Association of Cleveland – Website: <https://www.hac.org>

On The Road with WG8X



John, WG8X



It took a while after the big final rove a couple months ago, but I'm starting to get back in the groove as far as activating goes. There's still a lot to do on the home front, so I'm not near as active as I was last year. I did find a new goal though; one that I don't expect to ever really achieve. However, it's going to provide many enjoyable afternoons.

Before I share that with you, let me say that I have been enjoying hunting, contesting, and digital ops when the opportunities arise. However, I still enjoy getting out and traveling the Ohio back-roads. So here's what I'm doing.

There're currently 273 POTA references in Ohio. I've logged between 10 & 2500 contacts in all of them. POTA requires 10 contacts for a valid activation. However, the other program; World Wide Flora & Fauna (WWFF) requires a few more; 44 to be exact. WWFF is really popular in Europe. I don't feel that it's as popular as POTA in NA, but most of the POTA references also have WWFF numbers, so I've been returning to some of my lightly activated spots and bringing my total contacts up to at least 44. This can be a challenge, but on 20 meters & up, the pileups can be quite exhilarating!



There are also some WWFF references which are not yet added to the POTA database; maybe they never will be. One of them, Berlin Lake State Wildlife area (KFF-6454), covers parts of Stark, Portage, and Mahoning Counties. I drove out to this one a few weeks ago and spent the afternoon activating. Let me tell you, getting 44 contacts without relying on the POTA spotting page is tough! Since there is no POTA number for Berlin, it can't be spotted on their page. Instead, I used the WWFF spotting page (<https://wwff.co/dx-cluster/>) which doesn't seem to be as heavily used. By using the WWFF page, and adding in some contacts from the VA QSO Party, I managed 44 contacts exactly, but it took 2 1/2 hours.

Last weekend, I headed out to Woodbury SWA (US-8110/KFF-6491) in Coshocton County. According to one of the guys on the POTA Facebook group, this is one of the few really good dark sky sites in Ohio. [SEP] I had previously done 14 phone contacts here. But this time, I racked up an additional 50 (mostly CW). A lot of those were Europeans, since this site had not yet been activated for WWFF.

I'll be doing more of this in the future; dropping in to a site and hanging out for a while to get at least 44 (or more) contacts.

If you've not been on the bands, or POTA for the last few weeks, you'll find there's been some changes. In order to standardize the way that country prefixes are doled out, some number prefixes have been changed.



For instance, All US references now begin with the US prefix (West Branch SP was K-1999, and is now US-1999). Canada moved from VE to CA. None of the Ohio park numbers seem to have changed (beyond the new Prefix), but it's still a good idea to double check with POTA.app before going out.

Looking forward, I'm thinking of participating in the Solar Eclipse QSO Party (SEQP) on April 8th. Sponsored by Ham-Sci, the goal appears to be to get lots of Hams active during the eclipse as the moon's shadow travels across North America. This will allow them to gather lots of data from the RBN (Reverse Beacon Network). Read

what Ham-Sci says about the SEQP at <https://hamsci.org/seqp-faqs>:

The Solar Eclipse QSO Party is an opportunity for amateur radio operators (hams) to operate during the October, 2023 and April, 2024 eclipses, before, during and after they pass over North America. Using various modes (CW, voice, and digital), two-way transmissions (QSOs) made during the SEQP will contribute to scientific studies focusing on the ionosphere's reaction to the eclipse. The studies should lead to a better understanding of the interactions between the Sun, the ionosphere, and radio wave propagation. That research should benefit hams, professional broadcasters, satellite operators and many other users of radio spectrum.

Unfortunately, while the SEQP can handle Portable ops, it isn't set up to handle Rovers. I do intend to participate. I'll be at Findley State Park that day. Tune in next month to read how it went.

There's a story in this month's issue of the Radiogram about the SEQP. It gives some links, and a little more information.

Lastly, I have some advice for those who are planning to get out on their first activation. I know that the urge is strong to wait until you have the perfect radio; the perfect antenna, perfect weather, etc. before doing your first park activation. But the best advice I have for new ops is to go out & Just Do It! Sure, you'll make mistakes, but you'll learn more from those than you ever will from the internet. There's a lot to be said for the school of life, though the tuition can sometimes be a bit pricey.

We've got an opportunity coming up to help you in that department though. On April 20th, PCARS will be at the Marina pavilion at Punderson State Park. The order of the day will be QRP, & fun. You are welcome to bring your own stations, or just hang out and watch the rest of the ops. Look for more info in this issue. I hope to see you there!

73 DE WG8X



STEM Outreach Project

Jim, AC8NT



In March we attended three STEM events. Here are some notes on each.

ACCESS STEM Event, University of Akron - This event was held by the Akron Council of Engineering and Scientific Societies at the University of Akron on the afternoon of March 12th. 80 middle school students and 31 teachers attended the event.

The students were broken down into groups of eight and each group visited each of eight stations representing different STEM opportunities. Our station was cohosted this with IEEE. Jim Dowey, Chair of Akron/Canton Section of IEEE helped with the event. The station consisted of my portable ham station, a setup demonstrating SDR applications and various hand-on experiments including a tesla coil and experiments with magnets. IEEE provided lots of SWAG for the kids and help manning the tables.



Students helped make contacts using FT8, watched radio activity on the FM broadcast and aircraft bands. We decoded the traffic data send on a subcarrier of a couple of FM stations and displayed aircraft information using ADSB transmissions. Interest was high with both students and teachers. It was hard work considering we were on our feet for nearly 4 hours, but it was well worth the time. We setup our HF antenna on a balcony one floor down with coax out a nearby window. Considering the balcony was all metal, we had a few decent contacts in Europe. We have learned it is impossible to use phone at these events. It is way too noisy. We have already been asked to return for the next event.

Engineering EXPO, Highland High School, Medina - This event held with the joint efforts of Medina schools and the Medina County Economic Development Corporation. The event was held after school the evening of March 20th. Its purpose was to interest students in STEM areas including engineering and was open to all students. We had about 70 students attend with their parents. Again, we cohosted with IEEE.

The setup was the same as the ACCESS STEM event. However, at this event we had a much better antenna location. Students and parents helped make contacts with hams in Europe and South America. They were amazed at what we could do with 10 watts. 20 and 40 meters were both hot that night. Lots of interest from both the student and parents. We gave out 30 packets of information on ham radio and lots of QR code cards. It was great fun with the students and parents allowed more time to play and learn. We have been asked to attend both this event and its partner event in Brunswick next year.

District 5 Science Fair, University of Akron - I had the privilege of acting as both a judge of those worthy of going on to the state fair and as a sponsor judge for IEEE at the District 5 regional science fair. Projects covering a geographic area from Akron to the Cleveland area were judged. Acting as a Sponsor Judge for IEEE let me award gift cards to projects that were found to be significant in electrical engineering or physics. There were few radio projects, but a few that used some advanced electronics. After the event I had time to meet several of the students in a mentoring capacity. We talked about ham radio as a good start to learning electronics, having fun meeting new people and the fun of reaching stations around the world. This session was with 21 students and went very well. Ham radio needs more of this type of activity.

Jim, AC8NT

Yaesu FT-991 (not the 991A) transceiver. Original owner, includes power cord with Anderson power poles, MH-31A8J microphone, manual, original factory box, and RT Systems ADMS-991-USB programming software and cable. WILL NOT SHIP CASH ONLY, will deliver within 150 miles of Hiram, Ohio. \$600.00

Contact Rick at k8cav.com@gmail.com 330-620-8826. [05/24]

FOR SALE FROM K8IG (*non-smoking shack*). All equipment working unless noted otherwise. Local pickup in Mayfield Village. Manuals for most equipment. Pictures available on email request. Offers invited.

Ameco PT-3 preamplifier (\$90.00); **Collins 312b-4** winged emblem station console Serial # 314 (\$350); **Drake MN-2000** Serial 1758 (\$300); **LDG 600 Watt Autotuner AT600PROII** with accompanying illuminated meter (rare- meter no longer manufactured) \$475; **LDG Autotuner LDG AT-1000** (\$350); **LDG AT-1000PROII** (original Owner) with accompanying illuminated 1K meter (rare – meters no longer manufactured) (\$550); **MFJ – 616 Speech Intelligibility Enhancer** (\$125); **Nye Viking Antenna Tuner MB-V-A 3KW**, Serial # 10066 (\$450); **Palstar mobile wattmeter PM2000am** Serial # 26015 (\$150); **Swan Cygnet 300 B** Serial # 18547 Transceiver (\$400); **West Mountain Rig Blaster PRO** (\$25); **YAESU YO-301 Monitor Scope** (\$250); **Hallicrafters SX-28** (2 available) for parts (\$50) each. **(DXE) 12 meter add-on kit for 4-6 BTV** (never used – bought Hexbeam and never installed this kit) (\$60); **Heathkit SB-614 Station Monitor** Serial # 504 (\$200).

Contact Fred, K8IG at K8IG@arrl.net; call 440-446-8000 or text 440-668-2400. [05/24]

FOR SALE: YAESU FT-818ND . Never used. Complete with MH-31A8J hand microphone, battery(SBR-32 9.6V 1900 mAH Ni-MH), battery case (FBA-28)(REQUIRES 8 AA BATTERIES), rubber duck antenna for 50/144/450 MHz; DC cable (E-DC-6), shoulder strap, battery charger and operating manual. Comes in original box.

Also including the following: LDG – antenna tuner; Portable Zero Escort (side rails/tilt stand); Portable Zero Spide Net (Holds LDG tuner onto radio), SOTA Beam Power Pole adapter, SOTA Beam speech compressor, SOTA Beam SSB/CW filter and speaker. TOTAL RETAIL VALUE IS OVER \$1000.00. ASKING \$700 FOR EVERYTHING.

Email for Pictures: W8HFZ, TIM - timmc52@ameritech.net [04/24]

For Sale or Want Ad policy reminder: This is a PCARS *members only benefit*. Please don't ask to list items for a friend, relative or SK estate unless they are/were a member of PCARS. Requests come in from all over the USA (and beyond) to list items for sale or wanted items and we just cannot dedicate that much space to non-members. Listings are good for 3 months unless canceled or changed earlier.

The date listed after the contact information tells you when the ad expires - example: [01/24] indicates the ad will run until the end of January 2024.

Ohio Section Youth Net

When: The second Sunday of every month at 7:30 PM EST - **Sunday March 10, 2024**

Where: The K8IV repeater located in Kent, Ohio (EchoLink node K8BF-L) RF: 146.895 Mhz with PL 118.8

Who: Any licensed amateur radio operator who wishes to participate. Priority will be given to youth stations and those located in Ohio.

The purpose of this net is to encourage youth activity in amateur radio and to help new hams get more comfortable on the air.

If you are a young ham, in the Ohio Section or elsewhere, please check in and say "Hello"! Even if you're far away from OHIO you can check in via Echo-Link. Echo-Link is a good tool to have, and it can be accessed from your laptop, tablet or cellphone. But there is a process to get validated to the Echo-link system. It's simple to do, but you need to get it done before the day of the net!

Freeze Your Acorns Off 2024



J.C., KC8JC
Radiogram Field Correspondent

The 2024 Freeze Your Acorns Off Portable QRP event was another successful PCARS outing. Many operators gathered at Fred Fuller Park in Kent to sit outside in what was not exactly freezing but not particularly comfortable weather. It was certainly warmer than prior years but frostbite was decidedly not on the menu.



What *was* on the menu was plenty of good and tasty food provided by club members! There was camaraderie in the air and a great time was had by all who participated. As a contestant myself, I can say the best contacts are the Eyeball QSOs we collect as people go from station to station.

It is indeed a contest and the results are in with the certificates shared at the March PCARS Meeting.

First place went to Team AD8IR with 8639 points. The team was made up of Agnes AD8IR, Nick AC8QG, Ben AD8FQ, and Bernadette KE8LWO.

The Best Recipe award this year went to John WG8X for his meatball subs. This was a fierce (and delicious) competition.

The submitted logs produced the following results after careful scoring by the officials.

	Team	Points
1	AD8IR, AC8QG, AD8FQ, KE8LWO	8639
2	N8QE	4884
3	KC8JC, AC8NT	2255
4	KP4VZ	1155
5	WG8X	405
6	AF1K	244
7	KD8OBA	48
8	WD8DAU	12





Solar Eclipse QSO Party

John, WG8X

As I was perusing my e-mail & social media recently, I happened to come across mention of the Solar Eclipse QSO Party (SEQP for short). It looks like a cool way to get on the air, while helping to expand the understanding of propagation. The following excerpt from <https://hamsci.org/seqp-faqs> explains it better than I can:



What is a Solar Eclipse QSO Party, and why is it being held?

The Solar Eclipse QSO Party is an opportunity for amateur radio operators (hams) to operate during the October, 2023 and April, 2024 eclipses, before, during and after they pass over North America. Using various modes (CW, voice, and digital), two-way transmissions (QSOs) made during the SEQP will contribute to scientific studies focusing on the ionosphere's reaction to the eclipse. The studies should lead to a better understanding of the interactions between the Sun, the ionosphere, and radio wave propagation. That research should benefit hams, professional broadcasters, satellite operators and many other users of radio spectrum.



Of course, we know about the upcoming eclipse. To be totally honest, I was pretty sick of all the hype surrounding it. My plan was to go to work and ignore the eclipse. But, as the time got closer, and I did some reading about the SEQP, I had a change of heart. The idea of experiencing the change in propagation over the course of the event seems interesting. I'm now looking forward to experiencing this.

They say that the SEQP will be friendly to portable stations (POTA, SOTA, etc.), but unfortunately not so much to rovers. It's best for participants to pick a spot, and not change for the duration. Not that anyone would want to, however. According to ODOT's traffic predictions, the primary roads in Ohio are one of the last place I want to be after the eclipse. In fact, The Ohio State Parks are not booking any camp sites with an arrival or departure on April 8th (See inset). You can see ODOT's interactive map at <https://shorturl.at/jpzST>.



According to the Ham Sci website, the SEQP runs on April 8th from 1400 – 2400 UTC. It's a friendly competition; not a full-blown contest. In fact, they even encourage you to contact the same stations multiple times, as long as 10 minutes has elapsed.

SSB, CW, & Digital are allowed. The exchange is simple; accurate signal reports, and your 4 digit grid square. Complete rules can be found at <https://hamsci.org/node/677>.

Have fun, and good luck!

Could Be Anything Special Interest Group

Rick, KD8WCK
Could Be Anything SIG Coordinator



5th Tuesday Could Be Anything SIG: April 30

Our April 30th 2024 5th Tuesday SIG will be a hands on laptop computer session. If you want to get your Windows, Mac or Linux laptop computer set up for digital operations on HF or VHF/UHF with fldigi or WSJT-X bring it to the club site. We'll have a session from 7 to 9 p.m. to help to get software installed and configured.

The Could Be Anything SIG aims to feature hands-on activities. If you have a suggestion for a topic for July or October please contact Rick KD8WCK rad@hamnet.org. We will likely not have a 5th Tuesday SIG on New Year's Eve 2024.

Thanks and 73 de KD8WCK Rick

Portable Ops Special Interest Group

John, WG8X
Portable Ops SIG Coordinator



Next SIG meeting will be Tuesday April 9th at 7:00 PM

We have a lot coming up this month, and some items we've been talking about, so we won't be short of subjects. This will be the day after the solar eclipse, so let's compare notes on how the propagation was for you.

Our next outing will be a ParkPediton to Punderson SP on April 20th. There's more about that in this issue of the Radiogram.

So, bring out your show & Tell, and your questions.

We'll be meeting at PCARS World Headquarters (705 Oakwood St, Ravenna). If you'd prefer, feel free to join us on Zoom.

Join Zoom Meeting

<https://zoom.us/j/92154491950?pwd=cmZNSIFhZVRmcVg3L3pnazdrK1ZuUT09>

Meeting ID: 921 5449 1950

Passcode: 878917

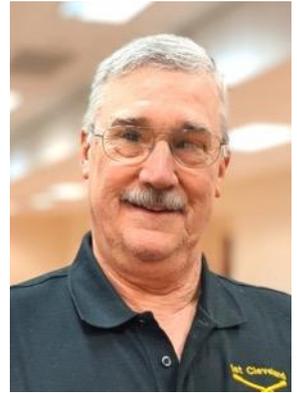
One tap mobile

+13092053325,,92154491950#,,,,*878917# US

+13126266799,,92154491950#,,,,*878917# US (Chicago)

Digital Special Interest Group

Rick, K8CAV
Digital SIG Coordinator



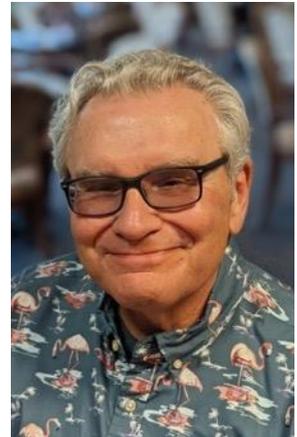
Next SIG meeting will be Tuesday MAY 7th at 7:00 PM

There is no Digital Special Interest Group meeting scheduled for April. The next Digital Special Interest Group meeting will take place on Tuesday May 7th at 7:00 PM at the PCARS Club Site. This month will feature a presentation on how to effectively operate on a digital-only net using pro-signs and Q signals, in preparation for the May Flex Net on May 8th.

As always, we'll be available to answer questions or provide help for any digital communications issue you may be having. I hope to see you there.

Antenna Special Interest Group

Bob, N8QE
Antenna SIG Coordinator



Next Antenna SIG meeting will be on April 16th - 7 pm

The next meeting of the PCARS Antenna Special Interest Group will be held April 16, 2024 at 7:00 PM. We will be in-person at the PCARS club site and on Zoom.

Join Zoom Meeting:

<https://zoom.us/j/99273855876?pwd=VWhuemc0T3JRdWVUd2NTZGJZWnBUQT09>

Meeting ID: 992 7385 5876

Passcode: 047804

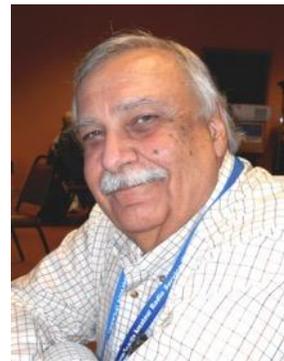
The Antenna SIG meetings are open to all PCARS members and guests. All ham radio operators or anyone interested in Amateur Radio are also welcome to attend. We will be discussing all aspects of antenna design, construction, test equipment, and experimentation. Everyone is welcome to join in the discussion and talk about their antenna-related projects with the group.



DX & Contesting Special Interest Group

Chuck, W8PT

DX & Contesting SIG Coordinator



Attention PCARS DXers & Contesters

We held our DX/Contesting Special Interest Group meeting on Tuesday, the 26th, at our Famous World Headquarters. We had 10 attendees and all participated in the discussions on our topics.

The main one was our plans to put K8BF on the air, once again, during the Florida QSO Party that takes place on Apr 27 & 28. The planners of this contest have seen fit to give us more mature (read OLD) operators a break by splitting the contest so that we have the evening to get some sleep.

We will be entering as a low power, Multi-Multi and I am hoping that we see many members attend and operate. We especially need CW Ops since that always is a source of higher scores. You will be seeing a few QST reminders as we get closer to the contest date.

We also mentioned the many DX-peditions that are planned for the upcoming months. All of the ones mentioned happen to be island operations.

We also had a suggestion presented to have a discussion and instruction on the use of the ARRL Outgoing QSL Bureau. Possibly, a further discussion on QSLing in general with all the possibilities of how HAMS are QSLing today and whether it is something that is passing away. I'm looking for someone to do that presentation.

See you at the end of April on the 4th Tuesday for another DX/Contesting SIG.

Flex Net

Rick, K8CAV

Flex Net Coordinator



Next Flex Net: April 10th at 8:00 PM

The next Flex Net will take place on Wednesday April 10th at 8:00 PM. This month's net will take place on 6 meters USB phone on 50.150 MHz, +/- QRM. Technician class licensee holders have full privileges on 6 meters and I'd love to see more of our Technicians on this net.

The Flex Net is a great place to contact other PCARS members and QSL for the PCARS A to Z Award. Information about this award can be found on the PCARS web site under the "Awards" tab. The net is a lot of fun and gives valuable feedback on how well your station is operating. I hope to hear you then!

Please join us if you can!

Jim, AC8NT



This short article will cover a couple of highlights from the HamSci conference held March 22-23. I am not going to cover the entire conference, just a couple of the points I found interesting. The conference was worth the money and time.

Personal Weather Station

For those of you not following this project, this system monitors multiple WWV HF signals to measure doppler shift in these frequencies. This doppler shift is an effect of solar events. This requires a GPS stabilized receiver to measure this difference in frequency between the transmitted and received signals. Several short talks covered the status of the Grape 2 by Case and the development of a system by the WSPR Daemon group. The design of the Grape 2 receiver system is now complete, and several have been built. They are available by asking for grants only. The focus of the development team has been distribution of units to monitor the April 8th eclipse. They should have at least eight receivers operational for the event. More information on the Grape 2 can be found at <https://hamsci.org/basic-project/personal-space-weather-station>.

The WSPR Group project receives the signals using the RX888 SDR receiver module equipped with an external GPS stabilized 27 MHz oscillator. It collects the same data as the Grape 2 but also provides additional uses for ham radio. The RX888 allows you to collect over 32 MHz of bandwidth.



Using a free SDR package called SDR Console, you can easily create a panadapter covering the entire HF range, from 1 MHz to 32 MHz, used by ham radio with the RX888 and a reasonable computer. They are currently using a Beelink computer (like the ones we have at the club site) to process the SDR data. This project is on my must do list. An HF panadapter would be very cool.

On a final note, TAPR now has new magnetometer boards. If you get a grant for the Grape 2, Case can supply one of these boards for free. They currently have 20 boards that were donated by TAPR.

William and Mary ARDC Project

First a little history. ARDC (Amateur Radio Digital Communications) is a California-based foundation with roots in ham radio and the internet. It was created as 44Net in 1981 when Hank Magnuski KA6M obtained a block of 16.7 million IP addresses early in history of the internet when they were very inexpensive. He wanted to make sure ham radio had access to the internet. This block is now worth a fortune. In mid-2019 ARDC sold 4 million contiguous addresses for enough money to endow ARDC's grant funds. Currently their assets are about 109 million dollars.

At HamSCI William and Mary University students reported on a project that ARDC funded to increase interest in ham radio. Working with the Green Bank Observatory they created a course open to 30 students. Students spent time at Green Bank learning about radio astronomy, learning to solder, performing experiments with the telescope, and studying for their Tech licenses. All received their Tech. The course continued to provide the knowledge for them to receive their General licenses; most have received their General ticket; and all have been on the air multiple times. Students gave the course very high ratings. It is interesting to note that

the project was created at a school with no engineering program. Students that attended were from all areas of studies including Communications Arts, English, Social Studies, as well as Physics. This is a group that is often not represented in college clubs adequately. We need to reach this way under tapped group of potential hams.

Jim, AC8NT

PCARS Thursday 2-Meter Nets

The Nets have been running about average which is a good thing. We have a new net operator Bob N8SKN and it is a great thing to volunteer and help the club out and learn at the same time. Be kind to him. I would also like to thank our current operators who make the nets exciting and maintain their skills. Without these operators we would not be having as much fun as this club does. Remember to participate, get involved and have fun. I know it is a hobby and life does get in the way. Play radio enjoy your family, promote the club and take care. I will see you all at the regular meeting in April and enjoy the eclipse.

April	
4	K8TOA
11	N8QE
18	KD8WCK
25	K8CAV

May	
2	N8WCP
9	KE8BWA
16	KE8WVV
23	WB8LCD
30	KA8TOA

June	
6	N8QE
13	KE8WVV
20	KE8ARB
27	KE8BWA



The PCARS net is **BIG Fun** - tell your friends to check in via RF or EchoLink!

PCARS Patches & Stickers



PCARS logo patches (*iron on*) & stickers (stick on) are now available!!

Put the patch on your hat, your shirt, your jacket and show off that PCARS

logo!! The patch is about 3". The embroidery

on the white patch is in Red, Black and Blue. Cost for a patch is only \$2.00 each and can be obtained at any PCARS meeting. There are 2 types of stickers available - a 4" x 6" oval and a 3" x 10" bumper sticker.

Stickers are \$1 each. Show your pride in PCARS - Wear a patch, use the stickers! See the club Treasurer: **Greg, KA8TOA** or e-mail him at:

Treasurer@portcars.org



PCARS T-Shirts, Polo Shirts, Jackets, Hats, etc. can be obtained from:

Villager Business Solutions - attention Michelle Zivoder
8088 Main Street
Garrettsville, OH 44231
michelle@villagerbusiness.com 330-472-7304



From Around The World...



Links from Here, There, and Everywhere

The ARRL Ohio Section website has all the latest news for members in the Ohio Section. Check it out here:

<http://www.arrl-ohio.org/default.html>

Amateur Radio Weekly is a weekly newsletter with great links to everything under the ham radio umbrella. If you've liked a link you found here, it might have come from there!

<https://hamweekly.com>

If you have had even a passing interest in setting up a packet radio station, then this write-up on setting up the Direwolf TNC on Windows or Linux is for you:

<https://themodernham.com/ultimate-direwolf-tnc-installation-guide-for-windows-and-linux>

FCC to Require Two Factor Authentication for CORES Users



The Federal Communications Commission (FCC) has announced an upcoming change to the Commission Registration System (CORES) that licensees use to pay any application or regulatory fees, manage or reset a password on an existing FRN, or request a new FRN. Beginning March 29, 2024, multifactor authentication will be implemented.

Users will be prompted to request a six-digit secondary verification code, which will be sent to the email address(es) associated with each username. The user will then need to enter the code into CORES before they can continue.

In a public notice, the FCC said this change will make the system more secure. "This additional layer of security will further safeguard against unauthorized access, thereby enhancing the overall integrity of information contained within the CORES system and improving the security of user data," it read.

The Public Notice can be found in PDF format at:

<https://docs.fcc.gov/public/attachments/DA-24-219A1.pdf>

The FCC recommends that users confirm they have access to their username account email and to add a secondary email address, if need be.

Resources are available for those who need assistance with the system. For inquiries or assistance regarding the implementation of multifactor authentication on CORES, submit a help request at

<https://www.fcc.gov/wtbhelp>, or call the FCC at 877-480-3201 (Monday through Friday, 8 AM to 6 PM ET).

Charlie the Tuner's HF High-Lites

Chuck, W8PT
a.k.a. "Charlie the Tuner"



Greetings DXers

Charlie the Tuner's DX High-Lites for February 2024!

Well, it seems that we are seeing the first signs of Spring, with the temps starting to creep up. We still have a little-ways to go, but the signs are good. Now if we can have some good WX days without rain, we might be able to get some long-awaited projects done.

The bands have been a little crazy with good openings on 6, 10 and 15 meters on the one hand, and solar black outs on the other. Those who can work Aurora have had some fun in recent weeks.

Let's see what DX is on tap for this month, and a couple months ahead.

Thanks to: G0TLE, The Daily DX, DL5ON & The DX News Letter, DXNews.com, DX-World.Net, I1JQJ/IK1ADH & 425 DX News, DXNL for the following DX information.

I'm using the same disclaimer as last year. This report "could" contain "Pirate/SLIM" operation or more likely a "BUSTED CALLSIGN". As always, you never know, so... - "**Work First, Worry Later**".

PLEASE NOTE: The fact that donation requests, from various DXpeditions, are at times included in this column does not mean that PCARS or this HAM approves or disapproves of donating to the DXpeditions listed. I am only providing information for you to make up your own minds as to whether or not to donate.

April...

6W, SENEGAL. Willy, ON4AVT will be QRV as 6W7/ON4AVT from Warang until April 16. Activity is on 80 to 10 meters using SSB and various digital modes, and on Satellite QO-100. QSL to home call.

7Q, MALAWI. REMINDER - Don, K6ZO is QRV as 7Q6M from Embangweni and is here for six months while on work assignment in a hospital. Activity is in his spare time on the HF bands and 6 meters using CW, SSB, FT8, and EME. QSL via LoTW.

A8, LIBERIA. A8OK Team will be active from Liberia, 5 - 19 April 2024. They will operate on 160 - 6m, SSB, CW, RTTY, FT8, FT4, PSK and also QO-100, RS44, IO-117. QSL via OK6DJ, ClubLog OQRS, LOTW.

CE0, JUAN FERNANDEZ ISLAND. Felipe, CE3SX is QRV as CB0ZIX until April 4. Activity is mainly on 6 meters, but also on the HF bands using SSB and FT8 in DXpedition mode. QSL via LoTW.

DA, FEDERAL REPUBLIC OF GERMANY. Special event stations DL75AFUG, DL75AFUV and DP75AFUG are QRV until April 30 to commemorate the 75th anniversary of the first Amateurfunkgesetz, the German amateur radio regulations that came into force on March 23, 1949. QSL via bureau.

FG, GUADELOUPE. Jean-Luc, F1ULQ and Bert, FG8OJ will be QRV as TO1Q until April 8. Activity is on the HF bands and 6 meters using SSB and various digital modes. QSL via F1ULQ.

KH0, MARIANA ISLANDS. JA6VQA, as WH0B, along with JA6REX and JH6HZH will be QRV from April 25 to 30, using mainly FT8 and FT4 with some CW and SSB, on 160 to 6 meters. Listen for them as WH0B, KH0/JA6REX and KH0/W6HZH, respectively. QSL WH0B via LoTW, eQSL and direct to JA6VQA. QSL KH0/JA6REX and KH0/W6HZH via LoTW, eQSL and Club Log.

HI, DOMINICAN REPUBLIC. Special event call sign HI180RD is QRV until April 30 to celebrating the 180th anniversary since the Dominican Republic declared its independence from Haiti. Activity is on all bands and modes. QSL via operators' instructions.

ON, BELGIUM. Members of the Radio Club de Luettich will be QRV with special event station OR100LGE during 2024 to celebrate the club's 100th anniversary. Activity will be on 160 to 6 meters using CW, SSB, FT8, and FT4. QSL via ON6YH.

PJ7, SINT MAARTEN. Ken, KJ9B will be active until April 6. He'll be operating as PJ7/KJ9B, mostly on FT modes.

PZ, SURINAME. Ren, PY8WW will be active as PZ5TW from Suriname, until 6 April 2024. He will operate on HF Bands, QSL via PY8WW.

TO, GUADELOUPE IS. Jean-Luc, F1ULQ will be active as TO1Q from Guadeloupe Island, IOTA NA - 102, until 8 April 2024. He will operate on HF Bands. QSL via F1ULQ, LOTW.

TO7, REUNION ISLAND. Giovanni, IZ2DPX will be QRV from April 7 to 18 as TO7PX. Look for him using SSB and FT8 on 40, 30, 20, 17, 15, 12, 10 and 6 Meters. QSL via IK2DUW.

V4, ST. KITTS AND NEVIS. Pete, G0TLE will be QRV as V4/G0TLE from St. Kitts, IOTA NA-104, until April 6. Activity will be holiday style on 40 to 10 meters using CW and SSB. QSL via LoTW.

V5, NAMIBIA. Gunter, DK2WH is QRV as V51WH from Omaruru until the end of April 2024. Activity is on 160 to 10 meters, including 60 meters. QSL to home call.

VK0, DAVIS STATION ANTARCTICA. Dave, VK2DS is active as VK0DS from Davis Station, Antarctica, until November 2024. He will operate on HF Bands, plus 6m and EME 2m and 23cm. QSL via home call.

VP2, MONTSERRAT IS. Tjaore. W2APF will be active as VP2MDX from Montserrat Island, IOTA NA - 103, until 11 April 2024. He will operate on 80 - 10m, CW, SSB. QSL via W2APF, LOTW.

YJ0, VANUATU. YJ0VK Team will be active from Vanuatu, until 11 April 2024. They will operate on 40 - 10m, SSB, CW, FT8. QSL via M0OXO, OQRS.

ZC4, UK SOVEREIGN BASE AREAS ON CYPRUS. Martin, MW0BRO is QRV as ZC4GW during 2024. QSL to home call.

Look Ahead & Reminders...

DA, FEDERAL REPUBLIC OF GERMANY. Special event call signs DB100FK, DC100FK, DD100FK, DF100FK, DL100FK, DM100FK, DQ100FK, DR100FK, DM100MW, and DR100PE will be active until May 31, 2024 to celebrate the 100th anniversary of the formation of the Deutsche Funk-Kartell, a federation of clubs of radio enthusiasts during the early days of amateur radio in Germany. QSL via LoTW.

FH, MAYOTTE. Marek, FH4VVK is here until June 2024 and QRV on the HF bands and 6 meters using SSB and FT8. He may soon be active using RTTY. QSL to home call.

FP, MIQUELON IS. Eric, FP/KV1J will be again active from Miquelon Island, IOTA NA-032, starting 2 July 2024. He will operate on 80 - 6m SSB, RTTY, CW, FT8 and FM Satellites. He will operate also in some contests. QSL via home call, LOTW.

FT4, GLORIOSO IS. Marek, FH4VVK is planning to be active as FT4GL from Glorioso Islands, IOTA AF - 011, 24 May - 19 June 2024. He will operate on HF Bands. QSL via F4FTV, LOTW. DXCC Country - Glorioso Islands, FR/G. QTH Locator - LH38pk.

FS, SAINT MARTIN IS. Hal, FS/W8HC will be active from Saint Martin Island, IOTA NA - 105, 25 June - 2 July 2024. He will operate on 40 - 6m, CW, FT8. QSL via LOTW.

FS, SAINT MARTIN IS. Gregg, W6IZT will be active again as FS/W6IZT from Saint Martin Island, IOTA NA-105, 25 June - 2 July 2024. He will operate on 40 - 6 m mostly CW. QSL via N7XG direct, buro, LOTW.

OE, AUSTRIA. Jorg, OE6VIE is QRV with special event station OE60RRDXA until June 30 to celebrate the 60th anniversary of the Rhein Ruhr DX Association RDXA. QSL via LoTW.

OE, AUSTRIA. Special event station OE40LCR is QRV until July 31 to celebrate the 40th anniversary of the Austrian Albert Schweitzer Society. QSL via operators' instructions.

OJ, MARKET REEF. OJ0T Team will be active from Market Reef, IOTA EU - 053, 27 April - 4 May 2024. They will operate on 160 - 6m, CW, SSB, Digital Modes. OJ0T call sign will be used CW, SSB. On FT8 they will use OJ0/LA1UW, OJ0/LA3WAA, OJ0/LB5SH, OJ0/LB0VG. QSL via EA5GL. Team - LA1UW, LA3WAA, LB5SH, LB0VG.

OZ, DENMARK. Stefan, DL7AOS will be QRV as 5P5K from Romo Island, IOTA EU-125, until May 6. Activity will be on 80 to 6 meters using SSB and various digital modes. This includes being an entry in the upcoming CQ World Wide WPX contest. QSL to home call.

TO7, REUNION IS. Giovanni, IZ2DPX will be active as TO7PX from Reunion Island, IOTA AF - 016, 8 - 18 July 2024. He will operate on 40 - 6m, SSB, FT8. He will operate on 40 - 6m, SSB, FT8. QSL via IK2DUW, LOTW.

XW, LAOS. Vincent, XW4KV is QRV from Vang Vieng until June 1. Lately he has been active on 15 meters using FT8 around 1100z. QSL via F4BKV.

As usual, here's my disclaimer: Keep in mind that these DX events can change due to various reasons that sometimes are out of the hands of those who are doing the planning. Keep the ethers wobbling and work some DX. Don't let your rigs gather dust!

Get on the air and work some DX!!

73 for now....Chuck W8PT aka Charlie the Tuner

March Meeting



Mobile HF Installation – Bonding and Choking

Gene, W8NET

This is one of a 4-part article about HF mobile transceiver installation. The whole article can be found here:

<https://stationproject.blog/2013/08/12/mobile-hf-installation-part-14/>

Our HF WAS & DX Nets SIG this month will be focusing on mobile operation. The subject of bonding, choking and grounding is ESSENTIAL for a successful mobile installation. Fred's, AB1OC, installation is a Ford F-150. Every vehicle has their own set of issues, so your mileage could vary. However, you will understand some of the issues.



August 19, 2013 by Fred Kemmerer, AB1OC

Transceiver Ground

This article will cover the second phase of our Mobile HF project – bonding and grounding. The following is a summary of the phases of the project:

Phase 1 – Install the ICOM IC-7000 running barefoot with a simple MFJ HAMStick Antenna (to be replaced with the Scorpion Screwdriver Antenna in Phase 3)

Phase 2 – Properly bond all elements of my truck and deal with any noise issues (this article)

Phase 3 – Install the Scorpion Screwdriver Antenna and Controller

Phase 4 – Install a 500w Amplifier, 160m capability and operating accessories.



We have been having fun with our new Mobile HF installation in our 2009 Ford F-150 Pickup Truck. We are currently using a simple HAMStick antennas to operate on the 20m and 40m bands. The initial installation focused on getting the radio installed in the truck and working and while this was successful, we have had to work around quite a bit of electrical noise when the vehicle is running. The noise was S9 without the Icom IC-7000 Transceiver's Noise Blanker turned on and about S3-S4 with the Noise Blanker on. Most of the noise sounded like ignition or fuel injector spikes (it was engine speed dependent) and I understand that this is quite common with the Ford F-150 Truck. This past weekend, I set about solving the noise problems via a combination of Bonding and Choking techniques. An excellent source on how to approach this can be found on the K0BG Mobile HF website.

The first step in the process was to ground my radio to a solid point on the truck's body. I used 3/4" wide ground braid from DX Engineering (picture above) for this purpose. I was fortunate that my F-150 had Truck had good ground straps installed between the body and the frame at the factory (although I do plan to supplement these with heavier straps in the future).

Power Connection Choke

Next, I added Type 31 choking material to the transceiver's power and antenna leads. I added a total of three beads on the power leads (one in the engine bay close to the firewall and two on the interior side of the firewall). I also installed choking material on the antenna coax near the radio. The correct way to install these beads is to coil the cables through them as many times as possible to form an effective RF choke. With these initial steps, my noise fell from S9 to about S6-S7 without the Noise Blanker.



Hood Bonding

The next step was to bond the hood of the vehicle to the rest of the body via 1" wide ground braid. These were made from material that I purchased from DX Engineering and they were installed on both hood hinges.



Body Bonding

I also installed two bonding straps between the cab and the bed of the truck (one on each side).



Exhaust Bonding

Finally, I used kits from DX Engineering to bond my exhaust system to the frame of the truck. This needs to be done in three places – at the exhaust pipe section which is connected to the engine, on the mid-pipe which leads to the front of the muffler (shown above) and at the tail-pipe which leads from the rear of the muffler to the rear of the truck. Exhaust system bonding is probably the most effective technique for reducing electrical noise in most installation and mine was no exception.

With these additional steps, I my noise level was reduced to S0! While I still have a faint amount of engine electrical noise, I can operate without the Noise Blanker on and with a lower level of Noise Reduction than before the steps outlined here. My installation is much quieter overall and I find that I am hearing many more stations than I did before. There is still more work that I plan to do in the future including bonding the truck's bed to the frame at all four corners, improving the existing factory grounding between the body and the truck's frame, and bonding the four doors to the body. For now, my Mobile HF operating experience has been improved considerably



PCARS Ham Radio License Plates Wanted !!! PLEASE !!

Dig out that amateur radio call sign license plate (with your present call sign), clean it up and bring it to be permanently affixed to the wall in the PCARS club station.

We have 80 PCARS member's ham plates now, **but we can use more.** Don't have ham radio call plates on your vehicle? Well for those of you in Ohio, you can get the plates sent to you by going to any License Bureau office and filling out the special plate registration form. Have a copy of your current FCC license when you apply. The official form to obtain your Ohio Amateur Radio license plates is on the PCARS IO Group site. Then you'll have an old plate to bring in to get hung up as a **permanent part of PCARS history.**



From the Ohio BMV:

General Information: Owners or lessees of motor vehicles who are residents of Ohio and hold an unrevoked and unexpired official amateur radio station license issued by the Federal Communications Commission may apply for these plates. The official call letters will be the license plate numbers.

Registrant Eligibility: Owner must submit a copy of the un-revoked and unexpired official amateur radio license issued by the Federal Communications Commission. (FCC).

Title Requirements: Ohio Certificate of Title issued in the same name as the FCC license, either singly or jointly, or the name on the FCC license is the same name on the lease agreement.

Vehicle Information: These plates may be issued to passenger vehicles, non-commercial trucks, recreational vehicles, house vehicles and non-commercial trailers.

Type of Plates: Plates will be manufactured with the FCC license.

Issuance Information: Amateur Radio plates cannot be issued with system assigned, reserved, or personalized plate formats.

Renewal of plates can be done at your local Deputy Registrar or by mail using their renewal notice. **Amateur Radio License Holders must provide a copy of their current unexpired and unrevoked official amateur radio license issued by the Federal Communications Commission (FCC) at the time of any type renewal transaction.**

All plates will be mailed directly to the address on your registration card unless customer requests otherwise. The deputy will issue your registration card, stickers and provide you with a permit which will allow you to operate your vehicle while your plates are being manufactured. Special license plate applications are available at all Deputy Registrar license agency locations. These plates cost an additional \$10.00 annually plus the normal registration fees. The fee is determined by Ohio Revised Code section 4503.14.

PCARS is on YouTube

That's right - PCARS is on YouTube. So, what does that mean? Hey, we have a place to put all kinds of videos that are about PCARS for the world to see.

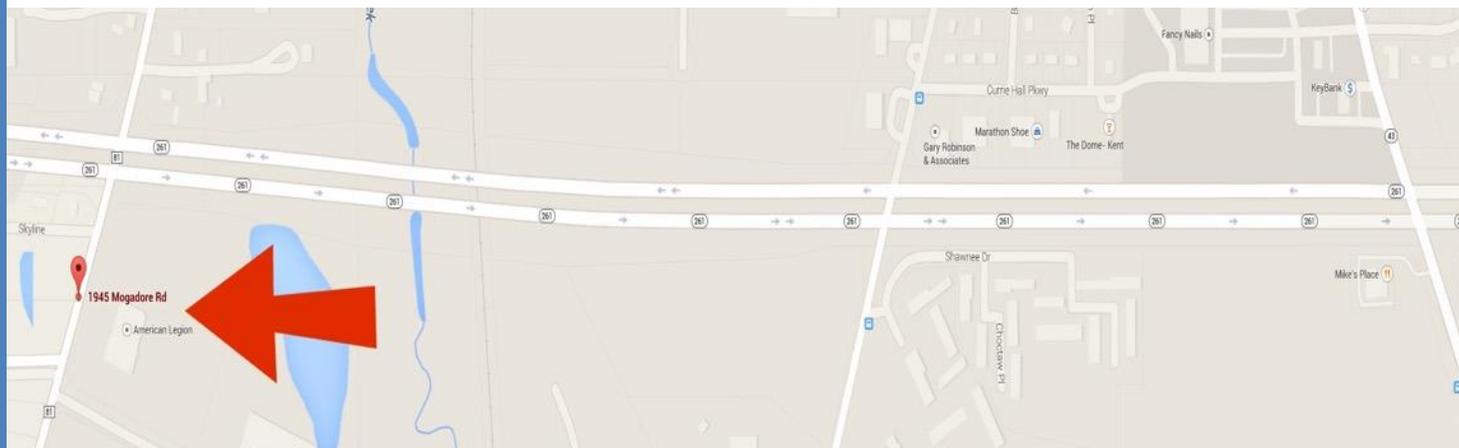


PCARS Meetings

The Portage County Amateur Radio Service (PCARS) in-person meetings are held the **2nd Monday** of each month and start at 7:00 pm.



*The meetings are held at The American Legion, Post 496
1945 Mogadore Road - in Kent. (Just South of Route 261)*



The American Legion Post 496 is located on the southeast corner of State Route 261 and Mogadore Rd. The driveway is on the south side of the building and as you enter you will pass through a parking lot on the south side of the building. Please do not park in this lot but instead continue on to the parking lot on the east side of the building which is near the rear entrance into the Post 'Canteen'. As you enter the post from this entrance you'll see a bar to the left and a dining area to the right. The meeting area we'll be in is on the right, to the rear of the dining area.



*The picture on the left shows
The American Legion Post 496
as viewed from Mogadore Road.
(looking East)*

The menu consists of your basic burger / dog / chicken sandwiches, wings, fries, onion rings, and salads. There is also an appetizer selection as well. Adult beverages are available and costs are in line with what you would expect at most bar-restaurant facilities.

If you are a member of The American Legion, The American Legion Auxiliary, or the Sons of The American Legion, bring your ID card as you get a substantial discount on adult beverage pricing.

PCARS VE Testing Information & News

Tom, KB8UUZ
PCARS VE Team Liaison



Future Dates

April 6th, June 1st, August 3rd, October 5th, December 7th

***** Check the website for the latest information *****

On behalf of the VE team at PCARS, we all look forward to seeing you at the PCARS club site in Ravenna so you can take your license test or an upgrade to your existing license. Face masks are not State/County mandated at this time, but you are always welcome to wear one.



PCARS VE sessions are scheduled for 9:45 am Registration, 10:00 am Testing starts, on the first Saturday of every even numbered month at the PCARS club site in Ravenna. Any questions? Contact KB8UUZ@gmail.com

QUICK FACTS

- **Yes**, PCARS VE test Sessions are held at the club site in Ravenna starting at 10 am - see schedule.
- **Walk-Ins are accepted.** Would appreciate an email to KB8UUZ@GMAIL.COM if you plan on attending.
- You **MUST** have an **FRN Number** (SSNs no longer accepted) **Taking Technician Test?** - You **MUST** apply for your FRN and get it prior to testing
- You **MUST** have a **valid e-mail address** for the FCC to be able to contact you.
- **Picture ID required**
- **Original and Copy of your valid FCC license** and originals of any applicable CSCE
- **VE fee is \$15** - Cash or Check payable to "ARRL-VEC"
- **FCC License Fee \$35** - payable **after** FCC sends you a link. **DOES NOT APPLY to upgrades**
- **17 years old or younger? VE Fee is \$5** per the ARRL reduced CE fee Youth Program
- **17 years old or younger? ARRL will reimburse you the \$35 FCC Fee**

Okay - now all the Details:

- If you are sick, have a cough, a high temperature or have been exposed to COVID-19 or other communicable germs, or someone that has been infected - please, *do not* come to the club site. *Use of masks is optional.*
- No food or snacks allowed.
- Ensure you have the following:
 - A picture ID such as a valid Driver's License, State ID, School ID, or US Passport.
 - If you are under 16 years of age, a parent or guardian must be able to vouch for you and you need a copy of your birth certificate (you do not have to give us a copy, we just have to see and verify).
 - **If you are upgrading to General or Extra - You MUST bring your original valid amateur radio license and a copy of your valid amateur radio license to turn in with your Form 605.**
 - Calculators are okay to use (if you need one) as long as the memories are cleared.
 - **NO cell Phones allowed**

First-Time Exam Applicants MUST Obtain FCC Registration Number BEFORE Taking Exam - All amateur examination applicants are **required** to provide an FCC Registration Number (FRN) to the Volunteer Examiners (VEs) **BEFORE** taking an amateur exam. This is necessary due to changes the FCC has made to its licensing system. Applicants will create an FCC username and account, respond to the verification email from FCC, and then register for the FRN. Register on the FCC's Commission Registration System (CORES): <https://apps.fcc.gov/cores/>

Email Addresses REQUIRED - All applications are required to contain an email address for FCC correspondence. Applicants will receive an email direct from the FCC with a link to the official electronic copy of their license whenever a license is issued or changed. ARRL VEC suggests that those without access to email to use the email address of a family member or friend. Licensees will be able to log in to the ULS using their FRN and password to download the

latest version of their license at any time. The FCC no longer provides paper license documents via regular mail.

FCC - \$35 Amateur Application Fee - The Federal Communications Commission (FCC) staff has clarified in response to an ARRL request that the new \$35 application fee will **not apply to upgrade to an amateur radio licensee's operator class and changes to club station trustees**. The new fees will apply only to applications for a new license, renewal, rule waiver, or a new vanity call sign.



VECs and Volunteer Examiner (VE) teams will not collect the \$35 fee at exam sessions. New applicants will pay the \$15 exam session fee to the ARRL VE team as usual.

When the FCC receives the examination information from the VEC, it will email a link with payment instructions to each successful candidate. The candidate will have **10 calendar days**, from the date of the application file number being issued, to pay. After the fee is paid, and the FCC has processed an application, examinees will receive a second email from the FCC with a link to their official license. The link will be good for 30 days.

Youth Licensing Grant Program - The ARRL Youth Licensing Grant Program, in effect since April 19, 2022, will cover the one-time \$35 application fee for **new** amateur radio license candidates **17 years old or younger** for tests administered under the ARRL Volunteer Examiner Coordinator (VEC) program. The \$35 Federal Communications Commission (FCC) application fee will be reimbursed after the ARRL VEC receives the completed reimbursement form and after the new license has been issued. The reimbursement check will be mailed to the fee payer. Also, candidates 17 years old or younger would pay a reduced exam session fee of \$5 to the ARRL VE team at the time of the exam. The \$5 fee is for all candidates 17 years old or younger, regardless of the exam level taken. Proof of under 18 status is required.

PCARS
ARRL Volunteer Examiners:
serving the Amateur Radio community
First Saturdays 10:00 am
at the club site in Ravenna
February, April, June, August,
October, December

Visit the ARRL website for the program instructions and reimbursement form at www.arrl.org/youth-licensing-grant-program.

Printing Your FCC License

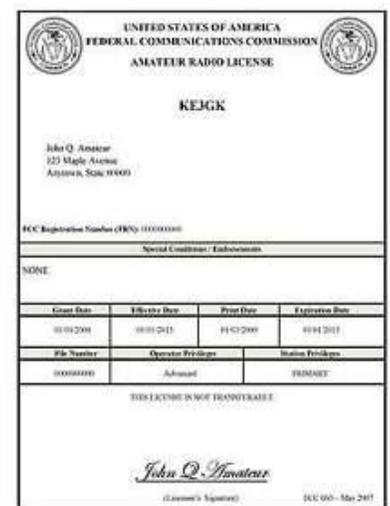
Print an Official or Unofficial Copy of Your Amateur Radio License

Information provided by Anthony Luscre, K8ZT

As of February 17, 2015, the **FCC no longer routinely issues paper license documents** to Amateur Radio applicants and licensees. The Commission has maintained for some time now that the official Amateur Radio license authorization is the electronic record that exists in its Universal Licensing System (ULS). The FCC will continue to provide paper license documents to all licensees who notify the Commission that they prefer to receive one.

Licensees also will be able to print out an official authorization — as well as an unofficial “reference copy” — from the ULS License Manager.

I’ve created a set of instructions on how you can request an “official” printed copy of your license* [Click here to download the instructions](#)



Thanks & 73

J.C., KC8JC
PCARS Newsletter Editor



Living in Ohio means making it through the false starts of spring. That includes wild rain on one day followed by a few flurries the next. We're all itching to get outside and it looks like April will have plenty of reasons to take to the air while we venture out into The Big Blue Room. From the upcoming PCARS ParkPedition for the POTA Support Your Parks weekend to the Solar Eclipse QSO Party it seems like we're all going to have a chance to enjoy a bit of nature with our radios.

We are very fortunate to have many and varied Special Interest Groups inside of PCARS. With all of those different threads to tug on, this hobby will never get boring. Why not try diving into a new one? You can meet your fellow club members and find something that will keep that ham radio fire burning. And if you do get out there and find something new, tell us all about it in The Radiogram!

Send your inputs my way at KC8JC@portcars.org and you will find yourself in the great company of our many prestigious newsletter contributors.

I'd like to thank all those who sent inputs for this month's issue:

AB1OC, AC8NT, K8CAV, KA8TOA, KB8UUZ, KP4VZ, N8QE, N8WCP, W8NET, W8PT, WA8LRW, WB2MGP, WG8X, The ARRL, and the World Wide Web.

Remember: With *YOUR* continued help, *WE* can keep making this a *GREAT* newsletter!



The Portage County Amateur Radio Service, Inc. (PCARS) - Ohio

~ The Hamvention® 2018 "Club of the Year" ~



PCARS meets the second Monday of each month at the **Kent American Legion Post 496**, 1945 Mogadore Rd. - just South of Rt. 261 - Enter the rear of the building for the meeting room.

Meeting starts at 7:00 pm - All are welcome to attend ~ Stop in and say hello!

PCARS uses the **K8IV** repeater: **146.895 MHz PL 118.8** in Sugar Bush Knolls ~ EchoLink Node: **K8BF-L**

Check PCARS out on the web: www.PORTCARS.ORG



~ 2024 Officers ~	2024 PCARS Appointments & Committees		
President - Mike Gonzalez - KP4VZ Vice President - Ken Hall - WA8LRW Treasurer - Greg Ash - KA8TOA 1 Year Trustee - Chuck Patellis - W8PT 2 Year Trustee Mike Ryan - KB8TUY 3 Year Trustee - Gene Marsh - W8NET Past President - Nick Wagner - AC8QG	ARRL Awards - DXCC	W8KNO	Joe Wehner
	Club Site Manager/Liaison	K8CAV	Rick Krus
	Contest Coordinator	W8PT	Chuck Patellis
	EchoLink	AC8NT	Jim Wilson
	Field Day Chairman, 2024	WA8AR	Tony Romito
	FYAO Chairman	W8PT	Chuck Patellis
	K8BF Callsign Trustee	N8QE	Bob Hajdak
	K8BF QSL Manager	N8QE	Bob Hajdak
	Membership Chairman		
	Net Control Coordinator	KA8TOA	Greg Ash
	Newsletter Editor	KC8JC	J.C. Wilson
	OSPOTA Chairman	KB8UUZ	Tom Parkinson
	PCARS Photographer		
	Public Information Officer		
	~ Meetings & Net ~	Secretary	KE8EGF
2nd Monday of each month, 7pm Thursday night Club Net at 8 pm on 146.895	Social Media	N8WCP	Mike Szabo
	Tech, Gen & Extra Class Mgr.	AC8NT	Jim Wilson
	Volunteer Examiner Liaison	KB8UUZ	Tom Parkinson
	Webmaster	KP4VZ	Mike Gonzalez
	POTA Coordinator	KE8ARB	Brandon Mercer



Active PCARS Volunteer Examiner Team Members

KB8UUZ	Tom Parkinson
AC8NT	Jim Wilson
AC8QG	Nick Wagner
N8QE	Bob Hajdak
KA8TOA	Greg Ash
WA8CCU	Al Nagy
N8FUM	Dan Torchia
KC8JC	James "J.C." Wilson
W8EC	Mark Haas
K8IG	Fred Freer
W8HFZ	Tim McLeod
K8PJW	Phil Weiss
N8XTH	Deron Boring
K8IV	Ed Polack
N8AMY	Amy Leggiero
W8PT	Chuck Patellis
KP4VZ	Mike Gonzalez

THE RADIOGRAM

PCARS Incorporated
Nov. 1, 2005

First Meeting
Nov. 14, 2005



ARRL Affiliation
April 20, 2006



Special Service Club
March 22, 2010

The RADIOGRAM copyright ©2024, is the official newsletter of the Portage County Amateur Radio Service, Inc. (PCARS) - Hamvention® 2018 Club Of The Year. The RADIOGRAM is an Award Winning newsletter: ARRL Ohio Section Newsletter - Third Place 2015, 2022 - Second Place 2014, 2016, 2020 - First Place 2012, 2013, 2017, 2018, 2019, 2021, 2023. ARRL Great Lakes Division Newsletter - Second Place 2013 - First Place in the 2017, 2020 and 2021.

Articles are the opinion of the authors and not necessarily those of PCARS. Or, better yet, let me express it this way: "These are my opinions and only my opinions, unless you share them as well, which would make them our opinions, but I am not of the opinion that I can express your opinion as my opinion without your prior expression of said opinion, and then my re-utterance of that opinion would, in my opinion, be foolish unless I were expressing agreement to your opinion, and then it wouldn't be my opinion but your opinion to which I only agree." **GO AHEAD - STEAL THIS NEWSLETTER!** You have our permission to post, e-mail, copy, print, or reproduce this newsletter as many times as you like, but please do not modify what you use. If you use material in this newsletter, all we ask is that you give credit to PCARS along with the author of the article. Caution - some of the articles in this newsletter maybe covered by copyright - please do not copy and use the ones that have by-line information unless you obtain permission from the original author. If you're not sure, drop an e-mail to KC8JC@portcars.org. The RADIOGRAM always obtains written permission for reproducing copyright material. The RADIOGRAM comes out the first day of each month (usually), please have inp uts submitted by 8 pm ET on the last Friday of each month. ARES® (Amateur Radio Emergency Service®) is a program of, and both logos are registered trademarks (used with permission) of the American Radio Relay League, Inc. ARRL, the National Association for Amateur Radio™. **Why the Black Squirrel in our logo?** For those of you not familiar with it: The Black Squirrel is commonly seen around Portage County, Ohio. Legend has it that some of these little guys and gals got loose from Kent State University back in 1961 and they migrated and thrived throughout our county. Look into the black squirrel legends and see what you find! **When you spot a black squirrel - think PCARS!**

The RADIOGRAM is published every month and only sent to subscribers. If you would prefer not to receive this newsletter, we understand. We'll try not to take it personally. It's not you saying you don't like us, but maybe you just don't have the time to look at all this hard work we've done just for you. Hey, that's cool. But if your heart is truly set on making sure you no longer receive this newsletter, even though we promise to one day reveal the meaning of life in it and you're going to be really upset when you miss out on that, we can take you off the e-mail list. Send your newsletter inputs (in .TXT format) along with in-focus pictures (not small 50 kb photos) to the newsletter editor: KC8JC@portcars.org

By attending PCARS in-person activities, you are acknowledging that an inherent risk of exposure to COVID-19 exists in any public place where people are present. By attending PCARS in-person activities, you voluntarily assume all risks related to exposure to COVID-19 and covenant not to sue and agree not to hold the Portage County Amateur Radio Service (PCARS) or any of their directors, officers, contractors, vendors or volunteers liable for any illness or injury. While PCARS implements preventative measures to reduce the spread of COVID-19 in accordance with Federal, State and Local guidelines, we cannot guarantee that attendees will not become infected with COVID-19 as a result of attendance.

Portage County Amateur Radio Service (PCARS)
705 Oakwood Street - Box 12
Ravenna, OH 44266 USA



NLC

