

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

July 2018 - Volume 13 Number 7

¥ 12,074.58

Field Day 2018 was FUN





PCARS Special Event Station This Month





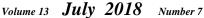


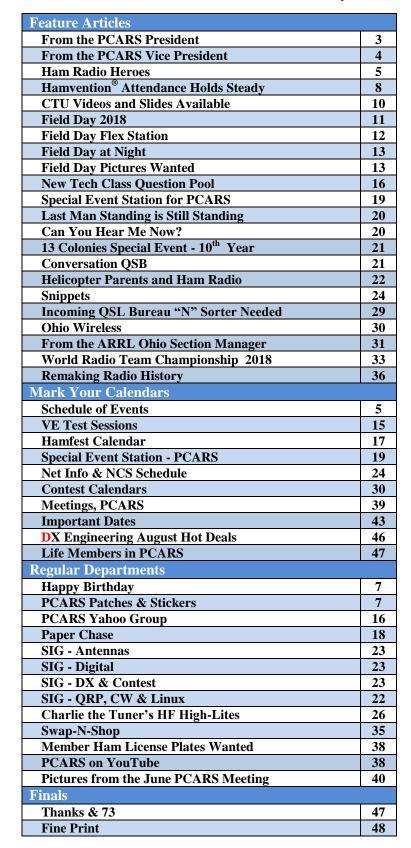
PCARS K8BF
The Club that puts the FUN in Ham Radio!



In This Issue of The















From the President

Jim, AC8NT PCARS President

Field Day

We had a great time at Field Day this year. Set up went well and we had lots



of help. I operated the GOTA station. I should say I tried to operate the GOTA station. On Saturday, 10 and 15 meters were both dead. These bands didn't open up until Sunday mid-



day after most visitors had left. We did get a chance to try out our antennas by receiving FT8 on 20 and 40 meters. Lots of traffic for those making contacts. My portable SuperAntenna worked much better than I expected and the MFJ loop worked without problems. We held a training session on Saturday that involved a tear down of the MFJ loop

and a demonstration of how to use a screwdriver type antenna. We had a lot of interest in the workings of the loop and in the SuperAntenna portability. I really enjoyed seeing a lot of hams that I hadn't met and many that I have not seen in a long time. It's what Field Day is all about.

My Go Kit

I had two projects for June that I finished. First, I again updated my "Go Kit". I now have a battery operated automatic tuner and better antenna switching. The kit also sets up much quicker. I can easily be up and running in 30 minutes; ready for SSB, CW and most digital modes. I also added a mesh access point for connecting to amateur networks. Maybe at the August meeting we should have members bring their kits to the meeting for all to see. I'm not talking about a GoKit monthly program, just a setup for all to see before the meeting.

Fundamentals of Ham Radio

The second project was setting up the gear for teaching the fundamentals of ham radio. In Britain and a lot of other countries, the license requirements include passing a practical exam that includes making QSO's, setting up a basic station, building and tuning an antenna and demonstrating familiarity with Morse code. Applicants must pass the practical before they are allowed to take the written. The RSGB says that this has

greatly increased the number of hams getting on the air quickly after getting their license. I have finished the apparatus for the antenna build and tuning. It is a couple of whips that form a dipole that students must



tune for a two-meter frequency and adjust for 1:1 SWR. It includes both center fed and offset dipole examples. I have also finished the balun kits for use in this training. We will be setting up some Saturday sessions where new hams and people that want to become hams can get this foundation training. Help would be appreciated. I will be having a session on Saturday July 17th to run through the training. Let me know if you are interested.

Special Event Station

On Saturday July 7th we will be activating a Special Event Station at the club site to celebrate winning the Hamvention Club of the Year Award. The event will run from 10 AM to 10 PM. This is a great time to operate. Everyone will be looking for us. We would love to see all of our stations running for this event.

July Monthly Meeting

We will have Natalie Wardega (https://tinyurl.com/y9mzpbuw) will be talking about **RePlay for Kids** and the good it does. RePlay converts and repairs toys for kids with special needs. We had a fix and modify session at the club last year and found it to be rewarding and fun to boot. We have scheduled our next session for 9 AM September the 29th. Please come and hear her speak about this great cause and plan to attend the session in September.



FT8 DXpedition Mode

A mode for FT8 operations by DXpeditions has been formalized. It will allow hundreds of contacts to be made per hour using FT8. A couple of things to remember:

- 1. You **must** be using WSJT-X version 1.9 to use this mode.
- 2. It doesn't use the standard FT8 frequencies.
- 3. Please **read the manual supplement** before you plan your contacts. It can be found at https://physics.princeton.edu/pulsar/k1jt/FT8_DXpedition_Mode.pdf.

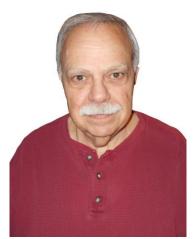
I am looking forward to contacting some of these expeditions using this new mode. If you are interested in FT8, please read this information.

That's all for now. Looking forward to seeing you at the July meeting.

From the Vice President

Tony, WA8AR
PCARS Vice President

Field Day is without a doubt the largest operating event for PCARS every year. This year we had 50 members participate in one way or another, some operated on the air, some acted as loggers and many others helped with everything from loading and unloading equipment to putting up and taking down antennas. There was plenty of work to do and a lot of people pitched in to make Field Day 2018 a fun and successful event. While 50 is a good turnout we would always like to have many more of our members attend.



I would like to thank all the volunteers who showed up to work. Remember that Field Day is not only a fun time (and a contest), it is also a national simulated emergency communications drill. What we did on June 23/24 is exactly what we would have to do in the event of a large natural disaster. The FCC and Homeland Security already recognize the fact that when all other communications systems get knocked out, Amateur Radio could be the last communications network still operational.



Schedule of Events

On the calendar for upcoming meetings and activities are:

- July 2nd PCARS Board Meeting 7 pm at the club site in Ravenna
- July 4th Independence Day
- July 7th PCARS Special Event Station at the club site 10 am to 10 pm
- July 9th PCARS meeting 7 pm at the Kent American Legion hall
- July 17th "Fundamentals of Ham Radio" at the club site in Ravenna 10 am
- Sept 29th RePlay for Kids at the club site in Ravenna 9 am





Special Interest Groups (SIGs) - Every Month at the Club Site in Ravenna - 7 pm

First Tuesday - **Digital** - Moderator: K8CAV
Second Tuesday - **QRP/CW** - Moderator: KB8AMZ
Third Tuesday - **Antenna** - Moderator: WA8AR
Fourth Tuesday - **DX & Contest** - Moderator: W8PT
Fifth Tuesday - **Linux for Hams** - Moderator: KB8AMZ

Fourth Thursday - Net Night at the club site - 6:30 pm

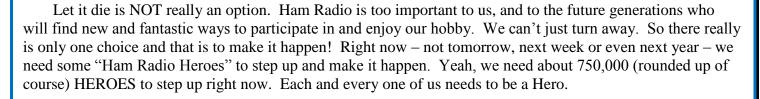


Ham Radio Heroes

Tom, WB8LCD

Let's face it, Ham Radio is definitely not the most popular hobby in the US of A at this time. In fact, if you round up the number of hams in the US to 750,000, and then figure that as a percentage of the total US population at 350 million (also rounded off for this discussion), that means that ham radio operators are approximately .002% of our population! That's not too much! Without numbers we

don't exist. We grow, or we die. We are, each and every one of us who holds an Amateur Radio license, literally, standing at the crossroads. So, I'm talking to all of us, as a group, and at the same time I'm talking to each one of us, as an individual. What are we (you) going to do? There are only two choices: let it die, or make it happen.



So, how can YOU be a ham radio HERO? It's not really all that tough. Anyone can, and should, be a hero. Most heroes will recognize that you need to act both nationally and locally. Lets first talk about nationally.

Unless you have some special talent, skill or position, its hard to make an impact on a national basis.



Where you can make an impact, on a national basis, is by supporting your ARRL. While you may, or may not be a fan of the ARRL, lets look at one important fact: The ARRL is the only organization that exists to support and fight for the rights of the Amateur Radio community. Through the years, they have done an outstanding job of representing us to government and industry. Those two entities would only be too happy to let us die (the sooner the better) so they can share the Billions of Dollars worth of radio spectrum we have allocated to our use. Without the ARRL, we would have ceased to exist a long time ago. I'm urging you to be a Ham Radio Hero by supporting the ARRL. The number one asset they need to continue their fight on our behalf is money. The latest issue of QST has pages recognizing some of their largest donors – you'll recognize some of their names. No, my name is not there, but I do support the mission of the ARRL every year with a donation at the level I can afford. You should too.

Now, lets bring it closer to home. PCARS. (If you are not a PCARS member, substitute the name of your local club.) PCARS needs money too. We have done some pretty fantastic things, on a pretty small budget. PCARS doesn't ask for much beyond your annual dues. PCARS will accept a donation from it's members and friends, at any time, even if not solicited! Having been involved with the club since the beginning, I can tell you explicitly that PCARS funds are always used in way that enhance the amateur radio experience for all of our members – no one has EVER profited from or used the assets of PCARS for their own personal gain. Through the years you've had good people doing a good job at managing the assets of the club for the benefit of everyone. You can feel comfortable that when you donate to PCARS, the funds will be used properly. I'm sure our club treasurer – Amy, KD8SKL – would be happy to take your donations to PCARS at any time. Let me also add, that if you would like to leave something to PCARS when you become a silent key, those arrangements can be made. It's best to make those arrangements ahead of time, and if you would like to know more about that, please contact me and I can put you in touch with someone who can make that happen for you.

Cash. Always an appropriate and appreciated gift to any organization!

Cash is easy. Now I want to talk about personal involvement. Our goal is to bring more people into the hobby and grow our numbers. Everyone looks at the numbers...... Are you personally involved in that? Every one of us should become a ham radio advocate to the outside world. Word of mouth is the best way to spread anything around the world – say something to the people you come in contact with. If you don't feel comfortable leading them to give it a try, put them in touch with someone who does. The main idea here is to make sure that everyone hears about ham radio. No one should be surprised that it still exists, and we really are High Tech! Our great hobby really does have something to offer just about everyone – they just need to be made aware of it. And, the more they hear about it, the more their interest and their acceptance will be heightened. We need to create a nationwide "Buzz" around Ham Radio! Another way you could step that up is to become a PIO for your club or group. Post to, or even manage their Facebook page, look for other ways to use social media to get that buzz started. Some of you are very good at that – just add ham radio to your list of topics! Again, we want to build exposure out in the general population.

You want to be a real "Ham Radio Hero"? Get involved with your club. Don't come to the meeting to grumble and share your bad attitude. Come to the meeting to get excited about something new. Come to the meeting to meet and greet the new hams that show up so that they know they're welcome and someone wants to help them with their involvement in the hobby! Don't come to club activities and then complain that it's not set up the way you would have done it – take an active role in the things that are going on. No 1, 2 or 5 people should have to do everything. Step up and take an active role in finding good speakers for the club's meetings, step up and help plan some of your club's activities. Plan the food, run the net, help clean up at the club site. Don't just sit there – get up and do something!

Don't get me wrong. Everyone should have the opportunity to attend some of the functions for the pure enjoyment of it. And if everyone shares the load and gets involved, that should work out very easily, especially for a large club like PCARS is. Everyone should be having fun at any of our activities. If a new ham shows up

and sees nothing but a bunch of grumpy old farts, it's not likely they'll be back. In fact, if you want to speed up ham radio's death, just grab on to those new hams and grumble about your crummy club and the out of touch ARRL. In one day, Samson slew 10,000 Philistines with the jawbone of an ass; please, don't use that same weapon on our new ham radio recruits!

Even though my JUNO Project QSL card is one of my most prized QSL's, you really don't need to be a rocket scientist to figure this all out. We need everyone's involvement if we are going to make this hobby successful and viable for the long term. Not everyone can function at the same level, but everyone has something useful to offer. When you see someone doing something at the club, you have 3 courses of action: you can ignore them, or worse, criticize whatever it is they are doing, you can tell them "thanks" for whatever it is that they are doing, or, you can get up and help them get the job done. Be that guy or gal. Be a Ham Radio Hero.

Happy Birthday PCARS Members

PCARS members having a birthday in **July**:

W8PT	Chuck	Patellis
KE8IED	lan	Warring
N8HUC	Karen	Andrews
WB9LBI	Bill	Fraedrich
N4PKW	Rod	Thompson

G0BPS	Dick	Pascoe
N8QZ	Paul	Mitchell
KE8IEC	Willie	Watts, Jr.
KD8EPA	Dan	Porcase

PCARS Patches & Stickers

New 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

and can be obtained 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.

PORTAGE

Show your pride in PCARS - Wear a patch, use the

stickers! See the club Treasurer: Amy, KD8SKL or e-mail her at: KD8SKL@yahoo.com













Hamvention® Attendance Holds Steady

From the ARRL

Hamvention[®] marked another successful year in 2018, General Chair Ron Cramer, KD8ENJ, told ARRL this week. At **28,417** visitors, Hamvention recorded its third-largest attendance ever in its second year at its stillnew location in Xenia, Ohio.



"We had a slight decline in attendance, but we think people were waiting to hear about the upgrades we made, and some upgrades did not happen until the very last moment," Cramer allowed. "Many were worried about the mud."

The drop in attendance amounted to some 900 fewer visitors from Hamvention 2017. Hamvention attendance peaked in 1993 at 33,669, before the 1996 change in date from April to May while it was still being held at Hara Arena. Attendance in 2016 for the show's final year at Hara was 25,364.

Cramer said other events in the Xenia-Dayton area cramped lodging availability, but Dayton Amateur Radio Association (DARA) organizers were "very pleased with the results and comments everyone has made this year."

Hamvention's 2018 theme was "Amateur Radio...Serving the Community" and the event highlighted emergency communication forums - many put on by ARRL - plus a big display of emergency communication vehicles.

This was a year of "fine tuning the event" through critique sessions with committee chairs and evaluating comments, compliments, and criticisms from first-year Xenia attendees and vendors, Cramer said.

"From all the information we have received back already this year, from guests and vendors, we believe we have been successful and are working hard to prepare for Hamvention 2019," Cramer offered. "We expect new additions to the show and finer tuning to make sure our guests keep coming back."

Improvements this year at the Greene County Fairgrounds and Expo Center included the use of



frame tents for some activities. "These were much more stable in the wind and rain - a very big improvement," Cramer said. "We installed asphalt millings in the Flea Market area to create roads and eliminate the mud we had last year. We will be widening and adding more asphalt millings to the roads this year." In addition, he said,

Hamvention on-site parking eliminated some of the muddier areas and halted the use of tractor-driven people movers, which were creating ruts. "We were not immune to rain, but it took less of a toll," Cramer added.

Cramer also touted more on-site food options, expanding the variety and number of food vendors and cutting wait times. More seating was added.

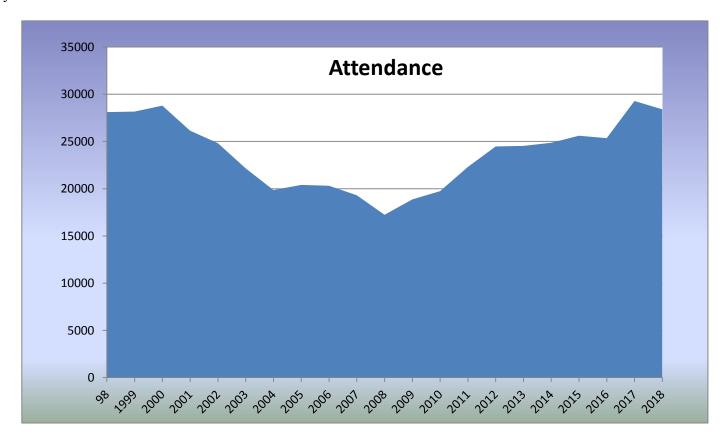
Other improvements Cramer cited included:

- More forums and a new forum room.
- Improved parking access by moving the bus drop-off location closer to the main entrance gate.
- More off-site parking with better signage to provide easier access.
- A new Product Showcase to highlight new products.

Central State University opened its dorms for the event, offering inexpensive lodging that included breakfast and dinner.

"There was a shortage of rooms this year with the grand opening of the Memphis Belle Exhibit at the Museum of the Air Force," Cramer explained, "but the Greene County and Dayton Convention Visitors Bureaus kept tabs on rooms and helped direct those who called."

Cramer expressed his appreciation to Greene County, Xenia Township, and the City of Xenia, as well as to the nearly 800 volunteers for their assistance. "The Greene County Fair Board has been exceptional in making this our new home," Cramer said. "We thank all who attended this year's show and hope to see you again next year."



Reported Hamvention Attendance - 1998 through 2018

Hamvention [®]	Hamvention [®]	Hamvention [*]	Hamvention [®]	Hamvention [®]
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2018 CTU Videos & Slides Available

Tim, K3LR

Contest University

2018 Contest University Dayton Videos & Slides are now available

Thanks to Icom America (Ray, N9JA), the Dayton CTU Professors and Teri, K8MNJ (organizer and webmaster) the slides in PDF format from all 2018 presentations (and many past years) and several 2018 CTU YouTube videos are now available.

Go to the Contest University website: http://contestuniversity.com

Click on FILES for the PDF slides and click on VIDEOS for links to the available recorded sessions (thanks to KC1CWF).

Contest University Files

K1DG: Radio Contesting - Having Fun is Easy

W3LPL: How to Improve your Transmitting Antennas for Low Solar Activity

NOAX: RadioSport Contesting Hints and Kinks NOAX: Hints and Kinks – Technique and Station

N6TV: CW and RTTY Skimmers and the Reverse Beacon Network

W5ZN: Utilizing Digital modes FT8 and MSK144 for Competitive Advantage in VHF Contests

W3LPL: Easy to Build Low Band Receiving Antennas for Small and Large Lots

NOAX: Grounding and Bonding for the Little Pistol and Medium Gun

K1DG: How to Read and Learn from your Log-Checking Report

WOYK: Having Fun with RTTY Contesting

W3LPL: How to Adapt your DX Contest Strategies for Low Solar Activity

K2YWE: Contest Operating Best Practices

N6TV: The Advantages of Waterfall Displays for Contesting and DXing

WOYK: Pursuing RTTY Contesting to the Limit

K3LR: Some Thoughts About Contesting & Optimization

W3YQ: Antenna/Tower Reliability NC0B: 2018 Contest Radio Review

Contest University Videos Dayton 2018 Contest University:

- ✓ Radio Contesting Having Fun is Easy K1DG
- ✓ Session 1 RadioSport Contesting Hints and Kinks NOAX
- ✓ Session 2 Grounding and Bonding for Contest Stations NOAX
- ✓ Session 3 Contest Operating Best Practices K2YWE
- ✓ Contesting & Station Optimization K3LR (No Video Available)
- ✓ Session 4 The Advantages of Waterfall Displays for Contesting and DXing N6TV (No Video Available)
- ✓ Session 5 Small Stations With Big Ideas K2YWE
- ✓ Session 6 Waterfalls, Recordings and Reverse Beacon Network N6TV (No Video Available)
- ✓ Session 7 2018 Contest Radio Review NC0B

Hope to see you at Dayton CTU 2019!





| Hamvention [®] |
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Field Day 2018

PCARS Field Day 2018 is History.

The totals are not all in yet and in next month's issue of The RADIOGRAM there will be a complete report of our submitted score.



We set up in the Freedom Township Park located at the corner of State Route 700 and Streeter Road. This was our third year at this location.

Saturday, the rain hit us about 4 times in bursts. We got around 3/4" of rain but it didn't dampen the spirits of all that participated.

Everyone pitched in. It was a great Team Effort! Almost all of the stations were on the air at the start of Field Day. The CW station had a bit of trouble with the antenna mast, but they finally prevailed and made it a run of it cranking out CW signals all over the United States.

There was also a VE testing session at 4 pm, and we had 6 people taking tests. Two of them were going for their Amateur Extra and both of them went home with a big smile after passing with perfect scores!.

Dinner was on Saturday and we had it catered. There was plenty of good food and if you went away hungry, it was your own fault. Everyone had plenty to eat and there were also a ton of snacks to keep the late shift running with no problems. On Sunday there were pancakes and bacon brought to you by chefs Jennifer, KB3GXB and Ray, KD8DFL.

First Contact was logged at 1800 UTC on June 23rd by the **40 Meter Phone Station** to N8BEG in Michigan. **Last Contact** was logged at 1759 UTC on June 24th by the **40 Meter Phone Station** to AA3N in North Carolina.

Total Contacts by Loggers / Operators

Logger	#
N8XTH	361
ND8L	356
K8IV	294
KD8DFL	279
KD8SKL	255
N8QE	252
W5OV	245
WB9LBI	210
KB8UUZ	193
K3GP	156
W8PT	148
KS8U	144
KB8AMZ	130
K8KSU	104
W8KNO	70

Logger	#
K8CAV	55
K8SRR	54
KA8TOA	30
W8NET	29
KD8WZS	28
KE8WBA	26
WB8LCD	24
W8YIH	23
KD8SOP	21
KD8WCK	16
KB8TUY	11
KA8T0A	9
N8GIE	6
W8AHC	2

Operator	#
K8IV	564
N8XTH	359
ND8L	356
K8KSU	315
N8QE	252
W5OV	245
WB9LBI	210
K3GP	156
KS8U	144
KB8AMZ	130
KD8DFL	104
KD8SKL	104
WB8LCD	75
W8KNO	70
W8PT	60

Operator	#
K8CAV	56
K8SRR	52
KD8WZS	49
KA8TOA	35
W8NET	30
KE8BWA	26
W8YIH	23
KD8WCK	16
KB8TUY	11
KB3GXB	4
W8AHC	2



Field Day Flex Station

Rick, K8CAV

PCARS Field Day 2018 opened with the threat of heavy rain and thunderstorms, so much so that there was a joking (maybe not so joking?) reference to adding a new category – 4A OH Maritime. While we did get rain, the thunderstorms stayed away and the park field did not get soaked enough to hinder antenna operations. Fortunately, the short, heavy downbursts did not start until after antennas and stations were put up.



So, let's start with the stats. This year the Flex Station had 220 phone contacts, 190 digital contacts, and 19 CW contacts for a total of 429 QSO's during Field Day. We were at 80.8% of last year's total contacts of 531. Most of the drop was in digital contacts, which were down to 190 contacts versus last year's total of 315. Phone this year was at 220 contacts compared to last year's total of 156, a significant increase. CW had 19 contacts versus 60 last year. The big drop in digital contacts was disappointing and we're working on trying to pinpoint why this occurred so that we can correct it for next year's Field day and get Flex back up to the numbers we saw last year. If anyone who operated digitally at Flex has an idea of what happened and how we can improve it, please let me know.

Despite the lower numbers there were a number of successes this year. A redesign of the antenna mast system that incorporated a falling derrick system was huge in getting the mast and antenna assembly in the air with little effort and no mast bowing. A homemade reeling/unreeling machine that used cast-off electrical wire spools dramatically cut the time to unwind ropes and antenna wires without the tangles associated with hand unwrapping. All of this resulted in being able to get the entire antenna system up and operational in under two hours.

We all know that operating as a team far outstrips a group of people acting individually and PCARS does teamwork well! I can't say enough about how much difference to a Station Captain having an Antenna Team to assist makes. To all of you on the Antenna Team, great job and many thanks! The Power Team did its usual superb job of getting power to all of the stations without one glitch the entire time. The IT team used lessons learned from last year to provide flawless networking and logging. Food service was great and kudos to the Food Service team for getting dinner to the operators and loggers at the stations, and for a great breakfast Sunday. One of the more overlooked but most important positions during Field Day is the Safety Team. That there were no injuries, and that there was constant vigilance to ensure everyone had plenty of water to drink is a testament to great planning and execution on the part of the Safety Team. The most important part of a team is the people who make them up and to all of you who stepped up to be part of those teams and to help with PCARS Field Day, THANK YOU!

I want to say a special thank you to all who volunteered to operate at the Flex Station. By the beginning of Field Day, all of the operator positions were filled and that makes a big difference in operating effectively. So, to Steve K8SRR, Terry KB8AMZ, Amy KD8SKL, Tom WB8LCD, Sylvester W8YIH, Deron N8XTH, Rick KD8WCK, Andrew KE8BWA, and Gene W8NET, THANK YOU for being a part of the Flex Station Team and hope you help again next year.



Field Day At Night



Amy, KD8SKL



Field Day 2018 at the 40 meter station was awesome. I had a great time logging for Melanie, K8KSU while the rain pounded the trailer sideways and Ed, K8IV yelled out helpful hints like.... "Bang it out Mel he's stealing our frequency..." One guy took so long between his call sign and class/section I thought he died somewhere in the middle.

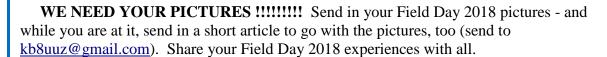
During the long silence, Ed yelled, "Tell us where your basement is located." Needless to say, I had a super fun time with them.



Later in the evening I operated on the 11 pm to 1 am shift. I am not sure how many contacts I made but I did have the first contact with the Canadian Province of Saskatchewan. I had a blast making tons of phone contacts & collecting points for the 40 meter station. I hope I did well enough to be invited back next year.



Field Day Pictures Wanted





Meanwhile - you can see about 190 pictures from the 2018 PCARS Field Day on the PCARS web site. Click the "**Field Day**" tab on the main page to get to the pictures (http://www.portcars.org/wp/?page_id=7388). You can also see the pictures that our Ohio Section Manager, Scott, N8SY has been posting on the Ohio ARRL Web Site (http://arrl-ohio.org/fd-18/index.php).







PCARS VE Test Sessions

Robert, N8RLG
PCARS VE Team Liaison

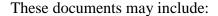
PCARS VE sessions are scheduled for 10:00 am on the first Saturday of every even numbered month at the PCARS club site in Rayenna.

August 4th, October 6th, December 1st



What to Bring to the Testing Session

- \$15 is the current test fee. We prefer the exact amount in cash or a check made out to: ARRL-VEC
- A government photo ID (driver's license or state ID card preferred).
- Your Social Security Number or FCC Federal Registration Number. We are required to submit either your Social Security Number (SSN) or your FCC Federal Registration Number (FRN) with your application. If you are upgrading, your FRN is on your current Amateur Radio license.
- A pen (black ink) and pencil (we can loan you either or both)
- If you already have an Amateur Radio license: One <u>copy</u> of any current (*unexpired*) amateur radio operator license issued to you.
- If you've already passed a test: The original (and one copy) of any document that you will use to prove you've already passed a test element.



- An unexpired Certificate of Successful Completion of Exam (**CSCE**) indicating the credit(s) earned indicating the credit(s) earned.
- o Original and copy of a pre-March 21, 1987 Technician license (this provides credit for the Element 3 [General] exam) you must be currently licensed to get this credit.

Expired License? Original and copy of your expired Amateur Radio License - you must take and pass Element number 2 to re-instate your license.





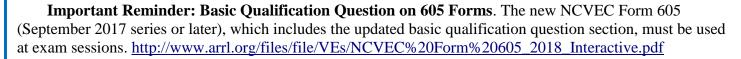
New Tech Class Question Pool

Daryl, WX1DER

New Technician Class Element 2 Exams will take effect for exam sessions beginning Sunday July 1, 2018.

The newly revised pool, released in January 2018 (updated and re-released February 12, 2018) by the Question Pool Committee (QPC) of the National Conference of Volunteer Examiner Coordinators (NCVEC), will be in use starting

July 1st. There are three graphics required for this pool and 423 questions in this pool, down slightly from 426 in the previous pool.



Older versions of the form are obsolete. The FCC revised the basic qualifications section of 605 Application Forms (FCC, NCVEC and Club) in September 2017 to include a question regarding whether an applicant has been convicted of a felony in any state or federal court.

Per FCC policy, exam session candidates will not be issued an FCC license if they do not answer the mandatory basic qualification question, or if they use an outdated form.

Each applicant applying for a new or upgraded license must answer the basic qualification question. A question left unanswered will result in the application being rejected by the FCC.

Visit the ARRL website for detailed information and instructions about the FCC's basic qualification question www.arrl.org/fcc-qualification-question.

PCARS Yahoo Group

Members are reminded that PCARS has a Yahoo Group dedicated to PCARS information. It's a great site to sign up for and get on the mailing list. Check out the PCARS Yahoo Group at:



http://groups.yahoo.com/group/PCARS/

As most of you may know, the portcars e-mail forwarding system is working anymore. Too many internet providers are looking at our forwarding system as spam and deleting the e-mails we send out through that system. So, what to do?

Two things every member should do.

- 1. Check the PCARS web site every day, maybe a couple of times a day to see new information that is posted.
- 2. Another thing to do is to join the PCARS Yahoo 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!!











Hamfest Calendar

07/08/2018 - 20/9 ARC Hamfest, Electronics & Computer Show - Location: Austintown Senior Center - 112 Westchester Drive - Austintown, OH - Website: http://20over9.org - Sponsor: 20/9 Amateur Radio Club - Contact: Dotti O'NeilMeleski , KC8SYF - PO Box 4006 Austintown, OH 44515 - Phone: 330-651-8420

Email: hamfest@20over9.org

07/14/2018 - NW PA Hamfest 2018 - Location: Greene Township Municipal Building - 9333 Tate Road Erie, PA 16501 - Website: http://www.wattsburg-wireless.us/ - Sponsor: Wattsburg Wireless Association - Contact: Neal Proper, WB3EQC - 4039 Ridge Parkway Erie, PA 16510 - Phone: 814-882-2739 - Email: nlproper@verizon.net

07/21/2018 - NOARSFEST - Location: Lorain County Community College - 1005 North Abbe Road - Elyria, OH 44035 - Website: http://noars.net - Sponsor: Northern Ohio Amateur Radio Society - Contact: Tom Porter, W8KYZ - 161 Herrmann Drive Avon Lake, OH 44012 - Phone: 440-320-5523 - Email: tporter161@oh.rr.com

08/04/2018 - 2018 Columbus Hamfest / Ohio Section Conference - Location: Aladdin Shrine Center - 1801 Gateway Circle - Grove City, OH 43123 - Website: http://columbushamfest.com - Sponsor: Voice of Aladdin Amateur Radio Club (W8FEZ) - Contact: John Lehman, K8PJ- 7415 Hagerty Road Ashville, OH 43103 Phone: 614-571-5179 - Email: voiceofaladdin@gmail.com

08/12/2018 - Cuyahoga Falls ARC's 10th Annual Tailgate Hamfest - Location: Robert Pinn Armory - 4630 Allen Road - Stow, OH 44224 - Website: http://www.cfarc.org/tailgate.php - Sponsor: The Cuyahoga Falls Amateur Radio Club - Contact: Frank Tompkins, W8EZT - PO Box 614 Cuyahoga Falls, OH 44222 -

Phone: 330-928-4048 - Email: tailgate2018@cfarc.org

08/26/2018 - Skyview Radio Society 2018 Annual Hamfest - Location: Skyview Radio Society Clubhouse Grounds - 2335 Turkey Ridge Road - New Kensington, PA 15068 - Website: http://www.skyviewradio.net - Sponsor: Skyview Radio Society - Contact: John Cancro, NK3P - 3525 Milligantown Road - New Kensington, PA 15068 - Phone: 724-339-4945 - Email: jpc2@psu.edu

09/09/2018 - Findlay Hamfest - Location: Hancock County Fairgrounds - 1017 East Sandusky Street - Findlay, OH 45839 - Website: http://www.findlayradioclub.org - Sponsor: Findlay Radio Club - Contact: Adam Hemmerly, KE8FLJ - 628 Hull Avenue Findlay, OH 45840 - Phone: 419-423-3402 - Email: https://www.findlayradioclub.org - Sponsor: Findlay Radio Club - Contact: Adam Hemmerly, KE8FLJ - 628 Hull Avenue Findlay, OH 45840 - Phone: 419-423-3402 - Email: https://www.findlayradioclub.org - Sponsor: Findlay Radio Club - Contact: Adam Hemmerly, KE8FLJ - 628 Hull Avenue Findlay, OH 45840 - Phone: 419-423-3402 - Email: https://www.findlayradioclub.org - Sponsor: Findlay Radio Club - Contact: Adam Hemmerly, KE8FLJ - 628 Hull Avenue Findlay, OH 45840 - Phone: 419-423-3402 - Email: https://www.findlayradioclub.org

09/09/2018 - Butler County ARA Swapfest - Location: Unionville Fire Hall - 102 Mahood Road - Butler, PA 16001 - Website: http://w3udx.org - Sponsor: Butler County Amateur Radio Association - Contact: Joseph Sciulli, N3WH - 1020 Bonniebrook Road Butler, PA 16002 - Phone: 412-337-1687 - Email: n3whjoe@gmail.com

09/23/2018 - Cleveland Hamfest and Computer Show - Location: Cuyahoga County Fairgrounds - 164 Eastland Road - Berea, OH 44017 - Website: http://www.hac.org - Sponsor: Hamfest Association of Cleveland - Contact: Glenn Williams, AF8C - 4134 Stoney Ridge Road Avon, OH 44011 - Phone: 440-934-5566 - Email: http://www.hac.org/contact.php











Paper Chase

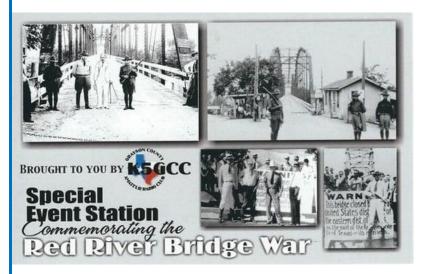
Joe, W8KNO

The Grayson County Amateur Radio Club will be operating a special event station, **W5I** from **0000Z-2359Z July 14th - July 22nd**, commemorating the Red River Bridge War, a dispute between Texas and Oklahoma over a new bridge that was built across the Red River in 1931.



The Red River Bridge War, also called the the Bridge War or the Toll Bridge War, was a 1931 bloodless

boundary conflict between Oklahaoms and Texas over an existing toll bridge and a new free bridge crossing the RED River.



The Red River Bridge Company, a private firm owned by Benjamin Colbert, had been operating a toll bridge between Durant, Oklahoma and Denison ,Texas carrying two US hwy routes. Texas and Oklahoma had jointly built a new, free span northwest of the existing toll bridge.

On July 10, 1931, the Red River Bridge Company obtained an injunction against the Texas Highway Commission, keeping them

from opening the new bridge. The company said that the highway commission had promised in July 1930 to buy the old toll bridge for \$60,000, equal to \$847,052 today. In reaction to the injunction, the Governor of Texas ordered that the new free bridge be barricaded from the Texas end.

On July 16, Oklahoma governor ordered the new bridge open, by executive order. Murray issued this order on the grounds that the land on both sides of the river belonged to Oklahoma, per the Louisiana purchase treaty of 1803. Murray sent highway crews across the new bridge to destroy the barricades on the Texas side.

The Texas Governor sent Adjutant General William Warren Sterling and three Texas Rangers (not including Chuck Norris) to the new bridge to defend the Texas Highway Commission workers enforcing the injunction and rebuild the barricade that night. The next day, Oklahoma crews under Oklahoma Governor Murray's order demolished the Oklahoma approach to the toll bridge, rendering that bridge impassable. And on and on.

You can read more on the Grayson County Amateur Radio web site, <u>www.graysoncountyarc.com</u>. This special event sounds like there may be some good stories to be told.

Frequencies to listen to: 7.040 - 7.050 CW, 7.200 - 7.205 LSB, 14.040 -14.050 CW, 14.250 - 14.255 USB. For a QSL mail your QSL and a SASE to: Grayson County ARC - PO Box 642 - Sherman, TX 75091











Special Event Station - PCARS

To celebrate the Portage County Amateur Radio Service as being honored with the Hamvention $^{\circ}$ 2018 Club of the Year award, PCARS will have K8BF on the air for a special event on July 7^{th} .



We'll be operational from 7 July 1400 UTC until 8 July 0200 UTC (**7 July 10 am ET to 7 July 10 pm ET**) from the PCARS club site in Ravenna.

For stations contacting K8BF, there will be a QSL card and Certificate available to commemorate this special event.



Information has been sent to ARRL and CQ Magazine and will be in the July issues. The listing is already posted on the ARRL web site.

This is the ARRL/QST listing:

07/07/2018 | Celebrating PCARS being honored as the Hamvention 2018 Club of The Year - Jul 7-Jul 8, 1400Z-0200Z, K8BF. Portage County Amateur Radio Service. 21.240 14.250 7.140. Certificate & QSL. Tom Parkinson, 9992 State Route 700, Mantua, OH 44255. General portions of the ham bands Certificate or QSL card available Send your QSL card with a Large SASE for 8x10 certificate or a regular SASE for QSL card. www.portcars.org

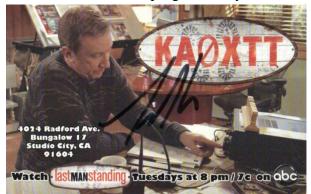


"Last Man Standing" is Still Standing



The TV comedy "Last Man Standing" will return in the fall for a seventh season, but on a different network. The program stars Tim Allen, KK6OTD, as Mike Baxter, who is also a ham and whose station has appeared prominently in the background on most episodes and was written into several of them.

ABC cancelled the program last year after six seasons, despite being the network's second-most watched



comedy, according to deadline.com. Amid an outcry by fans and a petition that gathered nearly a half-million signatures, the Fox Network decided to pick up the show for a seventh season. Fox's production arm had produced the program for ABC since its launch.

Co-Executive Producer John Amodeo, AA6JA, told fans in May that he hopes to return to the show as well, but already had other production commitments so couldn't be sure at that point.

From: http://cqnewsroom.blogspot.com/search?updated-max=2018-06-08T12:47:00-07:00

Can You Hear Me Now?

WRTC2018 update - WRTC Burner Phones Equipped with 70 mobile phones for emergencies

What are 70 phones needed for, when radio and antennas around the globe are used? "For emergencies and to coordinate in emergency situations, it was absolutely essential to equip the organizational center in Wittenberg with standard, easy-to-use telephones and not smart phones," explains Michael Höding (DL6MHW) from the board of the WRTC 2018 eV. "At each location the referee is allocated one of these telephones. This



allows him to communicate with the central office if, for example, problems with the competition need to be addressed", continues Michael Höding.

In addition to these communication paths, the radio amateurs have set up yet another backup: Three repeaters in the 70cm band are connected together to form a network, which considerably increases the range of the radio signals. If one of the repeaters is accessed, the two other connected repeaters also transmit the message. Thus, the transmissions can be heard in the entire area between Wittenberg, Jessen, Jüterbog and Mühlberg / Elbe. This facilitates organizational processes and can be a valuable fall-back in emergencies.

The installation of the 70 basic phones also creates considerable work in this part of the overall organization. "Every phone has to be charged, the SIM card installed and activated. In addition, we have set up special telephone numbers for the equipment, such as the number of the WRTC hotline or the SMS server", explains Ben Büttner (DL6RAI), who performed this complex work with Luise Ostheimer (DL2MLU) last weekend. All phones were tested with their prepaid SIM cards and everything worked straight away.



The interim scores of the competition teams are transmitted via a special computer to the scoreboard server in Wittenberg every minute to be displayed there on a large display. However, should this connection fail, the referee can send by SMS, the current score to Wittenberg and this will keep the scoreboard up to date, not on at minute intervals but at least on a regularly basis.

It is just a few days until the amateur radio world championship starts for the first time in Germany.

13 Colonies Special Event - 10th Year

From the ARRL

The annual Original 13 Colonies Special Event will mark its 10th anniversary this year. The event gets under way on July 1 at 1300 UTC and runs through July 8 at 0400 UTC. Event Manager Kenneth Villone, KU2US, reports that 127,132 contacts took place during the 2017 13 Colonies event, down from 139,772 in 2016, owing in part to poor band conditions.



Special event stations with 1 × 1 call signs will represent the original 13 US colonies, plus bonus stations WM3PEN in Philadelphia and GB13COL in Durham, England. Each special event station will have its own QRZ.com profile page. Participating stations try to contact all 13 Colony Stations plus the two bonus stations. Call signs and their respective states are K2A, New York; K2B, Virginia; K2C, Rhode Island; K2D, Connecticut; K2E, Delaware; K2F, Maryland; K2G, Georgia; K2H, Massachusetts; K2I, New Jersey; K2J, North Carolina; K2K, New Hampshire; K2L, South Carolina, and K2M, Pennsylvania.

Additional information is on the 13 Colonies website - http://www.13colonies.net/.

Conversation QSB

Brian, N9ADG
From the ARRL Contest Update

July 2018



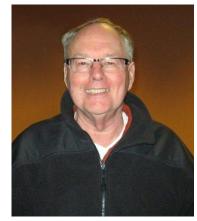
We're reminded ever more frequently of our own mortality with the absence of familiar calls on the bands, or faces present at our meetings. The sudden loss of a person recently encountered shows that fate is fickle. But let's not forget that some fade more gradually, and while they may not be attending the club meetings, or are not on the air, effective communication.

while they may not be attending the club meetings, or are not on the air, effective communication may still be possible with a phone call or personal visit. Say hello before you end up saying goodbye.

Helicopter Parents and Ham Radio

Jim, AC8NT

I was watching a story on the news about kids that were going to a playground designed to allow them to play without their parents hovering over them. They were allowed to use hand tools to build things and learn about tools. Some parents that were interviewed thought this was dangerous, others thought it gave their kids needed confidence. The story went into a great deal of detail about the way some parents protect their children from harm. It reminded me of



my childhood and one particular event in my learning of electronics. I thought I would share knowing most of you have had similar experiences.

I was in the third grade and visiting a friend's farm. He gave me a wooden box like device that he didn't



want. It had terminals and wires on it, so I wanted it. I took it home and started for our basement workshop. My father, as I flew by simply said "Be Careful". By this time in my life I had visited many telephone offices and easily recognized the label BATT and searched out a 6-volt Bell System battery we had on the bench. I hooked it up. It made a strange buzzing noise, but didn't do anything really cool. There were two glass things on the top of the box that were calling for investigation. I touched one and was thrown off my stool. I must have yelled something that drew my mother's attention. She called "Are you all right?" I said "Yes". A few minutes later my dad came down and asked what I was doing. I showed him. He asked where I got the Model A ignition coil. He also smiled and said I should not make a practice of experimenting with things that had glass insulators.

I think of what many modern parents would think of that event. No warning labels on the thing warning about the danger. The fact I had access to ALL the tools in the shop. The fact I was totally unsupervised. Some would have sued Ford and given me two days of time outs. If the school found out, they would have taken me from my parents. I'm not suggesting we shock all our kids or let them run amuck. But events like that gave me the confidence to become an Engineer and Mathematician. Kids need to build confidence and we as hams can help them do just that safely and have fun. **Disclaimer: I am not providing advice or recommendations on how to raise children. It is just a story from my past.**

QRP, CW & Linux Special Interest Groups

Terry, KB8AMZ

Hello PCARS members. July 10 will be the next meeting of the **CW/QRP Special Interest Group** at the club site. Nothing special is planned. Still making plans for building affordable and useable kits. Also, still trying to get some of you on the air using CW for the first time ever. I hope you will come and try your hand, rather your fist, at CW with QRP power. I will have my Yaesu FT-817ND for a true QRP experience. You just have to show up for the SIG.

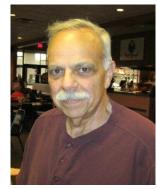


The next meeting of the **Linux for Ham Radio Operators Special Interest Group** is Tuesday July 31. Please bring your Raspberry Pi and peripherals. More stuff to learn.

Antenna Special Interest Group

Tony, WA8AR

The Antenna SIG meets at 7 PM in the PCARS club site radio room on the third Tuesday of every month. The July meeting will be held on 7/17/18. All PCARS members and guests are welcome to attend. We will be discussing all antenna related topics including selection, design, construction, trouble shooting and safety for all Amateur Radio bands. Although we will generally have a designated monthly



discussion topic please feel free to bring in any antenna related problem to the meeting and discuss it with the group.

Please note that the PCARS QST email system is functioning very well again, so please watch for PCARS QST for last minute announcements prior to all Special Interest Groups. And, always check the PCARS web site for Antenna SIG updates or last minute cancellations before going to the club site for a meeting.

Digital Special Interest Group

Rick, K8CAV

The Digital Special Interest Group will hold its next meeting on Tuesday July 3rd at 7:00 PM at the PCARS club site in Ravenna.

This month we'll spend some time talking about Field Day operations digitally, and some of the FT8 Field Day issues encountered.

As always, if you have any questions or need some help with your digital setup, we'll be there to answer as best we can.



SPECIAL NOTE: There are still a lot of really nice radios and equipment from the estate of Jim KC8PD available for sale. If anyone is interested, please contact me (<u>k8cav.coms@gmail.com</u>) to look at the equipment.

DX & Contest Special Interest Group

Chuck, W8PT

Hello DXers and Contestors:

The DX/Contest Special Interest Group meeting will be held July 24 at the club site at 7 PM. We will be discussing the ARRL North American QSO Party RTTY mode contest, that we will be participating in just a few days ahead of the meeting. I hope that all who participated will be able to attend.

George, K3GP, has a separate topic item in this newsletter, since he is our RTTY Guru, regarding the contest. I urge you, who plan to participate, to read his news item in the Contest column area.

I look forward to the contest that takes place the weekend of July 21-22 and I hope to see many PCARS contesters at both events.

m in the Contest column area.

Fluly 21-22 and I hope to see many PCAR.

PCARS Thursday Net Control

Greg, KA8TOA
Net Control Coordinator

Thank you all for helping with this! Anytime you are unable to take the net, please give me as much advance warning as possible! Check-in using the receiver located in Sugar Bush Knolls ~ 146.895 with a PL tone of 118.8.



July		
5	KB8UUZ	
12	KE8BWA	
19	K8IV	
26	AC8NT	

August	
2	N8QE
9	WB8LCD
16	KA8TOA
23	KB8UUZ
30	K8CAV

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

I am trying to get some new net control operators, anyone interested please contact me.

If you have not been a Net Control Operator for PCARS and would like to give it a try, *please* contact me at: grgory999@roadrunner.com

Everyone who is a club member is welcome to have a turn - and have fun being Net Control!

Net Operators: There is a new version of the Net Script (new & improved) and an updated version of the log sheet (with my e-mail address on it). You can find them on the PCARS web site in the Nets section. *Please* download them and use them. Also, remember to e-mail me a copy of the log for the club records and certificates. If you have some issues and can't make it as net control see if you can trade with someone.

Snippets

Jim, AC8NT

We all remember the war between Tesla and Edison over AC and DC. Isn't is



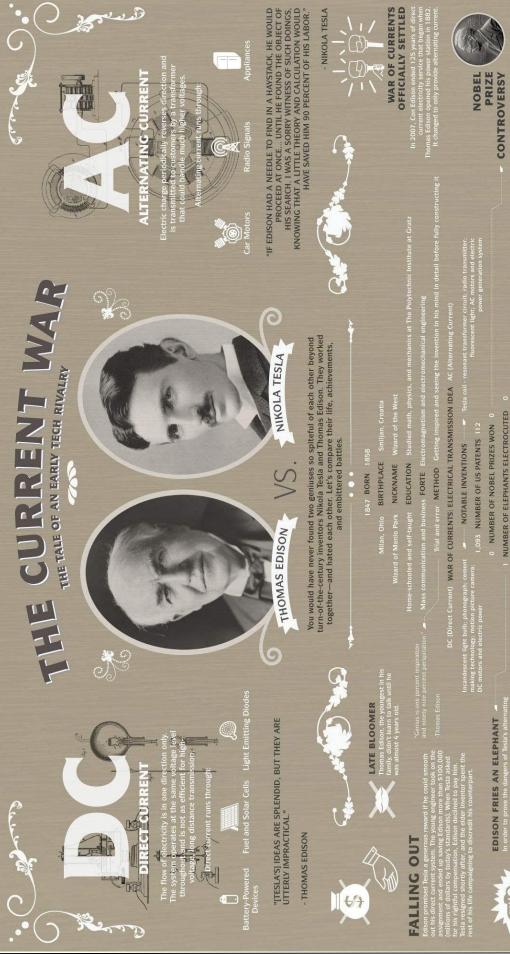
strange that an automotive company called
Tesla is powering its cars using DC. Shouldn't
it have been called the Edison Car Company.
Tesla is probably spinning in his grave.

We have all said we were making Xerox copies of documents when we were using a Ricoh copier. People in Britain say they are Hoovering their floors. People a long time ago said to bring the Kodak to the party. But did you know when the electric chair was developed for executions,

the papers said the guilty party was "Westinghoused". This was due to the relationship between Tesla, Westinghouse, and Edison. Edison loved to show people how dangerous AC was by killing animals scheduled to be killed and Tesla was closely associated with Westinghouse. In fact, both Edison and Tesla thought the idea of an electric chair was appalling and were publically against it. Westinghouse put a full staff of people to work eliminating the word "Westinghoused". They were successful, we don't use this term any more.







Charlie the Tuner's HF High-Lites

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



Hello to all PCARS DXers:

Well, half the year is gone and the days are now getting shorter. I hope that some of you have been able to take advantage of the openings on 6 meters. Those who are working FT8 seem to be having a lot of fun.

Working in the high temperatures lately has reminded me to keep hydrated. I'm not sure how some of the folks who work outside on a regular basis do it. Jack, N8BI, and I have been wrestling with the antenna project for some time now and we finally got the Tenedyne T-10 Log on top of Tower 2. But there are two other antennas and a whole bunch of ancillary things that need to be done before we can put a fork in this project. Then maybe I can focus on working DX.

Speaking of which, let's get right to the upcoming DX and see what will be happening in the next couple of months.

Thanks to the Northern Ohio Amateur Radio Society, Northern Ohio DX Association, Ohio/Penn PacketCluster Network, AB5K & the AR TelNet Clusters Network, NJ1Q & W1AW, W2VU & CQ Communications, NG3K & ADXO, W3UR & The Daily DX, AK5Q, AA6RE, K8GI, K8YSE, W8GEX & 60m DX News, DL1SBF, DL7UXG & The DX News Letter, DxCoffee.com, DXNews.com, DX-World.Net, ES1CW, F5NQL, F6AJA & Les Nouvelles DX, I1JQJ/IK1ADH & 425 DX News, I2MQP & DX Italia News, OZ6OM & 50 MHz DX News, Sixitalia Weekly, VA3RJ & ICPO and VE3VEE for the following DX information.

And as always, 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.

DXCC'S MOST WANTED (ClubLog). The "DXCC Most Wanted" entities list has been updated on ClubLog as of May 28th. The list contain 340 entities and here are the top 10 entities:

1. P5 DPRK (North Korea)	6. CE0X San Felix Islands
2. 3Y/B Bouvet Island	7. BV9P Pratas Island
3. FT5/W Crozet Island	8. KH7K Kure Island
4. BS7H Scarborough Reef	9. KH3 Johnston Island
5. KH1 Baker Howland Islands	10. VK0M Macquarie Island

4K6, AZERBAIJAN. Operators David/DL7ZM and Boris/4K4K, along with a team from/at the Nasir al-Din al-Tusi Shemakhi Astrophysical Observatory (1500m asl, LN40HS), will be active as 4K6/DL7ZM between July 1-10th. Activity will be 6 meters only using CW, SSB and FT8; with 100 watts, 7 and 3 element yagi and a noise cancelling system. QSL via AD0PY direct.

- **6W, SENEGAL**. Dominic, ON4AZP, will be active as 6W/ON4AZP from Senegal between June 25th and July 5th. Activity will be holiday style on 40/20/ 15/10 meters using SSB. QSL via his home call sign, direct, by the Bureau or eQSL.
- **7X, ALGERIA**. Special event station 7X2FIFA is active until July 15 during the 2018 FIFA World Cup. QSL via operators' instructions.
- **8Q, MALDIVES**. Daniel, SM0UDH will be QRV as 8Q7DT until July 9. Activity will be holiday style on the HF bands using SSB, JT9, JT65 and FT8. QSL to home call.
- **9L, SIERRA LEONE**. Mark, KW4XJ is now QRV as 9L1YXJ from Freetown. He is generally active on 40 to 10 meters using FT8 and some CW. QSL to home call.
- **BV, TAIWAN**. Members of the Chinese Taipei Amateur Radio League are QRV with special call BV18FIFA until July 15 during the 2018 FIFA World Cup.
- **CP, BOLIVIA**. Antonio, EA5RM, is active as CP1XRM from Bolivia until July 10th, and working as Solidaridad Medica and Radioamateurs Without Frontiers NGO volunteer. He plans to be on the air during his spare time on 40-10 meters using SSB and the Digital modes. He may also be on 60 meters. QSL via EA5RM.
- **H44, SOLOMON ISLANDS**. By the time you read this, Bernhard, DL2GAC, will once again active as H44MS from Malaita Island (OC-047) in the Solomon Islands until July 12th. Activity will be on 160-6 meters on SSB. QSL via his home callsign, direct or by the Bureau.
- **HL, REPUBLIC OF KOREA**. (Reminder) Special event station HL50IARU is QRV until the end of October 2018 to celebrate the 50th anniversary of IARU Region III.
- **HS, THAILAND**. In celebration of the 50th anniversary of IARU Region 3, members of the Radio Society of Thailand are QRV as HS50IARU until October 31. QSL via LoTW.
- **JW, SVALBARD**. Erik, LA2US, will once again be active as JW2US from Bear Island (IOTA EU-027) for the next 4 months. Activity will be limited to his spare time and he will operate on various HF Bands mostly CW at the lower band edges and IOTA frequencies. Also, on this trip he will be on BPSK, FT8 and RTTY. Equipment is a FT-450D, Signalink USB, Expert 1K-FA and a OCFD antenna. QSL via ClubLog's OQRS, LoTW or eQSL.
- KH1/KH7Z BAKER ISLAND DXPEDITION NEWS...... TOPBAND ADVICE BY GEORGE, AA7JV [edited]: Hello TopBanders -- The KH1/KH7Z will be active on 160m from Baker Island from June 27 to July 6 (note that dates are tentative and may change -- please visit http://baker2018.net/ for updates). Given the time of the year, KH1 is likely to be challenging for most. In addition to the less then perfect time of the year, we are limited to a maximum antenna height of 43 feet. But we do have a new antenna for 160 meters; we will stand it in the salt-water to maximize its performance. Our TX frequency will be 1822.5 to begin with, and we will be listening up. NA stations should call above 1825.0 to avoid the stronger JA callers who are limited to below 1825.0. They will also be on other HF bands so don't dismay. Activity will be on 160 to 6 meters using CW, SSB, RTTY, and FT8 in DXpedition mode.
- **OM. SLOVAK REPUBLIC**. Members of the radio club Horec are QRV with special event call OM75TESLA until the end of the year to commemorate Nikola Tesla's death 75 years ago. QSL via OM3KHT.
- **P2, PAPUA NEW GUINEA**. Roly, ZL1BQD, will once again be active as P29RR from Wewak between July 1-25th. Activity will probably be mainly on 40/20 meters using CW and the Digital modes (FT8, JT65, JT9). QSL via his home callsign direct, LOTW or eQSL.
- **S590, SLOVENIA** (Special Event). Special event station, S590RTVS, has been active since March 1st and will continue to be active until December 31st. Activity is a special promotional call sign celebrating 90/60 years of the public institution Radio and Television of Slovenia, and operated by the members of the Radio Club Cerkno (S50E) and their section Kricac Ljubljana (S59DRL). QSL via S50E. A special S590RTVS QSL will be confirmed for each contact via the

- QSL Bureau in early 2019. The LOG will also be uploaded to the ARRL's LoTW and CLUBLOG on a regular basis. For more information, updates and useful links please visit Radio Club Cerkno (S50E) Web site at: http://www.s50e.si Also, view ORZ.com for more details.
- **SU, EGYPT**. Special event station SU18FWC is QRV until July 15 during the 2018 FIFA World Cup. Activity is on all HF bands using CW and SSB. QSL via SM5AQD.
- **UA, EUROPEAN RUSSIA**. Special event station R400N is QRV until July 15 to celebrate 400 years since Novokuznetsk City was founded. QSL via RV9V.
- **V4, ST. KITTS AND NEVIS**. John, W5JON is QRV as V47JA from Calypso Bay, IOTA NA-104, until July 20. Activity is on 160 to 6 meters using SSB. This includes being an entry in the upcoming IARU HF Championship. QSL direct to home call.
- **V6, MICRONESIA** (Updated IOTA Plans). Members of the Nara DX Association have decided to be active as V6J from the rare IOTA Ta Islands (OC-254) between July 19-31st. Operators mentioned are Tosy/JA3FGJ (V63GJ), Sanny/JJ3CIG (V63SS) and Mami/JP3AYQ (V63YL). Pilot station is JJ3PRT. Activity will be on 40/30/20/17/15 meters as well as 6 meters. Operations will be on CW, SSB, RTTY and FT8 using three rigs (FT-857, FT-991 and IC-7000) with KPA500(500W) and homemade PA(500W) amps. QSL via JP3ATQ, ClubLog's OQRS (recommended) or SASE. No Bureau or No LoTW please. Look for updates to be posted on QRZ.com.
- **V8, BRUNEI**. Members of the Brunei Darussalam Amateur Radio Association are QRV with special event station V850IARU until October 31 to celebrate the 50th anniversary of IARU Region 3. QSL via V85TL.
- **VK. AUSTRALIA**. Special event station VI50IARU3 is QRV until August 31 to celebrate the 50th anniversary of IARU Region III.
- VK9X, CHRISTMAS ISLAND. Operators Martin/A65DC, Paul/A65DR, Thomas/SM0CXU and YL Delia/VE7HDW will be active as VK9XT from Christmas Island (OC-002) between September 29th and October 6th. Activity will be on 160-10 meters using CW, SSB and the Digital modes. FT8 might be used at times when no other operations are going on. QSL via N4GNR direct, LoTW, eQSL or QRZ.com's LogBook. Direct card via Clublog's OQRS will be active for 6 months after the DXpedition. You may request your direct card there. QSL Fee on the OQRS will increase to 3 USDs for OQRS to cover envelope and PayPal costs. Free Bureau card via ClubLog's OQRS will be open for six months after the DX- pedition. For more details and updates, see: http://vk9xt.qsodirector.com
- **VU, INDIA**. Members of the Bangalore Amateur Radio Club are QRV with special call VU18FIFA until July 16 during the 2018 FIFA World Cup.
- **XE, MEXICO**. Look for special event station 4A18FWC to be QRV until July 15 during the 2018 FIFA World Cup. QSL via bureau.
- **ZA, ALBANIA**. Waldi, SP7IDX, will be active as ZA/SP7IDX from Vlore (WW Loc. JN90rk) between August 5-12th. Activity will be on 40-10 meters using SSB and the Digital modes. Equipment will be a Flex 6300ATU, Maestro, Arlan Communications RG50SL, Hexbeam, HyEndFed 30/40m and portable Alpha EZ 2.0. QSL via the Bureau (PZK 03) or direct (w/2 IRCs or 2 USDs to cover his mail costs). QSLs without SAE and return postage are answered via the Bureau). NO eQSL. All contacts will also be uploaded on a regular basis to LoTW and ClubLog.

IOTA NEWS.....

AS-073. Luca, IK2PFL, will once again be active as 9M2/IK2PFL from **Perhentian Kecil Island**. This time, during the RSGB IOTA Contest (July 28-29th), as a Single-Op/Island-DXpedition entry. Activity outside of the contest will be holiday style on 30-10 meters (possibly 40m) with a focus on the 30/17/12 meters using mainly CW. QSL via IK2PFL, direct or by the Bureau. For more details and updates, see: http://www.stellemare.eu/wordpress/amateur-radio

- **EU-120**. Eddie, GM0KLS, will be active as G0LKS from **Holy Island** during the RSGB IOTA Contest (July 28-29th) as a Single-Op/12-Hrs/ High-Power entry. QSL via his home call sign.
- **EU-125**. Operators Dirk/DD5KD and Frank/OE9KFV will be active as 5Q6D and 5Q9F, respectively, from **Rømø Island** until July 7th. Activity will be on 80-10 meters using CW, SSB and the Digital modes. QSL via OE9KFV, direct, by the Austrian QSL Bureau, LoTW or ClubLog.
- **EU-131**. Several members of the ARI Mestre Team will be active as IQ3ME/p from **Pellestrina Island** during the RSGB IOTA Contest (July 28-29th). QSL via IQ3ME, direct or by the Bureau.
- **EU-132**. Adam, DJ0IF, will once again be active as SN0RX from **Wolin Island** during the RSGB IOTA Contest (July 28-29th) as a Single- Op/CW-Mode entry. QSL via SP8BXL.
- **EU-165**. Max, IOPNM, will once again be active as IMO/IOPNM from **S.Pietro Island**, Sardinia, between July 20th and August 20th. Activity will include the RSGB IOTA Contest (July 28-29th). Operations will be on 40, 20, 15 and 10 meters. QSL only direct to IOPNM.
- **NA-055**. Mike, W2IY, will once again be active from **Mount Desert Island** (USI ME-021S, WLOTA 1129, Hancock County, Maine) during the RSGB IOTA Contest (July 28-29th) as a Single-Op entry. Outside of the contest, activity will be holiday style. QSL via his home callsign, by the Bureau or direct.
- **NA-143**. Joe, K5KUA, will once again be active as K5KUA/5 from **Galveston Island** (USI TX-001S, Galveston County, Texas) during the RSGB IOTA Contest (July 28-29th) as a Single-Op/24-Hrs entry. QSL via his home callsign, direct, by the Bureau or LoTW.

MULTI-IOTA TOUR. Gabriele, IK3GES, will be activating several IOTAs (as well as some WFF references) throughout Northern Europe from six different countries until August 3rd. IOTAs mentioned are EU-128, EU-029, EU-043, EU-033, EU-076, EU-101, EU-173, EU-097, EU-140, EU-139, EU-084, EU-087, EU-129, EU-132, EU-057 and EU-037. Specific dates were not mentioned for the islands. Watch QRZ.com for possible updates. QSL via IK3GES, direct or by the Bureau. ClubLog's OQRS (preferred) will be available when he returns home.

Well there seems to be a lot of DX coming up. I just hope that propagation allows some of it to be worked from our part of the world. Warm up the air waves and work some DX. Until next month, vry 73.

OSL Incoming "N" Card Sorter Needed

Ohio Section

The ARRL Ohio Incoming QSL Card Bureau needs a dedicated person to be the sorter the letter "N" for the incoming QSL Bureau.



What is a card sorter? Here's a link to fill you in on all the details. http://arrl-greatlakes.org/8th_bureau.htm

If after you read the description you feel that you'd be a good fit for the job, and you call sign suffix begins with the litter "N", then you need to contact:

Bureau Manager - Jack Shirley, N8DX

E-Mail: n8dx@arrl.net

Contest Calendars

July 2018		
Contest Name	Times - Date	
RAC Canada Day Contest	0000Z-2359Z, Jul 1	
10-10 Int. Spirit of 76 QSO Party	0001Z, Jul 2 to 2400Z, Jul 8	
IARU HF World Championship	1200Z, Jul 14 to 1200Z, Jul 15	
North American QSO Party, RTTY	1800Z, Jul 21 to 0600Z, Jul 22	
CQ Worldwide VHF Contest	1800Z, Jul 21 to 2100Z, Jul 22	
RSGB IOTA Contest	1200Z, Jul 28 to 1200Z, Jul 29	



YES - There are MANY More Contests out there - Check the internet.

Keep the following dates open - K8BF will be contesting from the PCARS club site

Check the PCARS web site for up-to-date details from Chuck, W8PT.

Contest Name	Times - Date
NA QSO Party - RTTY	1800Z, Jul 21 to 0600Z, Jul 22
Ohio QSO Party	1600Z, Aug 25 to 0400Z, Aug 26
California QSO Party	1600Z, Oct 6 to 2159Z, Oct 7

NAQP RTTY Contest July 21-22

PCARS will be activating K8BF at the clubhouse in Ravenna for the NAQP RTTY contest from 2 PM local July 21 to 2 AM local on July 22 (1800 to 0600 UTC). We will be operating in the **Multi-2** category (two transmitters), with two-hour operator shifts. If you would like to join us, please contact **George, K3GP** via email (rttyfan@gmail.com) indicating your preferred time to operate.

Ohio Wireless

Mark, W8BBQ

After having dug to a depth of 10-feet last year, New York scientists found traces of a copper-wire system dating back 100 years, and they came to the conclusion that their ancestors already had a telephone network more than 100 years ago.



Not to be outdone by New Yorkers, in the weeks that followed, California scientists dug to a depth of 20 feet, and shortly after headlines in the LA Times newspaper read: 'California archaeologists have found traces



of 200-year-old copper-wire system and have concluded that their ancestors already had an advanced high-tech communications network a hundred years earlier than the New Yorkers.'

One week later, 'The Senior News' in Ohio reported the following: "After digging as deep as 30 feet in a corn field, Mark Ludwick, an editor and self-taught archaeologist, reported that he found absolutely nothing. Mr. Ludwick has therefore concluded that 300 years ago, Ohio had already gone wireless."

From the Ohio Section Manager

Scott, N8SY
ARRL Ohio Section Manger



Hey Gang...

Is it just me? It seems to me as though we need volunteers to help out with every kind of event that you can think of. Are you volunteering, or, are you one of those who say "I just don't think I want to do that, but.. if you have a REAL emergency, let me know, I can always find time for that! It's true, we have way

too many folks that think things like bike races and marathons are not training. Wow, how wrong you are!! It is training, and it soon will count! Yes, our new ARES[®] Connect system is based on events like this! All kinds of events, bike races, foot races, heck, even those things that we have FUN with like Field Day will soon count. Most of these events are really interesting and yes, even FUN to do. And, like I said, the new ARES[®] Connect system will very soon be up and running for real here in Ohio!



As most of you know, Ohio was chosen as one of four test Sections in the country. Why? Well, that's easy. We are a very active Section and Headquarters knows it! If you read the results from the 2017 ARES® S.E.T., you already know just how active we are! Now, I'm here to tell ya' that Ohio, like the other three test Sections will be released very soon to start migrating the remaining counties into the new system. Yes, we will kick off the release of the new system before any of the other Sections outside of the Beta testing. Once this has been done, we will be using the new system. We will still use our old system of reporting for a little while yet, but it will disappear in the not so distant future, and we will be on the ARES® Connect System completely.

How's your training going? Yes, I know that I've been hammering hard on this, but as a lot of you found out at the ARRL Forum at Dayton last month that things are going to change within ARES[®] very soon. Our ARRL Great Lakes Director, Dale Williams, WA8EFK has been heading up this committee to change ARES[®] and its requirements for some time now. Dale gave a really good overview of those proposed changes at that forum. Yes, for now they are just proposals, as that the Board of Directors have not voted on accepting them yet. That will happen in about a month from now at the July Board of Directors meeting.

Once adopted, it will be the new way of operating in ARES[®] from that point forward. I've been hammering on you for a very long time now so that you would be prepared for when this day comes, and as you can see, it will be coming very soon now! The changes to the NEW ARES[®] program are dramatic, but they are easily obtained. You just have to be willing to LEARN a little.

Why do we need these changes? That's easy, let me break it down this way, 4 years ago (2014) during the 100th Anniversary of the ARRL, we told Federal Emergency Management Agency (FEMA) in an agreement that we signed with them, that we would help out with communications in disasters. They stated that they would be willing to accept our help, but only if we agreed to training. So, with that knowledge in my pocket, I started on a campaign to make sure that NO ONE in Ohio would be left behind or forgotten about. We started with the E.C. and D.E.C. appointments and required them to have, or quickly obtain the training as part of their acceptance to their appointment.

In 2016 we were involved with the federal government and many served agencies for the Republican National Convention and the NAACP National Convention. We were told then and there that we HAD TO HAVE this, and even additional NIMS training, in order for us to participate. It wasn't just us as hams either, EVERYONE involved with these projects had to have the training. And that made me see just how important this was to our future with all of our served government agencies.

So, at the beginning of 2017 we ramped up that training requirement for individuals that wanted to work inside our government served agencies, feeling that the need to understand Incident Command is absolutely needed. Now, it's not without consideration for how this impacts all of you and your volunteer time. So, let me take a quote from the NIMS Training Guide as to who should have the training.

Q: Who should take NIMS and ICS training?

A: Everyone involved in emergency management (to include emergency operation center personnel in support of the field), regardless of discipline or level of government, should take the NIMS baseline curriculum courses (Independent Study-700 and ICS-100). The NIC recommends that only individuals with a command and general staff role take advanced ICS courses. Fulfilling the training associated with this plan helps emergency management organizations, departments and agencies to develop preparedness capabilities for effective and efficient incident management. As a result, trained emergency responders are available as mutual aid to support incident management in other jurisdictions, if requested. The NIMS Training Program should sustain a personnel qualification system that is coordinated, maintained and meets the needs of the emergency management community.

As the above states. Everyone that is involved in support of the field! That's us folks!!

Now, don't forget that your ICS certificates aren't the only things we're looking for either. If you have Basic First Aid, CPR or AED training, it's also very valuable in the field as well. And, don't forget about the newest training out there, "Stop the Bleed..." This one is really good, and it's something that you can use no matter where you are. These courses are not only useful for you in the field, but you'd be surprised how they can help you around the house as well. Remember, most accidents happen within 25 miles of you home! And YES, my accident last year happened within that 25-mile radius. You need to be prepared!

Ok, as I told you last week, we've gotten to the 700 mark! Congratulations and an ARRL ARES[®] Mesh Vest went out to Ken Cornett, N8SPW. He was the 700th person to send us his NIMS certificates! And YES, he was sent an ARRL ARES Mesh Vest! Now, on to number 725!!



Here's the figures as Jim, W8ERW has given them to me...

Members in the database – 946; Active members – 913; Members NIMS complete -703; Total courses logged - 6,589; 2017 training courses – 782; 2018 training courses - 390 These numbers just keep growing. And we want them to continue for sure!











World Radiosport Team Championship 2018: The Other Ham Radio Event of the Summer

In about 2 weeks, some 60 two-person teams will take on the world and each other in World Radiosport Team Championship 2018 (WRTC 2018), in the Jessen-Wittenberg area of Germany. Held approximately every

4 years, WRTCs take place in conjunction with the 24-hour-long <u>IARU HF</u> <u>Championship</u> July 14 - 15, although WRTC teams are subject to additional rules specific to the competition. Several years of preparation and organization begun right after WRTC 2014 in New England have led to WRTC 2018, and a number of skills have been brought into play, including carpentry. A team of about 20 has been building WRTC boxes that will contain all equipment transported to individual sites.

"Everything that is needed on the site, including antenna materials, arrives packed in the box. Only the mast is transported separately," said Andreas "Paul" Paulick, DL5CW. "This ensures that nothing gets lost in transit in the vehicles." Paulick noted that the mast, antenna, tent, and generator accessories are bulky enough not to fall through the cracks, but that small items "tend to disappear."



Final antenna work also has been handled, with 65 rotators bolted to base plates and tested to make sure that they're working correctly. Guy sets for the masts are also complete. Organizers suggest the tension is building as July 12 approaches.



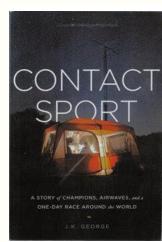
A WRTC 2018 station test session in 2016.

Fourteen North American teams qualified for WRTC 2018, including WRTC 2014 defending champions Daniel Craig, N6MJ, and Chris Hurlbut, KL9A, from the US. WRTC 2014 Chair Doug Grant, K1DG, merited a wild card slot, WRTC 2018 said. His teammate will be WRTC 2014 Competition Director Andy Blank, N2NT. WRTC 2018 also just announced a new team leader to take the place of a competitor who had to drop out of the event. Gilles Renucci, VA2EW, will head the new wild card team #6. He ended qualification for WRTC 2018 in 2nd place in area NA #7, which only had one team available. Arno Polinsky, DL1CW, will be his teammate.

Nearly all WRTC 2018 participants got into Amateur Radio as teenagers; a WRTC 2018 survey showed an average age of just over 13 when first licensed. Team Leaders were chosen from each region, based on 2

years of qualifying contest scores and have chosen a teammate for the event.

Wherever they're from, competitors must muster the stamina to sit at their radios for 24 hours straight if they want to finish on top. In *Contact Sport*, a narrative of WRTC 2014, author Jim George, N3BB, described the role that "extreme fatigue" played. "The final 4 hours were tough at every site," George wrote. Describing the operators at one site, he wrote, "The men couldn't keep their eyes open, were not able to concentrate, and had trouble pushing the right buttons on the radio and pressing the correct keys on the keyboard. Neither could sit any longer -- it was just too uncomfortable."



WRTC 2018 organizers have ensured that all competing teams will operate from as level a playing field as possible. This includes not just topography, but antennas and even freedom from external noise sources. A referee will be at each station site to verify compliance with the rules and make decisions on any rule questions competitors may have.



A WRTC 2018 station test site last summer.

A real-time <u>online scoreboard</u> will keep "spectators" up to date on how the competing teams are faring. "We want to make sure that from all competition locations, the ongoing results in 1-minute intervals are available on a scoreboard," said Ben Büttner, DL6RAI, who leads the real-time scoreboard team. He said special attention was given to RFI, thermal stability, and redundancy in assembling the computer systems that will collect score data.

Radio DARC will cover WRTC 2018 with two broadcasts in English, Saturday, July 14, at 1100 UTC and on Sunday, July 15, at 0900 UTC, on 6,070 kHz and on 13,860 kHz. The broadcasts will explain what



WRTC 2018 is and how it works, and will include behind-the-scenes reports touching on the qualifying process, the competitors, and the volunteers. The transmitters for the Radio DARC program are in Vienna, Austria.



Fred Dennin, WW4LL, and other stations in Georgia, will activate ARRL Headquarters station W1AW/4 for the IARU contest. The IARU HQ station will identify as NU1AW/9 with CW operation from the station of Craig Thompson, K9CT, and from the station of Jerry Rosalius, WB9Z, and Val Hotzfeld, NV9L -- both in Illinois. The 2018 <u>IARU HF World</u> <u>Championship</u> runs from July 14 at 1200 UTC to July 15 at 1200 UTC. These and other HQ stations count as multipliers in calculating IARU contest scores.

One of the unique features of WRTCs is that operators around the world also can join in from home and become part of the event. Indeed, this is necessary for there to be an event!

WRTC 2018 offers unique awards and prizes to operators who get on the air, contact the WRTC stations, and submit their log within six hours of the contest end (by 1800 UTC Sunday). Complete information is (or will be) at the above link, or for awards information, go directly to https://tinyurl.com/y9q8tkwn.



AND - Keep your ears open and make contact with Sponsored Team # 3: Tim, K3LR and Sandy, DL1QQ.

Note: Team call signs are not assigned until 15 minutes before the contest starts.







Sandy DL1QQ

Swap-N-Shop

FOR SALE: Gin Pole - 19 Feet Long - This is a commercial "Gin Pole" made by a Tower Manufacturer from the 70's & 80's. It is 19 foot total length and has a 5 foot aluminum sleeve in the middle for strength to make it this long and rugged! Works great with ROHN 25G, 45G, 55 G, plus all the towers this manufacturer made. The gin pole hangs on the rungs and the "top" hanger is adjustable up to 6 foot from the bottom hanger. More pictures available. \$800



FOR SALE: Bird 43 with 10 slugs - Bird 43 with SO-239 adapters and shorting slug. Includes 10 Bird slugs listed below, will not separate PRICE: \$500 for all, 2-30 MHz - 500 watt, 25-60 MHz - 100watt, 50-125 MHz - 50watt, 100-250 MHz - 25watt & 100watt, 200-500 MHz - 5watt & 100watt, 400-1000 MHz - 5watt & 50watt, 800 – 950MHz - 800-1watt.



Contact Jeff, WA8SAJ at: 440-951-6406 [09/02/18]

FOR SALE: MFJ-976 Tuner - excellent condition - very wide matching range: 12 to 2000 ohms and a freq.y range of 1.8 - 30 MHz, continuous. The power rating is 1500 watts PEP SSB and CW. Peak average forward power, reflected power, and SWR are displayed on the illuminated cross-needle meter.- New \$499.95, will sell for \$325

Contact Chuck, W8PT at: chuckw8pt@gmail.com [09/02/18]

FOR SALE: West Mountain Radio RigBlaster (M8). Excellent condition, original box/manual/CD/cables/etc. Works perfectly. \$15

25ft LMR-400 w/PL259/UHF Male x 2. DX Engineering part #DXE-400MAXDX025. \$20

FOR SALE: Foot peddle switch - 1/4 phone plug, 5 foot cord, used but good condition. \$5

FOR SALE: Heathkit AM-2 SWR Bridge - Covers 160m-6m, 1kW or more. It is a simple meter and works well. I replaced the original variable 50k pot. Good condition. \$15

Contact Gene, W8NET at: <u>w8net@me.com</u> Or call/text: 330619-9194 [09/02/18]

FOR SALE: 13 ELE 2 Meter Yagi – it has a 15' boom, with a "T" reflector at the end. Speaking to the folks at Cushcraft, they were confident that this is an early version of the A13B2 They said the specs should be similar to the current version. (http://www.cushcraftamateur.com/Product.php?productid=A13B2). The only difference is that the new versions don't have the "T" reflector. Asking \$75.

Contact John, KD8MQ at: 330-936-5021 or email to: KD8MQ@gmail.com [07/02/18]

FOR SALE: AMERITRON AL-82 LINEAR AMPLIFIER - \$1,450 Here is your chance to own a full legal limit amplifier in good condition for less than half the cost of a new one. Wired for 240V AC. With genuine Eimac 3-500Z tubes and a Peter Dahl HV transformer, items you will not get in a new AL-82. Due to the weight of the amplifier, I prefer a local sale - will drive up to 50 miles to deliver.



FOR SALE: YAESU FT-1000MP TRANSCEIVER - 100 W - AC VERSION - \$950 Excellent condition, Loaded with the following filters: Has Optional Roofing Filter. 8,215 IF Optional Filters: 500Hz, 2.0 KHz, 2.4 KHz, 6.0 KHz 455 IF Optional Filters: 250Hz, 2.0KHz, 2.4 KHz, 6.0 KHz Includes manual and hand microphone.

Contact George, K3GP at: 330-829-9504 Evenings or Weekends [10/02/18]

WANTED: Junker D.B.G.M Telegraph Key Have a Junker D.B.G.M telegraph key laying around collecting dust? For the right price I would like to buy it.



Contact Terry, KB8AMZ at 330-221-0169 or by e-mail at: hooked2u@neo.rr.com [07/02/18]

WANTED: I am looking for a Icom 706 MkIIG or and Icom 746 Pro

Contact Richard, KA8OAT at 330-506-7068 [010/02/18]

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Portage County Amateur Radio Service, Inc. (PCARS)

The RADIOGRAM

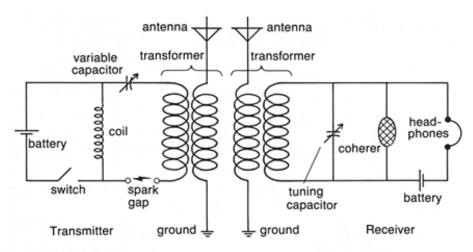
Remaking Radio History

and friends with the results.

Figure 2.

Jim, AC8NT

A couple of weeks ago, someone asked me what vacuum tube was used in the first radio transmitter. Interesting because the first radio transmitters were built before the vacuum tube was invented. He could not understand how a transmitter or receiver could work without a tube, transistor or integrated circuit. I spent some time with him explaining just how Marconi's wireless worked. I ended up building a receiver and using a spark generator for a transmitter. In the end he saw just how it was done and learned some interesting physics. You can do this also with a very small component cost and amaze your kin



"Danger Will Robinson", I mean very high voltage; about 12,000 volts at very high currents. When the switch (key) is closed, spark is generated and energy is sent to the antenna. The RF frequency is low, about 500kHz, with a bandwidth of about 8

Let's first discuss the transmitter/receiver system used by Marconi. Figure 1 shows the circuit diagram for Marconi's transmitter and receiver.

Figure 1

On the left is the transmitter. It is basically a VERY high voltage spark generator with a heavy duty resonant

circuit.

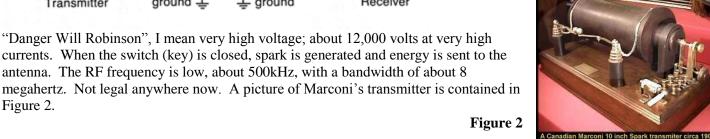


Figure 2

On the right of the diagram in Figure 1 is the receiver. This consisted of an antenna connected to an identical resonant circuit that fed a device known as a coherer that we will discuss later. The coherer is a switch activated by the receiving of an RF signal. When RF is detected the switch closes and a popping noise is heard in the headphones. The



coherer switch was soon used to switch a Morse inking receiver that marked dots and dashes on moving paper tape. On the left of Figure 3 is the receiver and Morse inking device.

Figure 3

As you can see the transceiver is pretty simple from an electronics standpoint.



I would point out, however, this system required some serious antennas to communicate across the Atlantic as shown in Figure 4.

Figure 4

Now to the fun of experimenting!!

The key element of the receiver is the coherer. Its operation is an interesting piece of physics that at first glance would seem not to work. The device is shown in Figure 5. It consists of a glass or other non-conducting tube with an electrode inserted into each end. The

area between the two electrodes is filled with a metal powder (i.e. copper, iron oxide, nickel, etc.) or conductive beads (usually stainless steel). When an RF signal is placed between the electrodes, the powder is forced to conduct creating a switch effect.

Figure 5

One would think the powders normally used would always conduct. However, copper oxide, iron oxide and nickel oxide normally have very low conductivity with resistances in the mega ohms area. As we also know copper, iron and nickel exposed to air oxidize quickly. The oxide on the elements of the power therefore keeps them from conducting. Remember the layer of oxide is



often only a few nanometers thick. When RF flows to the electrodes it breaks down this thin film and creates conduction region and the resistance of the powder drops to the a few ohms. This is known as the Branly or Coherer effect named after Edouard Branly who discovered the effect in 1890. He originally thought that the breakdown was due to the UV light given off by the spark until he moved the coherer out of his lab and found the effect was still apparent. Even after the RF is removed, the conduction region remains and the coherer acts as a closed switch. To stop the effect one needs to disconnect the powder elements usually using mechanical tapping. Until a new signal is received, the powder will remain at very high resistance. This mechanical tapping is performed by a coherer assembly. The coherer assembly consisted of the coherer mounted to a mechanism that taps the tube when the coherer conducts messing up the power and breaking the circuit. If an RF signal was still present, the coherer conducts again and gets tapped again until the signal stopped. There

is a great video of a homemade coherer assembly here: https://www.youtube.com/watch?v=_dq51APrFRc

This video shows how a student made his own apparatus. He actually made a relatively elaborate coherer using a glass tube and brass electrodes. A version that anyone can make with stuff around the house is shown in the following video: https://www.youtube.com/watch?v=kO9R4AeRgWA

In this video a candle lighter is used as the spark source.

It demonstrates very effectively how sensitive the coherer effect is and how simple it is to build a working coherer. It is also a very safe experiment for anyone to perform. I can tell you from experience that pushing the electronic lighter on my outdoor grill with cause the coherer to conduct in my family room through my patio door. It generated a lot of ouuuu's and ahah's from visitors.



As you can see, you can recreate the first wireless telegraph system with stuff you can find in your home. No soldering required, but soldering some of the components together will make for a more robust assembly. Give it a try and amaze your friends and new hams. I will be bringing my setup to the July meeting for all to see.

Portage County Amateur Radio Service, Inc. (PCARS)

PCARS Ham Radio License Plates Wanted !!!

Dig out an old 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 67 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 <u>PCARS Yahoo Group</u> 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:

<u>General Information:</u> 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).

<u>Title Requirements:</u> 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.

<u>Vehicle Information:</u> 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

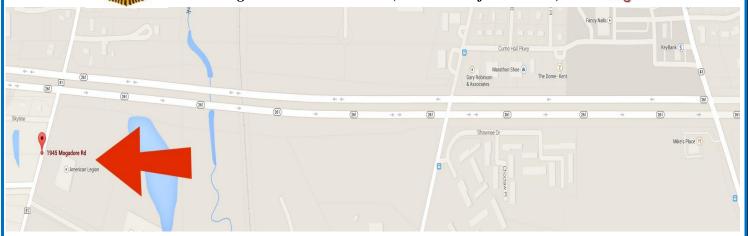
That's right - PCARS is now on YouTube. So, what does that mean? Hey, we have a new place to put all kinds of videos that are about PCARS for the world to see.



PCARS Meetings

The Portage County Amateur Radio Service (PCARS) 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 the 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.





AMATEUR

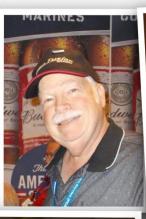
The picture on the left shows The American Legion Post 496 as viewed from Mogadore Road. (looking East)

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 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.

Photos from the PCARS Meeting in June











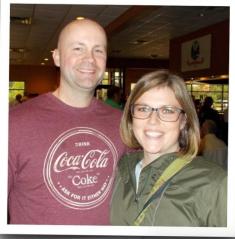




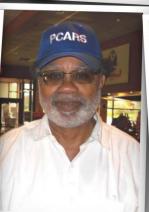








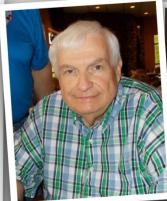




































































Important Days in July

July 4th will be Independence Day

The fourth of July is the birthday of our nation. Today, we celebrate and enjoy the freedom that comes with the event that made this day so special.

Thomas Jefferson, is the author of the Declaration of Independence. He led a committee that crafted the declaration between June 11-28, 1776. Jefferson and other

representatives from the thirteen colonies, voted and approved it on July 4, 1776. The document declared freedom for the 13 colonies from British rule. It currently resides in the Exhibition Hall of the National Archive in Washington, D.C.

Did you know? The Declaration of Independence was not signed by all representatives until August, 1776. To make it official, John Hancock, President of the Continental Congress signed it. Now, can anyone guess where the saying "put your John Hancock on it" came from!?!

Today, we enjoy the benefits of the freedom which the framers signed and ultimately fought for. For us, it is a time for baseball, hot dogs and family picnics. Summer is in full swing and life is good.

Fourth of July is not complete without parades and fireworks. Fireworks are enjoyed by almost everyone. You should have your choice of several locations in your area on the Fourth, or even the day before. Many cottage owners on lakes will set out flares along the shore creating a "Ring of Fire". Add to this an abundance of fireworks, and you have quite a display.

5th July, 2018 will be Apple Turnover Day

Turnovers are just amazing, delightful fruit filled cups of flavor-coated in a sugary glaze. There's something special about what basically amounts to a little personal-sized fruit pie, and our favorite pie is the apple! That's what makes Apple Turnover Day so amazing, it's dedicated to ensuring that everyone gets their own little slice in the form of a whole apple turnover!



History Of Apple Turnover Day

Turnovers are a very simple confection, essentially defined by their name. While you can have a turnover made with all sorts of ingredients, including just about any kind of meat, dessert turnovers are easily our favorite kind. We all know that the sign of a good pie is a flaky crust, but turnovers take flaky to a whole other level.

How To Celebrate Apple Turnover Day

The best way to celebrate Apple Turnover Day is to get down and make your own apple turnovers!

6th July, 2018 will be Fried Chicken Day

The bird gets the spotlight on Fried Chicken Day, and stomachs are rumbling already. Move over vegetarians, there's a deep-fried chicken leg and breast coming this way!

To add more pizzazz to the day, coat the legendary southern food in spices and yell "Yeehaw!" Cover the chicken with a mixture of cayenne pepper, garlic powder and paprika to put the spring back in the step. A little hot sauce? Sure, let's go all out! Serve the mouth-watering fried food

paprika to put the spring back in the step. A little hot sauce? Sure, let's go all out! Serve the mouth-watering fried food with chicken gravy to up the yum-factor even more.



Pair the succulent bird with waffles for a classic combo. Or, why not make chicken the star of the show and add a tasty side dish? Lip-smacking sides include buttermilk biscuits, cold potato salad or coleslaw. With fried chicken on the plate, the taste is sure to taste clucking good!

18th July, 2018 will be Hot Dog Day

The sun is out, you're at the amusement park, and the rollercoaster is filling the air with the clack-clack of wheels on rails. The scent of a thousand different fair foods fill the air, but one stands out above all the rest. It's rich, it's savory, it's the smell of a thousand mysterious meat products put into one delicious sausage casing, broiled up on a flame grill, and sent out on a bun with all the fixings. Hot Dog Day celebrates this most delicious and tantalizing of treats, and its extensive history!



History of Hot Dog Day

Given the Hot Dog Day is an international event, where it begins and who sponsors it tends to vary by region. In the USA it's primarily the industry partners that participate in promoting it, whereas in other countries around the world it may be historical organizations celebrating the role it played in their history. Did you know that the Frankfurter was named for the Germany city of Frankfurt, where it was said to originate? Well now you do! There's even multiple varieties of Hot Dogs! The original hot dogs came in a natural casing, which in case you didn't know were made from the small intestines of sheep. Intestines were regularly used for making all kinds of sausages, hotdogs included!

Then you have skinless hotdogs, in order to hold them together they're cooked in a cellulose casing that gets taken off when they get packaged. Since cellulose is kosher and cheaper than kosher intestine, this is often how the frankly (heh heh) delicious Kosher Hot Dogs are often made.

Hot Dog Day is celebrated all over, and if you've ever enjoyed a warm hot frank at a summer BBQ, then you're no doubt celebrating too!

How to Celebrate Hot Dog Day

The best way is to serve yourself up a great meal with hot dogs! Our personal favorite is the old classic, home-made mac and cheese served with slices of hot dog in it. We also really enjoy hot dogs in our chili, that's if we don't have a bun to make a classic chili dog. Get all your friends together in your back yard and encourage them to bring their favorite frankfurters and condiments. Share stories of your first hot-dog, and all the memories you have around this classic summertime treat. There's something about a hot dog with the slight char that comes from being grilled that always has us waiting for Hot Dog Day.

19th July, 2018 will be Ice Cream Day

"I guess ice cream is one of those things that are beyond imagination" ~ L.M. Montgomery

Ice Cream is without a doubt the perfect dessert ever devised by 1

Ice Cream is without a doubt the perfect dessert ever devised by man. It's rich and creamy, full of the flavors of summer while being made from the cold like the winter, and is perfect at any time of the year. Ice Cream can be used to make



sandwiches or entire cakes, or just eaten as a scoop all on its own. Ice Cream Day celebrates this delicious treat and all the varieties it comes in!

History of Ice Cream Day

Ice Cream has been around for a very long time since the first time milk and ice saw each other and fell in love, so long has Ice Cream been around. Throughout the years it has come in every conceivable flavor, from gentle and universally

Portage County Amateur Radio Service, Inc. (PCARS)

loved vanilla, to the unusual flavor that is crab ice cream. That's right, that's how amazingly versatile ice cream is, you can literally flavor it like anything!

Due to the difficulty of obtaining snow in hot summer months, ice cream used to be very difficult to obtain and reserved only for those of wealth and note. Thankfully with the advances made in refrigeration technology we're able to have ice cream any time of year! That's why we enjoy Choco-Tacos in the summertime, banana splits in the winter, ice cream cakes in the spring time, and ice cream sandwiches in the fall! What a wonderful world we live in to be able to enjoy this rich and delicious treat any time of the year!

Of course, these days we have unusual variations of ice cream as well, such as those made instantly by using liquid nitrogen, or those served up in individually frozen beads. What wonders the world has created for us to love on Ice Cream Day.

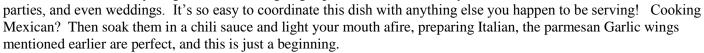
How to Celebrate Ice Cream Day

Well, first of all, get yourself out there and enjoy a heaping scoop of ice cream! Then maybe an ice cream sandwich, and then a delicious milkshake! Ok, are you sugared up enough yet? We didn't think so! The next thing you have to do is wolf down a delicious banana split and share an ice cream cake with your closest friends. Or just keep it all to yourself, we won't tell! Ice Cream Day is your chance to really indulge without any guilt or shame, and while you're at it, try coming up with your own flavors!

29th July, 2018 will be International Chicken Wing Day

It doesn't seem to matter where you go, chicken wings are finding themselves onto every conceivable menu around the world. There seems to be as many variations on a theme as there are cuisines to go with them, from parmesan garlic crispy wings to honey barbecue wings with a soft rich breading, there is no limit to what these delicious bits of bird flesh can make better.

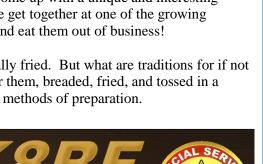
With such variety available, it's unsurprising that they have become so popular as a snack food for everything from celebrating huge sports events, to birthday





You'll be happy to hear that the best way to observe International Chicken Wing Day is by, quite simply, eating a ton of chicken wings! Get a bunch of friends together and challenge each of them to come up with a unique and interesting variation on this versatile food. If not in your own backyard then have everyone get together at one of the growing numbers of stores and chains that carry these sometimes mouth-searing treats, and eat them out of business!

Chicken Wings can be prepared in a number of ways, though they are traditionally fried. But what are traditions for if not breaking? The most popular of all wings, the Buffalo Wing, set the standard for them, breaded, fried, and tossed in a delicious spicy sauce. But baking and even slow cooking have become popular methods of preparation.







Dear Club Leader,

DX Engineering's "August Hot Deals" sales event is back for 2018 and better than ever! We look forward to seeing you again in our well-equipped showroom. You're invited to get on the air from N8DXE and try out the latest transceivers and accessories using three HF beam antennas stacked atop our 80-foot Rohn tower, and our state-of-the-art antenna switching system.

You and your club members can visit, make some contacts, and attend two free mini-seminars:

8:30 am to 9:00 am, **Digital and Software Defined Technologies**, presented by Will Jourdain, AA4WJ, from ICOM America. Jourdain will be joining us until noon to answer all your pressing questions about ICOM rigs and related equipment.

9:00 am to 9:30 am, **Near Vertical Incidence Skywave (NVIS) Antenna Communications**, presented by Tim Duffy, K3LR, Chief Operating Officer of DX Engineering.

In addition to the mini-seminars, on-air excitement, and technical advice, you can score discounts on open-box gear and inventory reduction items. Plus, you'll be able to purchase and pick up your in-stock order that same day.

August Hot Deals begins at 8:30 am on Saturday, August 11. Our DX Engineering staff will be on hand to answer questions until noon Saturday. The sale lasts through 9 pm on Sunday, August 12. The deals will only be good here at our Retail Showroom, inside the Summit Racing Retail Super Store at 1200 Southeast Ave. in Tallmadge, Ohio.

Watch for more details at DXEngineering.com and on our Facebook page. In the meantime, add the date to your calendar of events, newsletter and website, and spread the word to your club members and friends. Even if you can't make it to this event, I encourage you to come in anytime and get on the air in our Retail Showroom to test drive what's hot in Ham Radio.

73, Oin K3LR

Tim Duffy K3LR Chief Operating Officer and General Manager

DX Engineering 1200 Southeast Ave. Tallmadge, OH 44278 USA 330.572.3200 | DXEngineering.com

Phone: 330.572.3200 • Fax: 330.572.3279 • E-Mail: DXEngineering@DXEngineering.com • Web: DXEngineering.com

PCARS Life Members

A few months ago we changed the club rules on membership and added a Life Membership. One part of that change now has a provision for any member that has been an active member, for five consecutive years, and is age 75 or better will automatically be granted a Life Membership in PCARS. At the June meeting our Secretary - Tom, WB8LCD presented Life Memberships to those that we present at the meeting and qualified.

If you have any questions about this program, contact Tom, WB8LCD for details - and read the updated PCARS Constitution and By-Laws located on the PCARS web site.









Al, WA8CCU - Joe, W8KNO Jim, KD8FME - Bob, W8JFQ

Thanks & 73



Parky, KB8UUZ PCARS Newsletter Editor

All of our members (and others) look forward to getting this newsletter every month, so keep sending those inputs! I'm sure PCARS is known as the **BIG FUN** amateur radio club with plenty of activities. So chip in and send your report in to keep this newsletter great all throughout 2018 and beyond.

Thanks go out to the contributors for this month's newsletter:

SRLG, WX1DER, BQ, N8SY, CQ News

AC8NT, WA8AR, KB8UUZ, WB8LCD, K3LR, K8CAV, KD8SKL, N8RLG, WX1DER, W8KNO, N9ADG, KB8AMZ, W8PT, KA8TOA, N8DX, K3GP, W8BBQ, N8SY, CQ News Room, DX Engineering, The ARRL and the World-Wide Web.

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: K8SRR

Check PCARS out on the web: www.PORTCARS.ORG -or- www.K8BF.ORG

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~ 2018 Officers ~	2018 PCARS Appointments & Committees		
President - Jim Wilson - AC8NT Vice President - Tony Romito - WA8AR Treasurer - Amy Leggiero - KD8SKL 3 Year Trustee - Ed Polack - K8IV 2 Year Trustee - Robert Gurney - N8RLG 1 Year Trustee - Erica Pelz - AE8YL Past President - Rick Kruis - K8CAV	ARRL Awards - DXCC WAS, VUCC, WAC	W8KNO	Joe Wehner
	ARRL Awards - WAS	KB8UUZ	Tom Parkinson
	Club Site Manager/Liaison	K8CAV	Rick Kruis
	Contest Coordinator	W8PT	Chuck Patellis
	EchoLink	K8SRR	Steve Randlett
	Field Day Chairman, 2018	WA8AR	Tony Romito
	FYAO Chairman	W8PT	Chuck Patellis
	Historian	KB8SZI	Peggy Parkinson
	K8BF Callsign Trustee	K8FEY	Bob Hewett
	K8BF QSL Manager	K8FEY	Bob Hewett
	Membership Chairman	WB8LCD	Tom Sly
	Net Control Manager	KA8TOA	Greg Ash
	Net Night - Club Manager	WB8LCD	Tom Sly
~ Meetings & Net ~	Newsletter Editor	KB8UUZ	Tom Parkinson
2nd Monday of each month. 7pm Thursday night Club Net at 8 pm on 146.895	OSPOTA Chairman	KB8UUZ	Tom Parkinson
	Public Information Officer	WB8LCD	Tom Sly
	Secretary	WB8LCD	Tom Sly
	Tech, Gen & Extra Class Manager	AC8NT	Jim Wilson
	Volunteer Examiner Liaison	N8RLG	Robert Gurney
	Webmaster	KD8MQ	John Myers
			<u> </u>









PCARS Incorporated Nov. 1, 2005

First Meeting Nov. 14, 2005



ARRL Affiliation April 20, 2006



Special Service Club March 22, 2010

The RADIOGRAM is the official newsletter of the Portage County Amateur Radio Service, Inc. (PCARS) - Hamvention® 2018 Club Of The Year copyright @ 2018. The RADIOGRAM is an Award Winning newsletter: ARRL Ohio Section Newsletter First Place Winner for 2012 AND 2013. Second Place in the Great Lakes Division for 2013. Second Place ARRL Ohio Section Newsletter for 2014. Third Place Winner in the Ohio Section 2015. Second Place Winner in the Ohio Section for 2016. First Place Newsletter Winner in the Ohio Section for 2017 and First Place Newsletter Winner in the Great Lakes Division 2017. 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 KB8UUZ@gmail.com. The RADIOGRAM always obtains written permission for reproducing copyright material. The RADIOGRAM comes out the first day of each month (usually), please have inputs 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. Seems that some of these little guys and gals got loose from Kent State University back in 1961. They have migrated and thrived throughout our county. Kent State University even has an annual Black Squirrel Festival. So 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. Yes I know the cover says there is a cost, don't worry you won't get sent a bill or be hounded by bill collectors. Since this now looks like a magazine, I thought - what the heck, let's put a price on it. Every month it's listed in a different currency (this month it's Mongolian Tughrik) just for fun. Send your newsletter inputs (in .TXT format) along with in-focus pictures (not small 50 kb photos) to the newsletter editor: KB8UUZ@qmail.com





