



# The **RADIOGRAM**

When All Else Fails ~ Amateur Radio Works

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

January 2017 - Volume 12 Number 1

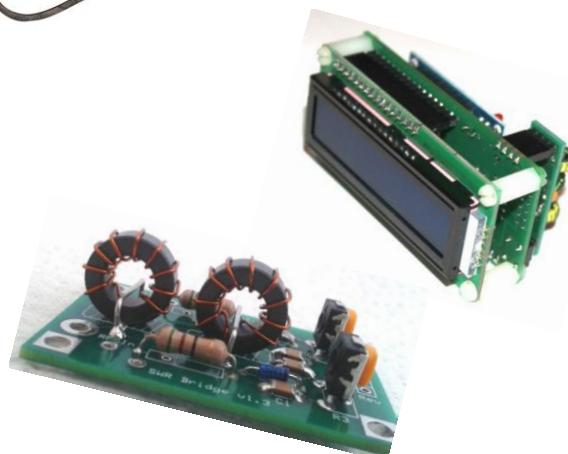
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***In This Issue -***

## ***Happy New Year***



## ***Projects for 2017***



## ***12<sup>th</sup> Annual FYAO Coming Up Soon***



### ***PCARS K8BF***

*The Club that puts the FUN in Ham Radio!*

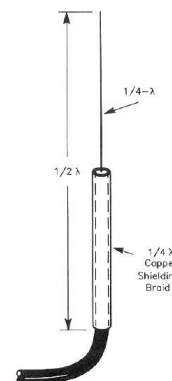
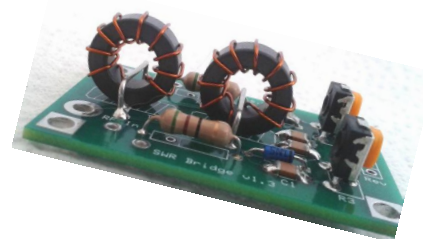


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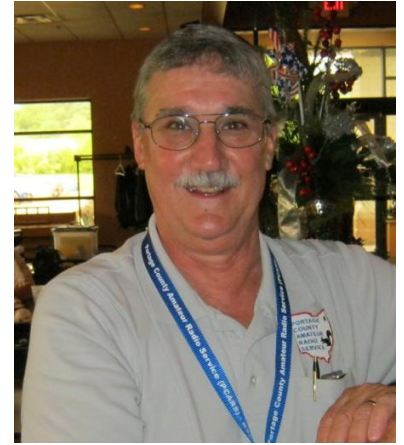
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## From the President

**Rick, K8CAV**  
PCARS President



From our annual fundraising for the Center of Hope to the many hours volunteered with ARES®, RACES, and public service events, PCARS members have gone out of their way to give back to the communities we live in. This month we have a new opportunity to help by giving two hours of your time and your expertise to volunteer with a ‘**Replay For Kids**’ workshop. PCARS is hosting this workshop at our club site in Ravenna on Saturday January 14<sup>th</sup> from 10 to noon. The workshop repairs or reconfigures and adapts toys for children with disabilities so that these toys can be more easily played with by them. ‘Replay For Kids’ is based in Medina, Ohio and this is a great opportunity for us to use our mechanical and electronic skills we practice in Amateur Radio to help fulfill their mission. They provide all of the material and tools, however if you want to bring your own tools you certainly can. Jim, AC8NT and I will be asking for some help prior to this event to get the lighting back up and running in Bay 2 and Bay 3 of the club site, and making sure we have electrical outlets at all tables and locations in the club site we’ll be using so keep an eye out for a QST e-mail asking for help. If you can volunteer for this event, please send an e-mail to Tom, WB8LCD at [wb8lcd@portcars.org](mailto:wb8lcd@portcars.org) so we have an idea of how many participants to plan for. I can’t think of anything so fulfilling as using our skills as Amateur Radio Operators to help provide some joy to kids so please volunteer if you can. For more information on ‘Replay For Kids’, you can go to their web site at [www.replayforkids.org](http://www.replayforkids.org).

From the very beginning of PCARS, providing classes for those interested in obtaining or upgrading their Amateur Radio licenses has been a priority and this month starts the first of two Technician Class instruction sessions at the club site. This is an eight-week class that takes place every Wednesday evening from 7 to 9 pm starting January 11<sup>th</sup> and culminates in an exam session when the classes are complete.

Getting a person licensed is only the first hurdle in making Amateur Radio an enjoyable avocation. We hope that the newly licensed Amateur Radio Operator will immediately get on the air and start enjoying the many different facets of our hobby but this is not always the case. We see too many newly licensed Amateurs that never get on the air and get involved with the hobby. While the reasons are many, there are things that we can



do to get newly licensed Amateurs involved. The first, and probably most effective way to do this is to get them into a club like PCARS, not just to expose them to the many different interests in Amateur Radio but more important get them associating with fellow Amateurs. As PCARS members you’ve always done a wonderful job welcoming and mentoring new Amateurs and I’m sure you will all continue doing so. As a club, we’ve just started an activity we hope will get newly licensed Amateurs involved by scheduling ‘**Get On The Air**’ days

following the exam session at the end of our classes. These are designed to get Amateurs hands-on experience and help with either their own radios or the club’s radios and get them to make their first contacts, or explore a new way of communicating using Amateur Radio. Our next session will take place on Saturday January 28<sup>th</sup> from 9 am to noon at the club site. If you are newly licensed, have been inactive, or know of anyone in these circumstances, make plans to attend and get on, or back on the air.

With the starting of the new year, PCARS has a lot for us to do, many old favorites and some new, so make time throughout the year to share in the **K8BF - BIG FUN PCARS** is.



## From the Vice President

**Jim, AC8NT**  
PCARS Vice President



The end of 2016 has been occupied with building robots and working to prepare my antenna for Freeze Your Acorns in February. I've build two 2 meter remote control systems for my teaching robots and a tuner for my QRP endfed antenna. 2017 is already getting filled with fun for our club. Here are just a few of the things coming:

1. We have a new Tech Class starting January 11th. If you know of anyone interested in getting their start in the hobby, have them contact me about the course. It will run 8 weeks on Wednesday from 7-9 PM with a VE session at the end.
2. Replay for Kids is scheduled for Saturday morning January 14th. We will be fixing and repurposing toys for kids in need. Let me know if you are interested in attending.
3. We will be building a WSPR transmitter on Saturday January 21. Details on this event will be sent out in a QST. We should be able to build and test the transmitter during this morning event. We will be using a kit supplied by QRP Labs. There is also an option to build a simple receiver to work with the transmitter.
4. We have a Get-on-the-Air day scheduled for January 28. If you or you know someone that would like to learn about the gear we have at the club site, this is a great event. It is also great for those who are moving up to HF privileges from Tech.
5. In February we have a VE session on the 4th and Freeze Your Acorns scheduled for the 11th.
6. We also will be having the rescheduled QRP Tuner build on February 25th



As you can see we have a lot of thing scheduled for the next couple of months. This should help get us all through the cold first of winter.

I am again asking for help in scheduling presentations for our monthly meetings. If you have any ideas, I would love to hear from you. It is not an easy job finding 12 presentations. Also, if you have any ideas for build projects send me an email. I have been asked for a session to build baluns and a session on WSJT. If you would like to attend any of the builds scheduled or suggested, let me know. We need to know to make sure we have enough materials.

I know we are going to have a lot of fun in 2017 and I am looking forward to every minute.



## 2017 PCARS Board Officers

### Here are the 2017 PCARS Board of Directors.

**Rick, K8CAV** President.

**Jim, AC8NT** Vice President,

**Amy, KD8SKL** Treasurer.

**Robert, N8RLG** 3-Year Trustee.

**Jim, KC8PD** 2-Year Trustee

**Chuck, W8PT** 1-Year Trustee

**Rick K8CAV**



**President**

**Jim AC8NT**



**Vice  
President**

**Amy KD8SKL**



**Treasurer**

## PCARS 2017 Elected Officers

**Robert N8RLG**



**3-Year  
Trustee**

**Jim KC8PD**



**2-Year  
Trustee**

**Chuck W8PT**



**1-Year  
Trustee**



**Tom,  
WB8LCD**

**Immediate  
Past  
President.**



## Schedule of Events

On the calendar for upcoming meetings and activities are:

- January 11<sup>th</sup> (Date Changed) - Technician Class starts at the club site in Ravenna - 7:00 pm
- January 14<sup>th</sup> - Replay for Kids - Toy Repair Day at the club site in Ravenna 10 am - noon
- January 21<sup>st</sup> - Building a Digital Mode Transmitter & Receiver for WSPR at the Club Site
- January 21-22 - K8BF on the air for the North American QSO Party at the club site
- January 28<sup>th</sup> - Get On The Air Day at the Club Site - 9 am - noon
- February 11<sup>th</sup> - Freeze Your Acorns Off day - see flier in this newsletter
- February 18<sup>th</sup> - Get On The Air Day at the Club Site - 9 am - noon
- February 25<sup>th</sup> - QRP Tuner Build project at the Club Site
- March 1<sup>st</sup> - 7 pm - (Date Changed) End of Tech Class VE Test Session at the PCARS Club Site - Walk-ins Welcome

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



First Tuesday	-	Digital - K8CAV
Second Tuesday	-	QRP/CW - WB8LCD
Third Tuesday	-	Antenna - WA8AR
Fourth Tuesday	-	DX & Contest - W8PT
Fifth Tuesday	-	Linux for Hams - KB8AMZ

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



## RePlay For Kids - January 14th

# RePlay for Kids



**Tom, WB8LCD**

**Mark your calendars for Saturday, January 14<sup>th</sup>  
from 10 am to noon!**

PCARS members are invited to participate in a  
“Toy Repair Workshop” located at the PCARS  
World Headquarters on Oakwood St. in Ravenna.

RePlay for Kids is a 501(c)(3), tax-exempt, non-profit organization out of Medina, OH. Their mission is to repair and/or adapt toys to make them usable for kids with disabilities.

RePlay for Kids provides everything we need to complete the task that will be assigned to us – even the tools at each workstation (you can bring along any of your own tools that you think might be useful). Our goal is to repair/adapt as many toys as possible within a two hour period. These toys are then made available to agencies that provide services to disabled children, as well as directly to the children of families who would not be able to afford to purchase these themselves.

This is another great opportunity for PCARS to serve our community by providing a needed service to those who have the need. I know that there is a wealth of talent among PCARS members in the ability to do this kind of work. I hope you'll all come out and support this event! You can see more at the RePlay website: [www.replayforkids.org](http://www.replayforkids.org). If you have any questions, please contact Rick, KD8WCK or Tom, WB8LCD.







... because **every** child  
needs to play

## 2015 SUMMARY

**Helping Kids  
With Disabilities  
Play and Learn  
Since 1999**

January 2016

[www.replayforkids.org](http://www.replayforkids.org)

### RePlay for Kids

At **RePlay for Kids**, our mission is to increase the availability of toys and assistive devices for children with disabilities. We fulfill our mission by repairing



**Adapted toys are easier to play with for children with disabilities.**

devices and adapting a wide range of battery-operated toys, therefore increasing not only the number but also the

variety of toys and devices that are available for children with disabilities.

**No other organization in Northeast Ohio provides similar services.**

Several service organizations in Northeast Ohio purchase specially adapted toys and other assistive devices for use by children with disabilities but, due to the limited market, adapted toys are significantly more expensive than their mainstream counterparts. Most organizations providing services for children with disabilities have limited resources and often cannot afford to replace broken toys or assistive devices. These organizations lack

the personnel with technical knowledge or available time required to modify and repair such devices.

**RePlay for Kids** provides free repair and modification services to these organizations, thereby increasing the number of functioning toys and assistive devices on hand for children with disabilities. At **RePlay for Kids**, we pursue our mission of increasing the availability of toys and assistive devices for children with disabilities by repairing existing devices, adapting mainstream toys, designing new devices and educating families and clinicians.



**Volunteers repair toys that will be distributed to the agencies served by RePlay for Kids.**



**Toys adapted by RePlay for Kids, ready to be donated.**

### Toy Workshops

**RePlay for Kids** has been hosting informal toy workshops since 1994. In 1999, **RePlay for Kids** was formally established as a nonprofit corporation to further increase the productivity of this toy repair

and modification effort. We currently host toy workshops a few times a month, during which volunteers spend a couple hours repairing and modifying toys. Since we utilize small, portable toolkits, our workshops can be set up in a

variety of locations. Workshops have been held at sites such as NASA, Ernst & Young, Nestle, Fifth Third Bank, Key Bank, Deloitte, Timken, GE, Keithley Instruments, Case Western Reserve Univ., Univ. of Akron and Cleveland State Univ.



**A child with cerebral palsy plays with an adapted toy dog.**

### Toy Repair Workshops

In these workshops, volunteers come and repair as many toys and assistive devices as possible in a 2 hour period. Workshop activities often involve simple repairs such as a broken wire or corroded battery terminal. Repaired items are checked for safe operation prior to being returned to the agencies.

**Over the past two years, there have been 189 toy repair and adaptation workshops.**

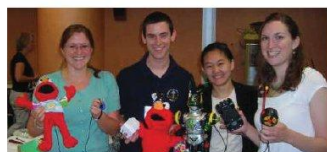
### Toy Adaptation Workshops

In these workshops, volunteers adapt mainstream, battery-operated toys by placing a switch cable in parallel with the original switch, allowing the toy to be operated by a variety of alternative switches that could be plugged into the cable. Volunteers do not need a technical background to learn how to adapt the toys.

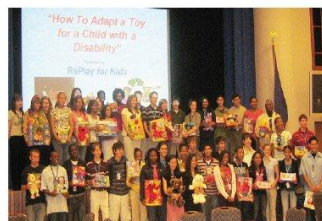
[www.replayforkids.org](http://www.replayforkids.org)

page 1





**Educational seminars teach individuals and organizations how to adapt toys.**



## Partner Agencies

- Boards of Developmental Disabilities in Cuyahoga, Summit, Medina, Stark, Lake, Geauga, Lorain and Wayne Counties
- United Cerebral Palsy of Cleveland
- Hattie Larlham Foundation
- United Disability Services of Akron
- Rainbow Babies & Childrens Hospital
- Cleveland Clinic Children's Hospital
- Akron Children's Hospital
- MetroHealth Medical Center
- Akron and Cleveland School Districts
- Society for Handicapped Citizens of Medina
- Aristocrat Berea
- Matthew's Lending Library

## Progress

Since 1999, volunteers for **RePlay for Kids** have repaired over 2,427 toys and assistive devices and produced over 6,447 adapted toys. In order to purchase replacements for the more than 8,874 toys and devices that were repaired or adapted over the past sixteen

years, the agencies would have spent over \$529,000. The past nine years, we have increased the number of toys and devices that have been repaired or adapted at workshops, from 368 in 2007 to 1,636 in 2014.

## 2015

The 1,636 toys repaired or adapted this past year have a

total value of over \$105,800. This includes 1200 newly adapted toys that were donated to the agencies for the holiday season. In 2015, we continued our **RePlay @Home** program, in which adapted toys are given to low-income families. We also held high school workshops to show students how they can use technology to help kids.

**Past 9 years: 411 workshops**

**7,687 toys repaired or adapted, over \$472,000 saved**

## These are a few comments from some of the agencies that we have assisted:

"The toys that were donated are not toys that one would typically find in an adapted equipment catalog. The toys are age and gender appropriate and they are typical to the toys with which other children often play. This makes them very motivating and special to our students."

*Assistant Director of Education, Medina County Board of Developmental Disabilities*

"The joy and excitement on the faces of the children has been immeasurable. The toys are also very reinforcing in establishing cause-effect relationships for children with disabilities. Some of the children with special needs have limited opportunities for "play" with toys that they can manipulate. Your donations have made their play time more meaningful and interactive for them."

*Speech-Language Pathologist, Euclid City Schools*

## Funding

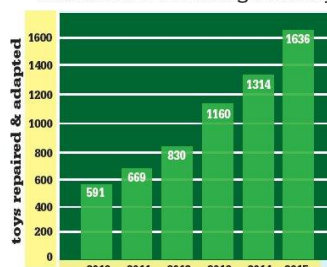
**RePlay for Kids** is a 501(c)(3) tax-exempt, nonprofit organization funded by grants from the Musson Foundation, Sisler McFawn Foundation, Medina County Women's Endowment Fund, Medina

County Community Fund, Romich Foundation, Stark Community Foundation, Akron Community Foundation Millenium Fund, Community Foundation of Lorain County, Nordson Corporation Foundation, Nord Family

Foundation, CareSource Foundation, Cy Pres Honor Project, Willard Stephenson Foundation, and individual donations. If you are interested in supporting our activities, you can donate on our web site, or send a donation to:

**RePlay for Kids** 600 W. Sturbridge Dr., Medina, OH 44256.

Phone: 330-721-8281 Toll Free: 866-9-REPLAY (866-973-7529) email: [info@replayforkids.org](mailto:info@replayforkids.org)



**RePlay for Kids repaired or adapted most of the toys received from our partner agencies, which translated into savings of over \$105,800 last year for these agencies.**





## FYAO Coming Up Soon

*Chuck, W8PT*

This is simply a reminder to all those PCARS members and friends of PCARS who will be braving the elements this February during our annual QRP event.

February 11, 2017, is not that far off. I want to make sure that those of you who are planning to set up a station outdoors during our balmy February WX, are getting their ducks (or should I say penguins) in a row.



Yes, it's the **Portage County Amateur Radio Service's Twelfth Annual "Freeze Your Acorns Off" (FYAO) Special QRP Event.**

As in years past, it will be held at Fred Fuller Park in Kent, OH, on Saturday, February 11, 2017. Set up time begins at 9 AM and the event will start promptly at 10 AM and go until 4 PM EST.

We will be active on CW, Digital & Phone in the 10, 15, 20, 40 and 80 meter bands (Repeater & Echolink on the K8SRR echo link node for a certificate) and anything else we can get working. Club Call Sign K8BF for a certificate. Other participating stations will be using their own callsign/FYAO, or calling "CQ FYAO" (only stations at the Freeze Your Acorns Off event should use the /FYAO designator). Yes, we'll be braving the cold snowy weather of North Eastern Ohio to set up QRP stations using portable power and antennas.

We will also be having our **Best Recipe Cook-Off** as we did last year. So those of you who think they have the best chili, sloppy joe's, mac 'n cheese or casserole are urged to enter said dish into the contest to see if they can win. A blind tasting by three very well qualified judges will determine the winner and two runners-up.

So come on out and join in the festivities. Have fellowship with your fellow members and partake in the good food. Let's start 2017 off with a lot of **Big Fun!**



## Contest Calendar

January 2017		
Contest Name	Click for more info	Date - Times
ARRL RTTY Roundup	<a href="#">Link</a>	1800Z, Jan 7 to 2400Z, Jan 8
DARC 10-Meter Contest	<a href="#">Link</a>	0900Z-1059Z, Jan 8
North American QSO Party, CW	<a href="#">Link</a>	1800Z, Jan 14 to 0600Z, Jan 15
North American QSO Party, SSB	<a href="#">Link</a>	1800Z, Jan 21 to 0600Z, Jan 22
CQ 160-Meter Contest, CW	<a href="#">Link</a>	2200Z, Jan 27 to 2159Z, Jan 29
Winter Field Day	<a href="#">Link</a>	1700Z, Jan 28 to 1700Z, Jan 29

*Google the Contest Name - Read the Rules & Have Fun. YES - There are MANY More Contests out there - Check the Internet*

## World's Smallest Receiver



**Leah Burrows**  
Science and Technology Communications Officer  
Harvard School of Engineering and Applied Sciences



World's smallest radio receiver has building blocks the size of two atoms  
Radio is made from atomic-scale defects in diamond

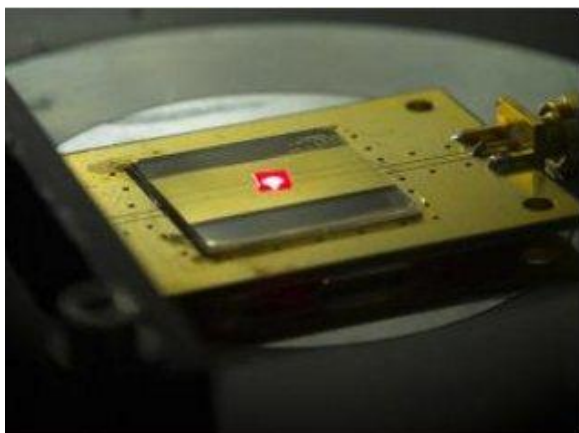
Researchers from the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS) have made the world's smallest radio receiver – built out of an assembly of atomic-scale defects in pink diamonds.

This tiny radio — whose building blocks are the size of two atoms — can withstand extremely harsh environments and is biocompatible, meaning it could work anywhere from a probe on Venus to a pacemaker in a human heart.

The research was led by Marko Loncar, the Tientsai Lin Professor of Electrical Engineering at SEAS, and his graduate student Linbo Shao and published in *Physical Review Applied*.

The radio uses tiny imperfections in diamonds called nitrogen-vacancy (NV) centers. To make NV centers, researchers replace one carbon atom in a tiny diamond crystal with a nitrogen atom and remove a neighboring atom — creating a system that is essentially a nitrogen atom with a hole next to it. NV centers can be used to emit single photons or detect very weak magnetic fields. They have photoluminescent properties, meaning they can convert information into light, making them powerful and promising systems for quantum computing, photonics and sensing.

Radios have five basic components — a power source, a receiver, a transducer to convert the high-frequency electromagnetic signal in the air to a low-frequency current, speaker or headphones to convert the current to sound and a tuner.



This tiny radio — whose building blocks are the size of two atoms — can withstand extremely harsh environments and is biocompatible, meaning it could work anywhere from a probe on Venus to a pacemaker in a human heart. (Photo courtesy of Eliza Grinnell)

In the Harvard device, electrons in diamond NV centers are powered, or pumped, by green light emitted from a laser. These electrons are sensitive to electromagnetic fields, including the waves used in FM radio. When NV center receives radio waves it converts them and emits the audio signal as red light. A common photodiode converts that light into a current, which is then converted to sound through a simple speaker or headphone.

An electromagnet creates a strong magnetic field around the diamond, which can be used to change the radio station, tuning the receiving frequency of the NV centers.

Shao and Loncar used billions of NV centers in order to boost the signal, but the radio works with a single NV center, emitting one photon at a time, rather than a stream of light.



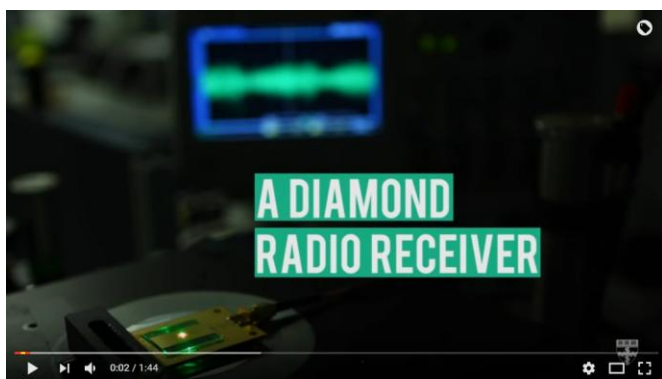
The radio is extremely resilient, thanks to the inherent strength of diamond. The team successfully played music at 350 degrees Celsius — about 660 Fahrenheit.

“Diamonds have these unique properties,” said Loncar. “This radio would be able to operate in space, in harsh environments and even the human body, as diamonds are biocompatible.”

This research was coauthored by Mian Zhang, Matthew Markham and Andrew M. Edmonds. It was supported in part by the STC Center for Integrated Quantum Materials.

Harvard’s Office of Technology Development has filed a provisional patent application on the technology and is actively pursuing commercialization opportunities.

The full paper can be viewed at: [http://nano-optics.seas.harvard.edu/files/nano-optics/files/Diamond\\_Radio\\_PRApplied.6.064008.pdf](http://nano-optics.seas.harvard.edu/files/nano-optics/files/Diamond_Radio_PRApplied.6.064008.pdf)



Click on the link to see the  
YouTube video of the radio in action  
<https://youtu.be/aytf0Jk8YJ4>

## PCARS President's Award for 2016

At the December meeting Rick, K8CAV presented the “President’s Award” to Dick Ward, KB8JFF and Mark, K8MSH. Rick said that Dick, KB8JFF is one of those quiet guys that is always there to help and shows up at just about every PCARS function. A real supporter of the club in many ways. Mark, K8MSH has been an asset to the club having been the club Secretary as well as being a volunteer for many club projects.



*Rick, K8CAV presents the President's Award to Dick, KB8JFF*



*Rick, K8CAV presents the President's Award to Mark, K8MSH*

## PCARS Thursday Net Control

Tom, WB8LCD

Thank you all for helping with this! Anytime you are unable to take the net, please give me as much advance warning as possible!

Don't forget - **4<sup>th</sup> Thursday is NET NIGHT at the Club Site !!**



January	
5	WB8LCD
12	K8CAV
19	KB8UUZ
26	NR8W

February	
2	KE8BWA
9	K8IV
16	KB8UHN
23	AC8NT

The PCARS net is **BIG Fun** - tell your friends to check in via RF or EchoLink! If you have not been a Net Control Operator for PCARS and would like to give it a try, please contact me at: [WB8LCD@portcars.org](mailto:WB8LCD@portcars.org) Everyone who is a club member is welcome to have a turn!

Another year of nets are now in the PCARS history books! I would like to give a very sincere "Thank You" to all of you who have participated in the Thursday night nets. I also want to give a very sincere "Thank You" to all of you who have acted as Net Control Operator through the course of the year – you are the ones who made the nets happen each and every week.

I don't have numbers to give you yet, but my gut feeling is that the net participation has declined a bit over the past couple years. I'm guessing our average net attendance has been about 22-25 through the last year, some more, some less. Echo-link has been a part of that decline, mostly because it has not been consistently available every Thursday night. I'm hoping that that problem will be corrected in early 2017 so it won't be an issue moving forward. I know the board members are aware of the problem and are searching out our best solution as a part of some other IT issues we've experienced. I'll keep you posted on that, and after we have a reliable connection, we'll go back to "advertising" that our net is open to Echo-Link check ins from "Around the World". It's always been exciting when we get a DX station checking into our local net.



The other part of the equation is participation by our members. With close to 200 Active Members, we only have about a 10% participation rate. I would like to see every active member check into at least 1 PCARS net per month. I know you could do it – and you really don't want me knocking on your door at 8:00 PM on a Thursday night reminding you to get on! Do it for the Net Control Operators – they always look at the participation rate of their net as a comment on their net control abilities and they could all use a boost to their egos! And, we really want to hear from you. "Another bean for the count" is OK, but it's kind of boring. Let us know how you are and what you're doing with this fascinating hobby.



Speaking of Net Control Operators – why would you want to do that? Let me tell you that in addition to being held in high esteem by the other club members – YOU will become a much better ham in the process, and much more valuable if you are ever needed in any kind of emergency operation! (Yeah, it could happen, even if you don't participate in ARES® or the Portage County Communications Unit. Bad things could happen anywhere, anytime. YOU could end up as the only station capable of handling that responsibility.) You will become a better PCARS member – you'll know who the other members are and



what their call-sign is. They will know who you are and what your call-sign is. You will lose any bit of “mic frite” you might otherwise have had. You'll be a better operator and have more fun on the air, especially in more intense situations such as contests. If you're a DX'er you'll learn to do a better job of picking those call signs out of the noise. Believe me when I tell you it's a WIN-WIN situation.



Before we had the very first PCARS activity, or even the very first PCARS meeting, we had the first PCARS Thursday night net! I'm proud to have been a part of it from the very beginning, and I plan to be a part of it for a long time to come. Please, take me up on my challenge to participate in at least one net a month over the next year (that's 12 check ins – BFD) , you can do it! And, if you would like to experience being a net control operator, send me an email – I'll get you in the roster and give you all the help you need to get up to speed and comfortable with the job!  
([wb8lcd@portcars.org](mailto:wb8lcd@portcars.org))

**Happy New Year! I hope 2017 is one of your best year as an Amateur Radio Operator and a PCARS member EVER!**

## 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 Ravenna.

**February 4<sup>th</sup> - April 1<sup>st</sup> - June 3<sup>rd</sup> - August 5<sup>th</sup> - October 7<sup>th</sup> - December 2<sup>nd</sup>**  
**Plus: March 1<sup>st</sup> - 7 pm at the end of the Technician Class - June 24<sup>th</sup> 4 pm at the Field Day site**



### 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 copy 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. These documents may include:
  - An unexpired Certificate of Successful Completion of Exam (**CSCE**) indicating the credit(s) earned indicating the credit(s) earned.
  - 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 2 to re-instate your license.



## ConTest University 2017 Registration Open

**Tim, K3LR**  
Contest University Chairman



I am proud to announce that student registration is now open for 2017 Dayton ConTest University ("CTU") to be held all day on Thursday May 18, 2017 at the Crowne Plaza in Dayton, Ohio. <http://contestuniversity.com>

Eight different countries have hosted CTUs over the eleven years. USA, Australia, Russia, Germany, Italy, England, Brazil and Finland. Over 5000 students have attended these CTUs with more than 100 CTU Professors sharing their contesting experiences.

## Contest University

2017 will be the eleventh year in a row for CTU Dayton. To give you an idea of the quality of the CTU content and activities, the 2016 CTU topics (last year) are listed on the

CTU web site at <http://contestuniversity.com>

The 2017 CTU Professor line up will be outstanding and is being finalized. Check the CTU website often for the 2017 Professor updates.

There are scholarships (registration fee) available from CTU through a grant from the Northern California DX Foundation (NCDXF) for those students 25 years old and younger. Please use the "contact us" button on the CTU website to get more information.

2017 Student registration information is on the CTU web site <http://contestuniversity.com>

Important - as we did last year - if you want to sign up for CTU 2017 Dayton and you have given (or will give one by Dayton 2017) a talk about Amateur Radio to any club, Hamfest or group since May 17, 2016 - you qualify for a \$10.00 registration fee discount. Please choose the "Registration with Club talk discount" option to get the \$10.00 discount. Spreading the word about amateur radio is lots of fun and can save you money at CTU!

Thanks to all of the CTU sponsors including Icom America, DX Engineering, the Northern California DX Foundation, the Radio Club of America and CQ Magazine for making CTU possible. Thanks to K8MNJ and K1SO for all of their help with CTU. Special thanks to Scott, KA9FOX from QTH.com for hosting and constructing the brand NEW CTU headquarters web site.

**CU in Dayton at CTU 2017 and Happy New Year**

**Contest University**

Crowne Plaza Hotel  
Dayton, Ohio USA

A row of four small photographs. From left to right: 1. A group of people at a computer workstation. 2. A man in a white shirt operating a radio. 3. A tall, multi-band antenna structure. 4. Two men looking at a document or screen.



# ARRL Vows Continued Pursuit in the 115<sup>th</sup> Congress

*From the ARRL*

## ARRL Vows Continued Pursuit of the Amateur Radio Parity Act in the 115th Congress



The Amateur Radio Parity Act, H.R. 1301, died an unbecoming death as the 114th Congress of the United States drew to a close today. After having passed the House of Representatives on a unanimous vote, the bill stalled in the Senate due to the intervention of only one member, Sen. Bill Nelson (D-FL).

Over the course of the past year, Sen. Nelson has received thousands of e-mails, letters, and phone calls from concerned constituents asking for his support of H.R. 1301. Numerous meetings were held with his senior staff in an effort to move the legislation forward. Negotiations, which led to an agreement with the national association of homeowner's associations and publicly supported by CAI and ARRL, were brushed aside by Sen. Nelson as irrelevant.

In a final meeting with the Senator's staff earlier this week, it became clear that no matter what was said or done, the Senator opposed the bill and refused to allow it to move forward. Unfortunately, as the bill did not receive floor time, the only manner in which it could get passed in the Senate would be through a process that required unanimous consent, which means no one opposes the bill.

The legislation will be reintroduced in both houses of Congress after the 115th Session begins in January. We have already been in contact with the sponsors of the bill to allow for an early introduction, which will give us more time to obtain success. We believe that we can get his bill adopted given the fact that we were inches away from crossing the goal line. We will continue to need the support of the membership, particularly in Florida, as we go forward through the next year.

## 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 any PCARS

meeting. There are 2 types of

stickers available - a 4" x 6" oval and a 3" x 10" bumper sticker. Stickers are \$1 each. Show your pride in PCARS - Wear a patch, use the stickers! See the club

Treasurer: Amy, KD8SKL or e-mail her at: [KD8SKL@portcars.org](mailto:KD8SKL@portcars.org)



**Jim, KC8PD**

**Radio Officer, Portage County  
Communications Unit/RACES**



It's almost the middle of winter and so far Northeast Ohio has fortunately not been clobbered by serious ice or snow storms that put the public at risk or cause serious power disruptions.

But have you ever stopped to consider that we are at greater risk from winter storms than we are from those during the summer? Knowing that, how well prepared are you to meet your power needs at home if a significant outage occurs?

Here's a solution that you probably never considered. As reported by the Harvard Press and reprinted in other media:



"The Prius has a new use, and it does not involve driving. The Harvard Press - which serves the Massachusetts town of Harvard as opposed to the university - reported that the car's battery helped keep the lights on for some locals during the recent ice storms.

"The newspaper reports that John Sweeney, a resident who lost power, 'ran his refrigerator, freezer, TV, woodstove fan and several lights through his Prius, for three days, on roughly five gallons of gas.'

"Said Mr. Sweeney, in an e-mail message to The Press: 'When it looked like we were going to be without power for awhile, I dug out an inverter (which takes 12v DC and creates 120v AC from it) and wired it into our Prius.'

"According to the newspaper, the device allowed the engine to run every half hour, automatically charging the car battery and indirectly supplying the required power."



Now you have another great reason to run out and buy that new car!

Well, maybe not, but it should get you thinking about how well you are prepared to provide your backup power at home if you don't have a Prius sitting in your garage.



Do you have a generator? When was the last time that you started it up to make sure that it would still run and generate power? Most manufacturers recommend that you start and run a generator with a load on it once a month. Is the gas tank full and have you added any fuel stabilizer? Do you have a safe place to run it so that exhaust fumes don't enter your home? Do you have power cords of the correct gauge and length to get power to the circuits or appliances that have priority?

If you are using any unsealed deep cycle batteries as a backup for your shack, check the electrolyte levels on a regular basis. Eyeball gel and AGM batteries for any obvious defects and periodically check the voltage on all storage batteries. You might want to invest in a West Mountain PWRgate that uses your power supply to maintain a float charge on the batteries and will automatically switch from line current to the batteries if there is a power failure.





Aside from what is in your go-kit, do you have enough spare batteries (AAA, AA, C, whatever) for flashlights and electronic devices at home? Watch for sales on batteries, particularly during the holiday season when many stores offer substantial discounts and two-for-one sales.



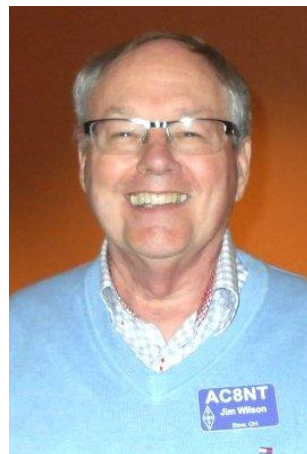
What about all of your rechargeables? Familiarize yourself with the battery type (NIMH, Lithium, etc.) and check the manufacturer's recommendation for type of charger and how often out of service batteries should be recharged. It may be a good idea to pick a regular date, say the first of every other month, and make sure each battery or battery pack gets a full recharge.

Otherwise, at the worst possible moment you are likely to discover that you have a bunch of dead batteries and no way to recharge them. The only way to be prepared is to be prepared. You don't have to call it a New Year's resolution, either. It is simply a timely update to your home safety plan.

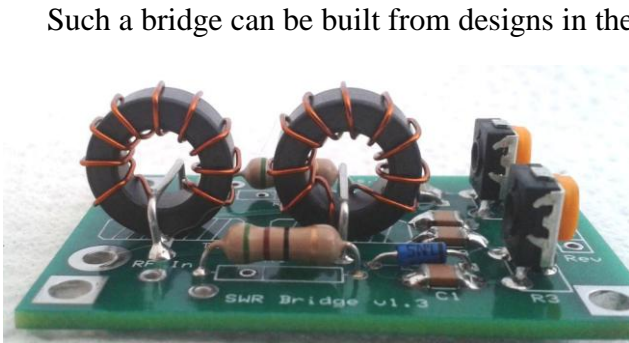
**Be safe!**

## *Tech Tip - SWR Bridge*

*Jim, AC8NT*



A lot of hams are working on antenna projects that in some way or another need to be tuned. We have magnetic loops, spiral dipoles and endfed designs that all need to be tuned for minimum SWR. These tuner designs usually involve a microcontroller (like Arduino) that needs to sense forward and reverse power to compute SWR. I have built two magnetic loops with automatic tuners that have been controlled by Arduino type processor. The trick is to find a small and easy to use SWR directional measurement circuit.



Such a bridge can be built from designs in the ARRL Handbook or from circuits found in many articles. But these designs are often difficult to build physically and often have hard to find components. I have found a kit that works great, is low cost, works with power levels up to 100 watts continuous and is relatively easy to build. This is the Universal SWR 1.3 Bridge offered by **Kits and Parts** (<http://www.kitsandparts.com/>) for \$11. It is a small circuit board that provides the required RF section and trim for calibrating the bridge. This combined with a couple of op amps and a controller will make building tuners much easier.

After using this board, I have found a couple of improvements that you might consider useful. The first is to insulate the toroids with Teflon tape to eliminate possible arcing shorts. Using plumbers tape is an easy solution. The second is to replace the ½ watt resistors with 1 watt resistors. This will prevent problems if you over power the bridge. I would like to note there are some surface mount components on the board, but they are of the “larger” size and fairly easy to solder.

I hope this provides a possible solution to your SWR measurement requirements.

## 2017 - What Will You Do?

*Parky, KB8UUZ*

Here it is - 2017 has arrived, and with it comes the hopes and the plans for a new year. So, now is the time to make a few resolutions that will hopefully be fulfilled. Here's just a few that you might want to choose from:



1. Upgrade your license. Go for that General or maybe that Amateur Extra. Open up more of the spectrum for you to play radio in.
2. Already upgraded to Amateur Extra? Then, how about giving some back to the hobby to help out the newer hams. Become a Volunteer Examiner (VE). It's easier than you think. You can find out all the details on the ARRL web site (<http://www.arrl.org/become-an-arrl-ve>). You download the VE manual, read it over once. Read it again and answer the 40 questions (it's an open book test). Then send the test into the ARRL. As soon as you get your VE credentials from the ARRL - you can attend VE test sessions and help give tests to new and upgrading hams.
3. Attend the PCARS "Get On The Air Day" functions at the club site. New and old hams will be there and someone will be looking for an answer to a question that you just might have the answer for! Be an Elmer and help other hams learn from what you have learned.
4. Go Portable. Get your rig and antenna and a power source and get out somewhere in the wild (or not so wild) and get on the air and make contacts. You may just find out how much fun that can be. Check out the Ohio State Parks On The Air (OSPOTA) ([www.ospota.org](http://www.ospota.org)) contest in September - a great reason to get out and get portable!
5. Try a new mode in ham radio. Try digital. It seems that since the solar cycle is going down there are many DX stations taking up JT65, a weak signal digital protocol. You don't need high power (in fact it is frowned upon unless you keep it LOW) to make some pretty good DX.
6. Go through the log and send out QSL cards both statewide and DX. It's always fun receiving cards in the mail from some of those far off places.
7. Work on Wall Paper. No, not that stuff your XYL wants you to do, but the wall paper you hang up in your radio room - certificates! Go for your Worked All States, Worked All Continents, DXCC and more. Look up the requirements and get busy. If you've been on the air for a while, you just might be close to getting an award!
8. Renew your membership in PCARS. Help keep the club going and lend a hand once in a while during club projects. It really is a lot of fun.

So - that's a start. I'm sure if you think about it, you could come up with more goals for 2017. Here's wishing all your goals and then some are achieved. Don't forget to **have fun** with amateur radio !





## Charlie the Tuner's HF High-Lites

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



WOW!!! 2017! Where did 2016 go?? As I get older it seems that the days and years go by faster and faster. And for me, it's a good reason to get on the air and work as much DX as I can. As a matter of fact I have my rig on listening to the crowd on 20m.

One of the things I've decided this year is to only report one or two months out. There is no use in announcing DX events more than that because plans do change and it just causes confusion and/or frustration on those of you who had been waiting for a particular DX event. This doesn't mean that I won't at times report on plans that are farther out than one or two months. But in that case it will be because the plans are very firm or the event is very rare.

Well, let's see what the near future has in store for us DX hunters.

As I have been doing all along, I extend thanks to the Northern Ohio Amateur Radio Society, Northern Ohio DX Association, Ohio/Penn PacketCluster Network, AB5K & the AR TelNet Clusters Network, K1XN & GoList, NJ1Q & W1AW, NG3K & ADXO, W3UR & The Daily DX, N4AA & QRZ DX, W4DN, K8GI, K8YSE, W8GEX & 60m DX News, W9ILY, N0FCD, CO3JK, 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, IZ5HQB, OZ6OM & 50 MHz DX News, RSGB IOTA Web Site, Sixitalia Weekly, VA3RJ & ICPO, VHF-DX-Portal(MMMonVHF) and VU2DSI for the following DX information.

This report "could" contain "Pirate/SLIM" operations or more likely a "BUSTED CALLSIGN". As always, you never know, so..... - **"Work First Worry Later"**.

**5K0, SAN ANDRES.** Operators Will/AA4NC and Ron/AA4VK will be on San Andres between Feb 14th and Mar 7th. Call sign are unknown at this point. It should be either 5K0N or 5K0X. They plan to be active on various HF bands and 60 meters. QSL info has not be reported yet. **ALSO REMEMBER:** Ops Will/AA4NC, Faber/HK6F, Tim/LW9EOC and David/WJ2O have joined forces to be active as 5J0NA from San Andres during the ARRL International DX SSB Contest (March 4-5th) as a Multi-Single entry. QSL via LW9EOC.

**5R, MADAGASCAR.** Eric, F6ICX, will once again be active as 5R8IC from Saint Marie Island (AF-090, WLOTA LH-0491) between November 6th and February 4th. Activity will be holiday style on 40-10 meters, mainly CW, but some SSB, RTTY, and PSK63, using a FT450 with 100 watts into various GPs or Inverted-Ls and a Hexbeam for 20-10 meters. There will be no online log during his activity. QSL via his home call sign (QRZ.com). Logs will be uploaded to ClubLog and LoTW.

**5Z, KENYA.** Nick, LZ4NM, active as 5Z4/LZ4NM from Nairobi through January 23rd. Activity will be on 40-10 m using CW and SSB. QSL direct: Amateur Radio Society of Kenya, Box 45681, Nairobi, 00100, Kenya.

**6W, SENEGAL.** Look for Michel, F6AFH, to be active as 6W7SS from La Somone in Senegal between early of January up to April. No other details were provided.

**8J1/8J60, ANTARCTICA.** Yath, JG2MLI, will once again be active as 8J1RL from the Japanese Antarctica Showa (Syowa) Research Station on Queen Maud Land (AN-015, WAP-JPN-03) between January 1st, and January 20th. He will also use the special call sign 8J60JARE to celebrate/commemorative the 60th anniversary of the Japanese Antarctic Research Expeditions (JARE) and the Antarctica station. Activity will be on 40-10 meters using CW, SSB, RTTY, PSK, JT9 and JT65. QSL via his home call sign, LoTW or eQSL. For more details, see: <http://cq8j1rl.exblog.jp>

**DP1, ANTARCTICA.** It has been reported that Felix, DL5XL, active as DP1POL from the German Neumayer Station III (AN-016, WWFF DLFF-022, WW Loc. IB59UH) through Feb. Activity will be on all HF bands using mainly CW and possibly some SSB and Digital modes. QSL via DL1ZBO or LoTW. ADDED Felix does have a FaceBook page at: <https://www.facebook.com/dl5xl?fref=ts> ADDED NOTE (de DL5XL): There will also be a ham radio operator on the next wintering team at Neumayer Station III. Daniel, DL1SU, works as an electronics engineer at the base. He plans to use the club call sign DP0GVN from Dec 2016 to Feb 2018. QSL cards for DP0GVN will be handled by Dominik, DL5EBE, direct or via the Bureau.

**JD1, MINAMI TORISHIMA.** Take, JG8NQJ, is once again active as JG8NQJ/JD1 from Marcus Island in the Minami Torishima (OC-073, JCG 10007) group for the next couple of months (December 15th- March 15th). He is usually there to work on the island's weather station. Activity will be limited to his spare time. He will be mainly on 17 meters but also on 20/15/12/10/6 meters CW. QSL via JA8CJY or by the Bureau via JG8NQJ.

**PY0F, FERNANDO DE NORONHA.** Erwin, PY2QI, will be active as PY2QI/PY0F from Fernando de Noronha Island (SA-003) between February 15-21st. Activity will be on 40-10 meters including the 30/17/12m bands using CW only. QSL via his home callsign direct.

**SA-028.** Operators PY2ALC, PY2XIZ (Team Leader), PY2GTA, PY2HP, PU2KFL, PU2UTY and PU2LEW will be active as ZV2CV from **Couves Island (DIB-SP022)** between Jan 7-8th. Activity will be on 80/40/20/15/10/2 m using CW, SSB and the Digital modes. QSL via PY2XIZ, direct, by the Bureau or LoTW.

**SA-043.** Members of the Chilean DXpedition Team will be active as XR7T from **Ascension Island** [Archipelago de las Gaaitecas](FE36dc). Likely dates will be in the period of January 10-17th. The main aim of the DXpedition will be to work the greatest possible number of unique call signs, thus offering a possibility also to work "Little Pistols and QRP stations". Activity will be on all bands using SSB and the Digital modes. CW is not available on this activation. Operators mentioned are Team Leader Bruno/CE7PGO, Domingo/CE1DY, Mauricio/CE7KF, Marco/ CE1TBN and Cesar/CA5GRF. QSL Manager is Julio/CE3OP (direct, Bureau, OQRS). Log will be uploaded to LoTW one year later.

**SA-072.** A group of Brazilian operators will be active as ZZ8P from **Poldros Island** (WWFF PY24, DIB MA 03) between January 14-18th. Operators mentioned are Robert/PT2GTI, Daniel/PT7BI, Junior/PS8DX, Jesus/PS8ET and Ilo/PS8JIF. Activity will be on various HF bands using CW, SSB and the Digital modes. QSL via PT2GTI, direct, by the Bureau, ClubLog or LoTW.

**TU, CÔTE D'IVOIRE.** Operators Bertrand/DF3FS, Norbert/DJ7JC and Heye/DJ9RR will be active as TU5MH from Côte d'Ivoire (Ivory Coast) between Jan 22nd and Feb 2nd. Activity will be on 80-10 meters using CW, SSB and RTTY. QSL via DJ5BWD, ClubLog's OQRS or LoTW.

**XW, LAOS** (Update). Ken, K4ZW, will once again be active as XW4ZW from Vientiane between Jan 6-16th. Activity will be on all bands, but with a focus on the lower bands and CW only. QSL via K1SE direct (with SAE/SASE). Log will be uploaded to LoTW and ClubLog. Ken states, "All Bureau cards received will be answered, but it is time consuming and expensive. Please note that I receive cards from the Bureau on average once or twice per year. It takes up to 1 year to answer the cards. You will need to be patient."



**XX9, MACAO** (Update). A German team of operators is planning to be active as XX9D between Feb 13-26th, Ops mentioned are Werner-DJ9KH, Guenter-DL2AWG, Dietmar-DL2HWA, Bert-DL2RNS, Juergen-DL3HRH, George-DL4SVA, Paul-DL5CW, Wolf-DM2AUJ, Sid-DM2AYO, Rolf-DL7VEE and Bom-XX9LT. Activity on 80-10 m (possibly 160/6m) with an emphasis on CW and RTTY, but with some SSB. They plan to have three stations on the air. QSL via DL4SVA. Suggested frequencies are:

CW - 1814.5, 3526, 7026, 10119, 14026, 18086, 21026, 24906 and 28026 kHz

SSB - 1849, 3805, 7095/7182, 14210, 18120, 21275, 24955 and 28465 kHz

RTTY - 3595, 7046, 10136, 14090, 18099, 21090, 24918 and 28090 kHz 6m - 50120/CW and 50120/SSB

PLEASE NOTE: These are the planned operating frequencies. Depending on local situation, they may change the frequency. Please listen! They will work always split.

**YJ, VANUATU.** Operators Minekazu/JA2NQG (YJ0WW), Yuji/JH2BNL (YJ0AA) and Shigehiko/JI2UAY (YJ0FM) will be active (w/call signs requested) from Benjor Resort, Port Vila, on Efate Island (OC-035), between January 20-23rd. Activity will be on 160-10 m using CW, SSB and RTTY. Minekazu states, "hoping for good conditions on 160". They will have two 500 watt stations and one 200 watt station into an Inverted L, dipoles, CrankIR and HB9CV. QSL LoTW for YJ0AA, and all others via their home call signs.

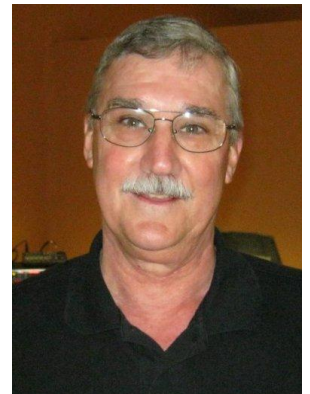
I hope that Santa was very generous to you this past Christmas and brought you at least one gift to enhance your Amateur Radio hobby. And whether you are a DXer or not, get on the air and warm up those circuit boards or tubes if you are fortunate enough to be using boat anchors. Make some contacts and some new on air friends in 2017.

Until the next issue of the award winning Radiogram,

73 and Gud DX!

## Digital Special Interest Group

*Rick, K8CAV*



The Digital Special Interest Group meeting for January 2<sup>nd</sup> is being cancelled due to the Board meeting shifting to Tuesday. Our next meeting will take place on Monday February 6<sup>th</sup> at 7:00 PM at the club site.

The Digital Special Interest Group's mission has been two-fold. The first is to provide equipment, software, and operational help to anyone wanting to become involved in digital communications but having problems or issues. The second was to provide periodic presentations on select digital topics, and to encourage group discussion on digital topics.

In some regards the Digital Special Interest Group is a victim of its own success in that most of the folks in PCARS that are interested have resolved any problems they may have had with digital operations and no longer attend the meetings. We've presented many topics involving digital communications and although the well isn't entirely dry, I hesitate to become repetitive unless there is interest in a specific subject, and that too has resulted in a lot of people no longer attending.

So the question for all of you digital aficionados is what kinds of things you'd like to see the Digital Special Interest Group do or present that would bring you back? Please drop me a line a let me know so we can keep providing you with a forum for all things digital. Thanks!

## Linux for Hams Special Interest Group

**Terry, KB8AMZ**



Hello all and welcome to 2017. The Linux for Hams SIG discussed at our last 2016, November, meeting topics for the upcoming year. A member suggested giving a presentation on the Raspberry Pi since it has become one of the computing platforms that other hams are using to experiment. Discussion followed. It was suggested that a presentation was given on the Raspberry Pi at a club meeting and that overheard responses from some members was bewilderment of what this small PC has to do with Amateur Radio. I suggested that we stay away from any in depth talk about Linux because I gave a presentation in a past meeting the Linux OS and the membership didn't seem to be keen on it. We have a plan to present the Raspberry Pi from concept to its current use. I have contacted our club Vice President, Jim Wilson for a tentative presentation in March 2017.

Thanks to Parky, I am in contact with another ham running a SIG similar to our SIG from another club in Arizona (note: he's also that club's newsletter editor). We exchange information to our respective club SIG's. Thanks Parky for the insight.

One of the Linux for Hams SIG members has been 'under the weather', Nick, AC8QG. I hope for his speedy recovery and that his prognosis turns out well.



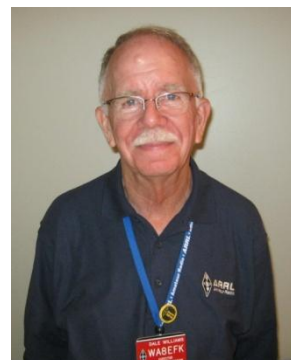
To finalize, the next Linux for Hams SIG will be January 31, 2017 from 1900 to approximately 2100 ET at the PCARS club house. We will be discussing the refurbished PC's scrounged from the club's previous inventory, hardware updates and installation of the Linux OS and the March 2017 club meeting presentation.

Hope to see all interested hams at this SIG. Per usual, any questions pertaining to our SIG may be directed to me, Terry, KB8AMZ via the club email [KB8AMZ@portcars.org](mailto:KB8AMZ@portcars.org) address or my personal email [hooked2u@neo.rr.com](mailto:hooked2u@neo.rr.com) or my co-host Mike, KB8TUY at [KB8TUY@portcars.org](mailto:KB8TUY@portcars.org) . 73, all.



## Dale's Tails

**Dale, WA8EFK**  
ARRL Great Lakes Division Director



"THANK YOU FOR ACTIVATING" are the words I have heard so very frequently during all of 2016. Our National Parks on the Air operating event has been a wonderful activity throughout this year and operators have displayed more courtesy than I can ever recall in the 54 years that I have been a ham. One of our local hams called it to my attention and it certainly is true. While most hams are normally quite courteous, often in contesting and challenging events, those courtesies get set aside. I know I have done that. This event, is different. Folks wait their turn, are complimentary and express their thanks. NEAT! At last count, with still a month remaining, there are more than 926,803 National Park QSOs entered in Logbook of the World. This leaves little doubt we are going to hit a million! What a great event. Thank you for operating! (What's next?)

YOUR ARRL BOARD worked diligently this year to make some significant improvements within our organization, some you may have seen directly, some you may have seen the side effects, while others remain works in progress. We have a new CEO, we have some realignment of Headquarters job duties to spread the workload more evenly, and we have made some technical improvements to Logbook of the World, just to name a few. A couple of wanted and fairly significant changes for the Field Organization are currently being vetted in committee. We hope those will be approved and authorized at the January Board meeting. In addition, and of real import, the ARRL Foundation granted many scholarship awards this year and accepted more scholarship endowments to its list of available programs.

SPEAKING OF AWARDS, now we begin our search for outstanding individual hams who whose talents and/or service to our hobby and the community may qualify them for the unique awards that ARRL has to offer. Awards for your consideration include The Hiram Percy Maxim Award, The ARRL Herb S. Brier Instructor of the Year Award, The ARRL Microwave Development Award, The ARRL Technical Service Award, The ARRL Technical Innovation Award, and The Knight Distinguished Service Award.

Opportunities are now open for members to nominate candidates for these awards. Look around; one of your local club members may be well qualified to be so honored. For further information or questions, you may check the ARRL Web pages for award criteria, or contact Sean Kutzko at Headquarters, (860) 594-0328.

## Hamfest Calendar

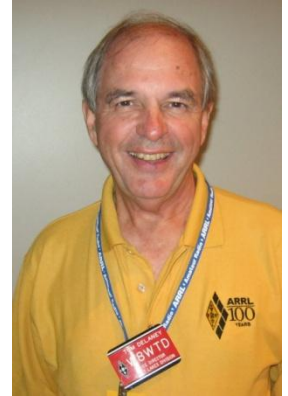
**01/29/2017 - TUSCO Amateur Radio Club** - Location: Wallick Auction Barn - 965 North Wooster Avenue Strasburg, OH 44680 - Website: <http://tuscoarc.org> - Talk-In: 146.730 (PL 71.9) - Public Contact: Janice Green, KB8YDK - 32210 Norris Rd - Tippecanoe, OH 44699 - Phone: 740-922-4454 - Email: [k8wfn@tusco.net](mailto:k8wfn@tusco.net)

**02/19/2017 - Mansfield Mid Winter Hamfest** - Location: Richland County Fairgrounds - 750 North Home Rd - Mansfield, OH 44901 - Website: <http://W8WE.ORG> - Talk-In: 146.94 (PL 71.9) - Public Contact: Danny Bailey, W8DLB - 70 Euclid St. - Shiloh, OH 44878 - Phone: 419-896-2165 - Email: [W8DLB113@gmail.com](mailto:W8DLB113@gmail.com)



## Comments from the Division Vice Director

**Tom, W8WTD**  
ARRL Great Lakes Division Vice Director



I can't help it. Sometimes I find very interesting connections in the most wildly different situations in ham radio.

Let's start with youth. Early in November, we had a great celebration in West Chester, Ohio, for Chris, KD8YVJ, the winner of the 2015 Maxim Award. It was wonderful to have Dale present him with that national award, with so many family members, club members and other hams around. And it was quite special to see what a great operator this young man has become. I'm sure he was pleased to make so many contacts and hear from so many in the division. But for us who were there in the room with him, it was a treat to see him operate.

And another youth story. An eleven-year-old from Ohio just got his license. While not his Elmer by any means, I was pleased to have some small part in coaching him for the test. He's now on the air, and very excited about being a ham.

What motivates these young people to be hams? Having a parent as a ham is a big help, of course. But that's not all there is, or we'd have far more young people clamoring for licenses. What is that unknown factor or factors?

For that matter, what is it about ham radio that motivates those of us who should know better than to stand around in the cold November weather, operating? Recently, I was part of a group that helped coordinate a local parade. There's something about public service that calls us out to help. That same weekend, somewhat on the spur of the moment, I joined some hams I know who were activating one of the National Parks in our area. Why do grown men sit around in a field with a radio and an antenna, trying to do our part to make the NPOTA a one-million-contact event, contributing our measly 120 or so contacts? It was cold and damp, for goodness' sake! (And fun!)

There are many reasons to become a ham, and many more reasons to be an active ham. We older folks know what motivated us, and those aren't the same reasons that motivate the new hams of today. We have to keep finding out what the motivations can be, the new ones and the old ones, so we can tap into that and help keep amateur radio going in its second century.

What thoughts do you have about licensing, education and youth? I'd love to hear from you.

## 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.

[https://www.youtube.com/channel/UCFVsDD\\_gwCLtTw-FPuBcYtA](https://www.youtube.com/channel/UCFVsDD_gwCLtTw-FPuBcYtA)



## Happy Birthday PCARS Members

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

AC8WX	Brian	Ames
KD8VCK	Steve	Beale
KC8BTN	Ronald	Corban
K8EUR	Alex	Dolgosh
N6JRL	Donald	Dubon
K8FS	Michael	Evans
KD8YXH	Roberta	George
N8IL	Neil	Gerren
	Leanne	Gray
WA8OHK	Thomas	Gregory
K8MSH	Mark	Haverstock
WA8OKR	William	Hunt
K8SWJ	Scott	Jones

KD8WGX	Marc	Jones
N8PXW	Jim	Korenz
W8BBQ	Mark	Ludwick
KD8WBC	Don	Manning
KE8BFA	Janice	Miller
KB8SZI	Peggy	Parkinson
KD8SOP	Eddie	Renfro
KE8BMP	Bobby	Spence
KE8EFW	Robert	Sweitzer
	Samuel	Vulgamore
NR8W	Russell	Williams
N1CJW	Christopher	Woolverton
N8GIE	John	Ziccardi

## Dues are Over Due

Please, help keep PCARS going by paying your annual dues on-time. The sooner you get them paid, the easier our Treasurer's job will be.

You can mail in your dues, bring them to a meeting, or better yet - pay **On-Line** using **PayPal**. Yes, we have that option right on the PCARS web site.

You pay a slightly higher amount to cover the PayPal fee, but it's easy and fast. Check out the PCARS web site under the "Club Info" tab.

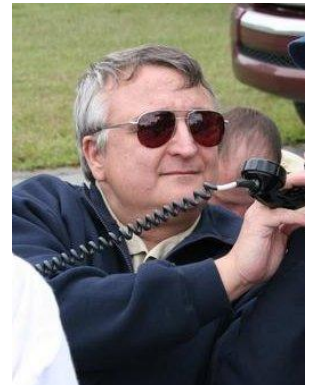


At the end of this newsletter is a dues form please use the form so we have all your correct information on file.



## Dead Electrical Dudes

*Philip, KA4KOE*



### Dead Electrical Dudes 20 and 21 Yagi-Uda Combo Special!



“Honey! Any snow on the TV picture now?”

**Hidetsugu Yagi**

Birth: 28 January 1886

Death: 19 January 1976

“Who Da’ Man? Uda Man!!”

**Shintaro Uda**

Birth Date: 1 June 1896

Death Date: 18 August 1976



How many of you have cursed when the gears of your *Armstrong Super Rotator 2* have ground themselves into smooth metal disks as the large skyhook beam came to a screeching, bank account emptying halt? Or, used a homebrew, handheld beam antenna to hunt down and skin alive an offending barbarian who has the utter gall to interfere with your local repeater group’s weekly “Aches and Pains Net”? Have you decorated your brand-spanking new pick-em-up truck/SUV/POV/VAN/Hummer with a minimum of 10 directional antennas in a holy quest to be anointed the highest-scoring rover in a VHF/UHF contest? By the way (Note: *A good rule of thumb dictates that a rover antenna installation isn’t worthwhile unless your gas mileage is reduced, via increased air drag, a minimum of 34.9%*), if you answer “yes” to one or more of the preceding questions, then the likelihood that a Yagi-Uda antenna was part of the mix is indeed high. If you say “no” to any of the aforementioned questions, then you’re poor, like I am, or don’t get out very often.



Examples of common verbiage when hams refer to their parasitic directional antenna arrays may read something like:

“My Yagi was busted up real bad when the twister went through the back 40 last night!”

“The HOA thinks my Yagi and kids are ugly and will destroy their property values”.

“The XYL says it’s her or the Yagi.”

“I can’t have an effective station without a Yagi on a 150’ tower and a 5 KW equalizer.”

Lots of techo-jargon, slang, and half-truths pertaining to Yagi-Uda antennas are floating out there in the ether. Turn on your radio, spin the dial, and someone, somewhere is bound to be talking about their favorite Yagi-Uda and why it is the best thing since sliced bread. I venture that most never mention, much less know about, Mr. Shintaro Uda. Who in the blazes is Uda? Shintaro’s last name rhymes with “Barracuda”—which can be either a mean, toothy type of carnivorous sea fish or a neat and cool Plymouth from the halcyon years of my golden, lost youth. In order to help the kind reader avoid possible confusion, please note the following figures:



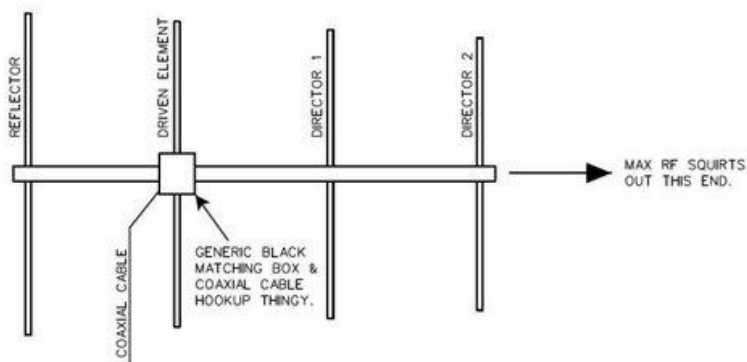
**Figure1**

Yagi-Uda for 160/80/40m belonging to my friend Dave, G0EVY with crane rotor. The massive array is homebrew and tips the scales at over 1000 pounds!



**Figure 2**

1971 Plymouth Hemi-Barracuda.



**Figure 3**

This is how a typical Yagi-Uda sorta looks like from above.

Figure 3 is a generic version of the Yagi-Uda beam. This particular one has one reflector on the left, a driven element where RF is applied, and two directors. For those who are really new at this, you point the end labeled “Forward” towards the station with which you wish to communicate. Finally, regardless of the operating bandwidth, it’s really not a great idea to stand in front of the “Forward” end while the RF is coming out, especially if you are squeezing lots of RF into the sucker from the transmitter. Yeah, I know, it MAY be okay, but once you get into the mid-HF to low-VHF and above range (someone please check me on this), things get dicey. Remember, the first thing to get cooked is the aqueous humor of your eyeballs in a manner similar to boiling an egg. YUCK!!!

The electric field polarization (there is also a magnetic H component oriented 90 degrees catty-wampus to the other field) is which way the elements are oriented in relation to terra firma; horizontal elements = horizontal polarization while vertical elements = vertical polarization. This orientation sometimes doesn’t mean a whole lot since once your “CQ!” bounces off one of those Kennelly-Heaviside layers (er....ionosphere), all bets are off. I think I read somewhere in Terman’s Radio Engineers Handbook (1943) that the reflected polarization is elliptical. I’m not in the mood to look this up at the moment so the possibility exists I’m dead wrong.

There are more variations of the Yagi-Uda beam antenna than Carter has pills. The sizes are dictated by the operating frequency, number of elements, mounting provisions, and desired forward gain. Finally, I am not going to dwell on the dense technical theory pertaining to the Yagi-Uda as that would definitely kill the mood I am trying to create. Search the internet and I am sure you will find something you can build that fits your needs. I can't do all the work on this end! Now that you have a pretty good idea of what a Yagi-Uda antenna looks like, let's get back to my original question of the exact relationship of Mr. Yagi and Mr. Uda. Here is what I have dredged up from the internet. Both worked together at Tohoku Imperial University with regards to the antenna's theoretical background, testing, and publishing of the test results in 1926. Both of their names were also on the documentation. Additionally, an English language article was published by Yagi in 1928. Somehow, Uda's name was, for some reason, omitted in the translation. Perhaps this is why English readers only knew about the antenna by the name at the top of the article.

The outbreak of the Second World War wasn't that far away when the inventors' paper was published. This following is likely apocryphal and I am unable to verify it's veracity: the Allies and Germans all used the Yagi-Uda antenna for various communications devices and weapons systems. The Imperial Japanese High Command was unaware of the antenna's very existence until some Allied communications equipment was captured. One of the antennas was weird looking and had the word "YAGI" engraved on one of the elements: an "AHA" moment followed. Interesting!

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Reprinted with permission from Philip Neidlinger, KA4KOE - Well, that about wraps up this combo special. I hope you have enjoyed this essay and motivate you to do some research on your own. If you find any blatant errors, then please be kind in any subsequent criticism. *AUTHOR'S DISCLAIMER: As eleven (11) years have passed since I last besmirched the memory of a Dude, I expect to be cut a lot of slack from you boys and girls with respect to the quality of this essay. I'm a bit out of practice and may inadvertently inject an occasional comma splice or syntax error. Additionally, I may accidentally convert someone's pet sacred cow into a pile of tasty USDA prime ribeye steaks. If the calls for my lynching do not reach a fever pitch, then I may churn out another inflammatory article in less than eleven years hence.* Now that the preliminaries are out of the way...It's good to be visiting with you again! Some may remember when my 19th and last Dead Electrical Dude, Lev Termen, appeared here on 10 October 2005. A lot has transpired and I shan't bore you with the details. Let's just say I've been busy raising children and keeping the local sheriff from evicting K4SMN and I from the **Neidlinger Estate and Country Club (NEC2)**. Memories tend to be short and I figured it was high time to give my reputation a booster kick back into the gutter where it so deservedly belongs.

## ***DX and Contest Special Interest Group***

***Chuck, W8PT***



Our first meeting of the DX/Contest SIG will take place on January, 24, 2017, at 7PM at our club site. This will be the only meeting before our annual FYAO, and we will be reviewing the rules for our annual QRP event.

For those of you who are interested. I will be at the club site to put K8BF on the air for the North American QSO Party (SSB) that takes place the weekend of January 21-22. This will not be an all out effort, but simply a time to do some contesting. If anyone wants to get their feet wet, let me know and I will make sure that you have a chance to operate under supervision if you have never worked a contest before.

My contesting time at the club site will be limited so I will give more details in a week or two as to when the club will be open.

## Straight Key Night - January 1<sup>st</sup>

This 24-hour event is not a contest; rather it is a day dedicated to celebrating our CW heritage. Participants are encouraged to get on the air and simply make enjoyable, conversational CW QSOs. The use of straight keys or bugs to send CW is preferred. There are no points scored and all who participate are winners. More info: <http://www.arrl.org/straight-key-night>

### On the Air

#### ARRL Straight Key Night (SKN)

January 1 — 0000 through 2359 UTC

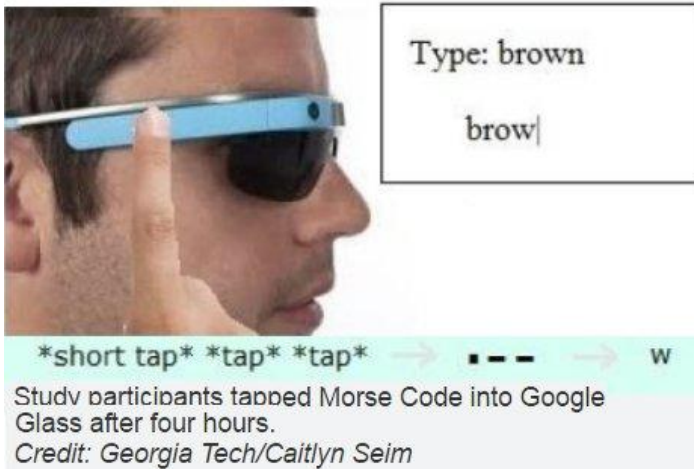
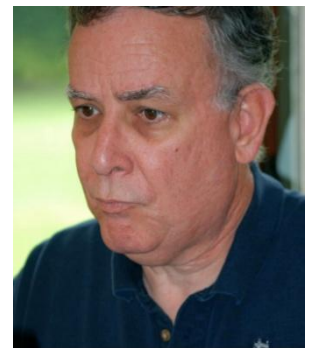
Celebrate Morse code (CW) operating! Make QSOs, not points.



## Learning Morse Code without Trying

**Rick, KD8WCK**

I saw this nugget in the Windmill Data Acquisition newsletter that I get - maybe interesting to hams!



Researchers at the Georgia Institute of Technology have developed a system that teaches people Morse code within four hours using a series of vibrations felt near the ear. Participants wearing Google Glass learned it without paying attention to the signals - they played games while feeling the taps and hearing the corresponding letters. After those few hours, they were 94 percent accurate keying a sentence that included every letter of the alphabet and 98 percent accurate writing codes for every letter.

Source: Georgia Tech <http://www.news.gatech.edu/>

<https://www.sciencedaily.com/releases/2016/10/161028115427.htm>



# PCARS K8BF

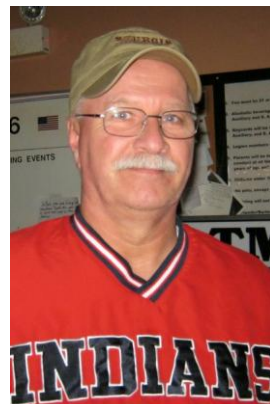
The Club that puts the FUN in Ham Radio!





## Who Says ???

Dave, WB2DFC



So, you have an amateur radio license.. you studied a lot to get that license, right... what did you learn ? Who says it's not valuable..... read on.

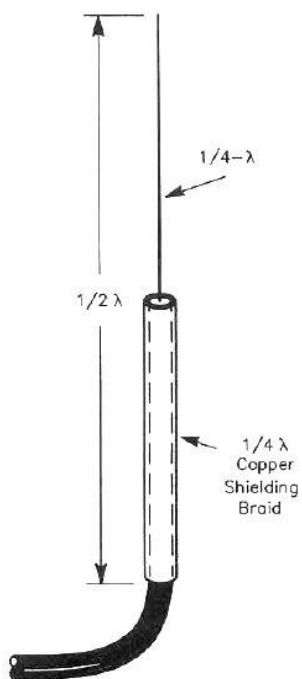
Recently our gate system the police department motor pool malfunctioned. The gate is operated by using a key FOB type actuator... each cruiser and each officer is issued a FOB to enter and exit the motor pool area. The gate FOB would only work if it was within 2 or 3 inches of the controller.

When the gate servicing company arrived to make repairs I was informed an external antenna would improve the range of the FOB devices. So, I asked for a quote to provide an antenna..... I don't even want to tell you the quoted price here.... but lets say the dollar amount would be equal to several weeks, even months of brown bottle beverages for Tom Sly..... (sorry Tom, had to have a valid reference point)



So after the service technician left, I removed the cover on the controller and studied the antenna on the device. It appeared to be about a 12 inch wire mounted to an F style connector. I found a scrap length of RG 59 with an F connector on one end and used that for the feed line and ..... (yes, my amateur radio technical knowledge served me well) ...a vertical coax dipole.

I duplicated the length of the factory antenna by stripping the insulation on the RG59, separating the shield from the center conductor, and taping the shield down the side of the RG 59. All was insulated with quality black tape and then enclosed in a pvc pipe. The pvc antenna was mounted to a post next to the gate operator and connected to the antenna input on the controller.



The FOBs now work from 80 to 100 feet away from gate, which means officers don't need to exit the cruisers to open the gate. (can't let those officers be exposed to inclement weather... hi hi). My "junk box" project really worked out great !!!

So, "Who Says" your amateur radio knowledge isn't valuable.... because it is, be proud of what you know... and put it to good use!

Oh, by the way, I am expecting a major nation prize for my initiative and cost saving solution..... NOT... (hi hi)



All, have a Safe and Happy New Year.... Click it or Ticket !!

## *My Key to a Great Christmas*

**Terry, KB8AMZ**

I ordered the Kent Morse SK1 to complement my Kent Morse Iambic double paddle. I work QRP CW mostly. As long as I receive an RST of 569 I can typically send at a faster clip; anything lower and I have slow way down.



For ruff (CW for rough) conditions it's better to send using a straight key, in my opinion, than and iambic key. Although my \$10 Radio Shack key, circa 1986, still works it is not as smooth as the Kent Morse key.

So, I've been waiting since November 29<sup>th</sup> for this package to arrive. It left Kent Morse on December 16<sup>th</sup> and sat at the Frankfurt, Germany airport for about 4 days before arriving in the USA.

Finally the package arrived. I immediately opened the box and snapped a couple of pictures. Here they are.

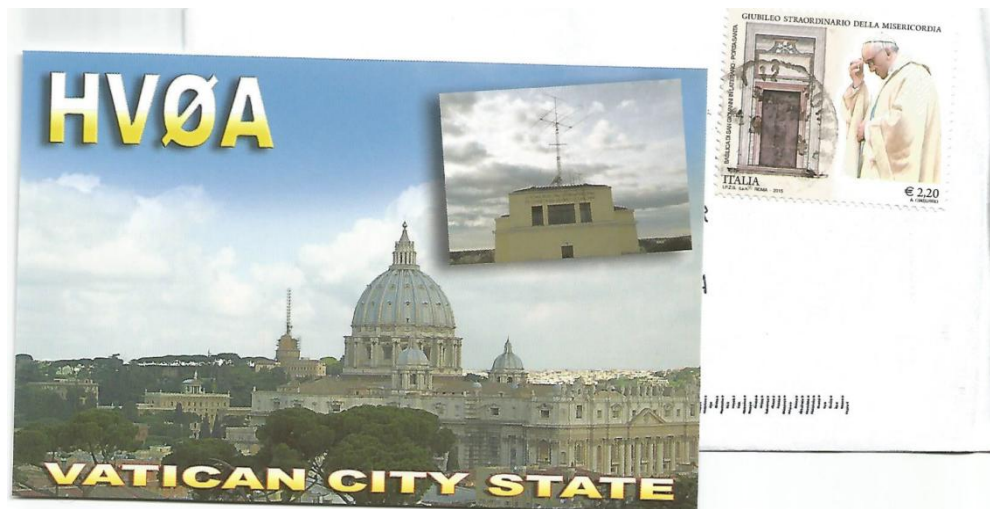
Now I have a proper straight key for the ARRL Straight Key Event on January 1, 2017.



## *My Christmas (QSL) Card from The Vatican*

**Joe, W8KNO**

What a nice Christmas (QSL) Card that I received from the Vatican.



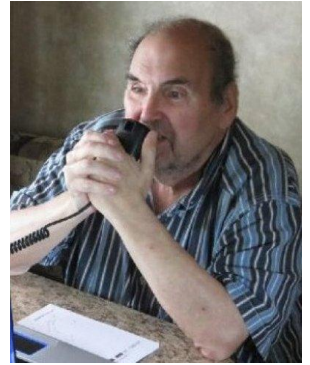


## Santa Found My Old Radio

**Chuck, K8BBE**

Greetings and hope all will be safe over New Years...

For Christmas, Santa was really nice to me. I got an MFJ-998 Automatic Antenna tuner for the HF, and an old, New Polycomm 6 meter AM transceiver with a 50.4 rock. I had one exactly like this one back in 1970 and used it mobile till someone thought it was a fancy CB set and borrowed it.



I found this one on Ebay and the XYL bought it for me.

I also got the six meter MFJ 906 tuner to match the antenna. Santa was really nice this year.

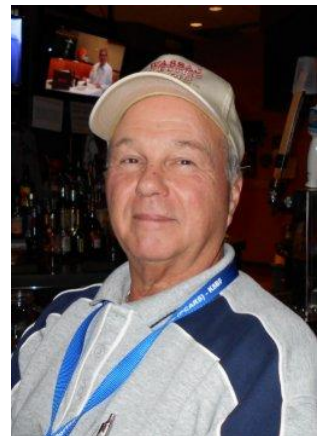


Have a GREAT New Year

## A Very Merry Christmas

**Jeff, WA8SAJ**

Well, I don't have pics of me, but I bought a new Icom IC-7300 & NCC-2 from DX Engineering thanks to Santa and they both work great!



The NCC-2 works with the Main Antennas, plus Magnetic Loop & long wire up in the attic for sense antennas.

Happy New Year & 73



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





## 2nd Annual Ohio ARES® VHF Simplex Contest

**Scott Yonally, N8SY**  
ARRL Ohio Section Manager



**he Second Annual Ohio ARES® VHF Simplex Contest! January 14, 2017**



After a lot of requests, we are opening this up to 6 meters as a part of your score as well! There is a lot of potential for wide-area coverage on that band, and we need to cultivate some interest- so, for the sixers out there, burn eggs on your beam!!

### **Some questions, and answers:**

- On the bonus situations, the EOC bonus is exactly what it says-operation must be from an EOC, not a nearby trailer or remote location. EOC ops, add 50 points to your total contact score. Operation from any portable location (trailer, tent, park bench, igloo) is 100 points added to your total contact score. Contact an ARES® officer of any type, add 5 points to that contact (in other words, if your contact says he's an EC, it's worth 6 points.)
- On digital. All modes are open, we've had some questions as to 'which' mode. Any of the modes commonly accepted for NBEMS work!
- Frequencies haven't been mentioned. Grab any you like- if your district has a prescribed simplex frequency, try that first. Anything except a repeater. Make sure you get the county or location of your contact- the whole point is to be able to plot your best coverage area. Look for 'real' signal reports.
- You know what? If you get bored and want to fry some eggs on your six-meter antennas, go for it. DO INCLUDE your six contacts in your score!
- HAVE FUN!

### **Here are the rules again!**

**Purpose:** ARES® is tasked with being able to provide communications "When all else fails." Local communication is critical and typically takes place on the VHF or UHF amateur band. In order to improve our ability to perform on these bands, Ohio Section ARES® is sponsoring the ARES® VHF Contest (Yeah, we know, but calling it the Ohio VHF / UHF Contest got a little long-winded). Participants in the contest are encouraged to make as many contacts as possible within the time-frame of the contest, with as many different geographical locations as the bands permit. The contest is open to all amateur operators, ARES® members are strongly encouraged to participate.

**Date:** The contest is January 14, 2017. The start time is 10 AM through 6 PM Eastern.

**Where are you going to be?** You may operate this contest from anywhere. There are certain benefits for venturing out from your warm, comfortable home station. EOC stations can gain extra points. Portable stations can gain even MORE extra points – that is, if your frozen fingers will still be able to operate a keyboard. Portable stations MUST use portable antennas, nothing permanently attached... kind of like Field Day on ice.

We are not going with any mobile operation this time. The image of a bunch of vehicles running around with portable towers, 150 pounds of antenna hardware and an occasional grounding anchor is best left to the ARRL contesters.

**Bands-Modes:** Because local emergency communication takes place primarily on the two meter and 70 centimeter bands, the contest is limited to those two bands plus 6 meters! Within each band, we will have these modes: FM Simplex, “Everything else” Simplex; DIGITAL simplex contacts will make up a third mode on each band. Contacts with a station count once per mode- if you can talk the other guy into abandoning “his frequency” and meeting you on SSB or CW, more power to you! **NO REPEATER CONTACTS WILL COUNT.** If you get bored, you certainly are welcome to chat amongst yourselves on repeaters, or simplex, or cell phones.

**Contacts:** The goal is to contact as many different stations in as many different counties as possible. You can make as many overall contacts as you like, they will then be multiplied by the number of counties you’ve reached. Extra points will be available for contacting an EC, AEC, DEC, ADEC, ASEC or SEC.

**Score:** Each FM Simplex contact counts as 1 point. Each non- FM simplex contact counts as 1 point. Each digital simplex contact counts as 1 point. (Detect a pattern here?) Contact with EC, AEC, DEC, ADEC, ASEC or SEC adds 5 points. Contact with an EOC or with a portable station adds 5 points. Operation from an EOC add 50 points to your total contact score. Operation from a portable location add 100 points to your total contact score. Total contact score (all bands/modes added together) will be multiplied by the total number of counties you contacted.

**Logs:** Please use any of the appropriate computer logging programs or paper dupe sheets. Just keep all that to yourself, we can’t find anyone with the time to go through all the details and contacts. Submit an email to: [contest@delares.org](mailto:contest@delares.org) with the following:

Your name:  
Group name:  
Location: (City, county)  
FM Simplex Contacts:  
“Everything else” Simplex Contacts:  
Digital Simplex Contacts:  
EOC bonus:  
Portable bonus:  
Total Contact Score (Add above together, but you figured that out already):  
Multiply by total number of counties contacted (include your own!):

#### Definition of acronyms..

EOC = Emergency Operations Center  
ARES® = Amateur Radio Emergency Service®  
SEC = Section Emergency Coordinator  
DEC = District Emergency Coordinator  
EC = Emergency Coordinator  
CW = Continuous Wave  
FM = Frequency Modulation

NBEMS = Narrow Band Emergency Messaging System  
SM = Section Manager  
ASEC = Assistant Section Emergency Coordinator  
ADEC = Assistant District Emergency Coordinator  
AEC = Assistant Emergency Coordinator  
SSB = Single-Side Band

ARRL—The national association for AMATEUR RADIO™  
225 Main Street  
Newington, Connecticut 06111 -1494 USA  
860-594-0200

[www.arrl.org](http://www.arrl.org)

## Swap-N-Shop

**FOR SALE: Cameleon Magnetic Loop** - F-Loop Antenna - 2.5 to 29.7 MHz. \$300

**WANTED: 500 Hz CW Filter** for Icom 703New

**Contact: Dave, WV8P at [WV8P@roadrunner.com](mailto:WV8P@roadrunner.com)** [2/02/17]

**FOR SALE: Signalink** - New In Box with cable for ICOM Never used \$80.00. **ICOM SM-20** Desk mike \$125.00. **BY-2** Iambic Keyer paddle with chrome base \$80.00 Lets talk.

**Contact: Richard, KA8OAT phone: 330 898 6248** [1/02/17]

**FOR SALE: Energy Concepts 30820D 20 Mhz Analog Oscilloscope** I recently tossed a bid in on what I thought was one 30820D oscilloscope. I had to pick it up in Northern Virginia. It was a lovely drive down and a very scenic drive back. I thought I was fortunate to get one, but imagine my surprise when they handed me five of them. I have three for sale. They are \$75.00 each and come with manuals and probes.

**Contact: Robert, N8RLG by email to: [N8RLG@portcars.org](mailto:N8RLG@portcars.org)** [1/2/17]

**FOR SALE: Base Antennas & Mosley Classic 36 6-element Tri-Bander** There are 2 Commercial Base Station antennas manufactured by **Antenna-Specialists Model: ASP-680** factory tuned for the 2-meter band both just came out of service with mounting clamps and N-connectors on the pigtails. **2 ROHN tower standoffs**, various coax cables, extra antenna clamps for mounting. This entire package and all for a price of \$300 for pickup only in N.E. Ohio (Cleveland area).

**Yaesu FT-60**-\$100      100 **Bird VHF slugs** - \$50 each.      **Antenna Specialist 100 watt mobile amp** - \$100

**Contact: Jeff, WA8SAJ by phone at 440-951-6406** [3/02/17]

**FOR SALE: Cushcraft 3- element Mono-band 10 meter Yagi:** New \$ 289.95, will sell for \$ 125.00.

**M2 - 6M5XHP, 6 Meter Yagi 5-element** 18 ft boom: New \$ 419.95, will sell for \$ 125.00

**Contact: Ed, K8IV by e-mail at [K8IV@portcars.org](mailto:K8IV@portcars.org)** [2/02/17]

**FOR SALE: Cushcraft Model XM-520** 20 Meter 5 El Beam \$200      **Yaesu FT-757GX-II** HF Radio \$250

**Kenwood SP-430** Speaker \$25

**Nye Viking, MBI-001** Tuner \$100

**Sencore TF151**, Transistor tester \$15

**Shure model PE515**, Microphone \$15

**Shure model 444D**, Microphone \$15

**AEA model QT-1**, Antenna tuner \$25

**Radio Shack 2 meter HTX-202** \$25

**Astron Power Supply Model RS-20M** \$50

**Heathkit VTVM** Model IM-11 \$25

**Variable Voltage Power Supply** +18 and -18 \$20

**Digital Multimeter** \$15

**Pyramid Power Supply** model PS-25 \$50

Misc tower parts, lots contact me if interested. Will accept all reasonable offers.

**Contact: Al, AB8AA at 330-207-3296 or [ab8aa@arrl.net](mailto:ab8aa@arrl.net)** [3/02/17]

**FREE TO A GOOD HOME:** The following **QST Magazines** (good condition). Thanks to the magic of downloadable archives, I'm getting rid of a ton of old QST's that I've hung on to over the years.

June-Dec 1993    Jan-May 1996    All of the following years: 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

**Contact: Deron, N8XTH at [N8XTH@portcars.org](mailto:N8XTH@portcars.org)** [3/02/17]







## PCARS Members - Amateur 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 club station.

We have 54 plates now, but we can use more. Don't have ham radio call plates on your vehicle? Well for those of you in Ohio, you can get the plates sent to you by going to any License Bureau office and filling out the special plate registration form. Have a copy of your current FCC license when you apply. The official form to obtain your Ohio Amateur Radio license plates is on the [PCARS Yahoo Group](#) site. Then you'll have an old plate to bring in to get hung up as a **permanent part of PCARS history**.

### From the Ohio BMV:

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

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

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

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

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

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

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

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

## PCARS 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/>

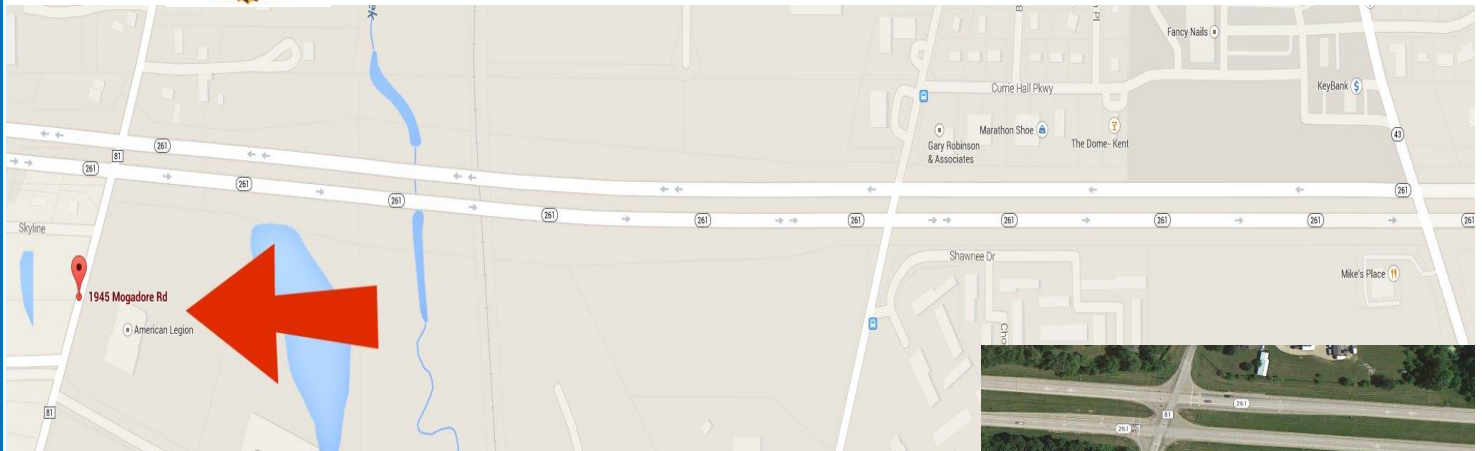


# PCARS Meetings

The Portage County Amateur Radio Service (PCARS) meetings are held the **2<sup>nd</sup> 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.



*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.

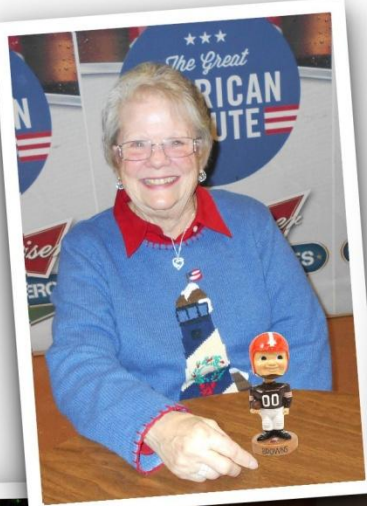
If you are a member of the The American Legion, The American Legion Auxiliary, or the Sons of The American Legion, bring your ID card as you get a substantial discount on adult beverage pricing.



## Photos from the December PCARS Meeting













## Important Dates This Month

### Sun 1st Jan, 2017 - Bloody Mary Day

Bloody Mary Day celebrates the drinking of the Bloody Mary cocktail, which is described by some as the perfect hangover cure despite containing the very thing that made you hung over in the first place: alcohol! The Bloody Mary is most often made with vodka, tomato juice and some spices, served on the rocks with a celery stalk or a dill pickle.

**The History of Bloody Mary Day:** The origin of Bloody Mary Day is as shrouded in mystery and intrigue as the history of the drink itself. Even the name is quite enigmatic, with various scholars suggesting it was named after Queen Mary I of England, Hollywood star Mary Pickford, or even a waitress named Mary who worked at the Bucket of Blood bar in Chicago all given as possible namesakes.

**How to Celebrate Bloody Mary Day:** The best and easiest way to celebrate Bloody Mary Day is by inviting some friends over to mix up and then enjoy a Bloody Mary or two. Or three. If you've never tried one before, and the idea of combining tomato juice with vodka just doesn't sound particularly appetizing to you, this is the time to do it—there is a good reason why this is one of the most famous and popular drinks the world over, find out for yourself what it is!

Classic Bloody Mary recipe: (serves 2)

- 2 lime wedges
- 4 oz high quality vodka
- 8 oz Tomato juice
- 4 dashes Tabasco Sauce
- 4 dashes Worcestershire sauce
- 2 pinches celery salt
- 2 pinches ground black pepper
- 2 pinches smoked paprika



Put a little celery salt onto a small plate. Rub the juicy side of a lime wedge along the lip of a pint glass. Then, roll the outer edge of the glass in celery salt to coat it; repeat with the second glass. Put some ice cubes in both glasses and set aside. Put the lime wedges into a shaker and add the remaining ingredients. Shake gently several times, then strain into the prepared glasses. Garnish with a celery stalk and the leftover 2 lime wedges.

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### Mon 2nd Jan, 2017 - Buffet Day

Everybody loves a buffet, so imagine having a whole day dedicated to one! Buffet Day is about hosting or attending a buffet of epic proportions—enjoy a table spread with enough food to keep you full for a whole day, and interesting enough to make eating all day fun and exciting!

**The History of Buffet Day:** The buffet table has its origins in brännvinsbord—a type of schnapps made in 16th century Sweden. The smörgåsbord was a type of “meal” during which guests gathered for a pre-dinner drink and small talk. The smörgåsbord buffet was often held in separate rooms for men and women before the dinner was served. The Smörgåsbord became internationally known as “smorgasbord” at the 1939 New York World’s Fair exhibition when the Swedes taking part in the exhibition had to invent a new way of showcasing the best dishes of the Swedish cuisine to large numbers of visitors. The term “buffet” itself originally referred to a type of





French sideboard furniture where the food was served but became popular in the English-speaking world in the second half of the 20th century after the Swedes had popularized the smorgasbord in New York, probably because it was considerably easier to pronounce and remember.

**How to Celebrate Buffet Day:** The way you celebrate Buffet Day depends on where you are and what your preferences are. If you happen to be anywhere near Nevada, it would be an unforgettable experience to visit one of Las Vegas' famous all-you-can-eat buffets. The Carnival World Buffet offers more than 300 dishes (!) and more than 70 varieties of homemade pies, cakes, and pastries all made from scratch. For \$24, you can get into Carnival World and stay all day, tasting the extremely wide variety of foods on offer all throughout it. If you're a fan of seafood, you could visit The Village Seafood Buffet, that features all of your seafood favorites such as lobster, snow crab legs, shrimp, freshly shucked oysters, sushi and many other mouthwatering seafood dishes. Lago Buffet at Caesars Palace is another absolute must for anyone who truly loves food, especially in such enormous quantities. Featuring fresh ingredients and many made-to-order specialties, the Lago Buffet offers a world-class selection of Asian fare, herb-roasted poultry and sauteed pasta. And, don't forget the Golden Coral

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### **Mon 9th Jan, 2017 - Static Electricity Day**

It's the bane of wool wearers, and the champion of older brothers. Static electricity has been experienced by all of us, whether we're simply grabbing a door handle on a cool dry day, or experiencing the magnificence of natural lightning. Whether you got it from walking across a carpet in wool socks or from petting your friendly purr-box kitten, static electricity has occasionally added a little spark to your day.



**History of Static Electricity Day:** The origin of static electricity has long been a mystery of youth. We knew enough about how it worked to generate it on demand, given the right materials, but not quite enough to truly explain how it worked. It just did. Let the mystery be unraveled! Static electricity is formed when two insulators are rubbed together, generating a static field of imbalanced positive and negatively charged ions. When the now charged insulators come into contact with a conductor (like metal, for instance) the charge is released. And this is why you get shocked when you grab a door-handle after crossing a room in wool socks! Air that is drier is far better for generating static electricity than humid air, hence why you tend to experience this phenomena more in winter than you do in summer. Static Electricity Day is your opportunity to really embrace this, and learn a bit more about it. For good or ill.

**How to Celebrate Static Electricity Day:** Celebrating Static Electricity Day is simple and fun! You can choose to be the imp of the perverse to your friends and family, or you can turn your attention to helping everyone avoid this sometimes unpleasant phenomena. If you're looking to be the deliverer of the micro-shock, then it's time to choose your weapons. Dress in synthetic clothes, ensure that your shoes are made with rubber soles, don't put on moisturizer, helping to provide a dry environment for the static to build, and stay out of contact with metals until you're ready to strike. All of these will help you build up a charge to employ against your victims. However, if you wish to be the angel of insulation, then advise your friends and family that leather soles are the appropriate choice to reduce static. Add in the aforementioned moisturizer, and natural fibers (except wool!) to help prevent static build-up. Most of all, let them know that keeping their hands on keys or a metal pen will help to painlessly release the static charge throughout the day, rather than letting it build up for a painful shock.

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## Wed 11th Jan, 2017 - Learn Your Name In Morse Code Day

Morse Code was one of the most important innovations of communications the world has seen, serving as the foundation of one of the first high-speed communications networks in the world. Used for everything from semaphore communication, to flashing with lights, to drawing it out as a sort of code, and most importantly, the use of telegraphs to help transmit information across vast distances in the days before the telephone, it's hard to understate the importance of Morse Code.

A a	·—	J j	·— — —	S s	···
B b	—···	K k	—·—	T t	—
C c	—·—·	L l	·—··	U u	··—
D d	—··	M m	— —	V v	···—
E e	·	N n	—·	W w	·— —
F f	··—·	O o	— — —	X x	—··—
G g	— — ·	P p	·— — ·	Y y	—·— —
H h	····	Q q	— — · —	Z z	— — ··
I i	··	R r	·— ·		

**History of Learn Your Name In Morse Code Day:** Morse Code is attributed to three different inventors, Samuel F. B. Morse, Physicist Joseph Henry, and Alfred Vail, who all worked together to produce a system of transmitting information via Electric Telegraph. As the only way they were able to transmit information was in electric pulses, there was a lot of consideration that went into deciding exactly how it was all going to play out.

The result was Morse Code, and it was intended to be a lot more efficient than it became at the time. There was a system developed in 1841 that would have allowed for Morse Code to be translated directly into letters at the receiving end, but oddly this system never caught on.

Learn Your Name In Morse Code Day was created by someone known only as Brownielocks, and was done as part of trying to revitalize the love and recognition of this fading method of communication. While it's no longer necessary to getting a Ham Radio License, it is still felt that it's incredibly important to pass on, so that this versatile method of communication doesn't disappear.

**How to Celebrate Learn Your Name In Morse Code Day:** Celebrating Learn Your Name In Morse Code Day is right there in the name! Learn your name in Morse Code! This can serve as an excellent way to reintroduce yourself to the language, and help add it to the number of ways you can share information with your friends and loved ones. Even across vast distances you can exchange information with nothing more complicated than a flashlight, a mirror, or any device that can make sounds of varying duration to mimic the long and short pulses used in the Morse Code alphabet.

Never underestimate the value of having one more piece of communication in your tool kit, and let Learn Your Name In Mores Code Day broaden your linguistic horizons! We'd never be where we are today without it!

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## Mon 16th Jan, 2017 - Nothing Day

Nothing Day has been commemorated since 1973. The day is literally about doing nothing at all, placing it in a similar vein to other such surreal non-occasions as an Un-Birthday or Buy Nothing Day. There is absolutely no purpose or intended structure for this pointless celebration.

The day was first proposed by the late American newspaper columnist Harold Coffin. Nothing Day was founded with the intent of eventual self-destruction, through satirically reigning in what Coffin considered a glut of recently established, useless commemorative days. Coffin's Nothing Organisation was simultaneously formed in order to raise awareness. Fittingly, the organisation has not yet held a single meeting. The continued official celebrations stand testament to Coffin's ultimate failure.



As it is all about expending no effort on celebrating absolutely nothing, Nothing Day can also be about celebrating life itself. The only limits on how the day is spent are the imagination and bank balance of the participant.

The day also raises some very interesting questions on a philosophical level. Can something worthwhile truly spring from nothing? Depending on your perspective, Coffin could either have been a latter-day David Hume or a quotable newspaper columnist slightly too clever for his own good.

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### Sat 21st Jan, 2017 - Squirrel Appreciation Day

Red, grey or even **black**, what's your favorite color of squirrel? Squirrel Appreciation Day reminds us to enjoy these nut-burying, scampering animals respectfully and with consideration. Why not visit your local park and spot some squirrels?



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### Tue 24th Jan, 2017 - Beer Can Appreciation Day

Beer, we're all familiar with it. There are advertisements for it on TV, it's a hallmark of gatherings on the tailgate and the quintessential go to for after-work relaxation. With its ancient heritage and pedigree, beer has been produced, sold, and bottled by cultures all over the world since time out of mind. During that time, different methods of bottling it have been discovered, and making each vintage stand out from the rest has been paramount. Beer Can Appreciation Day is here to remind you of the artistry and talent that goes into those simple aluminum cans that hold this precious elixir of life.



**History of Beer Can Appreciation Day:** Beer has been one of the staples of health and diet for thousands of years, and there are those who say that access to Beer is one of the reasons that the slaves of Egypt were able to build those huge pyramids. The ability to preserve calories and not rot cannot be underestimated! While back then the beverage was held in clay vessels, the container of choice today is the aluminum can. This tradition was first started in 1935, and on the heels of it came a never ending parade of varieties of labelling.

From the serious to the comical, there's no limit to what a label might contain. Beer can collectors all over the world have built sizable collections demonstrating the length and scope of artistic talent of beer can designers all over the world. It's not just the art either! The technical innovations that have changed over the ages are also appreciated, from the first cans that had to be opened with a church key to modern cans that can be popped with just a pull of the thumb. That delightful hiss is always there to herald in the beginning of a great afternoon.

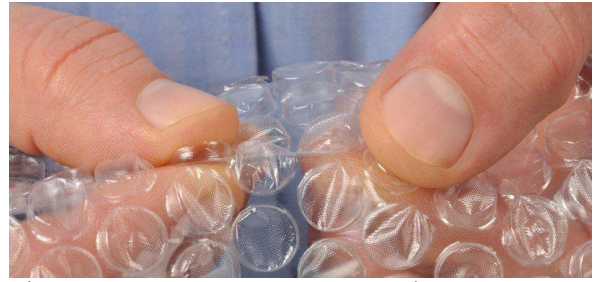
**How to Celebrate Beer Can Appreciation Day:** Your appreciation can start simple with a visit to your local grocery store. Beer of all varieties can be found on every shelf, and a close look will tell you that labelling is serious business. Beer cans come in every variety you can imagine, including those put out by bands. One particularly iconic beer label is for Iron Maiden beer, which contains the iconic mascot of the band, Evil Eddie! For some real variety, you can go to a collectors convention or even just pop over to a proper alcohol dealer to really get a spread. Once you finish admiring the can, pop it open and enjoy the frothy brew inside!

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## Mon 30th Jan, 2017 - Bubble Wrap Appreciation Day

Bubble Wrap appreciation day is one of the most unnecessary holidays we can imagine! I mean, who needs help appreciating Bubble Wrap? It's a fantastic and fun toy that was created by accident, solely for the purpose of preserving delicate items through shipping. From there it's become a therapeutic bonus prize in every shipping container, loved by men, women, children, and animals alike! If you've never had a piece of Bubble Wrap in your hands and just HAD to start popping it? We're not sure we want to know you.



**History of Bubble Wrap Appreciation Day:** Ok, ok... So it's not INTENTIONALLY a toy, but the truth behind Bubble Wrap is perhaps even stranger. You see, Bubble Wrap was originally formed from two shower curtains being sealed together, and the inventors tried to market this as wallpaper. It's perhaps sad that this wasn't actually successful, who knows how many cases of extreme anxiety could have been solved if all you had to do was pound your walls for a little relief? Ironically, this wasn't the only misstep on its way to its true calling, the next thing they tried to market it as was greenhouse insulation, which was also largely unsuccessful. A year later they discovered its perfect purpose, and the line of Bubble Wrap brand packaging came to pass. It started off on an auspicious path with IBM being the first customer, shipping the IBM 1401 in air cushioned comfort out to its many customers. Each year Bubble Wrap hosts a 'Young Inventor' award that encourages them to find ways to use Bubble Wrap outside of packaging. Whether you need a Bubble Wrap door cover to help you keep out the dings, or a Bubble Wrap cushy wheelchair to ensure your loved ones are safe from every danger, these young inventors work every year to try to create the newest Bubble Wrap rage.

**How to Celebrate Bubble Wrap Appreciation Day:** Bubble Wrap appreciation day can best be spent by taking a big old roll of Bubble Wrap and popping every single bubble in the sheet. Share these with your friends and family who need a bit of stress relief, and then share another sheet with them, popping away. One of our favorite ways to destress with Bubble Wrap is to take it and roll it in a tube, grab both ends of it, and twist as hard as we can, causing a torrent of pops to come forth. Maybe you can even spend the rest of the day coming up with new uses for Bubble Wrap yourself!

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## Thanks & 73

**Tom "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 will be known as the **BIG FUN** amateur radio club with plenty of activities to report on in this newsletter all throughout 2017 and beyond.



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

**K8CAV, AC8NT, KB8UUZ, WB8LCD, W8PT, Leah Burrows, N8RLG, K3LR, KC8PD, KB8AMZ, WA8EFK, W8WTD, KA4KOE, KD8WCK, WB2DFC, W8KNO, K8BBE, WA8SAJ, N8SY, The ARRL and the World Wide Web.**

With *your* continued help – we can keep making this a *great* newsletter.

## Winter Sale Day at **DX** Engineering

Our friends at **DX** Engineering in Tallmadge, Ohio are having a “Winter Sale Day” on January 21<sup>st</sup> from 9 am until 5 pm.

Why not stop in and say hello to the folks at **DX** Engineering who support the Portage County Amateur Radio Service.

You may also find some bargain items that need a home in your radio room!

PS: of the eight people in this picture, can you spot the five PCARS members? One is in there twice.

Upper Left: KB8UHN  
Center: N8QE  
Right: W8EZT, KB8UHN, W5OV  
Big Picture: W8BBQ

## Winter Sale Day

Inside the Summit Racing Retail Store



Shake off the cold weather and make some eyeball QSOs at DX Engineering's Retail Showroom. We'll open up our warehouse, so you can get super deals on open-box gear. Plus, we'll have several radios hooked up and ready for you to try on the air.

Got tech questions? Our staff will be on-hand ready to offer advice and suggestions. This is the perfect time to resolve a nagging station issue.

Winter Sale Day at DX Engineering, learn more at [DXEngineering.com](http://DXEngineering.com).

# **DX** ENGINEERING®

Check in at the N8DXE Repeater, 146.985 MHz, no PL.



# Portage County Amateur Radio Service, Inc. (PCARS)

Membership Application [ ] New [ ] Renewal

Name: \_\_\_\_\_ Call Sign: \_\_\_\_\_ License Class: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Phone: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

ARRL Member? [ ] Yes [ ] No ARRL Membership Expires Month: \_\_\_\_\_ Year: \_\_\_\_\_

Birthday: Month: \_\_\_\_\_ Day: \_\_\_\_\_ (don't need year)

**A \$5.00 initiation fee will be assessed in the first year of membership for all new members.**

**Membership year is Jan 1 - Dec 31. Dues are due no later than Jan 31st. If you don't pay by 1/31 - you are no longer a member and you will have to pay the \$5.00 fee again plus dues per the schedule below.**

Dues are as follows: Example - Regular Member Pays on Jan 1st \$20 for entire year. If paid on June 1st, \$15 for entire year, etc.

## Check One

## Dues Amounts

<input type="checkbox"/>	Regular Full Membership	Pay January 1 through May 31= \$20.00 (full year) Pay June 1 through August 31 = \$15.00 (last 7 months)
<input type="checkbox"/>	Associate Membership	Pay September 1 through November 30 = \$10.00 (last 4 months) Pay December 1 through December 31 = \$5.00 (last month)
<input type="checkbox"/>	Regular Senior Full Membership (65+)	Pay January 1 through May 31= \$16.00 (full year) Pay June 1 through August 31 = \$12.00 (last 7 months)
<input type="checkbox"/>	Associate Senior Membership (65+)	Pay September 1 through November 30 = \$8.00 (last 4 months) Pay December 1 through December 31 = \$4.00 (last month)
<input type="checkbox"/>	Family* Member	Pay January 1 through May 31= \$10.00 (full year) Pay June 1 through August 31 = \$8.00 (last 7 months)
	Call Sign of Regular Member:	Pay September 1 through November 30 = \$5.00 (last 4 months) Pay December 1 through December 31 = \$3.00 (last month)

(\*Family = wife, husband, brother, sister, son, daughter, father, mother that is a licensed amateur radio operator and who's FCC license has the same address as the paid regular member's FCC license)

Checks can be made out to either "PCARS" - or - "Portage County Amateur Radio Service, Inc."

What are **YOUR** Ham Radio interests:

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Mail to: Portage County Amateur Radio Service, Inc.  
c/o: Mark Haverstock, K8MSH  
6835 Colleen Dr.  
Youngstown, OH 44512

Date Received:	<input type="radio"/> New	<input type="radio"/> Renew	
Initiation Fee: \$	+	Dues: \$ = Total \$	
Paid: <input type="radio"/> Cash	-or-	<input type="radio"/> Check	Check #
Date Voted:	Results:	Member Number:	
<input type="radio"/> Database Updated			

Rev. 15 Jan 2015



# ~ Amateur Radio Instruction Class ~

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

is sponsoring an Amateur Radio **Technician** course

that will enable *You* to obtain  
**Your FCC Technician** license as an

# AMATEUR RADIO OPERATOR



**When:** Wednesday evening 7:00 p.m. – 9:00 p.m.  
January 11, 2017 through March 1, 2017  
8 weeks. Official Amateur Radio License testing will be held  
at the end of the course

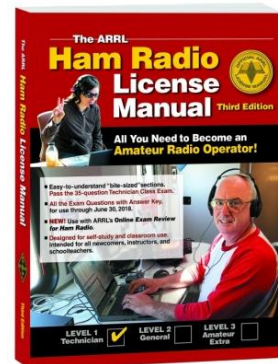
**Where:** At the **PCARS Club Site**  
Radio Room located in the  
Dietrich Building  
705 Oakwood St. in Ravenna



**Registration:** First night of class

**Cost:** **\$25.00 Registration fee** - which also provides the attendee a One-Year Membership in PCARS (No Registration Fee for PCARS Members)  
**\$30 Text – “Ham Radio License Manual”** (text may be purchased first night of class)

**Information:** Contact Jim Wilson, AC8NT  
e-mail at: [AC8NT@portcars.org](mailto:AC8NT@portcars.org)  
phone at: 330-342-8149



As a licensed **Amateur Radio Operator** you will be able to

- **Contact other ham radio operators in the area and around the world**
- **Serve your community – ham radio operators are the critical communication link during disasters and emergencies**
- **Participate in a fascinating and rewarding hobby**

For more information about PCARS, go to [www.portcars.org](http://www.portcars.org) or contact

**Jim Wilson - AC8NT**, at **AC8NT@portcars.org** or by phone at **330-342-8149**

# Portage County Amateur Radio Service, Inc.



## PCARS - K8BF

### Twelfth Annual

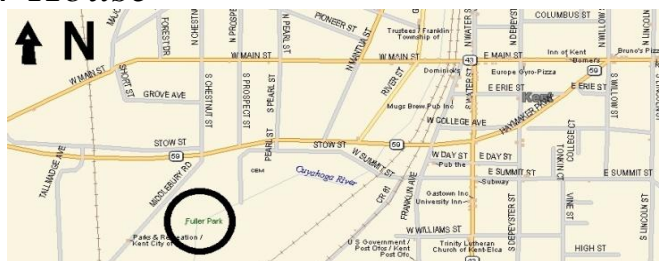
### "Freeze Your Acorn Off" (FYAO) Special Event Station



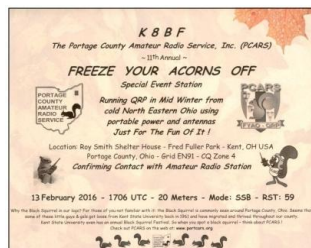
**Where:** Fred Fuller Park - 497 Middlebury Rd., Kent, Oh  
at the Roy Smith Shelter House

**When:** Saturday - Feb. 11, 2017  
Set up: 9am

**Operating Time:** 10am - 4pm EST



We will be active on CW, Digital & Phone in the 10, 15, 20, 40 and 80 meter bands (Repeater & Echolink on the K8SRR echo link node for a certificate) and anything else we can get working. Club Call Sign **K8BF** for a certificate. Other participating stations will be using their own callsign/FYAO, or calling "CQ FYAO" (only stations at the Freeze Your Acorns Off event should use the /FYAO designator). Yes, we'll be braving the cold snowy weather of North Eastern Ohio to set up QRP stations using portable power and antennas.



A beautiful color (suitable for framing) 8" x 10" certificate is available if you contact K8BF and send your QSL with a large SASE to the club call trustee:  
Bob Hewett, K8FEY - 3670 Sea Ray Cove  
Reminderville, OH 44202

So, from the comfort of your warm radio shack - give us a contact while we're out freezing. We'll need all the contacts we can make to help keep us warm. Your support will be very much appreciated!



Check PCARS out on the web at: [www.portcars.org](http://www.portcars.org)  
Questions? Contact Chuck, W8PT at [W8PT@portcars.org](mailto:W8PT@portcars.org)



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

Meetings: 2<sup>nd</sup> Monday of each month at 7:00 PM

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.

**All are welcome to attend ~ Stop in and say hello!**

PCARS uses the **K8IV** repeater: **146.895 MHz PL 110.9 ~ Rootstown, Oh ~ EchoLink Node: K8SRR**

PCARS thanks **K8IV** for making the repeater available to area hams and for PCARS activities

~ 2017 Officers ~		2017 PCARS Appointments & Committees	
President - Rick Kruis - K8CAV Vice President - Jim Wilson - AC8NT Treasurer - Amy Leggiero - KD8SKL 3 Year Trustee - Robert Gurney - N8RLG 2 Year Trustee - Jim Aylward - KC8PD 1 Year Trustee - Chuck Patellis - W8PT Past President - Tom Sly - WB8LCD	ARRL Awards - DXCC WAS, VUCC, WAC	W8KNO	Joe Wehner
	ARRL Awards - WAS	KB8UUZ	Tom Parkinson
	Club Site Manager/Liaison	KC8PD	Jim Aylward
	Contest Coordinator	W8PT	Chuck Patellis
	EchoLink	K8SRR	Steve Randlett
	Field Day Chairman	W8PT	Chuck Patellis
	FYAO Chairman	W8PT	Chuck Patellis
	Historian	KB8SZI	Peggy Parkinson
	K8BF Callsign Trustee	K8FEY	Bob Hewett
	K8BF QSL Manager	K8FEY	Bob Hewett
	Membership Chairman	KC8PD	Jim Aylward
	Net Control Manager	WB8LCD	Tom Sly
	Net Night - Club Manager	WB8LCD	Tom Sly
~ Meetings & Net ~		Newsletter Editor	KB8UUZ Tom Parkinson
2 <sup>nd</sup> 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	K8MSH	Mark Haverstock
	Tech, Gen & Extra Class Manager	AC8NT	Jim Wilson
	Volunteer Examiner Liaison	N8RLG	Robert Gurney
	Webmaster	KD8MQ	John Myers

PCARS Incorporated  
Nov. 1, 2005

First Meeting  
Nov. 14, 2005



ARRL Affiliated  
April 20, 2006



Special Service Club  
March 22, 2010

  <b>PCARS Active Volunteer Examiner Team Members</b>	KC8PD	Jim Aylward
	KB8UUZ	Tom Parkinson
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## THE RADIOGRAM

The **RADIOGRAM** is the official **Award Winning** (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.) newsletter of the Portage County Amateur Radio Service, Inc. (PCARS) – copyright © 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.** 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!**

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NLC

