



The **RADIOGRAM**

When All Else Fails ~ Amateur Radio Works

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

October 2015 - Volume 10 Number 10

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K1ZZ Visits PCARS



OSPOTA 2015 - Great Turnout



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



October 2015
Volume 10 Number 10

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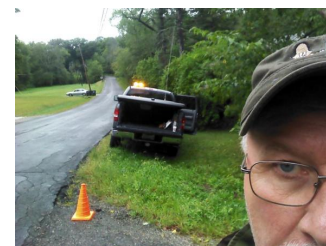
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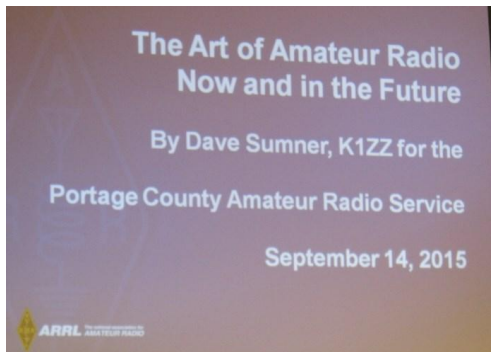


PCARS September Meeting

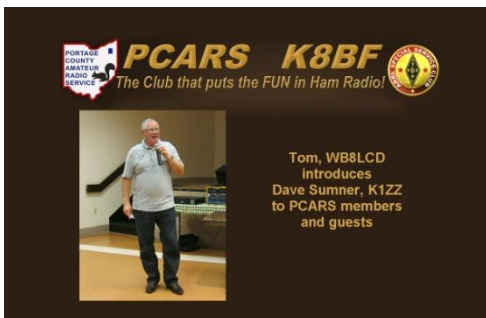
Tom, WB8LCD



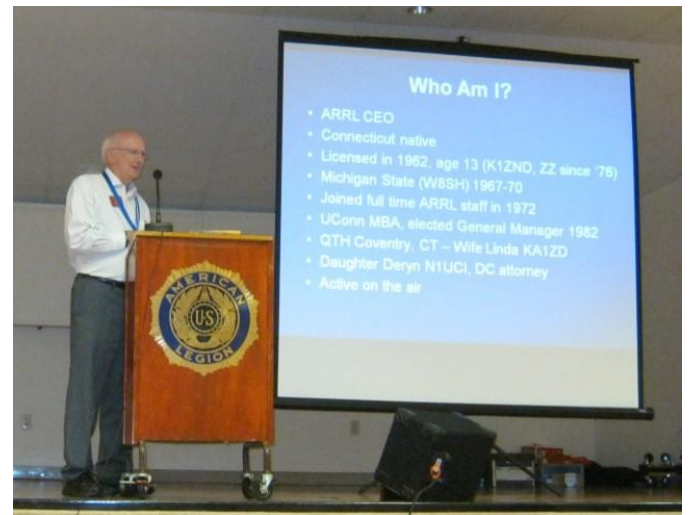
PCARS was especially pleased to welcome Dave Sumner, K1ZZ to our September meeting! Dave has been the CEO of the ARRL since 1982. As CEO, Dave is responsible for successfully enacting the policies of the board.



issues that face us as Amateur Radio operators and how the ARRL is involved in representing our interests. It was a very interesting and informative presentation.



PCARS rented the Underwood Hall at the American Legion post, which turned out to be a very nice venue for an event such as this. Special thanks to Bob, K8FEY for the sound system, and to Parky, KB8UUZ for putting together the video of Dave's presentation. Here's something I've never been able to say before: If you were unable to attend the meeting in person, you can view Dave's presentation on the PCARS YouTube channel at <http://tinyurl.com/pnjapml>. I would encourage you to check it out. Dave discussed many



Once you look at Dave's presentation, perhaps you'll better understand why I so strongly believe that every ham ought to

belong to the ARRL! Without the League, ham radio would have disappeared at one time or another over the last 100 years. They are the only organization that represents our interests! I urge you to become a member if you are not, or, renew your membership if you are. Beyond that, if you are able too, please support the ARRL with your contributions. It's our only chance to make sure that ham radio will continue to exist into the future.

In addition to those already mentioned there were several others who played a part in making the evening go smooth, and I thank you all. And on behalf of PCARS, I especially want to thank Dave for travelling to Ohio and participating in our meeting. It was an honor to have him as our guest.



Pictures from the September Meeting





PCARS Meeting Sept 14, 2015

K1ZZ and K3LR Receive PCARS Life Memberships

During the September PCARS meeting PCARS President Rick, K8CAV presented PCARS Life Memberships to both Dave Sumner, K1ZZ and Tim Duffy, K3LR.

Dave's proclamation included details of his numerous contributions to Amateur Radio through his long-time service with the ARRL



Tim's proclamation outlined his life long active participation in Amateur Radio and his continued world-wide work and accomplishments. Tim, K3LR has been a long time friend and supporter of PCARS.



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



Check out the video of Dave Sumner's presentation to PCARS while he was at the September PCARS meeting

Schedule of Events

On the calendar for upcoming meetings and activities are:

- **October 3-4th - California QSO Party** at the Club Site
- **October 12th - PCARS Meeting - 7 pm - WB9LBI - The Magic of Morse Code**
- **October 31st - Tentative PCARS Balloon Launch Date**
- **November 9th - PCARS Meeting - 7 pm - ELECTIONS - WA8ZLK - EMP**
- **November 14th - PCARS 10th Anniversary !!!**
- **December 14th - PCARS Christmas Party/Meeting** - more info to follow

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



- | | | |
|-----------------|---|--|
| First Tuesday | - | Digital Special Interest Group |
| Second Tuesday | - | QRP/CW Special Interest Group |
| Third Tuesday | - | Antenna Special Interest Group |
| Fourth Tuesday | - | DX & Contest Special Interest Group |
| Fifth Tuesday | - | Linux for Hams Special Interest Group |
| Fourth Thursday | - | Net Night at the club site - 6:30 pm |



Have A Fun and SAFE Halloween



From the Highland ARA operating from Rocky Fork, using the callsign K8HO

I don't know about anyone else, but I'm a tired but happy puppy. I don't recall as many HARA members participating in the Parks as we had this year. I think that is a real testimony to what we are trying to accomplish. Somewhere around 15 members participated in some way-whether it was helping set up, tear down, operating or just being there for support. Thank all of you.

A special thanks to Lee, N8YHU, and Jeff, KD8VUY, who were the backbones pulling this together and keeping the interest high. Thanks to Jeff, KD8VUY, and Dave, KD8TUR, for their last minute building of an NVIS antenna. Thanks to those who brought the food and drinks to nourish us during the day. Thanks to Vern, KF8LE; Dave, KD8TUR; John, WA8KIW and Jeff, KD8VUY, who kept the transmitters humming. Thanks to John, WA8KIW, and Jeff, KD8VUY, for furnishing the equipment. A special thanks to the late Paul, WA8KFB, for furnishing us with one of the antennas and coax used this year.

Conditions weren't exactly the best this year. The bands seemed weird. On 40 you worked Ohio stations and the next minute Ohio was gone. One minute you would have a pile-up only for the band to disappear the next and then return in five. 75 meters was just as frustrating and did not produce anticipated results. I believe weather conditions kept some of the

anticipated parks from being activated. I know of no mobiles putting out multiple parks this year.

A couple interesting items. Because of the Monday Morning Memo, one station in Lancaster was looking for us and ended up in both the 40 meter and 75 meter logs. Another recognized the call and informed me his mother, KE8RC, used to be a HARA member when she lived near Carmel. A club in Alabama was having its picnic and several members got on to give us a contact.

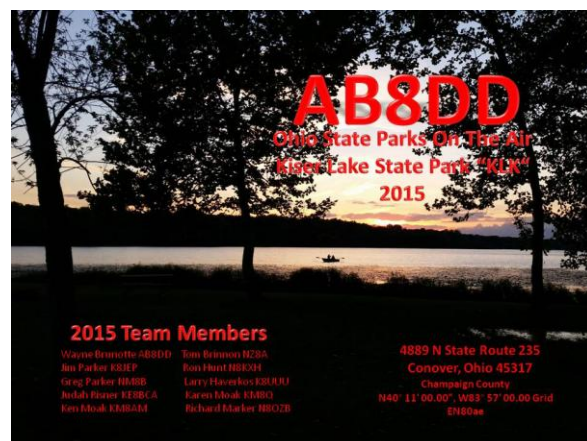
Here is a rough idea of how we did-around 280 contacts on 75 and 40 meters. We worked roughly 40 different parks. 27 states made the logs as well as Ontario.

As this is the first year we have ran multi-transmitters, we are in a completely different class than we have been in the past. Therefore I cannot compare us to past years.



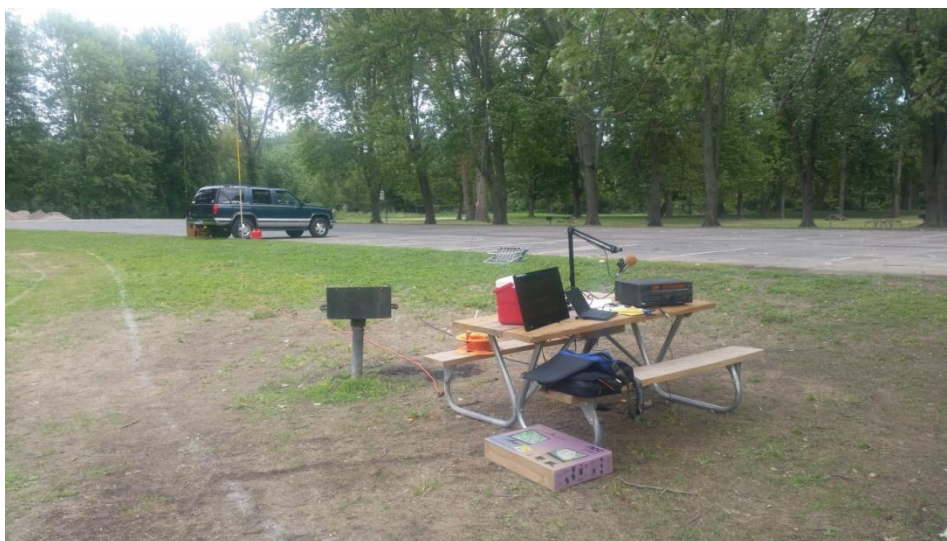
From AB8DD - The OSPOTA gang at Kiser Lake

Check out this nice QSL card that their group has for OSPOTA.



Also - Lwayne, AB8DD sent in this picture proving that the BANDS WERE DEAD
!!!!!!!

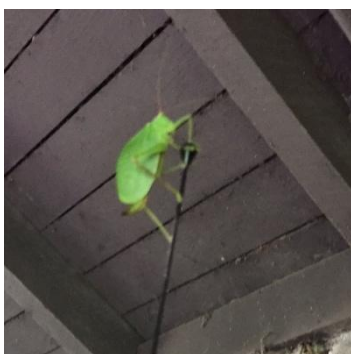
Steve, N8XSF on the air from Mary Jane Thurston State Park



W8CWO - Stubenville-Weirton ARC on the air from Jefferson Lake State Park



WC8VOA - Chester ARA on the air from John Bryan State Park



WB8YHD - Mahoning County ARES on the air from Lake Milton State Park



OSPOTA 2015 - The 2015 Ohio State Parks On The Air contest was held on September 12th.

Much of the state had pretty lousy weather, but the OSPOTA participants got out there, set up stations and had a fun radio day! Reports that have come in say that even though some places were a bit rainy and cold, the fun in making radio contacts won out. Some people are even wanting to list what State Park they will be in during the 2016 OSPOTA !!

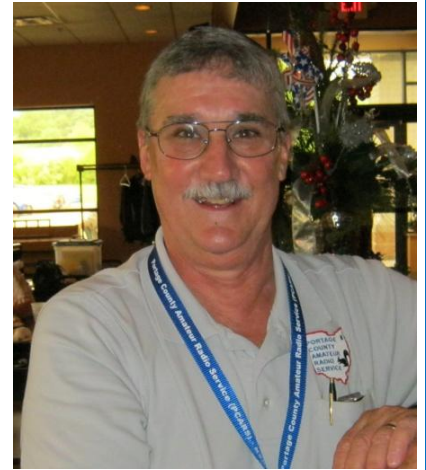
So far there are 79 logs submitted (we're still waiting to see what shows in snail mail) and the OSPOTA Contest Committee will be meeting on October 31st to go over the log checking. Certificates are ready to print, and the frames are also ready. The final scores and standings will be published in the December issue of The RADIOGRAM.

Until then - keep watching the OSPOTA Yahoo Group for the latest information

From the President

Rick, K8CAV
PCARS President

What another exciting month it's been for PCARS members! In addition to all of our normal activities and special interest group meetings, the annual Ohio State Parks On The Air contest was a big draw for many! The weather was variable throughout the state with some of us experiencing cloudy but dry conditions while others wound up drenched but it was a great time for all. For those who have been keeping track, next year the ARRL is going to be hosting a National Parks On The Air contest to celebrate 100 year of the National Park service that is modeled on our very own OSPOTA. Imitation is the most sincere form of flattery and PCARS should be very proud of our efforts in OSPOTA inspiring the ARRL version of this event. Stayed tuned for the results of this year's OSPOTA from Parky, KB8UUZ and the OSPOTA team.



Our monthly meeting in September featured a very special guest, Dave Sumner, K1ZZ who is the CEO of the ARRL. Dave had a presentation on where Amateur Radio and the ARRL have been, and where we're going. It was great to have Dave there to share with us and we had a good crowd on hand to hear him. In addition to Dave's presentation, PCARS honored two Hams with honorary lifetime memberships based on their contributions to Amateur Radio and to PCARS. Dave, K1ZZ has spent the better part of his working career with the ARRL and has contributed greatly to making the ARRL into a very efficient organization that represents the needs of Amateur radio both to its members and to national and international governmental agencies. Tim Duffy, K3LR, best known for the organization of one of the world's premier contesting stations, has held PCARS in high regards and is always providing his help and expertise to PCARS when asked. He's also been very generous with his time in inviting PCARS members to tour his contest station. Both of these Hams epitomize what it means to be an Amateur Radio Operator and we hope their membership in PCARS is in small measure a thank you for all they've done for our avocation.

Several times each year our emergency communications guru Jim, KC8PD talks about being prepared for disasters that might befall our communities, and what we should be doing to make sure we're prepared as Amateur Radio Operators, as individuals, and as members of our families. All of those mundane things like where all your important papers are, financial information, medical information, who should be contacted in an emergency and the like often elicits a mental 'ho-hum it won't happen to me' attitude. Well, I can tell you in no uncertain terms it DOES happen to us, and I learned that first hand yesterday when a fire at our business caused a loss in the neighborhood of a quarter million bucks. Much of what Jim talks about had been put into practice a while ago in our business and as a result, none of the things like trying to reconstruct financial records and such will be much of an issue. The important point here for us is to take to heart the preparedness awareness and training assets Jim has mentioned so that when disaster does strike, you'll be ready for it and can survive it yourself and provide your skills as an amateur radio operator to others in need.

So far it's been a fall here in northeast Ohio that's been nothing but beautiful weather. It won't last forever so now is a great time to get outside and look closely at all of the things that winter weather will make a lot harder to accomplish like repairing that broken ground rod wire, tightening up that drooping dipole, or trying to fire up that cranky generator that should have been serviced in September. A bit of elbow grease now will make for a lot cozier time in the shack later this year.

Last but in no way least, the members of PCARS are its heart and soul and I can't say enough about the willingness of you our members to share your expertise, your help, and your comradeship with the rest of us to make being a member of PCARS a truly rewarding experience. The more you share, the more rewarding our club is so participate to keep making PCARS K8BF, BIG FUN!

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.

October 3rd, November 4th (Wed evening - 7pm), December 5th

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.



ARRL VEC Reminds License Applicants: The FCC is Now Paperless!

The ARRL VEC is reminding Amateur Radio license applicants that the FCC no longer routinely prints or mails license documents. In an effort to streamline its procedures and save money, the FCC went "paperless" in February 2015.

"Customer contact with the VEC has tripled since this change, as many amateurs have not heard of the change or do not understand the FCC procedures for obtaining a license copy," said ARRL VEC Manager Maria Somma, AB1FM. She said the most frequently asked question comes from Universal Licensing System users who have applied for renewal or modification, but then think the transaction was not completed because they did not get a new copy of their license in the mail.

"Once we look up the info, our answer is nearly always that the requested transaction actually was completed and appears in the FCC database, but they won't be getting a copy of the updated license in the mail," Somma said. Less frequently, her department hears from exam applicants who ask why they did not receive a copy of their license after they passed the test.

To help clarify things, Somma has created a web page, [How to Obtain an Official FCC License Copy](http://www.arrl.org/obtain-license-copy), (<http://www.arrl.org/obtain-license-copy>) devoted to explaining the various ways a licensee can get an official license document from the FCC. An official license displays the FCC logo and the "Official Copy" watermark across each page. A [printer-friendly](#)

[version](http://www.arrl.org/files/file/VEs/Obtain%20License%20Copy%202015.pdf) (<http://www.arrl.org/files/file/VEs/Obtain%20License%20Copy%202015.pdf>) of the instructions is available on the ARRL website.

Somma said the *easiest* way for a license holder to obtain a license copy is to call the FCC at (877) 480-3201.

Licensees can also download and print their own official license copy by logging into the Universal Licensing System (ULS - <http://wireless.fcc.gov/uls/>) using their FCC Registration Number (FRN) and password, then clicking on "Download Electronic Authorizations" in the menu on the left. The ULS has also added a green informational banner that says, "Change your paper authorization preferences [here](#), or download your official electronic authorizations [now](#)." Somma points out that the green banner is only temporary, and it eventually will go away.

At least for now, though, clicking the "[here](#)" hyperlink will take you to the Paper Authorization Preferences" page. To continue receiving paper license documents, click "Yes." Clicking the "[now](#)" hyperlink will take you to the "Download Authorizations" page.

- ▶ [Apply for a New License](#)
- ▶ [Set Paper Authorization Preferences](#)
- ▶ [Download Electronic Authorizations](#)
- ▶ [Associate Licenses With Your FRN](#)

Click on "Download Electronic Authorizations" in the ULS menu on the left side of your account page to access the "Download Authorizations" page.

On the "Download Authorizations" page, scroll down to the "Filter by Radio Service" box (remember, the ULS is *not* just for the Amateur Service). First, **highlight your call sign** and then click "ADD>" to put your call sign into the "Authorizations to Download" column. Scroll down a little further and click "DOWNLOAD>" to create an official FCC license PDF document that can be saved or printed.

When modifying, renewing, or requesting a duplicate license copy, a licensee who already has an FCC Registration Number (FRN) and provides a valid e-mail address under "Applicant Information" while logged into the ULS system will receive an official ULS-generated electronic authorization via e-mail.

All Amateur Radio exam applicants should include a valid e-mail address on their NCVEC 605 form, in order to receive a copy of their license electronically.

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: Bob, N8QE or e-mail him at: N8QE@portcars.org



Contest Calendar

October 2015	
California QSO Party	1600Z, Oct 3 to 2159Z, Oct 4
10-10 Int. 10-10 Day Sprint	0001Z-2359Z, Oct 10
Pennsylvania QSO Party	1600Z, Oct 10 to 2200Z, Oct 11
Arizona QSO Party	1600Z, Oct 10 to 2359Z, Oct 11
10-10 Int. Fall Contest, CW	0001Z, Oct 17 to 2359Z, Oct 18
New York QSO Party	1400Z, Oct 17 to 0200Z, Oct 18
Illinois QSO Party	1700Z, Oct 18 to 0100Z, Oct 19
ARRL School Club Roundup	1300Z, Oct 19 to 2359Z, Oct 23
CQ Worldwide DX Contest, SSB	0000Z, Oct 24 to 2400Z, Oct 25

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



CQ WW WPX 2015 - #1 in the 8th Call Area

Neil, N8IL



The SSB WPX scores for 2015 were finally published. Competing in the low

power (100W) single-op assisted category improved my chances to win the 8th call area.

When entering a contest, consider

the category you choose. If you avoid the temptation to use your amplifier, you also avoid having to compete with the big guns. When I competed in the 2015 WPX SSB contest, I decided to compete in the low-power assisted category. With a score of 994,000, I met my goal of winning the 8th call area. The station here is comprised of a K3 feeding a Hex Beam at 1,140 feet above sea level. The score in 2014 was 1.4M, potentially winning the High Power

category, but I neglected to submit the log in time. That was a big lesson! Let it be a lesson for the rest of us!



North American QRP Club - 11th Anniversary



The North American QRP CW Club (NAQCC) will be celebrating its 11th anniversary the week of October 12-18 with some fun on-air activities. Special event stations N1A, N2A, N3A, ... N0A will be on the air from all over the United States, and special certificates and QSL cards will be available for these contacts.

The stations will be operating CW at QRP power levels and will be announced on our special spotting page (http://www.naqcc.info/spot_schedule.php) in almost real-time. (You do not need to be QRP but we encourage you to give it a try.)

On Tuesday evening of that week (0030-0230Z Oct 13) we will have our usual monthly sprint but with the bonus that all NAQCC members who participate will be automatically entered into a drawing for some great prizes.

More detailed information about our anniversary celebration can be found in our September newsletter at http://www.naqcc.info/newsletter_207.pdf.

Information about the NAQCC, including a membership application (it's free), can be found at <http://www.naqcc.info/>.



PCARS

ARRL Volunteer Examiners:
serving the Amateur Radio community

First Saturdays 10:00 am
at the club site in Ravenna
February, April, June, August,
October, December

PCARS
Join Now
Discover the FUN

PCARS
www.portcars.org

September 2015 PCARS Net Night Quiz

1. Who is the current President of the ARRL? A) Dave Sumner – K1ZZ B) Norm Fusaro – W3IZ
C) Kay Craigie - N3KN D) Scott Yonally – N8SY
2. Fox-1C and Fox-1D cubeSATS are scheduled to launch first quarter of 2016 in what type of vehicle ?
A) a re-purposed Chevy Astro Van B) a Russian Soyuz Rocket
C) a Private company, SpaceX, Falcon 9 rocket D) A US Saturn 5 rocket
3. October's biggest radio contest is A) California QSO Party B) CQ Worldwide DX Contest SSB
C) FYAO D) ARRL Sweepstakes
4. How many US Sections are there in the ARRL? A) 50 B) 71 C) 74 D) 96
5. Licensing of "Wireless" activities began in the US in what year?
A) 1890 B) 1910 C) 1912 D) 1914
6. What relationship is there between the 15 meter and 40 meter bands? A) None B) Both are HF bands
C) 40 is a harmonic of 15 D) 15 is a harmonic of 40
7. What is a "Rover" A) A Dxpedition that moves between locations B) A Station handling traffic – off frequency
C) An Amateur Satellite in low earth orbit D) A station that operates from several grid squares during a contest
8. What year were Novice operators authorized to use a VFO? A) 1962 B) 1968 C) 1972 D) 1976
9. During what years was Hiram Percy Maxim president of the ARRL?
A) 1914-1922 B) 1916-1924 C) 1916-1934 D) 1914-1936
10. On what date did Marconi receive the first Trans-Atlantic radio signal?
A) 12/01/1901 B) 12/12/1901 C) 12/10/1900 D) 12/12/1905
11. G5RV designed an all band HF wire antenna. How long is it? A) 102 ft B) 64 ft C) 132 ft D) 51 ft
12. The time it takes a capacitor to discharge 37% of it's charge through a bleeder resistor is know as?
A) The J-Factor B) Time Constant C) Doppler effect D) Half-Life theory
13. Radio waves and light waves are both what? A) polarized energy B) electrostatic energy
C) electromagnetic energy D) ionospheric energy
14. Why is it always necessary to lay down radials when constructing a ¼ wave, ground mounted vertical antenna?
A) The provide RF reflection attenuation B) They provide reverse electrical charging of the earth
C) They provide additional bandwidth D) They provide a low loss current return path back to the vertical
15. The first post war DXCC list (1947) contained how many entities? A) 316 B) 257 C) 274 D) 179
16. How many DXCC entities are there now? A) 340 B) 368 C) 402 D) 518
17. BONUS QUESTION - 5 POINTS : Who is Elon Musk??

Answers later in this issue of The RADIOGRAM

Happy Birthday PCARS Members

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

K8JAA	Jane Avnet	KD8MLE	Jon Fox
K8AAB	Bob Evans	KC8RCD	James Weber
N8ONI	Pat Karl	WA8SAJ	Jeff Covelli
KD8ZXD	Robert Sheppard	K8CAV	Rick Kruis
KD8EPG	Ken George	WA8AR	Tony Romito
KD8IUA	Mike Battershell	W8DMH	Dennis Hunt
K8DER	Donald Robinson	KD8MQ	John Myers

Linux for Hams SIG

Terry, KB8AMZ

Our last 2015 meeting will be in December, Tuesday the 29th. Apparently there are others in this group that have little social life and committed several months ago that they would be available for the last meeting. Nothing is planned yet but I am sure that either Mike or will have something setup for the last night.

I might be displaying my Raspberry Pi and TNC combo on air with my Yaesu FT-817ND. So if you're game to be there 2 days before New Year's Eve we will begin at 1900 hours EDT in the radio room.



DX & Contest SIG

Chuck, W8PT

As many of you know, we have been using the 4th Tuesday evening DX/Contest Special Interest Group meeting to work on our 2016 Field Day plans. We have also been using it to prepare ourselves for the California QSO Party coming up on Oct. 3.

By the time you read this report we will have held our Field Day meeting on Sept. 29th and will have completed a final review of the CAQP rules in preparation for the contest.

We will return to our normal format for the October DX/Contest SIG which will be held on Oct. 27. (Yes I double checked the calendar for the correct date.) We will review our participation in the CAQP and also view a DVD on the 2011 South Orkney VP8ORK DXpedition.

As an added note, I have spoken with Tim Duffy, K3LR, regarding his thoughts on our having instructional classes for contesting. NO, we are not thinking that he would be teaching the class. Not that that wouldn't be a



great thing. But I simply want to get some ideas from him that we can use to bring along those who want to participate in our contesting efforts but are still gun shy or really do not know how or have never taken part in a contest. Since Tim has been very successful with Contest University, I thought that maybe, with his input, we could put together something that could be used by PCARS but in a much more concentrated? way. Possibly something that could be used at other clubs also if we are successful.

Tim said that he would noodle about this and also talk with Parky since they work together at DXE. I look forward to Tim's input.

So until our next meeting..... 73

Antenna SIG

Jim AC8NT

We are planning to launch our balloon October 31st. We have ordered a new balloon for the launch and the hydrogen required for the launch. The balloon we had died in storage. Latex does not store well.

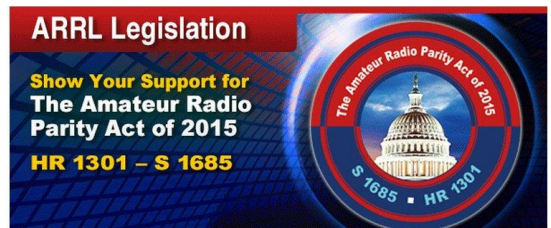
We have a tested APRS transmitter and a Cannon video camera ready for the launch. FAA paperwork has been approved and all the elements will be ready by launch day.

We will be discussing all the details at the October 13th Antenna Group meeting. Looking forward to good weather and some interesting contacts via the repeater that will be on board.



House Bill 1301 and Senate Bill 1685

Amateur Radio Parity Act: A companion bill to House Bill 1301 has been introduced in the US Senate. It is Senate Bill S. 1685, introduced by Mississippi Senator Roger Wicker, with Senator Richard Blumenthal of Connecticut as the initial Cosponsor. We have full details on the ARRL Web pages related to field support of this measure. Our efforts with House Bill 1301 are continuing very well with your support, as of Tuesday June 30, we have reached 84 cosponsors. Current FCC Regulations allow homeowners in deed-restricted residences to install TV receive only (TVRO) antennas. This includes both dish antennas and conventional over the air antennas. "Amateur Radio Parity Act" HB 1301 was introduced in the U.S. House of Representatives to direct the FCC to allow Radio Amateurs to have "parity" with the current TVRO antenna regulations and install reasonable ham radio antennas. The new ARRL Web Page <http://www.arrl.org/amateur-radio-parity-act> contains the complete text of both bills.



Start an Amateur Radio Virtuous Circle

Dan, KB6NU



On the ham_instructor Yahoo Group (https://groups.yahoo.com/neo/groups/ham_instructor/info) recently, we talked about the classes that we are going to be offering this fall. About his Tech class, Bob, K0NR, noted, "Currently have about 30 students signed up. We keep thinking we'll run out of interested people but they keep coming."

I've noticed the same thing here, too. I keep thinking that I am going to run out of people to teach, but I have no problem at all filling my classes. In fact, I'd go so far as to say that the more people that have taken my class, the more people there are that want to take it.

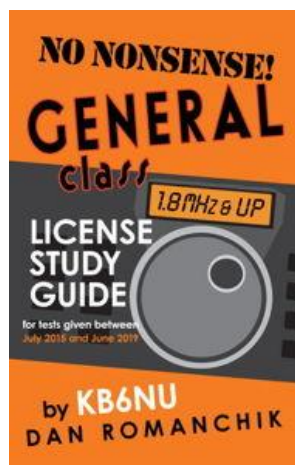
Of course, this makes perfect sense. If there are more people out there who have amateur radio licenses, there are more people out there talking about amateur radio, and actually doing amateur radio. And, the more people out there talking about and doing amateur radio, the more likely it is that other people will become interested in amateur radio and get their licenses as well.

It's an amateur radio *"virtuous circle."*

What does this tell you? Well, if you're in a place where amateur radio seems to be dying out, or belong to a club that is slowly fading away, start a class! I think every club should hold classes at least once a year, even if that first class has only one or two students. Those first few students are the start of your virtuous circle.

Don't know how to start a class? I can help you there. Start by reading my blog post, "**Teaching a one-day class**" (<http://www.kb6nu.com/teaching-a-one-day-tech-class/>). It has a lot of practical information, including tips on how to select a venue, how to publicize the class, how to get people to sign up for the class, and finally, how to teach the class.

You might also want to join the ham_instructor mailing list I mentioned earlier. It's a relatively low-volume list, but the subscribers have a lot of experience that you can tap into.



Also, get a copy of my free Tech study guide (<http://www.kb6nu.com/study-guides/>). Not to brag (well, OK I am bragging), but I really think that it's the best study guide for a one-day class. The study guide presents the topics in exactly the same order as I cover them in class. Read through it and you'll see what I mean.

If you need more help, or even just some encouragement, e-mail me, and I'll do what I can to help you. Seriously.

When not teaching ham classes or publishing amateur radio study guides, Dan, KB6NU, operates CW on the HF bands (mostly 40m and 30m). His #1-rated amateur radio blog can be found at KB6NU.Com, and you can e-mail questions, comments, or complaints to cwgeek@kb6nu.com.

Hamfest Schedule

10/18/2015 - Conneaut ARC's Ham Fest - Conneaut Amateur Radio Club (W8BHZ) - Location: Conneaut American Legion - 272 Broad St - Conneaut, OH 44030 - Web: <http://www.facebook.com/W8BHZ> - Talk-In: 147.390 (PL 131.8) - Contact: Mike Pongrass, KD8OSJ - POB 693 - Conneaut, OH 44030 - Ph: 814-440-6679 - Email: KD8OSJ@yahoo.com

10/25/2015 - Massillon ARC Hamfest - Massillon Amateur Radio Club - Location: Massillon Boy's & Girls Club - 730 Duncan Street SW - Massillon, OH 44646 - Website: <http://www.w8np.org> - Talk-In: 147.18 (PL 110.9) - Contact: Terry Russ, N8ATZ - 3420 Briardale Drive NW - Massillon, OH 44646 - Phone: 330-837-3091 - Email: truss@sssnet.com

11/01/2015 - WACOM HAMFEST 2015 - Washington Amateur Communications, Inc. - Location: Washington County Fairgrounds - 2151 North Main Street - Washington, PA 15301 - Website: <http://www.wacomarc.org> - Talk-In: 146.790, 145.250, 147.285, 147.390 (all linked together) - Contact: Bud Plants, N3TIR - 236 Chambers Ridge Road - West Alexander, PA 15376 - Phone: 724-350-6745 - Email: bud@n3tir.com



Charlie the Tuner's HF High-Lites

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

Labor Day has passed, OSPOTA 2015 is history, all the county fairs as far as I know, are now over. So what to do??? Well there is always the fun of working DX!! Yes I know I'm a broken record, but hey, how else can you take advantage of the final days of Sunspot Cycle 24 than to add some new countries to your DXCC list.



Then there is always antenna work to be done before the snow files. Make sure all the guys on your tower, or ropes on your dipole are in great shape to handle the WX. What about a new antenna? Come on - you've always wanted to get on 80 meters, so put up a dipole and talk with some of the old-timers. As I understand, that's where they congregate. Please note that many of these guys are crotchety, so you may not get them to answer you. But it might be worth a try just to learn some new "vocabulary" from them.

In any event, why not get on the air and work some DX. You might surprise yourself, and learn to like it. Let's take a look at what's coming up in the next few months.

As always, a big THANK YOU to the following for the forecast reports for this month and beyond. Without them and their timely information, it would be much harder to know what's happening on the bands. So 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, W2VU, K3LR, NG3K & ADXO, W3UR & The Daily DX, AA4VK, K4RUN, N4AA & QRZ DX, WW4LL, W6SZN, K8GI, K8YSE, W8GEX & 60m News, KX9X, W9ILY, DL7UXG & The DX News Letter, DL1SBF, DL2SBY, DxCoffee.com, DXNews.com, DX-World.Net, ES1CW, F1ULQ, F5NQL, F6AJA & Les Nouvelles DX, G3VMW, HP1AC, I1HYW, I1JQJ/IK1ADH & 425 DX News, I2MQP & DX Italia News, IZ8IYX, JA1TRC, OG2K, OZ6OM & 50 MHz DX News, PS7DX, PY2SP, RSGB IOTA Web Site, Sixitalia Weekly, TA2RX, VA3RJ & ICPO, VA3QSL and the VHF-DX-Portal (MMMonVHF) for the following DX information.

As always, this report could contain "Pirate/SLIM" operations or busted call signs. Please do yourself a favor and adhere to the old adage of "Work First - Worry Later" (WFWL).

3B7, ST. BRANDON. Pat, 3B8FA, will be active as 3B7FA from St. Brandon (AF-015) between October 26-31st. Activity will be limited and on 20/15/10 meters using mostly the Digital modes. QSL via LoTW, or via his home call.

3W2/XV2, VIETNAM. Mal, VK6LC, will once again return to Vietnam on a "DX Vacation" during the months of September and October. His schedule is as follows: **3W2HCM** - from Ho Chi Minh City between Oct 16-23rd. Activity is to celebrate 15 years operating in Vietnam. If like last time, Mel will be mainly on 20 meters with some 17/12 meters using mostly CW with some SSB. QSL via his home call sign, only direct. He does NOT use the QSL Bureau. Check out QRZ.com for some more details and pictures under VK6LC.

3W, VIETNAM (3W3MD - Press Release #3) [edited]. Great news from the Mediterraneo International Dx Club Team. - During their already announced Da Nang City, Vietnam, DXpedition with the call sign: 3W3MD between Oct 31-Nov 10, the international team leading by Antonio, IZ8CCW, and Gabriele, I2VGW, will also be able to be active from Cham Island IOTA AS-162 (claimed only by 17% of IOTA chasers). Some operators will leave the main land for 3-4 days, and with two stations and a couple of antennas they will try to give the reference to many IOTA chasers as possible. The rest of the team (19 skilled DX operators coming from 9 countries) will be on air from the beach of Da Nang with five stations 24 hours around the clock. According to the evaluations that they have done, they are confident to give to a lot of DXers the possibility to work this country on the Low Bands, WARC and especially on the Digital modes. For any further news and updates please visit the official Web site for this new great adventure at: <http://www.mdx.org/3w3md>

5J0, ANDRES ISLAND. Joseph, LU1FM, will once again be active as 5J0B from San Andres Island (NA-033) between Oct 17-27. Daniel, LU9FHF, will also be with him. Activity will be on 160-6 m using SSB and the Digital modes. Also look for him to participate the CQWW DX SSB Contest (Oct 24-25th). Equipment will be an IC-7100 with an ALS MRX 500 amp into a Hex- beam (20-6m) and dipoles for 160/80/40m. QSL via his home call sign. Look for more details and updates at: <http://www.tarjetasqsl.com.ar/5j0b> FaceBook page is: <https://www.facebook.com/sanandresisland2015>

5W, SAMOA. Craig, VK2ACH, is currently active as 5W0CW from Aggie Grey Hotel, Apia, Upolu Island (OC-097). Length of stay not known. Activity has been on the HF Bands. QSL via his home call sign.

9J, ZAMBIA (Special Event). Peter, 9J2HN, will be active with the special call sign 9J2JOCV from Lusaka, Zambia, between Sept 1 and Dec 31. Activity will be on HF bands. The special call sign "9J2JOCV" is for celebrating the 50th anniversary of the "Japan Overseas Cooperation Volunteer" (JOCV). If you need a paper QSL, please send your QSL with SASE (SAE + 1IRC or \$2) to JL1IHE direct only (no bureau access): Mr. Yoshitaka KAWAKU, 2-10 Yamate-cho, Hanno-city, Saitama 3570031 JAPAN. QSL through eQSL or LoTW will be issued after the whole operation period is ended. NOTE: Special event 8J1JOCV active from Kanagawa, Samukawa Town, Japan, since Jun 1 to celebrate the same thing. Activity will last until Mar 31 (2016). QSL via JARL Bureau or direct. QSL Manager is JR1EMO (SASE+2IRC).

A5, BHUTAN. Hans, SM6CVX, will be active as A52CVX from Bhutan between October 27-29th. Activity will be holiday style and mostly on CW. QSL via his home call sign, direct, by the Bureau or eQSL.

CE0Y, EASTER ISLAND. Ops Yan/RZ3FW and Sergey/R4WAA will be active as CE0Y/RZ3FW and CE0Y/R4WAA, respectively, from Easter Island (SA-001) between November 24th and December 2nd. QSL via their home call signs.

E5, NORTH COOK ISLANDS (Update). Ops Rob/N7QT, YL Melanie "Mel"/N7BX, and Grant/KZ1W active as E51MQT and E51MKW from Manihiki Atoll (OC-014) between Sept 29 and Oct 27. KZ1W's op as E51MKW will end on Oct 13. Activity has been updated to 160-10 m using CW, SSB and RTTY, with a K3/KPA500 and a SteppIR CrankIR vertical on the beach. Rob reports, "We are making progress on expedition planning. Lodging and airline tickets have been secured. K3/KPA500 and CrankIR verticals on the beach. We might be calling for EU/AF as well as NA/SA during their respective sunrise and sunsets, and will work the rest of the world during the remaining time. QSL Mgr for this expedition is N7BX." QSL available via LoTW, direct with SASE (2 USDs for international), or by the Bureau.

E5, SOUTH COOK ISLANDS. Steve, G0KIK, will be active as E51KIK from Rarotonga Island (OC-013) between November 9-15th. Activity will be holiday style using a TS-50 running 100 watts into 1/2 size G5RV. QSL via G0KIK.

E5, SOUTH COOK ISLANDS (Update). Jacek, SP5EAQ, will be active as E51EAQ from Rarotonga (OC-013, WLOTA 0971) between October 19th and November 1st. Activity will be on 80-10 meters SSB only. He will also be in the CQWW DX SSB Contest (October 24-25th). QSL via SP7DQR, by the Bureau, direct or an OQRS on the following Web page. Logs will be uploaded to LoTW. For more details and updates, see: <http://e5.sp5drh.com/index.html>

KG4, GUANTANAMO BAY. Jim, KG9LB, will be active as KG4AW from Guantanamo Bay [GTMO] (NA-015) between Oct 9-16th. Activity will be on 160-6 meters using CW, SSB, RTTY and PSK. QSL via his home callsign direct. ADDED NOTES: "The Daily DX" reports that Bill/W4WV (KG4WV) and Keith/KE4KDY (KG4DY) will also be there with Jim. The group will activate Over the Windward Point Lighthouse (GTM-001) over October 10-11th weekend. Keith and Jim will depart GITMO on October 16th, while Bill will remain until October 23rd.

KH5, PALMYRA (Press Release #3). Lou (N2TU) and Craig (K9CT) previously announced a DXpedition to Palmyra Atoll at the International DX Convention in Visalia, Ca. Palmyra (KH5) ranks #9 on the Most Wanted List and #2 in Europe. The Pacific Islands DXpedition Group has been awarded permission to activate Cooper Island in the Palmyra Atoll, 11-26 January 2016. A call sign will be announced through the normal DX media channels before the operation begins. One key to the success of activation of a rare entity is a team of pilot stations. These stations gather regional feedback, identify propagation trends and inform the on-island Team of operational issues. These pilots are well known to the DX community and have either been on DXpeditions or have been pilots on previous high visibility DXpeditions.

* Chief Pilot and Western USA- Rich, KE1B * Eastern USA/ Caribbean- Don, AA1V * Europe- Col, MM0NDX

* Africa/ South America- Andre, V51B * Asia/ Pacific, Hiroo, JA1WSX

NH0, MARIANA ISLANDS (Canceled). Koji, JL3RDC, who was expected to be active as NH0DX from Saipan during the CQ WW DX SSB Contest (October 24-25th), has cancelled his activity because the Saipan Rent Shack radio room has collapsed due to the typhoon.

PY0F, FERNANDO DE NORONHA (Update). Three of the five member 1992 Navassa DXpedition Team, Ron/AA4NC, Will/AA4VK, and Murray/WA4DAN are planning a "reunion" DXpedition to PY0F, Fernando de Noronha (SA-003) between October 18-27th, including operating in the CQWW Phone Contest. Look for operators to sign PY0F/homecall on all-bands on 160-6 meters using CW, SSB and RTTY. Elecraft has generously provided a complete station, including K3S and KPA500 amp. AA4NC will be the operator for the CQWW DX SSB Contest (October 24-25th) as a Single-Op/All-Band entry signing PY0F/AA4NC. A multi-card color QSL with island scenes similar to the QSLs for their recent CY0 operations is planned. WA4DAN will handle "Direct" QSLs. An OQRS service will be available on the Web page at: <http://www.qslnow.com/py0f---fernando-de-noronha.html> Until a dedicated PY0F website is created, updates will be posted at <http://www.AA4VK.com> and at the various DX bulletins.

S0, WESTERN SAHARA. Operators Roberto/EA2CNU and Arseli/EA2JG will be active as S01WS from the Sahrawi Amateur Radio Union Club Station in Tifariti, Western Sahara, between October 22-28th. Activity will be on the HF bands, especially the lower bands, using CW and SSB. They also plan to be active in the CQWW SSB DX Contest (October 24-25th) using the special call sign S0S. QSL via EA2JG and OQRS system. For more details and updates, watch: <http://saharadx.jimdo.com> <https://twitter.com/SaharaDxTeam>

SV, GREECE. Nicolas, F1RAF, will once again be active as SV8/F1RAF from Poros Island (not IOTA) between October 25-31st. Activity will be on SSB only on 20/17/15/12/10 meters. QSL via F1RAF, direct or by the Bureau.

T2, TUVALU. Operators Stan/LZ1GC, Lubo/OM5ZW and John/KK7L will be active as T2GC from the Vaiaku Lagi Hotel, Funafuti, Tuvalu (OC-015), between Sept 24 and Oct 14. Activity will be on 160-6 meters using CW, SSB, PSK and RTTY. They will operate from 2 sites and have a target of 30k QSOs. Suggested frequencies are: CW - 1822.5, 3502, 5371, 7024, 10104, 14010, 18080, 21015, 24905 and 28010 kHz, SSB - 5401, 7164, 14170, 18145, 21265, 21265, 24940 and 28470 kHz, RTTY - 7040, 10138, 14088, 18095, 21088, 24922 and 28088 kHz, 6m - 50097/CW and 50120/SSB, QSL via LZ1GC, direct or by the Bureau (may take 1-2 yrs). "Preferred Method" for QSL and LoTW requests is via T2GC on ClubLog's OQRS or via PayPal. For more details and updates, see: <http://www.c21gc.com>

T8, PALAU. Akira, JH0CKF/DU1CKF/AF1Y, is once again active as T88MZ from the VIP Guest Hotel (Free Radio Room) on Koror Island (OC-009) between October 6-9th. He is there on business, so activity will be limited to his spare

time on the HF bands (80-10m). QSL via DU1CKF, direct or by the Bureau, eQSL or LoTW. For more details about the VIP Guest Hotel (Free Radio Room), see: <http://www.palau-radio.com/index.php?page=rr2014>

TX3X CHESTERFIELD ISLAND DXPEDITION NEWS After a year of heads down project planning, budgeting and equipment procurement TX3X will soon be on the air. Chesterfield Island is now Clublog's Most Wanted #21. As of Thursday, Sept. 10th, the Advance Team is either in New Zealand, or en route. Evohe's skipper, Steve Kafka, is at Auckland's Bayswater Marina preparing to load our equipment between Sept. 13-15th. His position is visible at: <TX3X.com> or at <marinetraffic.com> by searching on Evohe, New Zealand. It's not too late to make a donation through the "Donate" button at <TX3X.com>. For those processing a donation through <TX3X.com> before we sail on Sept. 28th. - LoTW uploads will be processed while we're on the island. All other donors will receive their LoTW upload on a priority basis. OQRS will be available shortly after the DX-pedition is completed.

TY, BENIN. Nicolas, F8FQX (ex-TJ3SN, TN5SN, 5T5SN), will be moving to Benin later this year and will be active as TY2SN for next three years. Activity will be on 160-6 meters using CW and SSB. QSL via IZ1BZV or LoTW.

V5, NAMIBIA. Heli, DD0VR, will be active as V5/DD0VR (possibly V50VR) from Namibia starting December 10th for one month. Activity will be limited to his spare time because he is on holiday with his XYL Bigi, DE3BWR. Heli will use a KX3 with the HL-1.1KFX amplifier by Tokyo High Power with 500 watts or the RZ3AH PA with GMI-11tube with 350 Watts out -- QRO SSB. For CW, he will only operate with 1-5 watts (G-QRP-Club -- NR. 7073). His antenna is a vertical. QSL via his home call sign, direct or by the Bureau.

V6, MICRONESIA. Ops Yuji/JH2BNL (V6AAA) and Minekazu/JA2NQG (V6WW) active from Pohnpei Island (OC-010) between Oct 25-29. Activity will be on all bands, 160-6 meters, using CW, SSB, and RTTY with 500 watts. They will take part in the CWWW DX SSB Contest during the final several hours of the contest. QSL via their home call.

VB2, CANADA (CQ ZONE 2 DXPEDITION). Operators Jean-Pierre/VA2SG, Jean/ VE2VIA, Jean-Francois/VA2VL and Pierre/VA2CZ will be active as VB2T from ZONE 2 (Sept-Iles, Quebec) during the CQWW DX SSB Contest (October 24-25th) as a Multi-Single/High-Power entry. QSL via VE2JCW direct only, with 2 USDs for North America and 3 USDs for the rest of the world. More details are available at: <http://www.contestgroupduquebec.com/vb2t>

ZD7 & ZD8, ST. HELENA and ASCENSION ISLANDS (Update). Oliver, W6NV, will activate these two islands again between October and December. He should be on St. Helena (ZD7) (AF-022) between Oct 15 and Nov 1. To celebrate the arrival of Napoleon Bonaparte (Oct 15, 1815), Oliver has requested the call sign ZD7N. Activity will be on 160-6 meters using CW and SSB. He is also expected to participate in the CQWW DX SSB Contest (October 24-25th). After his operation on St. Helena, Oliver will then go to Ascension Island (ZD8) and be active as ZD8W between Nov 5 and Dec 2. He will then join others to be active on the CQWW DX CW Contest (Nov 28-29).

IOTA News

AS-043. Operators Suehiro/JI1PLF, Mitsuo/JA1UNS, Hisashi/7N1GMK, Takeo/7L4PVR and Kazuhiko/7N4VPS will once again be active as homecall/1 from **Hachijo Island** in the JA1 South Izu Group, between October 15-19th. Activity will be on 160-6 meters using CW, SSB and RTTY. QSL via their home call signs, direct or by the Bureau.

SA-071. Labeled as the "deadliest island in the world" because of snakes, look for operators Marcelo/PY2AE, Murilo/PY2DS and Joao Paulo/ PU2POP to be active as ZY2QG from **Queimada Grande Island** (DIB SP-17 [NEW!]) and lighthouse (DFB SP-11, ARLHS BRA-086, WLOTA 0242) sometime in November for 24 hours only. On QRZ.com, it states, "A Discovery Channel documentary, Treasure Quest: Snake Island, claimed that there is between two and four thousand snakes on the 430,000 square meter island which equates to an average of one snake per approximately 75 square meters over the entire island. This contrasts with claims of an average of one to as many as five snakes per square meter... It is home to an endemic species of Bothrops, the 'Golden Lancehead Viper' (Bothrops insularis), which is one of the most venomous snakes in the world. Much about its venom is disputed, as no cases of humans having been bit have been confirmed." QSL via PY2AE, direct or by the Bureau. See QRZ.com for more details.

There you have it. There's islands, lighthouses, DXpeditions and more to work. GET ON THE AIR AND CALL CQ DX!! Until next month..... 73

Jim, KC8PD/AFA5PD

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



In previous EmComm columns I have described the efforts of the Communications Unit to develop a broadband/hamnet (HSMM/mesh networking) capability. Steve, K8SRR, has led the effort, providing training on the use of the hamnet software as well as workshops on the use of the hardware.



Hamnet relies on repurposed wifi routers (both Linksys and Ubiquiti) which, essentially, serve as amateur radio stations after they have been flashed with new operating firmware. Each router then serves as a “node” in a local area net (LAN) that is entirely wireless. If at least one station in the LAN has access to the internet, that service can be shared with all other nodes.

Our goal had been to work through the training as more Comms Unit members acquired the hardware and then conduct a drill in the field in order to test our progress and to continue to work out any kinks in the operation.



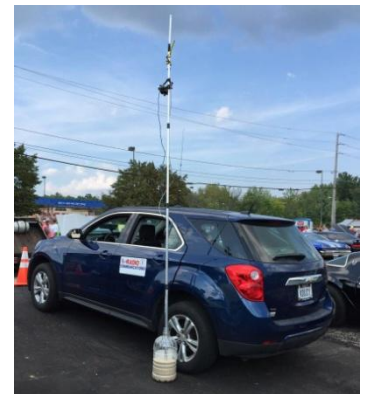
Mike, KD8FLZ, and I as members of the county’s Incident Management Assistance Team (IMAT) had the opportunity to participate in the planning for the recent Celebrate Portage Classic Car Cruise-In held in Ravenna. Capt. Dave Rarrick, WB2DFC, of the Ravenna Police Department was also on the planning committee and



our discussions led to the idea to use the cruise-in for our drill, thereby giving us a real-world test of our broadband skills plus providing a demonstration of its utility to local law enforcement officers and public officials.



We held a dry run of the setup a week before the event to ensure that the stations would have adequate signal strength and that the net could be maintained. The EMA was going to make the Mobile Command Post available to the City of Ravenna for the cruise-in and we planned to run the net from it and to install one of the antennas on a tripod/mast on the roof of the MCP. The MCP has some mechanical problems and was unavailable so the EMA’s Search and Rescue trailer was used.



Steve, K8SRR, managed the net from the trailer in the Marcs parking lot and the KC8PD node and camera were installed there. Rick, K8CAV, had a separate node/camera installation in his truck at the east end of the event venue and Sandy, KD8JCY, had a node/camera in her vehicle at the west end.



Mike, KD8FLZ, set up a node and camera using one of the EMA's trucks and Bob, N8KBX, borrowed a node and set it up in his vehicle.

The photos show some of the different stations. You can also see Steve running the network and Ryan Shackelford, the Director of the OHS/EM, checking out the video feed from one of the cameras.



Another photo shows the city's portable radio equipment and our VHF/UHF station for radio comms. Dave, WB2DFC, served as the net control station for all of the city's on-site radio comms.



This turned out to both a great exercise in the use of broadband/hamnet and a terrific demonstration of its utility. Steve was running a PBX phone system on the net as well as a texting application. But our main use was the video feed from the cameras. The police were monitoring the video at the command post and based on the video made a critical decision about a road closure in order to improve spectator safety. This was the most that we could hope for: a real-world use of hamnet by safety forces at a large public event.

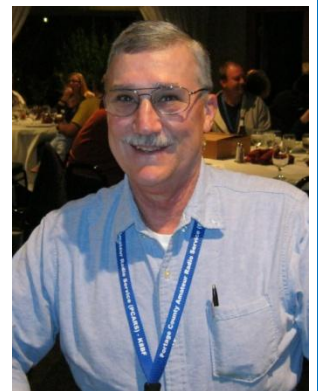
So in the end we had both a proof of concept and a demonstration of the true utility of hamnet. All in all, a very successful drill.

Software Defined Radio

Rick, KC8PD

Software Defined Radio (SDR) – An Inexpensive (aka 'cheap' 'ham') Way to Go.

So you're interested in learning about concepts and practice of Software Defined Radio (SDR) but the astronomical prices of Amateur Radio SDR rigs are keeping from getting your feet wet? Well, our very own Steve, K8SRR has an answer! This year PCARS has had a table at two, Mini-Maker-Faires, in the spring at Kent State University and at the Akron Public Library.



As part of our presentation at these events, Steve put together a concept SDR demonstration that showed what SDR is and what it can do using inexpensive SDR receiver dongles. His demonstration illustrated both the hardware itself and what software can do to make it a very versatile system. It captured the imagination of both youth and adults who attended these events and I've asked Steve to put together a presentation for an upcoming PCARS meeting.

Stay tuned to our award-winning newsletter for an announcement and when you'll get the chance to scratch that SDR itch.

Akron Maker Faire

Jim, AC8NT

The Maker Faire was held at the Akron Public Library on September 19th. We had a great day at the Akron Maker Faire. We were happy to introduce both students and adults to some of the great things that can be accomplished using Amateur Radio. We had demonstrations of digital systems, mesh networking and software defined radio. I



think we were most amazed by the number of people that new nothing about our hobby and sport. Questions included: Can I broadcast religious services using my radio? How many hams are in the Akron area (are there at least 10 to 20)? We answered a lot of questions!

Events like these fairs give amateur radio a chance to reach a large number of people that have no knowledge of the hobby and possibly interest them in getting their license. I have already had calls from both the Hudson and Stow school systems asking for more information and the possibility of demonstrations at their schools. This is just one way to get more (and younger) people interested in our hobby.

I would like to thank all those who helped with this effort. I was also happy to see the Cuyahoga Falls Club was also setup.

I hope we can again visit the Kent State and the Akron fairs next year. Maybe we could also visit the Cleveland event. We will see how many new recruits that we met actually get their licenses. It was a good day for amateur radio!!



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 - 4th Thursday is NET NIGHT at the club site !!



October	
1	WB8LCD
8	N8QE
15	WB2DFC
22	KB8UUZ
29	KB8UHN

November	
5	KC8PD
12	K8CAV
19	NR8W
26	WB8LCD

December	
3	KB8UUZ
10	KC8PD
17	WB8LCD
24	no net
31	no net



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 Everyone who is a club member is welcome to have a turn!



Net Night Quiz Answers

Tom, WB8LCD

- 1) C 2) C 3) B 4) B 5) C 6) D 7) D
 8) C 9) D 10) B 11) A 12) B 13) C 14) D
 15) B 16) A

17) Elon Musk is the CEO of both SpaceX and Tesla Motors. He was the founder of PAYPAL which he sold to EBAY and hit the big time.

A fascinating individual - read more about him at <http://www.telegraph.co.uk/technology/news/10544247/Meet-tech-billionaire-and-real-life-Iron-Man-Elon-Musk.html>



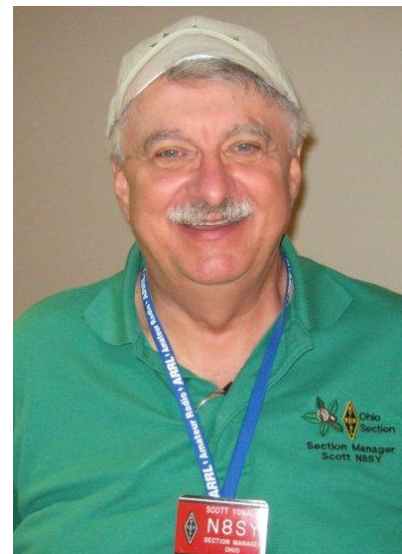
Let's Talk

Scott, N8SY
ARRL Ohio Section Manager

Wow, fall has arrived!!! Friday nights under the lights, pumpkins, apples and the like are now in season. This has been one of the busiest summers that I can ever remember. I've traveled all over the state visiting with all of you at your hamfests, club meetings, picnics and breakfast's. It's been fantastic! I've enjoyed every minute of it! And, YES, this newsletter is late this month simply because I ran out of time to get it to press before I came to Newington for

training. Yup. I spent 5 grueling days in classes. I did get to operate

W1AW several times however, but heard no one from Ohio on. Oh well. Better luck next time!



As many of you have noted in your newsletters, I'm making a very conscience effort to get to as many club functions and meetings as I can all around the state. As you know, the Ohio Section is the largest Section in the country. It's even bigger than a Division or two. So, with that in mind, it's only fair to say that Ohio also deserves to have a

full time Section Manager. So, don't be surprised when I just "pop-in" at your meeting or function.

I have another 3 Boy Scout troupes to visit this next month. Oh, be the way, we now have several new hams from the Boy Scouts I was telling you about last month. I am now waiting for them to get their call letters so that I can be their "First Contact".

Now, if you've never visited a Boy Scout Troupe meeting I would encourage you to do so. It's a lot of fun and wow - are these kids ever bright! I am working on scheduling more visits with the Cub Scouts and Boy Scouts, and YES, even the Girl Scouts this next coming fall/winter. There's a lot of potential there that needs tapped for sure.

Are you getting those emails from the Great Lakes Director or Section Manager? Now, for those of you who may not want to go to all the bother of checking your account with the League, or you are just not League members, you still have a chance to get these important emails. All you have to do is to "Opt-In" to receive them. There's a link to do this on the Ohio Section website, it's on the bottom left corner. For your convenience, here's a direct link to it: <http://arrl-ohio.org/forwarder/forwarding.html> I urge all of you to make sure that everyone, regardless of whether they are a League member or not, get signed up for one of these options. You can always "Opt-Out" at any time if you feel this is not what you were expecting. But, who in their right mind would want to miss out on anything coming out of the Great Lakes Director or the Ohio Section Manager?

Switching gears a bit. I want to talk to all of you about the Amateur Radio Parity Act of 2015 -- H.R.1301 in the US House of Representative and S 1685 in the US Senate -- It would direct the FCC to extend its rules relating to reasonable accommodation of Amateur Service communications to private land use restrictions. Now I do want to stress this, even if this passes, it doesn't guarantee that you'll be able to construct an antenna

farm on top of your 20 story apartment building. What it will do however, is at least give you a voice to the HOA's for something everyone could live with!

The Amateur Radio Parity Act would require the FCC to amend its Part 97 Amateur Service rules to apply the three-part test of the PRB-1 federal pre-emption policy to include homeowners association regulations and deed restrictions, often referred to as "covenants, conditions, and restrictions" (CC&Rs). At present, PRB-1 only applies to state and local zoning laws and ordinances. The FCC has been reluctant to extend the same legal protections to include private land-use agreements without direction from Congress.

I want to urge you to write to your members of both the House and the Senate, asking them to sign on to the bill as a co-sponsor. Please, route your letters for your member of Congress to:

ARRL - Attn: HR 1301 Grassroots Campaign - 225 Main St - Newington CT 06111

Remember - a big bag of letters from the constituents is always more impressive than ones trickling in day after day.

The Ohio Section Website. You can find the Ohio Section Website at: <http://arrloho.org>. If you don't have this website set as your home page, I urge you to do so. This website is one of the exceptions to the rules. It changes all the time. It's never stagnating, and I would highly recommend that you check into the website at least 3 times per week or more if you can. Yes, it does change that much! Now, how do I know so much about the website?? I'm the webmaster for it!

Yes, there's another NEW – one question – questionnaire on the Ohio Section Website. I've been changing the questions about once every couple of weeks or so. It only asks one question and it will take all of about 2 seconds for you to answer it, and you can see how your answer stacks up with others instantly. If you haven't done it yet, please do. I really want to hear from you.

Are you a member of the ARRL?? If you aren't a League member, this is a great opportunity to become one. Want more information on how to join? Here's the link: <http://www.arrl.org/membership-levels>. There's even a 90 day FREE trial that you can apply for if you've never been a member. Got questions about being a member or what the League is all about? Send me an email: n8sy@arrl.org I'll be happy to call or write to you or even call you if you've given me your phone number. We can even have coffee if you'd like, and I'll buy!!

Ok, I know that I push the website and website edition of the Ohio Section Journal a lot.. I'm even sure some of you think its way toooooo much. But, the main reason for pushing this so hard is that it's where all the news is. Yes, I know that there are some who don't even own a computer and won't own one either, and that makes me very sad. Not that they won't own a computer, but they are missing out on so much that's going on because of it. There's a lot of very good and exciting news and happenings on the Ohio Section website. If it isn't your home page on your browser, it should be!!

Do you follow us on Facebook or Twitter? Many folks have started picking us up on Facebook and Twitter now. Yes, we definitely have a presence on both of these social media areas! Why, well that's an easy one to answer, it's because that's where the younger folks are hanging out these days.. It's also a very quick way to post a short blast to everyone following us when something is happening. So, with that in mind, there's a lot going on up on Facebook and Twitter for the Ohio Section. Right now, we have over 1,300 followers from all over the world, with that number growing every day. So, do you follow us? On Facebook just type in: <https://www.facebook.com/ohio.section> On Twitter type in: @arrloho

There's a new link on the left side of the main page of the Ohio Section Website "Follow The Section Manager" Come on, follow me as I go around the state visiting with all of you folks. I post pictures of where I

am and have a lot of great folks commenting and liking my posts. Hey, I even have Kay Cragie, the President of the ARRL following along with me. It's a lot of fun and you'll get to see all the places I go and the folks I meet along the way. Not on Facebook? It's easy to join in and the best part of it is, it's FREE!!

Swap-N-Shop

FOR SALE: Kenwood TS-570D with internal ATU, Installed 2.4 khz Kenwood SSB filter & 500 hz CW filter, and interchangeable Inrad 2.1 khz SSB filter, DC Cable, VS-3 Voice Synthesizer, and copy of manual. A few scratches on the cover otherwise in excellent condition. Used for remote operation and backup no longer needed. \$575 Shipped and insured/\$525 pickup or delivery within 50 miles NE Ohio Paypal, Postal Money Order, or Cash



Yaesu FT-817ND All Mode HF/VHF/UHF Transceiver Good plus condition. Some scratches on top. Includes MFJ DC Power Supply, installed W4RT 2700 MA battery, spare 1400 MA battery, two antennas, programming software & cable, original manual & VE3AYR Pack It Manual (yellow) and Microphone. No carrying case. Originally used on trips & cruises now use RHR. \$550 Shipped and insured/\$475 pickup or delivery within 50 miles NE Ohio Paypal, Postal Money Order, or cash.



Contact: Jack, N8BI via e-mail at: N8BI@portcars.org [01/02/16]

FOR SALE: Eagle One, HF Vert Antenna, \$100 brand new in boxes.

Heathkit SA2060 Tuner, \$300 good condition

Icom IC-718, HF All Mode, \$500 Brand new, never used, in original box.

Icom 271H, 2 Mtr All Mode, used in original box

Kenwood TS-711A, 2 Mtr All Mode, \$450 In original box with mike and manual

Kenwood TS-811A, 440 Mhz All Mode, \$530

Kenwood TS-450SAT, HF All Mode, \$600

Kenwood TS-830S, HF All Mode, \$450 Refurbished about a year ago and never used since. Has original manual and MC-50 desk mike

Kenwood SP430 Spkr, \$60

MFJ-4225, Switching PS, \$90

Mosley CL-36-M 10, 15, 20 MTR BEAM antenna, \$500

Mosley CL-33-M 10, 15, 20 MTR BEAM antenna, \$400

Nye Viking, MBI-001 Tuner, \$100

Palstar, PM2000A Watt Meter 300/2KW, \$100

Vibroplex Bug, \$50

If interested make offer. Also have Misc Tower parts

Contact: Allan, AB8AA by phone at 330-207-3296 or e-mail at: AB8AA@portcars.org [01/02/16]

FOR SALE: Kenwood TS-450S/AT auto tuner built in. Comes with a **Shure 444D Microphone** - \$450

Bird-43 Wattmeter - \$150 **Bird VHF slugs** - \$50 each

Antenna Specialist Commercial 2-meter 100 watt FM only amplifier - \$100

Palstar AT-2K 2KW Tuner with 4:1 Balun - only a couple of months old - \$500

Contact: Jeff, WA8SAJ by phone at 440-951-6406 [01/02/16]

FOR SALE: Ameritron AL-1500 full legal limit-plus 160M-10M amplifier. Complete with manual and original shipping boxes. Excellent condition non-smoker, like-new tube still capable of 2000+ watts so it loafs at 1500 watts. Asking \$2000 – pick up, or I will deliver to your northeast Ohio QTH. Reason for sale – I have too many amplifiers!

Contact: Al, K8EUR by phone at 440-345-5217 or email at K8EUR@portcars.org [11/02/15]

FOR SALE: Alliance HD-73 Heavy Duty Rotator Package Used, in service for 10 years then stored. Dual speed, maximum of 10.7 sq/ft wind load, 6 conductor wire required. One working Rotator, One not working Rotator (for parts or rebuild—motor tries to turn), Two working Control Boxes in excellent condition. Original manuals. Package only. \$75.

Alinco DM-330MV Switching Power Supply Output 5-15 VDC @ 32A (max) 30A (continuous), Volt/Amp meter, terminals and cigarette outlet. Compact 6.9W x 2.6H x 6.5 D. Excellent condition in original box with data sheet. \$85.

Contact: Bill, K8KW by email at KW8KW@sbcglobal.net [10/02/15]

FOR SALE: MFJ-269B Antenna Analyzer Covers HF/VHF/UHF. Comes with manual and \$16 MFJ plug-in AC wall adapter. Cost new \$369 - Will sell for \$210

Astron SS-30M Power Supply Has Amp & Volt meters. 30 Amps at 13.8 Vdc Peak. Cost new \$149 - Will sell for \$99.

Contact: Parky, KB8UUZ by e-mail at: KB8UUZ@portcars.org [12/02/15]



Mantua Potato Stomp

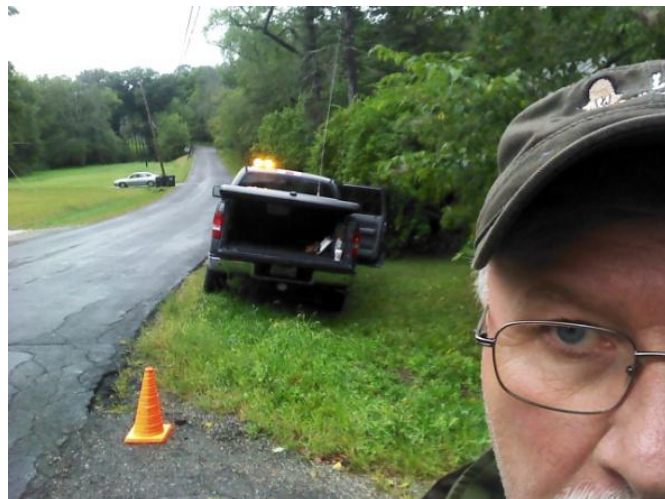
Dave, WB2DFC

Here's a picture from the Mantua Potato Stomp foot race.

I was at my post (Peck & Pioneer roads) and snapped this picture... Safety 1st.. My motto.. and reporting motorists better behaved than usual.... But, I still kept at least one eye open on the back of my head.

Communications worked well !
for now...73

All





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 over 53 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/>

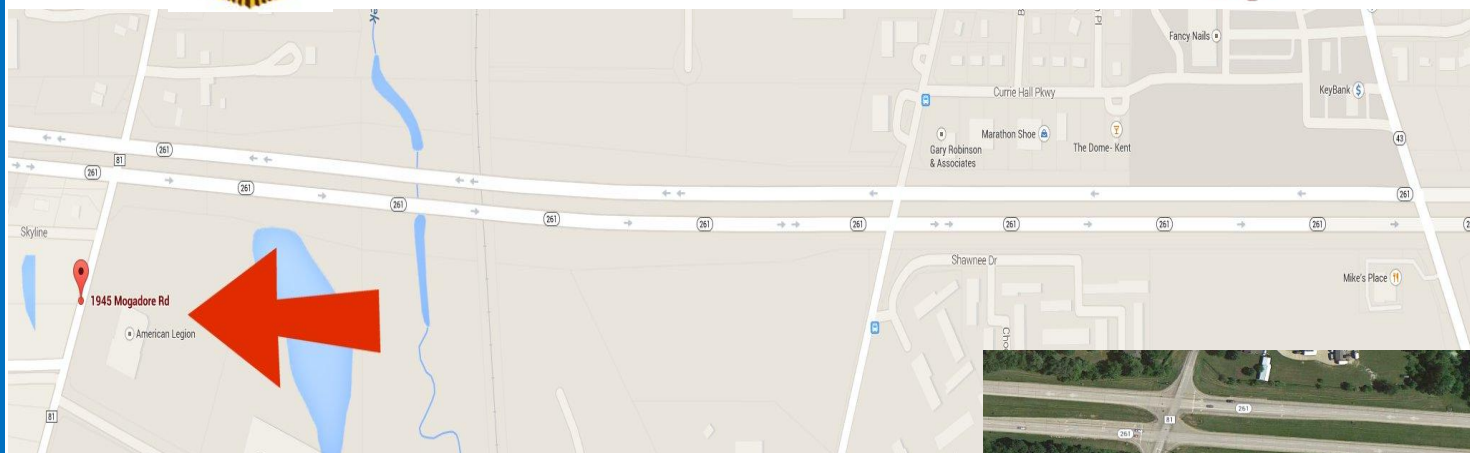


PCARS Meetings

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



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



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



*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.

American Beer Day



Tom, WB8LCD

Fun Holiday – American Beer Day

On October 27, visit your favorite pub or bar and enjoy some American brewed beers because it is American Beer Day!

The American Beer industry is one of the fastest growing business in the United States. In fact, the U.S. ranks second in the world in both total beer consumption as well as beer production, second only to China. A survey in 2014



estimated that there are over 3000 breweries in the country that manufacture about 196 million barrels of beer every year.

Rich History

Beer production in the U.S. has a rich and varied history. Historical records show that Native American tribes were brewing beer using corn (maize) more before European settlers reached the shores of the country. Dutch and English settlers in the 17th century produced local brews that were consumed locally. Mass production of beer in the U.S. only began in the late 19th century, and beer quickly replaced other spirits as the alcoholic beverage of choice. Between 1920 and 1933, the years of prohibition, beer fell out of disfavor as alcohol was banned throughout the country.

Today, in addition to the big beer manufacturers, the United States has seen a surge of craft breweries and microbreweries who make small batch artisanal beer.

Different Styles

While breweries across America make a number of different styles of beer, the most common kind available in the country is known as American style lager. It is a type of a pale lager that was inspired by the beer recipes bought to the U.S. by German immigrants.

Other styles of beers include American Pale Ale, American style India Pale Ale and Belgian style ale.

How to Celebrate?

- Celebrate the day by visiting your local bar and sampling some American beers. Remember, you don't have to be in the United States to celebrate this unofficial holiday.
- If you are a home brewer, why not try and brew some American style beers at home. Of course, don't forget to share with family and friends!

Did You Know...

...that home brewing has a long history in the United States? Both the first president of the country, George Washington and the third president, Thomas Jefferson were home brewers.



American Beer Day

More Pictures from the K3LR Visit

Thanks goes out to Tom, N3NTF from Hermitage, PA for sending me additional pictures from the PCARS K3LR Contest Station visit August 29th.



Stand By

Kevin, K5KVN
HamHijinks.com



New Ham Unsure If He Really Needs to Stand When Told To Stand By

ROLLING HILLS, OKLA. — Hearing the words “stand by” coming from his radio’s speaker is a confusing thing for Harold Benningloit.

The ham radio operator of less than two months says he spends most of his time in a seated position while operating his gear, so he feels conflicted when told to “stand by.”



“I probably hear that two or three times a day on various nets or on the repeater while driving home. I mean, at home it’s one thing, but in the car I absolutely cannot stand up,” says Benningloit.

Members of his local radio club didn’t offer much help. “No one takes me seriously when I ask. They all just say, ‘That’s a good one, Harold!’”

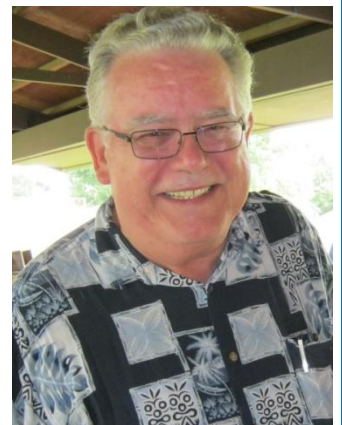
Until he finds out for sure, Benningloit says he will “sit by” when told to “stand by.”



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 again be known as the **BIG FUN** amateur radio club with plenty of activities to report on in this newsletter all throughout 2015.



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

AB8DD, AC8NT, K5KVN, K8CAV, K8HO, KB6NU, KB8AMZ, KB8UUZ, KC8PD, N3NTF, N8IL, N8RLG, N8SY, N8XSF, NAQCC, W8CWO, W8PT, WB2DFC, WB8LCD, WB8YHD, WC8VOA, the ARRL and the World-Wide Web.

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

Dipole Calculator

Paste this on a stiff piece of paper.

Cut out the two circles.

Poke the hole in the middles.

Cut out the window on the front side (the side with the ICOM).

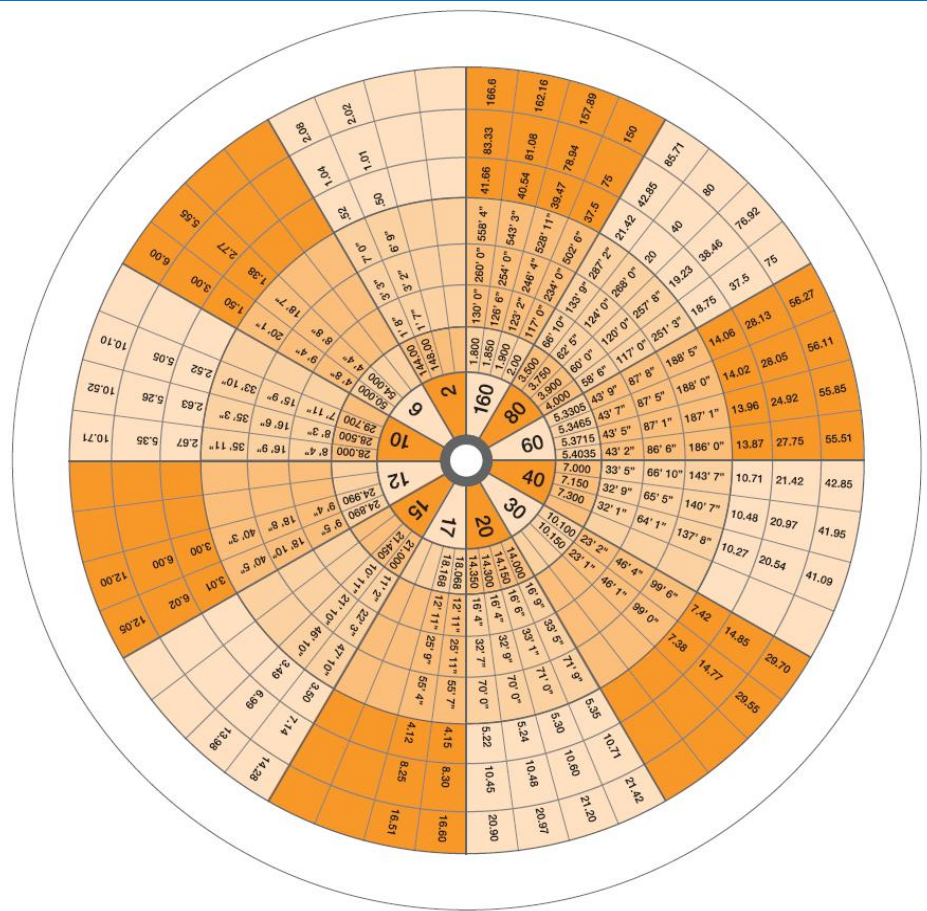
Clip the two halves together with a clip in the center holes so you can turn one while holding the other.

Now you have a quick and easy Dipole Calculator.

If you want a PDF of this, drop me an e-mail asking for the Dipole Calculator.

Parky

KB8UUZ@portcars.org



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

Meetings: 2nd 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 ~ Drop 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

~ 2015 Officers ~		2015 PCARS Appointments & Committees	
President - Rick Kruis - K8CAV Vice President - Tony Romito - WA8AR Treasurer - Bob Hajdak - N8QE 3 Year Trustee - Chuck Patellis - W8PT 2 Year Trustee - James Andrews - KD8VT 1 Year Trustee - Erica Pelz - AE8YL 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 Manager	WB8LCD	Tom Sly
	Net Night - Club Manager	WB8LCD	Tom Sly
	Newsletter Editor	KB8UUZ	Tom Parkinson
~ Meetings & Net ~		OSPOTA Chairman	KB8UUZ Tom Parkinson
2 nd Monday of each month. 7pm Thursday night Club Net at 8 pm on 146.895	P.I.O.	WA8AR	Tony Romito
	Secretary	K8MSH	Mark Haverstock
	Tech & Gen Class Manager	AC8NT	Jim Wilson
	V.E. 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

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) newsletter of the **Portage County Amateur Radio Service, Inc. (PCARS)** – copyright © 2015. 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!**

This is the **Electronic E-Mail** version of the **PCARS Newsletter, The RADIOGRAM**. The advantages to receiving this way are: You get **COLOR** pictures, active links, **NO** postage needed and the newsletter is delivered right to YOUR e-mail box! The **RADIOGRAM** is published every month and only sent to subscribers. If you would prefer not to receive this newsletter, we understand. We'll try not to take it personally. It's not you saying you don't like us, but maybe you just don't have the time to look at all this hard work we've done just for you. Hey, that's cool. But if your heart is truly set on making sure you no longer receive this newsletter, even though we promise to one day reveal the meaning of life in it and you're going to be really upset when you miss out on that, we can take you off the e-mail list. Yes I know the Sept cover says US\$4.95, don't worry you won't get sent a bill or be hounded by bill collectors. Since this now looks like a magazine, I thought - what the heck, let's put a price on it. In Oct we added Canada. Send your newsletter inputs (in .TXT format) along with in-focus pictures (not small 10kb ones...) to the newsletter editor: kb8uuz@portcars.org



NLC



"When All Else Fails - Amateur Radio Works"