



The Wave Bender

December 2018

AWARD WINNING NEWSLETTER

WRARC PRESIDENT'S MESSAGE

I'd like to wish everyone a merry Christmas and Happy New Year. It's been quite a successful year at the Western Reserve Amateur Radio Club. Our membership is now 52 members, our Friday night nets have check in's in the 30s, and the participation in the various marathons has been solid. In addition, we have had good numbers attending our monthly club meetings. The Officers and Trustees also have put in considerable time and effort to make WRARC a better club. I look forward to sharing 2019 with you in our many club activities. Have a wonderful holiday season.

73 Brian, AB8BL.
WRARC/President



2019 AFTER THE HOLIDAYS ANNUAL DINNER MEETING AND INSTALLATION OF OFFICERS

Our annual party is on the books for 2019. The party is on Sunday, January 13, 2019 at 3:00 P.M. in "our meeting room" at Davidson's. We will be using our usual format of everyone ordering individually from the menu and each person or family covering their own tabs that day - no need to pay up front. I do need to give the restaurant a number of attendees by January 7.

I started a sign up sheet around at the November meeting and it will be around again at the December meeting too. You can also call me at 330-398-1303 or e-mail me at mfstein@zoominternet.net to sign up. Just send me your name, call sign, number in your party, and a phone number in case I have to get a hold of you for anything party related.

This is primarily a social event and is for families and any other friends you would like to ask to come. Attendees do not have to be WRARC members. This is a fun, relaxed time for all of us.

We will be installing Darrin, N8DMC, for his second term as 3-year trustee. This is a good way to kick off the new year with something fun. As always, we hope to have a good turn out. Hope to see everyone there.

73 Maureen, KD8NXS

IN THIS ISSUE

2018 Officers:

President: Brian Lewis, AB8BL ab8bl@wrarc.net
VP: Maureen Stein, KD8NXS kd8nxs@wrarc.net
Secretary: Stan Adamski, KB3WPD kb3wpd@wrarc
Treasurer: Rose Marko, KD8TII kd8tii@wrarc.net
Past President: Bob Mitzel, N8RCM n8rcm@wrarc.net
Trustees:
 Darrin Cannon, N8DMC n8dmc@wrarc.net
 Roy Haren, KD8IJF kd8ijf@wrarc.net
 Steve Fabry, KC8SOY kc8soy@wrarc.net

Appointed Positions:

Social: Maureen Stein, KD8NXS
 kd8nxs@wrarc.net
Publicity: Joe Wojtowicz, W0JO
 w0jo@wrarc.net
Nets: Steve Fabry, KC8SOY
 kc8soy@wrarc.net
Classes/Testing: Bob Mitzel, N8RCM
 n8rcm@wrarc.net
Newsletter/Web: Jane Avnet K8JAA
 k8jaa@wrarc.net
Historian: Rose Marko, KD8TII
 kd8tii@wrarc.net
Badges: Darrin Cannon, N8DMC
 n8dmc@wrarc.net

Officer's Meeting:

Dec. 11 2018, 7:00 P.M. At Eat 'n Park,
 Austintown, Eat 'n Park,
 5451 Mahoning Ave
 All members welcome

Members Meeting:

Dec. 18, Davidson's
 3636 Canfield Rd., Cornersburgh

Speaker: Aiden Divilbiss, W0TIS

Topic: Inverters, generators



<http://www.wrarc.net/>

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**OTHER IMPORTANT WEB SITES****THE ARRL EXAM SEARCH PAGE**

<[HTTP://WWW.ARRL.ORG/FIND-AN-AMATEUR-RADIO-LICENSE-EXAM-SESSION](http://www.arrl.org/find-an-amateur-radio-license-exam-session)>

OHIO SINGLE SIDEBAND NET

<[HTTP://WWW.OSSBN.ORG/INDEX.HTML](http://www.ossbn.org/index.html)>

ANTENNA HEIGHT ABOVE AVERAGE TERRAIN (HAAT) CALCULATOR

[HTTPS://WWW.FCC.GOV/MEDIA/RADIO/HAAT-CALCULATOR](https://www.fcc.gov/media/radio/haat-calculator)

FROM OUR VP

Greetings Everyone! Here we are at the ending point of another year. How fast it all goes! WRARC has had a good year overall. We have a few areas where we could do a little better, and with all of us working together that can happen! Our public service special events are all in for this year, and they generally went well. We improved quite a bit on our performance and proper communication skills from the time of our first event, the Youngstown Marathon, to our last event, the Peace Race. The organizers of these races all want us back next year. Thank you to all who participated in each of them. Friday night net participation has remained good for the whole year, and meeting attendance has been good most months. We hope to see everyone back in 2019 plus some new members too. Remember. Dues are still being taken for 2019. If you have not already renewed, please contact Rose KD8TII to do so.



Maybe 2019 will be the year more members will participate more fully in club activities. If you have not been able to do that up too now. There are many activities to be a part of public service special events; the road clean up, spring and fall; Family Fun Day at Boardman Park; Field Day; take a turn at being net control for a Friday night net; fill a Board or Officer's position in November 2019; attend some Ham breakfasts so many options to choose from. We need all of you. Everyone is important.

Our December general meeting will be on Tuesday, December 18. Our speaker for December will be our own Aiden Divelbiss, W0TIS, giving a presentation on inverters, generators, and some individual work he has done in that area.

This gives me the opportunity to encourage any other of our members who would like to present things that they have developed or are currently working on to do so. A program doesn't always have to be an outside speaker. Sharing knowledge with the whole group is always a good thing!

Our November's speaker, Anthony Luscre, K8ZT, also would like us to make a note of the many links he has on his web site, for various Ham Radio topics. His web site is K8ZT.com There is a wealth of information there.

Have a Merry Christmas and Happy New Year. Happy Hanukkah wishes too.

73 Maureen,,KD8NXS
WRARC /VP



USE YOUR LICENSE TO SERVE THE COMMUNITY - VOLUNTEER

GREAT STORY ABOUT HAM RADIO

<https://www.ktuu.com/content/news/Ham-amateur-radio-operators-ready-to-respond-in-Alaska-497299581.html>

WHAT'S COMING UP?

- Dec. 01 YL Breakfast - TJ's Restaurant inside the Boardman
Holiday Inn
- Dec. 11 Board Meeting - Austintown Eat 'n Park
Members welcome
Ham Community Breakfast - Boardman Eat 'n Park
- Dec. 18 Members meeting - Davidson's 7:00 P.M.
- Jan. 05 YL Breakfast - PTBD
- Jan. 08 Board Meeting - Austintown Eat 'n Park
- Jan. 13 After the Holidays Annual Dinner - Davidson's 3:00P.M.



Janet Egan
Jim Jickess, KB8QDZ
Stan Adamski, KB3WPD
Matt Campbell, W8MIN



Amateur Radio Operator "Amateur means we're simply professional volunteers" ARRL reflector

CONTACT WRARC ELMERS WITH YOUR QUESTIONS - QUESTIONS@WRARC.NET



Beatty, Dave KC8WY
Fabry, Steve KC8SOY
Haren, Roy KD8IJF
Williams, Russ NR8W
Wojtowicz, Joe W0JO

anything
Yaesu FT8900, FT8800, Mobile
???
Electrician, tele-data, Amateur Extra
ICOM radios, D-Star

kc8wy@zoominternet.net
kc8soy@yahoo.com
harens@juno.com
rwiliams@neo.rr.com
w0jo@arrl.net

He who is afraid of asking, is afraid of learning

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Articles from members for the Wave Bender are encouraged. They must be received by the editor by the 20th each month. Please send your articles to: k8jaa@arrl.net, and put WRARC on the subject line of your email. You may also send your articles to the editor: Jane Avnet, 1440 Skyhawk Pl., Wright City, MO 63390

Join us for the WRARC Friday night Net 9:00 P.M.

KD8DWV - 145.270, PL -110.9

Upcoming Net Control Operators

Dec. 07 Aiden W0TIS

Dec. 14 Aiden W0TIS

Dec. 21 Roy, KD8IJF

Dec. 28 Rose, KD8TII

Dec. 31 Aiden W0TIS - 7 P.M.

Jan. This could be you, Volunteer

**If your name has never been on this list
Contact Steve, KC8SOY to take a turn at Net Control
330-774-6346**



WRARC Simplex Frequency 146.565

Mahoning County ARES® Nets

1st Monday 8.40 PM ET W8QLY Repeater - 146.745 (PL 110.9)

&

3rd Monday 8.40 PM ET W8QLY Repeater - 146.745 (PL 110.9)

ARES thanks MVARA for the use of their repeater

W8SGT is facilitating The Ohio HF net every Tuesday - 7:00 PM

The net is run from the State of Ohio EOC on the

Ohio ARES Admin frequency 3875 kHz LSB

moves to 7240 Khz after 20-min.

All are welcome to check in.



**The Ohio ARES/OES Digital Emergency Net held every Tuesday at 8:00PM.
held on 3585 kHz USB.**

Please note all digital communications are Upper Side Band.

<http://www.http://ohden.org/> for net details. Net Manager Gary NJ8BB



Thanks & 73 to all of our members (and others) look forward (hopefully) to getting this newsletter every month, so keep sending those articles, jokes, and suggestions! sending those articles, jokes, and suggestions!

Thanks goes out to this month's contributors; KD8TII, N8SY, The Ohio Section Journal, YI, the ARRL, FaceBook, and the World-Wide Web.

A WORD FROM OUR TREASURER

I want to thank all the volunteers who participated in all three of Mahoning Valley's major events in 2018 the Youngstown Marathon, the Panerathon, and the Peace Race. We were given great compliments from the sponsors. They would appreciate our assistance in next year's events. In addition, thanks also go out to all the volunteers who helped with the two road cleanups we did in May and September.

Our first YL Breakfast was a success. It was held on Saturday, November 3. at the Landmark Restaurant in Boardman. The ladies who attended were: Maureen Stein, KD8NXS; Shirley Boles, KD8SSB; Rose Marko, KD8TII; Donna Haren; Janet Egan. And of course, Jane Avnet, K8JAA, was with us in spirit - We toasted her. Our December breakfast will be Saturday, December 1. Maureen suggested a new restaurant to try. I mentioned it in the November's Wave Bender. It's called TJ's Restaurant located inside the Holiday Inn in Boardman. I will be setting up the reservation for eight ladies. If any other ladies would like to join us, please let me know by email to: Rose, kd8tii@zoominternet.net.



I am still collecting dues, and will be either in person at the meetings or by mail, up until and including the last day of January - January 31, 2019. If you have any questions, you can reach me by email at; kd8tii@zoominternet.net or by phone at; (216)406-5769.

I hope you all had a Happy Thanksgiving and look forward to the Christmas and New Year holidays.

73 Rose, KD8TII
WRARC/Treasurer



"The dues are due" anytime between now and January 31, 2019.

The dues are \$20.00 for the initial person joining in the household if that person is under 65, and \$5.00 for each subsequent member who is in the same household.

The senior dues for the initial person joining in the household who is 65 years of age or older is \$16.00 with \$5.00 for each subsequent member from the same household.



AUTOMOTIVE MOBILE RADIO REMINDERS



From the desk of KC8UNR - Thought it was about time for a quick reminder of maintenance of your vehicles electrical system, and mobile radios. Well it's that time of year when we find that the heat of the summer and running our car's AC on high most of the year cooked our batteries and now won't or barely starts our vehicles. Batteries need to be cleaned, some may need electrolyte or distilled water added to them if they are the kind that has the caps on top of them.

Always wear eye protection and wear junk shirts as the acid in the battery will eat through your clothes if you get splashed, and you don't want any in your eyes. The level should be above the plates you can see looking down the holes. Never charge a battery that is low on fluid. Inspect the large wires on the battery to see if they have corrosion or turning colors, also how is the weather proofing on them? Like coax cable

if they are bad or high resistance, it will cause problems for the charging system and the battery supplying power.

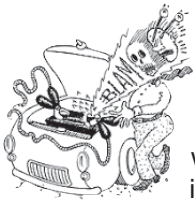
Make sure connections are tight, including the wiring for your radios and accessories you added.

Check the battery voltage. It should be 12.4 or higher, each manufacturer has different ratings but most are considered low at 12.2, and a full battery is around 12.6 to 12.8 WITHOUT the engine running. If voltage is less than 12.4 might want to consider putting it on charge using a charger, not driving around or sitting at idle in the driveway. Again Alternators are for supplying the vehicles needs not our radios. Unless you have a high output alternator 150amps or more, then you can get away with idle, or high idle, but best to use a charger. Note here that if you have any of the newer types of batteries or a hybrid car you may need a special charger for those. While the vehicle is running, you should see 13.6 -14.4 volts at idle, with nothing electrical on inside the vehicle.



Now just because you have good voltage does NOT mean you have the amps to supply all the needs of your vehicle and radios. You also need to check the belt tension and connections on the alternator that they are tight. Always have your radios, or other electronics, fused at the battery and its best to run all wires to battery, I don't recommend using lighter plugs, too many problems.

Just wanted to remind everyone who runs mobile radios, take care of those batteries and alternators. Also IMPORTANT - hybrids, and cars with airbags, STAY AWAY FROM YELLOW WIRES OR ORANGE/YELLOW, AND ANY CONNECTIONS TO THEM! THOSE ARE AIR BAG OR HIGH VOLTAGE WIRES if you have a hybrid. Always double check your wiring facts for your car before you install anything.



Last but not least if you go to a box auto part store be careful as the "new battery" you buy may have been on the shelf for a long time, months, so politely ask them to check voltage and if they need any electrolyte water before installing. I have witnessed new batteries installed and they were dead or low voltage already. The other day AAA had to come out to Cortland as my Mom's battery suddenly died, we had run errands for a few days before and some were highway miles down to Boardman, Geneva, etc. She stopped at a store and came out, the car would not start, no warning, no starting problems, noises etc., just made clicking noises according to Mom. I was not with her at the time, but would be interested to know why the sudden battery failure. So before it gets to cold get those batteries and electrical systems cleaned and tested unless you like to walk or wait in the snow!

73 Mike, KC8UNR



MAYBE THIS IS YOU?

Could YOU be the one I'm looking for? This is the editor of YOUR Newsletter. We have plenty of room for YOUR article(s)! If something is of interest to you, odds are that we all will enjoy your thoughts and activities! Have a favorite radio? Have some reminiscing to do? Maybe you have a question for one of our Elmers. OR, a Tip or Trick you learned that would help one of YOUR WRARC friends. Maybe you have acquired a new piece of equipment, designed or constructed a new antenna, took a trip focused around Ham Radio, or made an interesting contact. Maybe you'd like to share an Amateur Radio related experience, or discuss a technical topic.



Why not write an article for the monthly Wave Bender? The article can be short or long, simple or elaborate, and can even include pictures! Hint, hint! The Wave Bender would like to rely on articles from our members instead of always reprinting articles from the ARRL, or the internet. So why not give it a try? Write an article and send it to the newsletter editor <k8jaa@arrl.net>

It can be fun, and at the same time, your contribution helps support WRARC, and our HOBBY!

You don't need to write like William 'Bill' Shakespeare in order to write an article for the Wave Bender. In fact, we prefer articles without the words 'Thy,' 'Whilst,' 'Tis,' and 'Oft.' Do you have an idea for a newsletter article? You are warmly invited to contribute! Don't worry about writing or formality - we can help you with that. Your article could go in this spot, or one larger, next month!!

73 FROM
K8JAA



FROM A NEW MEMBER

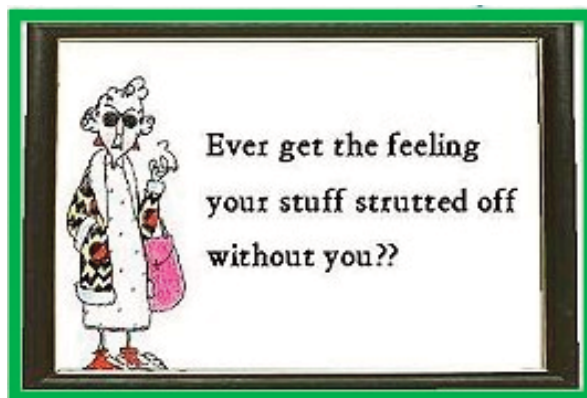
I am a new member and since you seemed to asked for "anything" I thought I would reply.

I am a member of a few different clubs, Radio Control, Hunting/fishing/conservation and a couple other clubs. One reason I liked the WRARC is people seemed laid back and friendly. When I visited at your function at the airport each person was happy to stop what they were doing and visit. They talked and explained what they were doing or trying to do. Although much of it was over my head at the time, and still is, I did pick up some knowledge from each.

One of my favorite things is before each meeting starts there is time to meet, talk and enjoy the different members. Next time I will try to keep my spaghetti sauce off my secondary napkin (shirt) so I am less embarrassed to mingle.

I have been to the MVARA club meetings also and both clubs have their pluses. I hope I can be an asset to the WRARC when I pick up a few more terms and knowledge. Still learning the Yaesu VX 6R but at least can adjust volume and change frequencies now.

Thank you Dave, KE8JTS



RUNNING & TESTING A GENERATOR



I took pics of running & testing my generator prior to our snow & ice, February 16! Just a note that the heavy red wire on the ground is a jumper cable I use to ground it to main house ground and run the generator under load and test the breakers on the generator too. Mine takes 20amps. It held 18 amps for over an hour until I added 1 more thing then it tripped like it should. just as a reminder to run generators properly grounded and running some devices to make sure generator works properly OH! and even in a garage they rust!

73 Mike, KC8UNR



**Monthly
Ham Community
Breakfast
Second and Fourth
Tuesdays
9:00 A.M.
at Boardman
Eat'n Park
Join Us!**

MAHONING COUNTY ARES 2018

As we approach the end of 2018, the MC ARES Team would like to thank all that helped with ARES activities this year. It was a year of change for ARES both on a national level and locally and we can't do any of it without you.

Looking forward to 2019, one of our goals is for MC ARES to have a bigger footprint in Ohio. There are many ways that can happen, for instance our participation in doing Damage Assessment for Mahoning County after the storms this year. If you didn't hear about it, Mahoning County EMA asked us to provide volunteers to canvas the hardest hit areas in Youngstown, Boardman, and Poland to collect damage information. We had a terrific turnout and spent three days speaking with residents. It was a real eye opener seeing and hearing of their experiences. With the weather events we've seen the past several years, this will likely not be the last time we are called on to help, so we are planning more DA training in the coming year.



Likewise, the ARES participation in Hubbard's Active Shooter exercise went well and kept us in the loop with staff in the hospitals and local first responders. Again we had a great turnout – 25 Amateurs staffing the EOC and four hospitals.

But we don't want to depend on just these large events. Just as important is to maintain a constant presence in the many Ohio Nets, conduct a regular schedule of training for volunteers, and (you knew it was coming) make sure we are registered in the ARES Connect system.

There are three major Ohio nets each week. W8SGT (The Sarge) is a SSB net that runs on Tuesday evening at 7:15pm on 3910 Khz +/- the qrm. Currently I know of one ARES volunteer that checks into that net with any regularity.

Also, on Tuesday evening is the OHDEN net at 7:45pm. OHDEN is the Ohio Digital Emergency Network. As the name states it is a digital net, runs on 3585.5Khz, Olivia 8-500, centered at 1500 in the waterfall. Unlike the Sarge that usually runs from the station at the Ohio EMA building in Columbus, the OHDEN operations rotate depending on who is running the net. One result of the rotation is a lot of variation in the signal quality. Of course that is one of the advantages of the digital modes and you can usually decode signals you can barely hear. There are two of us checking in with OHDEN each week.

The last net is a Winlink net that occurs on Wednesday evening. Because of the nature of Winlink there is not a specified time for the net, nor a specified frequency. Winlink is the system for sending emails via Amateur Radio. As such, you can use any frequency that has a gateway station to receive your signal. That could be HF or VHF depending on where you live and how propagation is running. Currently 40M has been working well and you may be surprised to find stations outside of Ohio are frequently easier to use. Personally, I find 2 land and 5 land are my best bets. One of the upsides of Winlink is that it is a free software solution. You can download the software and have it running in a matter of a few hours. The longest part is getting registered with the Winlink system and that also goes quickly. You may be thinking, why would we want an email system on Amateur Radio, but if you check the summaries following any of the disasters Amateurs help in, you will frequently find setting up Winlink is one of their first priorities. For some reason that eludes me, it is not looked on favorably in our area, but I think this is a huge mistake. Easy to set up, works well, costs nothing – yeah, I don't want any part of that! There is only one volunteer we know of checking in on Winlink weekly.

So, what would it do to our reputation if on each of these nets we had five or more checking in each week from Mahoning County? More importantly, what would it mean in terms of our capability to help during an emergency?

Best Wishes for the Holidays
Dave, KD8NZF, EC
Frank, WB8YHD, AEC
Dottie, KC8SYF, AEC
Ray, K8NVY, AEC

FROM THE AFFILIATED CLUB COORDINATOR

Tom Sly, WB8LCD-ACC
tomsly29@gmail.com

Everyone has something to give to their club. Every one of us can make a contribution to what our clubs want to accomplish. This point was driven home to me a short while ago when one of our club (PCARS) members passed away, suddenly, and tragically. He was a regular participant in our club meetings and in our activities. Although he had been a club trustee, he had to drop that position due to changes in his personal family situation.

More immediately, he was currently our club's VE liaison, and ran our VE Sessions for many years. The officers of the club rarely talked about VE sessions. They happen automatically, every other month. The VE's were reminded that the sessions were coming up and reminded of the date, time, location and the credentials the VE's needed to bring with them. It just happened.

With everything that's involved in the management of a successful club, that was one thing the officers did not need to worry about on a regular basis because they knew it was covered. Several other activities are covered that way. We have several operating activities each year Field Day, State QSO Parties, Freeze Your Acorns Off (FYAO), OSPOTA, to name a few. Thanks to a couple of dedicated members of our club, these things happen. The officers can count on them being in our annual schedule of events and that they will be promoted within the club and managed at the event.

One of our club members is not able to participate in a lot of our activities, including the monthly meetings. BUT, he's a regular on the weekly nets, not only for our club, but probably just about every other club across NE Ohio! He knows what's going on with our club, and he is a 1-Man publicity department for our club's activities within the local Ham community.

I'm sure you get the point here. You don't have to be an elected officer of the club to help elevate your club from the "run of the mill" to "Outstanding!" In fact, you don't even need to be appointed to somethings like this. Just show up and take care of the details! Too often we look at these types of things and only consider them from the point of view "What's In It For Me?" I'm asking you to turn that around and ask not what your club can do for you, but what can you do for your club? When our friend mentioned above passed away, there was a void left immediately from his loss. Others have stepped up, but our friend was appreciated and is missed for his contributions to our club, our lives and Ham Radio in general. Be that guy!

So here we are at the end of 2018. I know many clubs take this time to renew their memberships, hold elections for the coming years club management teams, and celebrate the successes and accomplishments of the year almost gone. Many clubs take some time off in December, maybe have a banquet to celebrate their achievements, or maybe just to enjoy each other's company in a non stressful way. That's all good. The "social" part of any club is just as important as the formal "Ham Radio" stuff that we do. Everyone who comes to, or belongs to, your club should feel like they are doing something with their Friends! There's already enough divisiveness in our world today.

Make your club one of the few places left where we can come together, even with different opinions or views, yet still be friends because of our common bond in Ham Radio!

Even though you're laying back a bit in December, don't get too relaxed! Show your club members that 2019 is going to be a year they will want to be involved with the club and its activities. Put out a tentative calendar of events for the first 6-months, or even the whole year, to show your membership that you've got some things of interest to keep them involved. I've said before, most Hams like to build things, following is a list of projects that would be easy for someone to put together (and if you come up with something really good, think about "kitting it up" and offering it to the other clubs in the OH Section):

Code Practice Oscillator.

Think about all of the new Hams in the last five years (basically anyone with a KD8 or KE8 callsign). They came into the hobby with no morse code requirement. That doesn't mean they might not enjoy *Continued page 12*



TOM SLY - CONTINUED FROM PAGE 11

operating CW! They just need someone to introduce them to it. You will probably get several members out on a Saturday morning to build a simple kit that has been designed for them to be successful at building it. As an aside from that, maybe there are a few members that would be willing to start a morse code class teaching them what they need to know to get on the air and make their first CW QSO. You might have a group that would want to look into the designing of the project including the layout and etching of PC boards!

**Dual Band J-Pole Antenna.**

This is a simple to build (mostly mechanical assembly) project that will give many of your new guys a better signal into the local repeaters. Pretty simple to Kit Up depending on how much you want the individual to do. A good place to learn some basic shop skills which most people have little of no exposure to! Maybe even include an adaptor for their HT to they can get rid of the almost worthless "rubber duck" and hook their handheld up to a real antenna. A J-Pole on top of a 10-20 painter's pole can make an effective solution for EmComm and Public Service events where the rubber duck just doesn't quite make it.

Jumper Cables.

Everyone needs some coax jumpers around the shack. Why not build your own? This is a good group project that involves learning how to attach different coax connectors to cables. Crimp on or solder, either way, you are making something useful and learning a skill that is better learned with someone experienced watching over you rather than trying to learn if from a book or a youtube video. Don't stop with coax jumpers, everyone can use some test leads around the shack with alligator clips or test prods on them. Add in some power cords with power poles on them. Let everyone make their own and be able to leave saying I did that myself! A power-pole distribution box is also another good project which can range from a simple box to distribute power, to a more ornate project with both voltage and current meters attached! Make it your own.

**Crystal Radio Sets.**

Yeah, really! Simple to build all the way up to some pretty ornate circuits. Include a discussion on the theory behind the operation all the way from the simplest set to what each of the added components add to the more ornate sets. This can be a good project to share with kid's groups. Most kids are pretty amazed at a radio that works without any power or batteries.

**Radio Restoration.**

Next time you're out at a Hamfest, look at some of the really cool, old radios, a lot of which some people are just looking to get them out of their basements! Buy a couple cheap and make it a group project to restore it to working condition. Someone who has skills with woodworking or metal working can do a session on restoring old radio cases to make them look original. Someone with the skills to SAFELY dig into the insides of the set and bring it back to within specs can spend a session or two, doing, or leading the work to be done with the participants. If you have a couple of teams each working on a radio, it can become a club competition!

QRP Radio Kits.

The whole QRP philosophy of doing more with less, lends itself to homebuilding of kits and projects. Do some internet searches and you will find many QRP Clubs that have kits for some pretty neat projects already Kitted Up and for sale. Turn someone loose on this and I'm sure that they will come up with tens, if not hundreds of options!

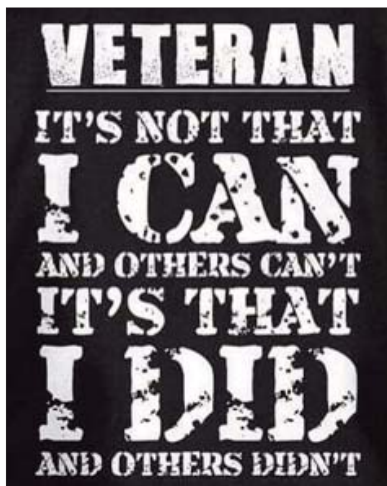
That's a few ideas of things to do. Some of them could lend themselves to more than just a one session project. Let's say you've got a club with 25 active members. Out of that just 5 are interested in building a CPO (code practice oscillator). That's OK. Everyone does not have to participate in everything all of the time. If 5 people want a CPO, 7 people want a J-Pole antenna, 4 people want a QRP kit, 6 people want some jumper cables and another 6-8 are interested in radio restoration, what you will find is that by offering a lot of different types of projects, at some point or another you will hit on something that will be of interest to everyone! *Continued page 13*

TOM SLY - CONTINUED FROM PAGE 12

As you keep doing different things, many people will "cross over" in their interests and find that something they never considered before is really very cool and they'll want to be part of it! Through the course of the year you are providing activities for everyone's interests, and not just doing nothing because you can't find something that will satisfy everyone all at the same time.

Finally, Thanksgiving is coming up on us pretty quick. Having been a Ham for 50 years now, I am certainly thankful that this hobby exists and for all the good we do for our communities. For all of the good times I've experienced as a Ham over those 50 years. And most of all, for the people I've come across through the years and what their friendship has meant to me. Almost all of my really good friends are Hams. Thank you for being there, and thank you for allowing me to be a part of this amazing Fraternity!

73, Tom Sly WB8LCD



THE COMET OF THE YEAR

Comet Wirtanen makes a very close (for a comet) approach to the Earth

COMING VERY SOON, THE COMET OF THE YEAR: Get ready for a very nice comet. Comet 46P/Wirtanen will sweep past Earth, making one of the 10 closest approaches of a comet to our planet during the Space Age. If forecasters are correct, Comet Wirtanen could become visible to the naked eye for weeks in Dec. 2018. The small but unusually active comet comes closest to Earth just four days after its closest approach to the sun, and it will be "up" all night long, making this an exceptional flyby.

Occurs Dec 16, 2018 - Less than 4 days after perihelion The comet is near its brightest

Geocentric Distance 0.0775 AU

30 Lunar distances

11.5 million km

7.1 million miles

10th closest comet in modern times

Few of the others reached naked eye brightness

No chance of the comet hitting Earth

Wirtanen is inherently relatively bright

Observing conditions are excellent

Has higher production rates than typical comets of the same size Predicted to reach naked-eye brightness around close approach In the most optimistic scenario, it could remain there for several weeks

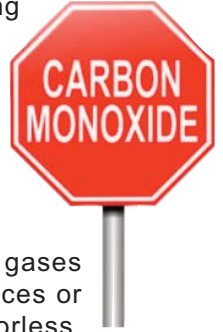


Above: Yasushi Aoshima of Ishikawa, Japan, took this picture of Comet Wirtanen on Oct. 7, 2018. The comet's green atmosphere is almost twice as wide as the planet Jupiter. Browse the comet photo gallery for more. <http://spaceweathergallery.com/comet_gallery.html>

http://wirtanen.astro.umd.edu/46P/46P_2018.shtml

CARBON MONOXIDE (CO) POISONING

Hi Gang, I'm sure that a number of you are asking what the heck is the Section Manager writing about this stuff, it's not Amateur Radio related!! Well my friends, you are very mistaken. It's not only Amateur Radio related, it's something that as a HAM operator you may not ever have thought about. Where's your ham shack located? In the basement, garage or out building? Most generally ham shacks are not in the living room or main part of the house. As such, heating devices are usually some sort of a supplemental heater/furnace, and that's why I'm writing about this.



First, let's describe what Carbon Monoxide (CO) is. Carbon Monoxide (CO) is the poisonous gases emitted from carbon fueled heat sources (i.e.. gas or fuel oil furnaces, wood burning fire places or stoves, kerosene heaters, propane heaters). I could go on but I think you get the idea. It's colorless, odorless and it will definitely kill you if you breathe very much of it in. How does this gas kill? It actually migrates into the blood stream and replaces the oxygen in your blood with the Carbon Monoxide. Once it invades your blood stream it will be with you for a very long time, in fact, most of your life! Just ask any firefighter about that. Going into burning buildings without a Self-Contained Breathing Apparatus (SCBA) on will definitely subject you to Carbon Monoxide poisoning, and it takes years and years to get it out of your system, if ever.

Sometimes, if consumed in a large enough quantity, you may need a complete blood transfusion to just keep you alive. Yes Virginia, it is that deadly!!

Why am I writing about this? It's very personal to me. A number of years ago a very close friend (and his entire family) died in their sleep because they consumed Carbon Monoxide (CO) without knowing it. They lived in an old house on the north side of Mansfield and because it was old, it was drafty with leaks around the doors, windows and the walls didn't have any insulation in them. We had gotten a cold snap in early November, and back in the middle 1970's kerosene heaters were all the rage to supplement heat in just this kind of house. Well, with the help of my co-workers we were able to purchase a big kerosene heater to help them through this cold snap. They got the heater all set up and running and all was fine for the first several days, then on the third day the dad came to work complaining of a very bad headache. None of us thought much about it that day and the dad continued his job on the assembly line with the rest of us. The next afternoon we all found out that the heater had been malfunctioning and every member of the family had died of this very dangerous gas.



I was absolutely torn apart. I had been one of several people at work that helped take up the collection to purchase the heater. It took me a long, long time to get over that. Don't get me wrong, there's nothing wrong with using these types of supplemental heating sources but be very careful when you do. At that time CO detectors were truly non-existent for homes, and the ones that were available were for scientific and commercial use, and cost hundreds and hundreds of dollars. That's all changed now. CO detectors are as cheap now as smoke detectors. You can get one for as little as \$10 now. That's an extremely cheap form of protection from this deadly gas.



Winter is almost here. I don't know about how it is at your house, but here in the little burg of Lexington, when it gets cold outside, you'll see the smoke coming out of many chimneys around here. That means that the temperature has dropped to below where it is comfortable. This is the point where the furnaces come on and people start thinking about lighting up the fireplaces and so forth. Now if these devices haven't been recently serviced, birds can make nests in the chimney's and like your car, the heat source most likely needs a tune-up to make sure that it's running efficiently and safely. Having the chimney stuffed up with bird nests or the heat source not burning correctly can cause Carbon Monoxide to accumulate in your house without you even knowing it. That's where the CO detector comes into play... Please, please buy one, or two of these really inexpensive CO detectors for your safety and use it! During my trips around the state.

By the way, it's not all about detection either. Do you have a properly rated fire extinguisher within your reach? If not, get one. Learn how to properly use it. It will save you from a lot of damage if you know how to use it properly. Don't assume that all you do is pull the pin and squeeze the trigger. It's about knowing how to sweep and aim at the base of the fire. Do yourself a HUGE favor, buy an extinguisher or two and teach *Continued page 15*

CO POISONING - CONTINUED FROM PAGE 14

your entire family how to properly use it! Yes, even the kids need to know how to properly use an extinguisher

Scott Yonally, N8SY -SM
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WRARC IS LIKE MAKING BREAD



WRARC is like making Bread the old-fashioned way. All the parts are needed and if one is left out-No bread! A lot of us are quiet--like flour or milk. It takes a lot of the quiet ones to make a good club, or a loaf of bread, but that's not all.

Some of us are saltier than others. A little salt is required. A lot of salt can ruin the whole thing. Then there are those of us who are really sweet - our YLs?? This too is an essential ingredient. You mix them together what happens? Nothing! You have a lump that just sits there.

What's missing?? The yeast, when you mix the yeast into the lump, the lump wants to sit there lumpishly, but the yeast has that enthusiasm. "Rise, Get up, get up" the yeast cries out kicking and hollering. Very reluctantly, the lump starts to rise. Then it gets punched down, but the yeast won't quit. Spurred on by the sugar, the yeast multiplies, and soon the loaf rises. Into the oven it goes and shortly thereafter and the people are fed. (The club is active.) It doesn't matter which part you play as long as you play a part.

Just lookout, the yeast will get you! Come on up, UP!!!! Let's all pitch in 2019 and we will make the best bread/club in the county.

73, Cam KI6WK/SK



THANK YOU FROM YE ED

Just a sort note thanking those of you, who took the time to write an article this month, or take a picture. You are what makes your newsletter a winner, and my job so much easier. Now that I'm not there to participate in all the fun things you all are doing, so I can tell you all what a good time I had doing those fun things with you. I have to rely on all of you to tell those fun stories. Please don't be shy. Those stories are more important than ever. So proud to be a member of WRARC! Thanks in advance.

73, Jane K8JAA
WRARC/NL Editor



Tell us how you got interested, or how you got started. Maybe you had an Elmer you'd like to tell us about. -ed

Take time to laugh for it's the music of the soul Author: --From an old English prayer

The following were some comments made in the 50's

1. "I'll tell you one thing, if things keep going the way they are, its going to be impossible to buy a weeks groceries for \$20.00."
2. "Have you seen the new cars coming out next year? It won't be long when \$5,000 will only buy a used one."
3. "If cigarettes keep going up in price, I'm going to quit. A quarter a pack is ridiculous."
4. "Did you hear the post office is thinking about charging a dime just to mail a letter?"
5. "If they raise the minimum wage to \$1.00, nobody will be able to hire outside help at the store."
6. "When I first started driving, who would have thought gas would someday cost 29 cents a gallon. Guess we'd be better off leaving the car in the garage."
7. "Kids today are impossible. Those ducktail hair cuts make it impossible to stay groomed. Next thing you know, boys will be wearing their hair as long as the girls."
8. "I'm afraid to send my kids to the movies any more. Ever since they let Clark Gable get by with saying 'damn' in 'Gone With The Wind,' it seems every new movie has either 'hell' or 'damn' in it."
9. "I read the other day where some scientist thinks it's possible to put a man on the moon by the end of the century. They even have some fellows they call astronauts preparing for it down in Texas."
10. "Did you see where some baseball player just signed 1 contract for \$75,000 a year just to play ball? It wouldn't surprise me if someday that they will be making more than the President."
11. "I never thought I'd see the day 11l our kitchen appliances would be electric. They are even making electric typewriters now."
12. "It's too bad things are so tough nowadays. I see where a few married women are having to work to make ends meet."
13. "It won't be long before young couples are going to have to hire someone to watch their kids so they can both work."
14. "No one can afford to be sick any more, \$35.00 a day in the hospital is too rich for my blood."
15. "I'm just afraid the Volkswagen car is going to open the door to a whole lot of foreign business."
16. "Thank goodness I won't live to see the day when the Government takes half our income in taxes. I sometimes wonder if we are electing the best people to Congress."
17. "The drive-in restaurant is convenient in nice weather, but I seriously doubt they will ever catch on."
18. "I guess taking a vacation is out of the question now days. It costs nearly \$15.00 a night to stay in a hotel."

Thanks Dennis, KA8DJM





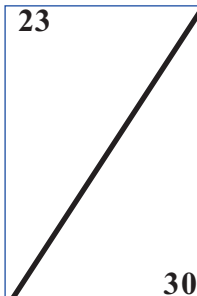


Xerox and Wurlitzer will merge To produce reproductive organs.



December 2018

PREPAREDNESS LEADS TO READINESS - MATT W8DEC



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	1 YL Breakfast 
2	3 ARES Net 8:30 PM 146.745 PL 110.9	4 Santa's List Day	5	6	7 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	8 National Brownie Day
9	10	11 Ham Breakfast Eat'n Park Boardman 8:30 A.M. Board Meeting Eat'n Park Austintown 7:00 P.M.	12 Channukah 1st Day 	13	14 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	15
16 National Chocolate Covered Anything Day	17 ARES Net 8:30 PM 146.745 PL 110.9	18 WRARC Meeting 7:00 P.M	19	20  WaveBender Input Due	21 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	22  Winter Solstice 5:23 P.M. EST
23 	24 	25 Merry Christmas 	26	27 National Fruitcake Day	28 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	29
30	31 