



Mahoning Valley Amateur Radio Association

Mahoning Valley Amateur Radio Association Voice Coil



April 2026

mvara.w8qly@gmail.com

The Voice Coil - Volume 26-4

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President's Corner

Hey Everyone, hope you're all staying safe with the recent storms rolling through the area! I know personally my allergies don't know what to do with the drastic change in both temperature and weather. As a note, don't forget to keep an ear to the ground with Tornado season underway as we've already seen some warnings and touchdowns in the surrounding areas! If you're interested in being more involved in Mahoning County SkyWarn, please reach out to Dean DeMain (w8yusu@arrl.net) to get more info. Also don't forget we have upcoming SkyWarn trainings, so for both ARES and SkyWarn members in the club, be sure you're up to date and to attend if needed, once again Dean should have details if you're interested. Speaking of training, thanks to everyone that attended the CPR/First Aid/Stop the Bleed classes in March, and a BIG

thanks to our Mahoning County ARES, Mahoning County EMA and Poland FD for organizing and hosting the class, it was very insightful and extremely useful (though I hope I don't ever need to use those skills, I'm glad I know how to just in case)! I hope you all have a Happy Easter as it approaches quickly this upcoming weekend, and I'll see you all at the next meeting!

73s Ralph Streb - K8TCP

Upcoming MVARA Events

Date	Event	Location
April 9, 2026	MVARA Meeting	Boardman
April 25, 2026	NVIS Day	Lake Milton

April Club Program

Neil has been at it again and has lined up Grayson Evans, KJ7UM, to join us via Zoom for April. Grayson, in addition to being a Ham, is the author of *Hollow State Design*, now in its third edition. 344 pages of pure Thermotron bliss. I'll let Grayson tell you how the name Thermotron came about, but it is what he calls vacuum tubes.



I was lucky enough to grow up during the time the country was transitioning from Vacuum Tubes to Transistors. So I spent a number of afternoons when I was young at Gray Drug with my dad using the store's tube tester to check the tubes from our TV because the TV was acting up. (Fred – you remember testing tubes at the store???) Consequently, I have a pretty good collection of tube manuals – all the classic RCA and GE manuals and a few less classic. But they don't hold a candle (filament?) to Grayson's book.

Each year, Nancy and I cross Florida in March to visit the Hamfest in Stuart, FL. It is a good Hamfest, but even better, Dave & Danielle Perry are heavily involved with the Stuart club and the Hamfest, so we see them at Stuart each year. This year Grayson had a booth at the Hamfest and I had a chance to see his designs and ended up buying his book. I've been buried in it ever since – learned more about vacuum tubes in the first thirty pages than from 50 years of studying them.

So get all your Vacuum Tube (oops – I meant Thermotron) questions together as we welcome Grayson to the MVARA.

Groups.io

This is a reminder that MVARA has a groups.io page we use to make announcements and discuss upcoming events and such. The page is available to all members of the club and can be found here:

<https://groups.io/g/mvara> and there is a subscribe link about midway down the page.

From the Shack and Field: A New Amateur's Notes Neal Bayless, KA3UON

A last-minute trip to my parents in Ocala just happened to fall on the same week as Hamcation, Orlando Amateur Radio Club's (OARC) Hamfest and one of the biggest in the world. The event has seen significant growth, reaching a record high of **25,321 attendees** in 2024. For comparison, Dayton Hamvention set a record in 2025 with 36,814 visitors and Tokyo claims over 40,000. They utilize a huge number of volunteers from clubs around the FL area to keep the chaos to a minimum and they do a fine job indeed. There is even a well put together, easy to use, intuitive app for downloading to help attendees plan and navigate their Hamcation weekend.



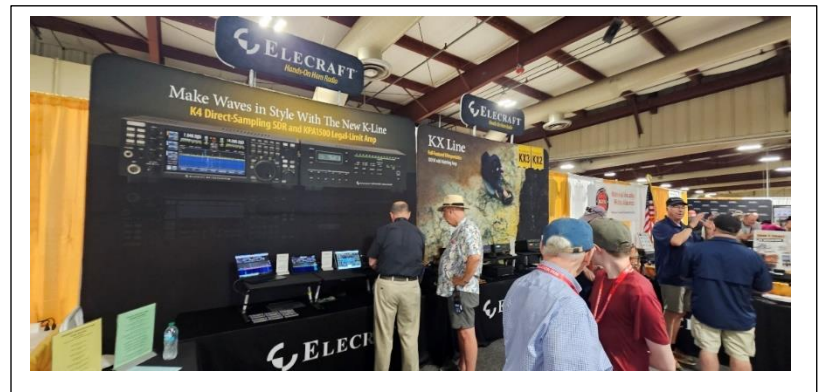
The weather was ideal for the Friday opener of the event. The tailgaters lot at 7:30 a.m. was already starting to stack up with traffic and the RV lot was filled with acres of rolling ham shacks with all types of antennas poking above the horizon.

I was going to Hamfests in the late 1970's before I knew the alphabet, let alone what the letters CW or SSB signified. I remember snippets of the White Swan Hamfest and the crowds of Warren. I sifted through old boxes of tubes hunting from dad's lists for whatever smoked out clunky metal cabinet rig he was working on at the time (after I learned my letters and numbers, of course).

Hamcation reminded me of those seemingly endless aisles of radio "stuff" new and old. Side note: my father reminded me of a ham that used to stroll around one of these with one of those old Steve Martin arrows through his head as he shopped for the "wild and crazy" great purchase. This is one of my earliest memories as a kid. Dew-soaked shoes, shivering in the early morning – often raining – and the sights, sounds, and characters like this are there as still frames in my mind.



I can recall seeing what could have been my first view of a computer at a Hamfest, my first radio-controlled item, and my first digital readout. Hamcation didn't disappoint in much the same way. In the vendor buildings I was able to lay eyes on and behold some of the highest end rigs and accessories I have seen in magazines and radio ads much like that as a kid with the Christmas catalog. Flex Radio, Yaseau, Icom, and Elecraft had booths here with some of their finest gear. Big name retailers like DX Engineering, Radioddity, and Gigaparts had space here selling a sampling of their goods. A number of other accessory vendors were also on hand with truckloads of parts, masts, antennas, and any other gadgetry you could imagine.



Organizations had a large footprint as well. The Long Island CW Club, CW OPs, HamSCI, POTA, and a couple of the local ARES setups. The ARRL had a wide section of space for membership, guest speakers, regional big-wigs, and also had their classic callsign W1AW/4 as a special event station open to all operators.

A particular highlight for me was the number of kids (like me a long time ago) that were not just milling about with their own fathers but involved. At the W1AW station mentioned previously, a young operator about 8 or 9 years old with headphones on and barely eyelevel with the rig made contacts under the watchful eye of an Elmer. I saw more than one kid testing or taking their picture with testing guru, Ham Radio Prep's Jim Reed, N4BFR, while others were carrying around a new license manual HRP was



handing out for free. It was great to see a younger crowd of operators coming onto the airwaves.

Classes and forums ran all day, every day, for the duration of the event. Topics from DMR, to using AI to analyze antenna design, to building kits, filled the days with one speaker after the next. Demonstrations on ARISS, Satellite, and HamSCI were also there for anyone to attend. Hours and hours of substantial content could be had by anyone in attendance. Food choice was plentiful, but not without some grumbling from the attendees suffering sticker shock.

Some of the surprises of the event were the strong presence of mesh network vendors. I was very surprised by the array of these devices and the throngs of people smashed up to get to these booths. As a side note, ARES is going through a little bit of an overhaul and mesh networks may play a part in this emergency communication array. The nodes are cheap, basic, and can be set up and forgotten about for a long time before much maintenance is necessary.

Another chuckle for me was the amount of star struck hams that were chattering about sightings of famous YouTube hams! I'm not going to deny it, when I was starting back to figuring out how to get back on the air or what has been going on in radio since I had last been active, I watched a lot of these. From setting up my rig, to building baluns and antennas, these videos saved me a ton of trial and error and frustration. Hamcation is a great, well-done event that I can't wait to go back to again and see some new stuff...and some old stuff. I even got to hunt some more tubes for dad again.

Mahoning County ARES Update

It has been a whirlwind of training for Mahoning County ARES Members lately. By the time you read this there will have been two Red Cross CPR and Stop the Bleed classes held for our Members with costs covered by the Western Reserve Fire District. Our Members appreciate the district's vote of confidence.



Another training that we haven't seen live in this area since the COVID epidemic is in-person Skywarn Training. That will be April 1st at the Stacy Pavilion, Austintown Park. See the National Weather Service Skywarn site for registration information. All of these training events qualify for ARES Task Book credit.

Speaking of the Mahoning County ARES Task Book, with that tool our ARES Members can do training on their schedule at their pace. Our Task book outlines a very doable path that our volunteers can do at their own pace and achieve their own "custom" training in emergency communications response. It's really a great training tool. If you're a Mahoning County ARES Member you should have a Task Book. If you don't you can download it from our website <http://mahoning-ares.org/>

Mahoning County EMA has a new tool for responding to emergency situations. EMA just put into service a few weeks ago their new EMA Mobile Command Post (MCP). The vehicle replaces a 20+ year old RV based unit that served the County well but was quickly becoming outdated. The new vehicle is not an RV repurposed for emergency response. The new unit is custom built from the ground up to serve as a command and control post for emergency response. Of course, communication is a key component of this vehicle.

The new MCP has state of the art communications equipment including two Amateur Radio transceivers. ARES volunteers have already been busy configuring and testing these new radios and working on antennas and data connections. There is more work to be done. Once it's completed there will be numerous opportunities for our ARES members to tour the new vehicle and become qualified to operate the new equipment. Look for future dates/times when the EMA MCP will be made available to tour and experience.

Coming up April 25th is the Ohio ARES NVIS Day. From 10 am until 4 pm that day ARES groups all over the state of Ohio will be on the air testing antennas built specifically for emergency communications within the state and with adjacent states. This will be a great opportunity to test your equipment whether it's from a park or your own backyard. Mark April 25th NVIS Day on your calendar and get on the air.

Mahoning County ARES has a lot going on. It's all happening because of you our ARES Members. Thank you all for your commitment to serving our communities in times of need.

If you're interested in joining Mahoning County ARES please visit our website <http://mahoning-ares.org/> or email mahoning.ares@gmail.com

Your ARES Leadership Team.

Off-Center Fed (OCF) Antenna: Multitalented or Misunderstood?

by Mark Haverstock, K8MSH

The Off-Center Fed dipole (OCF) – also called a Windom by many – has received mixed reviews among amateur radio operators. Although thousands of hams use and love these multi-band antennas, some people, including a few well-known antenna experts, view the OCF as a common mode current (CMC) generator or even an outdoor dummy load. But if built properly, the OCF is a great multi-band antenna ideal for hams with limited space. A ham friend of mine calls it an OCD antenna, poking fun at the lengths to which some hams will go to find the perfect feedpoint. In reality, it is one of the simplest and most economical antennas, and its length is comparable to a conventional dipole. This multi-band antenna doesn't require traps, loading coils, or a tuner on its operational bands.

History

Loren Windom and several others at Ohio State University discovered that changing the feedpoint affects an antenna's coverage and performance. The original Windom antenna from the late 1920s was an off-center-fed resonant dipole with a single-wire feedline of any length. It was intended for use on a single frequency only. Its main advantage was that it could easily be matched to a tube transmitter. Today's versions, based on the original Windom, include the common OCF and Carolina Windom.

How it Works

Like most HF antennas, the OCF is based on the dipole. By measuring impedance between the center and the ends of the dipole, you may find impedances between 73 and 3,000 ohms. For the OCF, the goal is to determine a point where the impedance is low enough to be useable on multiple bands. You can accomplish this by placing a feedpoint between 45 and 20 percent of the antenna's total length from one end.

Many OCF antennas are constructed according to a standard formula which places the feedpoint one-third of the way from one end, making two elements: one 33% and the other 67% of the total length. This results in low SWR on the lowest fundamental frequency for which the antenna is cut, and also on the *even* harmonics of that fundamental frequency—unlike a dipole which favors *odd* harmonics.

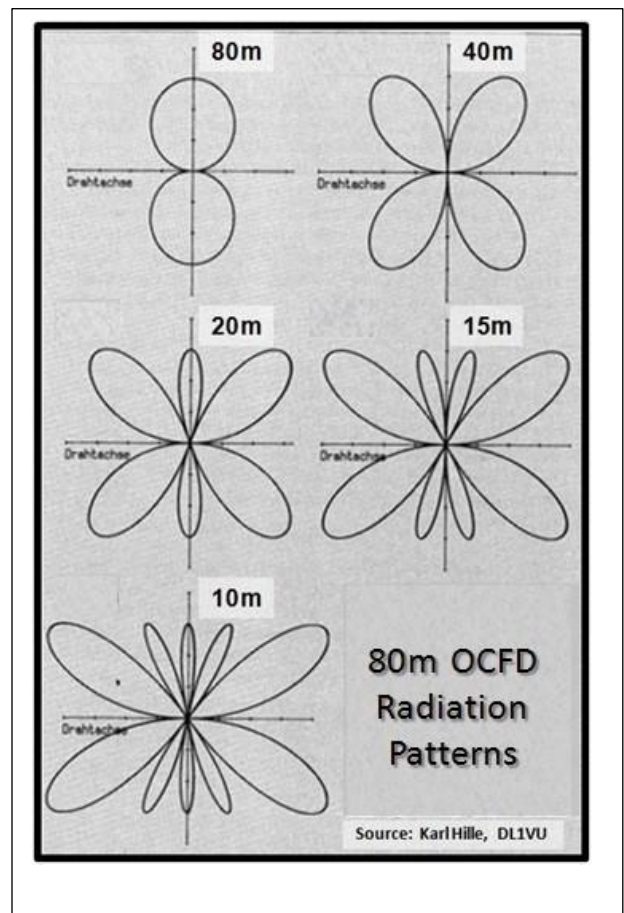
The OCF dipole presents a reasonably good match to the transmitter across multiple bands, which are even harmonics of the fundamental frequency, including 80, 40, 20, 12, 10 and 6 meter bands. Feeding the OCF dipole at a point that is one-third of its length from one end typically yields a higher feedpoint impedance, approximately 200-300 ohms, as compared to the center-fed half-wave dipole at 73 ohms. Most OCF antennas use a 4:1 impedance transformer at the feedpoint to match 50 ohm coax.

It seems that many OCF builders have found their own “sweet spot” through experimentation. For example, some hams have reported choosing a 20%-80% split in conjunction with a 4:1 current balun, providing a usable antenna on 80, 40, 30, 20, 15, 12, and 10 meters, with SWR readings less than 2:1 on these bands.

OCF antennas exhibit a radiation pattern similar to that of a conventional dipole at its fundamental frequency but differ in the harmonic bands. In the illustration, you can see that the figure 8 pattern splits into multiple lobes on the higher bands. In real life, however, the nulls are not as deep as the picture implies.

Installing the OCF

There are tricks to improving the performance and band coverage on an OCF once you've settled on the location of your feedpoint.



Distance above ground affects impedance—the higher the feedpoint, the higher the impedance. Typically, instructions suggest the feedpoint be at least 30 feet above ground level. Several sources suggest switching to a 6:1 balun if the antenna height is 70 feet or more.

Keep the OCF antenna as clear of surrounding objects as possible, especially metal. They can be installed as a flat-top or inverted-V. The inverted-V should have an inside angle of no less than 120 degrees between the elements, and each element end needs to be at least 8-10 feet above ground.

Whenever possible, run your coax an equal distance away from both legs of the OCF antenna as far as possible—don't run it parallel to the antenna.

Adding a vertical component can enhance performance by lowering the angle of radiation. The Carolina Windom is a variation of the OCF with a choke balun (line isolator) placed 22 feet below the 4:1 balun on an 80-10m off-center fed antenna. This allows the 22 foot vertical section of feedline to act as a radiator. The radiation pattern of this vertical radiator combines both horizontal and vertical components, reducing the effective radiation angle and bringing more of your signal near the horizon.

Performance

Essentially, an OCF dipole is just a dipole that is not fed at its center; it performs much like a center-fed dipole. It provides multi-band operation on even harmonics, often without using a tuner/matchbox. Overall, antenna system losses are lower because lower SWR at the OCF's operating frequencies means less feedline loss and lower losses from using a tuner/matchbox, while providing a good match to the transmitter.

OCF Antenna Advantages

- A single antenna will cover *almost* all HF bands
- Lowest cost per band compared to any good multi-band antenna
- Low radiation angle with good efficiency
- SWR generally well under 3:1 on most bands, except for 80/75m where a tuner is helpful. (This is typical of all 80m dipoles)
- No need for a separate matchbox. The transceiver's built-in ATU will usually work to minimize SWR

Disadvantages

- The SWR is not the same on all bands; it varies on each band
- Resonant frequency is not independently adjustable by band
- The off-center feeding results in an increase of common mode current trying to flow down the outer shield of the coax. With proper choking, this can be held in check, at least for moderate power levels up to 1kW

- The OCF has somewhat more pronounced nulls in its radiation pattern than a doublet on its harmonic frequencies

(Originally appeared in *DXE On All Bands*, April 2021)

Amateur License Refresher

It's probably been a while since you took your Amateur License exam. Here are a few sample questions from the current question pools just to keep those synapses firing.

Extra Pool

E5A01

What can cause the voltage across reactances in a series RLC circuit to be higher than the voltage applied to the entire circuit?

- A. Resonance
- B. Capacitance
- C. Low quality factor (Q)
- D. Resistance

E5A02

What is the resonant frequency of an RLC circuit if R is 22 ohms, L is 50 microhenries, and C is 40 picofarads?

- A. 44.72 MHz
- B. 22.36 MHz
- C. 3.56 MHz
- D. 1.78 MHz

E5A03

What is the magnitude of the impedance of a series RLC circuit at resonance?

- A. High, compared to the circuit resistance
- B. Approximately equal to capacitive reactance
- C. Approximately equal to inductive reactance
- D. Approximately equal to circuit resistance

General Pool

G9C01

Which of the following would increase the bandwidth of a Yagi antenna?

- A. Larger-diameter elements
- B. Closer element spacing
- C. Loading coils in series with the element
- D. Tapered-diameter elements

G9C02

What is the approximate length of the driven element of a Yagi antenna?

- A. 1/4 wavelength
- B. 1/2 wavelength
- C. 3/4 wavelength
- D. 1 wavelength

G9C03

How do the lengths of a three-element Yagi reflector and director compare to that of the driven element?

- A. The reflector is longer, and the director is shorter
- B. The reflector is shorter, and the director is longer
- C. They are all the same length
- D. Relative length depends on the frequency of operation

E5A01 (A)
E5A02 (C)
E5A03 (D)
G9C01 (A)
G9C02 (B)
G9C03 (A)

Upcoming Contests and QSO Parties

Dave Fairbanks N8NB

Contests:

Source is contestcalendar.com

Many more activities online. These are recommended.

April 2026

+ Louisiana QSO Party	1400Z, Apr 4 to 0200Z, Apr 5
+ Mississippi QSO Party	1400Z, Apr 4 to 0200Z, Apr 5
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Apr 7
+ DIG QSO Party, CW	1200Z-1700Z, Apr 11 (20m-10m) and 0700Z-0900Z, Apr 12 (80m) and 0900Z-1100Z, Apr 12 (40m)
+ RSGB FT4 International Activity Day	1200Z, Apr 11 to 1200Z, Apr 12
+ New Mexico QSO Party	1400Z, Apr 11 to 0200Z, Apr 12
+ Missouri QSO Party	1400Z, Apr 11 to 0400Z, Apr 12 and 1400Z-2000Z, Apr 12

+	Africa FT4 DX Contest	1500Z-1800Z, Apr 11
+	Georgia QSO Party	1800Z, Apr 11 to 0359Z, Apr 12 and 1400Z-2359Z, Apr 12
+	North Dakota QSO Party	1800Z, Apr 11 to 1800Z, Apr 12
+	RSGB 80m Club Championship, CW	1900Z-2030Z, Apr 13
+	Florida State Parks on the Air	1200Z-2359Z, Apr 17 and 1200Z-2359Z, Apr 18 and 1200Z-2359Z, Apr 19 and 1200Z-2359Z, Apr 20
+	Michigan QSO Party	1600Z, Apr 18 to 0400Z, Apr 19
+	Ontario QSO Party	1800Z, Apr 18 to 0300Z, Apr 19 and 1200Z-2000Z, Apr 19
+	Quebec QSO Party	1300Z-2400Z, Apr 19
+	ARRL Rookie Roundup, SSB	1800Z-2359Z, Apr 19
+	Run for the Bacon QRP Contest	2300Z, Apr 19 to 0100Z, Apr 20
+	Nebraska QSO Party	1400Z, Apr 25 to 0200Z, Apr 27
+	Florida QSO Party	1600Z, Apr 25 to 0159Z, Apr 26 and 1200Z-2159Z, Apr 26
+	UA1DZ Memorial Cup	1300Z-1859Z, Apr 26
+	BARTG Sprint 75	1700Z-2059Z, Apr 26
+	K1USN Slow Speed Test	0000Z-0100Z, Apr 27
+	QCX Challenge	1300Z-1400Z, Apr 27
+	ICWC Medium Speed Test	1300Z-1400Z, Apr 27

DX Information

Source is www.ng3k.com,

Svalbard is rarely on and would be a good catch.

Cocos (Keeling Islands) VK9C will still be on in May.

Antarctica VK0TBC will be active through the end of the year.

April						
2026 Apr03	2026 May20	Rodrigues I	3B9N	VU3OPT	OPDX 20260221	By VU3OPT; 20 15 10m; CW
2026 Apr08	2026 Apr08	Svalbard	JW	LoTW	OPDX 20260310	By KK6IK as JW/KK6IK fm Spitsbergen I (JQ78tf); 40- 15m; CW; QRP
2026 Apr11	2026 May01	St Kitts & Nevis	V47EM NEW	LoTW	OPDX 20260319	By G0TLE fm Calypso Bay, St Kitts I; @V47JA; 80-10m; CW SSB; holiday style operation; QSL via Club Log OQRS or G0TLE direct
2026 Apr16	2026 Apr30	Bermuda	VP9KF	See Info	TDDX 20260206	By G4BKI fm Bailey Bay; 160-10m; CW; QSL: c/o Paul Evans, 15 Watch Knob

						Lane, Swannanoa, NC 28778, USA
2026 Apr17	2026 Apr22	Fiji	3D2JK	LoTW	OPDX 20260216	By SP5APW fm Lakeba I (IOTA OC-095); 20-6m; mainly FT8, SSB; QSL via Club Log OQRS
2026 Apr19	2026 Apr30	Marquesas	TX9W	LoTW	K5WE 20251001	By K5WE W5CCP N5TEA K4VBM WD5COV F6BCW fm Atuona, Hiva Oa I (IOTA OC-027); 160-6m; CW FT8 FT4 SSB RTTY; 6 stns; QSL via K5WE
2026 Apr25	2026 May08	Gambia	C5	LoTW	OPDX 20260207	By F4AGG F5RAV as C5C (SSB CW) and C5D (RTTY PSK FT8); HF; QSL C5C via F5RAV direct; QSL C5D via LoTW only

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Website: The MVARA is on the web at www.mvara.org. It is the place to go for club events, classes, newsletters, VE exams, swap and shop, repeaters, history, documents, and contact information.

24/7 Club Connection: The MVARA is on groups.io at <https://groups.io/g/mvara>. Members are invited to hang out with us there and discuss any ham related topic that interest them such as, Club Activities, Parks on the Air, Solar Cycle 25, EmComm, Special Event Stations, Contesting, Public Service, and Swap and Shop. There is video on our website at <https://mvara.org/videos.html> that shows how to use and join the 24/7 Club Connection.

The **VOICE COIL** is the monthly publication of the Mahoning Valley Amateur Radio Association, Inc. (MVARA) and is intended to present news, issues and opinions of interest to MVARA members and the Amateur Radio Community. We encourage contributions of articles, letters to the editor, etc. and welcome newsletter exchanges with other clubs from around the country and around the world. Permission is granted to reprint material contained herein as long as proper credit is given to this newsletter and the author. Ideas for and contributions to the VOICE COIL should be submitted to: mvara.w8qly@gmail.com

Submissions must be received **no later than the 24th** of the month prior to the month of issue, unless otherwise specified. **Submissions should be in MS Word format or ASCII text—no PDF, please!** Material received after the deadline will be used in the next month's VOICE COIL if it is still current and /or newsworthy.

Swap and Shop Policies

Swap and Shop listings are open to all licensed Mahoning Valley Hams--you don't need to be an MVARA member. You can include a picture for your listing. Please submit your list to mvara.w8qly@gmail.com for placement in both *Voice Coil* and website. MVARA assumes no responsibility for transactions made or inaccuracies in ads. You are responsible for checking your ad and notifying us of any corrections. Ads will run for two consecutive issues unless we are notified otherwise.

The Mahoning Valley Amateur Radio Association, Inc, meets the second Thursday of every month. Location and time are subject to change. Dues are \$20.00 per year, \$10.00 each for additional family members. Contact Nancy, nanceanne34@gmail.com for details.

The club call is **W8QLY**; equipment operated under this call includes a two-meter voice repeater at 146.745 (-600, 110.9 PL).

Club email: mvara.w8qly@gmail.com

MONDAY NIGHT NET operates every Monday at 9:00. PM on 146.745 MHz.

SKYWARN NET - On 146.745 MHz as weather warrants.

ARES NET- First and third Mondays of each month at 8:30 PM on 146.745 MHz; prior to the Monday Night Net.

Disclaimer

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