Mahoning Valley Amateur Radio Association
Voice Coil

October 2025	mvara.w8qly@gmail.com	The Voice Coil - Volume 25-10

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President's Corner

Another year of Oh Wow and their Silly Science Sunday is in the books, and I can report the kids had a great time. Santa talked to 123 kids and listened to each wish. We talked to kids aged 4 to 52 years old. We even talked to several of the parents, and some are even interested in getting their license.
Elections are next month, and we still need a President. I have plenty of Trustees, but no one has talked to me about President. Someone needs to step up and talk to me about being President.
Scott, KE4UHC

Upcoming MVARA Events

Date	Event	Location
October, 2025	General Class	Online
October 9, 2025	MVARA Meeting	Boardman
November 5, 2025	MVARA VE Testing	Boardman

October Club Program

For October the folks at Ham Radio Prep will be joining our Zoom to talk to us about new programs they have started. HRP is the online course materials we recommend to students in our license classes.

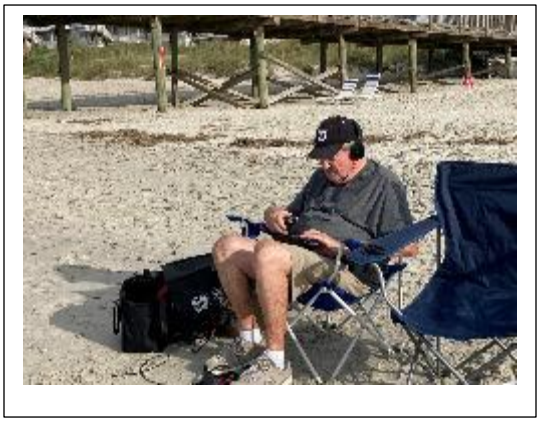
Silly Science Sunday

September 14th MVARA once again participated in Oh Wow's Silly Science Sunday event. We had another great year and were able to get 123 youngsters on the air with Santa. We also had displays on CW helping young ones spell their name in Morse Code, and lighting LED light strips.

Groups.io

This is just 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.

Retirement is Such a Difficult Part of Life



From the Shack and Field: A New Amateur's Notes

Neal Bayless, KA3UON

QRP Part I:
I saw a picture of an operator on a rocky peak above tree line with a wire and some sort of small rig. What is this? I have backpacked for 4 or 5 nights here and there but have never thought about lugging extra gear around to make contacts or "activate a summit". Another weekend of obsessed reading about SOTA (Summits on the Air) and the gear used quickly led to QRP (low power operating) and what all this entails.

SOTA is one thing for another day, but QRP is another one of the many cult like cliques with the amateur community. While some are melting the atmosphere with linear amplifiers and beams a couple hundred feet in the air while contesting, there seems to be an equal number committed to the minimalist life at home and portable eking out contacts from down to fractions of a single watt.

QRP is from that list of "Q" codes you may have kept a copy by your rig as you started getting on the air. It seems to have been created to ask, "Shall I reduce power?" and has morphed into a term to define low power amateur radio. Low power in the QRP cult typically means 10W SSB or anything 5W or lower on CW. Many of the modern multI-band rigs will only go down to 5w and so a specific "QRP" rig is often desired to engage in the low power realms. This too does not cover the many homebuilt and commercially available kits for QRP that are capable of operating at <1w!

There are a vast and wide number of QRP operators that divide out further from the unique radio craft. There are as many sub-groups in QRP as there are QRP'ers it would seem. One of those is a group that seems to aspire to break the miles/watt record. These folks dice the watt into further milliwatts to a point where it is hard for me to imagine that yelling out the window wouldn't be a more efficient method of communication. However, once I got to looking more into these minimalist lunatics, it was fascinating to see what they could do with fractions of a watt. The coveted USA to Australia dx contact has been made with only 5w. The next time you are on the air, crank your rig down to 5w and try to break into a pileup on a weekend contest. While there is an award by the QRP Amateur Radio Club International for 1000mi per 1w for those that do so. An excerpt from The Beacon Tribune out of Poughkeepsie, New York (found here https://www.eham.net/article/9982) claims a record of 13M miles/watt. It is a little over my comprehension at this point of my QRP knowledge, but fascinating none the less.

*Note: As fascinating as that 13M mi/w sounds, it is just a number to wow us. Yes, there has to be some line drawn to define the record; fact is, this really was under 600mi at a really low sub 1w. To put that in perspective, there are many days I cannot reach that with 80w because of many factors. More on these factors later and in future essay, but to further give you some idea how wild the idea of the fraction of a percentage of a watt covering this distance is that from Youngstown, OH to Boston, MA is just over 500mi. Another group of QRP'ers is the minimalist homebrew types. I've seen everything from an Altoid's can to a tuna fish can and about everything in between. Many others use a small project box and what looks like a half dozen components and a crystal to build a one frequency transceiver or standalone transmitter taking radio back to its most fundamental place. I have recently acquired a few of these in the "Rockmite" project configuration from WB8ENE (See pictures below). These little beauties require a couple of crystals to define the frequency of the homebuilt rig and I can't wait to see what I can do with these this winter on CW 40 and 20m.

I have heard the comment often, "Life is too short for QRP." However, in my experiences with QRP so far - and just when that comment starts to resonate in my head, I must retort with, "You haven't lived until you have done QRP".

I might write about something else next month and pick up QRP again in the next few months, until then, see you on the air and enjoy this beautiful fall weather!

A 20m and a 40 Rockmite QRP transceiver.

A Bit About Myself

I was licensed as a Novice in 1989 when you had to pass the 5wpm CW as part of the test. I worked about 50 QSOs in the next year before I went quiet for the next 35 years until April of 2025 when I tested for my technician class. I have since passed the General as of September 3, 2025. I like the minimal approach to radio, but I have found an interest in some of the "modern" digital modes, with meteor scatter and ISS part of my latest obsessions, and the General class license has opened up a wider range of rabbit holes to fall into.

Mahoning County ARES Update

ARES Update – October 2025

August was a very active month for ARES Members. The 2025 Canfield Fair was the big event of the month. Our ARES Members provided backup communications for the entire 6-day run of the Fair putting in over 340 hours of service plus many miles driven to be there. We'd like to recognize and thank:

Bill Beck KE8ZBQ	Mike Noble W8XLR
Darrin Cannon N8DMC	Pete Proch KG4HRT
Dean DeMain W8YSU	Alan Scannel KE8ADY
Allison Dunham KE8SKL	Dave Scannel KE8UWV
Rob Dunham KE8OKO	Rich Schmidt KD8TXH
Ken Goist WD8JZP	Rich Slutz KB8GAE
Rob Johnson KB8DLO	Don Smiley N8YJ
Steve Jones KF8BFJ	Frank Sole WB8YHD
John Morris WM8B	Ralph Streb K8TCP
Mark Munroe W4ZIP	Sarah Streb KE8VSU
Ed Newsome KE8NSW	David TouVelle KF8BFD

These individuals represent the best examples of what our ARES Members are, invaluable to our Community.

The ARES Fair effort cemented many important relationships with County and local agencies and organizations. Mahoning County ARES will be considered for many more upcoming events.

One of those events is the Boardman Cross Country track meet in October. Also, October will most likely see a Siren Assessment activation over two yet-to-be-determined Saturdays. Next year's Y-Live is also being mentioned and we have the Youngstown Christmas Parade coming up December 5th.

The ARES Leadership Team is also very involved in assisting County EMA with the design and fitting of their new Mobile Command Post (MCP). The communications van we've used for many years is being replaced. You'll be seeing more about this new resource in the near future.

Finally, the ARRL Simulated Emergency Test (SET) is in October. Each year our SET is just that, a test of our preparedness. Please make sure you're prepared with charged batteries, properly programmed radios and personal supplies. We hope all ARES Members will plan to participate in this October's ARRL SET.

For those Amateur Radio Operators that are interested in emergency communications and helping our communities in time of need please visit the Mahoning County ARES website at www. http://mahoning-ares.org/ for more information and our membership application.

Ham Radio 101: Dummy Loads—Smart Idea

By Mark Haverstock K8MSH

You may have heard the term “dummy load” before. While the name might give you an idea of what it does, dummy loads are a misnomer—they are *real* loads that absorb RF energy and dissipate it as heat.

An RF dummy load is an important piece of test equipment used in radio frequency (RF) systems, particularly in amateur radio, broadcast engineering, and telecommunications. It may appear to be just a fancy resistor, but in reality, a dummy load plays an essential role in safely testing and tuning radio transmitters without radiating radio signals. To understand why a dummy load is necessary, let’s examine its operation and the benefits it provides during transmitter testing, tuning, and maintenance.

How Does a Dummy Load Work?
A dummy load is a non-inductive resistor that is used in place of an antenna when testing or tuning a radio transmitter. It simulates the electrical characteristics of a perfect antenna—specifically a 50-ohm impedance—but doesn’t radiate any significant amount of radio frequency energy.
Instead of converting electrical energy into electromagnetic waves as an antenna does, the dummy load converts it into thermal energy—heat. The heat is safely dissipated through materials such as resistors, oil, and heat sinks.
To work effectively, the dummy load must:

- Match the impedance of the transmission line and transmitter
- Handle the transmitter’s power output without overheating
- Maintain a low SWR to minimize reflected power

Why You Need One
RF transmitters are designed to operate with a specific load impedance, typically 50 ohms. Not using an antenna or a dummy load can result in damage to the equipment. The resulting reflected power can cause rapid heat buildup and damage to the transmitter’s output circuitry.

When working on a transmitter, you may need to perform tasks such as measuring output power, testing modulation, and monitoring RF signals. A dummy load creates a controlled environment for these kinds of diagnostics. By using a dummy load, you protect your radio from the risks associated with high SWR, including overheating, power reduction, or even circuit failure. You also avoid creating QRM on the air that interferes with other radio transmissions.

They can also be used for routine tasks, like checking coax cables. Attach a dummy load to one end of the coax and the other end to an antenna analyzer or digital voltmeter set to measure resistance. Need to diagnose a tuner that isn’t working? Putting a 50-ohm load on the tuner antenna output may help you find the problem. Dummy loads are also used in laboratory and testing environments to calibrate instruments like oscilloscopes and spectrum analyzers.

How Do You Choose a Dummy Load?
Dummy loads come in a variety of shapes, sizes, and power ratings. Regardless of features, all dummy loads serve the same function: to provide a safe and non-radiating load for a radio transmitter.

Low-power dummy loads are used for handhelds or HF/VHF/UHF radios in the 10- to 100-watt range. They're ideal for quick testing and easy to carry. High-power dummy loads can handle hundreds or thousands of watts and are typically used in conjunction with base stations or linear amplifiers. They often include oil cooling, fans, or heat sink arrays to manage thermal loads.

When damaged, the dummy load reflects power back to the transmitter. A good rule of thumb is to pick a dummy load rated at least twice the transmitter's/amplifier's output. Other important specs include:

- Impedance: Typically 50 ohms
- Frequency Range: The usable range without excessive reactance (e.g., DC–3 GHz)
- VSWR: Should be as close to 1:1 as possible
- Duty Cycle: Some dummy loads can handle short bursts at high power, but not prolonged use. For example, the DX Engineering DXE-DL1500U 1,500W Dry Dummy Load handles 1,500 watts for 10 seconds (key-down CW) and 100 watts for 10 minutes.

DX Engineering's 1500W Dry Dummy Load features a lightweight, slotted black aluminum chassis to provide superior RF shielding and air cooling for the large internal resistor, which is nearly three times larger than the resistor in a similar, popular dummy load.

(Image/DX Engineering)

Dummy loads may have additional features such as built-in watt meters, cooling fans, or oil immersion for high-power dissipation. Air-cooled (dry) versions require sufficient space to allow air to circulate around them, preventing overheating. Look for adequate air vents in

the case or a large heatsink, they're a crucial part of a dummy load's thermal management system.

You'll see that air-cooled varieties are readily available, often using high-power resistors specifically designed for RF applications. There are also the classic oil-filled Heathkit HN-31 and other Cantenna variants from Dentron and MFJ that can be found used.

(Image/K8MSH)

Initially, hams used saltwater in glass jars as dummy loads. In 1961, Heathkit introduced the HN-31 Cantenna—a 50-ohm resistor immersed in transformer oil. Housed in a one-gallon paint can, it provided better heat dissipation than salt water, along with some RF shielding provided by the can. The Cantenna (below) and MFJ-250 (above) were capable of handling up to 1 kilowatt for up to 10 minutes. (Image/K8MSH)

(Image/Cantenna | **CC BY-SA 3.0**)

You can also build one of your own. A quick internet search for a Cantenna dummy load will yield a lot of information on its construction. Here's a sampling of currently available dummy loads at DX Engineering. Match your power and frequency needs.

Model	Cooling	Freq. Range	Max. Resistor	Rating
DXE DL-1500U	air	0 – 54 MHz	50 Ohm	1,500W
Palstar DL-1500	air	0 – 500 MHz	50 Ohm	1,500W
Elecraft DL1 (kit)	air	0 – 225 MHz	50 Ohm	100W
Diamond DL30A, DL30N	air	0 – 500 MHz	50 Ohm	100W
Coaxial Dynamics 4151	air	0 – 2.5 GHz	50 Ohm	150W

Don't Be a Dummy
A dummy load is not only a convenience — it's an important tool for safe radio diagnosis and operation. Whether you're a beginner learning the ropes or an advanced operator testing a new amplifier, a dummy load ensures that your radio testing doesn't interfere with others on the air, damage your equipment, or violate FCC regulations.
By absorbing RF energy instead of transmitting it, dummy loads allow you to tune, troubleshoot, and experiment with confidence. Every ham radio operator should have at least one in their toolbox or shack.

(Article originally appeared in *On all Bands, July 2025)*

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

E3C01
What is the cause of short-term radio blackouts?
A. Coronal mass ejections
B. Sunspots on the solar equator
C. North-oriented interplanetary magnetic field
D. Solar flares

E3C02
What is indicated by a rising A-index or K-index?
A. Increasing disturbance of the geomagnetic field
B. Decreasing disturbance of the geomagnetic field
C. Higher levels of solar UV radiation
D. An increase in the critical frequency

General Pool

G7C01
What circuit is used to select one of the sidebands from a balanced modulator?
A. Carrier oscillator
B. Filter
C. IF amplifier
D. RF amplifier

G7C02
What output is produced by a balanced modulator?
A. Frequency modulated RF
B. Audio with equalized frequency response
C. Audio extracted from the modulation signal
D. Double-sideband modulated RF

E3C01 (D)
E3C02 (A)
G7C01 (B)
G7C02 (D)

Upcoming Contests and QSO Parties

Dave Fairbanks N8NB

Source is www.contestcalendar.com

October 2025	
+ Phone Weekly Test	0230Z-0300Z, Oct 1
+ A1Club AWT	1145Z-1300Z, Oct 1
+ CWops Test (CWT)	1300Z-1400Z, Oct 1
+ VHF-UHF FT8 Activity Contest	1700Z-2100Z, Oct 1
+ NCCC FT4 Sprint	0100Z-0130Z, Oct 3
+ Weekly RTTY Test	0145Z-0215Z, Oct 3
+ NCCC Sprint	0230Z-0300Z, Oct 3

+ California QSO Party	1600Z, Oct 4 to 2200Z, Oct 5
+ Peanut Power QRP Sprint	2200Z-2359Z, Oct 5
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Oct 7
+ VHF-UHF FT8 Activity Contest	1700Z-2100Z, Oct 8
+ ARRL EME Contest	0000Z, Oct 11 to 2359Z, Oct 12
+ Nevada QSO Party	0300Z, Oct 11 to 2100Z, Oct 12
+ Scandinavian Activity Contest, SSB	1200Z, Oct 11 to 1200Z, Oct 12
+ Arizona QSO Party	1500Z, Oct 11 to 0500Z, Oct 12
+ Pennsylvania QSO Party	1600Z, Oct 11 to 0400Z, Oct 12 and 1300Z-2200Z, Oct 12
+ South Dakota QSO Party	1800Z, Oct 11 to 1800Z, Oct 12
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Oct 14
+ New York QSO Party	1400Z, Oct 18 to 0200Z, Oct 19
+ YLRL DX/NA YL Anniversary Contest	1400Z, Oct 18 to 0200Z, Oct 20
+ Stew Perry Topband Challenge	1500Z, Oct 18 to 1500Z, Oct 19
+ Illinois QSO Party	1700Z, Oct 19 to 0100Z, Oct 20
+ ARRL School Club Roundup	1300Z, Oct 20 to 2359Z, Oct 24
+ CQ Worldwide DX Contest, SSB	0000Z, Oct 25 to 2359Z, Oct 26

DX Information

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Source is www.ng3k.com

October					
2025 Oct03	2025 Oct07	**Christmas I**	**VK9QO**	LoTW	BH6BEZ 20250811
2025 Oct03	2025 Oct09	**Bhutan**	**A52G**	LoTW	DXW.Net 20250827
2025 Oct03	2025 Oct12	**Mariana Is**	**WH0RU**	LoTW	OPDX 20250915
2025 Oct04	2025 Oct27	**Burkina Faso**	**XT2AW**	LoTW	OPDX 20250814
2025 Nov05	2025 Nov25	**Guatemala**	**TG9BBV**	LoTW	TDDX 20250726
2025 Oct08	2025 Oct13	**Svalbard**	**JW**	Home Call	OPDX 20250203
2025 Oct08	2025 Oct15	**Fernando de Noronha**	**PY0FB**	LoTW	DXW.Net 20250606
2025 Oct08	2025 Oct15	**Grenada**	**J38LD**	M0OXO	DXW.Net 20250726

2025 Oct09	2025 Oct20	**North Cook Is**	**E51MWA**	LoTW	OPDX 20250723
2025 Oct16	2025 Oct20	**Tanzania**	**5H3MB**	LoTW	TDDX 20250915
2025 Oct17	2025 Oct28	**Angola**	**D2A**	EA7FTR	DXW.Net 20250727
2025 Oct17	2025 Oct29	**Saba & St Eustatius**	**PJ6Y**	LoTW	DXW.Net 20250318
2025 Oct18	2025 Nov12	**Gambia**	**C5**	LoTW	DXW.Net 20241227
2025 Oct20	2025 Oct29	**Dominica**	**J79FJ**	KU9C	FM5FJ 20250810
2025 Oct20	2025 Nov07	**Wallis & Futuna Is**	**FW5K**	LoTW	OPDX 20250210

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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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