

News Beacon

Medina County Amateur Radio Club

Prez's Preface

"For last year's words belong to last year's language. And next year's words await another voice."

T.S. Eliot

We all need something to believe in - that the New Year brings a fresh start - that miracles can happen, - "...that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness."

No one has been deeded the actual Right to happiness, merely the pursuit. Each one of us should take time to imagine what comprises personal happiness, then plan a course of action, and above all, enjoy the journey.

Hoping you find your fresh voice in the New Year.

God Bless and 73,
Jane@K8JGR.radio



Inside this issue

- December 9th Minutes.....2
- Winter Field Day.....3
- Calendar.....4
- Proton Battery.....5
- January 13th Meeting.....6
- Dits & Dahs.....7
- Repeaters.....8
- Who We Are.....9
- What We Do.....12



Hmmmmmm...

Where do electrons go for fun ?

... the circuits!



December General Meeting

The monthly General Meeting, was held December 9, 2024 in-person at the Medina County Career Center (JVS). The meeting was called to order by President, Jane K8JGR. The Pledge of Allegiance was recited at 7:10pm. The following twenty (20) paid members attended, so quorum (9) was reached.

Dave KE8APO	Ed K8NVR	Kirk WN8KDN	Dave NK0K	Diane KD8SSX
Jane K8JGR	Amy K2KSU	Brian KA8CNI	Steve KE8BJD	Gail KD8GGM
Michael KF8CTB	Baji K8IIT	Bill AB8FA	Dudley WA1X	Fred K8FH
John K8JEK	Lou N8LEM	James KD8FHY	Doug KD8SST	John Kollar Jr KF8CTA

Roll Call: All in attendance stated their names and call signs if attained.

Minutes: Motion to suspend reading of the November 11th minutes as published in the December newsletter: Diane KD8SSX , Second: Doug KD8SST. Approved, without corrections.

Treasurer's Report: November Treasurer's Report was read by: Dave KE8APO. Motion to approve: Fred K8FH , Second: Dudley WA1X. Approved.

President's Report: Jane shared that congratulations are in order to our tech class. They all passed the exam and are new Hams. All of them are eligible for a one year free Club membership. Thanks go out to the instructors who taught these sessions: Baji K8IIT, Dave NK0K, Rick KE8CSW, and Diane KD8SSX. Also to Bob K8MD who set up the Laurel testing session, and to Dave NF8O, Ken K8TV and Fred K8FH for grading the tests.

Repeaters: Ed K8NVR reported that he is still working on the new 2-meter amplifier. The new 440 repeater is working well. Jane thanked Ed and Ken for all the time they put into our repeaters.

Membership: Diane KD8SSX reported that membership is currently at 72. We had four new members join since last month.

Net schedule: *Baji K8IIT reported that the net schedule is in need of net controllers. Please sign up! *We also need topics for discussions. Jane reminded net controllers to please submit a copy of the net logs to her.

Contests: Technical discussion on Radio Contesting. There are a number of contests coming up over the next couple months.

Announcements: Brian KA8CNI told everyone about an Icom commercial 2-meter radio from Main Trading Co. in Texas. \$45.00 plus shipping.

Adjournment: Motion to adjourn: Dave N8OK, Second: Fred K8FH. Approved. Meeting was adjourned at 7:28pm.

Technical presentation: Baji K8IIT, How Linux came to be.

Respectfully submitted by Gail KD8GGM

Winter Field Day



What is WFD?

Winter Field Day is an exciting annual event for Amateur Radio enthusiasts, taking place on the last full weekend of January. It offers a unique opportunity for radio operators to set up field operations in remote locations, enabling them to connect with other participants worldwide. You may choose to participate solo or get your friends, family, or whole club involved. Winter Field Day is organized by the Winter Field Day Association. The association strongly believes that Ham Radio operators should practice portable emergency communications in winter environments. This is because freezing temperatures, snow, ice, and other hazards pose unique operational concerns.

Event Details

Objective: WFD is a multi-objective event. The primary objective is to set up an amateur radio field station and successfully make multiple contacts. Successful participants are those who can set up their equipment and correctly log the designated exchange during the operational period explained below. All participants are encouraged to complete as many additional objectives as possible. After the event, submit a log of stations worked and any additional documentation.

Eligibility: All licensed amateur radio operators are encouraged to participate in the emergency communications exercise known as Winter Field Day.

Operational Period: Winter Field Day is held the last full weekend in January. For 2025, it will be held on January 25th and 26th. The 30-hour operational period starts at 1600 UTC on Saturday (11 am EST), the 25th, and ends at 21:59 UTC on Sunday, the 26th (4:59 pm EST). Stations may begin setting up no earlier than 1600 UTC (11 am EST) on the Friday before. However, cumulative set-up time shall not exceed 12 hours.

Location Restraints: A multi-station WFD operation must ensure all stations operating under a single call sign are located in the same physical area. All station equipment, including antennas, feed lines, and accessories used, must be located within a circular area whose diameter does not exceed 1,000 feet (300m). This 1,000 ft area does not have to remain constant throughout the event¹.

Exchange: The designated Winter Field Day exchange includes your call sign, a category number, a class identifier, and a location identifier.

Category: A number designated by the number of transceivers (stations) at your location that are capable of transmitting simultaneously. 1, 2, 3, etc. This means you have the people needed to operate the number of transmitters you choose. Include all HF, VHF, and UHF transceivers. Don't count a station if it must be left unattended while you make contacts on another. If you decide to operate a satellite station, the satellite station does not increase your category number.

Class: You must choose which class you will operate in. If you are operating as a group under one call sign, choose the class that applies to the majority of the stations at your field day site. Home Station, Indoor Station, Outdoor Station, Mobile, Mobile Stationary.

Bands: All Amateur bands may be used except 12, 17, 30, and 60 meters. To qualify as a band worked, at least one valid, two-way QSO must have taken place on the said band during the contest.

Modes: All modes, CW, Phone, and Digital, may be used. Phone includes SSB, AM, FM, DMR, C4FM, etc. If the end result is voice, it's Phone. Digital includes PSK, RTTY, Olivia, Packet, SSTV, ATV, JS8Call, and other soundcard modes except for FT4 & FT8. If the end result is text or a picture, it's digital.

QSO Points: Phone contacts count as one point each, and all CW and digital modes count as two points each. You may only contact other field day stations a maximum of three times per band but only once per mode. So K4FUN may be contacted on 20m using Phone, CW, and digital for a total of five Points (one point for Phone, two points for CW, and two points for digital).

Excerpt from www.WinterFieldDay.org

Note: If you plan on participating as part of the Medina County Amateur Radio Club, please notify Fred K8FH or Ed K8NVR at everdom@gmail.com well in advance of the event.

Club Meetings

Monthly, MCARC General Meetings are held at 7:00pm on the second Monday of each month at the Medina County Career Center (JVS), Room 246.

The Medina County Career Center (JVS), is located at: 1101 W Liberty Street, Medina, Ohio 44256

Member Birthdays

Jane Reed K8JGR	01/11
Derek Poindexter	01/14
Kirk VanBlarcum	01/15

MCARC Calendar

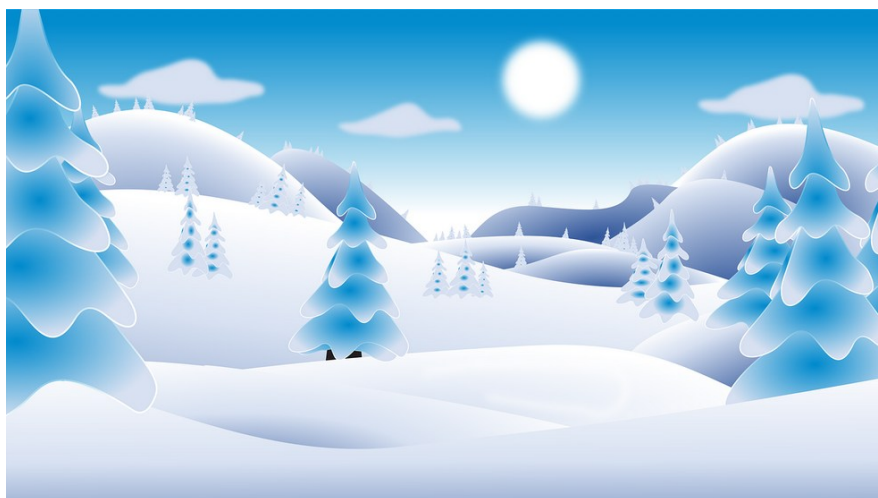
Jan 06	7:30pm Monday Night 2M Net
Jan 13	7:00pm IN-PERSON GENERAL MEETING (See page 6)
Jan 20	7:30pm Monday Night 2M Net
Jan 25 & 26	Winter Field Day (see page 3)
Jan 27	7:30pm Monday Night 2M Net

ARRL Ohio Hamfests

01/19/2025 Sunday Creek Amateur Radio Federation Hamfest
Location: Shade Community Center, 2380 Old U.S 33,
Shade, OH 45776
Sponsor: Sunday Creek Amateur Radio Federation
Email: jeramy_duncan30@yahoo.com

ARRL Radiosport Contests

January 1	Straight Key Night
January 4	Kids Day
January 4-5	RTTY Roundup
January 18-20	January VHF



Scientists Built a Proton Battery That Could Dethrone Lithium-Ion

Lithium-ion batteries are the backbone of mobile devices and electric cars, but lithium can be costly and explosive.

Proton batteries—which rely on more abundant materials—have been touted as a good replacement, and a new anode material could help overcome some of their shortcomings, such as limited voltage range.

This new material can last 3,500 cycles of recharging, maintain high capacity, and operate in colder weather, but scientists still need to improve manufacturing costs and cathode performance before proton batteries can go mainstream.

Lithium-ion batteries are the top dogs of the battery world. This 50-year-old technology forms the electronic backbone of billions of mobile devices around the world, and is the current frontrunner for powering the world's electric-vehicle future. But that doesn't mean there isn't competition.

When it comes to storing renewable energy, for example, other concepts like iron-air batteries (which use oxidation to store energy) could potentially be better options than the more expensive and explosive lithium. And more options are being explored all the time. For instance, the idea of proton batteries—which use protons split from water which then bond with a carbon electrode—is starting to grow in popularity. This is good news, seeing as proton batteries don't require rare elements such as lithium. And now, scientists at the University of New South Wales (UNSW) Sydney want to make them mainstream.

"There are many benefits to proton batteries," Sicheng Wu, a Ph.D candidate at UNSW Sydney, said in a press statement. "But the current electrode materials used for proton batteries, some of which are made from organic materials, and others from metals, are heavy," and still cost quite a lot.

In addition to this cost, the few carbon electrodes that do exist have a limited voltage range, and both of these shortcomings currently make proton batteries unfit to be true lithium-ion replacements. However, UNSW Sydney scientists have developed a new carbon electrode called tetraamino-benzoquinone (TABQ) to fix the problem. The team first started with a small molecule called Tetrachloro-benzoquinone (TCBQ), which doesn't have a high enough redox potential to be a cathode or a low enough potential to be an anode.

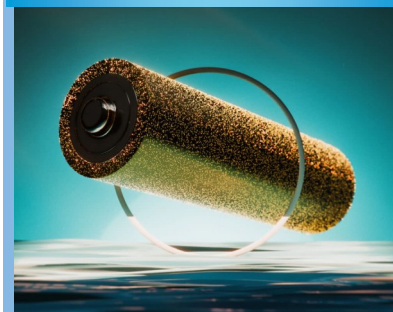
So, Wu's team replaced the four chloro- groups in the molecule with amino- groups (hence the name change), and found that the resulting lower potential both made TABQ a great anode candidate and improved the material's ability to store protons. While still paired with a TCBQ cathode, the all-organic battery could sustain 3,500 cycles of fully recharging, maintain high capacity, and perform well in cold conditions—a helpful side effect, as we'll need battery farms especially in the colder, darker parts of the world, and lithium loses efficiency when it gets too cold.

Oh, and another bonus: they don't explode.

"The electrolyte in a lithium-ion battery is made of lithium salt, a solvent which is flammable and therefore is a big concern," Chuan Zhao, a professor at UNSW Sydney, said in a press statement. "In our case, we have both electrodes made of organic molecules, and in between we have the water solution, making our prototype battery lightweight, safe and affordable."

While TABQ is an outstanding anode, the team admits that the TCBQ used in the cathode—which doesn't have the highest redox potential—will need to be improved upon next. There's likely more work ahead if proton batteries have any hope of dethroning lithium as the green revolution's battery of choice.

"We have designed a very good anode material," Wu said, "and future work will move to the cathode side. We will continue designing new organic materials that have higher redox potential range to increase the battery output voltage. To enhance the usage of renewable energies, we have to develop some more efficient energy integration technologies and our proton battery design is a promising trial."

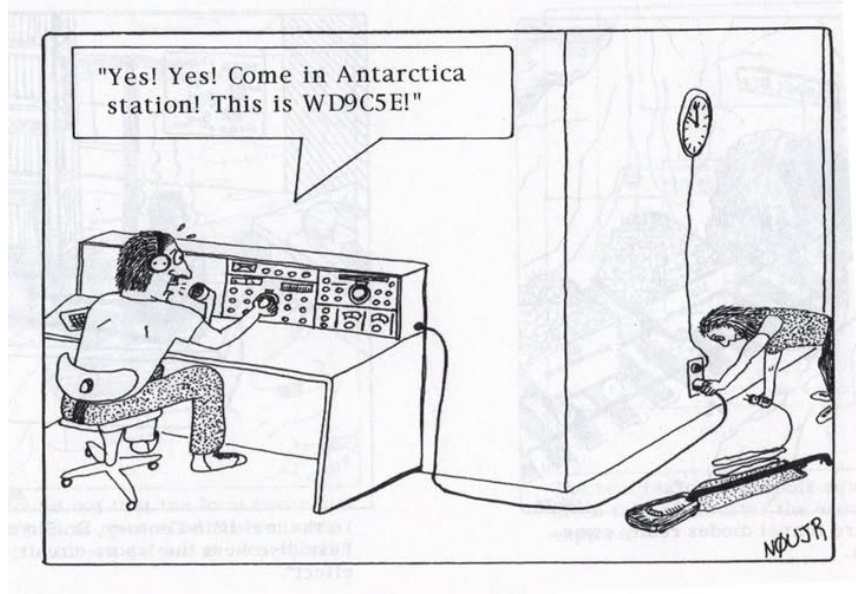


A Proton Battery Could Dethrone Lithium-Ion
koto_feja - Getty Images

Hamatuer Antix



US Army 32nd Station Hospital
WWII



MCARC will be holding Technical Sessions during most of our in-person General Meetings on the 2nd Monday of each month. IF THE DOORS ARE LOCKED PLEASE CALL JANE K8JGR AT 216-570-8500 AND WE WILL SEND SOMEONE DOWN TO LET YOU IN.

January 13, 2025 General Meeting

Our next monthly **In-Person General Meeting** is **January 13th**, and will be held at **7:00pm**, at the **Medina County Career Center (JVS)**, Room 246. The Medina County Career Center (JVS), is located at: 1101 W Liberty Street, Medina, Ohio 44256.

Call Jane K8JGR 216-570-8500 if doors are locked and we will send someone down to let you in. State whether you are at the front or back of the building.

The **Technical Session** speaker to be announced.

Dits and Dahs

- **Our Monthly Meeting**

Will be held on **January 13th**, at **7:00pm**, at the Medina County Career Center (JVS), Room 246. The Medina County Career Center (JVS), is located at: 1101 W Liberty Street, Medina, Ohio 44256. (See page 6). **IF THE DOORS ARE LOCKED PLEASE CALL JANE K8JGR AT 216-570-8500 AND WE WILL SEND SOMEONE DOWN TO LET YOU IN.**

- **MCARC 2M Net**

Check in with your friends to the **MCARC 2M Net**, held on every Monday evening at 7:30pm, with the exception of the second Monday of the month when we have our in-person meeting. See page 8 for info.

- **MCARC Net Control Operators**

Please consider volunteering as a MCARC 2m Net Control Operator for our weekly nets. [Click here.](#)

- **Reminder**

MCARC 2M Weekly Net Control Operators, please turn in your net log to Jane K8JGR. Thank you.

- **ARRL Kids Day**

Kids Day runs from 1800 UTC - 2359 UTC. Operate as much or as little as you like. The event is designed to give on-the-air experience to young people, to foster interest in getting a license of their own, and give older hams a chance to share their stations and love for amateur radio with their children. You can share the excitement with your own kids, grandkids, a Scout troop, a church, or the general public! More info is found on the [ARRL website](#).

- **ARRL Podcasts**

In early 2025, the ARRL Education & Learning Department will launch an interactive livestreamed video podcast, *On the Air Live*, sponsored by Icom. The monthly episodes will be aimed toward educating new and intermediate-level hams, inspiring them to explore the nearly endless aspects of Amateur Radio and develop their skills. ARRL Education Specialist Wayne Greene, KB4DSF, who will host each episode, joins the *On the Air* podcast to share more details, including upcoming topics and how to participate in real time.

- **Speakers Wanted**

We are always looking for speakers for our Monthly Technical Sessions. If you would like to present an interesting topic—radio or hobby related— or know someone who would, please contact Jane@K8JGR.radio.

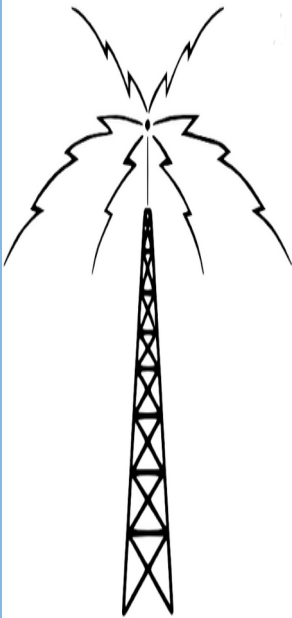
- **Geomagnetic storm could spark northern lights for New Year**

We could be in for a New Year's aurora treat with northern lights potentially visible deep into mid-latitudes tonight and tomorrow (Dec. 30 to Dec. 31). Due to an incoming solar storm, also known as a coronal mass ejection, the National Oceanic and Atmospheric Administration Space Weather Prediction Center issued a G3 (strong) geomagnetic storm warning for Dec. 31.

Space.com By Daisy Dobrijevic



MCARC Repeaters—current April 2024



Call	Location	Function	Repeater Input	Repeater Output	CTCSS (PL)	Band
W8EOC	Medina (Central Tower)	RX	147.63	147.03	141.3 three beeps	2 Meter
W8EOC	Brunswick (North Tower)	RX	147.63	147.03	131.8 two beeps	2 Meter
W8EOC	Lafayette (South Tower)	TX & RX	147.63	147.03	88.5 one beep	2 Meter
W8EOC	Lafayette (South Tower)	RX	51.16			
	Brunswick Hills (Pearl Rd)	TX		51.66	107.2	6 Meter
W8EOC	Lafayette (South Tower)	Repeater TX & RX	223.26	224.86	77.0	1.25 Meter
W8EOC	Lafayette (South Tower)	Repeater TX & RX	449.925	444.925	131.8	70 CM

Note: You can get into our W8EOC 2-meter repeaters from the Brunswick input (**PL 131.8**), the South (Lafayette) input (PL 88.5), or the North (Medina) at 141.3.

NOTE: FINAL REPEATER UPDATE for awhile: Please set your radios as indicated above to enjoy our 7:30pm MCARC weekly Monday Net (except for 2nd Monday of month).

2-Meter Net

Remember to join our 2-Meter nets on 147.030 Monday evenings at 7:30pm, except for the 2nd Monday of each month when we have our **In-person** meetings.

You do not have to be a member of MCARC to participate.

MCARC Monday Night 2-Meter Net Control

06-Jan-2025	K8NVR	13-Jan-2025	Meeting
20-Jan-2025	KD8SSX	27-Jan-2025	
03-Feb-2025	K8TV	10-Feb-2025	Meeting

Contact Baji K8IIT, k8iitm@gmail.com, if you would like to serve as NCO.

NCO openings can be found at:

<https://rebrand.ly/2025-net-control>

MCARC Membership

Please become a member or renew your **Medina County Amateur Radio Club** membership. Dues are our primary source of income and are used to pay for the administrative costs of liability insurance, website domain registration fees, web hosting for www.W8EOC.org, maintenance costs of repeater and towers along with passing on fun perks to you, our members. Our new/renewal Membership Form and information can be found on our website <http://w8eoc.org/membership>, or contact Diane KD8SSX at d.snider19@yahoo.com

Then, mail your dues to Diane Snider, 8311 Norwalk Rd, Litchfield, OH 44253, or bring them to the next meeting.

Please consider volunteering. We really would enjoy seeing fresh faces and hearing new ideas to keep the MCARC relevant and viable in 2025. Do you like designing or maintaining websites, organizing speakers for technical sessions, writing for the newsletter or teaching members new skills? Please let Jane@K8JGR.radio know. Thank you.

Who's Who

President: Jane Reed K8JGR
jane@K8JGR.radio

VP: Ed Eyerdom K8NVR
eeyerdom@gmail.com

Secretary:
Gail Helwig KD8GGM

Treasurer:
Dave Swancer KE8APO

W8EOC Repeaters:
Ed Eyerdom K8NVR
Ken Koyan K8TV

Sunshine:
Diane Snider KD8SSX

Trustees:
Doug McClure KD8SST
Dave Oravec N8JNX
Diane Snider KD8SSX
Amy Panchumarti K2KSU
Steven Stein KE8BJD

Newsletter:
Jane Reed K8JGR

Field Day:
Fred Helwig K8FH

Membership:
Diane Snider KD8SSX

Program:
Ed Eyerdom K8NVR

Website:
Jane Reed K8JGR

Net Scheduling:
Baji Panchumarti K8IIT

Social Events:
Gail Helwig KD8GGM

Skywarn:
Tracey Liston W8TWL

ARES:
Bob Mueller K8MD

RACES:
Dave Rickon NF80



MCARC on the World Wide Web

www.W8EOC.org

About Our Organization

The Medina Two Meter Group (M2M) Inc. DBA: the **Medina County Amateur Radio Club** is a nonprofit, ARRL Special Service registered, Amateur Radio organization based in Medina County, Ohio dedicated to communication, public service, education and fellowship. Our roots go back to 1932 in Medina County.

Many of our members are also involved with Skywarn, ARES, RACES, and assist with emergency communication or community events such as bicycle and foot races.

We usually meet on the second Monday of each month at the Medina County Career (JVS) Center, upstairs Room 246.



Medina Two Meter Group (M2M) Inc.
DBA:
Medina County Amateur Radio Club
1254 Hadcock Road
Brunswick, Ohio 44212

Admin@W8EOC.org

PLEASE
PLACE
STAMP
HERE

TO: