

# M2M News Beacon

Member to Member News Beacon



## Prez's Preface

*"Happily we bask in this warm  
September sun,  
Which illuminates all creatures..."*  
- Henry David Thoreau

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This newsletter is a few days late, past the first-of-the-month, self-imposed deadline that I try to maintain to preserve continuity and whatever shreds of sanity I may still possess. For each day of delay, that is an additional day distracted from the potential of unblemished opportunity. 😊

Please help support the News Beacon by not only submitting timely information, but by contributing articles, ideas, and insights for inclusion. This month Amy K2KSU submitted the cute Hamateur Antix cartoon on page five.

If anyone would like to assist in this newsletter's publication, or assume the role of Editor, it would be of great benefit to the Club to get more members involved.

The News Beacon is distributed to anyone who wants to see what MCARC and Amateur Radio is all about. Ask your friends to sign up at [www.W8EOC.org](http://www.W8EOC.org)

Another way our Club promotes Amateur Radio is by participating in community events.

Unfortunately, the rescheduled Twin Sizzler has been cancelled this year, but "Sam" Boyer still promotes our presence at Brunswick Heritage Farm events.

The Farm held a Drive-through Ice-Cream-Sundae on August 29<sup>th</sup> and our Club members volunteered their FRS radios to facilitate order fulfillment. I helped out at the event, and of course, proudly wore my call sign that encouraged questions.

Fred K8FH is again bringing his EmComm Trailer to the Heritage Farm Market on September 13<sup>th</sup> when the Butterfly Tagging and Release is scheduled. Please bring the family between 11am and 2pm to 4613 Laurel Rd, Brunswick, 44212.

May your September be filled with sunshine and happiness,  
73, Jane K8JGR

## Care Corner

**Don Duman W8DD** is fighting cancer. His wife asks for prayers for a miracle.

**Fred K8FH** and **Gail KD8GGM** suffered the loss of Gail's Mother and Niece, both in the same week.

**Amy K2KSU** will be undergoing more surgery on September 3<sup>rd</sup>.

Please keep them in your hearts and offer a prayer or act of kindness in their names.

## MCARC August 10th On-Air General Meeting Minutes

The August 10, 2020 Member Meeting was held on-air because of Corona Virus restrictions.

The net opened at 7:30pm with check-ins logging onto the 147.030MHz repeater. The net was controlled by Toby WT8O. The following paid members (and *guests*) were present (X - not) for the network meeting:

Toby WT8O - NCO	Ed K8NVR	Diane KD8SSX	John N8LVC - X
John AC8AT	Ray K2RWO	Baji K8IIT	Bob KE8KAA - X
Macy N8OBG	Julio KE8JIE	Dick WB8FZW - X	<i>Scott N8SX</i>
Jane K8JGR	Doug KD8SST	Amy K2KSU	<i>Jody KE8GKO</i>
Dave KE8APO	Steve KE8BJD	Frank KN4AW	<i>John K8JEK</i>
Gordon AI8Y	Dan W8DEJ	Larry NB8Z	<i>Fred N8AHS</i>

17 members present for meeting, Quorum (9) was reached.

NCO, Toby, asked net participants for their first go-around comments.

Toby then transferred control over to Jane K8JGR to conduct the regular monthly meeting...

\*\*\*\*\*

The meeting opened with the Pledge of Allegiance.

**Secretary's Report** – Motion to accept the Secretary's Minutes of the July 13, 2020 on-air meeting as published in the August Newsletter: Motion: Doug KD8SST, 2<sup>nd</sup> Amy K2KSU. Members voted approval.

**Treasurer's Report** – Prepared by Treasurer, Gail KD8GGM, read by Diane KD8SSX. Motion: Ray K2RWO, 2<sup>nd</sup> Dan W8DEJ. Members voted to approve as read.

### President's Report:

- Thank you note from Tamara Lesnick was read
- July 26<sup>th</sup> Fox Hunt winner was Baji K8IIT, runner-up was Dave KE8APO
- August newsletter lists Gerry N8GDT-SK equipment for sale

**Membership** – Nomination forms must be submitted to Diane KD8SSX or other officer by September 15th

**Repeaters** – No plans to put 6-meter and 70cm back into operation at this time.

**Education/VE** – CARS in Independence is holding an *open* VE testing session on September 13th

**Contests** – Ohio QSO Party is August 22, 2020

**Motion to Adjourn** meeting made by Doug KD8SST and Seconded by Dan W8DEJ

\*\*\*\*\*

Jane K8JGR transferred control back to NCO, Toby WT8O, who continued the net with a second round of comments, before returning the repeater back to normal operations.

Respectfully submitted by Secretary, Ray Orobona K2RWO

# Steven Fisher KB8SCI



**Name, Call Sign, Class:**

Steve Fisher, KB8SCI, Extra

**How long have you been a ham?**

Since around 1995

**How long have you been a member of MCARC?**

Approximately since 1996

**What/who got you interested in amateur radio?**

Wayne Snyder WB8TFI -SK

**What modes of operation do you like best?**

SSB/CW

**Activities:**

Been inactive for several years...need to get back on the air soon.

**Current projects?**

Antenna projects and a couple transceivers to rebuild.

**Favorite rig(s):**

Kenwood TS440, Icom 707 and a Kenwood TS700

**What would you like to learn more about?**

Electronics repair

**What line of work were/are you in?**

Welding and fabrication

**Other Hobbies?**

Target shooting

**What would you like to see in MCARC?**

"How to" presentations

## Virtual Flea Market

**Dave Hibbard NK0K will be donating more items for the Club to sell to members...**

MFJ telescoping mast - about 21 feet extended - lightly used - \$45

MFJ telescoping mast - advertised as being 33 feet - lightly used - \$80

KU4AB halo antenna for 2 meters - never used - \$20

KU4AB halo antenna for 6 meters - lightly used - \$25

ATAS - 25 antenna active tuning system (YAESU) - never used - \$170

Ten-Tec 937 Power supply - lightly used \$40

Model 555 Scout transceiver - 50 watts - \*\* One module for 30 meters available. Purchaser will need to locate additional modules (E-bay has 20m and 15m) to work bands beyond 30 mtrs. Lightly used - \$100

Ten-Tec 200-watt tuner (291) - lightly used - \$40

WA1FFL Ladder - Loc - lightly used (Dipole assembly) - \$5

Heavy duty automotive electrical noise filter - Radio Shack - never used - \$5

Kantronics KPC-3 Plus for packet and telemetry apps. - never used - \$30

Archer - Nickel cadmium battery charger (Tandy) - \$5

MFJ 9040 package (QRP) - Power supply, transceiver (40-meter CW) and tuner with twin lead dipole ever so slightly used - \$125

**CONTACT JANE K8JGR FOR MORE DETAILS – JANE@K8JGR.radio or 216-570-8500**

## MCARC 2021 Officer & Trustee Nomination Form

Person Being Nominated	Self?	Yes	No
Name		Call Sign	
Address			
Email		Phone	
<b>Position (circle one):</b> <ul style="list-style-type: none"> <li>• President (one year term)</li> <li>• Vice President (one year term)</li> <li>• Secretary (one year term)</li> <li>• Treasurer (one year term)</li> <li>• Trustee (two year term)</li> </ul>		Nominee is a paid-up member of M2M for one full year prior to November 2020:    Yes    No  Nominee attended at least 6 meetings since November 2019?    Yes    No  Nominee holds a valid amateur radio license: Yes No  Nominee is over the age of 18:    Yes    No  Nominee is a convicted felon:    Yes    No	
Please list nominee's qualifications and any other information you would like to be presented to the membership to use in considering your nomination (Use back of form if necessary):			
Person submitting Form (If not nominating self):			
Name		Call Sign	
Address			
Email		Phone	
Nominee Permission Granted?		Yes	No
<b>SIGNATURE OF NOMINEE:</b>			
Date:			
Note: your address, phone number and email will NOT be published in the M2M News Beacon newsletter <b>Form must be submitted to Diane KD8SSX or another Officer by September 15th</b>			

## September 14<sup>th</sup>, On-Air Meeting

The Medina County Amateur Radio Club will *not* be holding *in-person* meetings until the threat of Coronavirus is under control.

However, Monday, September 10, the Club will hold the *September meeting during a special 2-meter net* at 7:30 pm. See page 6 for frequency and tone.

## MCARC (M2M) Calendar

September 7	7:30pm	Monday Night 2M Net
September 13	11:00am-2:00pm	Brunswick Heritage Farm Market, Communications Trailer on Display
September 14	7:30pm	MCARC On-Air General Meeting
September 21	7:30pm	Monday Night 2M Net
September 28	7:30pm	Monday Night 2M Net

## September Contests

**12-14** Ohio State Parks on the Air  
Website: <http://ospota.org>

- 12-14** ARRL September VHF
- 19-20** ARRL 10 GHz & Up - Round 2
- 12-13** ARRL EME - 2.3 GHz & Up

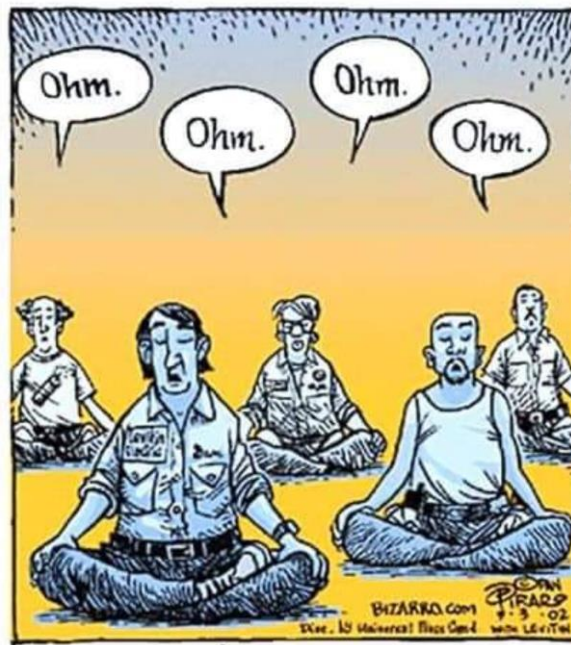
## September Ohio ARRL Hamfests

**09/13/2020 - CANCELED**  
 Findlay Hamfest  
 Location: Findlay, OH  
 Type: ARRL Hamfest  
 Sponsor: Findlay Radio Club  
 Website: <http://findlayradioclub.org>

**09/27/2020 - CANCELED**  
 Cleveland Hamfest and Computer Show  
 Location: Berea, OH  
 Type: ARRL Hamfest  
 Sponsor: Hamfest Association of Cleveland  
 Website: <http://www.hac.org>

## Hamateur Antix

Contributed by Amy K2KSU



## Nano-Diamond Self-Charging Batteries Could Disrupt Energy as We Know It



← NDB makes remarkable claims about its self-charging nano-diamond battery, here seen mocked up as a circuit board component. NDB

Here shown as a small, circuit board → mounted design, the nano diamond battery has the potential to totally upend the energy equation since it never needs charging and lasts many, many years. NDB



California company NDB says its nano-diamond batteries will absolutely upend the energy equation, acting like tiny nuclear generators. They will blow any energy density comparison out of the water, lasting anywhere from a decade to 28,000 years without ever needing a charge. They will offer higher power density than lithium-ion. They will be nigh-on indestructible and totally safe in an electric car crash. And in some applications, like electric cars, they stand to be considerably cheaper than current lithium-ion packs despite their huge advantages.

The heart of each cell is a small piece of recycled nuclear waste. NDB uses graphite nuclear reactor parts that have absorbed radiation from nuclear fuel rods and have themselves become radioactive. Untreated, it's high-grade nuclear waste: dangerous, difficult and expensive to store, with a very long half-life.

This graphite is rich in the carbon-14 radioisotope, which undergoes beta decay into nitrogen, releasing an anti-neutrino and a beta decay electron in the process. NDB takes this graphite, purifies it and uses it to create tiny carbon-14 diamonds. The diamond structure acts as a semiconductor and heat sink, collecting the charge and transporting it out. Completely encasing the radioactive carbon-14 diamond is a layer of cheap, non-radioactive, lab-created carbon-12 diamond, which contains the energetic particles, prevents radiation leaks and acts as a super-hard protective and tamper-proof layer.

To create a battery cell, several layers of this nano-diamond material are stacked up and stored with a tiny integrated circuit board and a small supercapacitor to collect, store and instantly distribute the charge. NDB says it'll conform to any shape or standard, including AA, AAA, 18650, 2170 or all manner of custom sizes.

And so what you get is a tiny miniature power generator in the shape of a battery that never needs charging – and that NDB says will be cost-competitive with, and sometimes significantly less expensive than – current lithium batteries. That equation is helped along by the fact that some of the suppliers of the original nuclear waste will pay NDB to take it off their hands.

Radiation levels from a cell, NDB tells us, will be less than the radiation levels produced by the human body itself, making it totally safe for use in a variety of applications. At the small scale, these could include things like pacemaker batteries and other electronic implants, where their long lifespan will save the wearer from replacement surgeries. They could also be placed directly onto circuit boards, delivering power for the lifespan of a device.

In a consumer electronics application, NDB's Neel Naicker gives us an example of just how different these devices would be: "Think of it in an iPhone. With the same size battery, it would charge your battery from zero to full, five times an hour. Imagine that. Imagine a world where you wouldn't have to charge your battery at all for the day. Now imagine for the week, for the month... How about for decades? That's what we're able to do with this technology."

And it can scale up to electric vehicle sizes and beyond, offering superb power density in a battery pack that is projected to last as long as 90 years in that application – something that could be pulled out of your old car and put into a new one. If part of a cell fails, the active nano diamond part can be recycled into another cell, and once they reach the end of their lifespan – which could be up to 28,000 years for a low-powered sensor that might, for example, be used on a satellite – they leave nothing but "harmless byproducts."

*Cont'd Next Page...*

## Nano-Diamond Self-Charging Batteries Could Disrupt Energy as We Know It, Cont'd

In the words of Dr. John Shawe-Taylor, UNESCO Chair and University College London Professor: "NDB has the potential to solve the major global issue of carbon emissions in one stroke without the expensive infrastructure projects, energy transportation costs, or negative environmental impacts associated with alternate solutions such as carbon capture at fossil fuel power stations, hydroelectric plants, turbines, or nuclear power stations. Their technology's ability to deliver energy over very long periods of time without the need for recharging, refueling, or servicing puts them in an ideal position to tackle the world's energy requirements through a distributed solution with close to zero environmental impact and energy transportation costs."

Indeed, the NDB battery offers an outstanding 24-hour energy proposition for off-grid living, and the NDB team is adamant that it wishes to devote a percentage of its time to providing it to needy remote communities as a charity service with the support of some of the company's business customers.

Should the company chew right through the world's full supply of carbon-14 nuclear waste – a prospect that would take some extremely serious volume – NDB says it can create its own carbon-14 raw material simply and cost-effectively.

The company claims to have completed a proof of concept and is ready to begin building its commercial prototype once its labs reopen after COVID shutdown. A low-powered commercial version is expected to hit the market in less than two years, and the high-powered version is projected for five years' time. NDB says it's well ahead of its competition with patents pending on its technology and manufacturing processes.

Should this pan out as promised, it's hard to see how this won't be a revolutionary power source. Such a long-life battery would fundamentally challenge the disposable ethos of many modern technologies, or lead to battery packs that consumers carry with them from phone to phone, car to car, laptop to laptop across decades. NDB-equipped homes can be grid-connected or not. Each battery is its own near-inexhaustible green energy source, quietly turning nuclear waste into useful energy.

Sounds like remarkable news to us!

Source: NDB, as published by New Atlas, Loz Blain

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*Update, August 27, 2020: We have contacted NDB to clarify several of their claims in this article. At this stage we believe the power density claims may relate to the power delivered by the supercapacitor part of the cell, rather than to how much energy the carbon-14 diamond itself is capable of generating. If this is the case, we may be looking at a very slow trickle charge from the diamond into the supercapacitor, and a high-power output from the supercapacitor.*

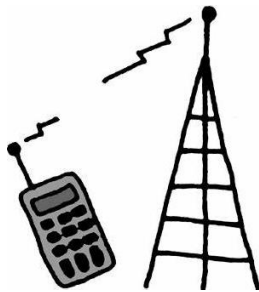
*The properties of supercapacitors are well known high-power density allowing fast charge and discharge, long lifespan, and low energy density – meaning they can store only a small amount of energy per volume.*

*Such a system – a trickle-charged supercapacitor – could be useful for sustained, low-power applications, and for emergency applications like Uninterruptible Power Supplies (UPS) that can slowly charge themselves for weeks or months between periods of discharge, but would not generate power anywhere near quickly enough for use in a long-range electric car or other applications requiring sustained high power outputs from a compact battery pack.*

*NDB speaks of low- and high-power versions of the cell in development, but until we see some output figures the claims are still hazy, and until we see some proof, they are of course just claims. We'll keep you updated.*

## MCARC (M2M) Repeaters

*Remember to check in to the 2-Meter Net 147.030 on non-meeting, Monday evenings at 7:30pm.*



				Repeater Directories		
Call	Location	Function	Repeater Input	Repeater Output	CTCSS (PL)	Band
W8EOC	Medina (Main Site)	Repeater TX & RX	147.630	147.030	141.3	2 Meter
W8EOC	Brunswick (North)	Receive only	147.630	From Main Site	131.8	2 Meter
W8EOC	Lafayette (South)	Receive only	147.630	From Main Site	88.5	2 Meter
W8HN	Medina	Digital C4FM TX & RX Repeater	147.885	147.285	(0)	2 Meter
		Analog TX & RX Repeater	147.885	147.285	(110.9)	2 Meter
W8UQZ	Medina	Repeater TX & RX	223.260	224.860	-	1.25 Meter

## MCARC (M2M) Monday Night 2-Meter Net Control

31-Aug-2020	<b>W8OSS</b>	07-Sep-2020	<b>K8IIT</b>
14-Sep-2020	<b>Meeting</b>	21-Sep-2020	
28-Sep-2020		05-Oct-2020	<b>KD8SST</b>

## ARRL Membership

Please consider paying your dues **for ARRL membership** through our club Treasurer, Gail KD8GGM. **M2M will retain \$15.00 for each NEW membership and \$2.00 for each renewal.**

Yearly dues are \$49.00 for regular membership, \$25.00 for youth under age 21 being oldest Ham in household, and \$10.00 for Additional Ham member in family. All but Additional Ham memberships will receive the monthly QST magazine. Dues can be paid by cash, **personal check made out to "Medina Two Meter Group"** or credit card.

**A copy of the ARRL Membership Application/Renewal form** can be obtained from Gail Helwig KD8GGM, Treasurer, M2M Group, 12891 East River Road, Columbia Station, Ohio 44028.



**We're on the Web!**

*See us at:*

[www.W8EOC.org](http://www.W8EOC.org)

Also,

**"Like Us" on  
Facebook**

**"Medina County  
Amateur Radio  
Club"**



## Who's Who

**President:**

Jane Reed K8JGR  
jane@K8JGR.radio

216-570-8500

**VP:** Diane Snider KD8SSX

**Treasurer:**

Gail Helwig KD8GGM

**Secretary:**

Ray Orobona K2RWO

**W8EOC Repeaters:**

Ken Koyan K8TV  
Ed Eyerdorn K8NVR

**State Certification:**

Don Duman W8DD

**Trustees:**

Doug McClure KD8SST

Dave Swancer KE8APO

Dave Oravec N8JNX

Amy Panchumarti K2KSU

Ed Eyerdorn K8NVR

**Sunshine:**

Diane Snider KD8SSX

**Newsletter:**

Jane Reed K8JGR

**Field Day:**

Fred Helwig K8FH

**Website:**

Jane Reed K8JGR

**Net Scheduling:**

Baji Panchumarti K8IIT

**Social Events:**

Gail Helwig KD8GGM

**Skywarn:**

Tracey Liston W8TWL

**MECARS/ARES:**

Bob Mueller K8MD

**RACES:**

Dave Rickon NF80

**Program:**

Toby Kolman WT8O

## About Our Organization...

The Medina County Amateur Radio Club (M2M) is a nonprofit, ARRL Special Service registered, amateur radio organization based in Medina County, dedicated to communication, public service, education and fellowship.

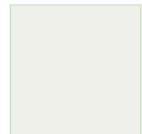
Many of our members also are involved with Skywarn, ARES/MECARS, RACES, and assist with community events

such as bicycle and foot races.

We meet on the second Monday of each month at either the Medina County Senior Center (Sr) or the Medina County Career (JVS) Center. See Website or page three for more information.



MEDINA TWO METER GROUP (M2M) INC.  
DBA: MEDINA COUNTY AMATEUR RADIO CLUB  
1254 HADCOCK RD  
BRUNSWICK, OHIO 44212



TO: