



February 2020  
Our 101<sup>th</sup> Year  
Volume 58, Issue 2

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Website:

<http://www.mvara.org/>

*The Voice Coil  
Newsletter of the  
Mahoning Valley Amateur  
Radio Association  
Established 1919*

# The Voice Coil

## Prez Sez

In the January meeting, Wes Boyd W8IZC resigned as Vice President and terminated his membership with the club. The Board then followed the Code of Regulations and voted and elected a new Vice President.

With a lot of talking and promises of “just one year to fill out the term” we had three very good candidates. They were Dave Brett KD8NZF, Mark Haverstock K8MSH, and Mike McCleery K8PRR all clear winners for the club but Dave Brett came out the winner. I promise to not load a whole bunch more on you Dave.

Now I know every ham who has had a mic in his hand in the car has wondered about antenna placement. There are as many choices out there as there are vehicles. Should you choose magnetic mounts or do you drill the hole and where? On the hood or under one of the bolts, on the trunk? Who knows? Everyone thinks they have the answer.

On February 13, 2020 at 7:00 PM, John Portune, W6NBC, will be joining us from Santa Monica, CA will be joining us via Zoom and telling us all about antenna placement on vehicles. This should be a good presentation-- John will kick off the meeting and we'll take care of business at the end.



Don't forget March 21, 2020 we have the MVARA Lou Malice WA8PKN 2 Meter contest coming up. There are 4 categories to win in low and high power rover and low and high power home. All contacts have to be made on simplex no repeaters can be used. All information can be found on the website at [www.mvara.org](http://www.mvara.org) -- the link is on the left.

Some of you may know him some of you may not, but I would like you to join me in saying a last '73 to Ray Solinger N8HRZ who passed away this afternoon 1/31/2020.

May the roads be curvy and everyone be 20/9--Scott, KE4UHC

### Next Meeting:

Feb. 14 at 7pm, GOP  
Headquarters, 8381  
Market St., Boardman  
(Adamas Square  
Plaza)

## 2019 Officers

President: Scott Wilton, KE4UHC  
Vice President: Dave Brett,  
KD8NZF

Secretary: Mike Malarky, W8IWD  
Treasurer: Nancy Brett, KD8QNY  
Trustees: Dean DeMain, W8YSU  
Bryan Bartzi, KF8G  
Jerry Goddard, KC8EFO  
Mike McCleery, K8PRR

Newsletter Editor: Mark  
Haverstock, K8MSH

Awards Manager: Dave Fairbanks,  
N8NB, 330.759.6993, 4770 Logan  
Ave. Youngstown, OH 44505

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  
member. Contact Nancy,  
[kd8qny@zoominternet.net](mailto:kd8qny@zoominternet.net) for  
membership 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](mailto:mvara.w8qly@gmail.com)

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

SKYWARN NET - First  
Wednesday of the month at 8:30  
PM 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.

**February Program:** John Portune, W6NBC, will be joining us via Video Conference for the February meeting to talk about his research on the best place to mount a mobile 2M antenna. If that topic sounds familiar it is because John did an article for QST in March of 2012 discussing his findings.

John is retired from a career in the technical side of broadcast television, principally for KNBC channel 4 Los Angeles, Ampex Corporation, Redwood City CA, Sony Electronics, San Jose, CA as a technical instructor/writer. He has been a ham since 1965, as WB6ZCT, G5AJH (while living 7 years in the UK), AA6NG and now W6NBC and still has a British call sign, M0GCK. He has been active on all bands, 160 Meters to 2.4 GHz. His current interests are helping hams get their license, local 2M mobile, and 40M Mobile. He rag chews from his home station, preferring regular nets, and has established a remote HF/VHF base station on Vandenberg AFB.

John is also a prolific writer and with well over 35 technology articles, from as long ago as 1975 for Popular Electronics to current time. Maybe you caught his article in the December 2019 issue of QST, the Slot-Cube Antenna for 2M, which was the winner of the December QST Cover Plaque award for that issue. He has won two previous Cover Plaque Awards.

You can check many of John's articles and other interests on his website, [www.w6nbc.com](http://www.w6nbc.com).

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## Don't Want to Drive to Dayton??

Pioneer Amateur Radio Fellowship is sponsoring a bus trip to Hamvention Saturday, May 16, 2020 - leaving from the Walmart on Arlington Rd. in Akron. Save on gas, parking, and walking. Leave the driving to us, and you can come and go to the flea market with your great purchases and leave them on the bus.

You can save \$20 if you book before April 15th. The cost of the Bus & Entrance ticket to the Hamvention: \$85 before April 15, 2020 The cost of the bus only to the Hamvention: \$65 after April 15, 2020 (You will be responsible for getting your own entry ticket - see <https://hamvention.org/purchase-tickets/#> for more information

P.A.R.F. reserves the right to cancel this trip should a minimum of 25 riders not be secured by April 15th. If that happens, a full refund will be made. For more information, call 330-745-5115 or email: [KA8TDF@arrl.net](mailto:KA8TDF@arrl.net).

**Refresher Answers:** E6A01 (C), E6A02 (A), G2B01 (C), G2B02 (B)

## Current Activities

**Feb. 14** Monthly meeting at 7pm, GOP Headquarters, 8381 Market St., Boardman. Speaker: John Portune, W6NBC

**March 21** MVARA Lou Malice, WA8PKN, 2 Meter contest.

**Contact Us:**

Email: [mvara.W8QLY@gmail.com](mailto:mvara.W8QLY@gmail.com)

Snail-mail: MVARA, P.O. Box 14141, Poland, OH 44514

Meeting ideas/ suggestions? Contact Dave, KD8NZF, [KD8NZF@zoominternet.net](mailto:KD8NZF@zoominternet.net)

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## Hamfest Calendar



**02/16/2020 - Mansfield Mid-Winter Hamfest- Location:** Richland County Fair Grounds, 750 North Home Road, Mansfield , OH 44901. **Website:** <http://WWW.IARC.CLUB> **Talk-In:** 146.940 - (PL 71.9)  
**Public Contact:** Danny Bailey, W8DLB, 70 Euclid Street Shiloh, OH 44878, **Phone:** 567-763-0021  
**Email:** [w8dlb113@gmail.com](mailto:w8dlb113@gmail.com)

**03/14, 15/ 2020 - Toledo Hamfest, ARRL Great Lakes Division Convention - Location:** Owens Community College - 30335 Oregon Road - Perrysburg, OH 43551 - **Website:** <http://www.tmrahamradio.org> - **Contact:** Rob Hall, KV8P - 8751 Oak Valley Road Holland, OH 43528 - **Phone:** 419-345-5759 - **Email:** [kv8p@kv8p.com](mailto:kv8p@kv8p.com)

**04/11/2020 66th Annual Cuyahoga Falls Amateur Radio Club Hamfest - Location:** Emidio & Sons Party Center, 48 E. Bath Road, Cuyahoga Falls, OH 44221 **Website:** <http://www.cfarc.org/hamfest.php>  
**Talk-In:** 147.270+, 444.850+ - (PL 110.9) **Public Contact:** Pat Morrow , N8OQP P.O. Box 614 Cuyahoga Falls, OH 44222, Phone: 234-206-0270  
**Email:** [hamfest2020@cfarc.org](mailto:hamfest2020@cfarc.org)

**Know of any regional events that should be included in the Voice Coil?** Send the information to: [MVARAVoiceCoil@gmail.com](mailto:MVARAVoiceCoil@gmail.com)

# Everything should be made as simple as possible, but not simpler

By Dan Romanchik, KB6NU

"Everything should be made as simple as possible, but not simpler" is a quote attributed to Albert Einstein <https://quotationcelebration.wordpress.com/2017/01/07/everything-should-be-made-as-simple-as-possible-but-not-simpler-albert-einstein/comment-page-1/> . Here's one way to apply this principle in amateur radio, specifically to code practice oscillators.



A week ago, my friend, Paul emailed me:

“I am planning on teaching a two-hour introduction to Morse code to 14 girls ages 8 to 9 *[[Paul's granddaughter is a Girl Scout.]]*. I plan on having the girls build a code practice device. I need your help in selecting a low cost buzzer and battery holder. Please take a look around and see would you can find. I would like to limit the power to one or two AA batteries.”

I replied that I'd be happy to help him with the demonstration, and offered the following advice:

“A while back, I built the QRPGuys' K7QO Code Practice Oscillator (<https://qrpguys.com/k7qo-code-practice-oscillator>). It uses a CR2032 coin battery.

“Unfortunately, they don't sell it anymore, but the assembly manual is still online ([https://qrpguys.com/wp-content/uploads/2017/03/cpo\\_assy\\_012616.pdf](https://qrpguys.com/wp-content/uploads/2017/03/cpo_assy_012616.pdf)). The assembly manual doesn't call out specific parts, but here are some Amazon SKUs:

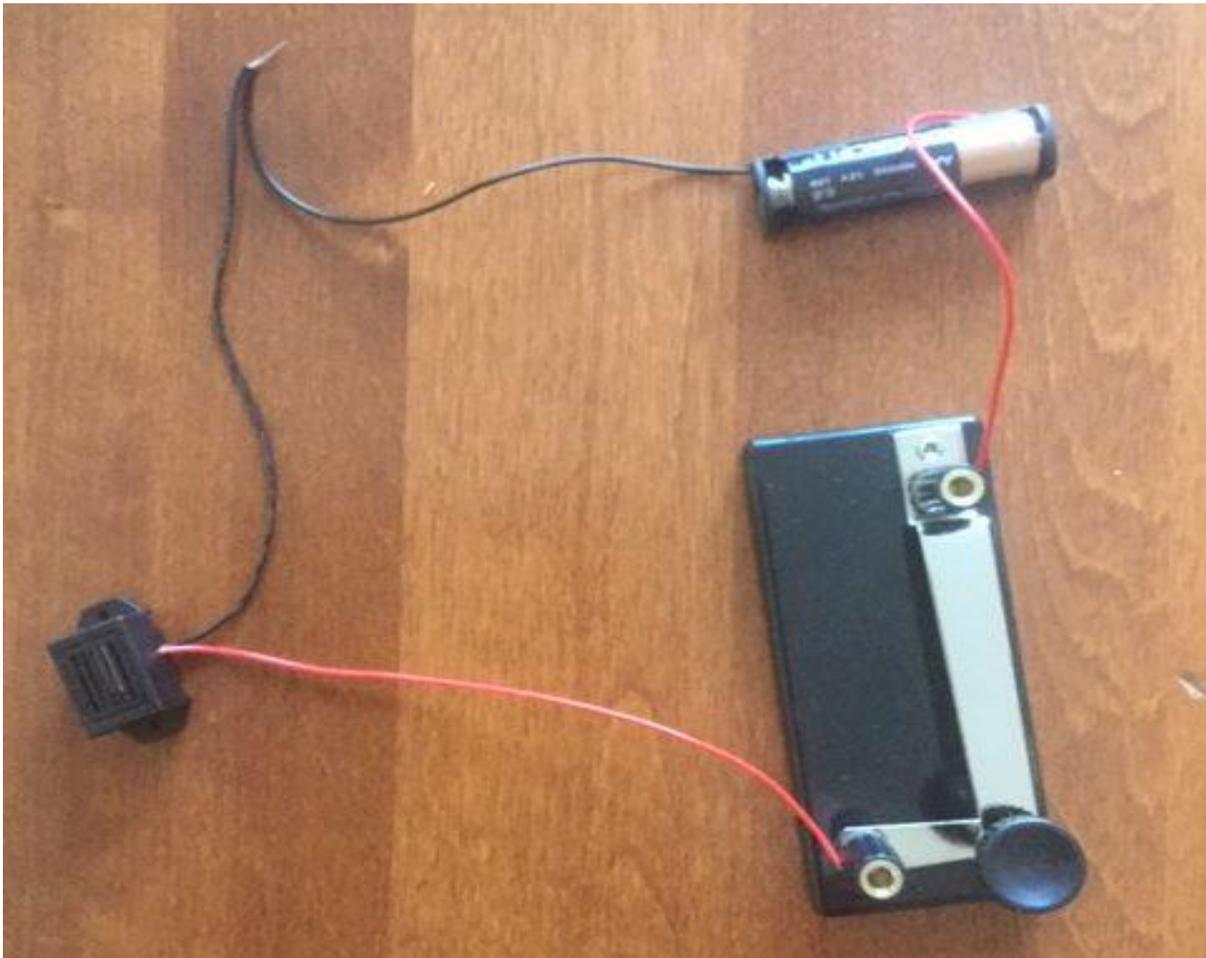
- B00J4BK0NS, Black 3V Electromagnetic Type Piezo Buzzer, 20 pcs/\$6.58
- B06XF3K4NP, Coin Cell Button Battery Holder, 30 pcs/\$9
- B008SNZUYC, 3 Pin PCB Mount Female 3.5mm Stereo Jack, 10 pcs/\$5.40
- B071RMD6FD, 1/8" 3.5mm Stereo Male Connector, 10 pcs/\$7

“Batteries are available at the dollar store for about 30 cents each. So, you could do the whole thing for less than \$5 for sure, even with a printed circuit board, which I would suggest that we do. Heck, if you ask nicely, the QRPGuys might even give us the artwork, or even better, have some boards still in stock. Even if they have neither, you should be able to get the boards in plenty of time.”

Later that day, Paul replied:

Thanks, Dan, for the information and making yourself available to help. I am just going to use a buzzer, key, and battery. The buzzer has a frequency of 400 Hz.

- <https://www.xump.com/science/Buzzer-Leads15V.cfm>
- <https://www.xump.com/science/ContactKeySwitch.cfm>
- <https://www.xump.com/science/Single-AA-Battery-Holder.cfm>



I think that this is as good an example of "Everything should be made as simple as possible, but not simpler" as there can be. I've volunteered to help Paul with his class. That will be fun, too.

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Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog ([KB6NU.Com](http://KB6NU.Com)), the "No Nonsense" amateur radio license study guides ([KB6NU.Com/study-guides/](http://KB6NU.Com/study-guides/)), and often appears on the ICQPodcast ([icqpodcast.com](http://icqpodcast.com)). When he's not trying to keep things as simple as possible, but not simpler, he likes to build stuff and operate CW on the HF bands.

## **Amateur Radio:**

**(n) A hobby, where people talk about their hobby, using their hobby.**

## State QSO Party Challenge Announced

The **State QSO Party Challenge** is a competition comprised of other contests, namely state and provincial QSO parties. As explained on the website, the annual cumulative score program is open to any radio amateur who participates in any approved state QSO parties (SQPs).

Participants just need to submit their QSO party scores to [3830scores.com](http://3830scores.com) to enter the challenge. Participants' cumulative scores will be calculated by totaling up the number of reported contacts and multiplying by the number of SQPs entered in the year to date. Periodic standings will be posted to [3830scores.com](http://3830scores.com), the **QSO Party Groups.io** forum, and the [StateQSOParty.com](http://StateQSOParty.com) website.

“Using the number of QSO parties entered as a multiplier is expected to encourage radio amateurs to enter more state/province QSO parties,” the program’s organizers said. “The first SQPs in 2020 are the Vermont, Minnesota, and British Columbia QSO Parties in the first weekend of February.”

Entrants must make at least two contacts in a QSO party for it to count as a multiplier. **Full details** are available on the State QSO Party Challenge website. Challenge sponsors expressed appreciation to Bruce Horn, WA7BNM, for developing the **SQP Activity Tracker** on [3830scores.com](http://3830scores.com). --ARRL

## Bits & Pieces

- There are about 3 million amateur radio operators worldwide, including more than 700,000 licensed operators in the United States alone.

-MDZhB has been broadcasting since 1982. No one knows why.

<https://www.bbc.com/future/article/20170801-the-ghostly-radio-station-that-no-one-claims-to-run>



1---ALPHA DELTA: dx-40

2---PAR ELECTRONIC: ef-30

3---IMD METER (kk7uq): w/ps & mnl

4---TRUE TALK (wa2nan): g5rv w/coax & ll

5---MAXCON: ocf-3k80 w/isltr

6---PALSTAR: at1kp tnr w/mnl

7---YAESU sp-101b speaker

Contact Ken, KC8Y. Email [cct66000@gmail.com](mailto:cct66000@gmail.com)

**Swap and Shop information/policies are listed on the last page of the newsletter.**

## Station Loaner Program

If you're a new ham/newly upgraded and want to get on the HF bands, MVARA has a loaner program for club members. The club has two complete stations with radio, power supply, microphone, CW key, and antenna tuner. All you need to do is supply your own coax, antenna, and keep the equipment in good condition while you have it.

Loan period is up to 6 months. However, you will be responsible for returning the station temporarily for use during Field Day weekend in June.

With the new ARRL proposal, it looks like even Tech class amateurs may soon have more phone privileges on some of the HF bands. Contact MVARA at our email address: [mvara.W8QLY@gmail.com](mailto:mvara.W8QLY@gmail.com)

# Contest and Special Event Operating Information

Dave Fairbanks N8NB

Data below as well as more information courtesy of the following website:

<http://www.hornucopia.com/contestcal/index.html>.

## February 2020

+ Vermont QSO Party	0000Z, Feb 1 to 2400Z, Feb 2
+ 10-10 Int. Winter Contest, SSB	0001Z, Feb 1 to 2359Z, Feb 2
+ Black Sea Cup International	1200Z, Feb 1 to 1159Z, Feb 2
+ F9AA Cup, CW	1200Z, Feb 1 to 1200Z, Feb 2
+ Mexico RTTY International Contest	1200Z, Feb 1 to 2359Z, Feb 2
+ FYBO Winter QRP Sprint	1400Z-2400Z, Feb 1
+ Minnesota QSO Party	1400Z-2400Z, Feb 1
+ British Columbia QSO Party	1600Z, Feb 1 to 0359Z, Feb 2 and 1600Z-2359Z, Feb 2
+ AGCW Straight Key Party	1600Z-1900Z, Feb 1
+ FISTS Winter Slow Speed Sprint	1700Z-2100Z, Feb 1
+ North American Sprint, CW	0000Z-0400Z, Feb 2
+ RSGB 80m Club Championship, SSB	2000Z-2130Z, Feb 3
+ ARS Spartan Sprint	0200Z-0400Z, Feb 4
+ QRP Fox Hunt	0200Z-0330Z, Feb 5
+ Phone Fray	0230Z-0300Z, Feb 5
+ CWops Mini-CWT Test	1300Z-1400Z, Feb 5 and 1900Z-2000Z, Feb 5 and 0300Z-0400Z, Feb 6
+ UKEICC 80m Contest	2000Z-2100Z, Feb 5
+ NRAU 10m Activity Contest	1800Z-1900Z, Feb 6 (CW) and 1900Z-2000Z, Feb 6 (SSB) and 2000Z-2100Z, Feb 6 (FM) and 2100Z-2200Z, Feb 6 (Dig)
+ SKCC Sprint Europe	2000Z-2200Z, Feb 6
+ NCCC RTTY Sprint	0145Z-0215Z, Feb 7
+ QRP Fox Hunt	0200Z-0330Z, Feb 7
+ NCCC Sprint	0230Z-0300Z, Feb 7
+ CQ WW RTTY WPX Contest	0000Z, Feb 8 to 2359Z, Feb 9
+ SARL Field Day Contest	1000Z, Feb 8 to 1000Z, Feb 9
+ Asia-Pacific Spring Sprint, CW	1100Z-1300Z, Feb 8
+ Dutch PACC Contest	1200Z, Feb 8 to 1200Z, Feb 9
+ SKCC Weekend Sprintathon	1200Z, Feb 8 to 2400Z, Feb 9
+ KCJ Topband Contest	1200Z, Feb 8 to 1200Z, Feb 9
+ YLRL YL-OM Contest	1400Z, Feb 8 to 0200Z, Feb 10
+ OMISS QSO Party	1500Z, Feb 8 to 1500Z, Feb 9
+ FISTS Winter Unlimited Sprint	1700Z-2100Z, Feb 8
+ RSGB 1.8 MHz Contest	1900Z-2300Z, Feb 8
+ Balkan HF Contest	1300Z-1700Z, Feb 9
+ Classic Exchange, Phone	1400Z, Feb 9 to 0800Z, Feb 10 and 1400Z, Feb 11 to 0800Z, Feb 12
+ CQC Winter QSO Party	0100Z-0259Z, Feb 10
+ 4 States QRP Group Second Sunday Sprint	0100Z-0300Z, Feb 10
+ ARRL School Club Roundup	1300Z, Feb 10 to 2359Z, Feb 14
+ NAQCC CW Sprint	0130Z-0330Z, Feb 12
+ QRP Fox Hunt	0200Z-0330Z, Feb 12
+ Phone Fray	0230Z-0300Z, Feb 12
+ CWops Mini-CWT Test	1300Z-1400Z, Feb 12 and 1900Z-2000Z, Feb 12 and 0300Z-0400Z, Feb 13

+ RSGB 80m Club Championship, Data	2000Z-2130Z, Feb 12
+ PODXS 070 Club Valentine Sprint	0000Z-2359Z, Feb 14
+ NCCC RTTY Sprint	0145Z-0215Z, Feb 14
+ QRP Fox Hunt	0200Z-0330Z, Feb 14
+ NCCC Sprint	0230Z-0300Z, Feb 14
+ ARRL Inter. DX Contest, CW	0000Z, Feb 15 to 2400Z, Feb 16
+ Russian PSK WW Contest	1200Z, Feb 15 to 1159Z, Feb 16
+ Feld Hell Sprint	1900Z-2059Z, Feb 15
+ AWA Amplitude Modulation QSO Party	2300Z, Feb 15 to 2300Z, Feb 16
+ Run for the Bacon QRP Contest	0200Z-0400Z, Feb 17
+ QRP Fox Hunt	0200Z-0330Z, Feb 19
+ Phone Fray	0230Z-0300Z, Feb 19
+ CWops Mini-CWT Test	1300Z-1400Z, Feb 19 and 1900Z-2000Z, Feb 19 and 0300Z-0400Z, Feb 20
+ AGCW Semi-Automatic Key Evening	1900Z-2030Z, Feb 19
+ NCCC RTTY Sprint	0145Z-0215Z, Feb 21
+ QRP Fox Hunt	0200Z-0330Z, Feb 21
+ NCCC Sprint	0230Z-0300Z, Feb 21
+ CQ 160-Meter Contest, SSB	2200Z, Feb 21 to 2200Z, Feb 23
+ REF Contest, SSB	0600Z, Feb 22 to 1800Z, Feb 23
+ UK/EI DX Contest, CW	1200Z, Feb 22 to 1200Z, Feb 23
+ SARL Digital Contest	1400Z-1700Z, Feb 23
+ High Speed Club CW Contest	1500Z-1700Z, Feb 23
+ QCX Challenge	1300Z-1400Z, Feb 24 and 1900Z-2000Z, Feb 24 and 0300Z-0400Z, Feb 25
+ SKCC Sprint	0000Z-0200Z, Feb 26
+ QRP Fox Hunt	0200Z-0330Z, Feb 26
+ Phone Fray	0230Z-0300Z, Feb 26
+ CWops Mini-CWT Test	1300Z-1400Z, Feb 26 and 1900Z-2000Z, Feb 26 and 0300Z-0400Z, Feb 27
+ UKEICC 80m Contest	2000Z-2100Z, Feb 26
+ RSGB 80m Club Championship, CW	2000Z-2130Z, Feb 27
+ NCCC RTTY Sprint	0145Z-0215Z, Feb 28
+ QRP Fox Hunt	0200Z-0330Z, Feb 28
+ NCCC Sprint	0230Z-0300Z, Feb 28
+ Feld Hell Sprint	0000Z-2359Z, Feb 29
+ UBA DX Contest, CW	1300Z, Feb 29 to 1300Z, Mar 1
+ South Carolina QSO Party	1500Z, Feb 29 to 0159Z, Mar 1
+ NA Collegiate Championship, RTTY	1800Z, Feb 29 to 0559Z, Mar 1
+ North American QSO Party, RTTY	1800Z, Feb 29 to 0559Z, Mar 1

## **DX Operating Information** Dave Fairbanks N8NB

Credit for the below information and further information on these operations and others can be found at the following website: <http://www.ng3k.com>

<b>February</b>						
2020 Feb01	2020 Feb16	<b>Ghana</b>	<b>9G5GS</b>	LoTW	IZ4YGS 20200113	By IZ4YGS; 160-20m; mainly FT8 SSB, some QO-100 satellite in USB; QSL also OK via IZ4YGS direct and eQSL

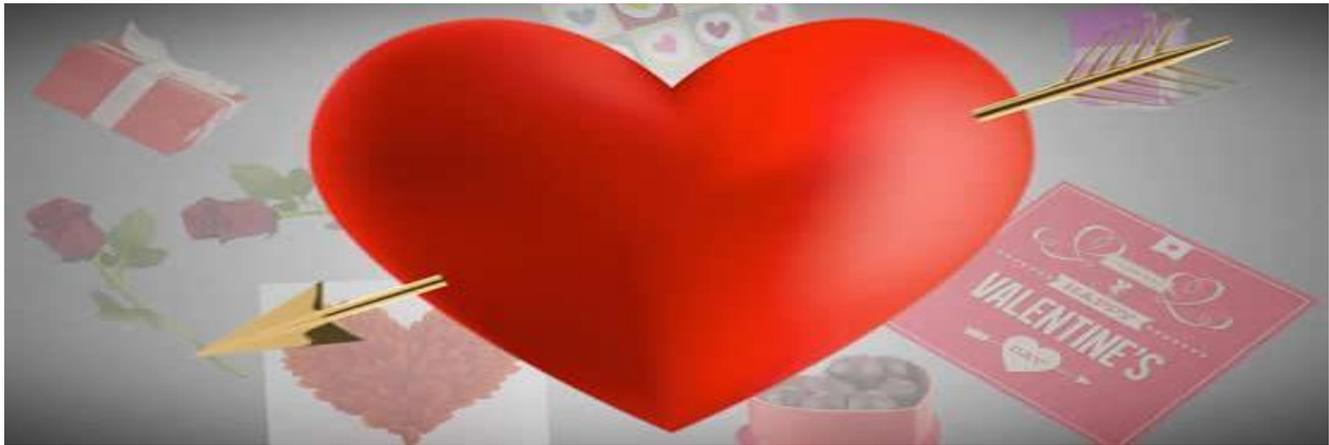
2020 Feb02	2020 Feb08	<b>Cocos I</b>	<a href="#">T19A</a>	LoTW	<a href="#">DXNews</a> 20200110	By TI2JV RA9USU UA3AB SM6LRR fm IOTA NA-012; all bands; all modes; QSL also OK via Club Log OQRS and UA3DX
2020 Feb02	2020 Feb14	<b>South Cook Is</b>	<b>E51DDG</b>	LoTW	VE7DS 20191229	By VE7DS fm Rarotonga I; 40-17m; CW; QSL also OK via VE7DS Buro
2020 Feb03	2020 Feb08	<b>Martinique</b>	<b>TO3FM</b>	LoTW	<a href="#">TDDX</a> 20191115	By JJ2RCJ; @FM5BH; 80-10m, perhaps 160m; FT8 (f/h); QSL via Club Log OQRS or JJ2RCJ direct (w/ SASE); no Buro requests
2020 Feb04	2020 Feb04	<b>Marshall Is</b>	<b>V73</b>	WW6RG	<a href="#">TDDX</a> 20190917	By WW6RG as V73/WW6RG fm Kwajalein; 20m; SSB; 0400-0530z, 0630-0800z
2020 Feb04	2020 Feb18	<b>Tanzania</b>	<a href="#">5H</a>	I2YSB	I2YSB 20190820	By I1FQH I1HJT I2PJA I2YSB IK2CIO IK2CKR IK2DIA IK2HKT IW1ARB JA3USA fm Zanzibar I (IOTA AF-032) using 5I5TT on CW SSB RTTY, 5I4ZZ on FT4 FT8; HF
2020 Feb05	2020 Feb08	<b>Nauru</b>	<b>C21</b>	Home Call	<a href="#">TDDX</a> 20200106	By JH3QFL as C21AA, JR3GWZ as C21GW, JA1PFP as C21PF, JH3VAA as C21VA, JH3AZC as C21MB; 160-6m, 2m EME; HF mainly FT8
2020 Feb04	2020 Feb25	<b>Belize</b>	<b>V31CO</b>	LoTW	<a href="#">TDDX</a> 20200117	By W0YBS fm Caye Caulker (IOTA NA-073); 80-10m; CW FT8 RTTY, maybe SSB; QSL also OK via W0YBS Buro or direct (/w SASE)
2020 Feb05	2020 Feb11	<b>Belize</b>	<a href="#">V31VP</a> <b>NEW</b>	WB0TEV	<a href="#">DXW.Net</a> 20200121	By WB0TEV fm Maya Hill Lodge; HF; SSB RTTY FT8 + QRS CW; QRV for CQ WPX RTTY; QSL OK B/d
2020 Feb05	2020 Feb17	<b>Palestine</b>	<a href="#">E44CC</a>	LoTW	<a href="#">DXW.Net</a> 20191029	By F4AJQ + team fm Bethlehem; 160-10m; CW SSB RTTY PSK FT4 FT8; full QSL details on <a href="#">Web</a>
2020 Feb06	2020 Feb18	<b>Tanzania</b>	<b>5H4WZ</b>	OM3PA	<a href="#">TDDX</a> 20191206	By OK2WM OM5ZW OM5MF OM4AZF SP9LJD fm Pemba I (IOTA AF-063); 160-10m; CW SSB RTTY FT8; 3 stations; QRV for ARRL DX CW Contest and CQ WPX RTTY Contest
2020 Feb07	2020 Feb12	<b>Azerbaijan</b>	<a href="#">4K6</a>	LoTW	<a href="#">425DXN</a> 20200110	By TA7AOF as 4K6/TA7AOF fm Baku; SSB FT8 CW; QRV for CQ WPX RTTY; QSL also OK via TA7AOF direct
2020 Feb08	2020 Feb22	<b>Bonaire</b>	<b>PJ4</b> <b>NEW</b>	LoTW	NE9U 20200122	By NE9U as PJ4/NE9U; HF; part of team PJ4A in ARRL DX CW; QSL also OK via NE9U direct w/ SASE
2020 Feb11	2020 Feb17	<b>French Polynesia</b>	<b>TX4</b>	See Info	AA4NC 20191213	By AA4NC AA4VK as TX4N and TX4VK; 160-10m; CW FT4 FT8 SSB; 100w; holiday style operation; QSL TX4N via EA5GL and TX4VK via AA4VK direct
2020 Feb11	2020 Feb17	<b>Monserrat</b>	<b>VP2MEP</b> <b>NEW</b>	LoTW	<a href="#">TDDX</a> 20200127	By K1EP; HF; CW SSB FT8; QSL also OK via K1EP direct
2020 Feb16	2020 Mar16	<b>Tanzania</b>	<b>5H3DX</b>	LoTW	<a href="#">TDDX</a> 20191118	By NK8O fm Zinga; 40-10m; CW PSK31 FT8, perhaps SSB; 100w; holiday style operation; QSL also OK via NK8O direct

2020 Feb14	2020 Feb21	<b>Micronesia</b>	<b>V63DX</b>	LoTW	JA7HMZ 20200108	By JA7HMZ fm Pohnpei; 160-6m; focus on 160m for EU; QSL also OK via JA7HMZ direct; logs will uploaded to Club Log
2020 Feb14	2020 Feb23	<b>Cayman Is</b>	<b>ZF2AN</b>	DF8AN	<a href="#">TDDX</a> 20191107	By DF8AN fm Grand Cayman I; HF; CW FT8; QSL ok via B/d
2020 Feb15	2020 Feb22	<b>St Barthelemy</b>	<b>FJ</b> <small>NEW</small>	LoTW	<a href="#">DXW.Net</a> 20200122	By N2IEN WW2DX W2RE WW1X as FJ/N2IEN; HF; digital; 2m EME, possibly satellites; holiday style operation
2020 Feb16	2020 Mar27	<b>Senegal</b>	<a href="#">6W7</a>	ON4AVT Buro	<a href="#">TDDX</a> 20200113	By ON4AVT as 6W7/ON4AVT fm Ourang Mbour (IK14mi); 60 40 20 10m; mainly FT8 FT4, some SSB
<b><a href="#">ARRL International DX Contest, CW</a> (Feb 15-16, 2020) Check here for pericontest activity too.</b>						
2020 Feb19	2020 Feb24	<b>Maldives</b>	<b>8Q7HK</b>	LoTW	<a href="#">TDDX</a> 20200110	By JG1SXP fm North Male Atoll; 80-15m; FT8 CW, some SSB; 200w; vertical; QSL also OK via Club Log OQRS
2020 Feb20	2020 Feb25	<b>Norfolk I</b>	<b>VK9NR</b>	See Info	AA4NC 20191213	By AA4NC AA4VK as TX4N and TX4VK; 160-10m; CW FT4 FT8 SSB; 100w; holiday style operation; QSL TX4N via EA5GL and TX4VK via AA4VK direct
2020 Feb20	2020 Mar04	<b>Costa Rica</b>	<b>TI5</b>	LoTW	AA1M 20191012	By W1USN as TI5/W1USN and AA1M as TI5/AA1M; 160-10m; SSB CW FT8, perhaps FM satellite; QSL also OK via W1USN and AA1M respectively (Buro or direct)
2020 Feb20	2020 Mar05	<b>South Orkney Is</b>	<a href="#">VP8PJ</a>	LoTW	K5GS 20190316	By K3EL W2LK W1SRD PY2PT K5GS W7XU DJ9RR HA0NAR WA6O UT6UD N6XG N7QT HB9BXE fm Signy I (AN-008); 160-10m; SSB CW RTTY FT8; see Web for for QSL details; dates tentative
2020 Feb21	2020 Feb23	<b>Puerto Rico</b>	<b>KP3RE</b>	EA5GL	KP4RV 20191120	By KP4RV KP4RD KP3H WP4U WP4N KP4VP NP3V WP4PBS KP3S NP3OT NP4D fm Culebra I (IOTA NA-249); 80-10m; CW SSB FT8
2020 Feb21	2020 Mar05	<b>St Kitts &amp; Nevis</b>	<a href="#">V47JA</a>	LoTW	W5JON 20191120	By W5JON fm Calypso Bay; 160-6m, incl 60m; SSB FT8; yagi, verticals; QSL also OK via W5JON direct



# HAM HUMOR: VALENTINE'S GIFT A 'BIG HIT' FOR RADIO OPERATOR

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By [WBØRUR](#), on the scene

**NACODOCHES, West Virginia** — Mr. Harold “Butch” Crutchfield of Upper Combover County is nursing a gunshot wound to the upper thigh, after presenting his wife with an outstanding Valentine’s Day present: an Alpha 9500 amplifier!

“She’d been hinting around that she wanted something really special this year,” says the 63-year-old civil engineer. “So I thought about it for a while... and chose the amp. It’s a great piece of equipment!”

Crutchfield, a ham radio operator since 1988, ordered the amplifier online. It was delivered just days before the traditional “love-bird” holiday.

“I didn’t even have a chance to gift wrap it before she ripped into the packaging. We’ve been married for 32 years,” says Crutchfield. “And I’ve got to be honest. I’m about out of creative gift-giving ideas.”

According to a spokesman for the local ham radio club, Marti Jane Crutchfield (the ham’s wife) was so excited upon un-boxing the amp that she retrieved her husband’s shotgun to fire celebratory gunshots into the air.

Apparently one of the blasts caught Butch in the upper thigh.

“I’ll be alright eventually,” he says philosophically. “But I won’t be climbing my tower anytime soon, that’s for sure.”

A year ago, Mr. Crutchfield presented his wife with an RG -58 coax bouquet, complete with silver and gold Teflon connectors, which he says “shimmered like my wife’s eyes.”

Local hams may recall the freak accident last year, when the coax bouquet twisted around Crutchfield’s left forearm and broke his fall from the 2nd story balcony.

### [HamHijinks.com](#)

# Letter to a New Amateur

*Anthony Luscre, K8ZT*

Because just getting that FCC license is not the end to our learning the process of mentoring is extremely important to develop active, proficient hams. It is so important that Amateur Radio has a special name for those that mentor other hams, “Elmers”.



Much of the Elmering that takes place is on an informal basis and that works for those that just happen to fall into the opportunity. The problem is there are few systematic mentoring programs so many new hams and potential hams fall through the cracks and never receive this invaluable service. I would encourage local radio clubs to create their own formal mentoring program and make it available to potential mentees, just as they often provide licensing classes.

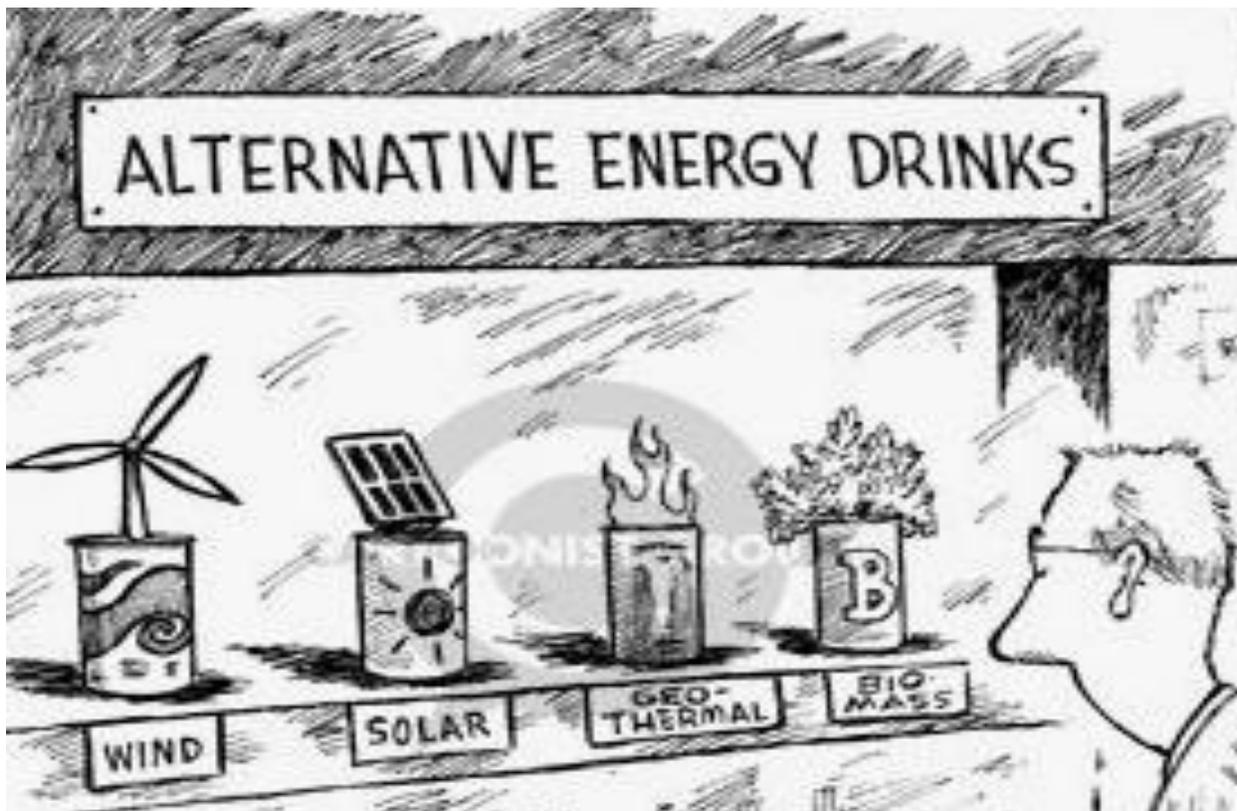
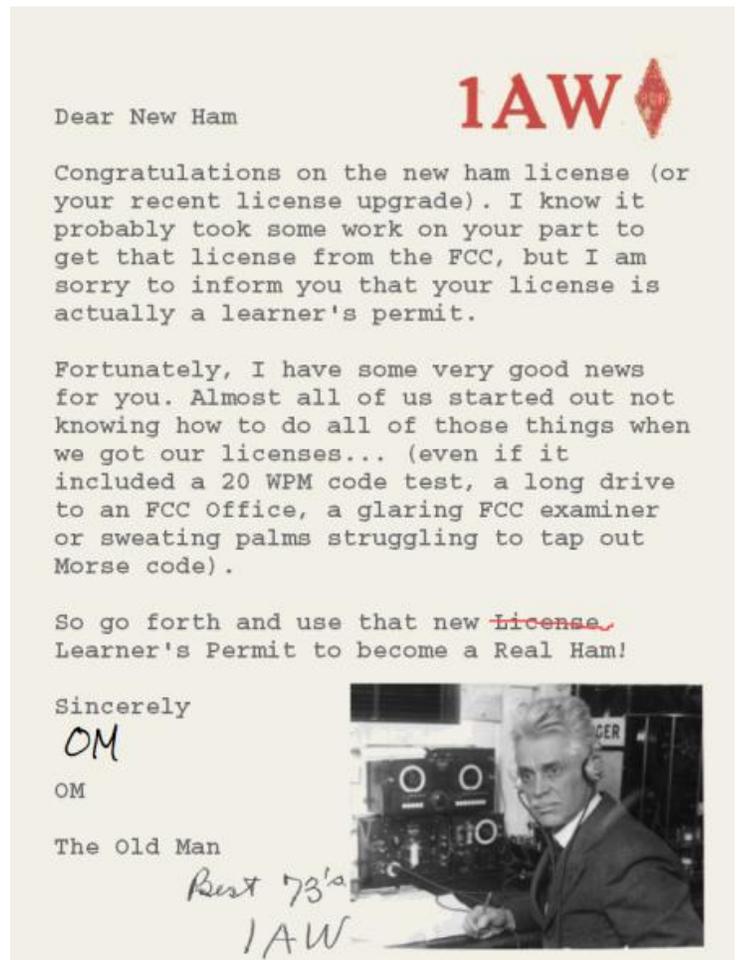
I would like to help facilitate this process by gathering information from clubs that are already doing this and how their program works. I will then share this with the readers of the OSJ in future issues. In the meantime, I have a couple of ideas on this project to share this month but really look forward to your suggestions on what you are doing or would like to do.

## Mentoring Program Ideas:

- Identify club members that are comfortable and capable of mentoring new hams. Not everyone feels comfortable or is effective in this role. Focus on members that will project a positive attitude on Amateur Radio to new mentees.
- Identify the special skills of your potential mentors so you can best match them to future mentoring opportunities. Also gathering other information on your potential mentors such as other hobbies, occupations, ham radio focuses, etc. will help to better match Mentors with Mentees.
- Consider incorporating your mentoring program into your licensing classes and/or VE testing program
- Publicize the mentoring program on your club’s website, in its newsletter, etc.
- Don’t limit targets of your mentoring program to new hams, there are plenty of things even vintage licensees would benefit from learning
- Encourage newer hams to become mentors also. They are often in a unique position where they have recently acquire knowledge to pass on while being able to relate to the needs of newly licensed mentees
- Take advantage of on-air activities such as ARRL Field Day, Ohio QSO Party, etc. as part of your mentoring project
- On-air activities that Technician class licensees can participate in should also be a focus-- ARRL VHF Contest (in January, June and September), Ohio Section Simplex Day, Satellite operations, etc.
- An example of a mentoring need for both new and vintage hams might be new modes like DMR, FT8, FT4, etc.

- Your group might want to create a checklist of things for a new ham to learn-- everything from on-air activities, learning about what equipment they need, putting up antennas to registering for LOTW or setting up your page on QRZ.com

- Create a “resources list” for your mentors to use in mentoring. This can include written documents, web pages, Youtubes, etc. You might want to take a look at “Ham Radio Intro & Quick Start Guide” Remember I would like to hear from you about what your club is doing. If you are a new ham or another potential mentee I would like to hear what you would like in a mentoring program. Email your info to me at k8zt@arrl.net. So, go forth, have some fun and make sure you share it with a youngster!



# Mahoning Valley Amateur Radio Association - 2020 Membership

Date: \_\_\_\_\_

Name: \_\_\_\_\_ Call: \_\_\_\_\_

Spouse/Family : \_\_\_\_\_ Call: \_\_\_\_\_

Mailing Address \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Home Phone # \_\_\_\_\_ Cell # \_\_\_\_\_

Email: \_\_\_\_\_

(The MVARA Voice Coil, the club newsletter, will be emailed to this address)

ARRL member?     **Yes**    Expiration Month & Year \_\_\_\_\_     **No**

Do you want the following to be included in the membership list available to all members?

Name and Call     *Yes*     *No*

Address     *Yes*     *No*

Phone     *Yes*     *No*

Email Address     *Yes*     *No*

## Membership

*Renewal*     *New Member*    Single membership \$20.00    \$ \_\_\_\_\_

*Renewal*     *New Member*    Additional family members, \$10.00 each    \$ \_\_\_\_\_

## W8QLY Repeater Support

\$12.00    Basic Support Donation    \$ \_\_\_\_\_

\$50.00    Gold Level Support Donation    \$ \_\_\_\_\_

\$    Other Support Donation    \$ \_\_\_\_\_

\$ \_\_\_\_\_

**Total Enclosed**

***Make checks payable to: Mahoning Valley Amateur Radio Association***

***Please bring this form and your payment to the next meeting  
or mail to: MVARA, P.O. Box 14141, 125 West McKinley Way, Youngstown,  
Ohio 44514***

# On the Air Magazine--ARRL's New On the Air Magazine is on its Way to Members

The premiere issue of ARRL's *On the Air* magazine has left the printer and is on its way to member subscribers. The magazine should be in mailboxes within the next 10 days.

*On the Air* is the newest ARRL member benefit to help new licensees and beginner-to-intermediate radio communicators navigate the world of amateur radio. Eligible US-based members can elect to receive *On the Air* or *QST* magazine in print when they join or when they renew their ARRL membership.

Delivered six times a year, the magazine will present articles and tips on selecting equipment, building projects, and getting involved in emergency communication. *On the Air* will also spotlight the experiences of those involved in public service communication and casual operating.

All members will be able to access digital editions of *On the Air* magazine. The first digital issue of *On the Air* will be available beginning January 14th, supported by a new version of ARRL's digital magazine app. With one app, members will be able to access *On the Air* and *QST*.

ARRL Emergency Preparedness Assistant Sabrina Jackson, KC1JMW, is featured on the cover of the premiere issue of *On the Air* magazine.



# Electret Microphones – Part II

Last month we talked about the trials and tribulations of getting a headset with electret mic element to work with Yaesu radios. Solved that problem with an adaptor to supply the phantom power needed by the mic element. Now let's look at why we needed to do that in the first place.

Historically, dynamic microphones were one of the early designs and have remained widely used. They operate similarly to a speaker, but in reverse. Instead of a voice coil moving the speaker cone, a diaphragm moves a coil.



The photo is a picture of the current practice in making dynamic mic elements. (We'll ignore ribbon mics for now) If you look closely you will see what looks like wrinkles. They are wrinkles in a clear plastic membrane. The membrane is bonded to a coil of very fine wire. In the photo the edge of the coil is visible in the red portion. The coil is sitting in a groove in a permanent magnet. Putting it all together, vibrations from sound in the air cause the membrane to move and therefore the coil. The coil moving gets cut by the lines of force from the magnet and induce a voltage/current in the coil. The amplitude and frequency of the voltage are proportional to the vibration of the diaphragm.

Works fine, lasts a long time, won't rust if you paint it green. But the output of the coil is very small. Typical values are in the low millivolt range, for instance between 10-100mV. The low output has several ramifications. For instance, it will need more amplification to be usable and will require a high quality cable to keep S/N high.

Another popular microphone design is the condenser mic. The basics remain the same, the difference is in how the output signal is created. In the picture the condenser mic element is the gold disc in the center. The element consists of a backplate, usually brass. Positioned closely to the backplate is a gold sputtered mylar diaphragm. Sputtering is a process of depositing a metal on a surface, so this is a mylar diaphragm coated with gold. The diaphragm and backplate together form a capacitor. Sound vibrations hitting the diaphragm move it relative to the backplate, changing the element.



To create a voltage signal we need to supply a voltage to the element. The voltage will create varying charge on the cap as the diaphragm moves. The output voltage of the condenser mic element is much higher than the dynamic element, but the current is extremely small. Going back to basic definitions, high voltage and low current are typical of a high resistance circuit. Being a form of AC (the audio signal) we refer to that as high impedance rather than resistance. The high impedance of the condenser element requires a circuit to transform the impedance to a lower value to make it usable.

Relative to the dynamic element, the diaphragm is able to move more freely since it is not hauling a coil in and out of a magnetic field. That increase in flexibility allows the condenser mic to do a much better job following the sound vibrations, and have a

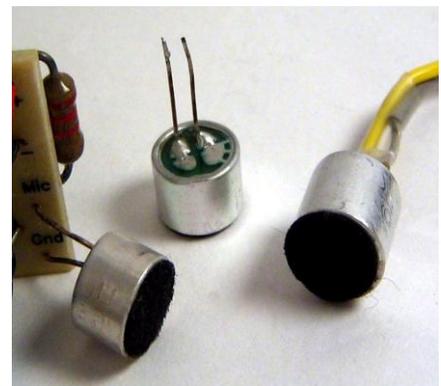
much greater frequency response.

One drawback of the condenser mic is the element is very fragile, more suited to studio applications than out in the field. Enter the Electret. The electret element eliminates the need for the applied voltage by having a permanent charge created during the manufacturing process. Wikipedia describes the process as: “Electrets are commonly made by first melting a suitable dielectric material such as a plastic or wax that contains polar molecules, and then allowing it to re-solidify in a powerful electrostatic field.” A side benefit is that the electret element is also more physically rugged than the traditional condenser.

Hold on, I've looked at schematics using electrets and they do require a voltage. True. Electret mic elements actually date back to the 1920's, but until design advances in the 60's were not popular. Recall that the condenser mic is a high impedance element requiring an impedance conversion circuit. That circuit was typically done with a vacuum tube as the main element. (Another reason condenser mics were largely used in studio settings) But as transistors and later IC's came online, small amplifiers were able to be mounted in the same package as the electret element, taking care of the impedance matching and providing some amplification of the signal. Of course the amplifier needs a voltage to operate.

That brings us roughly to current practice. Electret elements have become the element of choice for just about everything. In addition they are able to be made very small, so they show up in anything portable that needs a mic. On the low end of consumer electronics, they are inexpensive – think less than a buck for the element. On the high end, pro audio mics using electrets can run \$2000 or more.

If you want to dig deeper into condenser microphones, Neuman.Berlin has a large library of easy to understand reference material here: <https://www.neumann.com/homes>



## Spreading the Fun

We work a rare DX station and its fun. We build or buy a new radio and get it on the air and its fun. We talk to someone in another state or another country and learn about them and their station and its fun. We try a new part of the fascinating hobby we call ham radio and its fun. Any way you look at this hobby, its lots of fun.

Now when you do something that's fun, you usually share your experiences with other people. Sure it's fun to talk to other hams about our shared interests but when was the last time you talked to a non-ham about our fun hobby?

Well now's the time to start. ham radio's future depends on it. Its common knowledge our hobby needs new blood. That isn't going to happen by accident. We all need to talk about the fun of ham radio to other non-hams. It never fails that you find folks that express an interest. Time to get them involved.

The MVARA has all the right tools and programs to help with that. From VE license sessions to complete loaner stations (from the radio and power supply to the antenna) our club can help get new hams on the air and involved in our hobby. Do your part. Talk to non-hams about the fun.

# Amateur License Refresher-- Dave Brett, KD8NZF

It's probably been awhile 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

E6A01 (C)

In what application is gallium arsenide used as a semiconductor material in preference to germanium or silicon?

- A. In high-current rectifier circuits
- B. In high-power audio circuits
- C. In microwave circuits
- D. In very low frequency RF circuits

E6A02 (A)

Which of the following semiconductor materials contains excess free electrons?

- A. N-type
- B. P-type
- C. Bipolar
- D. Insulated gate

## General Pool

G2B01 (C) [97.101(b), (c)]

Which of the following is true concerning access to frequencies?

- A. Nets always have priority
- B. QSOs in progress always have priority
- C. Except during emergencies, no amateur station has priority access to any frequency
- D. Contest operations must always yield to non-contest use of frequencies

G2B02 (B)

What is the first thing you should do if you are communicating with another amateur station and hear a station in distress break in?

- A. Continue your communication because you were on the frequency first
- B. Acknowledge the station in distress and determine what assistance may be needed
- C. Change to a different frequency
- D. Immediately cease all transmissions

(Answers page 2)

## *The Last Word*

“Tell me and I forget, teach me and I may remember, involve me and I learn.” — Benjamin Franklin



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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:

[MVARAVoiceCoil@gmail.com](mailto:MVARAVoiceCoil@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, based on space available—you don’t need to be an MVARA member. Please submit your list to [mvara.w8qly@gmail.com](mailto:mvara.w8qly@gmail.com) **AND** [mvaravoiccoil@gmail.com](mailto:mvaravoiccoil@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 notified otherwise.

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