



November 2020
Our 101th Year
Volume 58, Issue 11

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Website:

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

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

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The Voice Coil

Prez Sez

When I joined the Mahoning Valley Amateur Radio Association, I had no intention of ever serving in office. Period.

Becky Albrecht tried to get me to run for president but I told her in no uncertain terms “No”. Becky and Rick asked me a couple of times and again I said, “No, just wasn’t interested.”

After that Dave Brett started on me and he would ask every once on a while. I would tell him “No” or “Cindy says, ‘If I run, me and the dog can come live at your house.’” Dave would still work on me from time to time and then he got Frank Sole involved.

After a while they started to get me thinking about doing it. We talked; we ate a lot of pizza, but the one I had to talk into it was Cindy. She was the one against me running for any office at all. It took me months of talking to make her come around to my thinking and she still isn’t there as of yet.

She still complains that this ham radio thing takes up to much of my time and I’m not doing enough around the house. To tell you the truth, I am having a lot of fun leading this group even with the Covid-19 going on and our yearly activities limited.

The reason I tell you this story is



We need one more trustee. Every other position has either been nominated or someone has stepped up and volunteered for. This is your club I know some of you have already served. For those of you who have not step up and let’s get some new blood on the board.

We’re not looking to change the world just have some fun with a ham radio group. This is the oldest club in the Mahoning Valley and the best club let’s keep that going. Don’t wait for the other guy to do it.

73,
Scott, KE4UHC

Next Meeting:

November 12, 2020

Online Zoom Meeting.
Email will be sent with a link prior to the meeting.

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 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

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.

ARRL Urges Members to Join in Strongly Opposing FCC's Application Fees Proposal

ARRL will file comments in firm opposition to an FCC proposal to impose a \$50 fee on amateur radio license and application fees. With the November 16 comment deadline fast approaching, ARRL urges members to add their voices to ARRL's by filing opposition comments of their own. The FCC *Notice of Proposed Rulemaking (NPRM)* MD Docket 20-270 appeared in the October 15 edition of *The Federal Register* and sets deadlines of November 16 to comment and November 30 to post reply comments, which are comments on comments already filed. ARRL has prepared a [Guide to Filing Comments with the FCC](#) which includes tips for preparing comments and step-by-step filing instructions. File comments on MD Docket 20-270 using the FCC's Electronic Comment Filing System ([ECFS](#)).

Under the proposal, amateur radio licensees would pay a \$50 fee for each amateur radio application for new licenses, license renewals, upgrades to existing licenses, and vanity call sign requests. The FCC also has proposed a \$50 fee to obtain a printed copy of a license. Excluded are applications for administrative updates, such as changes of address, and annual regulatory fees. Amateur Service licensees have been exempt from application fees for several years.

The FCC proposal is contained in a *Notice of Proposed Rulemaking (NPRM)* in MD Docket 20-270, which was adopted to implement portions of the "Repack Airwaves Yielding Better Access for Users of Modern Services Act" of 2018 — the so-called "[Ray Baum's Act](#)." The Act requires that the FCC switch from a Congressionally-mandated fee structure to a cost-based system of assessment.

ARRL is encouraging members to file comments that stress amateur radio's contributions to the country and communities. ARRL's *Guide to Filing Comments* includes "talking points" that may be helpful in preparing comments. These stress amateur radio's role in volunteering communication support during disasters and emergencies, and inspiring students to pursue education and careers in engineering, radio technology, and communications.

As the FCC explained in its *NPRM*, Congress, through the Ray Baum's Act, is compelling regulatory agencies such as the FCC to recover from applicants the costs involved in filing and handling applications. The Ray Baum's Act does not exempt filing fees in the Amateur Radio Service, and the FCC stopped assessing fees for vanity call signs several years ago.

Current Activities

November 12: Monthly meeting, 7pm via Zoom.

Elections: They will be held online this year. Information will follow soon by email.

VE Testing: We are hoping to have a VE session in early December. Date/time/location to be determined, dependent on Covid risks/restrictions. Watch your email for upcoming announcements.

Contact Us:

Email: mvara.W8QLY@gmail.com **Snail-mail:** MVARA, P.O. Box 14141, Poland, OH 44514

Meeting ideas/ suggestions? Contact Dave, KD8NZF, KD8NZF@zoominternet.net

Swap and Shop



--Analyzer [RIG EXPERT] AA-55 Zoom w/mnl

--K44 CW Keyboard & Reader w/mnl, pwr sup, ps-keyboard, & wired-plugs.

2m station:

- KENWOOD 281a 2M transceiver w/manual
- RT SYSTEM prog. software w/USB cable & CD
- ASTRON RS-20a power supply
- RG58au 50-ft. cable w/conn.
- ARROW OSJ146/440 J-Pole

Contact Ken, KC8Y cct66000@gmail.com

Cushcraft R8 Vertical from Msgr. Ashton's estate. Price is reduced...best whole dollar offer over \$100.00 takes it. Proceeds to be donated to charity.

Contact Andy, WA8ZLK. Cell:330-774-1108, email: ajaybee92@gmail.com

Hedy Lamarr: Movie Star, Inventor, and Radio Pioneer



Hedy Lamarr, born Hedwig Eva Maria Kiesler, was an Austrian-American actress, inventor, and film producer. She was part of 30 films in an acting career spanning 28 years. Her many films included *Boom Town* (1940) with Clark Gable and Spencer Tracy, *Comrade X* with Gable, *White Cargo* (1942), *Tortilla Flat* (1942) with Tracy and John Garfield, *H. M. Pulham, Esq.* (1941) with Robert Young, and *Dishonored Lady* (1947). In 1941, Lamarr was cast alongside Lana Turner and Judy Garland in *Ziegfeld Girl*.

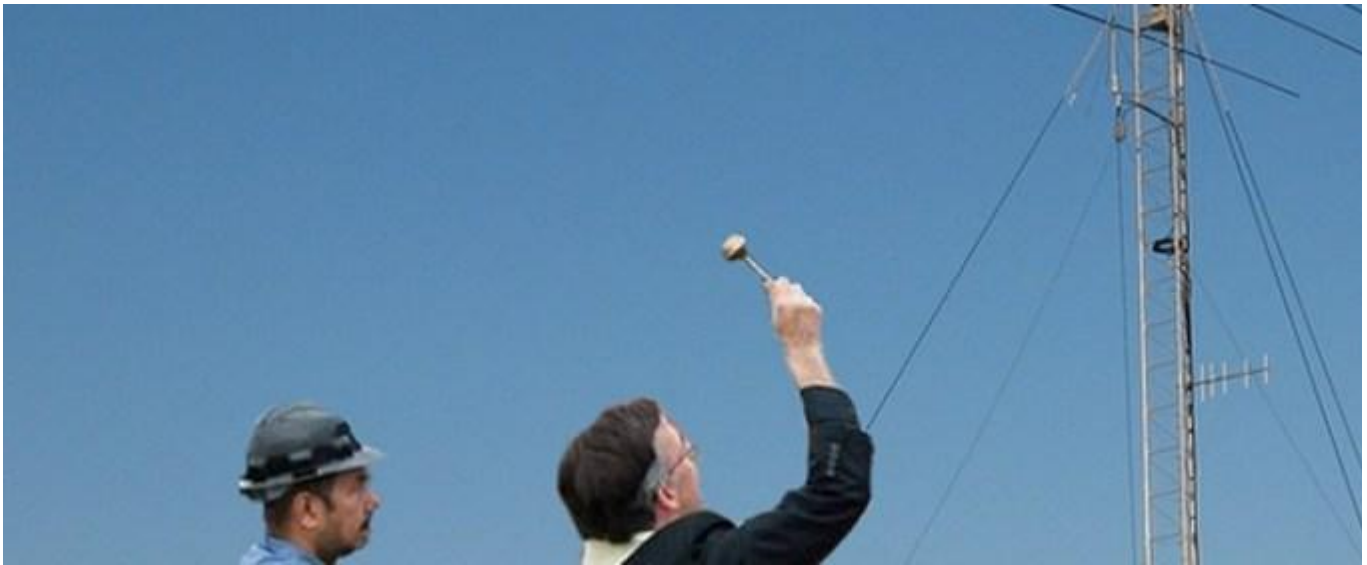
But what does a girl do when she's bored with acting? She took up inventing. Lamarr's earliest inventions included an improved traffic stoplight and a tablet that would dissolve in water to create a carbonated drink. The beverage was unsuccessful; Lamarr herself said it tasted like Alka-Seltzer.

In 1942, during the heyday of her career, Lamarr earned recognition in a field quite different from entertainment. She and her friend, the composer George Antheil, received a patent for an idea of a radio signaling device, or "Secret Communications System," which was a new frequency-hopping, spread-spectrum technology a means of frequency hopping radio frequencies to keep enemies from decoding messages. Originally designed to help radio-controlled torpedoes avoid jamming and going off course, the system became an important step in the development of technology to maintain the security of both military communications and cellular phones.

Lamarr wasn't instantly recognized for her communications invention since its wide-ranging impact wasn't understood until decades later. However, in 1997, Lamarr and Antheil were honored with the Electronic Frontier Foundation (EFF) Pioneer Award, and that same year Lamarr became the first female to receive the BULBIE™ Gnass Spirit of Achievement Award, considered the "Oscars" of inventing.

For those of you into special events stations, they will be celebrating Hedy Lamarr Day on November 9th 2020. This special event net will be on at 10am pst/1pm est, (18:00 UTC) to celebrate her accomplishments and of course her 106th birthday. Details? Contact W2JLD2@GMAIL.COM

Ham Humor: DXORCISM RIDS STATION OF SPOOKS



By [K5KVN](#), on the scene

SIMI VALLEY, Calif. — Traffic along Hillshire Avenue came to a halt yesterday as curious drivers stopped to see Father Henry McGuire suspended high above the Cuesta Verde neighborhood in a scissor lift.

Local ham radio operator Malcolm O’Hara arranged the spectacle, after experiencing phenomena that led him to determine his equipment was possessed.

O’Hara asked Father McGuire to “drive out the demons” that have prevented him from talking to distant amateur radio stations. The pair dubbed the activity a “DXorcism,” which involved throwing holy water on a Rohn tower and a Cushcraft beam antenna.

“Trust me, this was a last resort,” said O’Hara. “Finding pea soup in my cantenna was the last straw.”

He says strange occurrences have been happening in his shack for more than a year. “My beam turns all by itself! My buddies say it’s an electrical wiring problem, but I know it’s paranormal.”

“And, last week I was trying to work some RTTY, expecting a 599 signal report, but the screen printed 666. My wife says I need glasses, but it really freaked me out,” said O’Hara.

He says he’s not ready yet to call the procedure a success. His first contact following the DXorcism was a special event station in Death Valley.

HamHijinks.com

2020 ARRL Simulated Emergency Test and Black Swan Exercise



Mahoning County ARES was part of the ARRL Simulated Emergency Test on October 3, 2020. This year the SET included the the Black Swan exercise a multi-state radio communications exercise (COMEX) to test the ability for volunteer, non-government organization (NGO), and government agencies to communicate across services in emergency conditions through amateur radio. Black Swan participants included elements from the 179th Airlift Wing, Ohio Air National Guard; Central Ohio Poison Center; Toledo Emergency Medicine; The Ohio State University Emergency Medicine; Federal Emergency Management Agency (FEMA) Integrated Public Alert & Warning System R&D; Department of Homeland Security SHARED RESOURCES HF Program.

We started preparing in July by participating in the County Information Reporting Project, an effort to exercise amateur radio station operators in fundamentals of radio message origination, relay, and delivery. Objectives were sent by radiogram from the Ohio Section Assistant Emergency Coordinator via the Buckeye Net to the 10 Ohio District Emergency Coordinators. The DEC's would then pass the objective to the county Emergency Coordinators who would have county member(s) originate a radiogram to go back to the Ohio Section AEC. Radiograms were returned via the Buckeye Net, the Ohio Single Sideband Net, or Winlink RF. The CIRP helped everyone get comfortable with the tasks we would need to complete during the SET.

The scenario for the Black Swan was an explore Ohio weekend with lots of activities in the parks and nature preserves. This same weekend an internet service provider has a catastrophic failure causing loss of phone and internet service. Severe weather also strikes causing power outages, toxic spills, and infrastructure damage rendering TV and Radio broadcasters inoperable.

ARES members used google meet videoconferencing to create virtual sites that simulated shelters, hospitals, and Emergency Operation Centers around the state of Ohio. Traffic was generated between these sites and our severed agencies and our ability to handle messages was evaluated.

All Mahoning County ARES participants were required to originate a message to Matt Curtin KD8TTE Ohio Section AEC. We called up a local net on the 146.745 repeater and passed this traffic by voice and digital modes using both HF and VHF. We used the Buckeye Net, Winlink, and the Ohio Single Sideband net to relay these messages to Matt. Software used for the digital messages included NBEMS, FLDIGI, FLMSG, FLAMP, and WINLINK.

Everyone learned some new tricks about traffic handling and digital modes. Aiden, W0TIS, was able to install and configure FLDIGI and FLMSG during the exercise and use them to send a digital radiogram over the repeater.

If you were not able to make this year's SET we hope you will be able to join us for the 2021 SET next October. If you are interested in public service or emergency communications and would like more information about Mahoning County ARES please visit our web site at <http://www.mahoning-ares.org/> and check into the Mahoning County ARES net the first and third Monday of the month at 8:30 pm on the W8QLY repeater 146.745 pl 110.9.

Richard Slutz
KB8GAE MC AEC

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>.

November 2020

+ North American SSB Sprint Contest	0000Z-0400Z, Nov 1
+ Silent Key Memorial Contest	0600Z-0859Z, Nov 1
+ Classic Exchange, CW	1400Z, Nov 1 to 0800Z, Nov 2 and 1400Z, Nov 3 to 0800Z, Nov 4
+ High Speed Club CW Contest	1500Z-1800Z, Nov 1
+ K1USN Slow Speed Test	0000Z-0100Z, Nov 2
+ RSGB 80m Autumn Series, Data	2000Z-2130Z, Nov 2
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 3
+ ARS Spartan Sprint	0200Z-0400Z, Nov 3
+ RTTYOPS Weeksprint	1700Z-1900Z, Nov 3
+ QRP Fox Hunt	0200Z-0330Z, Nov 4
+ Phone Fray	0230Z-0300Z, Nov 4
+ CWops Mini-CWT Test	1300Z-1400Z, Nov 4
+ VHF-UHF FT8 Activity Contest	1700Z-2000Z, Nov 4
+ CWops Mini-CWT Test	1900Z-2000Z, Nov 4
+ UKEICC 80m Contest	2000Z-2100Z, Nov 4
+ CWops Mini-CWT Test	0300Z-0400Z, Nov 5
+ RTTYOPS Weeksprint	1700Z-1900Z, Nov 5
+ NRAU 10m Activity Contest	1800Z-1900Z, Nov 5 (CW) and 1900Z-2000Z, Nov 5 (SSB) and 2000Z-2100Z, Nov 5 (FM) and 2100Z-2200Z, Nov 5 (Dig)
+ SKCC Sprint Europe	2000Z-2200Z, Nov 5
+ NCCC RTTY Sprint	0145Z-0215Z, Nov 6
+ QRP Fox Hunt	0200Z-0330Z, Nov 6
+ NCCC Sprint	0230Z-0300Z, Nov 6
+ Day of the YLs Contest	0000Z, Nov 7 to 2359Z, Nov 8
+ IPARC Contest, CW	0500Z-1200Z, Nov 7
+ Ukrainian DX Contest	1200Z, Nov 7 to 1200Z, Nov 8
+ SKCC Weekend Sprintathon	1200Z, Nov 7 to 2400Z, Nov 8
+ RTTYOPS Weekend Sprint	1600Z-1959Z, Nov 7
+ ARRL Sweepstakes Contest, CW	2100Z, Nov 7 to 0300Z, Nov 9
+ AWA Bruce Kelley 1929 QSO Party	2300Z, Nov 7 to 2300Z, Nov 8 and 2300Z, Nov 14 to 2300Z, Nov 15
+ IPARC Contest, SSB	0500Z-1200Z, Nov 8
+ EANET Sprint	0800Z-1200Z, Nov 8
+ 4 States QRP Group Second Sunday Sprint	0100Z-0300Z, Nov 9
+ K1USN Slow Speed Test	0000Z-0100Z, Nov 10
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 10
+ RTTYOPS Weeksprint	1700Z-1900Z, Nov 10
+ QRP Fox Hunt	0200Z-0330Z, Nov 11
+ Phone Fray	0230Z-0300Z, Nov 11
+ CWops Mini-CWT Test	1300Z-1400Z, Nov 11
+ VHF-UHF FT8 Activity Contest	1700Z-2000Z, Nov 11
+ CWops Mini-CWT Test	1900Z-2000Z, Nov 11

+ RSGB 80m Autumn Series, SSB	2000Z-2130Z, Nov 11
+ CWops Mini-CWT Test	0300Z-0400Z, Nov 12
+ RTTYOPS Weeksprint	1700Z-1900Z, Nov 12
+ NCCC RTTY Sprint	0145Z-0215Z, Nov 13
+ QRP Fox Hunt	0200Z-0330Z, Nov 13
+ NCCC Sprint	0230Z-0300Z, Nov 13
+ PODXS 070 Club Triple Play Low Band Sprint	0000Z, Nov 14 to 2359Z, Nov 16
+ WAE DX Contest, RTTY	0000Z, Nov 14 to 2359Z, Nov 15
+ 10-10 Int. Fall Contest, Digital	0001Z, Nov 14 to 2359Z, Nov 15
+ JIDX Phone Contest	0700Z, Nov 14 to 1300Z, Nov 15
+ OK/OM DX Contest, CW	1200Z, Nov 14 to 1200Z, Nov 15
+ SARL VHF/UHF Analogue Contest	1200Z, Nov 14 to 1000Z, Nov 15
+ CQ-WE Contest	1900Z-2300Z, Nov 14 (CW/Digital) and 0100Z-0500Z, Nov 15 (Phone) and 1900Z-2300Z, Nov 15 (Phone) and 0100Z-0500Z, Nov 16 (CW/Digital)
+ Homebrew and Oldtime Equipment Party	1300-1500Z, Nov 15 (40m) and 1500-1700Z, Nov 15 (80m)
+ Run for the Bacon QRP Contest	2300Z, Nov 15 to 0100Z, Nov 16
+ K1USN Slow Speed Test	0000Z-0100Z, Nov 16
+ RSGB FT4 Contest Series	2000Z-2130Z, Nov 16
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 17
+ RTTYOPS Weeksprint	1700Z-1900Z, Nov 17
+ QRP Fox Hunt	0200Z-0330Z, Nov 18
+ Phone Fray	0230Z-0300Z, Nov 18
+ CWops Mini-CWT Test	1300Z-1400Z, Nov 18
+ CWops Mini-CWT Test	1900Z-2000Z, Nov 18
+ NAQCC CW Sprint	0130Z-0330Z, Nov 19
+ CWops Mini-CWT Test	0300Z-0400Z, Nov 19
+ RTTYOPS Weeksprint	1700Z-1900Z, Nov 19
+ NCCC RTTY Sprint	0145Z-0215Z, Nov 20
+ QRP Fox Hunt	0200Z-0330Z, Nov 20
+ NCCC Sprint	0230Z-0300Z, Nov 20
+ YO International PSK31 Contest	1600Z-2200Z, Nov 20
+ SARL Field Day Contest	1000Z, Nov 21 to 1000Z, Nov 22
+ LZ DX Contest	1200Z, Nov 21 to 1200Z, Nov 22
+ RTTYOPS Weekend Sprint	1600Z-1959Z, Nov 21
+ All Austrian 160-Meter Contest	1600Z-2359Z, Nov 21
+ REF 160-Meter Contest	1700Z, Nov 21 to 0100Z, Nov 22
+ RSGB 1.8 MHz Contest	1900Z-2300Z, Nov 21
+ Feld Hell Sprint	1900Z-2059Z, Nov 16
+ ARRL Sweepstakes Contest, SSB	2100Z, Nov 21 to 0300Z, Nov 23
+ K1USN Slow Speed Test	0000Z-0100Z, Nov 23
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 24
+ RTTYOPS Weeksprint	1700Z-1900Z, Nov 24
+ SKCC Sprint	0000Z-0200Z, Nov 25
+ Phone Fray	0230Z-0300Z, Nov 25
+ CWops Mini-CWT Test	1300Z-1400Z, Nov 25
+ CWops Mini-CWT Test	1900Z-2000Z, Nov 25
+ UKEICC 80m Contest	2000Z-2100Z, Nov 25
+ CWops Mini-CWT Test	0300Z-0400Z, Nov 26
+ RTTYOPS Weeksprint	1700Z-1900Z, Nov 26
+ RSGB 80m Autumn Series, CW	2000Z-2130Z, Nov 26

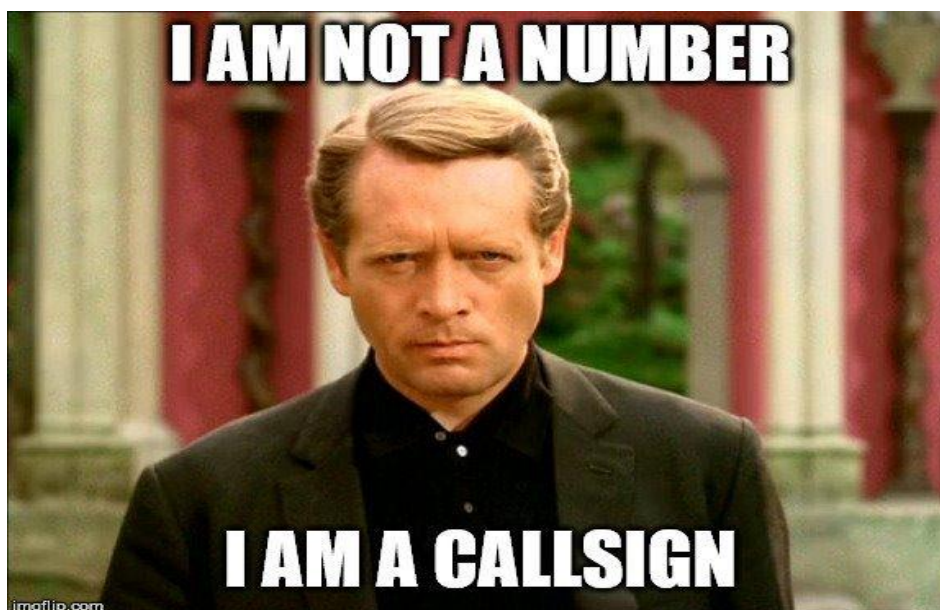
+ NCCC RTTY Sprint	0145Z-0215Z, Nov 27
+ NCCC Sprint	0230Z-0300Z, Nov 27
+ CQ Worldwide DX Contest, CW	0000Z, Nov 28 to 2400Z, Nov 29
+ ARRL EME Contest	0000Z, Nov 28 to 2359Z, Nov 29
+ RTTYOPS Weekend Sprint	1600Z-1959Z, Nov 28
+ K1USN Slow Speed Test	0000Z-0100Z, Nov 30
+ QCX Challenge	1300Z-1400Z, Nov 30
+ QCX Challenge	1900Z-2000Z, Nov 30

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>

November						
2020 Nov02	2020 Nov29	Maldives	8Q7RM <small>NEW</small>		DXNews 20201021	By HB9SHD fm Kandolhu I (IOTA AS-013); HF; SSB + digital
2020 Nov11	2020 Nov18	Malawi	7Q7RU	LoTW	DXW.Net 20201014	By RA1ZZ R7AL RZ3K fm br Embangweni (KH67ru); 160-10m; CW SSB FT-8 (f/h); QSL via R7AL (B/d)
2020 Nov21	2020 Nov28	St Vincent	J8 <small>NEW</small>	KD7WPJ	KD7WPJ 20201022	By KD7WPJ as J8/UR5BCP fm IOTA NA-109; 40-6m; mainly FT8 FT4; 100w; QSL OK B/d; LoTW for digital contacts
2020 Nov23	2020 Dec01	St Vincent	J88PI	GW4DVB Direct	TDDX 20200803	By GW4DVB fm Palm I (IOTA NA-0025, FK92ho); 40-6m; SSB FT8, maybe CW
CQ WW DX Contest, CW (Nov 28-29, 2020) Check here for pericontest activity too.						



Mahoning Valley Amateur Radio Association 2021 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	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Address	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Phone	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Email Address	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Membership

<input type="checkbox"/> <i>Renewal</i>	<input type="checkbox"/> <i>New Member</i>	Single membership \$20.00	\$ _____
<input type="checkbox"/> <i>Renewal</i>	<input type="checkbox"/> <i>New Member</i>	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 \$ _____

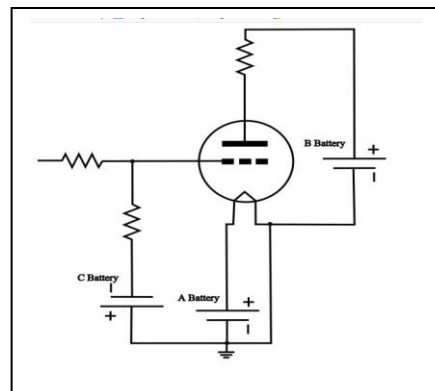
***Make checks payable to: Mahoning Valley Amateur Radio Association
Please bring this form and your payment to the next meeting or mail to: MVARA,
P.O. Box 14141, 125 West McKinley Way, Youngstown, Ohio 44514***

Are you EverReady? Dave, KD8NZF

For our October club meeting, our speaker was Stuart Smolkin, Curator of the Asheville Radio Museum in North Carolina. During his presentation there was some discussion on batteries used in the old sets and it piqued my curiosity enough to do a little looking on the internet.

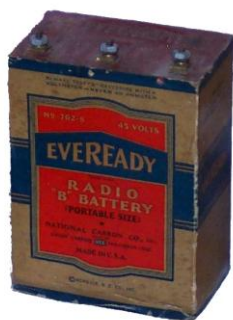
Many of the early radios made use of a three-battery system and labeled the batteries as the A, B, and C batteries.

As shown in the Triode circuit, the A battery was a low voltage battery typically used in the cathode circuit. Typical voltages for the A battery were between 1.4V and 2V and this battery energized the tube filaments, so was consumed rapidly by the relatively high filament current.



B batteries supplied the voltage to the Plate of the tube. Tube plates need high voltages and typical values for the early B batteries were between 45V and 90V. Due to the construction of the batteries, multiples of 22.5V were common and some batteries even had multiple taps, each 22.5V above the previous. If you look closely at the label on the B battery shown here, it is labeled 45V, 2 X 22.5V. The plate circuit did not consume nearly the current that the filament did, and the life of the B battery greatly exceeded the A battery. The legacy of the B battery lives on long after radios were designed to operate from AC, eliminating the batteries. In almost all tube circuits, the voltage on the plate of the tube is still referred to as B+.

The C battery was an addition that came about when tubes were designed with a Control Grid element. Most tube circuits are designed not to draw grid current (yeah – yeah, I know, grid leak bias does just that), so again the current draw on the C battery is low. A typical voltage for a C Battery was 4.5V and C batteries were also produced with multiple taps, but this time the difference between the taps was 1.5V. I'm trying to think – I know I've bought batteries rated 1.5 V and labeled as C batteries – now where was that? Now that I think about it I think I've bought A batteries too – something about Two A or Three A? Or was it AA or AAA? Shocking!



B battery



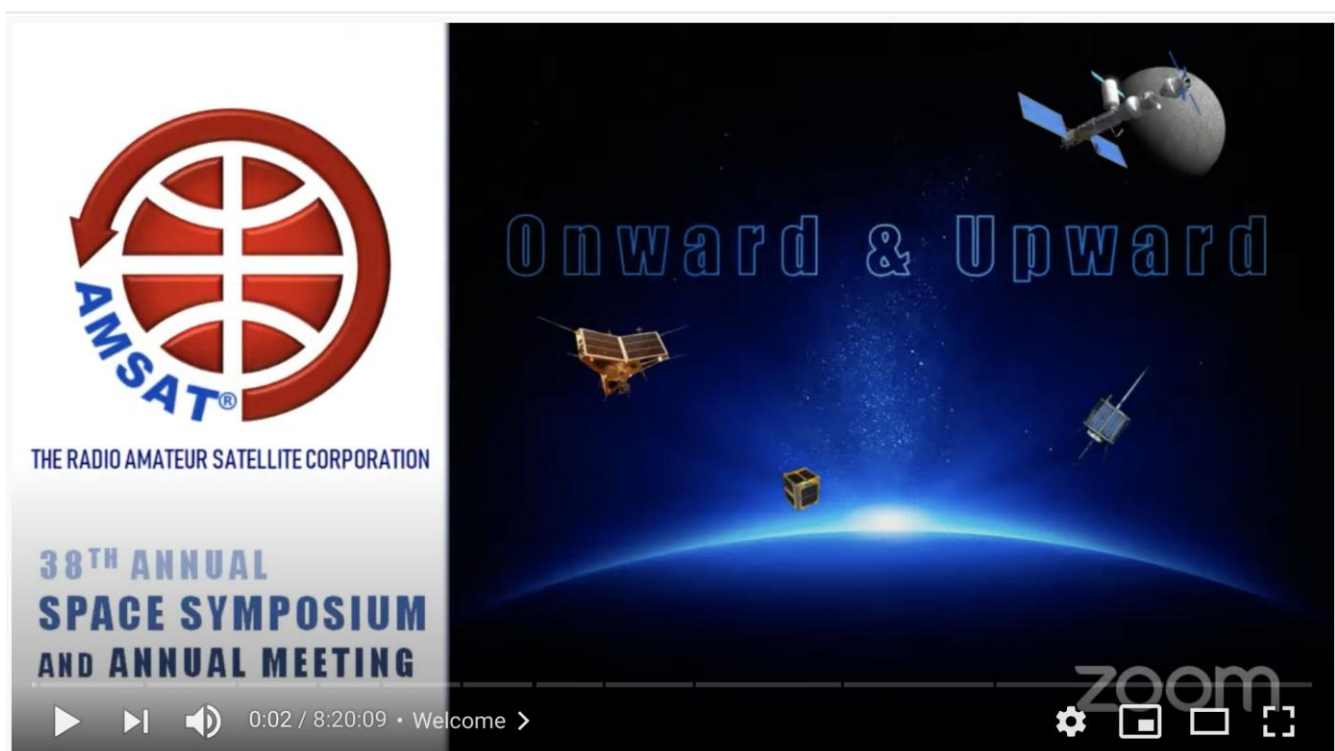
C battery

A battery



AMSAT 2020 Space Symposium video now online

By Dan Romanchik, KB6NU



The 38th AMSAT Space Symposium and Annual General Meeting was held online on October 17, 2020. I'm kinda bummed about this because I just joined AMSAT, but somehow, I managed to miss this event. Fortunately, the symposium was recorded and is now online, and I've been enjoying watching the video (https://www.youtube.com/watch?v=EHDgrI_w8hY).

The video includes updates on AMSAT projects and presentations on amateur satellite technology. For details on presenter names and presentation titles, visit the AMSAT website. AMSAT members can access the Symposium Proceedings on the AMSAT website as well. (The proceedings for all the AMSAT Symposiums are available there as well, but you do have to be an AMSAT member.)

Here's a list of the different presentations on the video and the times at which they start:

0:00:00 Welcome

0:02:07 AMSAT GOLF-TEE System Overview and Development Status

0:43:02 GOLF IHU Coordination

1:19:10 GOLF Downlink Coordination

1:50:15 FUNcube Next

2:13:50 LunART – Luna Amateur Radio Transponder

2:45:35 CatSat HF Experiment Overview

3:13:30 Neutron-1 CubeSat

3:39:58 Progress and Development of Open Source Electric Propulsion for Nanosats and Picosats

4:15:00 AMSAT Education

5:14:00 ARISS (Amateur Radio on the International Space Station) / AREx (Amateur Radio Exploration)

6:14:00 AMSAT Engineering

7:21:16 AMSAT Annual General Meeting

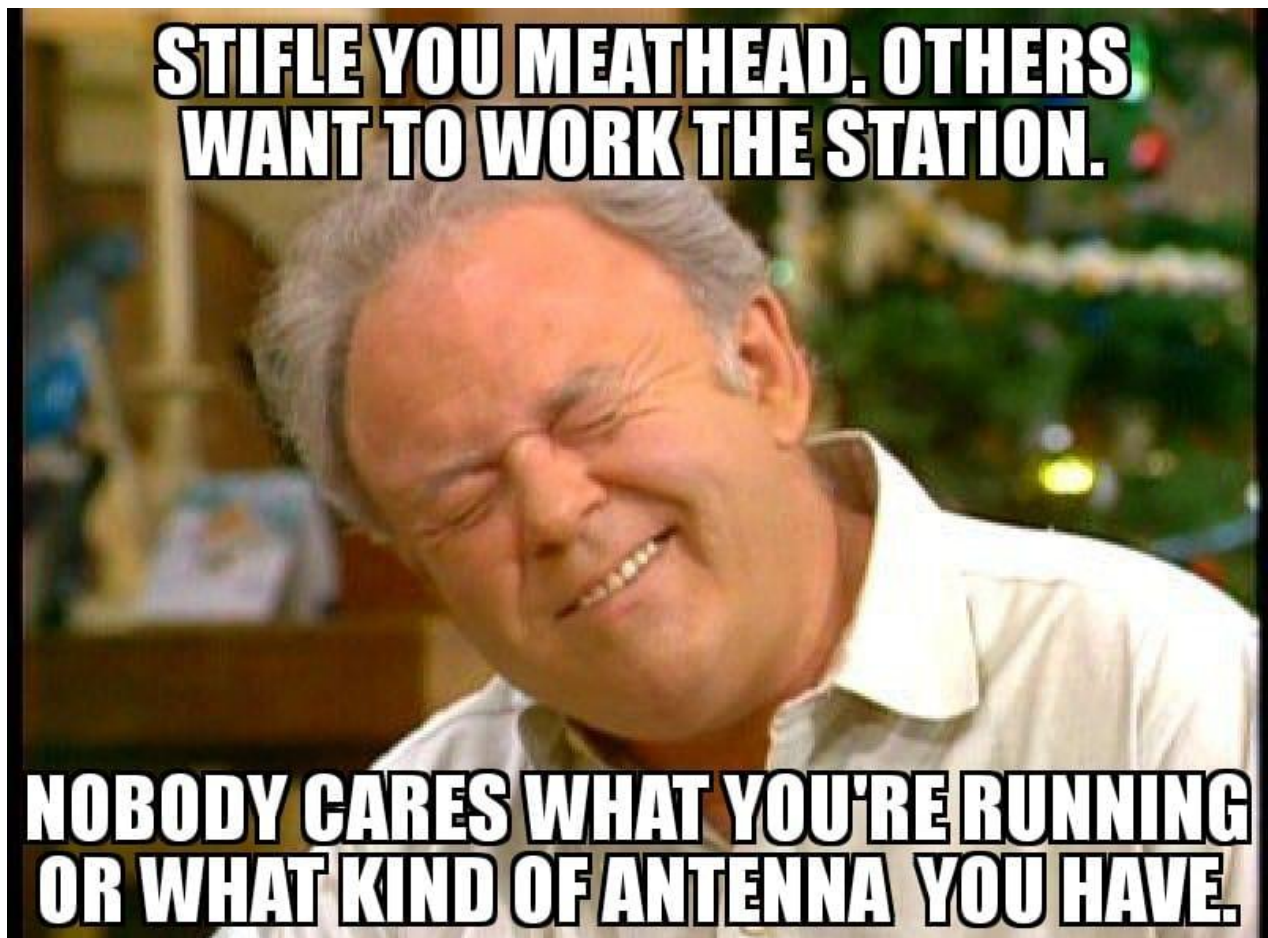
So far, I've only watched the GOLF-TEE System Overview and the AMSAT Education presentation. They were both interesting and I'm looking forward to watching the others.

I really hadn't been keeping up with AMSAT lately, so the the presentation on the GOLF project was definitely news to me. GOLF is an ambitious project aimed at sending up high Earth orbit (HEO) satellites. GOLF is short for "Greater Orbits Larger (user communication) Footprints." This is really pretty exciting stuff.

Watching these presentations really gives one an appreciation for the work that goes into the design of these satellites and the technical skills and dedication of the hams working on these projects. These guys are not getting paid to do any of this work, and as Eric Skoog, K1TVV, the GOLF System Engineer said in his presentation, "Space is hard."

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Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the "No Nonsense" amateur radio license study guides (KB6NU.Com/study-guides/), and often appears on the ICQPodcast (icqpodcast.com). When he's not trying to work the satellites, he teaches online ham radio classes and operates CW on the HF bands.



THE LAST WORD

“Politicians are like diapers, they need to be changed often, and for the same reasons.” -Mark Twain.



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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.

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