January 2021
Our 102th Year
Volume 59, Issue 1

Website:
http://www.mvara.org/

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

The Voice Coil

Prez Sez

Well, here we are. I have been president for one year and what a year it has been. We were two months into getting the club started with all the plans we had for it and we were hit with a deadly pandemic.

But we adapted and started doing meetings on Zoom and we would also have monthly meetings on the repeater. We held Board Meetings on Zoom and kept the club business going. We planned and held a General License class on Zoom and had several students upgrade their license.

We met for the annual Corn Roast and it was so good to see everyone, even if we did have to social distance. We again had a small group get together and built 6 meter antennas which turned out pretty well after we tuned and tested them. Later, we had a outdoor meeting at the train yard thanks to Mike McCleery K8PRR.

We then tried one meeting indoors and had a few show up, but we got shut down after that. Sadly I think we are going to stay shut down until Covid is under control.

Even this time of year when we should be with our families and loved ones, we are being asked to stay at home. "Do not gather in large crowds," we are being told. Folks I figure you're going to do what you're going to do. Stay home if that's what you think is right. Go and see your family if you think that's ok, but follow the proper precautions.

I have to thank the outgoing officers. All of you have done a tremendous job this year and really stepped up when the club needed you to. Thank you!

However you spend your holiday, be happy, healthy, and safe. Cindy and I would like to wish all of you a very Merry Christmas and a healthy and prosperous New Year.

73,
Scott,
KE4UHC

Next Meeting:

January 14, 2021
Online Zoom Meeting.
Email will be sent with a link prior to the meeting.

2021 Officers

President: Scott Wilton, KE4UHC
Vice President: Mike McCleery, K8PRR
Secretary: Ray Bishop, W8CSM,
Treasurer: Dean DeMain, W8YSU
Trustees:
Mark Haverstock, K8MSH
Joe Vasco, N8SEJ
Andy Brinco, WA8ZLK
John DeGutis, N8LVA

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 Dean, W8YSU@arrl.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.

MVARA 24/7 CLUB CONNECTION

We are pleased to announce the MVARA 24/7 Club Connection. It is hosted on Groups.io which is a modern internet platform designed to help people organize and share knowledge. There are no advertisements and your data is never tracked. It is a supercharged email system that uses a forum/topic format to organize posts. It also gives us an area to share files, post photos, create databases, add events to a calendar, and create polls. Many Ham clubs around the country have found Groups.io very useful to share experiences and organize activities.

The MVARA group is a private group limited to club members only. No one else will be able to view our files or posts. You can have all the posts sent to your email address or set your account to not get emails and view all the posts with your web browser. Some of the topics being discussed are Learning Groups.io, Parks on the Air, and Solar Cycle 25 is Happening.

We are excited to invite all club members to join our group. You will need to have Groups.io account and then apply for membership in the MVARA group. There is video on our web site mvara.org by Dave KD8NZF that shows how to use and join the 24/7 Club Connection.

Here is the link to obtain a Groups.io account https://groups.io/register

If you have a Groups io account you can join the MVARA group here: https://groups.io/g/mvara

To get you started we have a poll running on how many of our members use digital modes and would like your input. We hope everyone finds this new platform useful and enjoyable to use. --Rich, WB8GAE

Congratulations!

Tom Sly, WB8LCD, has been appointed as the Ohio Section Manager, effective January 1, 2021. Scott Yonally, N8SY, will now become Great Lakes Division Vice-Director, after serving as Ohio Section Manager since 2014.

Current Activities

January 14: Monthly meeting, 7pm via Zoom.

VE Testing: Cancelled for January due to Covid risks.

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

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Swap and Shop

Drake TR7. Includes RV7 Remote VFO, SP75 Speech Processor, MS7 Speaker, power supply and many spare boards and components, Service Manual, and Operators Manual. Asking $900 OBO
Contact RANDY W3PCF / tanker60@gmail.com

I have for sale a COMPLETE STATION, for a new ham or someone looking to upgrade to HF.

-YAESU FT 950 HF+6 METERS, with mic and manual
-USB SIGNALINK with cable , FT8 or digital modes
-FH2 Remote cw/ssb contest keyer
-CUSHCRAFT R-5 VERTICAL, 10,12,15,17,20 meters. Is currently down and in my back yard.
-MFJ Versa 3 KW Roller tuner
-MFJ 891 SWR/PWR meter
-MFJ 300 Watt dummy load

I am asking $1000.00 for all and have been told that this is a steal and not asking enough??? Rig can be seen on my QRZ.com page. Using social distancing, this can be seen at my home QTH in Howland. Call or text, Jon Kovacs, K8LY, 330 883 7285.

-2 heavy duty tables suitable for ham shack use approx 24" x 45". Very sturdy. $20 each.
-Daiwa CN-801H 1.8 - 200 mhz cross needle pwr/swr meter. Nice big face and meters. Easy to read, in very good condition $50
-TYT MD380 5w UHF DMR Handheld radio. Perfect, like new condition. Perfect battery. Programmed for Y-town area $75

Contact Frank,WB8YHD, younghotdog@yahoo.com

Swap and Shop Policies are on last page of the Voice Coil. Items are also posted on the MVARA website.

HAM HUMOR: TURKEY TAKES TOLL ON HAM

SAUSALITO, NV – A local ham radio operator has been cited for careless and imprudent radio operating by the Federal Office Responsible for Monitoring All Transmissions. Robert "Chick" Brown dozed off during the 40 meter "Thanksgiving Day Net," a traditional radio gathering since 1942, where hams "check-in" to offer thanks for the blessings of the past year.

As Junior Thompson offered thanks on the net for the blessing of his Kenwood TS-990 due to a large worker's comp settlement check, Brown's VOX opened up and he was heard snoring with 1500 watts P.E.P. delivered into a 7-element Yagi.

In a prepared release, the National Radio Retransmission Legion (NRRL) defended Brown's indiscretion, saying it was directly related to the amount of turkey consumed immediately prior to the net and that the broadcast was purely unintentional. *(Reporter's note: the chemical tryptophan-L, found in turkey, can induce sleep when ingested in large doses.)*

FORMAT says agents immediately received world-wide complaints about "the buzz-saw noise" emanating from North American shores.

NRRL spokesman Johnson Longfellow says the "…combination of turkey, dressing, cranberries, Watergate salad, and candied yams played the devil with Brown's metabolism, placing him in a stupor seldom paralleled in the annals of modern medicine."

For their part, the local ham radio club "Emergency Response Team" was called away from their Thanksgiving tables and placed into action to triangulate the origin of the signal and shut it down.

Brown has 45 days to file an appeal with the Federal Office Responsible for Monitoring All Transmissions, but the sleepy ham says he'll "…probably just pay the fine and move on, since Junior will spot me some left over worker's comp money. And maybe I will try not to eat so much turkey next year."

By WBØRUR, on the scene

Contest University to Host Propagation Summit

Several radio propagation experts will share their knowledge during a Propagation Summit via Zoom, sponsored by Contest University (**CTU**). The event is scheduled for January 23, 2021. The presentation schedule includes:

--"Update on the Personal Space Weather Station Project and HamSCI Activities for 2021" with Nathaniel Frissell, W2NAF, at 11 AM EST (1600 UTC)

--"Solar Cycle 25 Predictions and Progress" with Carl Luetzelschwab, K9LA, at noon (1700 UTC)

--"Maximizing Performance of HF Antennas with Irregular Terrain" with Jim Breakall, WA3FET, at 1 PM EST (1800 UTC)

--"HF Ionospheric Propagation" with Frank Donovan, W3LPL, at 2 PM EST (1900 UTC).

Registration is free. An Icom IC-705 will be raffled off as a "door" prize. The winner must be present on Zoom to win. — *Thanks to CTU Chair Tim Duffy, K3LR*

Registration link: https://zoom.us/webinar/register/WN_dfLvFDxaTyakOWd_C7_puw

FCC to Require Email Addresses on Applications

Amateur radio licensees and candidates will have to provide the FCC with an email address on applications, effective sometime in mid-2021. If no email address is included, the FCC may dismiss the application as defective.

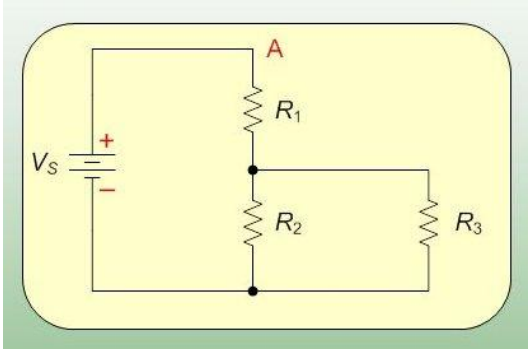
The FCC is fully transitioning to electronic correspondence and will no longer print or provide wireless licensees with hard-copy authorizations or registrations by mail.

A *Report and Order* (***R&O***) on "Completing the Transition to Electronic Filing, Licenses and Authorizations, and Correspondence in the Wireless Radio Services" in WT Docket 19-212 was adopted on September 16. The new rules will go into effect 6 months after publication in the *Federal Register*, which hasn't happened yet, but the FCC is already strongly encouraging applicants to provide an email address. When an email address is provided, licensees will receive an official electronic copy of their licenses when the application is granted.
Under Section 97.21 of the new rules, a person holding a valid amateur station license "must apply to the FCC for a modification of the license grant as necessary to show the correct mailing and email address, licensee name, club name, license trustee name, or license custodian name." For a club or military recreation station license, the application must be presented in document form to a club station call sign administrator who must submit the information to the FCC in an electronic batch file.

Under new Section 97.23, each license will have to show the grantee's correct name, mailing address, and email address. "The email address must be an address where the grantee can receive electronic correspondence," the amended rule will state. "Revocation of the station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the grantee failed to provide the correct email address."

I've heard of a stiff drink and a stiff neck, but a stiff voltage? Dave, KD8NZF

While browsing a recent issue of QST, I came across an article about a power distribution system a Ham built to make it easier to provide AC power to his multiple Linear Amplifiers in his shack. In the article he mentioned using #10 wiring to help maintain stiff power supply regulation and thought it might be interesting to look at what it means to have a stiff voltage or current supply.



The figure at the top of this article is a voltage divider with a load – aka a loaded voltage divider. R1/R2 form the voltage divider and for the moment imagine the load, R3, is not present. Let's also suppose that R1/R2 are equal size resistors, each 10KΩ, and that the battery is a 10V battery. Two equal resistors will divide the voltage equally, so each will have a 5V drop across them. Now suppose you put R3 back in the circuit. Since R3 is in parallel with R2, you would expect the voltage across R3 and R2 to be the same, so you should have 5V across R3.

But we haven't said anything about the value of R3 and it will matter in this circuit. So let's suppose R3 is 100Ω. If we analyze the circuit we have the R2, 10KΩ in parallel with R3, 100Ω, and those two in series with R1, 10KΩ. Calculating the parallel part, they have an equivalent resistance of about 99Ω, so the circuit becomes R1, 10KΩ, in series with the 99Ω equivalent. Even without doing the math, you should see that R1 is many times larger than the equivalent 99Ω. In a voltage divider, the largest resistor drops the largest voltage and in this case the drop across R1 will be about 9.9V and across the equivalent R about .1V. In round figures there is no voltage across the R2/R3 combination.

This is an example of what happens when the design is not stiff. A properly designed divider will not allow the voltage to change much when a load is attached. Generally speaking, a voltage divider will be stiff when it is designed to have at least 10 times more current through the divider than is expected to go through the load. Another way of looking at that is the resistance of the load will be at least 10 times larger than the resisters in the divider.

We could make this circuit stiff if we change R1 and R2 to be equal values of 100Ω and the load R3 to be a 10KΩ. Applying the same analysis, the equivalent resistance of the parallel part will still be 99Ω, but now that is only 1Ω different from the original 100Ω value of R2 and there will be no significant change in the voltages on the divider – you will get 5V across the load. The divider is now stiff.

January Antenna Project-- END FED 40-6 Meter Multiband HF Antenna

Live Zoom session January 12, 2021 at 7:00 pm. Event will be recorded and accessible on MVARA website for those who miss session or want to review construction instructions.

This inexpensive, multiband, end fed HF antenna/matchbox is pocket-sized (ok, a BIG pocket) and quick/easy to setup and use. *Note: his project requires an antenna tuner to achieve satisfactory SWR. Most built-in radio tuners as well as external tuners will work.*

How does it work? A 9:1 UNUN (unbalanced to unbalanced) toroid matching transformer matches the high input impedance of an end fed antenna into the range where most antenna tuners can produce good performance. The matchbox handles 100+ watts of power.

Tools needed: screwdriver, nut driver, needle nose pliers, drill, 5/8 &11/64 bits, soldering iron and solder, wire cutters, crimper, wire stripper, glue or bathroom caulk, heat gun or lighter.

The project uses materials listed below:

1 small plastic enclosure at least 3x2x1 inches (kit includes pre-drilled holes and installed SO-239)
1 powdered iron toroid T130-2
3 20" pieces of #20 AWG insulated copper wire in red, green, and black.
2 # 8-32 x 1" hex head machine screws
4 # 8 lock washers
3 # 8 ring wire lugs
4 # 8 flat washers
2 # 8-32 nut
2 # 8 wing nut
1 SO-239 panel mount connector, screw on mount with solder lug
3 pcs 3" nylon zip tie
1 in. 3/16" shrink tubing
30' # 20 or 18 AWG insulated stranded wire antenna (kit includes assembled antenna wire)
1 antenna insulator

A kit with all parts listed above is available at cost, $15, if picked up locally. If you want it mailed (first class parcel) add $4 for postage, total $19. Contact Mark, mh@zoominternet.net for details or to order a kit. Understand that kits will not be "parted-out" and are sold as a complete set.

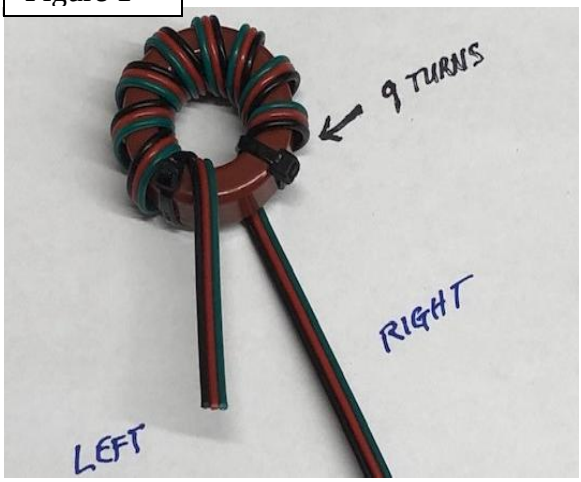
Box Prep

The enclosure needs one 5/8" hole for the SO-239 connector at one of the ends, and one 11/64" hole for the counterpoise wing nut on the lower side of the enclosure. An 11/64" hole on the top side of the box is used for antenna connector mounting. (see Figure 5) ***Note that the kit box is pre-drilled and connector installed.***

Wind the Toroid

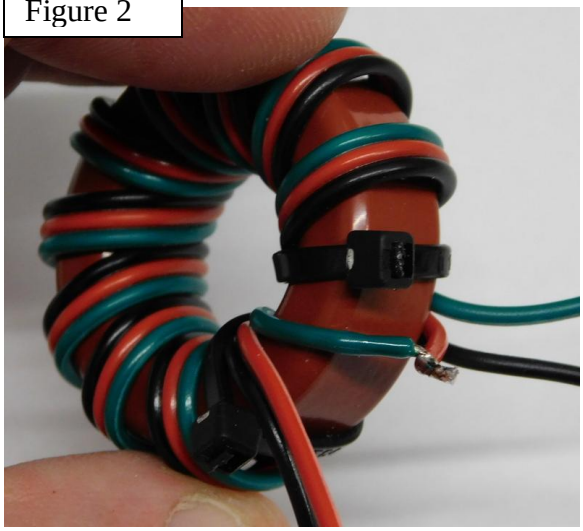
First, wind the three 20” pieces of insulated wire onto the toroid. ***NOTE: Count turns by counting the number of times the wire goes thru the toroid center.*** Place the wires as shown, green-red-black, and wrap the toroid with 9 turns so that it looks like the photo (figure 1). Secure the wires with zip ties. Notice there are three wires extending from the left, winding and three wires extending from the right winding. As the connections are completed, the steps refer to wires by left or right and color. If you’re using ribbon cable, cut between the 3 wires and gently pull apart.

Figure 1



Crimp together and solder the left red wire with the right green wire. When the step is completed, it will look like the photo (figure 2). The next three steps should appear as shown in figure 3.

Figure 2



Crimp and solder a # 8 lug to the left green wire about 2” from the toroid. The completed lug will later connect to the antenna connection bolt on the upper inside of the enclosure.

Twist the left black wire with the right red wire. Strip the ends of the two wires and twist together at about 2”. This twisted pair will solder to the center connection of the SO-239 connector in a later step.

Trim and strip the remaining right black wire at about 2”. Cut an additional 2” piece of black wire, and crimp and solder both wires to a # 8 lug. The 2” black wire will connect to the ground connector on the SO-239 already installed in the enclosure. Strip remaining black wire end 3/8” and bend into a hook for connection to the SO-239 ground connector.

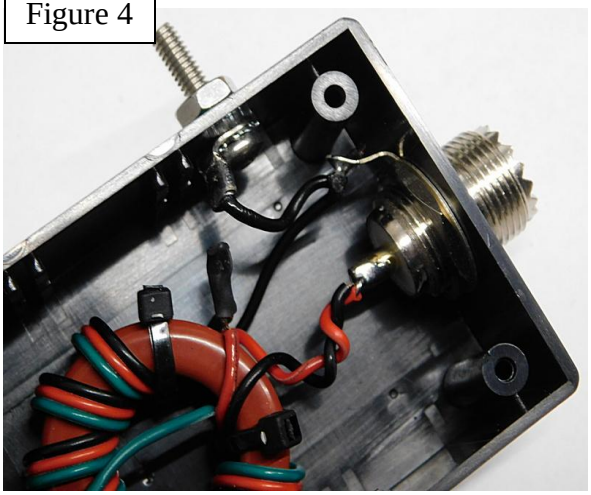
Figure 3

The SO-239 connector and ground lug should be installed through the hole in the lower part of the box with the mounting nut securely tightened (figure 4). Solder the black and red twisted pair to the SO-239 center connector. Solder the black wire hook to the ground lug on the SO-239 connector.

From inside the box, place an 8-32 machine screw through a lock washer, the # 8 lug on the black wire, then through the lower 11/64’” mounting hole. Place a green flat washer on the outside protruding machine screw followed by # 8 lock washer, nut, and tighten securely. Place a # 8 washer and wing nut on the machine screw to finish the counterpoise connector.

Position the toroid inside the box to allow connection of the green antenna wire lug to an 8-32 machine screw and lock washer on the upper box side. Place a red flat washer on the outside of the box followed with a # 8 lock washer and nut. Tighten the nut securely. Next, place a #8 washer and wing nut on the antenna connector and your project appears as shown in figures 4 and 5.

Figure 4

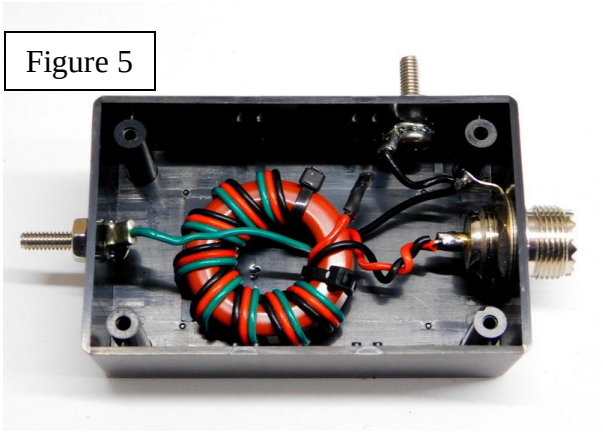


Put a small amount of clear silicone caulk or glue on the bottom of the toroid to secure it to the box. Clamp or place a small weight on the toroid until the adhesive sets. Secure the box cover in place with four screws.

Adding the Antenna

Take the 30' of wire and strip off 1/4 inch of insulation at one end. Place shrink tube over wire. Crimp wire lug over exposed wire and solder. Place shrink tube over solder connection and heat. Add insulator to the remaining end. See picture on top of pg.7. Attach lug to antenna terminal with wing nut. The kit antenna comes already assembled.

Figure 5



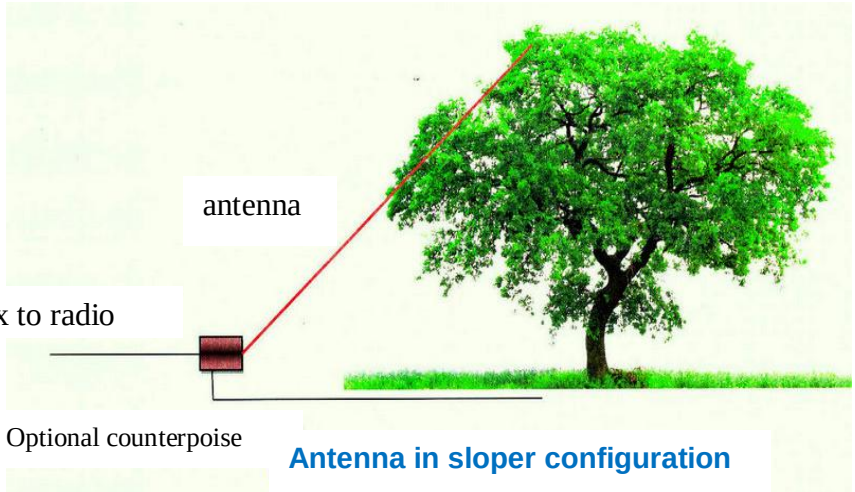
You'll get best performance with a run coax of 16' or longer, with the coax shield providing the counterpoise function. An additional counterpoise is usually not required, but a counterpoise connector is available if needed. The end fed antenna system works well in horizontal, sloper, and vertical configurations, but sloper is recommended. End height should be at least 20 ft.

Figure 6

Observe established safety practices when working with antennas, and avoid proximity to power or utility wires. Permanent installations should be equipped with appropriate static and lighting protection.

Operation

Set up the antenna as shown in the diagram. Choose the band of operation, and tune for lowest SWR. If you have difficulty tuning, try adding a 30' counterpoise run along the ground at right angle to the antenna.



Antenna in sloper configuration

Parks on the Air

In a recent conversation with Rob KE8OKO, the subject of Parks on the Air came up. So our program for the January 14th meeting is going to be about Parks on the Air. You may recall that in 2016, ARRL did a National Parks on the Air event that had Hams across the country going to parks and setting up stations for a day or weekend. It was a very popular event and after it wrapped up some Hams set out to keep it going and started Parks on the Air or POTA. POTA is an ongoing activity and if you in the habit of checking the HF spots in the Cluster, you will find some kind of POTA activity going on just frequently. For our meeting program we will be watching a video from the POTA folks and a second one on portable antennas for POTA use. Hope you can join us on January 14th. More details available as we get closer.

T^3 – Tech Terms Test

Here's a list of some abbreviations used in Ham Radio and Technology in general. How many do you know?

- ALU
- ASIC
- BIOS
- CRC
- DARPA
- ESR
- FSK
- ITU
- MUF
- NTSC
- OCR
- PLC
- RTO
- SMD
- THD
- UTC
- VXO
- WORM

Answers pg. 16

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	□ *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

Amateur License Refresher

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

E2A01
What is the direction of an ascending pass for an amateur satellite?
A. From west to east
B. From east to west
C. From south to north
D. From north to south

E2A02
Which of the following occurs when a satellite is using an inverting linear transponder?
A. Doppler shift is reduced because the uplink and downlink shifts are in opposite directions
B. Signal position in the band is reversed
C. Upper sideband on the uplink becomes lower sideband on the downlink, and vice versa
D. All these choices are correct

General Pool

G4D01
What is the purpose of a speech processor as used in a modern transceiver?
A. Increase the intelligibility of transmitted phone signals during poor conditions
B. Increase transmitter bass response for more natural-sounding SSB signals
C. Prevent distortion of voice signals
D. Decrease high-frequency voice output to prevent out-of-band operation

G4D02
Which of the following describes how a speech processor affects a transmitted single sideband phone signal?
A. It increases peak power
B. It increases average power
C. It reduces harmonic distortion
D. It reduces intermodulation distortion

Answers pg. 16

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.

January 2021	
AGB New Year Snowball Contest	0000Z-0100Z, Jan 1
NCCC RTTY Sprint	0145Z-0215Z, Jan 1
QRP Fox Hunt	0200Z-0330Z, Jan 1
NCCC Sprint	0230Z-0300Z, Jan 1
SARTG New Year RTTY Contest	0800Z-1100Z, Jan 1
AGCW Happy New Year Contest	0900Z-1200Z, Jan 1
AGCW VHF/UHF Contest	1400Z-1700Z, Jan 1 (144) and 1700Z-1800Z, Jan 1 (432)
QRP ARCI New Years Sprint	1500Z-1800Z, Jan 1
PODXS 070 Club PSKFest	0000Z-2400Z, Jan 2
WW PMC Contest	1200Z, Jan 2 to 1200Z, Jan 3
RSGB AFS Contest, CW	1300Z-1700Z, Jan 2
Original QRP Contest	1500Z, Jan 2 to 1500Z, Jan 3
Winter VHF Sprint	1600Z-1659Z, Jan 2
ARRL RTTY Roundup	1800Z, Jan 2 to 2400Z, Jan 3
ARRL Kids Day	1800Z-2359Z, Jan 2
EUCW 160m Contest	2000Z-2300Z, Jan 2 and 0400Z-0700Z, Jan 3
K1USN Slow Speed Test	0000Z-0100Z, Jan 4
OK1WC Memorial	1630Z-1729Z, Jan 4
Worldwide Sideband Activity Contest	0100Z-0159Z, Jan 5
ARS Spartan Sprint	0200Z-0400Z, Jan 5
RTTYOPS Weeksprint	1700Z-1900Z, Jan 5
QRP Fox Hunt	0200Z-0330Z, Jan 6
Phone Fray	0230Z-0300Z, Jan 6
CWops Mini-CWT Test	1300Z-1400Z, Jan 6
VHF-UHF FT8 Activity Contest	1700Z-2000Z, Jan 6
CWops Mini-CWT Test	1900Z-2000Z, Jan 6
UKEICC 80m Contest	2000Z-2100Z, Jan 6
AWA Linc Cundall Memorial CW Contest	2300Z, Jan 6 to 2300Z, Jan 7 and 2300Z, Jan 9 to 2300Z, Jan 10
CWops Mini-CWT Test	0300Z-0400Z, Jan 7
RTTYOPS Weeksprint	1700Z-1900Z, Jan 7
NRAU 10m Activity Contest	1800Z-1900Z, Jan 7 (CW) and 1900Z-2000Z, Jan 7 (SSB) and 2000Z-2100Z, Jan 7 (FM) and 2100Z-2200Z, Jan 7 (Dig)
SKCC Sprint Europe	2000Z-2200Z, Jan 7
NCCC RTTY Sprint	0145Z-0215Z, Jan 8
QRP Fox Hunt	0200Z-0330Z, Jan 8
NCCC Sprint	0230Z-0300Z, Jan 8
YB DX Contest	0000Z-2359Z, Jan 9
Old New Year Contest	0500Z-0900Z, Jan 9
UBA PSK63 Prefix Contest	1200Z, Jan 9 to 1200Z, Jan 10

SKCC Weekend Sprintathon	1200Z, Jan 9 to 2400Z, Jan 10
North American QSO Party, CW	1800Z, Jan 9 to 0559Z, Jan 10
NRAU-Baltic Contest, SSB	0630Z-0830Z, Jan 10
DARC 10-Meter Contest	0900Z-1059Z, Jan 10
NRAU-Baltic Contest, CW	0900Z-1100Z, Jan 10
Midwinter Contest	1000Z-1400Z, Jan 10
RSGB AFS Contest, Data	1300Z-1700Z, Jan 10
K1USN Slow Speed Test	0000Z-0100Z, Jan 11
4 States QRP Group Second Sunday Sprint	0100Z-0300Z, Jan 11
OK1WC Memorial	1630Z-1729Z, Jan 11
Worldwide Sideband Activity Contest	0100Z-0159Z, Jan 12
RTTYOPS Weeksprint	1700Z-1900Z, Jan 12
QRP Fox Hunt	0200Z-0330Z, Jan 13
Phone Fray	0230Z-0300Z, Jan 13
CWops Mini-CWT Test	1300Z-1400Z, Jan 13
VHF-UHF FT8 Activity Contest	1700Z-2000Z, Jan 13
CWops Mini-CWT Test	1900Z-2000Z, Jan 13
CWops Mini-CWT Test	0300Z-0400Z, Jan 14
RTTYOPS Weeksprint	1700Z-1900Z, Jan 14
NCCC RTTY Sprint	0145Z-0215Z, Jan 15
QRP Fox Hunt	0200Z-0330Z, Jan 15
NCCC Sprint	0230Z-0300Z, Jan 15
Hungarian DX Contest	1200Z, Jan 16 to 1159Z, Jan 17
PRO Digi Contest	1200Z, Jan 16 to 1159Z, Jan 17
RSGB AFS Contest, SSB	1300Z-1700Z, Jan 16
North American QSO Party, SSB	1800Z, Jan 16 to 0559Z, Jan 17
NA Collegiate Championship, SSB	1800Z, Jan 16 to 0559Z, Jan 17
ARRL January VHF Contest	1900Z, Jan 16 to 0359Z, Jan 18
WAB 1.8 MHz Phone/CW	1900Z-2300Z, Jan 16
Feld Hell Sprint	2000Z, Jan 16 to 0559Z, Jan 17
Run for the Bacon QRP Contest	2300Z, Jan 17 to 0100Z, Jan 18
K1USN Slow Speed Test	0000Z-0100Z, Jan 18
OK1WC Memorial	1630Z-1729Z, Jan 18
Worldwide Sideband Activity Contest	0100Z-0159Z, Jan 19
RTTYOPS Weeksprint	1700Z-1900Z, Jan 19
QRP Fox Hunt	0200Z-0330Z, Jan 20
Phone Fray	0230Z-0300Z, Jan 20
CWops Mini-CWT Test	1300Z-1400Z, Jan 20
CWops Mini-CWT Test	1900Z-2000Z, Jan 20
NAQCC CW Sprint	0130Z-0330Z, Jan 21
CWops Mini-CWT Test	0300Z-0400Z, Jan 21
RTTYOPS Weeksprint	1700Z-1900Z, Jan 21
NCCC RTTY Sprint	0145Z-0215Z, Jan 22
QRP Fox Hunt	0200Z-0330Z, Jan 22
NCCC Sprint	0230Z-0300Z, Jan 22
BARTG RTTY Sprint	1200Z, Jan 23 to 1200Z, Jan 24
UK/EI DX Contest, CW	1200Z, Jan 23 to 1200Z, Jan 24
K1USN Slow Speed Test	0000Z-0100Z, Jan 25
QCX Challenge	1300Z-1400Z, Jan 25

RTTYOPS Weeksprint	1700Z-1900Z, Jan 26
SKCC Sprint	0000Z-0200Z, Jan 27
QRP Fox Hunt	0200Z-0330Z, Jan 27
Phone Fray	0230Z-0300Z, Jan 27
CWops Mini-CWT Test	1300Z-1400Z, Jan 27
CWops Mini-CWT Test	1900Z-2000Z, Jan 27
UKEICC 80m Contest	2000Z-2100Z, Jan 27
NAQCC CW Sprint	0130Z-0330Z, Jan 28
CWops Mini-CWT Test	0300Z-0400Z, Jan 28
RTTYOPS Weeksprint	1700Z-1900Z, Jan 28
NCCC RTTY Sprint	0145Z-0215Z, Jan 29
QRP Fox Hunt	0200Z-0330Z, Jan 29
NCCC Sprint	0230Z-0300Z, Jan 29
CQ 160-Meter Contest, CW	2200Z, Jan 29 to 2200Z, Jan 31
Feld Hell Sprint	0000Z-2359Z, Jan 30
REF Contest, CW	0600Z, Jan 30 to 1800Z, Jan 31
UBA DX Contest, SSB	1300Z, Jan 30 to 1300Z, Jan 31
Winter Field Day	1900Z, Jan 30 to 1900Z, Jan 31

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

January						
2021 Jan03	2021 Jan09	**Costa Rica**	**TI**	LoTW	TDDX 20200622	By KM3A N0OI as TI2/AB3G and TI3/AB3G fm various locations; 40-15m; mainly CW; Special QSL OK via Club Lob OQRS
2021 Jan09	2021 Jan26	**Bolivia**	**CP1XRM**	LoTW	TDDX 20201207	By EA5RM; HF; SSB + digital
2021 Jan14	2021 Jan29	**Maldives**	**8Q7CQ**	M0OXO	DXW.Net 20201025	By G0VJG fm Reethi Faru, Filaidhoo I (IOTA AS-013); 80-10m; SSB + digital,some CW; 300w; vertical, dipole; QSL OK via Club Log OQRS; license pending

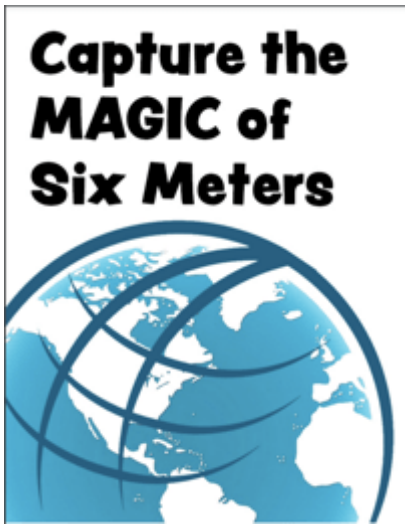
T3 Answers

- Arithmetic Logic Unit. A main part of a computer's CPU.
- Application-Specific Integrated Circuit. An IC designed by an OEM for his specific purpose.
- Basic Input Output System. Apart of a computer's operating system .
- Cyclical Redundancy Check. An error detection and correction technique used in sending digital information.
- Defense Advanced Research Projects Agency.
- Equivalent Series Resistance.
- Frequency Shift Keying.
- International Telecommunications Union.
- Maximum Usable frequency.
- National Television Systems Committee.
- Optical Character Recognition.
- Programmable Logic Controller.
- Resistive Temperature Device.
- Surface Mount Device.
- Total Harmonic Distortiom.
- Universal Coordinated Time.
- Variable (frequency) Crystal Oscillator.
- Write Once Read Many.

License Refresher Answers

E2A01 (C)
E2A02 (D)
G4D01 (A)
G4D02 (B)

Get this book and get on six meters by Dan KB6NU



One of the things that I said I was going to do during the summer was get on 6 meters and take advantage of sporadic E propagation. Of course, I never got around to it. If I'd seen this book last July, however, I might have done it. After all, according to the introduction:

"It really doesn't take much on six meters — your existing HF+6 meter rig along with a simple antenna, even a dipole, will work……It covers propagation, equipment, software, antennas, awards and contesting, as well as assistance in finding the magic. All of this is leavened with stories from my personal experience."

The book does a pretty good job of this, too. One thing that I take a little bit of exception to is that there's a heavy emphasis on the use of digital modes, but as on the HF bands, that's probably where a lot of activity is these days. For example, K5ND writes:

"In the early days of ham radio meteor scatter they often used CW and eventually went to very high speed CW with the received signal recorded and then slowed down to try to catch glimpses of the call sign, etc. Since the advent of WSJT and now WSJT-X computer signal processing is used to accomplish the same thing. The early mode of FSK441 and the newer mode of MSK144 essentially send hundreds of messages packed into a several second transmission (15 seconds is currently the standard duration)."

So, if you do want to make meteor scatter contacts, then I guess you really do need to be operating MSK144.

I also think that the book would be a little more useful if K5ND had gone into a little more detail on the antennas he writes about. This is just a minor quibble, though. There are plenty of books, blog posts, and YouTube videos that show you how to build various antennas. The author's descriptions of his experiences with the various antennas will certainly help you decide which antenna may be right for you.

Another thing that you really can't quibble with is the price. It's FREE! So, get a copy and get on 6 meters! *Capture the Magic of Six Meters: Average Antennas + Limited Antennas = Exceptional QSOS* by Jim Wilson, K5ND. 2020. https://www.k5nd.net/wp-content/uploads/2020/08/Six-Meters-eBook-V3.pdf

Dan Romanchik, KB6NU, is author of the No Nonsense amateur radio license study guides.

The Last Word

"Everything is changing. People are taking their comedians seriously and the politicians as a joke." --Will Rogers

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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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