

June 2021
2021 Edition 6



Mount Vernon Amateur Radio Club

Club Meetings

MVARC meeting is held on the 2nd Monday of each month at 7:00 pm. The June meeting will be at Ariel Foundation Park inside the Park National Bank Pavilion.

MVARC Information

The next club meeting is June 14, 2021.

Visit us on Facebook:

Mount Vernon Amateur Radio Club

Visit our Webpage:

<https://MVARC.net>

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MVARC Repeaters

K8EEN VHF Repeater
146.790 MHz
- 600KHz / PL = 71.9 Hz

K8EEN-R Echolink Node:
809800

K8EEN UHF Repeater
444.600 MHz
+5 MHz / PL = 71.9 Hz

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MVARC

President

Michael Jacobs, KE8HGE

Vice President

Greg Short, W8DOH

Secretary / Treasurer

Terry Windsor, KI8N

Club Call Trustee

Don Russell, W8PEN

Equipment Trustee

Barry Butz, N8PPF

Directors

Emery Bennett, W8TW

Barry Butz, N8PPF

Frank Counts, KC8EVS

Don Russell, W8PEN

Greg Short, W8DOH

Scott Yonally, N8SY

Newsletter Editors

Frank Counts, KC8EVS

Terry Windsor, KI8N

MVARC President: And now for a Word!

G. Michael Jacobs
KE8HGE



I want to start my monthly missive with a Thank You! to Emory Bennett (W8TW), who has reserved a shelter at Ariel Foundation Park for our monthly meetings through the month of October. While this takes a little bit of the pressure off us for a place to meet in the near-term, we do need to be thinking about places to go through the winter for meetings. And we need to keep an eye open for opportunities to set up a permanent home someplace. We had an exceptionally good thing with the Red Cross, and I suspect it will be difficult to find such an arrangement again; but that shouldn't keep us from trying.

Field Day is coming up later this month. We are hoping to

have all 4 stations running again this year, but now, we are down our digital station. If there is someone that would like to take up that gauntlet, or operate another phone station, contact Don Russell (W8PEN) and let him know. We will be having dinner Saturday evening at the Apple Valley location. The main dish will be taken care of; additional covered dishes and sides will be welcome. With the COVID restrictions being legislated away, the door is open for a more normal gathering than was available to us last year, so please consider coming out and joining us.

With the drawdown on COVID restrictions, Ham Radio conventions may be opening back up. If you are thinking about going to one, please let others know. The more, the merrier on trips like these.

And with these several random thoughts out of the way, I bid you 73.

“With the COVID restrictions being legislated away, the door is open for a more normal gathering than was available to us last year.”

May Meeting Minutes

G. Michael Jacobs KE8HGE



Opening (G. Michael Jacobs, KE8HGE)

The first in-person meeting of the MVARC in over a year. was called to order by G Michael Jacobs (KE8HGE).

Reports / Minutes

The minutes of the previous meeting were accepted as presented in the MVARC Newsletter without objection.

Treasurer (Michael Jacobs, KE8HGE)

The Treasurer's report for April 2021, was accepted presented without objection. Copies of the monthly report are available from the Treasurer upon request.

Repeater and Mesh Report (Don Russell W8PEN)

Don (W8PEN) said that everything was running well. There was an issue with Echolink. Mesh Net is working well. As the weather improves, we will start work on getting the Centburg node going and then start on the Fredericktown node.

ARES (Bill Stroud KD8WHQ)

Bill (KD8WHQ) asked that if the person running a Net could get a copy of the participants to him for logging, he would appreciate it. Michael (KE8HGE) added that he has an editable PDF form that can be used to help this, and it can be sent to anyone that wants it.

Old Business

Field Day (Don W8PEN)

The newsletter has the status of our Field Day plans. We will have 4 stations this year: 1 CW, 2 sideband, and 1 digital; and we have station managers for each one. The station managers will be responsible for setting up their stations and overseeing their operation. We will be watching our RF Exposure this year, so he will run an analysis on the antennas we will be using, but Don (W8PEN) does not anticipate their being an issue as we will be using horizontal antennas that will be high enough to not cause any problems. He will still generate and post at each station an analysis. Don is also looking for someone to set up and operate an Information Booth (100 extra points). Michael (KE8GHE) said that he could operate that. During our Field Day picnic Don would like to have a technical demonstration or training session (100 extra points), probably on RF Exposure and Safety.

Road Hog Willie's will hopefully be the source of our main course, buffet 6# + 2 sides, or buy just the meat and provide our own covered dishes. Frank (KC8EVS) started a FD Picnic Fund to help defray the club's expenses on the dinner.

Bill (KD8WHQ) asked if we got any points for doing testing during Field Day, and Don (W8PEN) responded that we do not.

Scott Yonally (N8SY) added that we do get bonus points for sending message to the Section Manager and Section Emergency Coordinator. We can also send out invitations to local officials (we get points if they show up and sign in) and any scouting troops. We should also include Mark Maxwell (County EMA Director) on any invitations we send out.

Knox County Parks on the Air (Frank KC8EVS)

Frank needs to know who will be participating.

Participants will need to set up their own stations.

There are 7 County Parks. We are planning on operating on May 22 between 10am to 2pm. This is not a "Parks on the Air" event so we should not call it that. It might be a good idea to pull the description/history of the park you are at from the county website. One (Wolf Run) has already been taken. The parks should not be solo events and are good opportunities to learn for those that are new. Frank (KC8EVS) will be at Thayer Road.

Black Fork Gravel Grinder

This event went well. Frank (KC8EVS) said that Arlen Bradford set up a local repeater. The Gravel Grinder itself is a very well-run event, with no glitches. There was only 1 accident that happened near one of their vehicles and it was handled very well. We have been invited back for next year; if we could have a few more volunteers next year, that would be great.

New Business

New Home

There was general discussion at several points during the meeting about finding a new "home" for the club. Emery Bennett (W8TW) suggested a committee to investigate this, and we volunteered him to lead it. Bill (KD8WHQ) is going to be at a meeting with county officials (LEPC - Local Emergency Planning Committee) and would talk to the County Commissioners, Mark Maxwell, and others to see what options might be available.

MVARC Website

It has been moved to a different server. Those that previously had secure sign-ins need to request a new sign-in for the new location. You can request "callsign @ mvarc.net" email addresses. We have a lot of archived information on the site from the previous one.



ARRL (Scott Yonally N8SY)

There is a lot of personnel shifting going on at the National Level due to retirements.

Scott (N8SY) also started a discussion about the requirements for RF Exposure Assessments. These requirements have always been on the books, but Amateur Radio was pretty much the exception to the rule when it came to regularly conducting them. Under FCC efforts to bring all the various radio services into line, our exception was removed, and the Exposure Assessments are now required. Stations in existence prior to May 3, 2021, are excluded due to a grandfather clause. Any changes to antenna to transmitters require an RF assessment to be made. (At 100 watts, that exposure range shakes out to about 18"). Vertical antennas set on the ground need to have contact protections in place. Don (W8PEN) ran an assessment on 10m at 700 watts on 8-dB gain Windom and the safe distance was 2 feet. N8SY reminded that an antenna feed line also has loss and that should be considered in the calculations.

WIRES-X at KCH

Emery (W8TW) asked about getting the repeater at KCH on Wires-X. Michael (KE8HGE) reported that the internet connection is in place. We just need to get the equipment into place. That equipment is the Wires-X box and a computer to act as a firewall. This has been on hold due to the COVID-related access restrictions at the hospital. Michael (KE8HGE) will reach out to Louie (NT8I), who was going order the Wires-X box and acquire the firewall computer to see where this all stands. Emery (WT8W) said that he and Frank (KC8EVS) would get it hooked up once it was acquired.

Meeting Adjourned



"We have been invited back for next year; if we could have a few more volunteers next year, that would be great." Black Fork Gravel Grinder

Radio Active

Don Russell

W8PEN



Field Day is upon us (drum roll please).

A few changes from last month's Field Day summary. Terry KI8N will not be able to make it to Field Day this year for personal reasons. Therefore, we will not be running a digital station. With that, I am planning on going back to three stations this year: One CW station and two SSB stations.

Station managers have been confirmed. Barry N8PPF and Greg W8DOH will manage the SSB stations. Barry will set up under the main tent. Greg will be in the club's tent. Don W8PEN (me) will set up the CW station. I am planning on setting up the station outside my camper this year. It is nice to have the station inside, but I feel it limits those that want to operate or watch. Therefore, it is back to the great outdoors.

Each manager will be responsible for their own antennas, equipment, and generator. The stations need to be 100% emergency power so we can get 300 bonus points. Let me know early if anyone needs help obtaining anything for the stations. The clubs Kenwood TS-570 is available to be used on SSB if either manager would rather not use their own equipment. Just let me know early enough that I can get the radio from Terry KI8N before he leaves town. Since the club had to move out of the old Red Cross building, Terry has been storing club property in his utility building.

I am hoping to have the clubs R5 vertical antenna available for either Barry's SSB station, or the CW station.

Michael KE8HGE will be setting up a public information table so that the club can get the 100 bonus points.



We will have a club picnic this year. The picnic will begin at 4:00 or 5:00 PM Saturday. The club will supply meat, buns, BBQ sauce, drinks, table settings, etc. Everyone should bring a covered dish. Since I did not receive any comments about my suggestion of buying the meat from Road Hog Willies (see May Newsletter), I will continue with this option. I am leaning towards ordering 4 pounds of chicken and 4 pounds of beef brisket. We will keep the meat

hot in crock pots. If anyone has a crock pot available, please let me know.

PLEASE BRING A CHAIR. I have been supplying a few plastic chairs every year. Every year at least one of them breaks. I do not have many and may not bring them this year because they are getting old and brittle. Not sure they are safe. I do not mind them breaking. I just do not want anyone to get hurt.

Antennas set up will be Friday, June 25th starting around 2:00 pm. We are getting rather good at this so it should not take too long. Probably the biggest project will be setting up the club's tent. There will be several of us spending Friday night at the Field Day site.

I think this wraps up my Field Day notes. Any questions members may have can be presented at the June club meeting.

Members had a great time activating some Knox County Parks May 22nd. Club members activated three parks. Thayer Ridge Park was activated by Frank KC8EVS. Wolf Run Regional Park was manned by Don W8PEN, Steve N8RLW, Roger KE8ICI, and Dave W8DEP. Barry N8PPF and Emery W8TW took the Honey Run Highland Park.

This was a fun event and I look forward to doing it again next year.

Club Repeaters and the Local Mesh Network are all working as expected. With the warmer weather and light winds, it is time to get the Centerburg and Fredericktown mesh nodes installed. We will probably be doing this in late July or early August. I will pick a really hot day for our climbers.....

That is it for this month. Hope to see you all at the next club meeting which is being held once again at Foundation Park. In the meantime, be sure to be **Radio Active**.

Amateur Radio Vinyl Decals

Nichole Adessa, N8OVE

My dad, Emery, W8TW had asked me to come up with a decal design for MVARC: I make vinyl decals. I made up two separate designs. The links below are to the designs on my online shop.

The first link is a club design shown below.

https://www.etsy.com/listing/1009895981/mount-vernon-amateur-radio-club-vinyl?ref=shop_home_active_1&variation0=1971593946&variation1=1991398087

This second one is a personalized decal that has the individual's Call Sign added.

https://www.etsy.com/listing/995928986/personalized-decal-with-call-sign-for?ref=shop_home_active_2

NOTE: You can see the both designs by going to the web address or looking at last months newsletter.



Knox Count Parks 2021

Frank Counts

KC8EVS



Where were you on May 22, 2021, from 10a to 2p? Well, there were several of our club members participating in the first Knox County Park activation. It was a great success (at least I think so, as we made 38 contacts!). We activated 3 of the 7 (depends upon how you count them) county regional parks, Thayer Ridge, Wolf Run and Honey Run Highlands.

Thayer Ridge was activated by me (KC8EVS) and Bruce KE8QYL. We operated SSB into an OCF 160m antenna at 50 watts. The antenna was up about 25 feet. We made a total of 9 contacts. Had a couple of visitors stopping by to see what we were doing. Thayer Ridge has a Frisbee golf course and bridle trails, so we saw several headed to the golf course and two or three on top of their steeds heading down the trail. I had a couple of pictures but where they are now, I do not know. Phones are wonderful but only as wonderful as the operator. When and if I find them, I will post on our web page with all the other photos.

Wolf Run was activated by Don W8PEN, Steve N8RLW, Robert KE8ICI, Dave W8DEP. Steve brought a friend Bob KE8HVE. Don had quite an operation at Wolf Run, he had a couple of antennas and operated SSB and CW. He also had the most operators. Don's group also made the most contacts at 23 (not surprising) plus Dave W8DEP made two CW contacts! Way to go!!



Honey Run Highlands was activated by Barry N8PPF, Emery W8TW. I think that Barry wins on having the coolest set up under the umbrella. They were operating SSB into a vertical mounted on the truck. They made 6 contacts.

The whole idea of this exercise was to get out and have fun and set up a station away from home. From the reports from the others, I think that we all were successful. I plan on doing this again so if interested please let me know. A lot of fun to be had by all.



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13Colonies Special Event

Frank Counts

KC8EVS



Just a reminder, starting July 1 through July 7 is the Annual 13 Colonies Special Event.

Per their web page; All HF bands will be in play, including the WARC bands, with the exception of 60 meters. Simplex on 2 meters and 6 meters is encouraged.

All modes of operation may be represented - SSB, CW, RTTY, Digital, Etc. - The mode of operation is up to the individual colony state station. Please refer to the State information pages for details.

The exchange for this event is:

- Call sign
- RS / RST / RSQ
- State

Everyone should give this a try and attempt a “*clean sweep*” of all 13 colony stations plus the stations in Great Britain and Philadelphia. You can try to sweep in all operating modes!

QSL and certificate information can be found at: <http://www.13colonies.us/>

Miscellaneous Rambling

Terry Windsor
KI8N



I am sad to say that I missed both of the club activities last month. I was unable to get off work to participate in the Black Fork Gravel Grinder and I was in Arizona enjoying my second anniversary during the Knox County Parks day.

I am also going to miss Field Day this year. I will be in Missouri visiting family. This will be the first time I have seen my mother and brothers in over 1.5 years. Mom picked the date so I am going as who knows when we will be available to get together again.

Has anyone noticed there is a lack of radio equipment available for sale from the various vendors? Most desirable radios now have at least a 30+ day wait and accessories do not even have an estimated in stock date. Several items have contributed to this issue; Covid 19, lack of workers willing to work, shipping delays, parts availability, and a fire in a semiconductor chip making plant.

All this adds up to long waits, frustration, and probably increasing prices. However, remain calm as eventually radios and components will be back in stock.

If you think getting a radio is bad go look at new car lots. The local Ford dealer on 6/02/2021 reported they only had 7 (Yes SEVEN) new cars on their lot.

Until next month be sure to “Ham It UP.”

Editors Notes



To All: The MVARC Newsletter is delivered to club members only by email link to the MVARC webpage. If you know a member who can not access or is not on this email chain please share this information with them and have them contact the editors.

Frank and I would really like to hear from you as to layout, articles, ideas for new content and anything else you would like to read or write about. Please have all written input to us by the fourth Friday of the month for inclusion into the next monthly newsletter.

Please note the contact email for the MVARC newsletter to MVARC.K8EEN@GMAIL.COM. If anyone sent an idea to the previous email address it was never forwarded, I apologize for not having used your input. Please try again using the gmail address.

Quick Updates



The following was received via the ARRL VE Newsletter May 2021

First-Time Exam Applicants Must Obtain FCC Registration Number before Taking Exam

Effective Thursday **May 20, 2021**, all amateur examination applicants will be required to provide an FCC Registration Number ([FRN](#)) to the Volunteer Examiners (VEs) BEFORE taking an amateur exam. This is necessary due to changes the FCC has made to its licensing system.

Social security numbers are no longer accepted at exam sessions.

Amateur candidates who already have an FCC license, whether for amateur radio or in another service, already have an FRN and can use the same number. All prospective new FCC licensees, however, will be required to obtain an FRN *before* the examination and provide that number to the volunteer examiners on the Form 605 license application. An FCC [instructional video](#) provides step-by-step instructions on how to obtain an FRN through the FCC's Commission REgistration System (CORES).

The FRN is required for all new applicants to take an amateur exam and is used afterward by the applicant to download the license document from the FCC Universal Licensing System (ULS), upgrade the license, apply for a vanity call sign, and to submit administrative updates (such as address and email changes) and renewal applications.

In addition, **after June 29**, all applications will be required to contain an email address for FCC correspondence. Applicants will receive an email direct from the FCC with a link to the official electronic copy of their license whenever a license is issued or changed. ARRL VEC suggests that those without access to email to use the email address of a family member or friend. Licensees will be able to log in to the ULS using their FRN and password to download the latest version of their license at any time. The FCC no longer provides paper license documents.

Morse Code Instruction

In the last few months, we had shown resources to learn morse code.

<https://cwops.org/cw-academy/>



MVARC ARRL Membership Notes

The following was noted by Barry Butz, N8PPF; I have been looking at the membership list and sorting it by license class and ARRL membership. Most extras, advanced, and general class licensees belong to the ARRL. Not many technicians are members.

Perhaps this is something that needs to be brought up at a meeting to get both ARRL members and non-member input?

General Exam Sample Test Questions:

G4E03 Which of the following direct, fused power connections would be the best for a 100 watt HF mobile installation?

- A. To the battery using heavy-gauge wire.
- B. To the alternator or generator using heavy-gauge wire
- C. To the battery using resistor wire
- D. To the alternator or generator using resistor wire

G8C08 Which of the following statements is true about PSK31?

- A. Higher power is needed as compared to RTTY for similar error rates
- B. Upper case letters use longer varicode bit sequences and thus slow down transmission
- C. Error correction is used to ensure accurate message reception
- D. Upper case letters are sent with more power

Extra Class Exam Sample Test Questions:

E7B05 What can be done to prevent unwanted oscillations in an RF power amplifier?

- A. Use a phase inverter in the output filter
- B. Tune the stage for maximum SWR
- C. Install parasitic suppressors and/or neutralize the stage
- D. Tune both the input and output for maximum power

E6D01 Why should core saturation of an impedance matching transformer be avoided?

- A. RF susceptance would increase
- B. Temporary changes of the core permeability could result
- C. Magnetic flux would increase with frequency
- D. Harmonics and distortion could result

These test questions are from the current test pools for their respective license classes. How did you do? The answers are on Page 18. Practice tests for all license classes can be found here: <https://www.qrz.com/hamtest/>

Miscellaneous Amateur Radio Information

Join us every Sunday night on the Mt. Vernon 146.79 repeater for our weekly ARES Net. **Check-in starts at 9pm.**

Unable to access the repeater from where you are located? We are on IRLP (EchoLink) - Just look us up.
K8EEN-R Node 809800.

Ohio Traffic Nets

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

Ohio Single Side-Band Net; Ohio connection for what is going on in the Ohio Traffic System. The Net meets on 3.972.5 KHz at 10:30 a.m., 4:15 p.m. and 6:15 p.m. daily. Alternate Frequency for all sessions is 3.968 KHz

<http://www.cotn.us/>

The Central Ohio Traffic Net is a part of the Ohio Section of the National Traffic System. They meet daily to handle traffic; all licensed amateur radio operators are welcome to check in and to learn how to handle traffic. The Net meets daily at 7:15 p.m. local time.

Area Radio Clubs

Delaware Amateur Radio Association: <http://k8es.org/>

Newark Amateur Radio Assoc: <https://www.n8ara.org/>

(Mansfield) InterCity Amateur Radio Club: <https://iarc.club/>

Marion Amateur Radio Club: <http://www.marionhamradio.com/home.html>

The ARRL Ohio Section Newsletter: <https://arrl-ohio.org/news/index.html>

The ARRL Ohio Section calendar:

<https://arrl-ohio.org/g-calendar/default.html>

ARRL Band Plans—160 Meters through 2 Meters

160 Meters (1.8-2.0 MHz)

1.800 - 2.000	CW
1.800 - 1.810	Digital Modes
1.810	CW QRP
1.843-2.000	SSB, SSTV and other wideband modes
1.910	SSB QRP
1.995 - 2.000	Experimental
1.999 - 2.000	Beacons

80 Meters (3.5-4.0 MHz)

3.590	RTTY/Data DX
3.570-3.600	RTTY/Data
3.790-3.800	DX window
3.845	SSTV
3.885	AM calling frequency

60 Meters (5 MHz channels)

*Only one signal at a time is permitted on any channel

*Maximum effective radiated output is 100 W PEP

5330.5	USB phone ¹ and CW/RTTY/data ²
5346.5	USB phone ¹ and CW/RTTY/data ²
5357.0	USB phone ¹ and CW/RTTY/data ²
5371.5	USB phone ¹ and CW/RTTY/data ²
5403.5	USB phone ¹ and CW/RTTY/data ²

1.USB is limited to 2.8 kHz

2.CW and digital emissions must be centered 1.5 kHz above the channel frequencies indicated in the above chart

40 Meters (7.0-7.3 MHz)

7.040	RTTY/Data DX
7.080-7.125	RTTY/Data
7.171	SSTV
7.290	AM calling frequency

30 Meters (10.1-10.15 MHz)

10.130-10.140	RTTY
10.140-10.150	Packet

20 Meters (14.0-14.35 MHz)

14.070-14.095	RTTY
14.095-14.0995	Packet
14.100	NCDXF Beacons
14.1005-14.112	Packet
14.230	SSTV
14.286	AM calling frequency

17 Meters (18.068-18.168 MHz)

18.100-18.105	RTTY
18.105-18.110	Packet

15 Meters (21.0-21.45 MHz)

21.070-21.110	RTTY/Data
21.340	SSTV

12 Meters (24.89-24.99 MHz)

24.920-24.925	RTTY
24.925-24.930	Packet

10 Meters (28-29.7 MHz)

28.000-28.070	CW
28.070-28.150	RTTY
28.150-28.190	CW
28.200-28.300	Beacons
28.300-29.300	Phone
28.680	SSTV
29.000-29.200	AM
29.300-29.510	Satellite Uplinks or Downlinks
29.520-29.590	Repeater Inputs
29.600	FM Simplex
29.610-29.700	Repeater Outputs

6 Meters (50-54 MHz)

50.0-50.1	CW, beacons
50.060-50.080	beacon sub band
50.1-50.3	SSB, CW
50.10-50.125	DX window
50.125	SSB calling
50.3-50.6	All modes
50.6-50.8	Nonvoice communications
50.62	Digital (packet) calling
50.8-51.0	Radio remote control (20-kHz channels)
51.0-51.1	Pacific DX window
51.12-51.48	Repeater inputs (19 channels)
51.12-51.18	Digital repeater inputs
51.5-51.6	Simplex (six channels)
51.62-51.98	Repeater outputs (19 channels)
51.62-51.68	Digital repeater outputs
52.0-52.48	Repeater inputs (except as noted; 23 channels)
52.02, 52.04	FM simplex
52.2	TEST PAIR (input)
52.5-52.98	Repeater output (except as noted; 23 channels)
52.525	Primary FM simplex
52.54	Secondary FM simplex
52.7	TEST PAIR (output)
53.0-53.48	Repeater inputs (except as noted; 19 channels)
53.0	Remote base FM simplex
53.02	Simplex
53.1, 53.2, 53.3, 53.4	Radio remote control
53.5-53.98	Repeater outputs (except as noted; 19 channels)
53.5, 53.6, 53.7, 53.8	Radio remote control
53.52, 53.9	Simplex

2 Meters (144-148 MHz)

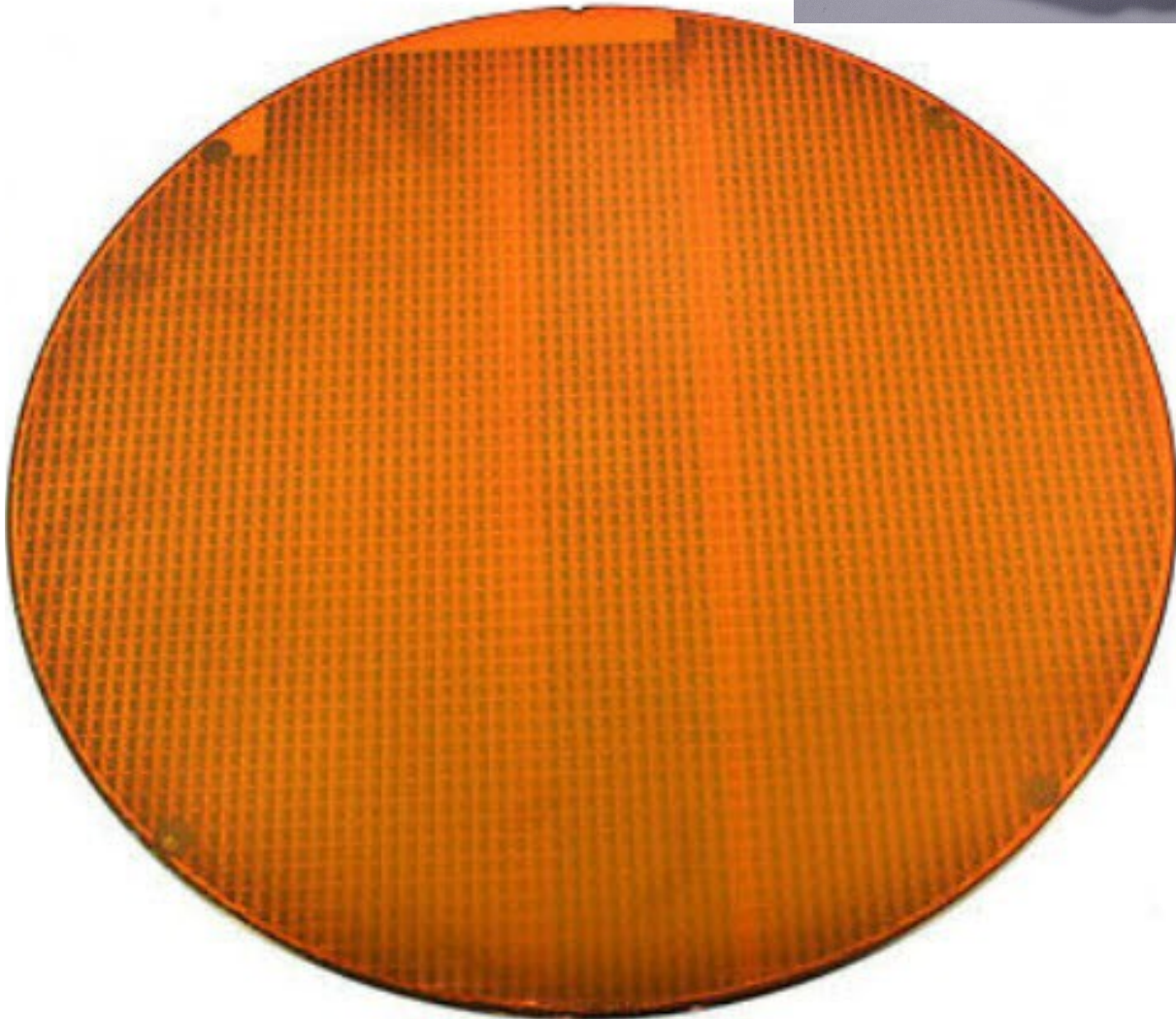
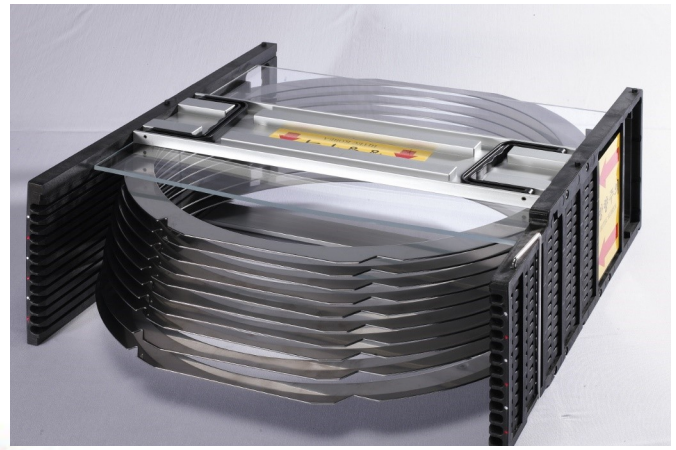
144.00-144.05	EME (CW)
144.05-144.10	General CW and weak signals
144.10-144.20	EME and weak-signal SSB
144.200	National calling frequency
144.200-144.275	General SSB operation
144.275-144.300	Propagation beacons
144.30-144.50	New OSCAR sub band
144.50-144.60	Linear translator inputs
144.60-144.90	FM repeater inputs
144.90-145.10	Weak signal and FM simplex (145.01,03,05,07,09 are widely used for packet)
145.10-145.20	Linear translator outputs
145.20-145.50	FM repeater outputs
145.50-145.80	Miscellaneous and experimental modes
145.80-146.00	OSCAR sub band
146.01-146.37	Repeater inputs
146.40-146.58	Simplex
146.52	National Simplex Calling Frequency
146.61-146.97	Repeater outputs
147.00-147.39	Repeater outputs
147.42-147.57	Simplex
147.60-147.99	Repeater inputs

Notes: The frequency 146.40 MHz is used in some areas as a repeater input. This band plan has been proposed by the ARRL VHF-UHF Advisory Committee.

June 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2 4:45 PM Dinner at Southside Diner	3	4 10:00 AM Breakfast at Foundation Park – Park National Bank Pavilion	5
6 9:00 PM ARES Sunday Night Net on 146.79 MHz	7	8	9 4:45 PM Dinner at Southside Diner	10	11 10:00 AM Breakfast at Foundation Park – Park National Bank Pavilion	12
13 9:00 PM ARES Sunday Night Net on 146.79 MHz	14 7 PM MVARC Monthly Meeting @ Ariel Foundation Park	15	16 4:45 PM Dinner at Southside Diner	17	18 10:00 AM Breakfast at Foundation Park – Park National Bank Pavilion	19
20 Father's Day 9:00 PM ARES Sunday Night Net on 146.79 MHz	21	22	23 4:45 PM Dinner at Southside Diner	24	25 10:00 AM Breakfast 2 pm Field Day set up @ 2 Apple Valley	26 ARRL Field Day
27 9:00 PM ARES Sunday Night Net Field Day	28	29	30 4:45 PM Dinner at Southside Diner			

Final Takeaway



Silicon wafer with computer chips shown. Most silicon disks are 12" (300mm) in diameter and there are typically 12 in a carrier—shown above. The individual microchips are each of the small dark squares on the disk above. There are hundreds of individual computer chips contained on this disk . Number of individual chips depends on what is being produced. When a factory is no longer able to produce completed silicon disks this results in massive shortages of electronic components and affects everyone's daily lives.

Process description and Video: <https://www.bloomberg.com/graphics/2021-chip-production-why-hard-to-make-semiconductors/>

Answers to sample test questions on page 10.

G4E03: A – To the battery using heavy-gauge wire

G8C08: B – Upper case letters use longer varicode bit sequences and thus slow down transmission

E7B05: C – Install parasitic suppressors and /or neutralize the stage

E6D01: D – Harmonics and distortion could result

Market Place

A column dedicated to amateur radio items you have, do not need, and would like to sell, trade or give-away.

Yaesu FT-70DR; dual band 5-watt HT. Includes:

- Antenna
- 7.4 V 1,800 mAh Lithium-Ion Battery Pack (SBR-24LI)
- Battery Charger (SAD-18B)
- Belt Clip
- USB Cable
- Warranty Card
- Operating Manual

RT Systems ADMS-70D software and USB-57B programming cable
\$190.00 - Contact Terry Windsor ki8n.tw@gmail.com

