
## Meeting News:

The August 12th general membership meeting was held at the Dudley House and on Zoom. Twenty-four signed in the roster including three new guests who joined during the meeting (Zak N6PK, Chester Klepadlo K1GKM and Tom Henderson N6QDI). Mark Swaney KD6ASL presented "My Experiences with DMR". His presentation has been placed on the K6MEP.org website under the "presentations" tab.

Our fall picnic is scheduled for September 3rd from 11am to 3pm at the Dudley House. Our next board meeting will be held on September 4th at 19:00 on Zoom; please check the calendar for the credentials.

Our next club meeting is scheduled for September 9th at the Dudley House and will be "Zoomed" thanks to Jeremy KN6JMD. Dave Schmidt AI6VX will present "Allstar". Our meetings start promptly at 19:00. After the call to order, welcome to our members and guests, and flag salute, introductions are made. Then our committee members are asked to present their status. Following the status report is a request for any new business. A break is taken to get the presentation set up, serve refreshments and have some social time. After the presentation is complete and everyone has asked and received answers to their questions, announcements are made and the meeting is adjourned. Visitors are always welcome to attend our club meeting; bring a friend! Afterwards, many of us go to Toppers for a slice of pizza and a great deal of ham radio discussions.

## The Inside Story



## Message from the President

The Prez Sez,

All Ventura County schools are (finally) back in session, the County Fair (and Surf Rodeo but not the Aloha Beach Festival held in early September at Surfer's Point) is over and quiet is once again heard (not heard?) in most Ventura County neighborhoods.

I discovered a September ham-themed poem that brought a smile to my face called Q.R.Oscar and Q.R.Pete by Wayne A. Burdick, N6KR (from https://www.qsotoday.com/n6kr-poetry.html):

It happened in September, on a cold and stormy day;
The mother of all contests was now nearly underway.
Before the day was over, ears from Bonn to Surinam
Would hear a battle rage between two different breeds of Ham.
Oscar, a distinguished man of wisdom (and of wattage),
Lit his pipe and surveyed his substantial shortwave cottage.
"Let the games begin!" he cried, aglow with pride and power;
And with a grin he swung his twenty-ton rotating tower.
Not far away a man named Pete crouched low inside a tent,
His sleeping bag was soggy and his penlight made him squint,
Yet as he worked he smiled, twisting wires, tweaking pots,
And soon his rig was bristling with two hundred milliwatts.
Just after zero, zero, zero, zero (UTC),

(Continued on Next Page)

| Club Offices | And Keyer | Contributors |
|---|---|---|
| President | Robert Shank | KM6RSS |
| Vice-President | Clement Alberts | KM6OKZ |
| Secretary | Phil Cohen | WA6BUZ |
| Treasurer | John Gartman | W6JPG |
| Board Member | Burt Auerbach | KA6BJA |
| Board Member | Dave Schmidt | AI6VX |
| Board Member | Mark Swaney | KD6ASL |
| Program Manager | Clement Alberts | KM6OKZ |
| Equipment Mgr. | Denney Pistole | N6HV |
| Refreshments | Linda Shank | |
| Facilities | Richard Abbey | WB6AEW |
| Keyer Editor | Robert Shank | KM6RSS |
| Webmaster | Robert Shank | KM6RSS |
| Domain | Phil Cohen | WA6BUZ |
| Membership | Open | Please volunteer |
| License Trustee | Dave Schmidt | AI6VX |
| ARRL Club Rep. | Dave Schmidt | AI6VX |
| ACS/ARES Rep. | Burt Auerbach | KA6BJA |
| Monday Night Net | Open | Please volunteer |
| QSL Manager | Ben Holmes | K6QV |
| Safety Officer | Mark Vodon | KI6PTE |
| PIO/Trivia | Dana Wentling | KG6WXE |
| Columnist | Steve Noll | WA6EJO |
| Columnist | Reese West | KQ6TT |

***The KEYER*** is published monthly by K6MEP, the Ventura County Amateur Radio Club, Inc. as a means of providing club members the minutes from K6MEP's monthly general membership meetings, the monthly board of directors' meetings, a calendar of events and articles of interest about amateur radio. Layout and logos are the property of The Ventura County Amateur Radio Club, K6MEP.



Submit material by email to KM6RSS@arrl.net.
Our club mailing address is:
K6MEP
PO Box 2103
Oxnard, CA 93034-2103

K6MEP holds general membership meetings at 7:00 PM on the 2nd Friday of each month (except December). Dues are $20 per year.

## Message from the President (Continued)

Both men tuned up on twenty and they listened carefully,
But neither could believe his ears, and both began to pray:
On 14020 they heard "DE Zed-A-1-A".
Now Oscar moved up five Kc (kHz) with dignity and class;
He gripped his paddle deftly and prepared to pound some brass.
The heterodynes were screeching, hungry birds caged in a zoo,
But he could snag Albania in one call--maybe two.
Pete took quite a different tack. He scanned for open space,
Listening to the bedlam with a frown upon his face;
He tugged his random wire to improve its ERP,
And finally he found a place to sign "slash QRP."
Well Oscar's monster, fire-breathing signal was the best,
But Zed-A-1-A knew him, and felt sorry for the rest.
With this in mind he listened for the meager and the brave,
And ignored the QRO boys (who began to rant and rave).
Soon the DX station heard a wimpy "QRP";
He fired off a "599" and waited patiently.
But Pete was eating trail mix, now, and feeling quite dejected;
Being called by rare DX was not what he expected.
Oscar heard the call and moved in closer for the kill,
Yet when he thought his turn had come the Q-so lingered still:
"So how much are you running?" "A quarter watt or less."
"A homebrew rig?" "My own design, or mostly, I confess."
"Well I'm a QRP fan, too; good attitude to foster,"
Then ZA1A signed and said, "OK, it's your turn, Oscar."
On Sunday Pete packed up his gear, his low-watt mission done.
(Birds who'd perched upon HIS wire would live to tell their young.)
Pete surveyed the hills and fields, a wondrous sight to feast on;
Then he stuffed himself into his trusty, rusty Nissan.
And Oscar? He had ruled the night with clear, demonic vision;
Slicing QRM with his unleashed atomic fission.
But near the stroke of twelve, he cut his drive by two dB,
Then worked some rare DX and said, "Not bad for QRP!
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## Message from the President (continued)

**Looking backward:**

At our club meeting on August 12th, Mark Swaney KD6ASL presented a talk about his DMR experiences. Many of our members have these devices and were very interested about how he obtained his code plug. His PowerPoint presentation has been posted on our K6MEP.org website https://www.qsl.net/k6mep/Club%20Meeting%20Presentations/My%20Experiences%20with%20DMR.pdf

Our K6MEP Monday Night Net Check-in contest (running from January 3rd to December 12th), is continuing. As of August 15th (33 weeks so far) we had a total of 537 check-ins including 86 visitors and an overall average of 16.24). Jeremy KN6JMD and Robert KM6RSS are in the lead with the perfect record of 33 check-ins. The winner will be announced at the DecemberFest dinner on December 9th, being held at the Black Bear Diner on the corner of Harbor and Seaward.

**Looking Forward:**

To celebrate Fall, we have our K6MEP annual autumnal picnic on September 3rd. Everyone is invited; bring gear, food and drink and your Ham radio interests to the Dudley House 197 N. Ashwood Dr. Ventura CA 93003 between 11am and 3pm. Everyone who is interested in attending the picnic to respond to our groups.io poll or contact me at KM6RSS@ARRL.net and let me know what you plan on bringing as a potluck item. We are coordinating with Mark Ortega KI6YLH on food purchases and preparation; the board has approved $100 and, remember, everyone is invited to bring their favorite food and/or drink for all to share. Mark KI6YLH will bring the club griddle and his culinary talents to cook up the food.

Our next meeting is on September 9th. Our guest speaker is Dave Schmidt AI6VX will present "Allstar".

As a reminder, we continue collecting yearly dues and ask everyone to begin considering running for a club office (nominations can be made by email sent to Secretary Phil WA6BUZ at any time before the November 11th meeting and nominations will be taken from the members at that meeting before the election takes place). Our DecemberFest dinner is not that far off and we are asking everyone to respond to our groups.io poll or contact me at KM6RSS@ARRL.net and let me know if you plan on coming, and, if so, how many will be in your party.

**Safety Share:**

To everyone that I may (or may not have) contact with recently;

Just when you think you have dodged the corona bullet, taken the vaccine and only hung out with "good people", it hits you from behind.

Linda was feeling bad Friday evening August 26th and on Saturday morning she was worse and took the "iHealth" home corona test; she was positive! We notified the CDC and called Kaiser to let her (shared with me) doctor know and his staff called back and alerted a doctor who was on-call and who prescribed PAXLOVID™. (Continued on next page)

## Message from the President (continued)

I picked up her prescription late on the 27th and tried the isolation process (slept in another bedroom). The morning of the 28th I woke up with sneezing and other nasal issues and at mid-day today started feeling achy with fever and chills. A quick COVID test later showed that I was now infected (just started with a very light gray "T" line) so that means that on the 28th I just started the viral infection and have been isolating (from everyone as well as alerting all those who might be impacted) as per CDC guidelines and my doctor's instructions. However, since I tested positive on a Sunday, notified the CDC and messaged, filled in an e-visit form and called Kaiser, it wasn't until Monday that Kaiser called me and offered to provide me with PAXLOVID although neither Linda nor I could pick it up from the pharmacy. I received many calls from our members offering help, but Pedro K6MIL, picked up the prescription and delivered it to our house. We're out-of-commission for up to 5 days **after** showing no symptoms and a negative test.

Below is a list of club activities that are affected by Linda's and my illness:

**Monday Night Net:**
Keith W6KME handled our August 29th Monday Night Net Controller and Dave AI6VX was his alternate. Thanks to both of them for their great logging of the check-ins and thanks to Jeremy KN6JMD for co-hosting the Zoom meeting. I participated in both but left Zoom early to "take drugs" (thanks to Stewart KG6BOV for his favorite reason to say goodnight).

**September 3rd picnic:**
I contacted Mark KD6ASL who volunteered to assist as our picnic coordinator. I've added his name to the list of attendees. I also communicated with Mark KI6YLH who, along with me, is storing frozen club food for the picnic. To keep from infecting others, I appreciate someone stopping by my house and picking-up the frozen food either Thursday or Friday so that it has time to thaw before the picnic. I'll have the items in a large ice chest.

Our sign-up sheet shows 18; please bring a potluck item to share with others.

I expect to be able to put together the September 4th board meeting agenda and host the meeting that starts at 19:00 hours on Zoom.
73,
Robert Shank KM6RSS
President, VCARC

# Minutes of the August 7th, 2022, VCARC Board Meeting

MEETING LOCATION: Zoom
TIME: 19:00 to 20:15
Timekeeper: None
MEETING CALLED TO ORDER at 19:00

Attending the meeting (in order of appearance) was: President Robert KM6RSS, Treasurer John W6JPG, Vice President Clement KM6OKZ, At-large Board Member Mark Swaney KD6ASL, At-large Board Member Burt KA6BJA and At-large Board Member Dave AI6VX. Secretary Phil WA6BUZ wasn't present. Present as chairpersons were Equipment Manger Denney N6HV and Technical Manager Jeremy KN6JMD. Youth Chairperson Tim KN6JGB and Health and Safety Chairperson Mark Vodon KI6PTE weren't present. Keith W6KME attended as a guest and a member of the Bored Net. The meeting started at 19:00 hours when a quorum (4) was present. All people that have groups.io and/or K6MEP.org access were invited to the meeting.

Robert welcomed all attendees.

**Minutes: (Phil wasn't present; Robert handled the secretarial duties)**

- The motion to approve minutes of the July 5th board meeting as published in the August Keyer by Burt with John seconding. The vote was approved by all but Dave who wasn't present yet.
- Motion to approve minutes of the July 8th regular meeting as published in the August Keyer by Burt with Mark seconding. The vote was approved by all but Dave who wasn't present yet.

**Officers Report: (John)**

- Treasurer: A motion to approve the treasurer's report as sent by John to the board members was made by Mark with Clement seconding. The vote was approved by all but Dave who wasn't present yet. John obtained a SQUARE account with credit card scanner for the club and will manage the account.

**Committee Reports:**

- Youth Committee (Tim KN6JGB) Not Present
- Field Day Committee Compilation Results (Clement or Denney)
    - Do we need to make any announcement at the August 12th meeting about the results? We didn't discuss this item.
- Members Health and Safety (Mark KI6PTE wasn't in attendance)
    - No special needs were assumed

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# Minutes of the August 7th, 2022, VCARC Board Meeting (Continued)

## Committee Reports (Continued):

- Picnic Committee (Robert KM6RSS) Mark Ortega KI6YLH not present.
    - September 3rd 11am to 3pm at the Dudley House- sign-up sheet shows 20. Motion to spend up to $100 for food (we have frozen left-overs from Field Day) was made by Mark and seconded by Dave. The vote was unanimous. We will have a donation jar at the picnic to help defray costs.
- Accounting Committee Budget Status (John W6JPG, Mark KD6ASL and Dave AI6VX)
    - The committee hasn't met since the July presentation to the general membership. John will announce the next meeting.
- Program Manager (Clem KM6OKZ)
    - The speakers for the year have been scheduled; Clement will be unable to present in October and will ask Pedro K6MIL to speak on the same subject.
- ARRL Chair (Dave AI6VX)
    - Nothing to report.
- ACS/ARES Chair (Burt KA6BJA)
    - Avi Carmi K6AVI is asking for volunteers for Wings Over Camarillo air show August 20-21 and Tim is chairing the STEM ham table.
- DecemberFest (Robert)
    - Black Bear Diner has been reserved – 29 plan to attend
        - Buffet main and side dishes to be selected in the future by those who will attend; Burt will suggest additional main courses.

**Special Orders:**

- Inventory (Denney N6HV)
    - Remaining inventory of club items and updated values not done
        - Inventory identification and storage process, will contact Jeremy.

**Unfinished Business:**

- Need the Following Committees:
    - Membership
    - Monday Night Net (need net control operators for August 15,22 and 29)
        - Keith volunteered for August 29.
- VCARC holding Amateur Radio Exams (John).
    - Dave will contact ARRL. Robert will ask members about those who have a VE certificate at the August 12th club meeting.

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## Minutes of the August 7th, 2022, VCARC Board Meeting (Continued)

**New Business:**

- Keith W6KME discussion about the micro-Field Day county activity
  - Having each of the four main clubs in the county to co-present an event for all hams county-wide each year, with members of other clubs invited. Keith suggested that VCARC could be responsible for hosting an October event (possibly at the Dudley House) and will provide a date. This will be discussed at the general membership meeting on August 12th.
- Discussed the creation of a nominating committee composed of voting members for November's officers and board.
  - The general consensus was that a committee wasn't needed.

**Announcements:**

- Our next club meeting is scheduled for August 12th at the Dudley House. Mark Swaney will present "My Experiences with DMR".

**Adjournment:**

- Dave made the motion to adjourn with Mark seconding. The vote was unanimous and the meeting adjourned at 20:15. Robert thanked all for attending.

# Minutes of the August 12th, 2022 General Membership Meeting of VCARC

GENERAL MEMBERSHIP MEETING (19:00)
MEETING ADDRESS: Dudley Historical House, 197 N. Ashwood Dr. Ventura CA 93003 and simulcast on Zoom
ATTENDANCE: We had twenty-four sign in the roster with three new guests who joined (Zak N6PK, Chester Klepadlo K1GKM and Tom Henderson N6QDI). See the list of board members who attended at end of these minutes).
CALL TO ORDER 19:14
MEETING MINUTES
President Robert welcomed everyone and held the Flag salute.

**Introductions:**

Robert asked everyone to introduce themselves and then hand the microphone to the person next to them to continue the process. All of us learned more about our club members and guests and enjoyed speaking into the microphone (no "mic fright" among us Hams).

**Committee Reports:**

**Youth Outreach: (Tim KN6JGB)**

- Tim brought up participation at the Wings over Camarillo air show. He is still looking for volunteers to help out. He has been organizing the STEM table sign-up for August 20-21 but announced that he will be out-of-town for the event.

**Picnic: (Robert KM6RSS)**

- September 3rd is our fall picnic at the Dudley House.
    - Robert reminded everyone who is interested in attending the picnic to respond to our groups.io poll or fill in the response sheet that is on the clipboard in the back of the room; which has a space for potluck items. We are coordinating with Mark Ortega KI6YLH on food purchases and preparation; the board has approved $100 and, remember, everyone is invited to bring their favorite food and/or drink for all to share.

**Events (Keith W6KME)**

- Keith talked about the upcoming Micro Field Day on August 13.
    - We discussed our club hosting a micro-Field Day county-wide activity in October and Robert asked Keith if the Dudley House area was of sufficient size to support the event. Keith believed that it was. Keith further said that the idea is to have each of the four main clubs in the county to co-present an event for all hams county-wide each year, with members of other clubs invited. Keith suggested that VCARC could be responsible for hosting an October event (possibly at the Dudley House) and will provide a date. Richard WB6AEW, our facilities manager, has been asked to see which dates that Dudley House is available.

(Continued on next page)

# Minutes of the August 12th, 2022 General Membership Meeting of VCARC (continued)

**Committee Reports: (continued)**

**Health and Safety: Mark Vodon KI6PTE (not present)**

**Club Inventory: Denney N6HV**

- The shed is full and needs straightening out.

**K6MEP Monday Night Contest: (Robert KM6RSS)**

- Robert announced the K6MEP Monday Night Contest status as of week 32; 516 check-ins with 83 visitors and a 16.13 average. Please volunteer as net control operators for the month of August (see sign-up sheet on clipboard in the back of the room)

**ARRL Liaison (Dave AI6VX):**

- There has been an interest in providing the Amateur Radio Exams by our club. Dave will contact the ARRL to see what is required. We have four members (John W6JPG, Robert KM6RSS, Keith W6KME and Zak N6PK) with a valid VE certificate but need a location to hold the exam and the approval from ARRL.

**ACS/ARES Liaison (Burt KA6BJA).**

- Mike Felio K6MJF (feliomj@gmail.com) is the Communications Lead for Wings Over Camarillo happening August 20-21 and volunteers are needed, especially for Sunday.

**DecemberFest. (Robert KM6RSS)**

- The date is December 9th and the location is Black Bear Diner at the corner of Harbor and Seaward in Ventura just off the 101. An attendance poll is on groups.io as well as a response sheet on the clipboard in the back of the room. Please let us know if you will join the fun!

**Goals Committee: (Mark KD6ASL and Burt KA6BJA).**

- Not discussed

**New Business:**

- No New Business

Break for socialization and set-up (20 minutes)

Presentation by Mark Swaney KD6ASL discussion about DMR.
Mark made a great presentation using Power Point as well as using actual equipment to show how DMR works. Many questions were asked and his presentation ended at 21:40.
(Continued on next page)

# Minutes of the August 12th, 2022 General Membership Meeting of VCARC (continued)

**Announcements:**

- The next Board Meeting (on Zoom) is September 4th; everyone is invited to attend using the credentials posted on our calendars (K6MEP and Groups.io).
- Remind everyone about the club's next meeting date September 9th. Dave Schmidt AI6VX will present "Allstar".
- Thanks to those who brought refreshments for tonight's meeting (Linda Shank and Ben K6QV).

Adjournment:

- Tim made the motion to adjourn and Dave seconded it. All were in favor and the meeting was adjourned at 21:46.
- Robert reminded everyone that many of us will continue the camaraderie at Toppers on Main Street in Ventura.

OFFICER ATTENDEES

| OFFICE | LAST | FIRST | CALL SIGN | PRESENT |
|---|---|---|---|---|
| PRESIDENT | Shank | Robert | KM6RSS | X |
| VP | Alberts | Clement | KM6OKZ | |
| SECRETARY | Cohen | Phil | WA6BUZ | X |
| TREASURER | Gartman | John | W6JPG | X |
| BOARD | Auerbach | Burt | KA6BJA | X |
| BOARD | Schmidt | Dave | AI6VX | X |
| BOARD | Swaney | Mark | KD6ASL | X |

# K6MEP Monday Night Net Update Robert KM6RSS

Our new Monday Night Net Contest started Monday, January 3rd and will end on December 5th. To give those who are interested in the experience of being part of our Monday Night Net Contest as Control Operators, I've placed a sign-up spreadsheet on our groups.io website under files, 2022 Monday Night Net. We need back-up net controllers to sign up as well. If you would like to volunteer, please contact me with the date(s) you would like and whether you want to be the primary or the back-up net controller and I'll update the list, which is saved to our K6MEP.groups.io website:https://groups.io/g/K6MEP/files/2022%20Monday%20Night%20Net%20Contest .

Below are the current Monday Night Net Contest Totals. Our groups.io has all of the Monday Night Net Contest documents in the files folder. Our contest-to-date total over 35 weeks is 571 check-ins with 87 visitors and an average of 16.34.

Monday Night Net Contest Totals to Date

| Week | Date | Total | Visitors |
|---|---|---|---|
| 1 | 1/3/2022 | 15 | 2 |
| 2 | 1/10/2022 | 17 | 2 |
| 3 | 1/17/2022 | 14 | 1 |
| 4 | 1/24/2022 | 20 | 3 |
| 5 | 1/31/2022 | 19 | 1 |
| 6 | 2/7/2022 | 17 | 4 |
| 7 | 2/14/2022 | 14 | 2 |
| 8 | 2/21/2022 | 16 | 2 |
| 9 | 2/28/2022 | 11 | 1 |
| 10 | 3/7/2022 | 14 | 1 |
| 11 | 3/14/2022 | 17 | 2 |
| 12 | 3/21/2022 | 15 | 1 |
| 13 | 3/28/2022 | 13 | 0 |
| 14 | 4/4/2022 | 17 | 2 |
| 15 | 4/11/2022 | 18 | 4 |
| 16 | 4/18/2022 | 15 | 1 |
| 17 | 4/25/2022 | 19 | 3 |
| 18 | 5/2/2022 | 16 | 3 |
| 19 | 5/9/2022 | 12 | 1 |
| 20 | 5/16/2022 | 20 | 7 |
| 21 | 5/23/2022 | 20 | 3 |
| 22 | 5/30/2022 | 20 | 6 |
| 23 | 6/6/2022 | 16 | 2 |
| 24 | 6/13/2022 | 14 | 3 |
| 25 | 6/20/2022 | 18 | 3 |
| 26 | 6/27/2022 | 18 | 2 |
| 27 | 7/4/2022 | 15 | 2 |
| 28 | 7/11/2022 | 11 | 1 |
| 29 | 7/18/2022 | 11 | 1 |
| 30 | 7/25/2022 | 20 | 8 |
| 31 | 8/1/2022 | 17 | 5 |
| 32 | 8/8/2022 | 15 | 2 |
| 33 | 8/15/2022 | 20 | 3 |
| 34 | 8/22/2022 | 17 | 1 |
| 35 | 8/29/2022 | 20 | 2 |
| | Total | 571 | 87 |

# Photos from Wings over Camarillo Air Show August 20-21, 2022

Photos from Seth L. and Mark KD6ASL

(Continued on next page)

## Photos from Wings over Camarillo Air Show August 20-21, 2022

(Continued)


## Antenna Obfuscation by Steve Noll WA6EJO

I am inspired to write this seeing info on that new miracle VHF/UHF mobile antenna that has been making the rounds lately. Some of the "data" on it has been hazy at best, Reese mentioned this in his August article. I like to know the dBi or dBd gain of an antenna. Well, I found it for that antenna in the August 2022 QST review, it is: "Nominal 5(+) dB-MEG."

Huh? What???

First result of a Google search for "dB-MEG" takes me to http://revolutionwifi.blogspot.com/2011/06/measuring-rf-antenna-gain-in-db-meg.html. Here they refer to some unknown manufacturer's definition:

"Decibels Mean Effective Gain is used by one manufacturer. To establish the Mean Effective Gain for their antenna, received power is first measured and averaged using a ¼-wave whip (0 dBi) in a real mobile or reflective environment.
The whip is then replaced with their antenna, and again measured in the same environment. The MEG gain is then the ratio of the two received powers. On average their antenna receives twice the power of the ¼ wave whip in a mobile or reflective environment. Alternatively said, their antenna has 3dBi Mean Effective Gain."

0 dBi for a ¼-wave whip? My research found claims of -0.85 dBi to +5.31 dBi gain for a ¼-wave ground plane antenna, averaging around +3 dBi. I make no claims myself but it is almost certainly not 0 dBi.

Same web site has two links for more information. Both links are bad. Continued research finds this somewhat obscure MEG thing dates back to 1990. According to the originator, "the average power received by the antenna under test in the propagation channel of interest to the sum of the average powers that would had been received in that same environment by two isotropic antennas, vertically and horizontally polarized, respectively."

Well, I am certainly glad that he is going to use the propagation channel of interest! Now, isotropic antennas are just theoretical constructs and do not actually exist, and I question that an isotropic antenna can be polarized at all. This definition is not much of a help and does not refer to using a ¼-wave whip as a reference. But why should it be any different from any antenna gain measurement where you compare it to another antenna of known gain. So why the "MEG?"
(Continued on next page)

## Antenna Obfuscation By Steve Noll WA6EJO (Continued)

One way to look at this "MEG" stuff is that it is just a marketing thing to muddy up the waters. Like specifying an antenna gain in dB, not properly in dBd or dBi. Let's just use units no one else does so we can't compare antennas, okie dokie!

Disappointed that the QST review did not address the dB-MEG specification, nor did it do any actual performance measurements. QST should be a more professional journal. Getting into a repeater is not a "measurement." Far better would be to alternately swap the antenna being tested with the aforementioned ¼ wave whip with the feedline connected to a proper receiver that has a real signal level meter. Not "four bars" but a dBm readout or even an S-meter. The ICOM IC-R8600 is an example. Now you can get actual dB comparisons from repeater signals.

Said QST review also glosses over: "...because the antenna has a strong magnetic near field, local noise is reduced."
Huh? What???
Further investigation reveals that it appears that the major advantage for this antenna is that it is not solely vertically polarized as would be normal for a mobile antenna, but it is elliptically polarized. That is, it has some directivity in both the horizontal and the vertical. The result is if in motion through certain environments that present the desired signal with its polarization scrambled you will encounter less flutter. A basic vertically polarized mobile antenna will have higher gain in the vertical polarization but will be more susceptible to flutter.

So, I get it. It's an antenna with some vertical polarized and some horizontal polarized gain. So how about a more scientific and reproducible way to characterize it? MEG does not do that as it does not define the test environment. Just measure the gain in both polarizations using the same source power in each polarization. Perhaps the antenna spec would then be "x dBiH, y dBiV." Unlike the originator of "MEG", I would not express the gain as the sum of the two gains. It may be of more use and interest to keep those measurements separated.


Some of us old guys remember Ham Radio magazine which was the real technical journal of our hobby. I miss it.

73, Steve J Noll, WA6EJO

**Trivia by Dana KG6WXE**

DID YOU KNOW?

1. Hawaii is the only State in the United States that produces coffee?


2. China has only one time zone.

3. In the battle of Gettysburg (1863) 51,000 lives were lost in the 3 day battle. Compare this to Viet Nam where we lost 58,200 in 20 years.

De
Dana
KG6WXE

## K6MEP Monday Night Net Script

"QST- QST- QST. This is (NAME, CALL SIGN) with the Ventura County Amateur Radio Club Net. If there is any station with EMERGENCY or PRIORITY Traffic that needs the immediate use of this frequency, please come now.

Hearing none, the following is a QST. This is (NAME, CALL SIGN), tonight's net control station for the Ventura County Amateur Radio Club Net. If, at any time, during tonight's net, anyone needs this frequency for emergency or priority traffic, please call net control, and we will respond appropriately.

This is a directed net, open to all amateur radio operators and is sponsored by K6MEP, the call sign for the Ventura County Amateur Radio Club. This net begins each Monday evening at 20:00 local time on the WD6EBY linked repeater system.

The primary frequency of this net is 145.200 MHz with a minus offset and a PL of 127.3 Hz. If the repeater should fail for any reason, we can use South Mtn. repeater on 146.385 MHz with a positive offset and a PL of 127.3 Hz as backup.

All amateurs are welcome to check in **after** the following announcements.

A roundtable will follow the check-ins. A rag chew session may follow the formal net. We will have a Zoom meeting following the net.

At this time I will call on tonight's alternate net control station (NAME, CALL SIGN), (Pause for alternate NC check in with "how's my signal "and respond appropriately). If for any reason my station should become inoperable the alternate net control station will proceed with the net.

K6MEP, the Ventura County Amateur Radio Club, meets at 19:00 hours on the second Friday of each month at The Dudley House, 197 N Ashwood Ave, Ventura, CA. The club meeting will also be on Zoom. Our next board meeting will be on (DATE) at 19:00 hours on Zoom. Please see our K6MEP.org events page or our K6MEP.groups.io calendar for the credentials. On Friday (DATE) at the Dudley House and Zoom, (NAME CALL SIGN) will present "(SUBJECT)" and Jeremy KN6JMD will provide Zoom and projector/sound/camera/internet support. We urge any non-members interested in the Ventura County Amateur Radio Club to contact us at K6MEP@qsl.net. Non-members interested in amateur radio are welcome to attend our meetings.

Our 2022 Contest started on January 3rd and ends on December 5th. Make sure to set your calendar alarms to remind you to check-in and join the Zoom get-together that follows.

(Continued on Next Page)

## K6MEP Monday Night Net Script (Continued)

The contest rules are: The person who checks-in to the K6MEP Monday Night Net Contest must hold a valid Amateur Radio License. If a non-member wins, they will be given a two-year membership in the club. The member's awards consist of $100.00 for first place, $50.00 for second place and $25.00 for third place. In case of ties, the awards will be split equally among the members who qualify for the monetary award.

When you check-in, please give your call sign (phonetically), name and if you are a Ventura County Amateur Radio Club member. If you are not a member of the club, please include your QTH or location.

Please check in now. "(you can use the quick check in list spreadsheet if it helps in logging check-ins).

(If the check-ins are completed or there is a lull in the check-ins say:

"Hearing no other check-ins at this time, we will now begin with our Roundtable"

(Start with the first check-in and ask him/her about ham radio activities during last week, also ask another question that you think will spur the discussion, then move on to the next person).

During the Roundtable, pause every 10 minutes and identify yourself with "This is (NAME, CALL SIGN), tonight's net control station for the Ventura County Amateur Radio Club Net". Also ask if anyone wants to check-in after several roundtable check-in comments are made. If you have completed the check-in and roundtable list, ask "Any last comments?" If none heard, ask "Any late, missed, or visitor check-ins? Please check-in now."

If nothing is heard;

(Closing): "This concludes the Ventura County Amateur Radio Club weekly net at _____hours. Thank you for your interest and participation. Thanks to (NAME, CALL SIGN), for acting as the alternate net control operator. Also thanks to Paul Strauss, WD6EBY, for the use of the repeater for our K6MEP net.

73, this is (NAME, CALL SIGN), tonight's Ventura County Amateur Radio Club net control, signing off and returning the repeater to its normal use."

## 8-Year-Old Girl Chats With ISS Astronaut Using Ham Radio

By Hafsa Khalil, CNN

Published 11:01 AM EDT, Wed August 17, 2022

**Courtesy Matthew Payne**

**London CNN —**

When Isabella Payne heads back to elementary school in September, she's going to have the best "what I did in my vacation" story to tell.

In a tale of "right place, right time," the 8-year-old girl from Kent in southeast England spoke with American astronaut Kjell Lindgren aboard the International Space Station (ISS) using her dad's ham radio.

On August 2, Isabella had just dropped off to sleep when her dad woke her up, dragged her out to the radio and thrust a microphone in her face.

"I was like 'Why are you doing this to me? I need my beauty sleep,'" Isabella told CNN on Wednesday.

From her dad's lap, she told Lindgren her name and age. "His voice instantly changed from normal to joyful," she said. "You could hear his smile."

"I was elated when I heard his voice," she added. "I thought it was a dream."

After their conversation, Lindgren told followers on Twitter about it, saying his chat with Isabella may be his "favorite contact so far."

Isabella's dad, Matthew Payne, 42, said he has held an amateur radio license for 22 years. He told CNN that conversations with astronauts are kept short, with a brief mention of your call sign – every person with a license is allocated one by official agencies – to tell them who you are, your name, and a quick thank you and goodbye. "They're only in the sky above us for 10 to 15 minutes and we want as many people as possible down here to have that kind of experience," Payne explained.

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## 8-YEAR-OLD GIRL CHATS WITH ISS ASTRONAUT USING HAM RADIO (Continued)

Isabella and Matthew Payne share a passion for space and radio.
Courtesy Matthew Payne

He said the ISS has an amateur radio station aboard that is used by astronauts to make contact with schools while in orbit. Occasionally, during their downtime, they also "call out" to any amateur radio operators on Earth.

"I heard through the communities that I'm part of that he (Lindgren) was using the radio, so we listened for a couple of weeks … and one evening I heard him call," Payne recounted.

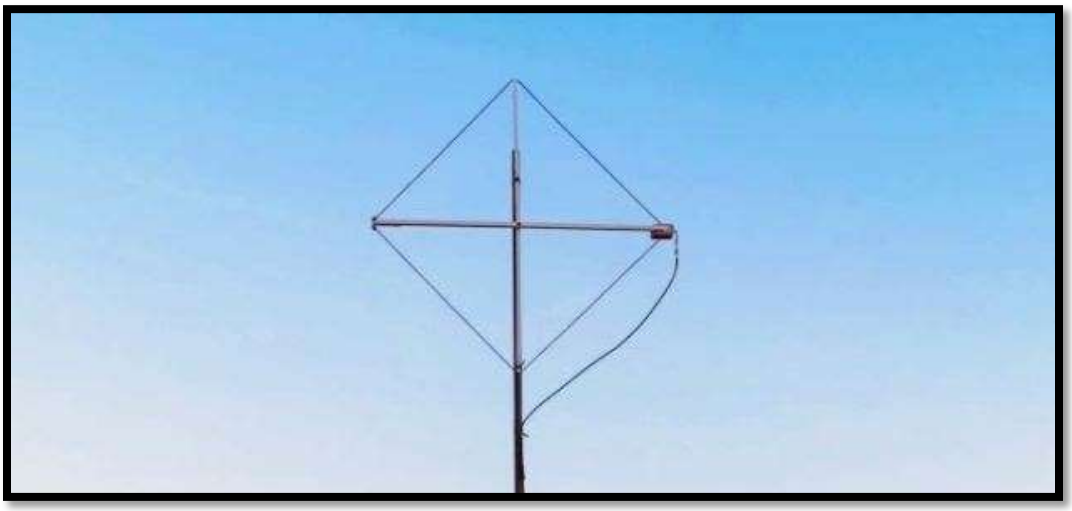
Both father and daughter are space and radio fans, Payne said, adding that Isabella had been sitting on his knee since she was a baby, watching "all the launches, all the space station events, all the space walks" together.

In April 2016, Payne helped students from a local school speak with British astronaut Tim Peake while he was aboard the ISS. At the time, Isabella was just 2, and in her usual position on his knee.

Since her unforgettable evening this month, Isabella has spoken with media organizations and has even had email correspondence with NASA – all of which is good preparation for her long-term ambition to become a communication specialist for the space agency.

"I want to talk to the astronauts and say, for example: 'Good morning, Sam. Is everything still floating around up there like it's supposed to?'

# Introducing the Amazing SULA: An Affordable Unidirectional DX-Grade Loop Antenna That You Can Build!



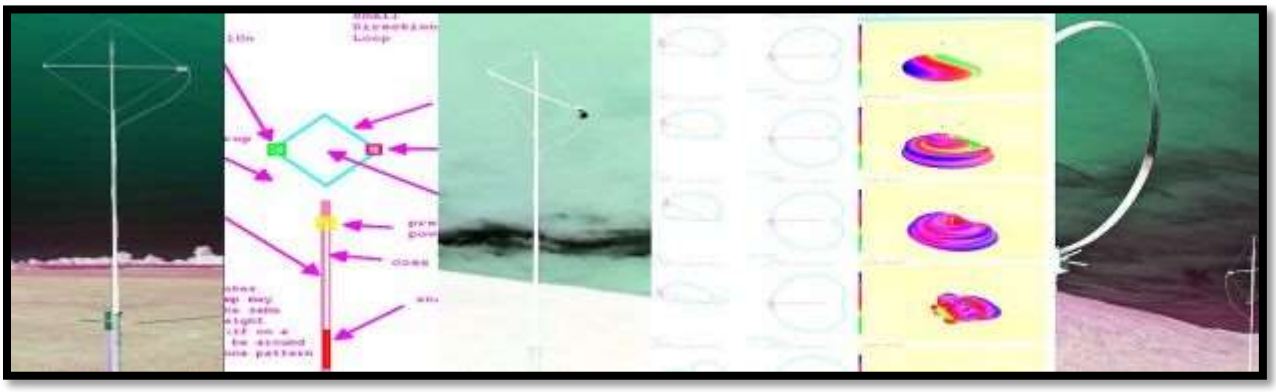
Many thanks to SWLing Post contributor extraordinaire, 13dka, who brings us a three part series about the new SULA homebrew antenna project. This first article describes this affordable antenna and demonstrates its unique reception properties. The second article will focus on construction notes. The third and final article will essentially be a Q&A about the SULA antenna. All articles will eventually link to each other once published.

This wideband unidirectional antenna is an outstanding and innovative development for the portable DXer. I love the fact that it came to fruition via collaboration between Grayhat and 13dka: two amazing gents and radio ambassadors on our SWLing.net discussion board and here on the SWLing Post. So many thanks to both of them!

Please enjoy and share SULA Part 1:

## Introducing the Small Unidirectional Loop Antenna (SULA) 1-30MHz

A small and simple, unidirectional and DX-capable loop “beam” for SWLs! by 13dka



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**INTRODUCING THE AMAZING SULA: AN AFFORDABLE UNIDIRECTIONAL DX-GRADE LOOP ANTENNA THAT YOU CAN BUILD! (**Continued)

In early June, Andrew (grayhat), SWLing Post's resident antenna wizard suggested a variation of the "cardioid loop" on the SWLing Post message board: The original "cardioid loop" is a small loop receiving antenna deriving its name from a cardioid shaped (unidirectional) radiation footprint. The design is strikingly simple but it has a few downsides: It relies on a custom preamp, it needs a ground rod to work and it is unidirectional only up to 8 MHz.

Andrew's version had the components all shuffled around and it did not only lose the ground rod, it also promised a nice cardioid pattern over the entire shortwave, from a small, diamond shaped loop. Wait…what? It can be made using parts available on Amazon and your DIY store: You need some 3m wire and PVC tubes to create a support structure to hold the wire, a 530 Ohm resistor and a 9:1 balun like the popular "NooElec One Nine". Since it's a "lossy" design, adding a generic LNA like the NooElec "LANA HF" would help getting most out of it. When you put that all together you have what sounds like an old shortwave listener's dream: a small, portable, tangible, and completely practical all-band shortwave reception beam antenna with some more convenient properties on top, for example, it is a bit afraid of heights.

That sounded both interesting and plain crazy, but the .nec files Andrew posted were clearly saying that this antenna is a thing now. Unfortunately Andrew suffered a little injury that kept him from making one of those right away, I on the other hand had almost all the needed parts in a drawer so I ended up making a prototype and putting it through some of its paces, with Andrew changing the design and me changing the actual antenna accordingly, then mounting it upside down. Let me show you around:

- Small, diamond shaped wire loop (with 76cm/29.92" sides), needing as little space as most other small loops.
- Unidirectional with a ~160° wide "beam" and one pronounced minimum with a front/back-ratio of typically 20dB over the entire reception range 1-30MHz.
- Moderate height requirements: It works best up to 3m/10' above ground, where it gives you…
- …a main lobe with a convenient flat takeoff angle for DX
- Antenna is comparatively insensitive to ground quality/conductivity.
- Wideband design works best on shortwave and is pretty good up to 70cm.

A functional small beam antenna for shortwave reception that's just as small and possibly even more lightweight (prototype:~250g/9oz) than your regular SML, that can be easily made out of easy to obtain parts and easily carried around for mobile/portable DXing and due to its cardioid shaped directional pattern also for direction finding, a "tactical" antenna that's also doing DX? Unlike conventional, Yagi-Uda or wire beams it can achieve a low takeoff angle at only 3m/10ft height or less, the front/back ratio is typically better than that of a 3-element Yagi, with a particularly useful horizontal pattern shape. That it's rather indifferent to soil quality could mean that more people get to reproduce the good results and being a real wideband antenna is making the SULA an interesting companion for multiband radios and SDRs. Really? A miracle antenna? Is it that time of year again? If I had a dollar for every….

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**INTRODUCING THE AMAZING SULA: AN AFFORDABLE UNIDIRECTIONAL DX-GRADE LOOP ANTENNA THAT YOU CAN BUILD! (**Continued)

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**INTRODUCING THE AMAZING SULA: AN AFFORDABLE UNIDIRECTIONAL DX-GRADE LOOP ANTENNA THAT YOU CAN BUILD! (**Continued)

**The proof is in less than half of the pudding**

Full disclosure: I'm not an optimistic person.

Of all the things I expected to happen, that it actually works was not the top one. But let me just share with you how it greeted me out in the field, the first thing ever recorded from such an antenna at the dike.

This was the first time ever I heard a small pile-up of specifically Japanese stations out at the dike, calling for lovely sounding TF/LA5MUA in Iceland. That I had the new antenna turned a bit towards Japan may actually have contributed to that specificity. These signals came in with a comfortable SNR, and this was only the passive version of the SULA (I forgot to bring the power bank for the preamp that night). Most importantly this didn't sound "meh" at all, which was what I expected more than anything else – that it kinda works but it's too "meh" to bother with. Rarely been more happy to be wrong! After changing the feedpoint to "outside the loop" for improved lobe shape and stability, the real SULA confirms the 4NEC2 simulation in most if not all of its predictions, it…dare I say that…it works!?

Expectations need to be reasonable of course, beam antennas are not like flashlights, the highest difference in "brightness" between front and back is 1-3 S-units, even though the SULA has the potential to be better than that. Let's also not forget that this is a quite lossy antenna, that's why it may not work well for many radios without adding a preamp to the antenna, and even with that help it will not have super-hot levels.

What we hope for is that it can yield a better SNR from its smaller reception lobe compared to regular loops of that size, and the evidence collected so far indicates that this is very often the case, sometimes more, sometimes less…

The key information you're all probably waiting for is where on the big roster of antennas this one could be sorted in and after only 4 weeks in chronically disturbed conditions here's some mostly speculative performance ballpark guesswork – the overall performance of the pre-amplified version is comparable with ideal results from regular, high quality active loop antennas of comparable size, but the SULA offers some potential perks over them.

Whereas "Ideal results" for an SML are what the ML-200 is picking up at the beach, because it's close enough to the water to have good low angle coverage. The more you move away from the water, the more the results are supposed to drift apart in favor of the SULA. But even with a preamp it's pretty much deaf on LW and still quite insensitive on the lower part of MW…and that still brings us right back to the good things:

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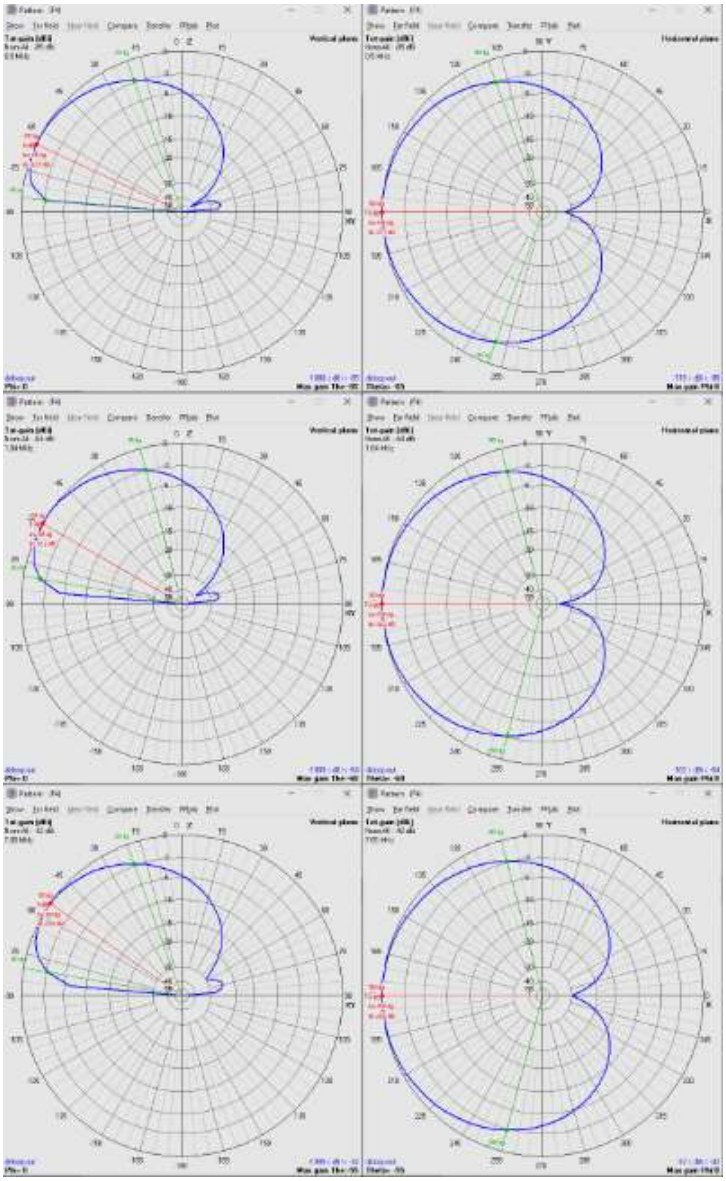
**INTRODUCING THE AMAZING SULA: AN AFFORDABLE UNIDIRECTIONAL DX-GRADE LOOP ANTENNA THAT YOU CAN BUILD! (**Continued)

**Directionality**

Even down on MW it has a pretty deep minimum on the backside that can be used to separate pretty strong AM stations on the same frequency and it generally works pretty OK at night on MW. Beyond 1 MHz it opens up and starts doing what it says on the imaginary tin. The pronounced backside minimum (to avoid the term “null”) is getting flatter with increasing frequency but it has still excellent (>13dB) directionality up to 10m and beyond. This is pretty educational, too: All of a sudden I can tell if a signal comes short path or long path and an azimuth map is my new friend. That’s fun!



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**INTRODUCING THE AMAZING SULA: AN AFFORDABLE UNIDIRECTIONAL DX-GRADE LOOP ANTENNA THAT YOU CAN BUILD! (**Continued)

Up in the FM band the pattern changes due to the loop becoming a “big” (1 Lambda) loop for the wavelength and the unidirectionality makes place for a bidirectional pattern shifted 90°, which is then perpendicular to the plane of the loop. The loop stops having losses and if you have nearby FM transmitters you may need to add an FM bandstop filter in order to avoid overloading the LNA, that the SULA is a surprisingly competent antenna on FM, VHF and beyond for its odd 3m restriction is probably not helping with that.

**Elevation/takeoff angle and height**

Again, this antenna works up to 3m/10ft of height, more will quickly deteriorate the lobe pattern. At 3m/10ft the takeoff angle is typically centered at 25° on 20m, lowering the antenna to 1.5m/5′ makes that 30°, 5m/15′ would yield 20° but at the cost of directionality. Mind you, 25° is only the gain peak of the lobe, the 10° takeoff angle is there too and only a few dB quieter over average ground.

The takeoff angle of the SULA still depends a bit on frequency as in “higher=flatter” but the slightly steeper angles on the 160-40m bands at constant 3m height are rather welcome variations catering for the different usage of the 80- and 40m-band . The best is maybe that this behavior is all “wideband”, with similar properties on all bands and all frequencies on shortwave.

The low height requirements are making this great for portable operation on short, portable fiberglass poles or for permanent installation in small backyards. Obviously you can turn its main lobe away from your house for some attenuation of QRM from the house. For the same reason it could be good on a balcony, depending on the noise situation of course. It probably only kind of works indoors or in the attic, this may not be the ideal indoor antenna in very noisy environments, or when the relative height of the antenna is too high, or just because the patterns may be all pretty off indoors. OTOH, mounting this 3m high over a big metal roof on a high-rise could be pretty awesome… Another nice trait of the SULA is its relative independency from ground properties – the difference in takeoff angle between “good ground” and “poor ground” is only +/- 5° (10° flatter near salt water), so in theory it could bring in some DX where other antennas would have great difficulties to do that. Whether that’s true or not…that’s for you to find out!

So far we only verified some basic properties of the SULA on open area test sites, there’s only one of these antennas in existence right now…and building your own would be a chance to explore something (I think) new and if you’re inclined to, share your results! Everyone would be super interested in practical demonstrations, particularly comparisons with other antennas and performance in different environments!

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**INTRODUCING THE AMAZING SULA: AN AFFORDABLE UNIDIRECTIONAL DX-GRADE LOOP ANTENNA THAT YOU CAN BUILD! (**Continued)

## The Joy of Electric Car Ownership

LOS ANGELES — California air regulators voted last Thursday on an historic plan to address climate change and harmful pollution by moving the nation's largest auto market away from the internal combustion engine. California's decision to ban the sale of new gas-powered cars beginning in 2035 will also halt the sale of such vehicles in Virginia due to a 2021 law linking the commonwealth to the western state's vehicle emissions standards, state attorneys have concluded. In a Thursday email obtained by the Mercury (https://www.virginiamercury.com/2022/08/26/californias-2035-ban-on-new-gas-powered-cars-set-to-apply-to-virginia/), Assistant Attorney General Michael Jagels concluded that Virginia is "bound" by the California decision because the state chose to be "statutorily and (sic) regulatorily aligned with California." Decoupling from California's path would require "an amendment or repeal of the mandating legislation," Jagels wrote. The ban, which if approved by the U.S. Environmental Protection Agency wouldn't take effect for 13 years, would not impact used car sales or prohibit anyone from driving older-model vehicles with internal combustion engines. The regulation will phase out the sale of new gasoline-powered cars, trucks and SUVs in the nation's most-populous state, culminating in a total ban of new sales of the vehicles by 2035. The ban will not prevent people from using gas-powered vehicles or apply to the used car market, but California officials say it will dramatically cut the state's "climate-warming emissions (CO2)" and famously dirty air by speeding the transition to electric vehicles. With a heat wave expected in early September, all Californian's are admonished to follow: "The top three conservation actions are to set thermostats to 78 degrees or higher, **avoid** using large appliances and **charging electric vehicles**, and turn off unnecessary lights," according to the American Public Power Association. During a "Flex Alert," residents are encouraged to reduce energy consumption from 4:00 pm to 9:00 pm — the hours in which "demand for electricity remains high and there is less solar energy available." I guess this means avoiding driving an electric vehicle when it is hot because you will be contributing in causing a "brown-out" or worse. Mark has his own solar panel roof and whole-house storage batteries so he is self-sufficient. The photo, below, showed what Mark KD6ASL, faced trying to "supercharge" his Tesla at the Collection recently.

Waiting for an open space at the Tesla SuperCharging Station at the Collection

| Date | Location | Charge Type | Total | Charging Fees | Idle Fees | Invoice |
|---|---|---|---|---|---|---|
| 08/28/2022 | Oxnard, CA | Supercharging | $4.40 | 10 kWh @ $0.44/kWh $4.40 | | |

## Selected Contests & Special Events

Please see QST or the ARRL website (www.arrl.org) for any details and QSL information.

Maty Weinberg, KB1EIB, events@arrl.org; www.arrl.org/special-event-stations

# Special Event Stations

**Working special event stations is an enjoyable way to help commemorate history. Many provide a special QSL card or certificate!**

**Through Dec. 31, 0000Z – 2359Z, GB1900HA** and **GB1900HW**, South Shields and Hexham, England. Hadrian's Wall Partnership. **www.qrz.com/db/gb1900ha** and **www.qrz.com/db/gb1900hw**

**Through Dec. 31, 1000Z – 2359Z, PA100THALES**, Many cities, Netherlands. PA100THALES Team. **100 Years of Thales Nederland B.V.** All bands, all modes. QSL. Email **pa100thales@qsl.net** for information. *This is an operating event*. **www.qsl.net/pa100thales**

**Aug. 8 – Aug. 14, 0000Z – 0000Z, N7C**, Chinle, AZ. N7HG. **Navajo Code Talkers**. 7.265 14.265 18.133 21.265. Certificate & QSL. Navajo Code Talkers, P.O. Box 06, Chinle, AZ 86503. **n7hgster@gmail.com**

**Aug. 13, 1600Z – 2300Z, W6B**, Bodie, CA. California State Parks/Bodie Foundation. **Friends of Bodie Day**. 7.225 14.275 21.295 28.400. QSL. John F. Pinckney, 1551 Bennington Woods Ct., Reston, VA 20194.

**Aug. 20, 1500Z – 2100Z, W8GNM/8**, Port Clinton, OH. Port Clinton Lighthouse Festival. **Port Clinton Lighthouse Activation/International Lighthouse/Lightship Weekend**. 7.200 7.235 14.285 14.335. QSL. W8GNM/8 via LoTW. *ARLHS USA-922, grid square EN81mm*. **www.portclintonlighthouse.org** or **www.arlhs.com/events**

**Aug. 20 – Aug. 21, 1400Z – 2100Z, W2DAR**, Swans Island, ME. **Activation of Burnt Coat Harbor Lighthouse/International Lighthouse/Lightship Weekend/Sesquicentennial**. 7.197. QSL. Ron Jocher, W2DAR, 24 Park Ter., East Hanover, NJ 07936. **www.burntcoatharborlight.com**

**Sep. 1 – Sep. 12, 0000Z – 2359Z, K7T**, West Jordan, UT. Utah DX Association. **95th Anniversary of the Invention of the Electronic TV**. 14.250 7.200. QSL. Wesley Wilkinson, 7363 S. Galaxy Hill Rd., West Jordan, UT 84081. **w7wes@yahoo.com**

**Sep. 2, 1600Z – 2130Z, W5KID**, Baton Rouge, LA. Baton Rouge Amateur Radio Club. **V-J Day Commemoration**. 7.040 7.250 14.040 14.250. QSL. USS *Kidd* Amateur Radio Club, 305 S. River Rd., Baton Rouge, LA 70802. **www.qrz.com/db/w5kid**

**Sep. 2 – Sep. 3, 1200Z – 0200Z, W8G**, Burton, OH. Geauga Amateur Radio Association. **200th Great Geauga County Fair**. 7.245 14.245. Certificate & QSL. Jacqueline Welch, P.O. Box 192, Windsor, OH 44099. **www.geaugaara.org**

**Sep. 3 – Sep. 5, 1300Z – 2300Z, W9C**, Orland Park, IL. Metro DX Club. **Celebrating the 100th Anniversary of KYW Broadcast**. 7.050 7.280 14.050 50.313; additional frequencies possible. Certificate & QSL.* Jim Mornar, N9TK, 8607 W. Kendall Ln., Orland Park, IL 60462; eQSL **n9tk@att.net**. **Donation requested, see website*. **www.metrodxclub.com/2022-special-event**

**Sep. 3 – Sep. 5, 1600Z – 1700Z, K7RDG**, Sierra Vista, AZ. Cochise Amateur Radio Association. **Back to Paradise 44th Anniversary**. 3.890 7.225 14.070 14.285; voice/FT8/FT4/JS8. Certificate. Cochise ARA, P.O. Box 1855, Sierra Vista, AZ 85636-1855. **www.k7rdg.org**

**Sep. 4, 1200Z – 1900Z, W9EBN**, Marion, IN. Grant County Amateur Radio Club. **Fly/In Cruise/In**. 3.850 7.250 14.250; D-STAR: Ref 24B; DMR: Talkgroups 31656 & 3100. Certificate & QSL. Grant County Amateur Radio Club, c/o L. B. Nickerson, K9NQW, P.O. Box 1786, Marion, IN 46952. **grantcounty amateurradioclub@gmail.com** or **www.grantarc.org**

**Sep. 8 – Sep. 12, 0000Z – 2359Z, K4A**, Cordova, AL. Alabama Contest Group/WA1FCN. **9-11 Remembered Once More**. 7.040; all bands, all modes. Certificate & QSL. Robert Beaudoin, 970 Mountainview Rd., Cordova, AL 35550. *Certificate for K4A QSO on four bands and any combination of modes*. **wa1fcn@charter.net** or **www.qrz.com/db/wa1fcn**

**Sep. 10, 1300Z – 2000Z, WA4TRS**, Fairview, NC. The Road Show Amateur Radio Club, Inc. **Toys on the Air**. 14.275 28.370. Certificate & QSL. The Road Show Amateur Radio Club, Inc., 57 Echo Lake Dr., Fairview, NC 28730. **www.wa4trs.org**

**Sep. 10, 1400Z – 2200Z, WØR**, Parker, CO. Parker Radio Association. **Wings Over the Rockies B-17 Fly-in**. 7.222 14.222. QSL. WØR, P.O. Box 3241, Parker, CO 80134. **www.parkerradio.org**

**Sep. 10, 1500Z – 2200Z, KØA**, Saint Paul, MN. South East Metro Amateur Radio Club. **Celebration of Initiation of US Airmail and Attendant Beacon System**. 7.035 7.250 14.250 18.100. Certificate. Brian McInerney, NØBM, 2523 Cochrane Dr., Woodbury, MN 55125. **www.semarc.org**

**Sep. 10 – Sep. 18, 0000Z – 2359Z, K4MIA**, Loxahatchee, FL. PBSEC. **National POW MIA Recognition Day**. 7.195 14.265 18.150 28.400. Certificate & QSL. Michael Bald, 6758 Hall Blvd., Loxahatchee, FL 33470. *Sister stations K4MIA/2, K4MIA/4, K4MIA/5, K4MIA/7 and K4MIA/8 also operating; others possible. Please take time to remember our POWs, MIAs, and KIAs, as well as their families*. **radiomb@bellsouth.net** or **www.qrz.com/db/k4mia**

**Sep. 10 – Sep. 18, 0000Z – 2359Z, W6H**, Rio Rancho, NM. Albuquerque DX Association. **Route 66 On-the-Air**. 3.866 7.266 14.033 14.266; CW, SSB, and FT8 primarily on 80 through 10 meters, with supporting propagation. QSL. Bill Mader, 4701 Sombrerete Rd. SE, Rio Rancho, NM 87124. *Look for our self-spots on your favorite cluster; operating schedule is at* ***http://n2iw.com/route66-2022/index.php***. **https://adxa.groups.io/g/main** or **www.qrz.com/db/w6h**

**Sep. 16 – Sep. 18, 1700Z – 1900Z, K9J**, Hartford City, IN. Indiana Royal Rangers. **Ham Radio Action Camp**. 14.240 14.270 28.435 146.550. Certificate. Jerry Barnes, 601 Spring St., Madison, IN 47250. **www.indianaag.org/ministries/royal-rangers**

**Sep. 16 – Oct. 2, 1000Z – 2200Z daily, N1E**, West Springfield, MA. Hampden County Radio Association. **Project Big E**. 7.050 7.195 14.050 14.285; digital, HF and VHF; additional bands and modes possible. QSL. Larry Kranson, W1AST, 100 Kenmore Dr., Longmeadow, MA 01106-2759. **www.nediv.arrl.org/ProjectBigE**



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## Selected Contests & Special Events (Continued)

**Sep. 17, 1400Z – 2000Z, KSØLV**, Leavenworth, KS. Pilot Knob Amateur Radio Club. **Harvey House on the Air**. 7.185 14.228 21.278 28.378. QSL. Charles Jackson, NØCS, 717 Mount Calvary Rd., Lansing, KS 66043. **n0cs@arrl.net**

**Sep. 17, 1500Z – 2359Z, N7GV**, Sahuarita, AZ. Green Valley Amateur Radio Club. **USAF 75th Birthday**. 7.260 14.260. QSL. Richard Rogers, 15747 S. Avenida Cuaima, Sahuarita, AZ 85629-8682. **rcralb@aol.com** or **www.gvarc.us**

**Sep. 17 – Sep. 18, 1300Z – 2300Z, WØN**, Bellevue, NE. Bellevue Amateur Radio Club. **200th Anniversary of the Fontenelle Fur Trading Post**. CW: 7.060 14.050; SSB 7.250 14.250; PSK31 14.070; SSTV 14.233; D-STAR Ref 002C. QSL. eQSL or direct to Dudley Allen, KDØNMD, 4509 Anchor Mill Rd., Papillion, NE 68133. **www.bellevuearc.org**

**Sep. 22 – Sep. 25, 1400Z – 2300Z, K5A**, Springdale, AR. Razorback Contest Club. **500th Anniversary of the Discovery of Arkansas State Capital — Little Rock**. 7.040 7.190 14.040 14.260. QSL. Razorback Contest Club, 3407 Diana St., Springdale, AR 72764. **rccw5yo@cox.net** or **www.qrz.com/db/w5yo**

**Sep. 24, 1400Z – 2000Z, NE1PL**, Fall River, MA. USNR. **Celebrating the Launch of the USS *Massachusetts* BB59**. 20 and 40 meters; other bands possible depending on operators and operating conditions. QSL. Rick Emord, KB1TEE, 135 Wareham St., Middleboro, MA 02344. **www.ne1pl.org**

**Sep. 24, 1400Z – 2200Z, W8PAR**, Parkersburg, WV. Parkersburg Amateur Radio Klub. **Volcano Days Parkersburg**, WV. 7.225 14.225. Certificate & QSL. Jerry Wharton, 1722 20th St., Parkersburg, WV 26101. **www.w8par.org**

**Sep. 24, 1700Z – 2100Z, WØK**, Saint Joseph, MO. Missouri Valley Amateur Radio Club. **The 100th Anniversary of the Krug Park Castle**. 14.188; 20 and 40 meters SSB and CW; other bands and modes possible. Certificate. Brad Hurd, 3423 Pacific St., Saint Joseph, MO 64507. **www.w0nh.org**

**Sep. 25 – Oct. 7, 1700Z – 1700Z, WR4CC**, Elizabethton, TN. Carter County Amateur Radio Association. **242 Anniversary Muster at Sycamore Shoals on the Watauga River and March to Kings Mountain**. 3.900 7.075 14.290 21.350. QSL. Larry Davis, KM4RWO, 172 Carl Taylor Dr., Elizabethton, TN 37643. **www.wr4cc.org**

**Certificates and QSL cards**: To obtain a certificate from any of the special event stations offering them, send your QSO information along with a 9 × 12-inch self-addressed, stamped envelope (3 units of postage) to the address listed in the announcement. To receive a special event QSL card (when offered), be sure to include a self-addressed, stamped business envelope along with your QSL card and QSO information.

**Special Events Announcements**: For items to be listed in this column, use the ARRL Special Events Listing Form at **www.arrl.org/special-events-application**, or email information to **events@arrl.org**.

Submissions must be received by ARRL HQ no later than the 1st of the second month preceding the publication date; a special event listing for **December** *QST* would have to be received by **October 1.** In addition to being listed in *QST*, your event will be listed on the ARRL Web Special Event page. **Note**: All received events are acknowledged. If you do not receive an acknowledgment within a few days, please contact us. ARRL reserves the right to exclude events of a commercial or political nature.

You can view all received Special Events at **www.arrl.org/special-event-stations**.

## Contest Corral

# Contest Corral — September 2022

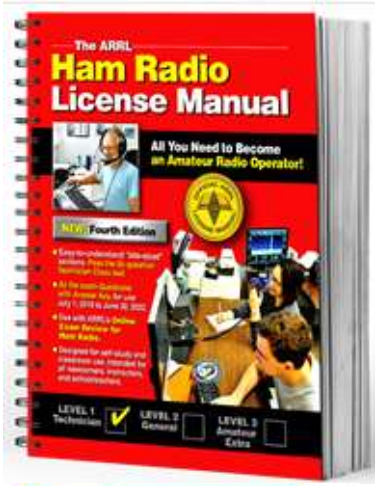
Check for updates and a downloadable PDF version online at **www.arrl.org/contest-calendar**.
Refer to the contest websites for full rules, scoring information, operating periods or time limits, and log submission information.

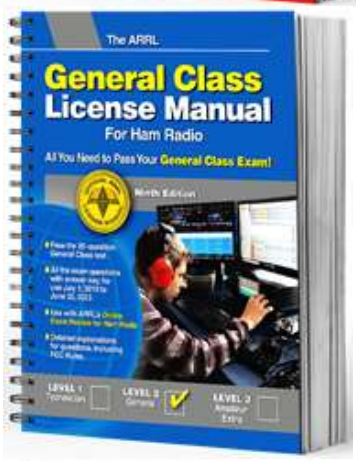
| Start - Finish Date-Time | | Start - Finish Date-Time | | Bands | Contest Name | Mode | Exchange | Sponsor's Website |
|---|---|---|---|---|---|---|---|---|
| 1 | 1700 | 1 | 2100 | 28 | NRAU 10-Meter Activity Contest | CW Ph Dig | RS(T), 6-char grid square | nrrlcontest.no |
| 1 | 2300 | 3 | 2300 | 3.5-28 | G3ZQS Memorial Straight Key Contest | CW | RST, SPC, name, mbr, or power | www.fistsna.org/operating.html |
| 3 | 0000 | 3 | 2359 | 3.5-28 | Russian RTTY WW Contest | Dig | RST, RU oblast or CQ Zone | www.qrz.ru/contest/detail/93 |
| 3 | 0000 | 4 | 2359 | 1.8-28 | All Asian DX Contest, Phone | Ph | RS, 2-digit age | www.jarl.org/English |
| 3 | 0600 | 3 | 0600 | 7/14 | Wake-Up! QRP Sprint | CW | RST, serial, suffix of previous QSO | qrp.ru/contest/wakeup |
| 3 | 0800 | 4 | 1000 | 1.8-28 | SARL Field Day Contest | CW Ph Dig | RS(T), # of rigs, category, province | www.sarl.org.za |
| 3 | 1300 | 3 | 1600 | 7 | AGCW Straight Key Party | CW | RST, serial, class, name, age | www.agcw.de/contest/htp/htp-en |
| 3 | 1300 | 4 | 0400 | All, except WARC | Colorado QSO Party | CW Ph Dig | Name, CO county or SPC | pprsa.org/coqp |
| 3 | 1300 | 4 | 1259 | 1.8-28 | IARU Region 1 Field Day, SSB | Ph | RST, serial | www.darc.de |
| 3 | 1300 | 4 | 1300 | 3.5-28 | RSGB SSB Field Day | Ph | RS, serial | www.rsgbcc.org/hf |
| 3 | 1400 | 4 | 1400 | 145 | IARU Region 1 145 MHz Contest | CW Ph Dig | RS(T), serial, 6-char grid square | www.iaru-r1.org/wp-content/uploads/2021/03/Rules-2021.pdf |
| 3 | 2000 | 4 | 2000 | 3.5 | PODXS 070 Club Jay Hudak Memorial 80-Meter Sprint | Dig | RST, SPC | www.podxs070.com |
| 4 | 1000 | 4 | 1400 | 144 | WAB 144 MHz QRO Phone | Ph | RS, serial, WAB square or country | wab.intermip.net |
| 4 | 1800 | 5 | 0300 | All, except WARC | Tennessee QSO Party | CW Ph Dig | RS(T), TN county or SPC | tnqp.org/rules |
| 5 | 1900 | 5 | 2030 | 3.5 | RSGB 80-Meter Autumn Series, SSB | Ph | RS, serial | www.rsgbcc.org/hf |
| 6 | 0100 | 6 | 0300 | 3.5-28 | ARS Spartan Sprint | CW | RST, SPC, power | arsqrp.blogspot.com |
| 7 | 1700 | 7 | 2000 | 144 | VHF-UHF FT8 Activity Contest | FT8 | 4-char grid square | www.ft8activity.eu/index.php/en |
| 10 | 0000 | 10 | 2359 | 1.8-28, VHF | FOC QSO Party | CW | RST, name, mbr (if any) | g4foc.org/qsoparty |
| 10 | 0000 | 11 | 2359 | 3.5-28 | WAE DX Contest, SSB | Ph | RS, serial | www.darc.de |
| 10 | 1200 | 11 | 2359 | 1.8-28, 50 | SKCC Weekend Sprintathon | CW | RST, SPC, name, mbr or "none" | www.skccgroup.com |
| 10 | 1400 | 10 | 2200 | 3.5-28 | Ohio State Parks on the Air | Ph | OH park abbreviation or SPC | ospota.org |
| 10 | 1500 | 11 | 0300 | 3.5-28 | Alabama QSO Party | CW Ph | RS(T), AL county or SPC | www.alabamaqsoparty.org |
| 10 | 1500 | 11 | 0959 | 3.5-28 | Russian Cup Digital Contest | Dig | serial, 4-char grid square | www.qrz.ru/contest/detail/96.html |
| 10 | 1800 | 12 | 0300 | 50 and up | ARRL September VHF Contest | CW Ph Dig | 4-char grid square | www.arrl.org/september-vhf |
| 11 | 0000 | 11 | 0400 | 3.5-14 | North American Sprint, CW | CW | Other's call, your call, serial, name, SPC | ncjweb.com/Sprint-Rules.pdf |
| 12 | 0000 | 12 | 0200 | 1.8-28 | 4 States QRP Group Second Sunday Sprint | CW Ph | RS(T), SPC, mbr or power | www.4sqrp.com |
| 14 | 1700 | 14 | 2000 | 432 | VHF-UHF FT8 Activity Contest | FT8 | 4-char grid square | www.ft8activity.eu |
| 14 | 1900 | 14 | 2030 | 3.5 | RSGB 80-Meter Autumn Series, CW | CW | RST, serial | www.rsgbcc.org |
| 15 | 0030 | 15 | 0230 | 3.5-14 | NAQCC CW Sprint | CW | RST, SPC, mbr or power | naqcc.info |
| 15 | 1800 | 15 | 1959 | 3.5 | BCC QSO Party | CW Ph Dig | RS(T), T-shirt size | www.bavarian-contest-club.de |
| 15 | 1900 | 15 | 2000 | 3.5-14 | NTC QSO Party | CW | NTC member: RST, mbr; non-member: RST, "NM," less than 25 WPM | qsl.net/ntc/party.html |
| 16 | 2100 | 16 | 2359 | 3.5 | AGB NEMIGA Contest | CW Ph Dig | AGB member: RST, serial, mbr; non-Member: RST, serial | www.ev5agb.com/contest/agb_nemiga.htm |
| 17 | 0000 | 18 | 2359 | 2.3 GHz and up | ARRL EME Contest | CW Ph Dig | Signal report | www.arrl.org/eme-contest |
| 17 | 0300 | 18 | 0900 | | SARL VHF/UHF Digital Contest | Dig | RST, 6-char grid locator | www.sarl.org.za |
| 17 | 0600 | 18 | 2359 | 10 GHz to light | ARRL 10 GHz and Up Contest | CW Ph Dig | 6-char grid square | www.arrl.org/10-ghz-up |
| 17 | 1200 | 18 | 1200 | 3.5-28 | Scandinavian Activity Contest, CW | CW | RST, serial | www.sactest.net/blog/ |
| 17 | 1400 | 18 | 0200 | All, except WARC and 60 | Iowa QSO Party | CW Ph Dig | RS(T), IA county or SPC | www.w0yr.com/IAQP |
| 17 | 1400 | 18 | 2000 | All, except WARC | Texas QSO Party | CW Ph Dig | RS(T), TX county or SPC | www.txqp.net |
| 17 | 1500 | 17 | 2100 | 1.8-28 | QRP Afield | CW Ph Dig | RS(T), SPC, power or mbr | www.newenglandqrp.org |
| 17 | 1600 | 17 | 2300 | 3.5-28, 50, 144 | Wisconsin Parks on the Air | CW Ph | WI park abbreviation or SPC | wipota.com |
| 17 | 1600 | 18 | 0359 | 3.5-28 | New Jersey QSO Party | CW Ph Dig | RS(T), NJ county or SPC | www.k2td-bcrc.org/njqp/ |
| 17 | 1600 | 18 | 2200 | All, except WARC | New Hampshire QSO Party | CW Ph Dig | RS(T), NH county or SPC | www.w1wqm.org/nhqso/ |
| 17 | 1600 | 18 | 2359 | 1.8-28, 50, 144 | Washington State Salmon Run | CW Ph Dig | RS(T), WA county or SPC | salmonrun.wwdxc.org |
| 17 | 1800 | 17 | 1959 | 1.8-28, 50 | Feld Hell Sprint | Dig | RST, mbr, SPC, grid | sites.google.com/site/feldhellclub/Home/ |
| 18 | 0000 | 18 | 0400 | 3.5-14 | North American Sprint, RTTY | Dig | Other's call, your call, serial, name, SPC | ncjweb.com |
| 18 | 1700 | 18 | 2059 | 3.5-28 | BARTG Sprint PSK63 Contest | Dig | Serial | bartg.org.uk |
| 19 | 1900 | 19 | 2300 | 144 | 144 MHz Fall Sprint | CW Ph Dig | 4-char grid square | svhfs.org/wp/sprints/ |
| 21 | 1700 | 21 | 2000 | 1.2G | VHF-UHF FT8 Activity Contest | FT8 | 4-char grid square | www.ft8activity.eu |
| 22 | 1900 | 22 | 2030 | 3.5 | RSGB 80-Meter Autumn Series, Data | Dig | RST, serial | www.rsgbcc.org |
| 24 | 0000 | 25 | 2359 | 3.5-28 | CQ Worldwide DX Contest, RTTY | Dig | RST, CQ Zone, (+state/prov for US/VE) | www.cqwwrtty.com |
| 24 | 1200 | 25 | 1200 | 1.8-28 | Maine QSO Party | CW Ph | RS(T), ME county or SPC | www.ws1sm.com/MEQP.html |
| 24 | 1400 | 24 | 1800 | 144,432 | AGCW VHF/UHF Contest | CW | RST, serial, power, 6-char grid | www.agcw.de |
| 24 | 2200 | 25 | 2200 | 1.8-14 | AWA Amplitude Modulation QSO Party | Ph | Name, SPC | antiquewireless.org/homepage |
| 25 | 0700 | 25 | 1000 | 50 | UBA ON Contest, 6 Meters | CW Ph | RS(T), serial, ON section (for ON) | www.uba.be |
| 26 | 1900 | 26 | 2030 | 3.5-14 | RSGB FT4 Contest | FT4 | 4-char grid square | www.rsgbcc.org |
| 27 | 1900 | 27 | 2300 | 222 | 222 MHz Fall Sprint | CW Ph Dig | 4-char grid square | svhfs.org/wp/sprints/ |

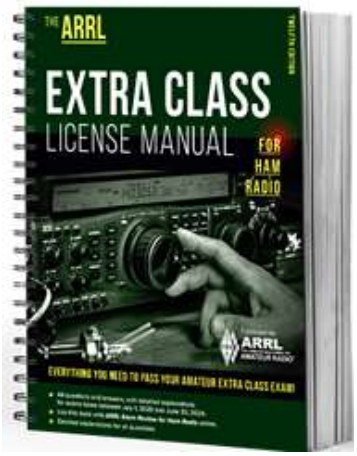
There are a number of weekly contests not included in the table above. For more info, visit: **www.qrpfoxhunt.org**, **www.ncccsprint.com**, and **www.cwops.org**. All dates and times refer to UTC and may be different from calendar dates in North America. Contests are not conducted on the 60-, 30-, 17-, or 12-meter bands. Mbr = Membership number. Serial = Sequential number of the contact. SPC = State, Province, DXCC Entity. XE = Mexican state. Listings in blue indicate contests sponsored by ARRL or *NCJ*. The latest time to make a valid contest QSO is the minute listed in the "Finish Time" column. *Data for Contest Corral is maintained on the WA7BNM Contest Calendar at* **www.contestcalendar.com** *and is extracted for publication in QST 2 months prior to the month of the contest. ARRL gratefully acknowledges the support of Bruce Horn, WA7BNM, in providing this service.*

## Upcoming FCC Exam Session Preparation Sites

Thousand Oaks CA 91360
09/03/2022
**Start/End Dates:** 09/03/2022 - 09/24/2022
**Times:** 0800 to 1200
**# of Sessions:** 4
**Class level:** Technician
**Morse code offered:** No
**Pre register required:** No
**Fee:** 0
**Pre Study required:** Yes
**Class Type:** Traditional
**Exam offered:** No
**Sponsoring Club/Organization:** CVARC
**Instructor:** W6KME
**Contact:** Keith Elliott W6KME
**Phone:** 6
**Email:** W6KME@ARRL.NET
**Location:** East County Sheriff Station
Community Room
2101 E. Olsen Road
Thousand Oaks, CA 91360
**Additional Information:** Class is held on four Saturdays in September from 8:00am to noon, at the East County Sheriff Station at 2101 E. Olsen Road. Thousand Oaks, CA 91360. Pre-enrollment is not required, but there will be a reading assignment for the first class so be sure to contact Keith at W6KME@ARRL.net. We are using the ARRL Ham Radio License Manual 5th Edition, available through the ARRL.



## Upcoming FCC Exam Test

Van Nuys CA 91405-4542

09/03/2022
**Sponsor:** ARES LAX
**Date:** Sep 03 2022
**Time:** 10:30 AM (Walk-ins allowed)
**Contact:** James W. Laage
(818) 368-8710
**Email:** cllaage@verizon.net
**VEC:** ARRL/VEC
**Location:** Valley Presbeterian Hospital (Health Education Center)
15107 Vanowen Street
Van Nuys CA 91405-4542

Goleta CA 93117-3271

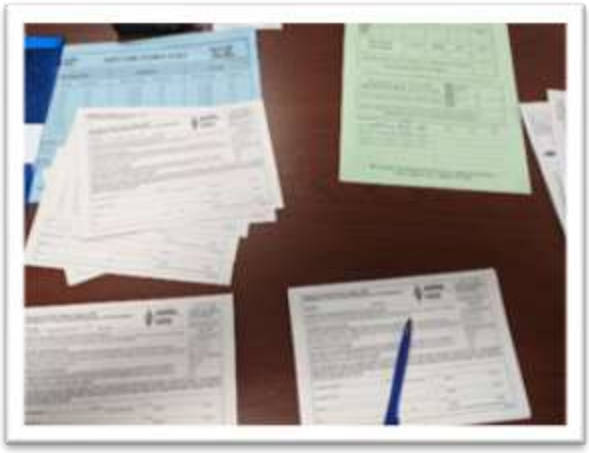
09/10/2022
**Sponsor:** Santa Barbara ARC
**Date:** Sep 10 2022
**Time:** 9:00 AM (Walk-ins allowed)
**Contact:** Tom Saunders
(805) 452-0840
**Email:** tsaund@cox.net
**VEC:** ARRL/VEC
**Location:** Impulse Communications
6144 Calle Real
*Pre-registration preferred*
Register on the team's website
Goleta CA 93117-3271
**Website:** https://www.sbarc.org/ve-exam-registration/

Santa Monica CA 90403-5610

09/10/2022
**Sponsor:** The PAPA system
**Date:** Sep 10 2022
**Time:** 7:00 AM (No Walk-ins / Register or Call ahead)
**Contact:** Norm Goodkin
(818) 613-2257
**Email:** hamclass@goodkin.net
**VEC:** Greater LA VEC
**Location:** Fromin's Deli and Rest
1832 Wilshire Blvd
# Http //Papasys Org
Pre-registration required
Santa Monica CA 90403-5610

Valencia CA 91355-2008

09/17/2022
**Sponsor:** Santa Clarita ARC
**Date:** Sep 17 2022
**Time:** 8:00 AM (No Walk-ins / Register or Call ahead)
**Contact:** Ronald B. Klein
(661) 259-0948
**Email:** testing@w6jw.org
**VEC:** Greater LA VEC
**Location:** United Methodist Church of Valencia
25718 McBean Pkwy
Rm B
Valencia CA 91355-2008



## On Exam Day Bring the Following Items:

### 1. MANDATORY BEFORE THE EXAM

FCC Registration Number (FRN): Examinees are required by the FCC to submit your FRN with your license application form. New license applicants must create an FCC user account and register their Social Security Number (SSN) in the FCC Commission Registration System (**CORES**) before attending exam sessions. Registrants will be assigned an FRN which will be used in all license transactions with the FCC. For instructions on how to register your SSN and receive an FRN from the FCC, visit the CORES Registration page and the FCC's Registration instructions page. Per FCC rules, a valid **email address** is also **mandatory** on the application form to receive FCC correspondence, including the official copy of your Amateur Radio license

**2.** One legal photo ID (identification):

**a.** State Driver's License

**b.** Government issued Passport

**c.** Military or Law Enforcement Officer Photo ID card

**d.** Student School Photo ID card

**e.** State Photo ID card

**3.** If no photo ID is available, two forms of identification:

**a.** Non-photo State ID card (some states still have them)

**b.** Birth certificate (must have the appropriate seal)

**c.** Social security card

**d.** Employer's wage statement or Minor's work permit

**e.** School ID card

**f.** School or Public Library card

**g.** Utility bill, bank statement or other business correspondence that specifically names the person; or a postmarked envelope addressed to the person at his or her current mailing address as it appears on the Form 605.

**4.** Students/minors without a photo ID need to bring only one of the above items if a legal guardian presents their photo ID; otherwise two non-photo IDs are required. ARRL will cover the one-time FCC application fee for new license candidates younger than 18-years old for tests administered under the ARRL VEC program. Candidates younger than 18-years old would pay a reduced exam session fee of $5 to the ARRL VEC VE team at the time of the exam. *Minor children (under the age of 18) may be accompanied in the room by an adult during the test.*

**5.** If applicable, bring a printed copy of your Amateur Radio license or be able to show proof of the license in the official FCC database. Acceptable copies or printouts of licenses are available from the following sources: the official license or reference license printed from the FCC website or license data printed from the ARRL website or QRZ website. The original(s) and photocopy(s) of any Certificates of Successful Completion of Examination (CSCE) you may hold from previous exam sessions. If your license has already been issued by the FCC, the CSCE showing license credit is not needed. The candidate is require to show proof of the current license to the team but the team is no longer required to submit the proof to the VEC. Expired license proof must be submitted to the team and to the VEC for processing to FCC. These photocopies will not be returned.

**6.** Two number two pencils with erasers and a pen for in-person sessions.

**7.** A calculator with the memory erased and formulas cleared is allowed. You may not bring any written notes or calculations into the exam session. Slide rules and logarithmic tables are acceptable, as long as they're free of notes and formulas. Cell phone must be silenced or turned off during the exam session and the phones' calculator function may not be used. In addition, iPhones, iPads, Androids, smartphones, Blackberry devices and all similar electronic devices with a calculator capability, may NOT be used.

**8**. Bring a check, a money order or cash to cover the exam session fee(s)

**9**. Be aware that some information about you will be made publicly available on the FCC's website (FCC Licensee Privacy) including a felony conviction status. All applicants must answer the Basic Qualification Question (felony conviction status question) on the 605 Form at the exam session. Applicants that answer "YES" for the question must follow these FCC procedures: FCC qualification question instructions

## Convention and Hamfest Calendar

Convention and Hamfest Calendar

Steve Ewald, WV1X, sewald@arrl.org; www.arrl.org/hamfests-and-conventions-calendar

A = AUCTION
D = DEALERS / VENDORS
F = FLEA MARKET
H = HANDICAP ACCESS
Q = FIELD CHECKING OF QSL CARDS
R = REFRESHMENTS
S = SEMINARS / PRESENTATIONS
T = TAILGATING
V = VE SESSIONS

**Abbreviations**
*Spr* = Sponsor
*Tl* = Talk-in frequency
*Adm* = Admission

**Arizona (Payson) — Oct. 1 D H T V**
8 AM – 3 PM. *Spr:* Tonto ARA. Rumsey Park, Pavilion 5, 400 N. McLane Rd. *Tl:* 147.390 (100.0 Hz). *Adm:* Free. **www.n7tar.org**

**Arizona (Tucson) — Sept. 24 D F H Q R T**
7 AM – 11 AM. *Spr:* Radio Society of Tucson. Calvary Tucson Church, 8711 East Speedway Blvd. *Tl:* 145.370 (131.8 Hz). *Adm:* Free. **www.k7rst.org**

**California (Lincoln) — Sept. 17 F H R**
7 AM – noon. *Spr:* Western Placer ARC. McBean Park, 65 McBean Park Dr. *Tl:* 147.300 (67 Hz). *Adm:* Free. **www.wparc.us**

**Colorado (Longmont) — Oct. 2 F H R V**
8 AM – 1 PM. *Spr:* Boulder County ARC. Boulder County Fairgrounds, 9595 Nelson Rd. *Tl:* 146.70 (No tone). *Adm:* $5 (Under 12 free with paid adult).

**Connecticut (Newtown) — Sept. 11 D F H R S T V**
8 AM – 2 PM. *Spr:* Candlewood ARA. Police Athletic League, 35 Hayestown Rd. *Tl:* 147.300 (100 Hz). *Adm:* $7, $1 Discount with flyer. **www.cararadioclub.org**

### ARRL CONNECTICUT STATE CONVENTION
**October 9, North Haven, Connecticut**
**D F H R S T V**
8 AM – 2 PM. *Spr:* Meriden ARC. Best Western Hotel North Haven, 201 Washington Ave. *Tl:* 147.36 (162.2 Hz). *Adm:* $10. **www.nutmeghamfest.com**

**Connecticut (Windsor) — Sept. 17 F H V**
8 AM – 2 PM. *Spr:* The Amateur Radio Club of the Vintage Radio Communications Museum. The Vintage Radio and Communications Museum of Connecticut, 115 Pierson Ln. *Tl:* None. *Adm:* Free. **www.vrcmct.org**

### ARRL FLORIDA STATE CONVENTION
**October 7 – 8, Melbourne, Florida**
**D H Q R S T V**
Fri. 9 AM – 5 PM, Sat. 9 AM – 3 PM. *Spr:* Platinum Coast ARS. Melbourne Auditorium, 625 East Hibiscus Blvd. *Tl:* 146.85 (no tone). *Adm:* $10. **www.pcars.org**

**Illinois (Belvidere) — Sept. 25 D F H R T V**
8 AM – 3 PM. *Spr:* Chicago FM Club. Boone County Fairgrounds, 8791 IL-76. *Tl:* 146.760. *Adm:* $8 Advance, $10 door. **www.chicagofmclub.org**

### ARRL ILLINOIS STATE CONVENTION
**September 17 – 18, East Peoria, Illinois**
**D F H R S V**
Sat. 8 AM – 4 PM, Sun. 8 AM – 1 PM. *Spr:* Peoria Area ARC. East Peoria Event Center, 4200 E. Washington St. *Tl:* 147.075 (156.7 Hz). *Adm:* $7 Advance, $10 door. **www.w9uvi.org**

### 2022 W9DXCC CONVENTION
**September 16 – 17, Naperville, Illinois**
**D H Q R S**
8 AM – 5 PM. *Spr:* Northern Illinois DX Association. Chicago Marriott Naperville, 1801 Naper Blvd. *Tl:* None. *Adm:* $55 Advanced, $60 door. **www.w9dxcc.com**

**Iowa (Columbus Junction) — Oct. 2 D F H R S T V**
8 AM – 2 PM. *Spr:* Washington Area and Muscatine ARCs. Louisa Co. Fairgrounds, 101 Fairground Rd. *Tl:* 146.985 (192.8 Hz). *Adm:* $10. Email: **ec@muscatineares.org**

**Iowa (Sioux City) — Sept. 10 F H S V**
9 AM – 2 PM. *Spr:* Sooland ARA. Morningside Lutheran Church (lower gym), 700 So. Martha St. *Tl:* 146.91 (110.9 Hz). *Adm:* $5. **www.facebook.com/groups/591123127614974**

### ARRL KANSAS STATE CONVENTION
**October 1, Wichita, Kansas**
**D F H R S V**
8 AM – 1 PM. *Spr:* Valley Center ARC, Riverwalk Church of Christ, 225 N. Waco. *Tl:* 146.940 (103.5 Hz). *Adm:* $5. **www.vcarc.org**

**Kentucky (Lexington) — Oct. 8 D F H Q R S T V**
7 AM – 3 PM. *Spr:* Bluegrass ARS. Highlands Baptist Church, 2032 Parallel Rd. *Tl:* 146.760. *Adm:* $5 Advance, $6 door. **www.bluegrassars.org**

**Kentucky (Richmond) — Sept. 10 D F H R T V**
8 AM – 2 PM. *Spr:* Central Kentucky ARS. Madison County Fairgrounds, 3237 Old Irvine Rd. *Tl:* 145.370 (192.8 Hz). *Adm:* $8. **www.ckars.org/hamfest**

**Maine (Alexander) — Sept. 17 D F H R T V**
8 AM – noon. *Spr:* St. Croix Valley ARC. Alexander Elementary School, 1430 Airline Rd. *Tl:* 147.330 (Hz). *Adm:* $5. **http://stcroixvalleyamateurradioclub.com**

**Maryland (West Friendship) — Oct. 2 D F H R S T V**
6 AM – 3 PM. *Spr:* Columbia ARA. Howard County Fairgrounds, 221 Fairgrounds Rd. *Tl:* 147.390 (156.7 Hz). *Adm:* $10. **www.carafest.org**

**Michigan (Adrian) — Sept. 18 D F H R T V**
8 AM. *Spr:* Adrian ARC. Lenawee County Airport, 2651 W. Cadmus Rd. *Tl:* 145.37 (85.4 Hz). *Adm:* $5. **www.w8tqe.com**

**Michigan (Port Huron) — Aug. 28 F H Q R T**
8 AM – noon. *Spr:* Eastern Michigan ARC. Vantage Point, 5 Water St. *Tl:* 146.800 (100 Hz). *Adm:* Free. Email: **ac8w@arrl.net**

**Michigan (Shelby Township) — Sept. 17 D F**
8 AM – noon. *Spr:* GM ARC. Packard Proving Grounds, 49965 Van Dyke Ave. *Tl:* 443.075 (123 Hz). *Adm:* $5 per car. **www.gmarc.org**

**Minnesota (Lake Elmo) — Sept. 17 F H T**
8 AM – noon. *Spr:* Metro Area Repeater Association. Hewlwig Farm, 8247 27th St. North. *Tl:* 146.850 (no tone). *Adm:* Free. **http://wd0hwt.net**

**Minnesota (Plymouth) — Sept. 24 R T**
8 AM – 11:30 AM. *Spr:* Twin City FM Club. West Medicine Lake Community Center, 1705 Forestview Lane North. *Tl:* 146.76. (114.8 Hz). *Adm:* $5. **www.tcfmc.org**

**Minnesota (Rush City) — Sept. 10 F H R T**
8 AM – noon. *Spr:* East Central Minnesota ARC. Rush City High School, 51001 Fairfield Ave. *Tl:* 145.330 (146.2 Hz). *Adm:* Free. **www.qrz.com/db/K0ECM**



(Continued on next page)

## Convention and Hamfest Calendar (continued)

**Missouri (Joplin) — Sept. 30 – Oct. 1** D F H R V
Fri. 11 AM – 7 PM, Sat. 8 AM – 2 PM. *Spr:* Joplin ARC. ETG Event Center, N. Prosperity Ave. *Tl:* 147.210 (91.5 Hz). *Adm:* $8 Advance, $10 door. **www.joplinhamfest.org**

**New Jersey (Landing) — Oct. 1** D F H Q T
8 AM. *Spr:* Splitrock ARA. Landing Park Recreation Complex, 165 Landing Rd. *Tl:* 146.985 (131.8 Hz). *Adm:* $7. **www.splitrockara.org**

### ARRL SOUTHERN NEW JERSEY SECTION CONVENTION

**September 11, Mullica Hill, New Jersey**
D F H R S T V
8 AM – 1 PM. *Spr:* Gloucester County ARC. Gloucester County 4H Fairgrounds, 235 Bridgeton Pike (Rt 77). *Tl:* 147.180 (131.8 Hz). *Adm:* $10. **www.w2mmd.org**

**New Jersey (Spring Lake) — Sept. 17** D F H R T V
7 AM – 1 PM. *Spr:* Ocean Monmouth ARC. Spring Lake Heights Volunteer Fire Company Number One, 700 Sixth Ave. *Tl:* 145.110 (127.3 Hz). *Adm:* $5. **http://n2mo.org**

**New Jersey (Tinton Falls) — Sept. 24** D H Q R V
8 AM – noon; Rain date: Sept. 25. *Spr:* Garden State ARA. MOESC Parking Lot, 100 Tornillo Way. *Tl:* 147.045 (67 Hz). *Adm:* $5. **www.gsara.club**

**New Jersey (Township of Washington) — Oct. 8**
D F H Q R T V
8 AM – 1 PM. *Spr:* Bergen ARA. Westwood Regional Jr./Sr. High School, 701 Ridgewood Rd. *Tl:* 146.79 (141.3 Hz). *Adm:* $5; Free for non-ham family members. **www.bara.org**

**New York (Ballston Spa) — Sept. 11** D F H R S T V
7 AM – 2 PM. *Spr:* Saratoga County ARA. Saratoga County Fairgrounds, 162 Prospect St. *Tl:* 147.00 (91.5 Hz) and 147.24 (91.5 Hz). *Adm:* $6 Advance, $7 door. **www.k2dll.org**

**New York (Beacon) — Sept. 18** D F H R T V
8 AM. *Spr:* Mt. Beacon ARC. Slater Chemical Company Glenham Fire House, 76 Old Glenham Rd. *Tl:* 146.970 (100 Hz). *Adm:* $5. **www.wr2abb.org**

**New York (Henrietta) — Oct. 4 – 8** D F H S T
8 AM – 5 PM. *Spr:* Antique Wireless Association. Rochester Institute of Technology Inn and Conference Center, 5257 W. Henrietta Rd. *Tl:* None. *Adm:* $60 Advance, $65 door. **www.antiquewireless.org/homepage**

**New York (Horseheads) — Sept. 24** D F H R V
6 AM – 2 PM. *Spr:* Chemung County ARES and Amateur Radio Association of the Southern Tier. Chemung County Fairgrounds, Grand Central Ave. *Tl:* 146.700 (No tone) and 147.360 (no tone). *Adm:* $6 Advance, $8 door. **www.arast.info**

**North Carolina (Lexington) — Sept. 24** F T V
8 AM – noon. *Spr:* W4PAR Healing Springs Mountain VHF Society. Farmers Market Flea Market, 366 Livestock Market Rd. *Tl:* 146.910 (107.2 Hz). *Adm:* $5. **www.w4par.org**

**North Carolina (Winston-Salem) — Oct. 8** D F H R T
7:30 AM – 11:30 AM. *Spr:* Forsyth ARC. Robinhood Road Baptist Church, 5422 Robinhood Rd. *Tl:* 145.47 (100 Hz). *Adm:* $5. **www.w4nc.com**

### ARRL DAKOTA DIVISION CONVENTION

**September 24, West Fargo, North Dakota**
F H R S V
8 AM – 2 PM. *Spr:* Red River Radio Amateurs. Red River Fairgrounds, 1805 Main Ave. West. *Tl:* 145.350 (123 Hz) and 444.875 (123 Hz). *Adm:* $10. **www.rrra.org**

**Ohio (Berea) — Sept. 25** D F H Q S T V
8 AM – noon. *Spr:* Hamfest Association of Cleveland. Cuyahoga County Fairgrounds, 164 Eastland Rd. *Tl:* 145.410 (110.9 Hz) and 442.225 (131.8 Hz). *Adm:* $6. **www.hac.org**

**Ohio (Findlay) — Sept. 11** D F H R S T V
8 AM – 3 PM. *Spr:* Findlay Radio Club. Hancock County Fairgrounds, 1017 East Sandusky St. *Tl:* 147.150 (88.5 Hz). *Adm:* $10. **www.findlayradioclub.org**

**Ohio (Miamisburg) — Sept. 17** F T
8 AM – noon. *Spr:* Mound ARA. Mound Park, 900 Mound Rd. *Tl:* 147.195 (No tone). *Adm:* Free. **www.w8dyy.org**

**Oklahoma (Ponca City) — Sept. 17** F H R S T V
8 AM – 2 PM. *Spr:* Kay County ARC. VFW Post, 2821 E. Prospect Ave. *Tl:* 146.97 (88.5 Hz). *Adm:* $10 per vehicle. **www.kaycountyhams.com**

**Oregon (Redmond) — Oct. 1** D F H R S V
8 AM – 3 PM. *Spr:* High Desert Amateur Radio Group. Deschutes Co. Fairgrounds, 3800 SW Airport Way. *Tl:* 146.94 (162.2 Hz). *Adm:* $8 Advance, $10 door. **www.hidarg.org**

### PACIFIC NORTHWEST VHF SOCIETY CONFERENCE

**October 7– 8, Salem, Oregon**
H Q R S
Fri. 1 PM – 5 PM, Sat. 9 AM – 5 PM. *Spr:* Pacific NW VHF Society. Holiday Inn, 3301 Market Street NE. *Tl:* None. *Adm:* $65 Advance, $75 door. **http://pnwvhfs.org**

**Pennsylvania (Butler) — Sept. 11** D F H R V
8 AM – 3 PM. *Spr:* Butler County ARA. Unionville Fire Department, 102 Mahood Rd. *Tl:* 147.360 (131.8 Hz). *Adm:* $5. **http://w3udx.org**

**Pennsylvania (East Stroudsburg) — Sept. 18** D F H R T V
8 AM – 1 PM. *Spr:* Eastern Pennsylvania ARA. Moose Lodge 1336, 705 Stokes Mill Rd. *Tl:* 147.045 (131.8 Hz). *Adm:* $7. **www.qsl.net/n3is**

**Pennsylvania (New Holland) — Oct. 1** D F H R V
8 AM. *Spr:* Red Rose Repeater Association. Garden Spot Fire and Rescue, 339 East Main St. *Tl:* 147.015 (118.8 Hz). *Adm:* $5. **www.w3rrr.org**

### ARRL WASHINGTON STATE CONVENTION

**September 24, Spokane, Washington**
D H R S V
9 AM – 4 PM. *Spr:* Inland Empire VHF Club, KBARA, Northwest Tri-State ARO, Spokane DX Association, Palouse Hills ARC. University High School, 12420 E. 32 Ave. *Tl:* 147.38 (100 Hz). *Adm:* $5. Email: **treasurer@vhfclub.org**

### ARRL CENTRAL DIVISION CONVENTION

**September 23 – 24, Milwaukee, Wisconsin**
D Q R S V
8 AM – 1 PM. *Spr:* Ham Radio Outlet. Ham Radio Outlet, 5710 W. Good Hope Rd. *Tl:* 145.130 (127.3 Hz). *Adm:* Free. Email: **milwaukee@hamradio.com**

### ARRL ROCKY MOUNTAIN DIVISION CONVENTION

**October 7 – 9, Cheyenne, Wyoming**
D H Q R S V
Fri. 6 PM – 9 PM, Sat. 9 AM – 4 PM, Sun. 9 AM – 2 PM. *Spr:* Sweetwater Amateur Radio Club. Sweetwater Events Complex, 3320 Yellowstone Rd. *Tl:* 146.94 (100 Hz). *Adm:* $20 Advance, $25 door. **www.facebook.com/mysarc**

## ARRL News

(All photos and icons from ARRL.org or other specified sources).

October 1972

# A Look Back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## ARRL News (Continued)

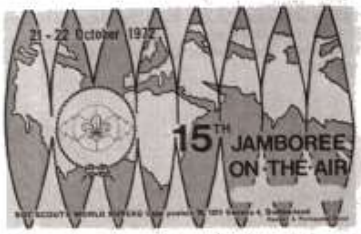


Left: 8J1WJ, 13th World Scout Jamboree, Japan, July 1971. Right: Francis S. G. Rose, G2DRT entertains the Chiltern Venture Scouts during JOTA at his station in High Wycombe, England.

# Ham Radio -- *Scout Style*

ONE OF THE MOST fertile recruiting grounds for amateur radio around the world is through the Scouting movement. Through displays at Jamborees (national and international encampments of Scouts held every few years), merit badge work, locally-organized exhibits at Scout-O-Ramas, and the annual Jamboree-On-The-Air, youngsters are introduced to the wonderful world of hamming. Here is an album of pictures, Ham Radio – Scout Style.

Advance word – there will be ham radio stations as part of the "Merit Badge Midway" at Jamboree East, Moraine State Park, Pennsylvania and Jamboree West, Farragut State Park, Idaho the first week in August, 1973. The National Jamboree Coordinator for Radio is Perry F. Williams, W1UED, 12 West District Road, Unionville, Connecticut 06085.




This year's QSL card issued by the World Scout Bureau, CP 78, 1211 Geneva 4, Switzerland.

VE3SHQ, the station of the National Headquarters Venturer Company, Boy Scouts of Canada.

K2BSA, National Headquarters BSA Amateur Radio Club, North Brunswick, New Jersey.



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## ARRL News (Continued)

October 1972

Harry Harchar, W2GND, former editor of *Boys' Life* magazine, offers the mike to a grinning Cub. ▶


QSL card of WO6BSA, a special events station for the Jamboree-On-The-Air at Placenta, California.

Left: Lloyd Alberga, 6Y5LA (right) introduces members of the Polio Rehabilitation Troop in Jamaica to amateur radio at 6Y5RA. Right: K3BSA, the Jamboree station at Valley Forge a few years ago.

Left: "Down Under" in Australia, there was fun and sun to go with JOTA activities. These are the Taraubal Scouts. Right: Even in the Persian Gulf, Cubs and hams get together for JOTA at MP4BS.

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## ARRL News (Continued)



▲ Atop a ten-story building, Scouts string up antennas for CR7IA in Mozambique.

When did it all start? Len Jarrett, HB9AMS, at the World Scout Bureau (itself licensed as HB9SI) sends record of XBS, issued to H. R. Phillips for the 1st Arundel Troop Boy Scouts in October 1912 – just sixty years ago this month! The pioneer English station used "accumulators" (batteries, to you W/Ks); maximum power was 50 watts on 200 meters; range 5 miles on transmit, 800 on receive; operating hours most Wednesday and Saturday afternoons; also licensed for portable apparatus to work to the main station within five miles!

WI9BSA, Fort Wayne, Indiana, with Paul De Mond, WA9WUC at the mike.


Explorer Post 160, Box 22, Mankato, Minnesota 56001 offers this award for working 25 amateurs in Scouting. Gary G. Hanson, WAØIEF is the advisor.

The 1972 Jamboree-On-The-Air will be October 21 and 22, midnight Friday to midnight Sunday, local time. Best chance of the year to interest youngsters in ham radio – get in touch with the Boy Scouts, either some you know or through the Boy Scout office listed in the telephone book, and invite the boys to visit your station during the time. It's a "conversation party" rather than a contest; no formal report is needed, but BSA Hq. would like to know who participated: address is National Headquarters ARC, BSA, North Brunswick New Jersey 08902. Gathering points on the air include: 3590, 3940, 7030, 7290, 14070, 14290, 21140, 21360, 28190, and 28990 kHz.


◀ Some Scouts at the Racal Amateur Radio Club, GB3RAC.

*QST* for



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## ARRL News (Continued)

# International Space Station Upgrades Amateur Radio Operations

ARISS, Amateur Radio on the International Space Station, announced that simultaneous operations of the ARISS voice repeater and digital APRS (Automatic Packet Reporting System) communications on the Space Station are now a reality.

NASA Astronaut Kjell Lindgren, KO5MOS, tweeted this photo of the ham radio station in the Columbus module, just before ARRL Field Day in June. https://tinyurl.com/2p9cr53f

Current ARISS operations include voice repeater transmissions with the JVC Kenwood TM-D710GA in the Columbus module and APRS operation from an identical radio in the Zvezda module. Packet operations are on 145.825 MHz.

The Columbus module radio uses the call sign NA1SS and the new radio in Zvezda uses RS0ISS. Aside from the call signs, the radios are identical, and packet operations are the same as before. You can use RS0ISS, ARISS, or APRSAT as the packet path. Both radios are expected to be running full time, except during educational contacts, extra vehicular activities (EVAs), and docking maneuvers. Final checkouts and equipment activation occurred on August 11.

ARISS International Chair Frank Bauer, KA3HDO, said, "Simultaneous operation of APRS and the voice repeater on ISS is transformative for ARISS. It represents a key element of our ARISS 2.0 initiative, providing interactive capabilities 24/7 that inspire, engage, and educate youth and lifelong learners -- especially lifelong learning in ham radio operations. Our heartfelt thanks to Sergey Samburov, RV3DR, for making this crucial ARISS 2.0 initiative become a reality."

Rosalie White, K1STO, one of two US delegates to ARISS, said the ham radio community will be very happy with the new radio operations from the ISS. "Hams really love doing ARISS packet, cross-band repeater, and Slow-Scan Television (SSTV) operations. Besides the thousands who download ARISS SSTV images downlinked from the ISS, we discovered that in a year's time, hams did 80,000 ARISS packet messages," she said. "We are not sure how many have been enjoying the ARISS cross band repeater, but we know it is a lot. This simultaneous operation capability is going to make many hams happy -- and we know that keeping hams on the air is good for ARRL and good for amateur radio," White added.

Operational status and expected downtimes of the ISS radios can be found at www.ariss.org/current-status-of-iss-stations.

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## ARRL News (Continued)

ARISS is a cooperative venture of international amateur radio societies and space agencies that support the ISS. In the US, sponsors are the Radio Amateur Satellite Corporation (AMSAT), ARRL The National Association for Amateur Radio®, and NASA's Space Communications and Navigation (SCaN) program. The primary goal of ARISS is to promote exploration of science, technology, engineering, arts, and mathematics topics. ARISS does this by organizing scheduled contacts via amateur radio between crew members aboard the ISS and students. Before and during these radio contacts, students, educators, parents, and communities take part in hands-on learning activities tied to space, space technologies, and amateur radio. For more information, see www.ariss.org and www.arrl.org/amateur-radio-on-the-international-space-station.



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## ARRL News (Continued)

Rick Palm, K1CE, k1ce@arrl.org

**Public Service**

# Radio Mounting Solutions for Efficient Station Interchangeability

I spend a lot of time in my personal emergency operations center (EOC) experimenting with station configuration, especially mounting radios and peripherals for ease of removal and transfer to mobile and portable platforms for deployment exercises, events, and incidents. Early on in my career I employed the traditional station setup: a large, heavy oak desk with a radio, a tuner, a wattmeter, and a power supply positioned to the rear of the desk, which was pushed up against the wall. In order to transport my gear for mobile and portable operations, I needed to revise this setup.

### Updating to a Portable Setup

The first step of evolving this standard arrangement involved moving the desk away from the wall so I could easily access my coax, power cables, and connectors. Next, I removed the desk altogether by screwing my radios and peripherals onto their mounting brackets and bolting them to shelves on mini scaffolding (this process is discussed in the March 2017 "Public Service" column). The steel scaffolding frame had large wheels for easy maneuverability; if I needed to access the radio's rear panel connections, I could roll the entire unit away from the wall. Steel shelves provided secure platforms for my equipment. For portable operation at an exercise deployment, I could remove the radios and peripherals from their mounts, secure them in military-grade Pelican™ cases, remove the shelving, fold up the scaffolding, and put it all in my vehicle for transportation to the exercise site. Setting up at the site was quick and easy.

### Trying Out Boxes for Gear

This system didn't lend itself to quick installation and mobile operation in my vehicle. It also lacked a professional appearance — a factor that should be considered for deployments to a large county or state EOC with professional emergency managers and personnel observing. I decided to experiment with mounting my radios and peripherals in audio equipment boxes, such as aluminum and plastic rack mount system boxes (often used by musicians for protecting and transporting delicate electronics).

I experimented with a deluxe version first — the iPortable Pro2 Equipment Rack System 6UM box from DX Engineering ($375). The box easily accommodated my HF radio, an Icom IC-7300, and a Yaesu 80 W VHF FM radio. I reviewed the box in *QST*'s October 2021 "Product Review," and described it as "a portable, medium-duty hard shell case that includes two 12-inch-wide shelves for mounting transceivers, power supplies, digital mode interfaces, or other gear." I also

My radio in its equipment box with the Astron Corporation SRM-50M rack mount switching and metered power supply, secured in the plywood frame in the back of my car. The unit is connected to antennas and a LiFePO battery. [Rick Palm, K1CE, photo]



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## ARRL News (Continued)

explained that "It includes panels on each side of the shelves for speakers and external power and antenna connections. The outer dimensions of the box are 12 × 22 × 18 inches (height, width, depth), and it weighs about 19 pounds." The case comes with back and front covers that are deep enough to provide some extra room for radio knobs, muffin fans, or connections, and a zippered nylon mesh pocket attached to the inside of the back cover that can hold cables and radio operating manuals. The covers are secured with sturdy latches. The built-in speakers, power wiring, and antenna connections eliminate the need to search for cables and make it a breeze to get a station up and running in the field. I operated Field Day last year at an EOC and noticed emergency management staffers using these boxes with radios for deployment to local American Red Cross shelters.

### A Less Expensive Alternative

Although I liked the iPortable Pro2 unit for its superior utility, I searched online for similar solutions that were less expensive. I found the PA DJ 6RU Equipment Rack Mount Flight Storage Case on eBay for $129, and I decided to purchase two — one for my HF system, and one for my VHF radio setup. It's basically the same box as the iPortable Pro2, but without the extras (speakers, coax, Powerpole® connectors, etc). The case is constructed of ABS plastic (an affordable plastic that's resistant to strong impacts and corrosive chemicals) and aluminum. Other specifications include: integrated front and back industry-standard 19-inch rails, industrial-quality butterfly latches, an internal depth of 16½ inches without lids and 22 inches with lids, and gasket-sealed lids for protection against dust and moisture. The empty box weighs 16 pounds.

### Best Practices for My Station

The best practice for my HF system turned out to be mounting my IC-7300 on a tray and screwing it into the rack mount rails. Below it, I mounted my new Astron Corporation SRM-50M rack mount switching and metered power supply, which weighs 7 pounds, making it much lighter than my older linear Astron Corporation RM-35M, which is almost 40 pounds.

For my fixed (home) station application, I placed the equipment box on scaffolding in front of my small (but readily transportable) operating stand and connected my antenna coax and dc power cable. If I want to operate my system in a mobile application, I simply disconnect the cables, pick up the box, and place it in the plywood frame I constructed on top of the spare tire well in the back of my hatchback car (see the photo). I connect the radio to my mag-mount roof antenna or field-expedient wire antenna and a lightweight lithium iron phosphate (LiFePO) 13.8 V, 50 AH battery via Powerpole connectors.

I can easily bring my station to a public event, exercise, or disaster site and set it up quickly in the field. If I need to move my system into an American Red Cross shelter, for example, I disconnect the cables, lift the supply box out of its frame in my car, place it on a table inside the shelter, and connect it to the shelter's fixed antenna and power cables. This allows me to be ready to communicate shelter population data and food and clothing requisitions to an American Red Cross warehouse or regional headquarters, as requested.

I have participated in countless Field Day and exercise events over the years, and it still amazes me to see operators transporting their expensive radios and other gear in old cardboard cartons. You can get professional quality and higher utility and efficiency by purchasing audio flight storage cases for a minimal price.

## Field Organization Reports

### June 2022

### Public Service Honor Roll

This listing recognizes radio amateurs whose public service performance during the month indicated 70 or more points in six categories. Details on the program can be found at www.arrl.org/public-service-honor-roll.

750 W0PZD
535 WA3EZN
490 N9VC
440 N4DNA
420 W7EES
393 W7PAT
350 KE6BYC
310 KK6GXG
280 AC0KQ
276 N3KRX
268 K2KNB
265 KE8DON
260 W9RY
256 KC8YVF
255 WA2CCN KT2D
250 KD8UUB
235 KK4PUX
230 ND8W
225 N2LC N1PZP
215 N2RQ
210 N5MKY KD2NMG
206 AD8CM
205 KB8PGW
201 WB2ZEX
191 KV6Z
188 KD2GXL
185 AI9F WM5N
183 KD8T
180 WX2DX N4CNX
175 N8SY
173 WV5Q
170 KF0BPN W2PH NW3X K0RCJ
160 KK3F
158 WO2H
155 W8DJG
151 W9GRG
149 KB8PGY
145 N0IW KY2MMM
140 W2PAX WB9QPM K9LGU WB9WKO KB3YRJ K4IWW
138 WB1M
135 ND3L KE4RS KC8PBU AC8NP W3YVQ
134 N2DW
130 WA3QLW WA1URS KD8ZCM WK4WC N2JBA KW1U N1UMJ
129 KT4WX
128 KB8RCR
125 KC3MAL
120 W4CMH KA9MZJ WC4FSU AG8G K7OED K3FAZ K3JL WA4VGZ K8MDA AA3N W3GWM KY2D W3CJD
119 KM8V
117 WB8YYS
115 KD4QL W9WMC WD8USA W2OOD
113 W1KX
110 KD4KUS KC9FXE K6HTN WB8TQZ KC8WH KL7RF N3SW KB2QO W2AH N1IQI W1RVY KB2YAA W2ZX0N K1UAF
107 K1HEJ
105 NX9K AA7BM
102 KB1TCE
100 K2WAV KZ8O WB4RJW KE4DRF K3YAK KA2GQQ KA2HZP AK2Z KD2PQP WA1MXT KC9UC KN8P N4ZM K8ED WB8SIQ AC8RV KB8GUN AA3SB N1LAH
99 K1CFI
96 N3JET
95 K8RDN K1XFC
93 W7PHX
92 KT8EM KD2TDG N2TSO
91 W4TTO
90 KR4PI AD4DO KM4WHO KD8HHN KB9GO K5OB K8KRA N8MRA KB8HJJ W4KX K2MTJ K2SCH KC1KVY
87 KB3IN KB8DTI
85 KB1NMO WA1LPM KA0DBK
84 KF7GC
83 N6IET
82 WB8R
81 K2EAG K2VTT KR2HWK
80 KR4ST W9GSR W4EDN
79 AJ7B W5XX
78 W7FSC
77 W4CAC WA3FIR KC1HHO
76 WB6NCT WB3FTQ
75 K4FHR KD2CBV
74 W3ZR WB2VUF
73 KD2LPM KD2VZA
71 K6RAU KN4AAG N3ARB
70 KA1G

The following stations qualified for PSHR in May, but were not acknowledged in this column last month: K0RCJ 165, WA3QLW 150, KF0BPN 140, W7VQ, AC0KQ 130, NA7G, N7IE, K0NWV 120, WS4P 110, KB8DTI 77, N7UWX 76.

### Section Traffic Manager Reports

The following Section Traffic Managers reported: AK, AR, AZ, CO, CT, EMA, ENY, EPA, GA, IL, IN, KS, KY, LA, MDC, ME, MI, MO, MS, ND, NE, NFL, NH, NLI, NM, NNJ, NV, OH, OR, SFL, SJV, TN, VA, WCF, WI, WMA, WNY, WPA, WV, WWA, WY.

### Section Emergency Coordinator Reports

The following Section Emergency Coordinators reported: AR, ENY, EPA, EWA, GA, IN, MDC, ME, MI, MO, MS, MT, ND, NFL, NLI, NM, NNJ, NNY, NV, PAC, SCV, SDG, SNJ, STX, TN, VA, VI, WCF, WPA, WTX, WWA, WY.

### Brass Pounders League

The BPL is open to all amateurs in the US, Canada, and US possessions who report to their SMs a total of 500 or more points or a sum of 100 or more origination and delivery points for any calendar month. Messages must be handled on amateur radio frequencies within 48 hours of receipt in standard ARRL radiogram format. Call signs of qualifiers and their monthly BPL total points follow.

KY2D 2,651, NX9K 1,607, K3F 1,457, K6HTN 966, WB8WKO 787, KW1U 777, N9CK 568, AG9G 525.



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## ARRL News (Continued)

John Ross, KD8IDJ, kd8idj@arrl.net

### Happenings

# FCC Legacy CORES System to Be Retired

The FCC retired the legacy version of its COmmission REgistration System (CORES) on July 15, 2022. CORES is the FCC's public-facing database that enables and tracks certain types of FCC and FCC applicant actions, including amateur radio applications and licenses. Its implementation has enabled routine amateur applications and licenses to be issued overnight instead of over weeks, as was the case with earlier methods. ARRL The National Association for Amateur Radio® advises the amateur radio community to transition to the updated version of CORES as soon as possible.

In essence, CORES is designed to identify those who hold certain types of FCC licenses and FCC authorizations, including amateur licenses, and organize them in an easily accessible manner under a common FCC Registration Number (FRN) regardless of whether one holds a single such authority or thousands. The new CORES, in addition to assigning individual FRNs, allows holders of multiple FRNs to aggregate them under a single account where the licenses and authorization, fees and payments, and related actions can be administered from within the same account.

The updated version of CORES has been available since 2016, and now its use will be mandatory for all amateur licensees when submitting amateur-related applications.

As of July 15, 2022, the legacy CORES website redirects users to the Commission's updated CORES site. Although some functionalities in the old system will continue to work for a short time, the FCC has urged all users to transition to the updated CORES system to take advantage of its enhanced security and functionality.

Licensees that do not already have an FCC CORES Username Account must create one with a unique username (a valid email address) and password. After creating the account, when logged in, users should associate their existing FRN or FRNs with this account. Instructions for doing so are on the **FCC REGISTRATION HELP** page. One's FRN is printed on all current amateur applications and licenses, and will not change. FRNs can also be found by looking up one's call sign in the Commission's ULS (visit **wireless2.fcc.gov/UlsApp/UlsSearch/searchLicense.jsp**) or by using the FCC's **ADVANCED SEARCH** page.

The FCC has posted tutorial videos to assist with the transition. ARRL VEC Manager Maria Somma, AB1FM, recommends viewing the videos "Getting Started With the New CORES," which explains how to register for a CORES Username Account, and "Associating an FRN to a Username," which instructs Legacy CORES users on how to link one or more existing FRNs to a username. FCC CORES registration instructions can also be found on the ARRL website.

Additional information can be found on the FCC website (**www.fcc.gov/licensing-databases/commission-registration-system-fcc**) or by calling FCC Licensing Support Services at 877-480-3201.


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## ARRL News (Continued)

Mike Walters, WBZY, mwalters@arrl.org

### Club Station

# Rebuilding an Amateur Radio Club for the Future

*The York County Amateur Radio Society (YCARS) is the oldest continuously operating amateur radio club in South Carolina. When the club's Trustee, John P. Gendron, NJ4Z, joined in 2016, YCARS was in financial trouble, was inactive, and had 36 members. In this month's column, John shares the victories and challenges that YCARS encountered while rebuilding itself into a successful, active club.*

In 2016, YCARS had a deteriorating facility, a lack of engagement and recruitment, and outdated technological infrastructures, among other challenges. In 2017, some members decided to try to save the club by building something that would be well-poised for the next generation of members.

This effort has played out over the last 4 years. YCARS now has 112 members, an upgraded facility, and an active membership, and it is in a sound financial position. It averages annual membership growth of 20%, with an ever-increasing level of membership satisfaction. YCARS also boasts a 95% member retention rate.

It may be challenging to know where to start when rebuilding a club. Here are a few ways that YCARS has been successful in doing so.

## Phase One: Change the Culture

Having a welcoming environment and allowing members and guests to feel like their opinions and ideas are valued will be transformative for your club. But change doesn't just happen; there must be a realization that it's needed, and a willingness to make changes.

No matter what position you hold in a club, if you want to make a change, you must lead by example. Darcy Pach, K4DQP, and I began greeting everyone at the door during meetings. It didn't matter if they had been a member for 50 years or were a first-time visitor. This simple act created a welcoming environment and set an example for others. Soon everyone was greeting each other without needing us to stand by the door.

At one of YCARS's open houses, members worked together to build pneumatic antenna launchers. [John Gendron, NJ4Z, photo]

### Get Active

The purpose of joining a club is to learn and to engage in fellowship. The club must "live amateur radio" to be engaging and provide value for its membership.

YCARS started by reclaiming its radio room — a storage area with outdated and barely functional equipment. Five members cleared out the room, brought in their own gear, and began using the radio room and its antennas. Club members were then invited to our Operating and Hobby Fun Night. It was so successful that open house events like this have become a weekly occurrence.

### Establish Servant Leadership

Leadership must earn credibility and gain members' trust in order to make changes. Servant leadership is an efficient way to achieve both. This type of leadership puts members' needs first, by sharing power and helping people perform at an elevated level.

First, YCARS had to draft a new constitution and bylaws to improve operational procedures. Of all the changes made, this was the most challenging, as many long-standing members didn't understand that change was necessary so that the club could work in a manner that ensured its survival, preserved its legacy, and allowed it to obtain a charity status. After much debate and a lengthy amendment process, the new constitution was adopted and the club obtained its 501(c)(3) status. These changes made it possible for YCARS to solicit and receive donations, helping to relieve financial stress.



(Continued on next page)

## ARRL News (Continued)

Through a servant leadership model, YCARS embraced a new leadership hierarchy. Along with the traditional officers and directors, a committee and team structure were created so that officers could share power with membership. This added accountability, transparency, and engagement, and it supplied a voice for membership. Additionally, it gave leadership the ability to mentor younger club members in an effort to help them become the next leaders, which is paramount to ensuring the club's success.

This new structure also distributed the efforts of running the club among the members, allowing leadership to continue strategic planning for the club's growth. Committees were created to oversee the clubhouse and radio room, technology, community service, communications, fundraising, as well as membership wellness, happiness, and inclusion.

### Phase Two: Focus on Membership

Once the foundation was laid, we began to experience solid membership growth and satisfaction, and the operational and financial challenges were less daunting. To sustain this growth, YCARS needed to focus on its membership.

#### Engage Your Members

YCARS created a Wellness, Happiness, and Inclusion (WHI) Committee that was charged with increasing membership satisfaction and participation. This committee reviews membership every quarter to find better ways to serve members, so YCARS doesn't miss out on an opportunity to improve.

Promoting amateur radio while serving the community is a great membership engagement tool. YCARS's Community Service Committee and Amateur Radio Emergency Service® (ARES®) team engages with other charitable organizations and local emergency management and police departments to serve the community. We created various programs to give communications assistance at local public service events and to offer non-radio community service. These service programs also help expose the benefits of amateur radio to our community.

The WHI Committee and Volunteer Examiner (VE) team hold license classes and testing sessions. At each test session, an officer welcomes attendees, shares a summary of club benefits, and offers a tour of the facility. We also prioritize getting new licensees on the air by way of our mentoring program. After every other VE test session, we hold an open mentoring session. We also leverage programs like Parks on the Air® (POTA) through regular activations.

We've started a help desk, where a team fields operating questions and matches the inquirer with a member who's a subject-matter expert. They also coordinate site surveys to determine the best antenna for a particular location and help with setting up various pieces of equipment.

One member's generous donation allowed us to establish an antenna scholarship program that supplies materials and guidance to new hams for building a wire antenna that fits their needs. YCARS also promotes amateur radio to youth and offers training for the Boy Scouts of America Radio merit badge, and works with Girl Scouts of the USA to combine POTA and the Girl Scouts Love State Parks program.

#### Embrace Technology and Social Media

YCARS leadership and the WHI Committee recognized a need for engaging older members, such as those who don't like to drive at night. In 2019, through a generous donation from Microsoft®, we received the Office 365™ suite of products.

YCARS adopted Microsoft Teams as a platform for virtual meetings. This decision paid huge dividends during COVID-19. All meetings and presentations are hybrid, allowing hams from outside our local area to join YCARS. We now have members in North and South Carolina, Florida, and Iowa. Meeting virtually has also allowed the club to interact with ham experts worldwide.

In a world where computers and the internet are a part of everyday life, an active social media presence was necessary for club promotion, sharing our activities, and attracting a new generation of hams. YCARS has an active presence on Facebook and Instagram, and we have a YouTube channel for sharing presentations and knowledge.

YCARS has also rebranded itself by way of a new logo and public website. The public website is a dynamic source of club information and activities, and the members-only website allows members to collaborate and communicate.

### The Future for YCARS

Current YCARS President, Steve Czaikowski, W3SPC, says, "YCARS needs to perform like the radio club we want to be, not the club we are now." This challenge drives us to constantly improve our club and amateur radio for the next generation.

YCARS officers, committee chairs, and team leaders stand ready to help other clubs achieve the success we've had. Please feel free to reach out to us via email at **ycars@ycars.org**, or via postal mail at YCARS, P.O. Box 4141 CRS, Rock Hill, SC 29732.

#### Write for "Club Station"

*QST*'s "Club Station" column is a designated space for clubs to share specific and practical ideas about what has contributed to their success, in the hope that the information will help other clubs grow and thrive. Visit **www.arrl.org/qst-club-station-guidelines-and-profile-form** for more information, including author guidelines and a Club Profile Form (this form is required in order for "Club Station" submissions to be considered complete).



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## ARRL News (Continued)

# Dual-Band Sloper for 60 and 17 Meters

An abridged half-sloper antenna that can help fulfill the needs of hams with space limitations.

**Patrick Brannick, N2BZD**

Operating HF from my suburban lot requires some creativity. I reside in Wall Township, New Jersey, and my local codes don't allow for antennas — or their free-standing supports — to exceed 21 feet. And should an antenna fall, it must be completely contained within the boundaries of my property. My wife, Maura Grady, KC2VKN, and I have been operating within these local regulations with a 40-, 30-, 20-, 15-, and 10-meter multiband vertical. As we were interested in adding additional HF bands, Maura suggested using a tree in the center of our property as a potential support for another antenna.

## Research and Design

In our research, we read two *QST* articles: "A Reduced-Size Half Sloper for 160 Meters" by Don Kirk, WD8DSB, from the March 1998 issue, and "The Half Sloper — Successful Deployment is an Enigma" by John Belrose, VE2CV, from the May 1980 issue. Both articles discussed restricted-space antennas and suggested a half sloper that's reduced in size, where one leg is ⅛ wavelength, and a counterpoise is attached on the shield side of the coax. Unfortunately, the height requirements precluded operation on 160 and 80 meters. However, it appeared that a reduced-size half sloper for 60 meters was a viable option.

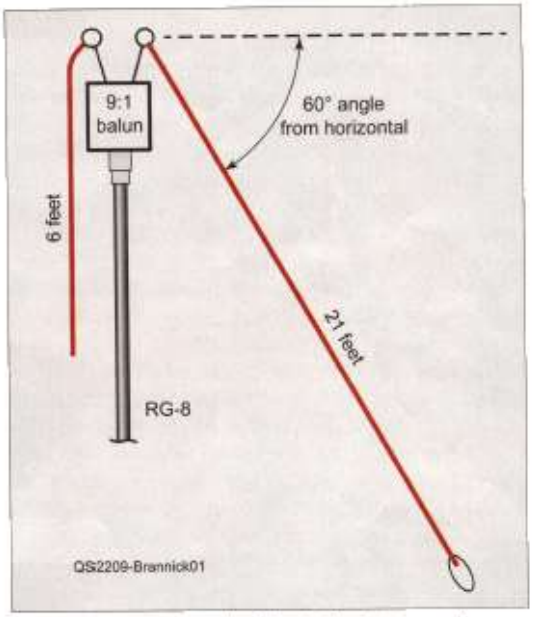


**Figure 1** — Assembly details of the dual-band sloper antenna for 60 and 17 meters. This figure is not to scale.

A ⅛-wavelength antenna cut for the lowest 60-meter frequency of 5.332 MHz is 21 feet and 11 inches. Because of my space constraints, I was only able to use a 6-foot counterpoise. Normally, a reduced-size half sloper requires inductive loading (inserting a loading coil in series with the antenna), as it is a shortened antenna. Without inductive loading, the antenna has a high impedance due to its capacitive reactance. Further, this antenna

**Table 1 — 60-Meter SWR, Impedance, Resistance, and Reactance**

| Channel | Frequency (MHz) | SWR | Impedance Ω | Resistance Ω | Reactance Ω |
|---|---|---|---|---|---|
| 1 | 5.332 | 2.6 | 55.0 | 37.5 | 40.2 |
| 2 | 5.348 | 2.5 | 56.4 | 39.6 | 40.1 |
| 3 | 5.358 | 2.4 | 58.2 | 41.7 | 40.7 |
| 4 | 5.373 | 2.3 | 59.2 | 43.7 | 39.9 |
| 5 | 5.405 | 2.1 | 63.0 | 49.5 | 38.9 |



(Continued on next page)

## ARRL News (Continued)

**Table 2 — 17-Meter Reverse Beacon Network (RBN) Reports**

Date: October 7, 2018, 1728Z; SSN: 0, SFI: 69, A: 6, K: 4; Frequency: 18.075 MHz; Speed: 18 WPM; TX Location: Wall Township, New Jersey; Transceiver: Elecraft K3S; Power: 75 W, setting on K3

| Call Sign | Frequency (MHz) | Signal-to-Noise Ratio |
|---|---|---|
| VE6WZ | 18.0753 | 24 dB |
| AE4PM | 18.0750 | 2 dB |
| AC0C | 18.0751 | 36 dB |
| OH6BG | 18.0751 | 7 dB |
| N5RZ | 18.0750 | 14 dB |
| VE6NZ | 18.0753 | 25 dB |
| PJ2A | 18.0749 | 16 dB |
| WA7LNW | 18.0750 | 6 dB |

is unbalanced. I used a 1:9 commercially built balun at the feed point for matching and reducing common-mode current. This resulted in a worst-case scenario of a 60-meter SWR of 2.6:1. Surprisingly, I found that this configuration also resulted in a 17-meter, full-band SWR of 3.3:1. The automatic antenna tuners found in modern radios should easily handle these mismatches.

The antenna specifics are detailed in Figure 1. To tune the antenna, start with a leg that's 22 feet long. Then trim the length 1 inch at a time while checking for the lowest SWR across 60 and 17 meters. Table 1 shows the SWR, impedance, resistance, and reactance for the 60-meter band. As you can see, the 60-meter SWR varies from 2.1:1 to 2.6:1.

### Operating Results

This is when the fun began. While operating on 60 meters, we netted 5 x 9 SSB contacts with hams located in Westport, Connecticut (70 miles northeast of us), and in Mount Laurel, New Jersey (about 45 miles southwest). At a peak height of 14 feet, the sloper was working as well as a near vertical incidence skywave (NVIS) antenna would on this band.

On 17 meters, we operated CW with 75 W output power and yielded a cluster of skimmer stations on the Reverse Beacon Network (RBN) from Finland to Alberta, Canada (see Table 2). The RBN seemed to confirm my suspicion that a tree trunk was blocking the long leg of the antenna to the southeast, resulting in some directivity to the north and northwest.

The design methodology for this antenna involved a review of literature on slopers, a simple calculation of a ½-wavelength wire length, and building and testing the antenna. And while I used a commercial 1:9 balun (available from numerous suppliers), an internet search will yield plenty of construction articles, should you wish to build your own. The successful end result was that I've added two more HF bands to my station.

Patrick Brannick, N2BZD, was first licensed in 1979 and holds an Amateur Extra-class license. He obtained his Bachelor of Science in Electrical Engineering from Monmouth College, and a Master of Science in Computer Science from Monmouth University. For 20 years, Brannick worked as an electronics engineer for the US Army and US Navy, mostly in radar system development and testing. Prior to that, he worked in the process control industry and spent a few years as a high school science teacher. Brannick is mostly a CW operator and has earned a DXCC CW award. He can be reached at **pbrannick@gmail.com**.

**For updates to this article, see the *QST* Feedback page at www.arrl.org/feedback.**


## Feedback

In the March 2022 issue, "Product Review" referred to the potential dangers of owning a "Paraset" radio during World War II. The suffering perpetrated by Nazi Germany is a serious matter. *QST* apologizes for printing a remark that was insensitive to that suffering. The offending language has been removed from the digital edition of the March 2022 issue.





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## ARRL News (Continued)

# 2022 Simulated Emergency Test

Practice your emergency readiness on October 1 – 2, 2022.

**Steve Ewald, WV1X**

The basis and purpose of the Amateur Radio Service, according to Part 97 of the Electronic Code of Federal Regulations (eCFR), is "Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications."

With this in mind, the annual nationwide ARRL Simulated Emergency Test (SET), scheduled for October 1 – 2, 2022, invites you and the radio amateurs in your ARRL Section to learn how to properly check equipment and practice operating skills during a simulated emergency exercise.

As part of their 2021 SET, Carlton County ARES/RACES (Minnesota) established this portable amateur radio station outside the Scanlon Community Center and fire station. This location would likely serve as an emergency shelter. The trailer is owned by Cliff Tanner, ACØFO, and it houses HF and VHF/UHF radios powered by a generator and batteries. [John Cavanaugh, KCØAFE, photo]

### ARRL and Partner Organizations

ARRL Field Organization, Amateur Radio Emergency Service® (ARES®), National Traffic System (NTS), and Radio Amateur Civil Emergency Service (RACES) leaders and participants, along with traffic (message) handlers, are among many radio amateurs and organizations who are active in public service and emergency communications. The SET is an opportunity to fine-tune emergency preparations and put ongoing practice to the test under simulated emergency conditions.

ARRL has formal relationships with several national organizations — including the American Red Cross, the National Weather Service (NWS), the Federal Emergency Management Agency (FEMA), and the Salvation Army — with whom ARES members and other radio amateurs work closely when emergencies occur. This year, we are offering bonus points for cooperation with Army MARS stations, and for sharing information between MARS and amateur radio stations. Visit **www.arrl.org/served-agencies-and-partners** for more information.

National Preparedness Month is recognized each September to encourage everyone to be ready for emergencies and disasters. The US Department of Homeland Security (DHS) partners with several organizations to help promote the importance of year-round preparedness. This fall's ARRL SET is a demonstration of amateur radio's commitment to serve the public. More information on National Preparedness Month can be found at **www.ready.gov**.

### Ready, SET, Go!

ARRL Field Organization leaders may conduct their local or Section-wide SET at a time other than the weekend of October 1 – 2 to avoid schedule conflicts and allow for maximum participation. Exercises should be held no later than the end of the fall season or the calendar year.

Contact your local ARRL Emergency Coordinator or Net Manager to learn how you can get involved. Local clubs and your Section Manager may also assist in referring you to times and frequencies of the nearest ARES or NTS nets. The ARRL Section web pages present Section contact information at **www.arrl.org/groups/sections**.

Guidelines for the exercise and 2022 SET reporting forms for ARRL Section and Field Organization leaders can be found on the ARRL website at **www.arrl.org/public-service-field-services-forms**.



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## ARRL News (Continued)

Jon Jones, NØJK, n0jk@arrl.org

### The World Above 50 MHz

# Planetary K Index Follow-Up and Rare Grid Openings

In "The World Above 50 MHz" column in the July 2022 issue of *QST*, Jon Jones, NØJK, mentioned that the 6-meter opening of April 14 was via the F2 region due to a spike in the planetary K (Kp) index to 6 as a result of a geomagnetic storm. He also commented that the 10.7-centimeter solar flux was only 99 on the same date.

Normally, one would expect F2 region propagation on 6 meters only when the 10.7-centimeter solar flux was above 200 or so. But we must remember that radiation from the sun is not the only parameter that can cause variability in the F2 region. Geomagnetic field activity and events at ground level and in the lower atmosphere can modify the amount of ionization in the F2 region. Thus, the April 14 10.7-centimeter solar flux may not be telling us what the ionosphere was really doing.

NØJK believed the F2 propagation was the result of a geomagnetic storm, so let's look at the Kp indices for April 12 – April 15 (see Figure 1). When the Kp indices are 5 or greater, the Earth's magnetic field is likely to be disturbed. In turn, the F2 region is usually affected negatively, but sometimes there can be a short-term positive enhancement.

Now let's note how those spikes in the Kp index on April 14 affected the F2 region (see Figure 2). The graph shows the maximum usable frequency (MUF) over the ionosonde at Boulder, Colorado (40° North latitude) — assuming Boulder is the midpoint of a 4,000-kilometer hop. On April 12 and 13, the F2 region MUF for a 4,000-kilometer path — with Boulder at the midpoint — was only around 35 MHz. But on April 14, the spikes in the Kp index provided a short-term enhancement in the F2 region MUF to above 50 MHz from about 1930 – 2050 UTC.

I also looked at the F2 region MUF over the Austin, Texas, ionosonde (30° North latitude) and over the Eglin Air Force Base, Florida, ionosonde (31° North latitude). Both showed a short-term enhancement similar to Boulder. I finally consulted data from the Alpena, Michigan, ionosonde (45° North latitude) and the Millstone Hill Geospace Facility, Massachusetts, ionosonde (43° North latitude), and they did not show any F2 region enhancements. In general, F2 region enhancements due to geomagnetic storms are most often seen at the lower latitudes.

The takeaway is to keep an eye on the K index. If you see a moderate spike, the 10.7-centimeter solar flux may not be telling you what's really going on. And you may want to check 6 meters (or 10 meters) for a short-term positive enhancement in the F2 region from the geomagnetic storm that caused the spike. This may also be the link to trans-equatorial propagation (TEP) if you're far north of the Caribbean.

— *Carl Luetzelschwab, K9LA*

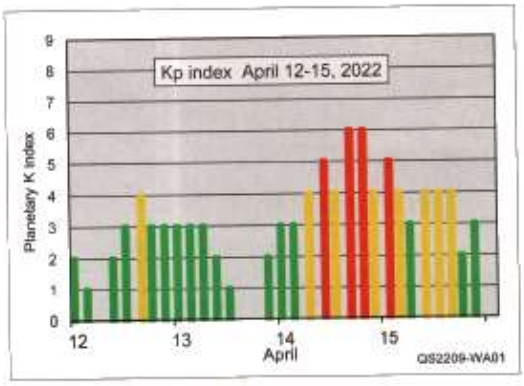


**Figure 1** — Kp indices for April 12 – 15, 2022.

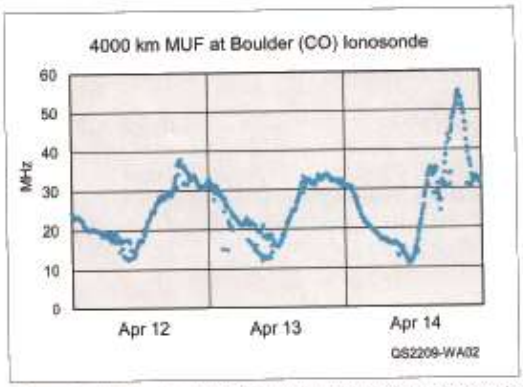


**Figure 2** — Maximum usable frequency (MUF) over the ionosonde at Boulder, Colorado, for April 12 – 14, 2022.



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## ARRL News (Continued)

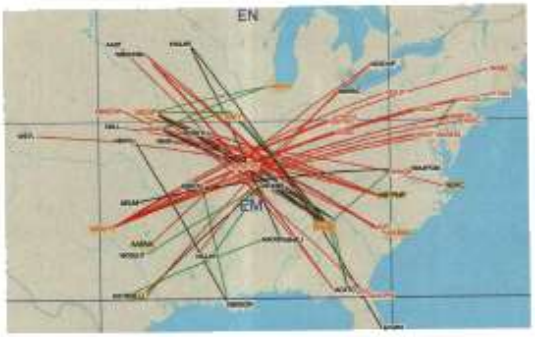


**Figure 3** — 2-meter E-skip during Sunday evening of the 2022 ARRL June VHF contest. [**www.dxmaps.com**]

### F2 50 MHz Openings in Fall 2022

Solar Cycle 25 continues to grow stronger. With seasonal changes in the ionosphere, F2 propagation with higher solar fluxes may be possible for North American stations in September and October on 6 meters. Carl, K9LA, has provided a detailed analysis of the April 14, 2022, F2 opening to Ecuador from North America, with clues as to how such openings occur. Similar openings are likely to take place again this fall, most often during periods of disturbed geomagnetic conditions or storms.

### 2-Meter and 1.25-Meter E-Skip in the ARRL June VHF Contest

Strong and extensive sporadic E occurred on 2 meters on the Sunday evening of the ARRL June VHF Contest (see Figure 3). Jim, AAØMZ (EM29), first worked stations in VE3, then in VE4 when he logged VE4CY and VE4MA, followed by W4. With 10 W and a small Yagi, I (NØJK EM28) was able to log eight stations on 2-meter sporadic E on 144 – 174 MHz FT8.

Not all of the action was on FT8. From North Carolina, Lauren Libby, WØLD (FM05), found Larry Lambert, NØLL (EM09), and several stations in EM29, EM39, and EN10 on SSB. John Lock, KFØM (EM17), noted strong $E_s$ to VE3, VE4, and W4, in addition to finding a loud K5QE (EM31) on Tropo.

NØLL also worked 1.25-meter $E_s$. He tried 222 MHz with N1GC (EM95) on SSB at 0204Z on June 13 and then completed a contact. The 2-meter $E_s$ faded around 0230Z on the same date. Some 2-meter $E_s$ occurred earlier in June, however. On June 3, KK4BZ (FM18) logged Greg, WQØP (EM19), on FT8. On June 19, Ron Todd, K3FR (FM18), found W5AFY (EM04) on $E_s$ at 0101Z while using an indoor Yagi.

### On the Bands

**50 MHz**. On June 3, a very rare opening occurred from Fiji to North America on 6 meters. Antoine, 3D2AG, made contacts to W1, W8, and VE3 on 50.323 MHz FT8. I was active from EM28 and did not hear 3D2AG, but I logged four stations in Japan. WQØP (EM19) found BV3UF for a contact.

On June 10, Fred Honnold, KH7Y, in California worked YL2AO. WØFY (EM48) found many JAs on Saturday evening during the June VHF contest, and on Sunday afternoon, a strong opening from the midwest to Europe took place. I noted that AAØMZ (EM29) completed a contact with MDØCCE, and Rich, K1HTV (FM18), was decoded by BG6CJR and BH4SCF in China. On June 13, Mike White, K7ULS, worked Europe from Utah and Scott, KBØY (EM80), worked eight stations in Japan. Later, on June 15, Mario, K2ZD, logged Li, BA4SI, for a new country.

On June 21, Charles Rankin, WA2HMM, had Europe "blasting in" to FN30. Ned Stearns, AA7A, completed the FFMA by working VE2IR on the same day. Lance Collister, W7GJ, operated from rare grid DN37 on June 23, making 272 contacts. Lance said,

> I drove to Sunset Mountain, Montana, above the Continental Divide in DN37uc, on Wednesday, June 22, and set up at the top during extremely windy conditions. I started operating late that afternoon and continued all day on Thursday. On Friday, after seeing no activity on the band at dawn, I tore down the antenna and packed up the station.

Other stations, including ACØRA, WL7T/P, N5NA, N7PHY, NØLL, and K7BWH, were active from rare grids.

Alan, N5NA, set up in DM90 and made 148 contacts with a 3-element Yagi. Larry Lambert put EM07 on again, logging about 200 contacts. Perhaps one of the rarest and most unusual grid activations was by Tyler, WL7T, in EL84. He operated from a sailboat in the Gulf of Mexico to put EL84 on the air. Tyler lost his generator the first evening he was on the radio. He sailed back to Key West, secured a replacement, and was back on the next day. He was able to hand out the rare grid to many on the FFMA leaderboard. Steve, W5KI, worked WL7T/P for the last grid he needed to complete the FFMA.

**144 MHz**. Mike White, K7ULS (DN41), worked several Europeans on EME on June 23. Robert Stoll, KG5ZMQ (EM32), worked WE7L (DM79) on FT8 on June 28 — perhaps $E_s$. The same day, UT1FG/mm (FN58) worked 2-meter sporadic E to Florida and Georgia. AC4TO (EM70) logged him at 0117Z on FT8.

#### Here and There

Chip Margelli, K7JA (DM03), reports working YO7NE on June 13 to complete his DXCC on 50 MHz. Chip accomplished this from southern California with a "barefoot" Kenwood TS-990S and a seven-element LFA Yagi.



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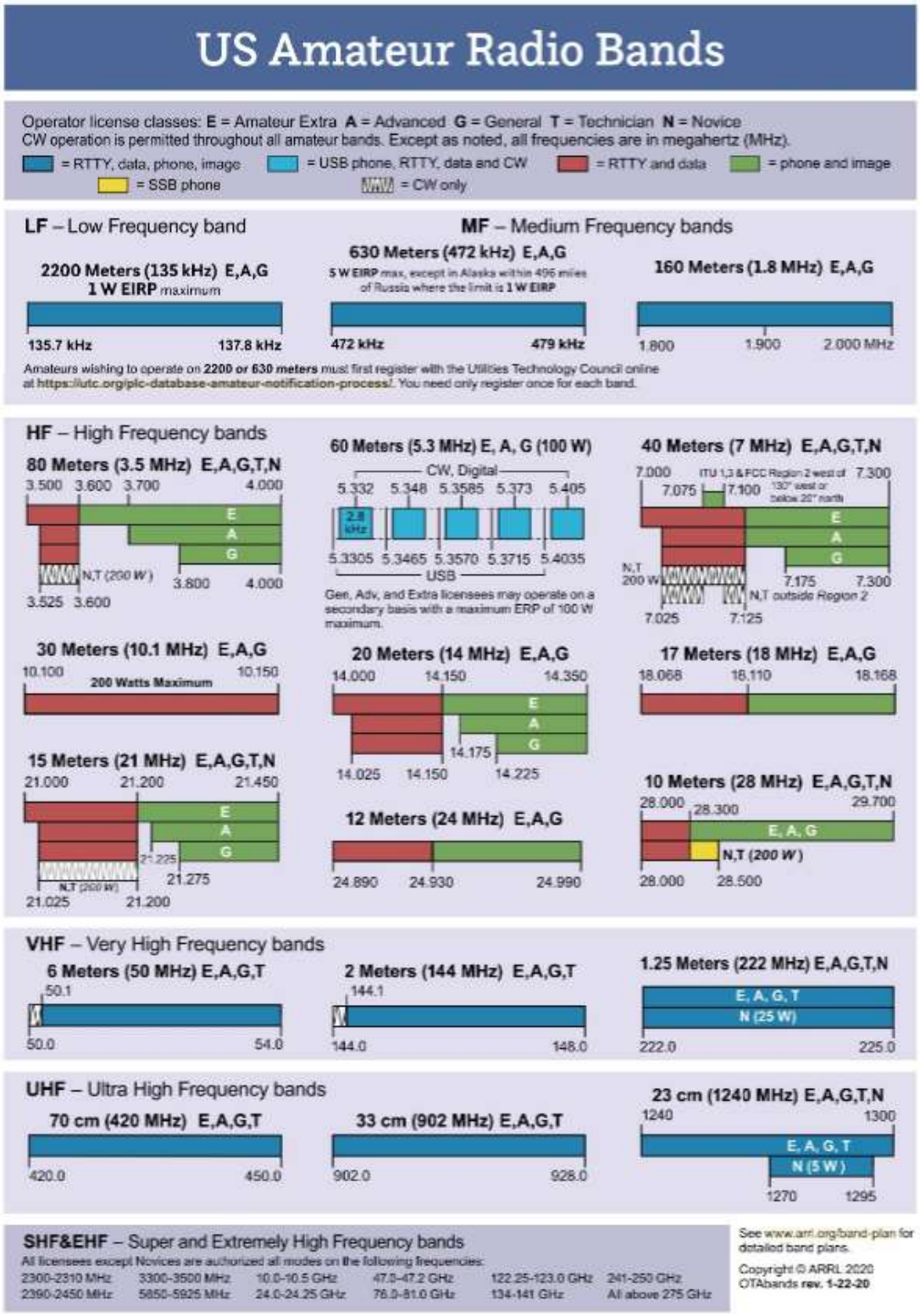
## US Amateur Radio Bands



## W1AW Schedule

# W1AW Schedule

| PAC | MTN | CENT | EAST | UTC | MON | TUE | WED | THU | FRI |
|---|---|---|---|---|---|---|---|---|---|
| 6 AM | 7 AM | 8 AM | 9 AM | 1400 | | FAST CODE | SLOW CODE | FAST CODE | SLOW CODE |
| 7 AM-1 PM | 8 AM-2 PM | 9 AM-3 PM | 10 AM-4 PM | 1500-1700 1800-2045 | VISITING OPERATOR TIME (12 PM-1 PM CLOSED FOR LUNCH) | | | | |
| 1 PM | 2 PM | 3 PM | 4 PM | 2100 | FAST CODE | SLOW CODE | FAST CODE | SLOW CODE | FAST CODE |
| 2 PM | 3 PM | 4 PM | 5 PM | 2200 | CODE BULLETIN | | | | |
| 3 PM | 4 PM | 5 PM | 6 PM | 2300 | DIGITAL BULLETIN | | | | |
| 4 PM | 5 PM | 6 PM | 7 PM | 0000 | SLOW CODE | FAST CODE | SLOW CODE | FAST CODE | SLOW CODE |
| 5 PM | 6 PM | 7 PM | 8 PM | 0100 | CODE BULLETIN | | | | |
| 6 PM | 7 PM | 8 PM | 9 PM | 0200 | DIGITAL BULLETIN | | | | |
| 6:45 PM | 7:45 PM | 8:45 PM | 9:45 PM | 0245 | VOICE BULLETIN | | | | |
| 7 PM | 8 PM | 9 PM | 10 PM | 0300 | FAST CODE | SLOW CODE | FAST CODE | SLOW CODE | FAST CODE |
| 8 PM | 9 PM | 10 PM | 11 PM | 0400 | CODE BULLETIN | | | | |

W1AW's schedule is at the same local time throughout the year. From the second Sunday in March to the first Sunday in November, UTC = Eastern US time + 4 hours. For the rest of the year, UTC = Eastern US time + 5 hours.

♦ Morse code transmissions: Frequencies are 1.8025, 3.5815, 7.0475, 14.0475, 18.0975, 21.0675, 28.0675, 50.350, and 147.555 MHz.

Slow Code = practice sent at 5, 7½, 10, 13, and 15 WPM.

Fast Code = practice sent at 35, 30, 25, 20, 15, 13, and 10 WPM.

Code bulletins are sent at 18 WPM.

For more information, visit us at
**www.arrl.org/w1aw**

♦ W1AW Qualifying Runs are sent on the same frequencies as the Morse code transmissions. West Coast qualifying runs are transmitted by various West Coast stations on CW frequencies that are normally used by W1AW, in addition to 3590 kHz, at various times. Underline 1 minute of the highest speed you copied, certify that your copy was made without aid, and send it to ARRL for grading. Please include your name, call sign (if any), and complete mailing address. Fees: $10 for a certificate, $7.50 for endorsements.

♦ Digital transmissions: Frequencies are 3.5975, 7.095, 14.095, 18.1025, 21.095, 28.095, 50.350, and 147.555 MHz.

Bulletins are sent using 45.45-baud Baudot, PSK31 in BPSK mode, and MFSK16 on a daily revolving schedule.

Keplerian elements for many amateur satellites will be sent on the regular digital frequencies on Tuesdays and Fridays at 6:30 PM Eastern time using Baudot and PSK31.

♦ Voice transmissions: Frequencies are 1.855, 3.99, 7.29, 14.29, 18.16, 21.39, 28.59, 50.350, and 147.555 MHz. Voice transmissions on 7.290 MHz are in AM double sideband, full carrier.

♦ Notes: On Fridays, UTC, a DX bulletin replaces the regular bulletins. W1AW is open to visitors 10 AM to noon and 1 PM to 3:45 PM Monday through Friday. FCC-licensed amateurs may operate the station during that time. Be sure to bring a reference copy of your current FCC amateur license. In a communication emergency, monitor W1AW for special bulletins as follows: voice on the hour, teleprinter at 15 minutes past the hour, and CW on the half hour.

W1AW code practice and CW/digital/phone bulletin transmission audio is also available real-time via the *EchoLink Conference Server* W1AWBDCT. The conference server runs concurrently with the regularly scheduled station transmissions. The W1AW Qualifying Run texts can also be copied via the EchoLink Conference Server.

During 2022, Headquarters and W1AW are closed on New Year's Day (observed December 31, 2021), Presidents Day (February 21), Memorial Day (May 30), Independence Day (July 4), Labor Day (September 5), Veterans Day (November 11), Thanksgiving and the following day (November 24 and 25), and Christmas Day (observed December 26).