



Meeting News:

The March 11th general membership meeting was held at the Dudley House and on Zoom . Our presenter was Burt Auerbach KA6BJA who presented “Using Winlink for Creating and Mapping Situation Reports”. Jeremy KN6JMD set up the wifi, ran the computer, projected the presentation, and managed the Zoom meeting. All Zoom attendees were able to see and hear Burt’s presentation as well as the overall meeting. The members approved the amended bylaws which will allow us to conduct our club business and vote using virtual meetings. The bylaws also recognize federal and state laws that have been implemented since the bylaws were written in 2010.

Our next club meeting is scheduled for April 8th and Pedro Morillas K6MIL will present “Testing and Results using the 2M/440+ with the ‘CompacCounterpoise’ antenna by Dr. Jack Nilsson, Inventor - Antennas, EM & Energy COMPACtenna.com”. We will be serving refreshments and our meeting starts at 19:00 with a “one-half” social hour before the gavel starts the formal meeting. Visitors are always welcome to attend our meetings and join us afterwards at Toppers for a slice of pizza and camaraderie.

The Inside Story

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Message from the President

The Prez Sez,

The 8th Annual Ventura Marathon on Feb. 26-27th was a unique weekend of events appealing to a variety of demographics including runners, walkers, friends, family and the public. This event was created in 2013 and has raised over \$100,000 for local schools, teams and charities.

In 2022, the Packet Pick Up and Health & Fitness Expo took place in the heart of Downtown Ventura. On Sunday, the Finish Line and Health & Fitness Expo was located at Ventura Unified School District.

The Half Marathon and Full Marathon featured a fast downhill course both starting in Ojai and ending at the Ventura Unified School District. With the fast downhill course and Boston Qualifying Marathon, they were able to reach runners from across the country to come to the town and enjoy all of the great things Ventura has to offer.

Holding an event like this and others (Ride for the Red, Mountains to Beach, etc.) takes an enormous amount of planning and communications before, during and after the event.

I volunteered (teamed with club member Burt KA6BJA) to provide emergency communications support for the February 27th Ventura Marathon (<https://www.venturamarathon.com/>), through our Ventura County ACS/ARES group, led by Rob Hanson W6RH and coordinated by Jim Aguirre KM6GUE.
(Continued on Next Page)

Club Offices	And Keyer	Contributors
President	Robert Shank	KM6RSS
Vice-President	Clem Alberts	KM6OKZ
Secretary	Phil Cohen	WA6BUZ
Treasurer	John Gartman	W6JPG
Board Member	Steve Noll	WA6EJO
Board Member	Dave Schmidt	A16VX
Board Member	Mark Swaney	KD6ASL
Program Manager	Clem 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	A16VX
Monday Night Net	Open	Please volunteer
QSL Manager	Ben Holmes	K6QV
Safety Officer	Mark Vodon	K16PTE
PIO/Trivia	Dana Wentling	KG6WXE
Columnist	Reese West	KQ6TT
Columnist	Steve Noll	WA6EJO
Columnist	Paul Strauss	WD6EBY
Columnist	Denney Pistole	N6HV

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.

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Submit material by email to KM6RSS@gmail.com.
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)

We received our communication instructions and assignments (we actually got to choose our location) well before the event, and tested our ability to communicate with the communications officials by driving to our aid station assignment (called “L” or Lima) which was at the intersection (see map, below) of the Ojai Valley Trail where Pacos Street is perpendicular.



The nearby neighborhood is well-kept and quiet; however, the street near the trail is used for parking and the entrance to the trail is a no-parking zone from 100' to either side.



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Message from the President (Continued)



We tested our handheld transceivers (HT) to ensure that they would be able to contact net control on both the primary and secondary frequencies (Red Mountain repeater 146.880 with a negative offset and a PL tone of 127.3 and Sulphur Mountain repeater 145.200 with a negative offset and a PL tone of 127.3. Pedro K6MIL accompanied us to test out his new Compactenna (being presented at our April 8th club meeting) and Denney N6HV, acted as net control and provided signal reports from his home in Port Hueneme. Luckily, our HTs were a Q5 with full quieting for the most part.

Because some of the marathon supplies have been stolen in the past, I volunteered to arrive at aid station Lima at 5:45 am to guard them until the volunteers from the local middle school and their track coach arrived and set up the tables, cups and water. Ice was also available for those runners who wanted to cool down quickly. The communications assignment information shows that we should have also had GU tabs, but I don't remember seeing them.

AID STATION LIMA	FULL 24.5	LIMA 1	Robert	Shank	KM6RSS	5:45 AM
Water, GU Tabs	HALF 11.45	LIMA 2	Burt	Auerbach	KA6BJA	7:00 AM

When I arrived, finding parking and creating a space for Burt to park was my immediate task, as well as keeping warm and holding the flashlight. I checked-in with net control on the Red Mountain Repeater 146.880 with a negative offset and a PL tone of 127.3 using my Yaesu VX-6R. Kat K6VQN stopped by at 6:05 and gave me a sweatshirt (which I immediately put on) and a gift card for coming early to guard the supplies.

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Message from the President (Continued)

The first two volunteer crew members arrived at 6:30 am and met an official who provided them with signs to install on the trail.



The supplies arrived at about 7 am and the crew quickly set up the tables, etc., then left. The volunteers were on station and ready to support the runners.

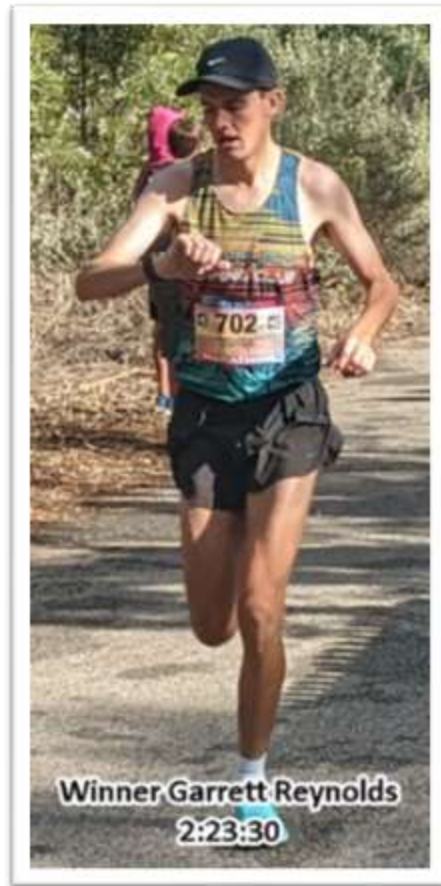


Burt KA6BJA arrived at 7:05am. At 8:11am the first half-marathon runner passed through the station.

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Message from the President (continued)

Garrett Reynolds, of Ventura, a full marathon runner, passed our table at 9:01 am and set the record for the event. There were no injuries or issues reported by our station.



We did take a photo of the last marathon “runner”, Moshe Zloof, age 83.



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Message from the President (continued)

VENTURA MARATHON - Results
Ventura, CA USA
February 27, 2022
Finishers: 693, Males - 434, Females - 259
Male Winner: 2:23:30 | Female Winner: 2:51:11
Average Finish Time: 4:06:07 | STD: 0:50:26

Burt and I submitted our after-action report to assist with the event planners' next Ventura Marathon.



We still have several important club offices open and need members to step up and volunteer. You can volunteer for one or more of the following enjoyable club activities:

Program chairperson. With the passage of the amended bylaws at our March 11, 2022 meeting, our Vice President, Clement Alberts KM6OKZ, is now the Program Chairperson. We have speakers tentatively scheduled for March, April, May, June July, August and September.

Membership chairperson. This person works with our Secretary to contact area hams (sometimes using emails sent to our K6MEP website, our Monday Night Net, Facebook, MeWe or other methods) and invite them to our club meetings and other activities.

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Message from the President (continued)

Monday Night Net Control Operator Scheduler. We had good success with last year’s Monday Night Net being run by members of the club as net control operators. By having volunteers as our net control operators, they have the opportunity to improve their “microphone skills” and learn more about our members and guests. I’ve created a schedule calendar on our groups.io website. The link is <https://groups.io/g/K6MEP/files/2022%20Monday%20Night%20Net%20Contest>. It would be very helpful to have a member volunteer to become our scheduler and encourage everyone to sign up to be a net control operator for a few Mondays in 2022. We are also looking for someone to be a back-up operator in case the operator has problems with his/her rig. I’ve been acting as the alternative and have been preparing the updated script for every Monday night net that includes the next meeting’s date and topic/presenter.

Picnics and Outings chairperson. We’ve held very successful picnics at the Dudley House and also had limited outings (due to health department regulations) at parks where we tested our rigs. It would be very helpful for a member to volunteer to help organize these activities.

DecemberFest chairperson. The process of making a list of restaurants that meet our selection criteria, polling our members to select the best restaurant and making the reservation, as well as acting as a go between with the restaurant and the membership is a very important club activity, even though it is done once a year.

73,
Robert Shank KM6RSS
President, VCARC



Minutes of the March 6th, 2022, VCARC Board Meeting

MEETING LOCATION: Zoom

TIME: 19:00 to 20:45

BOARD ATTENDEES:

OFFICE	LAST	FIRST	CALL SIGN	PRESENT
PRESIDENT	SHANK	ROBERT	KM6RSS	Y
VP	ALBERTS	CLEMENT	KM6OKZ	Y
SECRETARY	COHEN	PHIL	WA6BUZ	N
TREASURER	GARTMAN	JOHN	W6JPG	Y
BOARD	NOLL	STEVE	WA6EJO	Y
BOARD	SCHMIDT	DAVE	A16VX	Y
BOARD	SWANEY	MARK	KD6ASL	Y

Committee Chair invitees (Denney N6HV, Burt KA6BJA, Mark Vodon KI6PTE, Jeremy KN6JMD, Tim KN6JGB)

GENERAL MEMBER ATTENDEES: (Denney N6HV, Burt KA6BJA, Mark Vodon KI6PTE, Jeremy KN6JMD, Tim KN6JGB, Pedro K6MIL)

CALL TO ORDER 19:00

Opened the meeting at 19:01 and board attendance was 6 out of a possible 7 members present.

Robert KM6RSS welcomed all to the board meeting and ask for general comments.

Minutes: (Robert KM6RSS; Phil WA6BUZ wasn't present)

- We now have 49 paid-up members.
- Reviewed the minutes of the February 6th board meeting (as published in the March Keyer) and John W6JPG made motion to approve with Mark KD6ASL seconding. Unanimous vote to accept.
- Reviewed the minutes of the February 11th meeting (as published in the March Keyer) and Dave A16VX made motion to approve with Mark KD6ASL seconding. Unanimous vote to accept.

Officers Report: (John W6JPG)

- Treasurer: The treasurer provided the balances to the board.
- Discuss collection of 2022 dues status. Non-renewing members have been contacted and the membership roster has been purged (with names moved to another tab).

(Continued on next page)

Minutes of the March 6th, 2022, VCARC Board Meeting (Continued)

- What benefits should a member have (meetings, groups.io, Keyer, etc.) that should be withheld from a non-member to encourage them joining the club? No changes to current member vs. non-member benefits; members have name badges, voting as well as being able to be on the board and committees.

Committee Reports:

Members Health and Safety (Mark KI6PTE)

- Board to decide on any changes to make for March's General Membership Meeting at Dudley House now that masking isn't required by the health department. Refreshments are planned to be served. Is it recommended that we make any health and safety changes prior or during the meeting (fans, air purifiers, hand sanitizers, etc.)? After a lengthy discussion, the board voted, with one abstention, to authorize Tim KN6JGB to spend up to \$50 to rent a fan for March 11th's meeting and Mark to install it (Robert KM6RSS to bring extension cord) near the back door to provide positive ventilation. We will monitor noise, temperature and emergency access and make a determination to move forward with a vote purchase, or to use Robert's KM6RSS fans, or to not use fans at all.
- First Aid kits
 - Were the First Aid Kit(s) purchased (up to \$250 limit)? Not yet; Mark KI6PTE will purchase one kit and submit the bill to John.
- Youth Committee (Tim KN6JGB) Nothing new to report.
- By Laws (Mark KD6ASL, Burt KA6BJA)
- We will vote on the proposed amended bylaws at the March 11th meeting. What method should we use to take the vote (ballots, simple show of hands, etc.)? We will ask for a show of hands for the amended bylaw vote and Dave AI6VX will count the numbers in the room. Jeremy will send a chat to the voting members on Zoom and save the chat with the results.
 - During the break before Burt KA6BJA presents his topic, the votes (2/3rds of the total need to be "ayes") will be counted and the results announced. If the vote is close, a ballot will be distributed after Burt's KA6BJA presentation and the ballots collected and the count added to the Zoom votes.

(Continued on next page)



Minutes of the March 6th, 2022, VCARC Board Meeting (Continued)

Special Orders:

- Inventory (Denney N6HV)
 - Report from Denney N6HV on club items sold and amount collected.
 - Latest Donations “for sale” photos and inventory from the Christopher Edlund. Although Denney N6HV attended earlier in the meeting, he had left the meeting when these topics were raised, so there was no update).

Unfinished Business:

- Accounting Process Discussion (John W6JPG)
 - Status report on review of VCCU categories and assignment of transactions to those categories
 - Income sources and fixed and variable expenses (some transactions need to be categorized).
 - Reports to determine category and amount to be budgeted. Robert KM6RSS will send a proposed budget to the board based on the information in our VCCU accounts.
 - Due to the receipts for the donated items, our expenses have been balanced on the whole, by our income. We didn’t donate to the student’s science fair due to its cancellation (hopefully now that COVID doesn’t restrict students from meeting together to work on projects, etc., we will be able to participate in judging and offering prizes for the fair). Steve WA6EJO mentioned that he is judging the “First Robotics” event this coming weekend.
 - Payments to the 2021 Monday Night Net winners will be issued at the March 11th meeting.
 - Status Report on Dudley House Internet (Richard WB6AEW, Dave AI6VX and Jeremy KN6JMD). Dave AI6VX and Jeremy KN6JMD reported that the existing system isn’t available or usable. Jeremy KN6JMD will set up his T-Mobile cell hotspot and manage the bandwidth on his computer.
 - Burt’s KA6BJA presentation will be placed on Jeremy’s KN6JMD computer and sent to the projector as well as shared on Zoom. Jeremy KN6JMD will ask that during the presentation, all “Zoomers” will turn off their video to conserve bandwidth.

New Business:

- Consider establishing a Santa Barbara section chairperson to interface with John Kitchens, Section Manager (tabled until next meeting by Mark S.)

(Continued on next page)

Minutes of the March 6th, 2022, VCARC Board Meeting (continued)

New Business:

- Program
 - We still need a program chairperson
 - Scheduled for our March 11th meeting, Burt Auerbach KA6BJA will present “Using Winlink for Creating and Mapping Situation Reports”.
 - Tentatively scheduled for our April 8th meeting, Pedro Morillas K6MIL will present “Testing, Results and Opinions regarding the 2M/440+ ‘CompacCounterpoise’ antenna by Dr. Jack Nilsson, Inventor - Antennas, EM & Energy COMPACTenna.com”
 - Tentatively scheduled for our May 13th meeting, Clement Alberts KM6OKZ will moderate our “K6MEP Field Day Preparation Activities”.
 - Tentatively scheduled for our June 10th meeting, Clement Alberts KM6OKZ will moderate our “Final K6MEP Field Day Preparation Activities”.
 - Tentatively scheduled for our July 8th meeting, Clement Alberts KM6OKZ will moderate our “Results of the K6MEP Field Day”.
 - Tentatively scheduled for our August 12th meeting, Mark Swaney KD6ASL will present “My Experiences with DMR”.
 - Tentatively scheduled for our September 9th meeting, Dave AI6VX will discuss his “Seismograph Project”.
- Membership
 - We still need a membership chairperson
- Monday Night Net Control Operator and Alternate Calendar

Please volunteer to be our net control operator!		
Date	Net Control Operator	Back-up Net Control Operator
4-Apr	Dave AI6VX	Open
11-Apr	Tim KN6JGB	Open
18-Apr	Open	Open
25-Apr	Keith W6KME	Open
2-May	Dave AI6VX	Open
9-May	Open	Open
16-May	Open	Open
23-May	Mark KD6ASL	Open
30-May	Open	Open
6-Jun	Dave AI6VX	Open
13-Jun	Tim KN6JGB	Open
20-Jun	Open	Open
27-Jun	Open	Open
4-Jul	Dave AI6VX	Open

- We continue to seek a coordinator to manage the Monday Night Net control operator’s calendar. (Continued on next page)

Minutes of the March 6th, 2022, VCARC Board Meeting (continued)

- Picnic
 - We still need to start a committee
 - May or June Picnic and where? If Dudley House, get reservations and approve costs. Mark K16YLH has volunteered to be our chef and coordinate the cooking (in an email to Robert KM6RSS).
- Field Day
 - Clement KM6OKZ will lead the committee (he had left the meeting when this topic was discussed) and needs volunteers to assist with the following tasks:
 - Oxnard College Duck pond usage application/approval.
 - Insurance
 - Food (Mark O?)
 - Security
 - Porta Potty & Wash Station (Tim will send a pricing proposal to Clem for his review)
 - Expenses/disbursements requiring Board approval
 - Mark's K16PTE RV availability? - Overnight volunteers
 - Public - City Official. e.g. Fire Department Notifications (Extra Points)
 - Band Captain - Who works what frequencies, what antennas will be deployed, etc.
- DecemberFest
 - Need to start a committee
- Winter Field Day
 - Need to start a committee for next winter, if needed.
- Meeting Location That Better Meets Our Needs.
 - Search for an alternative meeting location that has internet and a better health and safety environment for our members (internet, heating, space, more parking, etc.).
 - Pedro K6MIL has volunteered to conduct the search and will report back to the board in the future.
- Announcements:
 - Our next club meeting is scheduled for March 11th at the Dudley House. Burt Auerbach KA6BJA will present “Using Winlink for Creating and Mapping Situation Reports”. Visitors are always welcome to attend our meetings. We will continue to update our members on any new Ventura County Health Department requirements. Please volunteer to help on one of our committees!
- Adjournment:
 - John W6JPG made the motion to adjourn with Mark KD6ASL seconding and the vote was unanimous. The meeting adjourned at 20:45.

General Membership Meeting Minutes for VCARC March 11th, 2022

GENERAL MEMBERSHIP MEETING (19:00)

MEETING ADDRESS: Dudley Historical House, 197 N. Ashwood Dr. Ventura CA 93003 and on Zoom

ATTENDANCE: We had 21 members attending. See the sign-in roster for details.

The first social half-hour was used for set-up, refreshments and checking out the donations and freebie tables.

CALL TO ORDER (AT 19:31)

President Robert KM6RSS said a brief welcome and Dave AI6VX lead us in the Flag salute. Robert then asked for everyone to introduce themselves and thanked all who attended. Two members, Pedro K6MIL and Stewart KG6BOV, attended via Zoom. Orv W6BI attended as a visitor earlier but had to leave before the meeting started.

- John Albin KN6LOV was introduced as our newest member; he enjoys horses as does Dave AI6VX. Clint Davis AJ6VR stated that he would join during the break and became our 50th member.
- George Christianson NJ2P mentioned that his granddaughter is a Pebble Pup and had just created a display for the Ventura Gem and Mineral Society's show on March 6&7. President Robert also attended the show and bought several specimens.
- Mark AE6GD was successful with EME with a 9' diameter dish, Q65 WSJT at 1276 MHz; has several QSL cards.
- Keith W6KME mentioned the micro Field Day March 20th 11-3 at Rancho Portrero West Entrance. He will post details in our groups.io.
- Robert asked if there were any new members present to be recognized since our last meeting and/or if anyone has progressed with their FCC license. There were none. CVARC is planning on having the FCC licensing test in April at the East Valley Sheriff's Station; the details will be posted in our groups.io messages.
- Paul Strauss WD6EBY and a work party added a new link to the Red Mountain repeater; more details to follow soon
- Mark KI6PTE, with assistance from Tim KN6JGB, tested out a positive ventilation system tonight for our member's Health & Safety.

Officer's Reports:

Secretary

Minutes:

- Secretary Phil WA6BUZ read the minutes of the board meeting held on Sunday March 6th, 2022.
- Our Secretary read the minutes of the general membership meeting held on February 11th.

Treasurer

- Treasurer John W6JPG provided the status of the club's accounts, including the sales at the TRW swap of the club donated equipment. (Continued on next page)

General Membership Meeting Minutes for VCARC March 11th, 2022 (Continued)

Committee Reports

- Robert provided the status of the new K6MEP Monday Night Contest 10 weeks, 157 check-ins with 19 visitors and a 15.7 average per week.
- Denney N6HV presented the status of the club's inventory; he is very busy but will be working on developing photos and adding to the club's inventory from the four car loads of donations from Christopher's relative. (Continued on next page)
- Mark Vodon KI6PTE provided information about the new safety equipment kit and had it available for review.
 - We are testing out a positive ventilation system tonight for our H&S. Overall, most members felt good that it was there. However, as the night progressed and outside temperatures lowered, several members had to put on jackets and make hot drinks to keep warm. The noise level of the fan was considered acceptable.
- Tim KN6JGB didn't have anything to update to the club on our youth outreach. (but he did pick up and take the fan back with his truck)
- Robert acknowledged that the recommended amendments of the Bylaws have been sent to all members for review and a vote to accept the changes will be held tonight.

Presentation

- Robert introduced tonight's speaker: Burt Auerbach KA6BJA who presented "Using Winlink for Creating and Mapping Situation Reports". After the question period was over, everyone applauded and thanked Burt. His presentation will be posted on the K6MEP.org website.

Amended Bylaws Vote

- We conducted the club vote on accepting the amended bylaws. Jeremy sent a request for our full members to vote in the Zoom chat room, and announced and saved the results for our records. Dave AI6VX counted 16 raised hands for approval. There was one vote who opposed the adoption of the amended bylaws. Jeremy collected the results of the two members who voted via the Zoom chat room; both were in favor. Dave and Jeremy coordinated and tallied the vote and a grand total of 18 approved with one opposed. The sign-in roster showed that 21 people attended with one non-voting member and one visitor, for a total of 19 plus the two Zoom voting members, for a total of 21 voting members. One member left before the vote. There were more than the 2/3 majority needed to confirm the amended bylaws and they will be certified by the board and posted on our K6MEP.org website, as well as retained in the club records by our secretary.

New Business:

- Denney mentioned using Zoom for Field Day 2022 planning. (Continued on next page)

General Membership Meeting Minutes for VCARC March 11th, 2022 (Continued)

New Business: (Continued)

- Keith W6KME mentioned the Bored net, Saturday Morning net and the need for net control operators and the micro field day.
- The use of the fan was discussed, 4 members felt cold, 9 said that they appreciated the positive ventilation and Lloyd KE6BBP mentioned a smell and asked about the overhead vents; they are for heating but the thermostat isn't connected.

Announcements:

Calendar: See groups.io or K6MEP for an updated Calendar.

FCC Ham License Test April 10 2022 08:30 – 12:00

CVARC is offering in-person amateur radio license exams once again. Until further notice, the number of attendees will be limited, and all applicants must preregister. **No walk-ins will be admitted.**

Prevailing COVID protocols will be observed. Masks must be worn in the examination room and applicants will be asked to provide proof of vaccination. Please review this information about how to prepare for a license exam before attending a session.

To register, or if you have questions, please contact Andy Ludlum at 818-370-3402. (k6agl@cvarc.org)

The VE sessions will be held in the Community Room in the East County Sheriff's Station: 2101 E. Olsen Road, Thousand Oaks, CA 91360

Robert reminded everyone about the club's next meeting date April 8th where Pedro Morillas K6MIL is scheduled to present "Testing, Results and Opinions regarding the 2M/440+ 'CompacCounterpoise' antenna by Dr. Jack Nilsson, Inventor - Antennas, EM & Energy COMPACtenna.com".

Adjournment:

A motion to adjourn and a second was requested and received. All were in favor and the meeting was adjourned at 21:29.

Everyone was invited to join us at Toppers for a slice (or two) of pizza and a drink.



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 Monday Night Net Contest Totals. Our groups.io has all of the Monday Night Net Contest documents in the files folder. We've had a contest-to-date total of 202 check-ins with 22 visitors and an average of 15.54 to date.

	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
	Total	202	22

The Importance of “The Band Plan”

Steve J. Noll, WA6EJO

For some time I had been hearing occasional FM voice signals on 432.1 MHz. That’s just not right, that frequency is our national weak signal SSB 70 cm calling frequency. Finally, on Friday March 4 there was enough chatter there that I was able to copy some call signs. What the heck - they were all from 3 and 4-land! I heard the word “Echolink” there once and thought that maybe someone’s local repeater was retransmitting that. After listening for a while I was able to copy some call signs, a W3 and a NA3. QRZ.COM gave me their email addresses so I shot them messages asking them if they were on Echolink and telling them I was copying them fine here in Ventura California on 432.1 MHz. After a couple email exchanges it was revealed that they were chatting using Allstar. (I’m totally clueless regarding Allstar, Echolink, most any newfangled thing.) BTW, I was hearing them “full quieting” on both my Kenwood TS-2000X with a horizontal Yagi pointed east to Los Angeles and on my ICOM IC-R8600 with a discone pointed everywhere but up. Both the guys were surprised, friendly, and very cooperative with one of them emailing me a node map of what stations were connected to Allstar at that time. The node map showed a station in New York, one in Pennsylvania, one in Connecticut, and one in Oxnard! Gee, I think I know where the problem is. The two fellows I was hearing and I emailed the offending station (who shall remain nameless) and the next morning I received a reply. The Oxnard Allstar node owner reported that he was using a 400 mW transmitter into a one-inch stubby antenna in a closet to monitor his node while in his house; I assume so he could walk around and monitor the node with a handheld. He has since moved frequency to one in the Southern California Repeater and Remote Base Association (SCRRBA) band plan and replaced his antenna with a dummy load. I am encouraged by the cooperation of all involved, a great example of the camaraderie of Amateurs. I am not encouraged that an Amateur Extra licensee was not familiar with band plans. Just because you find a quiet frequency doesn’t mean you can park a transmitter there, even a low power one. Maybe part of the problem is that the Amateur Extra exam pool does not contain anything about band plans, band usage, or frequency coordination. And maybe we are just not doing a good job of educating new Hams as to how we have agreed to use our frequencies. The ARRL publishes The Considerate Operator’s Frequency Guide but it’s limited to HF. The purpose of SCRRBA is to provide frequency coordination and achieve solutions to problems on the 29, 51, 420, 902, 1240 MHz, and microwave amateur bands in the Southern California area. (MESH users - that applies to you too!) You can bet that if there were any serious frequency use issues that the FCC would listen to SCRRBA first. You can find the Southern California band plans at <http://www.scrrba.org/BandPlans/BandPlans.htm> .

Here are some VHF and above frequencies recognized nationally as weak signal SSB calling frequencies:

50.125, 144.2, 432.1, 1296.1

These frequencies are used in VHF and above contests, meteor scatter, aurora, e-skip, and other “weak signal” uses. (Continued on next page)

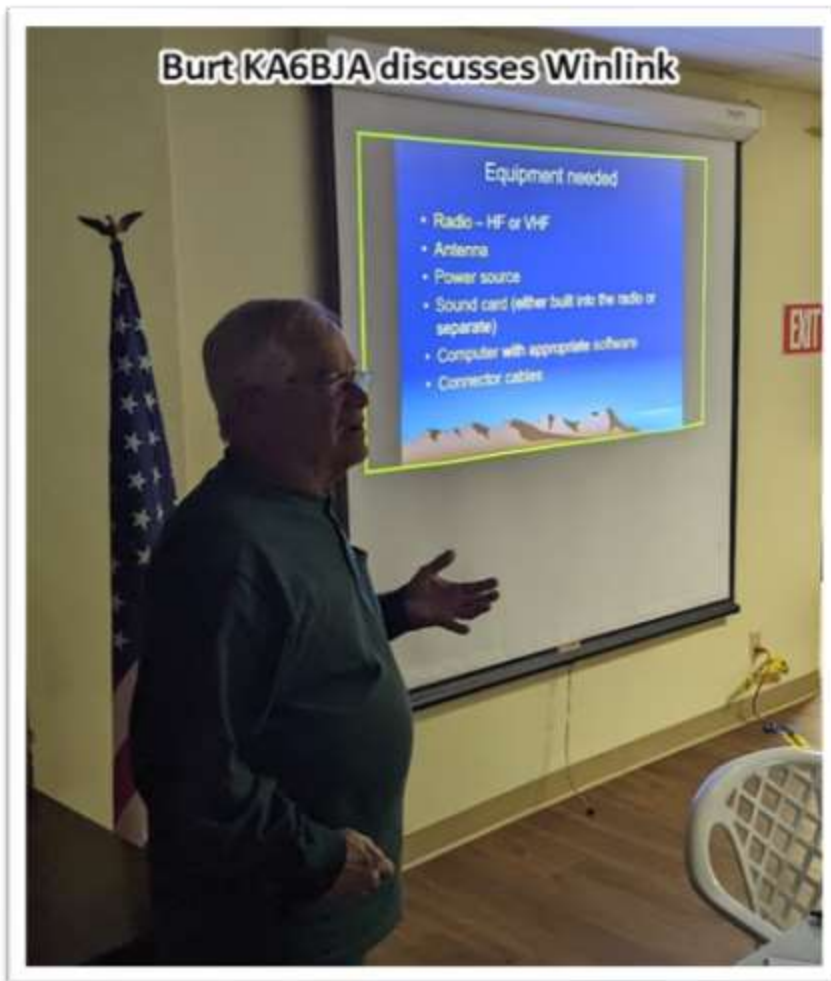
The Importance of “The Band Plan” (Continued)

Amateurs using these modes will often have equipment and antennas capable of hearing milliwatt signals.

Do not transmit on, or near these frequencies using FM. You should not ragchew on them even if on SSB. Have you heard of the BOZO net? The name came from a most avid and experienced ham, Chip Angle N6CA, chastising some fellows for rag chewing on 144.2 MHz. Chip called them BOZOs for hogging the 2M weak signal calling frequency. One of the embarrassed fellows started the BOZO Net. In SoCal, the BOZO Net meets on 144.24 MHz every Sunday and Wednesday around 7:30 PM. Participants can receive their own personal BOZO number. There’s something like 1000 BOZOs now, and I’m honored to be number 21 as I got into it near the beginning. Yes, I’m a BOZO.

73,

Steve WA6EJO

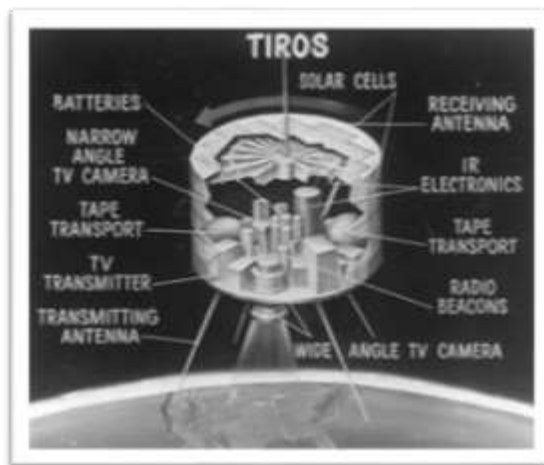


Thoughts from the West - Reese West KQ6TT

A TRUE STORY

In 1961, I was working on the first television cameras going to the moon. This was in the satellite division of RCA. There was a video tube to get the pictures which needed a good mounting method for all the major shocks it would receive during launch. The glass tube was about five inches long and an inch diameter. RCA hired a mechanical engineer friend of mine to design the mounting hardware. My friend designed a simple system to hold and protect the tube. It locked everything in place with one knurled nut about two inches in diameter. He took the design to his boss to get the design approved. The boss, who I will call Bossman so that real names are not used, told him to add a set screw to the knurled nut to keep it from turning. My friend objected. He said that that was the beauty of the design. The angle of the threads and the resistance to turning did not require any further precautions. Boss man told him to add the set screw. My friend returned to his desk and added a blind set screw that did not go all the way through the knurled nut. He returned to Bossman who signed off on the design. When the first model was built and on the shake table to be tested, my friend called Bossman in and gave him an Allen wrench to tighten the set screw to his satisfaction. The shake test was run and the design was used successfully when the satellite was launched.

A few months later an engineer from a different satellite program, which was going to use the design, came to see my friend and asked him what the blind set screw was for. My friend said, "I don't know. Ask Bossman." I don't know what happened after that, but there is a possibility that the design is still being used--unchanged.



Reese West KQ6TT



PVARC Update by Paul WD6EBY

Pleasant Valley Amateur Radio Club Update March 15, 2022

Hello All

In cooperation with SMRA, PVARC has a new repeater on Red Mountain on 445.64 MHz / 141.3 PL.

On Friday March 11th a new PVARC repeater was installed on 445.640 MHz with an encode and decode PL of 141.3 Hz. This repeater is linked to the PVARC repeater network and provides coverage along the Hwy 33 corridor and throughout the Ojai Valley. If this frequency sounds familiar, it was originally for Laguna Peak and is now coordinated by S.C.R.R.B.A. for Red Mtn.

This PVARC repeater installation was made possible with the cooperation of George Kreider KN6LA of the Sulphur Mountain Repeater Association. This repeater installation would have not been possible without a shared commitment of SMRA and PVARC to provide quality communications for the Ventura County amateur radio community. I would like to express my personal thank you to George for working with me and PVARC to make this installation possible.

This PVARC UHF repeater is linked to the PVARC repeater network through a 420 MHz full duplex link to Sulphur Mountain incorporates a 16 channel 2 Meter remote base radio and a mesh access point. The mesh node is still in configuration mode. In addition to all of this, I have incorporated a backup 145.200 repeater. So in the event the Sulphur Mtn repeater should fail this backup Red Mtn 145.200 repeater could be brought on line.



Continued on next page

PVARC Update by Paul WD6EBY (continued)

I have noticed the real-world coverage does not quite match the predicted coverage. For example a base station from Goleta is 95% quieting into the repeater but could not hear the repeater at all. I believe there are a couple of contributing factors for this. At present I am using a side mounted low gain antenna mounted at 30 feet and I think I may have left the repeater transmitter programmed to a test RF output power of 5 watts. I will check the power on a future visit. With all of the above considered the repeater is HT quality in my driveway in Camarillo, solid along the 101 and is providing enhanced coverage to the Ojai Valley.



To provide you with a little insight on repeaters, the installation of a repeater is not an overnight task. It takes time and expense to acquire the needed parts, build and test the system, and work with coordinating bodies for a repeater frequency and the 420 MHz link frequencies and both ends of the links. In effect three duplex frequency pairs had to be coordinated to make this system operational. In addition to all this it takes a great deal of time and discussion to work out a mountain top radio site. In some cases it has taken me over 10 years. And finally these days the cost of gas for my car play a big part of this equation.

And finally I would thank the team of Rob W6RH, Dan KE6NYT and Eric KG6WXC for their dedication and help in the installation of this repeater.



Continued on next page

PVARC Update by Paul WD6EBY (continued)



Please contact me if you have any questions or concerns.
Thank you all for your time

Paul Strauss
WD6EBY / K6PVR
pgstrauss@verizon.net



Trivia by Dana KG6WXE

DID YOU KNOW?

1. McDonald's restaurants buy 7% of all potatoes consumed in the U.S.?



2. Americans consume 34 pounds of French fries a year.



3. In the US you are never more than 115 miles from a McDonald's restaurant.



De

Dana

Kg6wx

Happy Easter. 🐰🐰🐰🐰

Heard on the net during March by Denney N6HV

Stay up to date with your club members and join in the conversations on the Monday night K6MEP two meter net. We start at 8:00 p.m. on the 145.200 MHz WD6EBY repeater. You can also get on and tell us about your best contact you've made last week on VHF or HF, show off your station or new equipment, or ask questions or seek help.

Last Monday night (3/28/22) Robert KM6RSS was having trouble with his packet radio set up. He had been trying out some new setups he got from the WaveTalkers webinars. Ended up pulling out the FT-857 radio and using it for packet until he can sort out the configuration changes he needs to undo.

Jeremy KN6JMD has been assigned a new call designator for the LA district emergency communications area.

Denney N6HV has been busy upgrading the storage for the club's donations. The improvements help in the recent rains. TRW swap meet was good. There were a few more sellers there than the last time I went. The sun has been very active, with solar flare after solar flare during the last week. Conditions are very changeable. Remember radio blackouts can last for an hour, but usually clear up after that.

Rod KA6GSU reported that he made to TRW and found and purchased what he went for.

Ben K6QV said he found out that the GMRS license fee has been reduced. Of course that was after he paid it.

Dave AI6VX is repairing an HQ-20 and an HQ-200 for friends. He's having fun and I think he is falling in love with the old radios and wants a pair for his shack.

John W6JPG got some time on FT-8 over the week end. He is looking at the Collins equipment the club has available for donation.

In the zoom meeting after the net there were discussions about airplanes, antennas and field day. Burt KA6BJA is trying to combine a NVIS and a vertical to save the number of pole needed to be put up.

Tim KN6JGB has a badge making machine. He offered to make up some nicer badges for club members. Denney N6HV suggested a badge design contest for club members.

Monday the 21st net.

Robert got help from Pedro on getting FT-8 working.

AEW Richard needed help installing an antenna.

Dave AI6VX picked up a 7250 VTVM and an oscilloscope.

Burt had a Gazebo given to him. I'm thinking that would be a nice base for an antenna.

Pedro has been working 40 meters and getting ready for his presentation to the club

Clint AJ6VR built a choke and it helped clean up RFI in his shack.

73s, Denney N6HV



K6MEP Monday Night Net Script (revised 03/27/22)

QST- QST- QST. This is (name and 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 and 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 and 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 meeting will be on Friday (month and date) at the Dudley House and Zoom, where the presentation topic is (topic name and presenter). 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 (revised 3/27/22) Continued

The rules are as follows: 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 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, then move on to the next person). At every ten minute mark, identify with your name, call sign and Ventura County Amateur Radio Club net.

During the Roundtable, pause every 10 minutes and identify yourself with “This is (name and call sign), tonight’s net control station for the Ventura County Amateur Radio Club Net”. Also ask if anyone wants to check-in. If none, ask “Any last comments? ***** Any late, missed, or visitor check-ins?”

Please check-in now.

Say “Hearing no new check-ins, does anyone have anything else they would like to add to tonight’s net?”

If nothing is heard;

(Closing): This concludes the Ventura County Amateur Radio Club weekly net at _____ hours. Thank you for your interest and participation. Also thanks to Paul Strauss, WD6EBY, for the use of the repeater for our K6MEP net.

73, this is (name and call sign), tonight’s Ventura County Amateur Radio Club net control, signing off and returning the repeater to its normal use.

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. **Hadrian's Wall 1900 Festival.** 7.150 14.200 21.300 145.500. QSL. LoTW. *These two special event stations will run throughout 2022 to commemorate the 1900 years since the building of Hadrian's Wall.* www.qrz.com/db/gb1900ha and www.qrz.com/db/gb1900hw

Mar. 26, 0000Z – 2359Z, W4W, Goose Creek, SC. Carolina SideWinders of the Lowcountry. **Walk for Water Charleston 2022.** 7.216 14.074 14.316. QSL. Carolina SideWinders, 318 Jennie St., Goose Creek, SC 29445. km4sw_614@yahoo.com

Apr. 1 – Apr. 15, 0000Z – 2359Z, WA3MD, Pasadena, MD. **Autism Awareness Month.** 3.573 7.074 14.074 21.074. QSL. Frank Mathias, 1849 Choptank Rd, Pasadena, MD 21122.

Apr. 5 – Apr. 10, 0800Z – 1700Z, W4S, Lakeland, FL. Lakeland Amateur Radio Club. **Sun 'n Fun Aerospace Expo Special Event Station.** 2, 20, and 40 meters; other bands and modes possible. QSL. LARC, P.O. Box 90853, Lakeland, FL 33804. www.lakelandarc.org

Apr. 9, 1600Z – 2300Z, N6IW, San Diego, CA. USS *Midway* (CV-41) Museum Ship. **Doolittle Raid.** 7.250 14.320 14.070 (PSK31) D-STAR (Papa Sys. Repeater). QSL. USS *Midway* Museum Ship COMEDTRA, 910 N. Harbor Dr., San Diego, CA 92101. www.qrz.com/db/n6iw

Apr. 9 – Apr. 10, 1400Z – 0200Z and Apr. 10, 1400 – 2022, K5LRK, The Colony, TX. Lake Area Amateur Radio Klub. **Texas State Parks on the Air.** 80, 40, 20, and 15 meters; 3.825, 7.225, 14.225, and 21.325; CW bottom of band +40 kHz; phone general segment and 28.350; VHF 50.200 and 144.200. QSL. Ken Rainey, AC5EZ, 529 Kenilworth Ave., Little Elm, TX 75068. *This is an operating event.* info@k5lrk.com or <https://www.tspota.org>

Apr. 14 – Apr. 15, 1200Z – 2200Z, various call signs, various locations worldwide. **Maritime Radio Day 2022.** CW only; 160, 80, 40, 20, 15, and 10 meters, plus WARC. Certificate & QSL. See website for QSL information. *This is an operating event; see rules on website.* maritimeradio.pro/maritimeradioday

Apr. 16, 1400Z – 1800Z, W4ABZ, Ringgold, GA. Ringgold Amateur Radio Club. **160th Anniversary of the Great Locomotive Chase.** 7.265 14.265. QSL. Jim Skeen, 224 Smith Liner Rd., Chickamauga, GA 30707.

Apr. 16 – Apr. 30, 0000Z – 2359Z, W4M, Boones Mill, VA. AA4SS. **Whiskey 4 Moonshine — Texas State Parks on the Air.** 7.215 14.250 18.135 50.125. QSL. Timothy Boyd, AA4SS, 2201 Green Level Rd., Boones Mill, VA 24065. *Operating on all HF bands, depending upon operator preferences and equipment; phone, digital, and CW modes. Operations will take place in Franklin and surrounding counties.* <https://whiskey4moonshine.wordpress.com>

Apr. 18, 1400Z – 2359Z, NA1KW, Doolittle, MO. North American Kilowatt Club. **80th Anniversary Doolittle Raid on Tokyo.** 7.178 14.228; 20 and 40 meters SSB. Certificate & QSL. Charles Doolittle, N1SPX, 2600 Davis St., Hannibal, MO 63401. www.na1kw.com

Apr. 18 – Apr. 19, 1300Z – 0500Z, W2W, Rochester, NY. ROC-HAM. **World Amateur Radio Day 2022.** ROC-HAM/EchoLink 531091; AllStar 2585, 47620, 479 18; other EchoLink conferences will be connected for this event. QSL. John Derycke, W2JLD, 85 Amherst St., Apt. 2, Rochester, NY 14607. *7th annual VoIP event/largest VoIP special event.* www.roc-ham.net/ward-2022

Apr. 21 – Apr. 24, 1200Z – 2359Z, K5T, Nacogdoches, TX. Nacogdoches Amateur Radio Club. San Jacinto Day. 3.75 7.230 14.275 21.240. QSL. Nacogdoches ARC, 167 CR 2093, Nacogdoches, TX 75965. *All contacts confirmed via LoTW; special QSL card available.* www.w5nac.com

Apr. 22 – Apr. 25, 0000Z – 2359Z, W2P, West Point, NY. Ten Mile River Scout Museum Amateur Radio Club. **58th Annual West Point Scout Camporee.** 3.858 7.258 14.258 18.158. QSL. James Gallo, 149 Marine Ave. 6F, Brooklyn, NY 11209. www.qrz.com/db/w2p

Apr. 23, 1400Z – 2000Z, W1M, Russell, MA. Western Mass Council BSA. **WHOA Weekend.** 7.190 10.115 14.060 14.290. QSL. Tom Barker, WA1HRH, 329 Faraway Rd., Whitefield, NH 03598. *Paper logging. QSL via SASE and eQSL.*

Apr. 23 – Apr. 27, 1400Z – 2359Z, W5RRR, NN4SA, and others. NASA On the Air (NOTA). **50th Anniversary of Apollo 16.** 14.045 14.271. QSL. Club contacted, see QRZ page. *We will be operating from various NASA centers. See website for information and updates.* nasaontheair.wordpress.com

Apr. 30, 1700Z – 2359Z, NV7AV, Amargosa Valley, NV. Amargosa Amateur Radio Club. **Amargosa Days.** 7.250 14.280 18.150. QSL. AARC, P.O. Box 101, Amargosa Valley, NV 89020. www.amargosa-hams.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. *Note: Some clubs may ask for a nominal fee to cover the cost of the certificate or QSL. Request will be made on air during the event or on the club's website.

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 July QST would have to be received by May 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 acknowledgement 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

Bruce Draper, AA5B, aa5b.corral@gmail.com

Contest Corral

April 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 Date-Time	Finish Date-Time	Bands	Contest Name	Mode	Exchange	Sponsor's Website
2 0800	2 2000	1.8-28	RSGB FT4 International Activity Day	Dig	Signal report, 4-char grid square	www.rsgbcc.org/hf/
2 1000	3 0400	14	PODXS 070 Club PSK 31 Flavors	Dig	SPC, mbr or name	www.podxs070.com
2 1200	3 1200	3.5-28	EA RTTY Contest	Dig	RSQ, EA province or serial	concursos.ure.es/en
2 1400	3 0200	1.8-144	Louisiana QSO Party	CW Ph Dig	RS(T), LA Parish or SPC	laqp.louisianacontestclub.org
2 1400	3 0200	1.8-144	Mississippi QSO Party	CW Ph Dig	RS(T), MS county or SPC	arrl.org/sections/view/mississippi
2 1400	3 2000	1.8-UHF	Missouri QSO Party	CW Ph Dig	RS(T), MO county or SPC	www.w0ma.org/index.php
2 1400	3 2200	3.5-28	Florida State Parks on the Air	CW Ph Dig	Park ID or SPC	flspota.org/rules
2 1500	3 1500	1.8-28	SP DX Contest	CW Ph	RS(T), SP province or serial	spdxcontest.pzk.org.pl/2021
5 0100	5 0300	3.5-28	ARS Spartan Sprint	CW	RST, SPC, power	arsqp.blogspot.com
6 1200	6 1300	1.8-28	A1Club AWT	CW	RST, name	a1club.org/contest/awt
6 2000	6 2100	3.5	UKEICC 80-Meter Contest	Ph	6-char grid square	www.ukaiccc.com/80m-rules.php
7 0000	8 0300	7	Walk for the Bacon QRP Contest	CW	RST, SPC, name, mbr or power	qrcontest.com/pigwalk40
7 2000	7 2200	1.8-50	SKCC Sprint Europe	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
9 0000	9 0600	1.8-28	QRP ARCI Spring QSO Party	CW	RST, SPC, mbr or power	qrparc.org
9 0700	10 1300	1.8-28	JIDX CW Contest	CW	RST, JA prefecture or CQ zone	www.jidx.org/jidxrule-e.html
9 1200	10 1100	3.5-28	DIG QSO Party, CW	CW	RST, mbr (if any)	diplom-interessen-gruppe.info
9 1200	10 1200	1.8-28	OK/OM DX Contest, SSB	Ph	RS, OK/OM county code or serial	okomdx.crk.cz
9 1200	10 1200	3.5-28	F7n DX Contest	Dig	4-char grid square	europeanf7club.wordpress.com
9 1200	10 1800	3.5-28	IG-RY World Wide RTTY Contest	Dig	RST, 4-digit year first licensed	www.ig-ry.de/ig-ry-ww-contest
9 1200	10 2359	1.8-50	SKCC Weekend Sprintathon	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
9 1300	10 2200	1.8-UHF	Nebraska QSO Party	CW Ph	NE county or SPC (FT8: grid)	nebraskaqsoparty.com
9 1400	10 0200	1.8-144	New Mexico QSO Party	CW Ph Dig	Name, NM county or SPC	www.newmexicoqsoparty.org
9 1400	10 2000	All	Texas State Parks on the Air	CW Ph Dig	RS(T), park ID or SPC	www.tspota.org
9 1800	10 1800	1.8-144	North Dakota QSO Party	CW Ph	RS(T), ND county or SPC	www.ndarrisection.com
9 1800	10 2359	1.8-50	Georgia QSO Party	CW Ph	RS(T), GA county or SPC	gaqsoparty.com
9 2100	10 2100	1.8-28	Yuri Gagarin International DX Contest	CW	RST, ITU zone	gc.qst.ru/en/section/32
10 0700	10 1900	3.5-14	International Vintage Contest HF	CW Ph	RS(T), 6-char grid square	aririmi.jimdofree.com
10 1000	10 2100	3.5-14	WAB 3.5/7/14 MHz Data Modes	Dig	RS, serial, WAB square or country	wab.interimp.net/Contests.php
10 1800	10 2359	3.5-28	ARRL Rookie Roundup, SSB	Ph	Name, year first licensed, state/province/NE area/DX	www.arrl.org/rookie-roundup
10 1900	10 2030	3.5	RSGB RoLo SSB	Ph	RS, previous 6-char grid received	www.rsgbcc.org/hf
11 0000	11 0200	1.8-28	4 States QRP Group Second Sunday	CW Ph	RS(T), SPC, mbr or power	www.4sqr.com
11 1900	11 2030	3.5-14	RSGB FT4 Contest	Dig	4-char grid square	www.rsgbcc.org/hf
11 1900	11 2300	144	144 MHz Spring Sprint	CW Ph Dig	4-char grid square	sites.google.com/site/springvhf/sprints
13 0030	13 0230	3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or power	naqcc.info
15 2100	16 2100	1.8-28	Holyland DX Contest	CW Ph Dig	RS(T), 4X area or serial	iarc.org/iarc/HolylandContest
16 0500	16 0859	3.5, 7	ES Open HF Championship	CW Ph	RS(T), serial	www.erau.ee
16 0600	17 0559	3.5-28	Worked All Provinces of China	CW Ph	RS(T), BY province or serial	www.muilandxc.com
16 0700	17 0659	3.5-28	YU DX Contest	CW Ph	RS(T), YU/YT county or serial	www.yudx.yu1srs.org.rs
16 0900	17 2359	3.5-28	CQMM DX Contest	CW	RST, continent abbreviation	www.cqmmx.com/rules
16 1600	17 0400	3.5-28	Michigan QSO Party	CW Ph	Serial, MI county or SPC	www.miqp.org/Rules.htm
16 1700	17 1200	3.5-28	EA-QRP CW Contest	CW	RST, category, "M" if member	www.eaqrp.com
16 1800	16 2159	1.8-50	Feld Hell Sprint	Dig	RST, mbr (if any), SPC, grid	sites.google.com/site/feldhellclub
16 1800	17 1800	1.8-144	Ontario QSO Party	CW Ph	RS(T), ON county or SPC	va3cco.com/oqp/rules.htm
17 0700	17 1900	1.8-28	Dutch PACcdigi Contest	Dig	RST, PA province or serial	www.veron.nl
17 1200	17 2000	1.8-144	Quebec QSO Party	CW Ph	RS(T), QC zone or SPC	wp1.quebecqsoparty.org
17 2300	18 0100	1.8-28	Run for the Bacon QRP Contest	CW	RST, SPC, mbr or power	qrcontest.com/pigrun
18 1500	18 1730	3.5, 7	DARC Easter Contest	CW Ph	RS(T), DOK or serial	darc.de/der-club/referate/conteste
19 1900	19 2300	222	222 MHz Spring Sprint	CW Ph Dig	4-char grid square	sites.google.com/site/springvhf/sprints
21 0000	22 0300	14	Walk for the Bacon QRP Contest	CW	RST, SPC, name, mbr or power	qrcontest.com/pigwalk20
23 0001	24 2359	28	10-10 International Spring Contest, Digital	Dig	Name, mbr or "0"; SPC	www.ten-ten.org
23 0800	23 1800	3.5-21	QRP to the Field	CW Ph	RST, SPC, name/SOTA	www.zianet.com/qrp
23 1200	24 1200	3.5-28	SP DX RTTY Contest	Dig	RST, SP province or serial	www.pkrvq.org
23 1300	24 1259	1.8-28	Helvetia Contest	CW Ph Dig	RS(T), HB canton or serial	www.uska.ch/contest
24 0000	24 0400	3.5-14	North American SSB Sprint	Ph	Other's call, your call, serial, name, SPC	ssbsprint.com/rules
24 1700	24 2059	3.5-28	BARTG Sprint 75	Dig	Serial	bartg.org.uk
27 0000	27 0200	1.8-50	SKCC Sprint	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
27 1900	27 2300	432	432 MHz Spring Sprint	CW Ph Dig	4-char grid square	sites.google.com/site/springvhf/sprints
27 2000	27 2100	3.5	UKEICC 80-Meter Contest	CW	6-char grid square	ukeicc.com/80m-rules.php
30 0600	1 2359	2.3 GHz +	SBMS 2.3 GHz and Up Contest	CW Ph Dig	6-char grid square	n6nb.com/sbmsrules.htm
30 1200	1 1159	1.8-28	Russian WW MultiMode Contest	CW Ph Dig	RS(T), UA oblast or serial	www.rdrclub.ru
30 1200	1 1200	3.5-28	UK/EI DX Contest, CW	CW	RST, serial, UK/EI district code, serial	ukeicc.com/dx-contest-rules.php
30 1600	1 2159	7-28	Florida QSO Party	CW Ph	RS(T), FL county or SPC	floridaqsoparty.org/rules

There are a number of weekly contests not included in the table above. For more info, visit: www.qrpxhunt.org, www.nccsprint.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 WATBNM 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, WATBNM, in providing this service.

Upcoming FCC Exam Session Preparation Sites

(Virtual and In Person)

La Verne, CA 91750 CA 91750

03/15/2022

Start/End Dates: 03/15/2022 - 04/14/2022

Times: 6 to 9 PM Tuesdays and Thursdays

of Sessions: 10

Class level: Technician

Morse code offered: No

Pre register required: No

Fee: \$20.00 Donation for non CERT members

Pre Study required: No

Class Type: Traditional

Exam offered: No

Sponsoring Club/Organization: La Verne CERT

Instructor: KR6JK

Contact: James Kesterson KR6JK

Phone: (909) 596-4390

Email: 2kr6jk@gmail.com

Location: La Verne EOC

2061 Third Street, La Verne, CA 91750

La Verne, CA 91750, CA 91750

Online CA 90703

04/06/2022

Start/End Dates: 04/06/2022 - 04/27/2022

Times: Wednesdays 7PM-9PM

of Sessions: 4

Class level: General

Morse code offered: No

Pre register required: No

Fee: \$65

Pre Study required: Yes

Class Type: Online or Hybrid

Exam offered: No

Sponsoring Club/Organization: American Red Cross

Instructor: KK6SMD

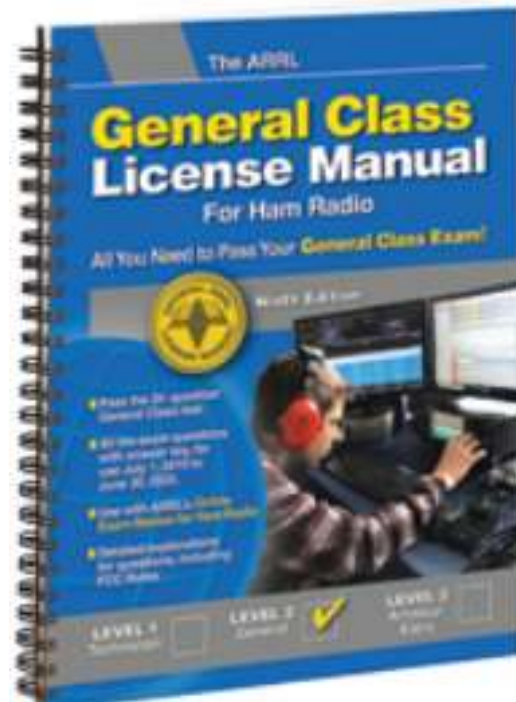
Contact: Mark Chung KK6SMD

Phone: (562) 708-3893

Email: mchung@prodigy.net

Location: At your home

Additional Information: This is the second level FCC license class. You must have the first level Technician Class as a pre-requisite. Once licensed, your HF privileges will enable you to communicate across the USA and around the world with the proper radio. The classes are conducted via ZOOM so that you can attend the class from your own home. One month of pre-study is recommended using the Gordon West General Class (2019-2023) book or the FAST TRACK to General Class by Michael Burnett. Amazon and ARRL sells these books. To register, send the fee to PayPal or Zelle (mchung@prodigy.net) and also notify this instructor via email. A syllabus and class schedule with a ZOOM link will be sent to you. We have several testing organizations for your FCC license testing which is a separate charge and at your own time.



Upcoming FCC Exam Test

(Within 50 miles) Due to the Coronavirus outbreak, please verify with your VE team that the exam session is being held.

GLAARG is offering remote testing; see <https://glaarg.org/remote-sessions/> for details

Thousand Oaks CA 91360-6861

04/10/2022

Sponsor: Conejo Valley ARC

Date: Apr 10 2022

Time: 8:30 AM (No Walk-ins / Register or Call ahead)

Contact: Andrew G. Ludlum

(818) 370-3402

Email: K6AGL@cvarc.org

VEC: [ARRL/VEC](#)

Location: East County Sheriff's Station, Community Room

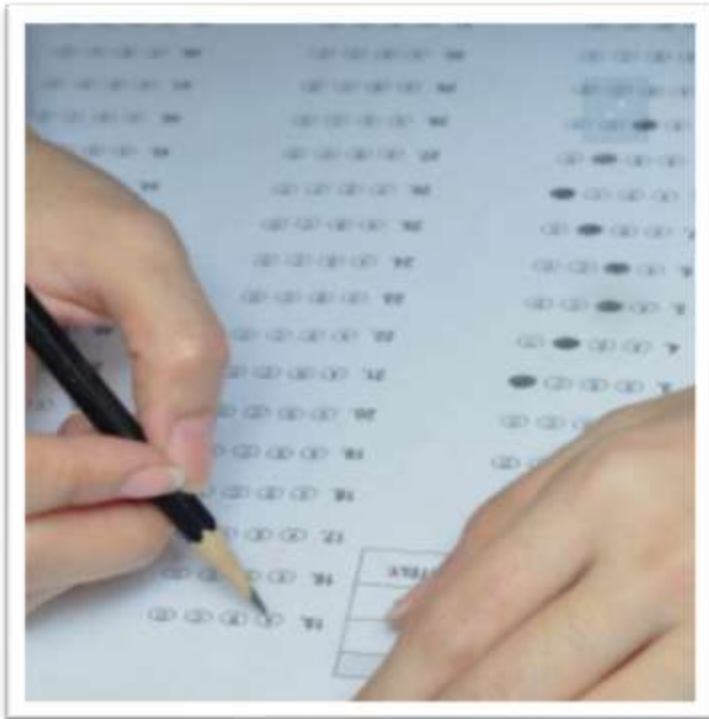
2101 E Olsen Rd

Proof of vaccination required.

Space is limited. Pre-registration required.

Thousand Oaks CA 91360-6861

Website: <http://www.cvarc.org/upcoming-ve-sessions/>



On Exam Day Bring the Following Items:

1. 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.
2. 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.
3. 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. Minor children (under the age of 18) may be accompanied in the room by an adult during the test.
4. FCC Registration Number (FRN): VECs 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 FCC's Registration page and the FCC's Registration instructions page. Per FCC rules, a valid email address is also mandatory on the application form.
5. If applicable, bring a printed copy of your Amateur Radio license. 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 required 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. Instructions on how to obtain an official FCC license copy are on our Obtain License Copy web page.
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). Check the ARRL VEC's current exam fees. **The FCC started to accept the \$35 fee on April 19, 2022, which will be paid directly to the FCC.**
9. Be aware that some information about you will be made publicly available on the FCC's website.

Convention and Hamfest Calendar

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

Convention and Hamfest 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
Ti = Talk-in frequency
Adm = Admission

Illinois (Sullivan) — Apr. 30 DFHRT
 8 AM – 1 PM. *Spr*: Moultrie Amateur Radio Klub, Sullivan American Legion, 8 East Strain St. *Ti*: 449.275 (103.5 Hz). *Adm*: \$5. qsl.net/mark

Indiana (New Castle) — Apr. 16 FHT
 8 AM – noon. *Spr*: Henry County ARC, W. G. Smith Building at Memorial Park, 2221 N. Memorial Dr. *Ti*: 147.390 (127.3 Hz). *Adm*: \$10. w9ob.org

ARRL INDIANA STATE CONVENTION

May 7, Peru, Indiana
D H R S T V
 9 AM – 2 PM. *Spr*: Cass County, Grant County, Kokomo, and Miami County ARCs. Miami County 4-H Fairgrounds, 1029 W. 200 North. *Ti*: 147.345 (131.8 Hz). *Adm*: \$5. ncl-hamfest.net

ARRL MAINE STATE CONVENTION

April 1 – 2, Lewiston, Maine
D F H Q R S V
 Fri. 7 PM – 9 PM, Sat. morning, afternoon. *Spr*: Androscoggin ARC, Ramada Convention and Hotel, 400 Pleasant St. *Ti*: 146.610 (88.5 Hz). *Adm*: \$8 Advance, \$10 door. w1npp.org

Maryland (Odenton) — Apr. 24 DFHQRT
 9 AM – 1 PM. *Spr*: Maryland Mobileers ARC, Odenton Volunteer Fire Company, 1425 Annapolis Rd. *Ti*: 146.805 (107.2 Hz). *Adm*: \$5. sites.google.com/view/marylandmobileers/hamfest?authuser=0

Michigan (Cadillac) — May 7 DFHQRV
 8 AM – 1 PM. *Spr*: Wexaukee ARC, Mackinaw Trail Middle School, 8401 S. Mackinaw Trail. *Ti*: 146.98. *Adm*: \$5. wexaukeearc.org

Minnesota (Brainerd) — Apr. 23 FHQR
 9 AM – 1 PM. *Spr*: Brainerd Area ARC, Brainerd National Guard Armory, 1115 Wright St. *Ti*: 147.225, no tone. *Adm*: \$8. brainerdham.org

Minnesota (East Grand Forks) — Apr. 30 FHR SV
 8 AM – 1 PM. *Spr*: Forx ARC, Heritage Village, 219 20th St. NE. *Ti*: 146.940 (123.0 Hz). *Adm*: \$8 Advance, \$10 door. www.wa0jxt.org

Missouri (Kansas City) — Apr. 16 DFHRS
 8 AM – 1 PM. *Spr*: Ararat Shrine ARC, Ararat Shrine Temple, 5100 Ararat Dr. *Ti*: 145.130. *Adm*: \$5. Email: kc0fd@att.net

New Hampshire (Center Ossipee) — Apr. 23 DFH RV
 8 AM – 2 PM. *Spr*: Lakes Region Repeater Association, Center Ossipee Town Hall, 55 Main St. *Ti*: 147.030 (88.5 Hz). *Adm*: \$10. w1bst.org/event/ham-fest-april-2022

New Hampshire (Hampton) — Apr. 9 F H R T V
 8 AM – noon. *Spr*: Port City ARC, St. James Masonic Lodge, 77 Tide Mill Rd. *Ti*: 145.150 (127.3). *Adm*: \$5. w1wqm.org

New Jersey (Parsippany) — Apr. 2 DFHR
 8 AM – noon. *Spr*: NJARC and Info Age, Parsippany PAL Building, 33 Baldwin Rd. *Ti*: none. *Adm*: \$7. njarc.org

New Jersey (Succasunna) — May 7 DFQTV
 8 AM, vendors 6 AM. *Spr*: Splitrock ARA, Horseshoe Lake Park, 72 Eyland Ave. *Ti*: 146.985 (131.8 Hz). *Adm*: \$7. splitrockara.org

Alabama (Fayette) — Apr. 30 DFHRTV
 7 AM – 2 PM. *Spr*: West Alabama ARC, Fayette Guthrie Smith Park, 218 23rd St. NE. *Ti*: 145.430 (110.9 Hz). *Adm*: Free. www.facebook.com/groups/586474361391035

Alabama (Headland) — Apr. 23 FRTV
 8 AM – noon. *Spr*: Wiregrass ARC, Town Square, 100 Park St. *Ti*: 145.430 (186.2 Hz). *Adm*: Free. w4dhn.org

Alabama (Mobile) — Apr. 23 DFHQRV
 8 AM – 1 PM. *Spr*: Mobile ARC, ABBA Temple Shrine, 7701 Hitt Rd. *Adm*: \$5. w4iax.com

Arizona (Sierra Vista) — May 7 DFHRTV
 8 AM. *Spr*: Cochise ARA, CARA club site, Green Acres, 2756 Mosion Rd., Hereford. *Ti*: 146.76 (162.2 Hz). *Adm*: Free. k7rdg.org

California (Sonoma) — Apr. 23 F H R T V
 8 AM – noon. *Spr*: Valley of the Moon ARC, First Congregational Church of Sonoma, 252 West Spain St. *Ti*: 145.35 (88.5 Hz). *Adm*: Free. www.vomarc.org

Connecticut (Gales Ferry) — Apr. 23 A H R T
 10 AM – 3 PM. *Spr*: Radio Amateur Society of Norwich, Our Lady of Lourdes R.C. Church Hall, 1650 Route 12. *Ti*: 146.730 (156.7 Hz). *Adm*: \$5. rason.org

Connecticut (Thompson) — Apr. 24 FHQ
 8 AM – noon. *Spr*: Eastern Connecticut ARA, Raceway Restaurant, 205 East Thompson Rd. *Ti*: 147.225 (156.7 Hz). *Adm*: \$5. ecara.net

ARRL DELAWARE STATE CONVENTION

April 23, Georgetown, Delaware
D F H Q R S T V
 7:30 AM – 2 PM. *Spr*: Sussex ARA, Cheer Community Center, 20520 Sand Hill Rd. *Ti*: 147.090 (156.7 Hz). *Adm*: \$6. radioelectronicsexpo.com

Georgia (Pooler) — Apr. 30 FT
 8 AM – 1 PM. *Spr*: Coastal ARS, Savannah Hilton Head Regional Airport Recreation Building, Crossroads Parkway. *Ti*: 442.70, no tone. *Adm*: Free. coastalamateurradiosociety.net/wpW4LHSblog/?page_id=10

Idaho (Kamiah) — Apr. 23 DFH R S T V
 7 AM – 2 PM. *Spr*: Clearwater Valley ARC, American Legion Hall, 618 Main St. *Ti*: 146.680 (100 Hz), 146.700 (88.5 Hz). *Adm*: \$5. Email: c53@att.net

Illinois (Sandwich) — May 1 DFHRT
 7 AM – 1 PM. *Spr*: Kishwaukee ARC, Sandwich Fairgrounds, 1401 Suydam Rd. *Ti*: 146.73, 146.520 simplex. *Adm*: \$8 Advance, \$10 door. karc-club.org

Convention and Hamfest Calendar (continued)

New York (Scotchtown) — May 1 D H Q R T V
8 AM – noon. *Spr:* Orange County ARC. Walkill Community Center, 7-9 Wes Warren Dr. *Tl:* 448.325 (123 Hz). *Adm:* \$6. ocarcny.org

ARRL ROANOKE DIVISION CONVENTION

April 16, Raleigh, North Carolina

D F H Q R S V

8 AM – 3 PM. *Spr:* Raleigh ARS, Inc. Jim Graham Building, 4285 Trinity Rd. *Tl:* 146.640, no tone. *Adm:* \$9 Advance, \$10 door. rarsfest.org

Ohio (Athens) — Apr. 23 D F H R T V

8 AM – 1 PM. *Spr:* Athens County ARA. Athens Community Center, 701 East State St. *Tl:* 145.15, no tone. *Adm:* \$5. ac-ara.org

RV RADIO NETWORK SPRING RALLY

April 25 – 29, Millersburg, Ohio

S

All week. *Spr:* RV Radio Network. Berlin RV Park, 5898 OH-39. *Tl:* 146.67 (71.9 Hz). *Adm:* Free. rvradionetwork.com

Pennsylvania (Bristol) — May 1 D F H Q R S T V

7 AM – 2 PM. *Spr:* Warminster ARC. Bucks County Community College-Lower Bucks Campus, 1304 Veteran Hwy (Rte. 413). *Tl:* 147.09 (131.8). *Adm:* \$7. k3dn.org/hamfest

Pennsylvania (Spring Grove) — Apr. 30 D F H Q R S T V

8 AM – 1 PM. *Spr:* York Hamfest Foundation. Elicker's Grove Park, 511 Roth Church Rd. *Tl:* 147.330 (123.0 Hz). *Adm:* \$5. yorkhamfest.org

Tennessee (Bartlett) — Apr. 9 D F H Q R S T V

9 AM – 3 PM. *Spr:* Mid-South ARA. Bartlett Station Municipal Center Auditorium, 5868 Stage Rd. *Tl:* 147.03 (107.2 Hz). *Adm:* Free. maraonline.org/freefest

Tennessee (Greenville) — Apr. 16 D F H R T V

6 AM – noon. *Spr:* Andrew Johnson ARC. Greene County Fairgrounds, 123 Fairgrounds Cir. *Tl:* 145.390 (88.5 Hz). *Adm:* \$5. greenvillehamfest.com

Texas (Emory) — Apr. 23 D F H Q R T V

8 AM – noon. *Spr:* Rains Amateur Radio Association. Rains County Fairgrounds, US 69 at State Hwy 19. *Tl:* 146.92 (88.5 Hz). *Adm:* \$5. w5ent.org

Wisconsin (Cedarburg) — Apr. 30 D F H R

8 AM – noon. *Spr:* Ozaukee Radio Club. Ascension Columbia St. Mary's Expo Center, W67N890 Washington Ave. *Tl:* 146.97 (127.3 Hz). *Adm:* \$5. ozaukeeradioclub.org

Wisconsin (Superior) — May 7 D F H Q R V

9:30 AM – 1 PM. *Spr:* Arrowhead Radio Amateurs Club. Head of the Lakes Fairgrounds, 4700 South Tower Ave. *Tl:* 146.940 (103.5 Hz). *Adm:* \$7. www.thearac.org

To All Event Sponsors

Before making a final decision on a date for your event, you are encouraged to check the Hamfest and Convention Database (www.arri.org/hamfests-and-conventions-calendar) for events that may already be scheduled in your area on that date. You are also encouraged to register your event with HQ as far in advance as your planning permits. See www.arri.org/hamfest-convention-application for an online registration form. Dates may be recorded up to 2 years in advance.

Events that are sanctioned by ARRL receive special benefits, including an announcement in these listings and online. Sanctioned conventions are also listed in *The ARRL Letter*. In addition, events receive donated ARRL prize certificates and handouts. Once the form has been submitted, your ARRL Director will decide whether to approve the date and provide ARRL sanction.

The deadline for receipt of items for this column is the **1st of the second month preceding publication date**. For example, your information must arrive at HQ by **May 1** to be listed in the **July** issue. Information in this column is accurate as of our deadline; contact the sponsor or check the sponsor's website for possible late changes, driving directions, and other event details. Please note that postal regulations prohibit mention in QST of games of chance, such as raffles or bingo.

Promoting your event is guaranteed to increase attendance. As an approved event sponsor, you are entitled to special discounted rates on QST display advertising and ARRL web banner advertising. Call ARRL's toll-free number at 1-800-243-7768, or email ads@arri.org.



ARRL News

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

Rick Lindquist, WW1ME, ww1me@arrl.org

Happenings

Amateur Operation in the 3.45 – 3.5 GHz Segment of 9 Centimeters Must Cease by April 14, 2022

Amateur radio operation in the 3.45 – 3.5 GHz segment of the 9-centimeter band will no longer be allowed after April 14, 2022. Secondary operations will be permitted to continue indefinitely in the remainder of the band, 3.3 – 3.45 GHz, pending future FCC proceedings.

On January 14 the FCC released DA 22-39, which announces the results of

Auction 110 for the 3.45 – 3.55 GHz band. Release of this notice triggered FCC rules adopted last year, requiring that amateur radio operations between 3.45 and 3.5 GHz cease within 90 days of the public notice.

In October, ARRL President Rick Roderick, K5UR, urged Congress to direct the FCC to preserve amateur radio's secondary use of the 3 GHz



band in a written statement responding to H.R. 5378, the Spectrum Innovation Act of 2021, before the US House

Commerce Communications and Technology Subcommittee.

A chronology of actions responding to amateur access on the 3.5 GHz band can be found on the ARRL website, at www.arrl.org/3-ghz-band.

ARRL Highlighted Among NASA's Best Space Station Science Pictures of 2021

NASA has recognized Amateur Radio on the International Space Station (ARRL) as a science education and research program. Two images of ARISS activity are among those singled out by the space agency as some of the Best Space Station Science Pictures of 2021 (www.nasa.gov/mission_pages/station/research/news/best-space-station-science-pictures-2021). ARRL Representative to ARISS-International Rosalie White, K1STO, said recognition is significant because it shows that NASA considers the ARISS program to be within the realm of science education and research. "They call our radio contacts 'ISS experiments,' just as we call each radio contact an ARISS experiment," she said.

The introduction to the new video, which NASA shared on Twitter, is, "It has been a busy year of research aboard the International Space Station. NASA's SpaceX Crew-1, Crew-2, and Crew-3 missions supported hundreds of science experiments aboard the orbiting laboratory."

ARRL team member Armand Budzianowski, SP3QFE, wrote, "It is phenomenal that we were honored as creating science. It is a proud moment that ARISS and amateur radio were honored for the field of science and research by NASA!"



Astronauts Shannon Walker, KD5DXB, and Soichi Noguchi, KD5TVP, during an ARISS ham radio contact with students at Hisagi Junior High School in Zushi, Japan.



NASA Astronaut Raja Chari, K5LIU, spoke with students from Colegio Pumahue in Chile. The program's goal is to spark student interest in mathematics and science, and to inspire the next generation of explorers. Selected students learn about the station, radio waves, and other topics, and prepare questions before their scheduled call.

(Continued on next page)

ARRL News (Continued)



Rick Lindquist, WW1ME, ww1me@arrl.org

Amateur Radio World

Amateur Radio Challenged by Tonga Emergency

Radio amateurs worldwide have expressed concern over the situation in the Kingdom of Tonga, after a volcano on an uninhabited island in the archipelago erupted on January 14 and set off tsunami warnings.

A representative of International Amateur Radio Union (IARU) Region 3 has said that amateur radio in Tonga is difficult, as there are currently no HF operators and only a few transceivers in storage. An amateur radio emergency communication network may be set up in the future.

In the wake of the volcano, operators were asked to keep the IARU Region 3 emergency frequencies clear. They are 3.600, 7.110, 14.300, 18.160, and 21.360 MHz. ARRL has reached out to the IARU Region 3 emergency communications representative to offer any assistance.

The volcano spewed a huge cloud of electrically charged ash that has disrupted or impaired telecommunications, including satellite and telephone networks, although at least one native of Tonga, who now lives in California, got word via a brief satellite telephone call that her family and others in the vicinity were all okay. Electrical power was also affected. Maritime VHF communication is said to be possible.

Efforts Continue to Resolve Potential Amateur Interference to Satellite Navigation System

IARU Region 1 continues wrangling with the issue of interference potential to Galileo global navigation satellite system (GNSS) sites in Europe from



The volcano eruption in Tonga. [Photo courtesy of Tongan Geological Services]

amateur radio operation in the 1240 – 1300 MHz (23-centimeter) band. Considerable work has gone into documenting an interference case on a single Galileo channel between a “very local” Italian 23-centimeter repeater and receivers at the nearby Joint Research Centre, the European Commission’s science and knowledge service, in Ispra, where Galileo applications are developed and tested.

As a consequence of this single instance of interference, the IARU has been engaged for several years in defending amateur interests on 23 centimeters. Considerable computer modeling has gone into the effort, in advance of World Radiocommunication Conference 2023 (WRC-23).

In 2018, the FCC granted, in part, the European Commission’s request for a rules waiver so that non-federal devices in the US may access specific Galileo signals to augment the US Global Positioning System. The two systems are interoperable and RF compatible.

“The impact of traffic through this very local repeater (12.5 kilometers distant) on three different Galileo receivers has been documented,” Barry Lewis, G4SJH, Chair of IARU Region 1 Spectrum Affairs, said. “This work suggests that while RNSS receiver bandwidth can have a part to play in enabling coexistence, beyond that nothing has been reported that could help develop any coexistence criteria.”

IARU Region 1 President Don Beattie, G3BJ, stated last year that IARU doesn’t want the Amateur Radio Service to affect Galileo system operation.

Lewis said the IARU has provided extensive information regarding amateur applications in the 1240 – 1300 MHz band, as well as operational characteristics and data indicating the density of active transmitting stations and the busiest periods when these are most likely to be operational.

“Amateur transmissions virtually anywhere in the band will be co-frequency with the RNSS receivers from one system or another,” Lewis said. He suggested that “some compromises will need [to] be necessary” to develop a coexistence model.

(Continued on next page)

ARRL News (Continued) April First Article

The Better Antenna: Copper Versus Aluminum

A highly scientific overview of aluminum and copper and how they function as conductors of electricity.

Pete Varounis, NL7XM

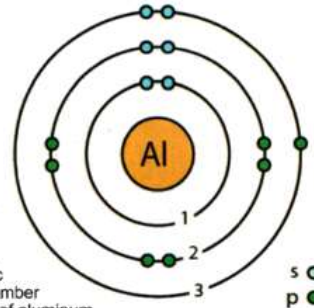
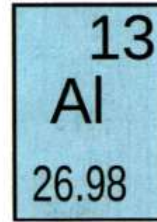
In the "Hands-On Radio" column from the March 2008 issue of *QST*, Ward Silver, NØAX, describes how metals conduct electricity. He said, "Electrons collide with the atoms that make up material as they flow through it. The collision transfers some of the electron's energy to the atoms, which vibrate in response. These vibrations increase the temperature of the material," and because of the resulting friction, electrons create power dissipation, which can be calculated as:

$$\text{Power (P)} = I^2 \times R \text{ or } P = E^2 / R$$

Let's assume we are feeding current to a copper wire dipole antenna. We would expect electrons encountering the antenna's first copper atom to navigate all the way to the far end of the antenna's last copper atom. But electrons are lazy, and will take an easier, more efficient process to accomplish the same result.

Much like a fire bucket brigade, an electron will instead simply replace another electron on one of its rings of the first copper atom it encounters, liberating that one electron to bump free an electron from the very next copper atom and so on, like an assembly line or baton in a relay race.

It becomes obvious that this permits individual electrons to travel much shorter lengths, and gives them time to rest before they have to work again.

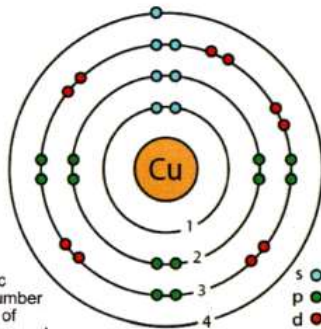
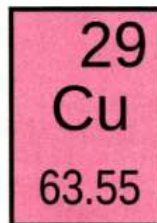


Aluminum (Al) is an element on the periodic table with an atomic number of 13. The Bohr model of aluminum (right) shows the nucleus surrounded by the 13 electrons. It has three valence electrons. Aluminum is a lightweight metal with a density lower than those of other common metals.

Copper has 29 electrons and aluminum only has 13. Therefore, copper is much more efficient, because it has more participating electrons distributing the workload before they have to be disturbed again.

All this can be proven with simple observations. The longer a wire antenna is up, and the more power you put into it, the more electrons will exchange places. This will make the electrons very, very tired, and when exposed to all kinds of cold and rainy weather, many will lose their grip, die, and fall off.

This is why, after a few years, all wire antennas will eventually start to sag.



Copper (Cu) is an element on the periodic table with an atomic number of 29. The Bohr model of copper (right) shows the nucleus surrounded by the 29 electrons. With one valence electron, copper is a good conductor of heat and electricity.

All figures courtesy of Wikimedia Commons.

Licensed for 40 years, Pete is a Life Member of ARRL, Antique Wireless Association (AWA), and a Board Director of Quarter Century Wireless Association (QCWA). He is a Senior Member of RCA and A-1 Operator Club, the 2018 winner of the prestigious AWA Houck Award for Preservation, and the official US call sign historian for RCA and QCWA, maintaining a World-Class Call Book Library dating to 1909. Pete has worked closely with Executive Producer John Amodeo, AA6JA, designing custom call signs assigned to Tim Allen's fictitious characters from Fox TV's comedy *Last Man Standing*.

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



(Continued on next page)

ARRL News (Continued)

ARRL actually starting to do things for clubs

MARCH 23, 2022 BY DAN KB6NU



If any of you have read my blog over the years, you know that I'm often critical of the ARRL's efforts to help affiliated clubs. Even so, hope springs eternal. Last year, they hired Mike Walters, W8YZ, and he's actually started to do things to help clubs. For example, the ARRL has finally started publishing the clubs newsletter again.

Another step in the right direction is that the ARRL Foundation will soon start a clubs grant program, as a result of being awarded a \$600,000 grant from ARDC. This program will award up to \$25,000 to clubs for projects like repeater upgrades, licensing classes, and emergency communications equipment.

More direct help for clubs

The latest issue of ARRL Club News promises even more direct help for clubs. An item in the newsletter calls for volunteers to serve as Clubs Grant Coach or Club Mentor. Here's how the newsletter describes these positions:

The **Club Grants Coach** is a person that can collaborate with a club to help them create or refine a grant application. As grant applications come in there will be some that need assistance with the process. This person should be able to work with a club to help visualize and present their ideas for a grant. They will not be responsible for writing the applications, but they will be helping the clubs get organized and through the application process. Grants Coaches will start work after the first round of applications.

The **Club Mentor** will work with a club that may be struggling to survive, helping them reorganize or structure programs to help the club grow. Some clubs are on virtual life support and can benefit from a Mentor to help them develop new outlooks and ideas and execute a rebuilding program for their club.

(Continued on next page)

ARRL News (Continued)

ARRL actually starting to do things for clubs (continued)

It goes on to say, “Both positions will receive training in the processes that they will need to do the jobs and will be supported by the Field Services Team at ARRL” To volunteer, email mwalters@arrl.org.

Give clubs a bigger kickback

Another thing that the ARRL could do for clubs is to give them a bigger kickback on new member signups and membership renewals. As it currently stands, clubs get only a \$2 commission when a member renews through their club. At that rate, it’s really not worth it for clubs to bother collecting ARRL dues. Clubs do get a \$15 commission for signing up new members, but there would be even more incentive for clubs to get involved if the renewal commission was higher. And, to make this program really work, the ARRL needs to automate this process somehow to make it easy for a club treasurer to enter the names, call signs, and addresses of the members joining or renewing and to make the payment.

Even so, both the restart of *ARRL Club News* and the start of the club grants program are both positive signs. I’m looking forward to the cool projects that the grants program will make possible.



ARRL News (Continued)

New Amateur Radio License Applications Fee To Become Effective April 19, 2022

A Public Notice released by the Federal Communications Commission (FCC) on March 23, 2022, in [MD Docket No. 20-270](#), announced that new application fees for Wireless Telecommunications Bureau applications will become effective on April 19, 2022. The new fees, mandated by Congress, apply to applications for Amateur Radio licenses including those associated with filing Form 605, the Amateur Operator/Primary Station Licensee Application.



Effective April 19, 2022, a \$35 fee will apply to applications for a new Amateur Radio license, modification (upgrade and sequential call sign change), renewal, and vanity call signs.

Anticipating the implementation of the fee in 2022, the ARRL Board of Directors, at its July 2021 meeting, approved the "ARRL [Youth Licensing Grant Program](#)." Under the program, ARRL will cover a one-time \$35 application fee for license candidates younger than 18 years old for tests administered under the auspices of the ARRL Volunteer Examiner Coordinator (ARRL VEC). Qualified candidates also would pay a reduced exam session fee of \$5 to the ARRL VEC. ARRL is finalizing details for administering the program.



ARRL had filed comments in opposition to imposing a fee on Amateur Radio license applications. The FCC initially proposed a higher, \$50 fee. In a Report and Order (R&O), released on December 29, 2020, the amount was reduced -- the FCC agreeing with ARRL and other commenters that its proposed \$50 fee for certain amateur radio applications was "too high to account for the minimal staff involvement in these applications."

ARRL Volunteer Examiner Coordinator (ARRL VEC) Manager Maria Somma, AB1FM, explained that all fees are per application. "There will be no fee for administrative updates, such as a change of mailing or email address. The fees will be the responsibility of the applicant regardless of filing method and must be paid within 10 calendar days of FCC's receipt of the application. For applications filed by a VEC, the period does not begin until the application is received by the Commission, a ULS file number assigned, and an email sent by the FCC directly to the applicant." (Continued on next page)

ARRL News (Continued)

New Amateur Radio License Applications Fee To Become Effective April 19, 2022 (Continued)

VECs and Volunteer Examiner (VE) teams will not collect the \$35 fee at license exam sessions. New and upgrade candidates at an exam session will continue to pay the \$15 exam session fee to the ARRL VE team as usual, and pay the new, \$35 application fee directly to the FCC by using the CORES FRN Registration system ([CORES - Login](#)).

When the FCC receives the examination information from the VEC, it will email a link with payment instructions to each successful candidate who then will have 10 calendar days from the date of the email to pay. After the fee is paid and the FCC has processed an application, examinees will receive a second email from the FCC with a link to their official license or explanation of other action. The link will be good for 30 days.

Somma also explained that applications that are processed and dismissed will not be entitled to a refund. This includes vanity call sign requests where the applicant does not receive the requested call sign. "The FCC staff has suggested that applicants for vanity call signs should first ensure the call signs requested are available and eligible for their operator class and area, and then request as many call signs as the form allows to maximize their chances of receiving a call sign."

Further information and instructions about the FCC Application Fee are available from the ARRL VEC at www.arrl.org/fcc-application-fee. Details for the ARRL Youth Licensing Grant Program will be similarly posted there, when available.

Meeting Resources

Anyone that has been involved with a club knows that it is a challenge coming up with meeting materials and presentations. Club meetings should be more than just listening to the repeater and treasurer reports. Here at ARRL Headquarters, we get requests all the time to speak at meetings. Unfortunately, there are only so many of us and resources are thin. However, we can offer clubs the ARRL Learning Center as a resource. There you will find a list of presentations on a variety of topics. The recordings can be used at a club meeting,



even a virtual meeting. Most have a contact for additional information, and they are all. The only requirement is that whoever logs into the Learning Center must be an ARRL member. Their ARRL website credentials will get them in. Check it out and try it for a meeting. The address is <https://learn.arrl.org>. Most of the content in the webinars section is the perfect length for a club meeting. You will also find training programs and educational materials for the member and the club.

Continued on next page

ARRL News (Continued)

Spring has Sprung

With the warmer spring weather approaching, many operators have begun to get started on antenna and tower projects. Ward, N0AX, shared some tower climbing safety tips that he and other fellow tower climbers were discussing. Specifically, what to do if your muscles start to cramp while on the tower.

An unpleasant surprise when climbing or working on a tower is the onset of cramps in legs, arms, or hands. Even the most experienced climbers can be rattled by cramps, which come on suddenly and release slowly. When muscles, in particular those of your fingers, hands, or arms, refuse to respond normally, it's time to immediately stop whatever you were doing and recover.

Dealing with cramps begins before you ever start up the tower. Eat a meal with the right minerals and drink plenty of Gatorade or another fortified sports drink of your choosing, particularly if you will be working in high temperatures. During extended periods on the tower, continue to drink a quart of fluids every hour or so. One sports drink per three or four bottles of water works well. Everyone, young and old, must make the time to do this!



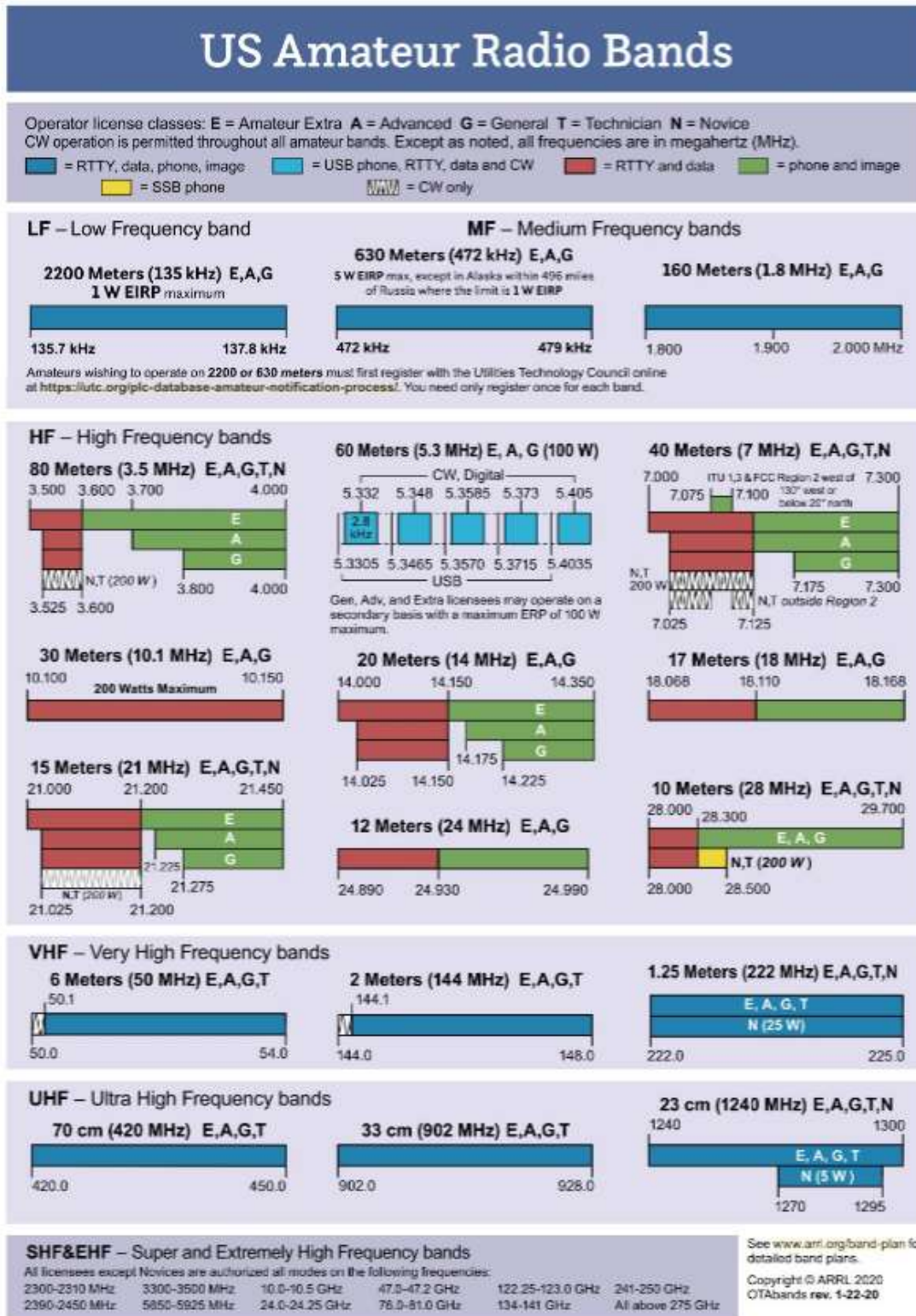
Climbing and working aloft works our hands and arms much harder than usual, with a very tight grip that restricts the blood from getting oxygen to your muscles. Your arms are working at or above chest level, making blood flow even more difficult. Remember to stop every so often and drop and shake out your arms to restore full blood flow and flush out and re-oxygenate your muscles. Climb and work slowly and deliberately with frequent rests while the climbing gear supports your weight.

If you find yourself cramping, don't panic. Your climbing gear will keep you secure. Cramps are just one reason to be attached to the tower 100% of the time, whether climbing or working. Your body is telling you that it has run out of something important and needs attention. Have your ground crew send up some fluids immediately. Start with sports drinks and let your body absorb them. Allow adequate time for your body to relax. Do some flexing. If the cramp is in your arms, alternate between letting your arm hang loosely at your side and then placing your hand palm-up on top of your head to gently stretch the muscles.

Consider your options carefully - should you continue working or retreat to the ground to rest? After a cramp, you may not be at full-strength for some time. Another cramp when you're doing heavy work or not completely secured is an unnecessary risk. Whatever you were doing can wait until you are fully recovered from the cramp. The safety of you and your ground crew are of the utmost importance.

-Thanks to Ward Silver, N0AX and friends.

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.arri.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).

