

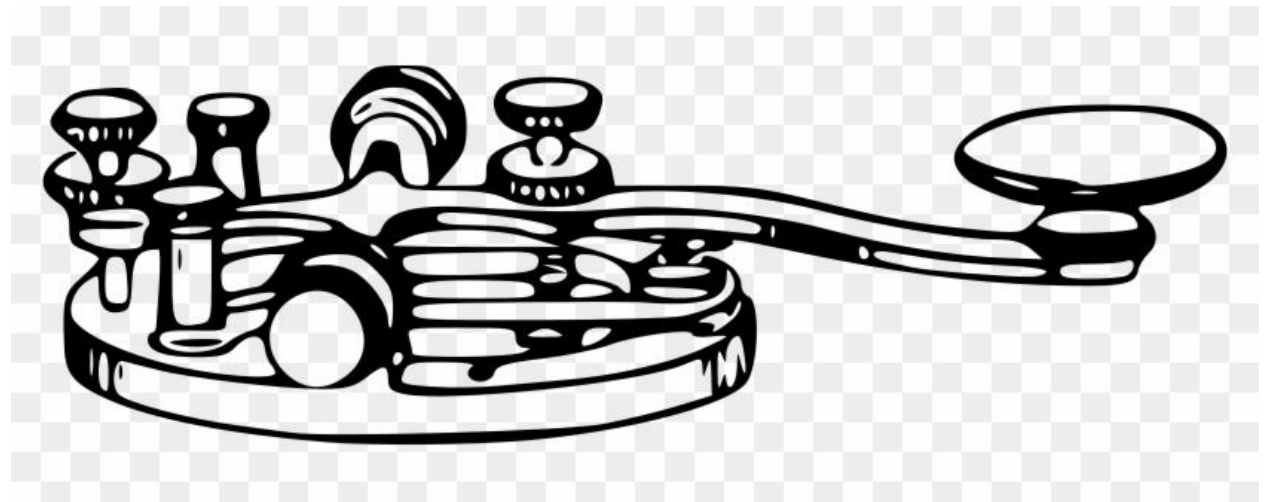


QSA-5

Marin Amateur Radio Society Monthly Newsletter

Established 1933

December, 2021



When all else fails, you can count on Amateur Radio

From Our President:

The Holiday season is well and truly upon us. I hope you had a happy Thanksgiving. The rest follows hard upon and although at the time I write this I have not heard any Christmas music; I suspect I will have heard some before you read this. I also want to wish you all a merry Christmas and a happy new year.

I am hearing in the chatter that there is some interest in restarting the Sunday morning sessions at the club house, and to that end it is on the agenda for the next board meeting. Several months back at a regular club zoom meeting I asked for show of hands on who would be interested in coming in on Sunday morning and got no response. I intend to ask that question again at the December 3rd club meeting. If we do open back up you would need to be masked and keep your distance. The covid virus continues to make us reconsider going back to “normal” so any decision we make is subject change. This morning the news mentioned a new variant that has been identified in South Africa and that has replaced the delta variant as the most commonly found. Little is known about it yet but European countries are announcing travel bans again. If we decide to reopen on Sunday mornings it would not be until February but If you are interested in attending on Sunday morning, please let me know at wa6uda@w6sg.net.

I often get emails from the contact us page on the website asking for help with a particular practice or technology. Some of the time I know exactly who to refer the request to but often I am at a loss. This morning I got one about D-Star. Although MARS has never put up a D-Star system I suspect that there are some of you out there who have the skill, the time, and the willingness to help out another ham. It dawned on me that perhaps I could cultivate a list of folks who I could direct the inquires to. If you joined the list the only expectation would be that you would reply to the person asking the question and cc me so I knew someone responded. The response could be that at moment time you don't have the time. I would want to include topics that I see frequently like “I would like help choosing an antenna” or “I need help setting up my DMR radio”, “a group of us have a need to communicate by radio, what are our options”, “Can someone help me install a radio in my boat?”. When I listen to the Fun with Ham Radio portion of the meetings, I am always impressed by the amount of technical expertise you have out there and perhaps with a list I can help connect a person asking for help with someone who can

provide it. If you would be interested in being on such a list, wet me know at wa6uds@w6sg.net

73 de wa6uds

From the Editor:

Happy holidays everyone! Well, we've made it through another year, one that left us with more questions than answers regarding the future! The holidays are here and just around the corner, the new year. This new year will hopefully deliver us into better times. The Marin Amateur Radio Society has been busy, coming to life again after a long period of being locked down due to the pandemic. In short, life as we know seems to be slowly returning to normal, at least a new normal. The QSA-5 publication has started to receive more input from its readers regarding content, which makes me happy. We have also started to add some graphic content as well!

We still need more ideas regarding content and would like to hear from everyone in our club. All it takes is an email to me with a one-line message regarding what you want to see within the pages of the QSA-5. Remember, this is your publication. I'm just a glorified typist who occasionally grabs the rudder in desperation to make sure the ship is following its course. One topic that has come up is DMR or Digital Mobile Radio. I've been involved in DMR for the last year and now build my own WiFi hotspots. I had no idea that there were other club members interested in this form of communication. I would not have found out about other club members interest in DMR if one of our ranks hadn't emailed me regarding this subject. The QSA-5 will now include a monthly column, starting in January, dedicated to DMR. This is a great example of our club making this publication better. Keep thoughts, ideas and suggestions coming in and the QSA-5 will include them. If you have any thoughts or ideas, email me at:

QSA-5Editor@w6sg.net



General Membership Meeting: November 5th, 2021

Call to Order: 19:31 Hours (7:31 PM)

Approve minutes: August and September meetings M/S/A

Adopt Agenda: M/S/A

New Members:

Jason Sloan KN6ROS - San Rafael

Lara Sloan - San Rafael

Alexander Peck KN6RST – Novato

John Woo KN6RAP

Spencer Holtaway – San Rafael

Board Actions:

Hybrid meetings were devised, and tonight's hybrid general meeting is a result, the first hybrid online/in-person General Meeting for MARS.

The MARS board nominating committee was formed. Doug KF6AKU not in attendance tonight to report on this. A bit more later in this meeting.

Presentation:

Rob NZ6J did a presentation on the mesh network.

Fun with Ham Radio:

Milt KM6ASI and **Jerry WA6BXV** repaired a bad power connector at the Bahia repeater to repair its poor recent operation. The fried connector was shown to the room and the Zoom audience.

Rob NZ6J showed a lightweight LiFePO4 battery that is much cheaper than the Bienco batteries that many of us buy. It was very light and handed around the room to show that.

Rob K6RJI talked about a small VTec mobile radio in his car having very poor internal audio so he connected to his car stereo via a particular BT streaming adapter that auto connects whenever power is applied as the car is turned on.

Antonis AA6PP updated us on an SFRC [POTA/IOTA/SOTA event](#) coming up tomorrow.

Eric Z showed us a new radio Go Box he built. It was rack mounted in an [iPortable Pro 2 flight case](#) with a Yaesu 857 and a DMR radio with power interface, antenna tuner, etc. He'll be using it as the Dipsea event on Sunday.

We all talked about the tech we are using for this hybrid meeting, explaining the audio and video tech being used.

Secretary – Communications:

Brian reported that he feels the hybrid meeting tech is solid enough to use on an ongoing basis. Curtis agreed.

Treasurer's Report:

Bruce had nothing new to report beyond what has been published in QSA-5.

Committee and other Reports:

1. Membership 148 | 106% (of end of 2020)

2. Facilities

No major updates since last meeting. Rob **NZ6J** reported that the neighbor on the 29 Shell Rd. side of the clubhouse suffers garage flooding frequently and it *may* be related to some drainage problems on our property. Curtis reminded that the drainage issue is being tackled by the board.

Rob also reported that we had a meager 7 bids ranging from \$7.50 to \$50.00, leaving us with a lot of gear and very little in the way of proceeds. Rob suggested we keep the auction open a little longer, cajoling in-person attendees tonight to buy items before they leave tonight! Skip said the remaining gear is headed for recycling at some point. No reasonable offer will be refused tonight on location.

It was informally decided to keep the auction open through the end of November after which remaining gear will be subject to recycling. Andrew KI6UOC offered to truck the remaining gear to our Reno recycler on his holiday road trip that is taking him that way.

3. Education: N/A

4. Repeaters

Milt reported that Bahia is back in good shape, as noted above, thanks to a power connector repair that was clearly badly needed. San Rafael Hill repeater has been up and running on UHF for about 6 weeks now.

A NEW Big Rock repeater (UHF) is up! Tune to 442.174 PL +156.7.

Curtis said he will get these new repeater details onto the club web site asap, but under Other Repeaters, due to the fact that these new repeaters are assigned to W6ECU through trustee Dan Healy on behalf of RACES and RCV. Both these hardware installations were installed by the County.

5. VE – 10/9/21

Ken AB6JR says exams will be predictably quiet until a likely Jan 8 exam date, due to seasonality.

6. VOAD

Skip KJ6ARL reported that VOAD and RCV continue to develop together. RCV took part in the [Golden Eagle exercise this past week](#) from its CBO locations around Marin. **Ann K6SHO** recounted how she was reported to Marin Health Security by several people who were suspicious of what she was doing!

Beyond that, however, several other RCV operators reported great feedback from officials involved as well as from a few members of the public who saw us out on the street and knew what we were doing thanks to a [Marin IJ story that featured Skip KJ6ARL](#).

Old Business: N/A

New Business:

Board Elections: Curtis reported that a slate of candidates is not ready to share yet, but ballots will be coming soon so that the election results can be reported at the December General meeting.

The December general meeting is not going to be the usual holiday dinner, so it will remain on the first Friday as normally scheduled.

Good of the Order:

Adjourn: Meeting adjourned at 8:34

Post-agenda Presentation: N/A

Next General Meeting: December 3rd, 2021



Marin Amateur Radio Society Board of Directors Meeting

Call to Order

President: Curtis Ardourel WA6UDS

Secretary: Brian Cooley K6EZX

Vice President: Milt Hyams KM6ASI

Trustee W6SG: Mitch Martin WU1Q

Director: Skip Fedanzo KJ6ARL

Treasurer: Bruce Bartel N6VLB

Director: Mark Klein KM6AOW

Director/Trustee K6GWE: Doug Slusher KF6AKU

Adopt agenda: M/S/A

Approve minutes: 14 October M/S/A

Secretary's Report/Communications:

Brian K6EZX advised that he has two meetings left as Secretary and that he is happy to evangelize the position to any new potential board members that are being groomed for a run. Also, he will not be in-person at the next General Meeting so someone else needs to be ready to run the A/V tech for the Zoom part of the hybrid meeting.

Treasurer's Report:

Curtis WA6UDS recently paid for the club's 1.) web site hosting and 2.) domain registration (W6SG.com and W6SG.org) and will be submitting a request for reimbursement to **Bruce N6VLB**. The board was asked to pre-authorize that reimbursement at a maximum of \$450. M/S/A by a quorum of board members in attendance (not including Curtis who is the party being paid).

Bruce N6VLB has looked into a club credit card. Our bank said it would have to be tied to Bruce's and Curtis' individual signatures and credit reports, which is a less than optimal arrangement. It seems we don't have the ability to get a card from our bank with the club as the issued cardholder

Milt KM6ASI suggested we proceed soon with a rental increase for our tenant. The timing was discussed, and it seems to have been irregular in the past. Curtis will put the matter on the December board agenda for a more formal discussion.

Committee and other Reports:

1. **Membership:** – 148 | 106%
2. **Education:** N/A
3. **Facilities Rob: NZ6J** reported that **Michael K6MLF** has a work party ready to change the comm van enclosure on Thursday 11/18 at 14:30 PT. Milt KM6ASI suggested that also be the date on which we get some board members together to inspect the drainage situation at the back of the property. **Skip KJ6ARL** confirmed he will be there at that time to lead the inspection tour.
4. **Public Service: Pam N6PDW** reminded us that we have successfully concluded a busy PS season. **Rob NZ6J** said we may want to soft pedal our involvement in the previously discussed ultra-endurance run that has been mentioned as a possible new event for our PS calendar in 2022; The organizer seems like they may not be terribly well sorted out. The event is the [2021 Golden Gate spartan gate trail classic](#) weekend.
5. **Technical: Doug KF6AKU** says we have pending work coming up on Tam West's receive side which seems off its game lately, perhaps because of the heavy wind and rains a few weeks ago. We also received a complaint from a repeater operator in Morgan Hill alleging some interference, but the complaint was not very specific. Doug will follow up with a call to the complainant. He believes it may be the same system with which we have a standing agreement to co-exist even if a small amount of interference does exist.
6. **RCV (VOAD): Skip KJ6ARL** reported further 1:1 meetings have been held with 5 out of the 7 Community Based Organizations (CBOs) that RCV serves, and that RCV took part in the recent [Golden Eagle emergency radio drill](#). A date is set to go before the DC3 ([Marin Operational Area Disaster and Citizen Corps Council](#)) (of which **Milt KM6ASI** is a new member) for more formal adoption of RCV in Marin. If there are no issues the next step would be to go

to the county board for a formal 5-year commission. At that point RCV will move to recruit more operators so that it can then recruit more CBOs.

Old Business:

1. **Tower: Milt KM6ASI** is calculating the right time to escalate this request to the right person. As such, the issue may remain quiet until early next year.
2. **Life membership** N/A
3. **Frequency coordination:** Largely covered above in Technical.
4. **Sale of catalogued equipment:** The silent auction remains alive through the end of November, as discussed earlier in the most recent board and General meetings.
5. **Hybrid Meetings: Curtis WA6UDS** reported that we have had 1 board and 1 general meeting via the hybrid Zoom/in-person hybrid arrangement. It was generally agreed that Board meetings will be Zoom only since they involve a smaller group, while General meetings will become hybrid TFN, since their larger attendance warrants the technical effort to put on a hybrid meeting.

It was also discussed how we could resume our Sunday “Bible Study” sessions at the clubhouse. The board members agreed we would need to have some way to keep attendance from growing too large and some way to monitor compliance with whatever COVID guidelines are in place at any given time. It was agreed that February is probably the earliest we could do this in any event. Curtis will add a note to this effect to the December General Meeting to gauge what kind of appetite exists to resume Sunday “Bible Study” at the clubhouse.

6. **Drainage:** Covered above, under Facilities.
7. **Election: Skip KJ6ARL, Tom KGTCM, Ken AB6JR** are all confirmed as candidates running for the MARS board in the upcoming December election. Others will be confirmed by Doug ASAP.

- 8. Awards** COVID has interrupted a lot of what we do as a club which makes it harder to ascertain which members deserve any of our annual awards (which are we not required to award in any given year). That said, **Milt KM6ASI** initiated a discussion about whether it is appropriate to consider board members for awards or to exempt them from consideration. It was noted that the award policies are contained on the [Awards page](#) on the site, not formalized in the club bylaws so we have plenty of latitude on this issue.

It was agreed generally that significant recognition should be given to **Michael K6MLF** who is wrapping up a long and highly regarded run as Public Service head. **Milt KM6ASI** also noted that **Skip KJ6ARL** took on a Facilities role, RCV development, and frequency coordination work this year and should be honored with an award for these many successful efforts.

- a. Ham of the year: TBD
- b. Hi Roberts Award: TBD
- c. John Butler “Elmer” Award: TBD
- d. Ted McMillian Youth Achievement Award: TBD

New Business: N/A

Good of the Order N/A

Executive Session: N/A

Adjourn M/S/A 20:28

Next Regular Meeting 3 December 2021

Next Board Meeting 7 December 2021

Club Financials

Marin Amateur Radio Club Balance Sheet Comparison As of September 28, 2021

Cash Basis Tuesday, September 28, 2021, 11:12 PM GMT-07:00 1/1

	TOTAL	
	AS OF SEP 28, 2021	AS OF SEP 28, 2020 (PY)
ASSETS		
Current Assets		
Bank Accounts		
B of A Building account - 8795	2,346.63	1,305.67
B of A General account - 4328	12,175.37	12,066.01
CD	25,000.00	25,000.00
Money Market	5,000.00	5,000.00
Public Service	234.91	
Skip Fedanzo	81.84	
Total Bank Accounts	\$44,838.75	\$43,371.68
Total Current Assets	\$44,838.75	\$43,371.68
Fixed Assets		
club house- 27 Shell Rd. MV	58,983.00	58,983.00
Total Fixed Assets	\$58,983.00	\$58,983.00
TOTAL ASSETS	\$103,821.75	\$102,354.68
LIABILITIES AND EQUITY		
Liabilities		
Total Liabilities		
Equity		
Opening Balance Net Assets	124,400.00	124,400.00
Retained Earnings	-22,636.76	-10,052.02
Net Income	2,058.51	-11,993.30
Total Equity	\$103,821.75	\$102,354.68
TOTAL LIABILITIES AND EQUITY	\$103,821.75	\$102,354.68

Marin Amateur Radio Club
Profit and Loss
January 1 - September 28, 2021

Cash Basis Tuesday, September 28, 2021, 11:08 PM GMT-07:00 1/1

	TOTAL	
	JAN 1 - SEP 28, 2021,	JAN 1 - SEP 28, 2021 (YTD)
Income		
Donations	262.03	262.03
Dues	6,676.47	6,676.47
Income club activities	828.00	828.00
Rent	22,525.00	22,525.00
Sales of Product Income	20.32	20.32
Total Income	\$30,311.82	\$30,311.82
GROSS PROFIT	\$30,311.82	\$30,311.82
Expenses		
Awards	400.00	400.00
Car & Truck	1,075.83	1,075.83
Equipment	< \$2,500 322.79	322.79
Food	1,536.00	1,536.00
Garbage	284.24	284.24
Insurance	6,140.35	6,140.35
Job Supplies	87.37	87.37
Legal & Professional	25.00	25.00
Reimbursable Expenses	2,965.04	2,965.04
Rent & Lease	150.00	150.00
Repair & Maintenance	2,281.66	2,281.66
Repairs & Maintenance	813.34	813.34
Repeater	0.00	0.00
Taxes & Licenses	4,550.56	4,550.56
Telephone	93.24	93.24
Uncategorized Expense	1,127.50	1,127.50
Utilities	5,701.35	5,701.35
VE Session	188.00	188.00
Water	511.04	511.04
Total Expenses	\$28,253.31	\$28,253.31
NET OP INCOME	\$2,058.51	\$2,058.51

NET INCOME

\$2,058.51

\$2,058.51

This is a news release, included within the board meeting minutes from last month, that you should look at regarding drainage issues and flooding due to rain. Since Northern California was recently hit with a massive rainstorm, QSA-5 felt this news release was of importance to its readers. After the news release, you will find agenda item 10 from the October MARS Board meeting regarding permitting issues. We should all thank Milt for dealing with the more often than not, confounding world of local government bureaucracy.



Residents in unincorporated areas can apply for financial aid for culvert repairs:

San Rafael, CA – Many private property owners are unaware that the maintenance of underground pipes and culverts on their property is often their responsibility. That can be the case even when the infrastructure on private property is an important drainage component for the community. Whether they realize it or not, homeowners may be relying on their neighbors for protection against water damage and flooding.

The [Marin County Department of Public Works](#) (DPW) offers a [Drainage Assistance Pilot Program](#) designed to assist private property owners in unincorporated areas of Marin with the repair or replacement of deteriorated culverts that serve public benefit, which can be cost prohibitive for some residents. Since the pilot program's initiation in 2019, nine residents have applied; two met the program criteria and have received financial assistance for repairs on their property.

The program has now been expanded to make it applicable to more homeowners. All applications are evaluated on a list of criteria and conditions, which has been revised from the initial set. While the pilot initially only allowed for in-place repairs, such as slip-lining a pipe, the expanded options now include excavation and replacement of culverts with equal or larger diameter pipe. Driveway culverts are excluded from the program. Neighbors sharing responsibility for drainage facilities can also band together to make improvements to deteriorated pipes in their neighborhood.

"We have expanded this pilot program with the goal of opening it up to more of Marin's residents and improving public safety across the board," said Eric Miller, Interim Assistant Director of DPW. "The effort is intended to be beneficial in helping reduce the risk of future damage not only to private property but also to public infrastructure across the county."

Drainage facilities, such as underground pipes and culverts, play a crucial role in maintaining proper waterflow and, in certain cases, protecting communities from flooding. If not properly maintained, drainage facilities deteriorate over time, which can become a public safety risk for neighbors as well as those living above the infrastructure.

Approved applicants would receive a cash contribution up to 50% of the total improvement costs, but not to exceed \$30,000. Condo units, which do not include apartment units, are assessed differently and would receive a cash contribution up to 50% of the total improvement costs, but not to exceed

\$50,000.

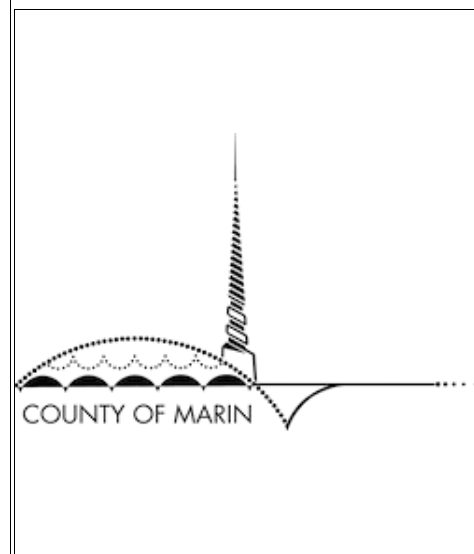
The program has \$357,000 in funding set aside for allocations. Once fully dispersed, the program would be reevaluated. The program would be covered by the County’s General Fund, but funding for any future iteration would be informed by the results of the pilot.

Approved projects under the program would move forward with the understanding that the County would not be involved in the design, contracting, or administering of the actual project implementation. Property owners are required to obtain all necessary permits associated with the work. All future ownership and maintenance of the improved private drainage facilities would remain the property owner’s full responsibility.

For more information, visit the [program webpage](#).

You have subscribed to News Releases & Advisories for Marin County. This information has recently been updated.

Visit the [Newsroom](#) to view all County news releases.

	<p>Not all events are sponsored by the County of Marin. County of Marin sponsored events are required to be accessible. If you are a person with a disability and require an accommodation to participate in a County program, service, or activity, requests may be made by calling (415) 473-4381 (Voice), Dial 711 for CA Relay, or by email at least five business days in advance of the event. We will do our best to fulfill requests received with less than five business days’ notice. Copies of documents are available in alternative formats upon request.</p>

Questions and Answers

This section of our publication is dedicated to any questions you have. If there is something you need or a problem you cannot solve, this is the place to seek assistance. Who provides the answers? Readers of the QSA-5 publication do!

While the next question was not directly sent into the QSA-5 Question and Answer section of the newsletter, I believe that the subject matter warrants our attention: Brian K6EZX had an antenna question and asked members for advice and received advice from the group at the October meeting regarding the best place to mount a new antenna on his pickup truck. We did some research and found several sources for antenna mounting issues:

Here's a link to the Radio Reference website's forum page that discusses this question:

<https://forums.radioreference.com/threads/best-place-to-mount-dual-band-antenna-on-pickup-truck.324814/>

Here is a page dedicated to mobile antenna mounting from Comet Antenna:

<https://cometantenna.com/land-mobile/no-holes-mobile-mount/mobile-mount-faqs/>

This final link comes from KV5R and is nicely detailed and explains the subject clearly.

<https://kv5r.com/ham-radio/mobile-antenna-placement/>

The next question, which was previously published, comes from Warren, regarding an antenna mount for his Tesla: I've been using a mag mount antenna with my Kenwood TM-V71A in my car (can't hit Mt Tam from home), but I'll be taking delivery of a Tesla Model Y soon, and it has a glass roof. What's the recommended antenna and mount for a Tesla?

Hi Warren, here are some links I found regarding radio installation on Tesla vehicles. While they cover the entire installation, they do give some thoughts on mounting an antenna.

Phil's Osophies: Phil describes his installation of a ham radio rig on his Tesla:

<https://blog.rosenberg-watt.com/2019/09/24/model-3-ham-radio-install/>

Tesla Owners Forum: You may find this a good starting point for trying to solve your problem.

https://forums.tesla.com/discussion/84568/ham-radio-and-m3?_cf_chl_jschl_tk__=pmd_GBBJrn3eYw0WYbQUxJQjCdDXCxYnc6lu0d6adiUvdYc-1632775692-0-ggNtZGzNAjujcnBszQjR

LIFE IS SIMPLE



Marin Amateur Radio Society News

MARS Board Member Elections

The Marin Amateur Radio Society is holding elections for new board members. Make sure to cast your vote. While it may seem like a trivial matter, it's important to participate in the election of board members because the future of our club is in their hands! Here's the email that our club president sent out:

You are invited to vote in the Marin Amateur Radio Society - MARS 2022 Board of Directors. The voting deadline is Dec 4, 2021, 8:30pm Pacific Time (US & Canada). We are using an online election system to tabulate our votes. You have been assigned a unique access key which can only be used to vote once, and your voting choices will remain anonymous. Do not forward this email. Do not reply to this email to vote, as your vote will not be registered. If you have election questions, feedback, or want to be removed from future ballot lists, please email Douglas Slusher at kf6aku@rfhell.com.

To vote, visit:

secure.electionbuddy.com/4CK6-N9BZ-LLQV-S9QM

Or copy and paste the link into your web browser.

You can also visit secure.electionbuddy.com/ballot and enter "4CK6-N9BZ-LLQV-S9QM"

November Critical Mass Event

What's a critical mass event? It's an opportunity for amateur radio operators to practice their communication skills in preparation for emergency situations. Who can participate? Any licensed Amateur Radio Operators with any level of experience. All you need to do is bring your radio, paper, and pencil. Here are some photographs of the Critical Mass event that took place in November. A big thanks to everyone who participated!









Second Silent Auction Extended

The Marin Amateur Radio Society held a silent auction to reduce the amount of donated equipment currently occupying our clubhouse. While the auction's original deadline has passed, it has been extended through the end of November. There is some great gear available, and the clubhouse needs to be cleared. All bids, within reason, will be considered. Our club President, Curtis WA6UDS, had this to say regarding the auction's start:

Greetings:

Our silent auction of equipment is now open. The link below will take you to a Google sheet listing the items for sale. It includes descriptions for every item and photos of many. Enter your bid and contact information following the instructions in the sheet.

- Bidding ends 26 October 2021 at 17:00
- All sales are final
- No returns
- All items sold as is
- You may set up a time to inspect items at our 27 Shell Road, Mill Valley Club House by contacting either Rob Rowlands NZ6J, rowlands47@gmail.com or Skip Fedanzo KJ6ARL drferret@comcast.net
- You may share the link but please do not download the sheet and share that as only bids entered directly into the Google Sheet will be considered.

The link

<https://docs.google.com/spreadsheets/d/1ZKvDYA6fXsBl4Q4EYt45u23W2g0WDSxnK7yzi3KDLk0/edit?usp=sharing>

Happy hunting!

73 DE WA6UDS

January VE Test Session

Ken AB6JR and his team of Volunteer Examiners have another scheduled exam session in January. The examination will take place on January 8th, 2022. While the holidays tend to bring with it a low number of examinees, the MARS VE team will nonetheless put on the event regardless of the number of individuals signing up for the testing date (unless no one signs up). Again, a big “thank you” to Ken and his team for bringing new amateur radio operators into the fold. If you know of anyone looking to get their first amateur radio license or upgrade their existing license, let Ken know. The QSA-5 will provide an update to this story in next month’s issue.

New Garage Installed at the Clubhouse

There’s been a great deal of activity at the MARS Clubhouse as we head towards getting back to business as usual. One important activity was the replacement of the garage used to house our mobile radio station. As always, our crack team of volunteers made quick work of the project. Thank you to everyone who participated. Here are some photographs from this event. Again, a big thank you to all who participated in the project!







Help Extend the SF Emergency Wireless Emergency MESH

Because the San Francisco Emergency Wireless Emergency MESH is such an important project, we are once again reposting this writeup about it.

From Rob Rowlands: We have about 6 nodes working in Marin so far and need people with property in high places to host more nodes. The mesh depends on line-of-site (LOS) paths between nodes interworking and while we have a great site on Wolfback ridge above Sausalito, there are multiple places we can't reach, for example the Club house! If you have access to homes or buildings with great views,

we may be able to mount a node, regardless of whether you want to connect (see the following page for a picture of the node).

http://meshmap.sfwem.net/map_display.php#11/37.8586/-122.3836



This is an example of a MESH Node

All it takes is space to mount a \$50 radio on a wall and connect it via ethernet cable to a power feed adapter. The radio node is about the size of a small loaf of bread and can be painted to appease your family! Call Michael Fisher (415) 519-2201 or Rob Rowlands (415) 849 5667 if you can help.

New Slack Chat Channel for MARS Members

Join our new Slack channel to chat about ham radio!

From Rob Rowlands: "Slack" is used extensively in industry and academia to network people, especially since Covid-19. MARS now has a Slack channel, "Marin Amateur Radio Society". Go to https://join.slack.com/t/marinamateurr-sq15924/shared_invite/zt-r9ocah4l-4G7PI8LAOssMMsnfIQ8QcQ. There is also a slack channel for the San Francisco Amateur Radio club that is highly active.

Ham Radio News

Each month, QSA-5 searches the internet for stories about amateur radio in the news. As editor of our publication, I merely present these articles and do not take a position regarding their message or content. Our first story comes from the ARRL regarding the current Solar Cycle:

The K7RA Solar Update: Tad Cook, K7RA, reports on some new solar activity in this piece from the ARRL

<http://www.arrl.org/news/the-k7ra-solar-update-707>

Ham radio users reach across world: Our next story comes to us from The Vindicator newspaper in Pennsylvania An interesting article about the power of amateur radio:

<https://www.vindy.com/news/local-news/2021/06/ham-radio-users-reach-across-world/>

ARDC Grants Will Expand Emergency Capabilities in Haiti and the US Virgin Islands: This article from the ARRL discusses how ARDC Grants will help build up emergency capabilities for radio communication on these Caribbean Islands.

<http://www.arrl.org/news/ardc-grants-will-expand-emergency-capabilities-in-haiti-and-the-us-virgin-islands>

Indian Radio Amateurs Help to Coordinate Disaster Relief in the Wake of Flooding: This article comes from the ARRL regarding Amateur radio operators in India assisting in the relief efforts going on after massive flooding has left many parts of the country devastated:

<http://www.arrl.org/arrlletter?issue=2021-10-28#toc10>

Upcoming Conventions: Here are a few of the upcoming ARRL Section, State, and Division Conventions It's further down the page so you'll have to do some scrolling on the webpage:

<http://www.arrl.org/arrlletter?issue=2021-10-28#toc16>

Ham Radio Operators Helping Family Members Locate Caldor Fire Evacuees: This piece promotes the use of amateur radio during emergencies and/or disasters:

<https://sacramento.cbslocal.com/video/5908770-ham-radio-operators-helping-family-members-locate-caldor-fire-evacuees/>

ARRL, RSGB Announce Joint Events to Celebrate Centenary of Ham Radio Transatlantic Success: The ARRL and the Radio Society of Great Britain are planning to celebrate the one-hundred-year anniversary of the transatlantic cable:

<https://www.arrl.org/news/arrl-rsgeb-announce-joint-events-to-celebrate-centenary-of-ham-radio-transatlantic-success>

FCC Regulatory News

Here are the current regulatory changes and FCC news as it applies to Amateur Radio. This section of the QSA-5 newsletter was introduced earlier this year. We will add new regulations and rules monthly, removing the older regulations and rules as new regulations/rules are introduced. As of the August issue of the QSA-5 newsletter, this list of FCC regulations and changes will be reduced, only covering this year's new regulations and rules. The newest regulations and changes will appear at the top of the list. Note that we are not able to cover every change the FCC has made this year within our publication:

FCC Orders Amateur Access to 3.5 GHz Band to “Sunset” It doesn't look for amateur access to the 3.5 GHz band. While many amateur radio operators, especially those who hold new licenses, may not be familiar with this band, some older license holders (especially those with specialty interests) use it. Here is the article from the ARRL:

<http://www.arrl.org/news/fcc-orders-amateur-access-to-3-5-ghz-band-to-sunset>

The FCC Headquarters Relocates: The government organization that regulates amateur radio is moving their headquarters. Here's a piece on the move from the ARRL:

<http://www.arrl.org/news/fcc-headquarters-relocates>

ARRL Urges Members to Join in Strongly Opposing FCC's Application Fees Proposal: The ARRL is asking their members to oppose the FCC application fee proposal. Here's the article:

<http://www.arrl.org/news/arrl-urges-members-to-join-in-strongly-opposing-fcc-s-application-fees-proposal>

FCC Extends Filing Deadlines for Affected Louisiana Parishes and Mississippi Counties: Because of the devastation of Hurricane Ida, the FCC is extending filing deadlines for ham radio operator:

<https://www.arrl.org/news/fcc-extends-filing-deadlines-for-affected-louisiana-parishes-and-mississippi-counties>

FCC Grants 60-Day Waiver of Part 97 Data Rate Rules for Hurricane Relief Traffic: The FCC has granted a sixty-day waiver permitting radio amateurs handling hurricane relief communications on HF to use any protocol that would comply with the FCC's rules but for the symbol rate limits.

<https://www.arrl.org/news/fcc-grants-60-day-waiver-of-part-97-data-rate-rules-for-hurricane-relief-traffic>

FCC Grants Temporary Waiver to Permit Higher Symbol Rate Data Transmissions for Hurricane Ida Traffic: The FCC has granted an ARRL emergency request for a temporary waiver intended to facilitate relief communications in the wake of Hurricane Ida.

<https://www.arrl.org/news/fcc-grants-temporary-waiver-to-permit-higher-symbol-rate-data-transmissions-for-hurricane-ida-traffic>

FCC Application Fees Unlikely to Go into Effect Until 2022:

Last year, the FCC announced that they would be increasing the cost of Amateur Radio licenses. It has drawn both criticism and support from radio operators across the United States. Here's a link to the ARRL reporting on the increase.

<http://www.arrl.org/news/fcc-application-fees-unlikely-to-go-into-effect-until-2022>

FCC to Re-Establish Technological Advisory Council, Solicits Membership Nominations:

The FCC is seeking nominations for a chairperson and members of the Technological Advisory Council (TAC). Here is a link to the ARRL article.

<http://www.arrl.org/news/fcc-to-re-establish-technological-advisory-council-solicits-membership-nominations>

FCC Investigating Alleged “Jamming” on 40 Meters:

Amateur radio operators have reported that there is some sort of signal jamming on the 40-meter band. Here is an article from the ARRL that covers the story in greater detail.

<https://www.arrl.org/news/fcc-investigating-alleged-jamming-on-40-meters>

FCC Reaffirms Nearly \$3 Million Fine for Marketing Unauthorized Drone Transmitters: While not directly related to amateur radio, this article from the ARRL reminds us that manufacturers of any device that uses a radio frequency based control or communication system is regulated.

<https://www.arrl.org/news/fcc-reaffirms-nearly-3-million-fine-for-marketing-unauthorized-drone-transmitters>

FCC Seeks Comment on Potential Impact of Global Semiconductor Shortage:

This is an important read for anyone that is involved in electronics, or anyone who owns or is considering the purchase of “smart” electronic devices. There is a global semiconductor shortage, and the FCC is asking for commentary regarding this potentially serious problem:

<http://www.arrl.org/news/fcc-seeks-comment-on-potential-impact-of-global-semiconductor-shortage>

FCC Seeks Comments in Proceeding Involving 70 and 5 Centimeters:

This article from the ARRL was published on June 24th, 2021. The gist of the article is this: The FCC is soliciting a second round of comments regarding the use of portions of the 70cm and 5cm bands for commercial space entities. Here's a link to the full article:'

<http://www.arrl.org/news/fcc-seeks-comments-in-proceeding-involving-70-and-5-centimeters>

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

As of May 20th, 2021, the FCC now requires that all examination applicants must provide an FCC Registration Number or FRN to the Volunteer Examiners at the testing site before taking the actual examination. Here's link to an ARRL article regarding this rule change:

<http://www.arrl.org/news/first-time-exam-applicants-must-obtain-fcc-registration-number-before-taking-exam>

Propagation News

Here are some links dedicated to propagation conditions, space weather, sunspot cycle information and all things related to solar conditions:

DX.QSI Propagation:

A simple, straightforward website for propagation conditions that is regularly updated:

<https://dx.qsl.net/propagation/>

Radio Society of Great Britain: What's New and Propagation Now:

A great resource from the UK version of the ARRL regarding solar activity and propagation:

<https://rsgb.org/main/technical/propagation/whats-new-propagation-now/>

SunSpotWatch.com:

A good general interest site for amateur radio operators who follow solar activity:

<http://sunspotwatch.com/>

ARRL:

Here is an update from the ARRL regarding solar flare activity. The article appeared on May 25th, 2021: Weekend Solar Flare Frenzy Could Spark Geomagnetic Storms:

<http://www.arrl.org/news/weekend-solar-flare-frenzy-could-spark-geomagnetic-storms>



DIY Radio References

We have added a few additional links to our list and will continue to do so as we discover more websites related to the Do-It-Yourself movement! QSA-5 is going to keep adding to the original list of online resources, bringing you more resources as we find them. If there is anything you think would be useful to other club members, contact me and I will be happy to include it in this reference section.

Microcontrollers and Single Board Computers: With the advent of the Arduino micro-controller board, the Raspberry Pi (a single board minicomputer) and Texas Instrument's Launchpad (also a single board microcontroller), Amateur Radio enthusiasts can build both accessories, such as antenna tuners, and fully functioning transceivers. I have spent the last year at the University of California studying these devices, learning how to use them and incorporate them into electronic projects. I was able to build two HF receivers based on the Arduino and Raspberry Pi devices. The best news of all is that these devices are inexpensive! I encourage you to check these websites out!

Arduino: The Arduino microcontroller board was the first to popularize these devices. They are inexpensive and can be used for a variety of radio related projects. I will include some links to radio related Arduino projects in the next issue of the QSA-5. Here's a link to the Arduino homepage:

<https://www.arduino.cc/>

Raspberry Pi: Did you every wish you could have a PC small enough to fit into your shirt pocket? Your dream has come true. The Raspberry Pi 4 is a fully functional Quadcore 1.6 GHz computer, about the size of a package of playing cards. It has an Ethernet jack, two USB 2 ports, two USB 3 ports and two HDMI ports. Next month, I'll post some links to radio related Raspberry Pi projects. Here's a link to their homepage.

<https://www.raspberrypi.org/>

Texas Instruments TI Launchpad: The Launchpad is Texas Instruments answer to the Arduino. The Launchpad is geared more towards advanced projects and is slightly more expensive. However, the Arduino still holds it own against this device. The Arduino also has more in the way of opensource software. Here is a link to the TI Launchpad homepage.

<https://www.ti.com/design-resources/embedded-development/hardware-kits-boards.html>

Tools for electronics: It is a lot easier to build or repair your electronics if you have the right tool. Paperclips and duct tape are not the solution to everything (unless you are McGyver – hopefully, you got the reference). Therefore, we added some links to suppliers of electronics tools.

All Electronics: A one stop electronics shop that has a variety of tools for your repair and building needs:

<https://www.allelectronics.com/category/780/tools-and-supplies/1.html>

Jameco Electronics: A supplier of decent tools at a reasonable price:

<https://www.jameco.com/Jameco/content/tools.html>

Electronic Printed Circuit Boards (PCB): If you design and build projects that require specific circuit boards, you know how difficult it is to find a board that will work for your purposes. Designing a board and then having it made can be expensive. Here is a company that has a large number of radio PCBs you can purchase and then add components to. They also can take your design and fabricate a PCB at a very reasonable cost. The company's name is **PCBway**:

<https://www.pcbway.com/project/>

Electronic Components and Parts: Many of us involved in amateur radio are constantly tinkering with electronics. It seems to be part of our genetic makeup! Here are some links to companies that sell electronic components and parts, starting with San Rafael's own Electronics Plus (Support local business).

Electronics Plus: It's great to have an electronics store close by for those times when you need a part immediately:

<https://www.electronicplus.com/>

Digikey: A good source for DIY and Maker projects as well as parts. They claim to have the world's largest selection of electronic components.

<https://www.digikey.com/>

Jameco: This company is a good source for almost everything, especially mainstay items such as resistors, capacitors, etc.

<https://www.jameco.com/>

Homemade Antennas: Many new ham radio enthusiasts put a great deal of time and effort into researching their first radio. However, they often neglect the most important component to a successful radio experience, the antenna. Even if you have some ham radio experience, antennas can be a daunting subject. Commercially manufactured antennas can be expensive and beyond your budget during these hard financial times. Even if you have the funds available to purchase an antenna, reading through the antenna's specs can be akin to reading some long lost ancient language. A good solution for increasing your knowledge of antennas and radio wave propagation, not to mention cutting the costs down, is to build them yourself. Here are some links to DIY (do it yourself) sites to give you a start:

Antenna building basics:

<https://www.wikihow.com/Build-Several-Easy-Antennas-for-Amateur-Radio>

Good Reference for several antenna types:

<https://www.hamradiosecrets.com/homemade-ham-radio-antennas.html>

A step-by-step guide for building a simple antenna:

<https://geardiary.com/2012/07/21/building-a-simple-ham-radio-antenna-without-soldering/>

Instructions for a VHF/UHF dual band antenna:

<https://www.instructables.com/Quarter-Wave-Dual-Band-VHFUHF-Ham-Radio-Antenna/>

Build an HF dipole antenna:

<https://www.electronics-notes.com/articles/antennas-propagation/dipole-antenna/hf-ham-band-dipole-construction-80-40-20-15-10-meters.php>

Introduction to antennas:

<https://www.onallbands.com/ham-radio-antenna-options-for-home-and-portable-operations/>

Ham Radio QRP Transceiver Kits: With the advent of SDR (Software Defined Radio), building fully functioning ham radios has become a lot easier and extremely inexpensive. While, having fewer bells and whistles, as well as being low power units, many have fully functional touchscreens and cover many of the HF bands:

An easy to build QRP transceiver. No soldering needed to build:

<https://www.hfsignals.com/>

An easy to build, single band CW kit:

<https://qrp-labs.com/>

Offering several kits and finished transceivers:

<https://youkits.com/>

Propagation Websites: Propagation is a key factor in successful radio communications. Here are some links to websites that will help you with all your basic propagation needs:

Real time band conditions:

<https://qrznow.com/real-time-band-conditions/>

VOACAP band conditions:

<https://www.voacap.com/hf/>

ARRL Propagation Page:

<http://www.arrl.org/propagation>

Real Time HF Propagation Prediction:

<https://hamwaves.com/propagation/en/index.html>

Ham Radio Websites of general interest:

Ham Radio News: Here are some sites and articles you may find of interest regarding ham radio.

ARRL News Page, which is a good place to find national news regarding ham radio:

<http://www.arrl.org/news>

QRZ Now. Another good site for ham radio news from around the globe:

<https://qrznow.com/>

The Amateur Radio Newsline. An AP styled news feel page for amateur radio:

<https://www.arnewsline.org/>

Fun With Radio

We will start our monthly DMR digital mobile radio column in January, having it replace the Fun with Radio column. Since we didn't receive any input regarding topics for the Fun with Radio column, we decided to replace it with a monthly DMR column since there is interest in this topic. If you want the QSA-5 to keep the Fun with Radio column, let me know and send me some suggestions regarding what you want to see here.

If you have not tried SDR (Software Defined Radio) out, you really should. I've been playing around with and building SDR receivers for the last 14 months. However, there are many SDR transceivers on the market as well. They are small and an inexpensive alternative to the traditional HF transceiver. What makes the radio so small is its use of processing chips and software to do much of the heavy lifting once done by physical components. The QSA-5 will be doing an in-depth article on the SDR revolution. **Bill AK3Q** (formerly AI6SJ) discussed open and closed source SDR hardware he's been working with, namely the [Hermes-Lite 2](#). Here's a link to a review of this amazing radio:

<https://www.eham.net/reviews/view-product?id=14724>

