

# QSA-5

## Marin Amateur Radio Society Monthly Newsletter

Established 1933

October 2021

**From Our President:** Among the perks of being a radio club president, I am copied on most club correspondence which gives me a perspective on what we as a club are doing. I have to say that what you contribute to the community always impresses me and makes me proud of our club. This year we are back doing what we are known for, which including public service. Things are not as they were before covid, but we are stepping up and supporting our partner organizations in their activities. Last weekend we were quite busy and from the reports I have read you were great. I do want to share one comment that came in from Gina Bianucci Rus, the race director for the Dolphin Club Escape from Alcatraz "A great big shout out of appreciation to the Marin Amateur Radio Club from the Dolphin Club for yesterday's Escape from Alcatraz Triathlon coverage. You guys went far and above any expectations, again, by keeping all participants safe in our event. The roses provided were pretty awesome! I can't say enough about your club". I think that says a lot about who we are.

While on the topic, this weekend I was adding a new station checking into the Sunday morning net. When I do this, I usually look up the station or qrz.com to make sure I have the name, call sign, and city correct. I found this quote in the bio "We have an awesome radio club locally in Mill Valley California, called the Marin Amateur Radio Society, where I have been a non-active member since 2016"

Since I am waxing about the joys of being president, I should also mention club awards. I have the privilege of handing out our club awards. We have several. The Ham of The Year which is given out for exceptional service to the club in a particular year. Board members are not eligible, but you can suggest candidates to any board member of

committee chair. The Hi Roberts Award. This is for exceptional service to the club over a number of years. Send any candidates to me at [wa6uds@w6sg.net](mailto:wa6uds@w6sg.net). The John Butler award is for someone who has contributed to Elmering (mentoring) other members again submit any candidates to me. The Ted McMillian Youth Advancement award for a club member under 18 who has worked to advance their skills again send any candidates to me. To see more on the awards, go to [w6sg.net/site/members/club-awards/](http://w6sg.net/site/members/club-awards/)

Lastly as the year end approaches it is time to elect board members. If you would like to serve on the board, please let me know. We will be forming a nominating committee at the next board meeting.

73 de wa6uds

**From the Editor:** Fall is now upon us as the temperature drops a little further each night. It seems as if, in the blink of an eye, we went from lazy summer days where daylight left us late in the evening to overcast mornings and chilly nights. The sun now sets earlier and earlier with each passing day. However, no matter what season we find ourselves in, it's a good time to be an amateur radio operator!

I've asked for volunteers for a few columns I want to post within the pages of the QSA-5 but have not heard back from anyone. That's alright because I'll keep asking for your input, confident that some of you will respond. As always, I am constantly on the lookout for good content to share with our club's members. I am holding off on changing the graphical structure of the QSA-5 until I can confirm that we'll be adding another one or two monthly columns to its pages. Once I get the QSA-5 set – content-wise – I'll add some color to our publication. Again, this is your publication. I just type and occasionally steer to boat in the right direction. Therefore, if there is something you want to see within the pages of the QSA-5, email me and I'll include it (within reason). In closing, I would like to add that I am not aware of every radio event taking place, so if you attend such an event or know of an upcoming event, please send me photographs and information about the event so I can share it with other club members here at the QSA-5.

[QSA-5Editor@w6sg.net](mailto:QSA-5Editor@w6sg.net)

# **General Membership Meeting: September 3rd, 2021**

**Call to Order: 19:30 Hours (7:30 PM)**

**Approve minutes: Of August meeting: M/S/A**

**Adopt Agenda: M/S/A**

## **New Members:**

Daniel Greely KN6PNA – Novato

Roberto Alonzo KN6QCH – Novato

Germaine Krase N6WTQ - San Rafael

## **Board Actions:**

In-person meetings.

Disposition of donated equipment.

Changes to Sunday morning net.

**Presentation: N/A**

## **Fun with Ham Radio:**

**Andrew KE6HID:** AT&T in Santa Rosa area is [soon to require 1-\(area code\)](#) to make a local call from the 707 area, including to 707 area code numbers. Also: [SCRA radio club](#) is looking for volunteers to work events as they are short on hands.

**Jan WB6SPX** told a shaggy dog joke as well as a story about his time as a radio operator on a ship.

**Antonis AA6PP** told the club about operating in the UK (Northumberland) and making a variety of EU contacts and the variety of call signs and techniques.

### **Secretary – Communications:**

Second silent auction will be bid via Google sheet only, soon to be sent out. A lot of nice gear, not just leftovers from first sale.

### **Treasurer's Report:**

Latest financials are linked in the August issue of the QSA-5.

### **Committee and other Reports:**

#### **1. Membership: 141 | 101%**

**2. Facilities: Skip KJ6ARL:** New smoke detectors have been installed and gear has been sorted for silent auction mentioned above.

There is an apparent drainage erosion issue along one side of our back property that will be our responsibility, per Mill Valley regulations. This problem is being investigated for future determination of the work that will be needed.

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#### **3. Education: N/A**

#### **4. Repeaters: N/A**

**5. VE:** The next VE session coming up on 10/9/21 **Ken AB6JR** reports there are still just 5 registrants, but its early. Ken asked if there will be enough space on the tables in the clubhouse to make room for approximately 12 test takers expected on the above date. Skip KJ6ARL says we will.

**Curtis WA6UDS** took a straw poll on Zoom about interest in in-person meetings at the clubhouse among the members present. Only about 6 people raised their virtual hand to signify interest, as observed by Secty. Cooley.

**Old Business:** N/A

**New Business:** N/A

**Good of the Order:**

**Skip KJ6ARL** updated us that our repeaters are closing in on the final process of being “coordinated” so that they are officially part of the regional NARCC registry to make them (unofficially) official. It helps us come out ahead if someone else sets up on any of our frequencies and we need a ruling from the FCC on who is entitled to use that freq.

**KM6ASI** reported on a recent meeting (last Thurs) regarding activating a UHF repeater on Bahia. It’s about a month away by his estimate, requiring we reprogram the intended hardware from its current freq. to 442.200 to avoid conflict with an existing machine in Daly City.

**Antonis AA6PP** reported on the need for volunteers for the [SFARC](#) to [support the SF Marathon](#) on 9/19.

**Adjourn:** 20:19

**Post-agenda Presentation:** N/A

**Next General Meeting: October 1<sup>st</sup>, 2021**

## **Marin Amateur Radio Society Board of Directors Meeting September 9<sup>th</sup>, 2021**

**Call to Order 19:32 Hours (7:32 PM)**

**President:** Curtis Ardourel WA6UDS

**Secretary:** Brian Cooley K6EZX

**Vice President:** Milt Hyams KM6ASI

**Trustee W6SG:** Mitch Martin WU1Q

**Director/Trustee K6GWE:** Doug Slusher KF6AKU

**Director:** Skip Fedanzo KJ6ARL

**Treasurer:** Bruce Bartel N6VLB

**Director:** Mark Klein KM6AOW

**Adopt agenda: M/S/A**

**Approve minutes:** 8<sup>th</sup> of July meeting. **Milt KM6ASI** pointed out that the board meeting minutes for August are showing up corrupted in QSA-5. **Brian K6EZX** will contact Ed Essick to investigate it.

**Secretary's Report/Communications:** N/A except for the minutes note directly above.

**Treasurer's Report:** *(see statements at bottom of minutes)*

*Still issues with long outstanding checks*

### ***Balances***

<b><i>General Account</i></b>	<b><i>\$15,210.19</i></b>
<b><i>Building Account</i></b>	<b><i>\$ 2,346.63</i></b>

(Noted that the above are separate balances)

*CD account still needs to be closed. Curtis will attend to it.*

***VOAD** has been paid, check cashed. VOAD offices vacant, mailed check to the address was cashed, however.*

*Esther Lee (caterer) gratuity paid, check not cashed - has been two weeks. Curtis: She called Curtis and thanked him profusely.*

*Rent current from tenant.*

*Bo has been paid for his radio inventory work at the clubhouse.*

## **Committee and other Reports:**

**Membership: 142 | 102%**

**Education N/A**

**Facilities:** Skip **KJ6ARL** sent board members the latest list of our repeaters currently recognized by NARCC (see addenda at bottom of these minutes). Some of them were a surprise to Skip(!), so he is looking into them to clean up duplicates or any obsolete MARS listings in NARCC's records.

Next steps on items for sale from the clubhouse, Pt. II: **Rob NZ6J** joined the meeting at this time). Table space is needed for a VE exam on 10/9, but Doug Slusher recommends we take more than that months' worth of time to sell clubhouse gear since so many members have been busy with public service events through September and early October and have not had time to consider bidding on/examining gear for sale. Upon a motion by **Skip KJ6ARL** it was agreed to have **Steve KB6HOH** and **Jerry WA6BXV** be our unofficial appraisers of the equipment and make their comments to **Milt KM6ASI** and [via the inventory list](#) by 9/23. The board will be notified of this new list update for action well prior to the next board meeting on October 14 in the interest of moving this process to a conclusion soon.

Erosion at back of clubhouse lot: Skip reported there is enough erosion going on that it is undermining part of the fence. A related, open county ditch is in the same area, and we are required to maintain it as the property owner. There are neighbors whose properties could be affected if our fence falls into the ditch and diverts water during the rainy season. It was decided to get contractor Fred Conner out to look at; He did

recent roof and other work on the building. Doug Slusher will make that contact.

**Public Service: Michael K6MLF** We are facing three back-to-back weekends of public service coming up and a bit more in October and early November to close out the season. This scheduling density was expected and it's going smoothly. A discussion arose about how or why several club members have not been good about confirming their availability for events they signed up for early in the year. However, a sufficient number of members have been available for the events, often due to last minute recruitment from the reserve list.

**Technical: N/A**

**VOAD: Skip KJ6ARL** gave a quick review of how RCV is proceeding to develop a set of SOP's with the Community Based Orgs (CBOs) that it serves. Relationship with VOAD is going well and RCV is generating solid interest among CBOs. **Doug KF6AKU** asked if there is a national group like RCV to which Skip replied there are so many groups in roughly this vein that it's hard to delineate them from each other. **Milt KM6ASI** noted that RCV was devised to specifically be independent and Marin-specific.

### **Old Business:**

1. Tower: **Milt KM6ASI**: No notable progress to report on the permit and planning logjam. He's due to contact the Deputy head of Planning to move forward.
2. Life membership N/A
3. Frequency coordination (Covered by Skip above in Facilities.)
4. Sale of catalogued equipment: (Covered above.)
5. Hybrid Meetings: Curtis requested a formal hybrid meeting gear list from **Brian K6EZX** so that the club can assemble the setup and have a full rehearsal meeting before we deploy it for the October board meeting in preparation for wider deployment for the general meeting in November. Brian will circulate a list of proposed equipment to the board for an OK to purchase equipment as needed. October *general* meeting will remain virtual only.



## New Business:

1. New cover for Comm Truck: A set of prices (see addenda below) offers us three price and quality tiers. **Michael K6MLF** reminded us that installing a cover is laborious and doing it less often is a good idea, suggesting we purchase one of the more expensive covers at ~\$1,000 or ~\$1,200. Michael will try to get one of those spec'd without a zipper front door and therefore a lower price. **Milt KM6ASI** made a motion to authorize **Michael K6MLF** to go ahead and buy the best (21.5-ounce material) cover with any savings he can negotiate, authorized up to \$2,000 total without further consultation with the board. M/S/A unanimously with a show of hands vote.
2. Website redesign: **Curtis WA6UDS** was contacted by Bruce **Wolfe KI6BSL** and learned he is redoing the SF ARC web site and is also interested in becoming our webmaster. If that were to happen he would like to move us to the [Joomla platform](#) and then re-do the site. **Steve KB6HOH** requested that any new site support the ability to better sort the member list for his use during the Sunday morning net, allowing more options for him to sort call signs to mix up the order.
3. Club credit card: **Bruce N6VLB** suggested we obtain one for one or two senior club officers. Curtis mentioned that the last time the board talked about this there was strong objection due to a lack of trust among board members at that time regarding who might have access to it. Bruce advocates a club card for 1.) purchase protection in the case of purchases that don't work out well as well as 2.) for warranty extensions that come along with many credit-card purchases. Cash back is a lesser benefit in Bruce's mind. Curtis and Milt both spoke in favor of a club credit card being more elegant than members making club purchases via personal funds subject to reimbursement. Bruce will proceed to talk to BofA and determine what card options are available to an org like ours with 1.) a reasonable credit limit, 2.) availability to President and Treasurer, and 3.) not connected to our other accounts in any way that would allow misuse to drain our cash balances.
4. **Skip KJ6ARL** Rear drainage ditch behind clubhouse. (Covered in Facilities above)

**Good of the Order N/A**

**Executive Session:** was held to discuss a board composition matter. Session ended at 21:44

**Adjourn M/S/A**

**Next Regular Meeting October 1<sup>st</sup>, 2021**

**Next Board Meeting October 7<sup>th</sup>, 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
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B of A General account - 4328	12,175.37	12,066.01
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CD	25,000.00	25,000.00
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Money Market	5,000.00	5,000.00
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Public Service	234.91	
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Skip Fedanzo	81.84	
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<b>Total Bank Accounts</b>	<b>\$44,838.75</b>	<b>\$43,371.68</b>
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<b>Total Current Assets</b>	<b>\$44,838.75</b>	<b>\$43,371.68</b>
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Fixed Assets

club house- 27 Shell Rd. MV	58,983.00	58,983.00
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<b>Total Fixed Assets</b>	<b>\$58,983.00</b>	<b>\$58,983.00</b>
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<b>TOTAL ASSETS</b>	<b>\$103,821.75</b>	<b>\$102,354.68</b>
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## 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
<b>Total Equity</b>	<b>\$103,821.75</b>	<b>\$102,354.68</b>

**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
<b>Total Income</b>	<b>\$30,311.82</b>	<b>\$30,311.82</b>
<b>GROSS PROFIT</b>	<b>\$30,311.82</b>	<b>\$30,311.82</b>
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
<b>Total Expenses</b>	<b>\$28,253.31</b>	<b>\$28,253.31</b>
NET OP INCOME	<b>\$2,058.51</b>	<b>\$2,058.51</b>
NET INCOME	<b>\$2,058.51</b>	<b>\$2,058.51</b>

## 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! This repeat of last month's question comes from me, the editor of the QSA-5. I am sure some of our newer members could use help in this department as well:

Greetings and salutations! I am trying to find a used HF Transceiver. The Covid-19 Pandemic financially crushed my quest to purchase a new rig. Of course, I'm trying to find an inexpensive HF receiver, which seems to be a pipe dream at best. However, I have seen rigs being sold on E-Bay that seem to be too good to be true, pricewise. My question is this: Where is the best place to look for a used HF rig. My concern with E-Bay is that you are essentially sending money to someone you don't know, based on a photograph of a radio that may or may not be what actually arrives on your doorstep when all is said and done. Any suggestions for a super-broke radio guy?

The next question 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-gqNtZGzNAjujcnBszQjR](https://forums.tesla.com/discussion/84568/ham-radio-and-m3?_cf_chl_jschl_tk=_pmd_GBBJrn3eYw0WYbQUxJQjCdDXCxYnc6lu0d6adiUvdYc-1632775692-0-gqNtZGzNAjujcnBszQjR)

## Marin Amateur Radio Society News

### Winlink & Amateur Radio During Race Events

While this was first published in last month's issue of the QSA-5, it is still worthy of remaining here for this month's issue. This is an interesting piece about the use of WinLink during race events, brought to us by Bruce N6VLB. Bruce added that he would like to see more of this in the QSA-5 newsletter so, with that said, we will be happy to add Winlink related articles in this publication's pages. Here is a quote Bruce sent us regarding the practical use of WinLink. The quote comes from Ken Grous NB6S:

*"I volunteer at a good deal of endurance runs and riding events each year in some pretty remote locations (just back from Big Bear, heading to Ashland in a couple of weeks) - most of which have no cell service."*

The following is an example of Winlink's value in emergency communications: *"I set up a radio station out at Last Chance during The Tevis Cup last month (not even a glimmer of cell service there). I heard over the radio from another station about an injured horse still 20 miles back up the course (torn ligaments requiring transportation to a large*

*animal hospital). The head veterinarian for the event was in our station, so I brought him over to our radio to listen in / provide support. He and the on-scene vet could consult about the injury via radio.”*

*“After their conversation on the radio, our vet was mentioning he sure wished he could give the hospital a heads-up on the injury. We then used a piece of software called Winlink to send a detailed email to the hospital - the physician could write it up using medical terms to describe the injury, recommended protocol, we re-read it to him a couple of times to make sure everything was accurate then used our radio to send the message as email to the hospital. This allowed them to know about the case before the trailer arrived.”*

*“A few hours later we needed an additional trailer to transport a horse not able to continue so used voice radio for that... then finally, on the drive out my partner was behind a large pickup towing a trailer with three horses and the pickup lost his brakes out on Mosquito Ridge Rd - another zero-cell service area.”*

*“My partner pulled over, set up his radio and was able to arrange for a replacement vehicle plus a tow for the pickup... and those actions weren’t even why we were out there! ... fun stuff to be able to help in meaningful ways...”*

NB6S, Ken Grouse (contact Ken if further info desired).

## **Upcoming Licensing Test Session**

Our Volunteer Examiner Team, led by **Ken AB6JR** will be holding another testing session for individuals wishing to get their first amateur radio license or upgrade their current license. The testing session will be held on October 9<sup>th</sup>, 2021, at 1:00 pm. The event will take place at our clubhouse, 27 Shell Rd, Mill Valley, CA 94941. As of the September General Membership Meeting, there were five people who had signed up. However, that number is expected to grow as the examination date nears. Ken hopes to be able to do the session indoors. If you know anyone interested in getting their amateur radio license or upgrading their existing license, let them know about our VE session. Make sure to tell anyone considering taking their Technician’s test for the first time that they need to acquire an FCC FRN from the FCC site. Here’s a link to the FCC website page for doing that:

<https://apps.fcc.gov/coresWeb/publicHome.do>

## 2 Meter Critical Mass Event

Here are some photographs of the Marin Amateur Radio Society's two-meter critical mass event. What is the two-meter 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 have to do is bring your radio, paper and pencil. The San Francisco Radio Club holds a two-meter critical mass event on the second Saturday of each month from 10:00 until 12:00. The Marin Amateur Radio Society held a two-meter critical mass event on September 19<sup>th</sup>, 2021. The event took place behind the Marin Civic Center in the Jury parking lot.

At this event, the club members present were able to get MESH access to Dollar Hill. Milt KM6ASI, started programming *the* new Dollar Hill UHF repeater (442.175MHz, +, 162.2Hz), and playing with the AREDN mesh. If you have any questions about upcoming critical mass events, email the QSA-5 or drop by our monthly club meeting. Here re some photographs of the event.













## **Help Extend the SF Emergency Wireless Emergency MESH**

Because the San Francisco Emergency Wireless Emergency MESH is such an important project, we are 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](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-4G7Pl8LAOssMMsnfIQ8QcQ](https://join.slack.com/t/marinamateurr-sq15924/shared_invite/zt-r9ocah4l-4G7Pl8LAOssMMsnfIQ8QcQ). 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 Southgate Amateur Radio News regarding young patients at a children's hospital and ham radio:

**ARISS contact scheduled with students at the Children's National Hospital, Washington, DC, USA**

<http://www.southgatearc.org/news/2021/september/ariss-event-21-09.htm#.YVNC6bhKjIU>

**Radio Amateurs on Standby Following La Palma Volcanic Eruption:** This article comes from the ARRL regarding the role amateur radio plays in the volcanic disaster taking place in the Canary Islands:

<https://www.arrl.org/news/radio-amateurs-on-standby-following-la-palma-volcanic-eruption>

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

<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 24<sup>th</sup>, 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 20<sup>th</sup>, 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 25<sup>th</sup>, 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

This is a reposting of last month's piece on magnetic loop antennas. The November issue will have a new fun with radio segment. Evey use a magnetic loop antenna? A magnetic loop antenna is a loop of copper or other radio friendly metal wire mounted on a frame (for air-core loops) or around ferromagnetic material (for ferrite loops). The magnetic loop antenna is sensitive to the magnetic field and not the electric field. It outputs a voltage proportional to that field. This type of antenna is referred to as 'Magnetic' because it picks up the magnetic end of an electromagnetic field, unlike the usual antennas used for Amateur Radio, such as dipoles, yagi, and vertical antennas. Antennas such as dipoles, yagi and vertical antennas only respond to the electrical end of the electromagnetic field.

One of the great advantages of magnetic antennas is that they can be small or large. This is extremely useful for radio operators who have a small space in which to work. You don't have to worry about radials or other counterweights because the radiation is largely independent of the distance of the antenna to the ground. However, you do want to keep your magnetic loop antenna somewhat above the surface of the ground. They range in price from inexpensive to expensive. I purchased a small magnetic loop antenna for about \$50.00 and have seen large models priced just below \$1,000.00 (and all points in between). Pricewise, there's a loop antenna to fit anyone's budget.

Regarding resonance frequency, magnetic antennas are somewhat narrow-banded. As with any antenna, there are pros and cons to consider. One advantage is that few harmonics are radiated. However, smaller loop antennas have poor efficiency and hence are mainly used as receiving antennas at lower frequencies. There is also some power loss as heat due to flow of current with high levels.

Again, with all antennas, there are pros and cons, which may explain why many of us have multiple antennas protruding from our rooftops. I use a magnetic loop



antenna for my homebrew, DIY Arduino HF receiver and it works wonderfully. Here are some links for further information:

**The Wiki Page About Loop Antennas:**

[https://en.wikipedia.org/wiki/Loop\\_antenna](https://en.wikipedia.org/wiki/Loop_antenna)

**Homebrew Magnetic Loop Antennas:**

<https://m0ukd.com/homebrew/antennas/magnetic-loop-antennas/>