

QSA-5

Marin Amateur Radio Society Monthly Newsletter

Established 1933

August 2021

From Our President: We had an episode of nearly normal life. On July 17th we held the combined Public Service Luncheon and club picnic at the Marin Rod and Gun Club. Everyone I spoke to declared it a success. I had a great time seeing people I had not seen outside of little rectangular boxes for a year and a half. It was glorious! I was also humbled by the kind words many of you had for me.

I arrived on site at 09:00 and was admitted by Ann Shores K6SHO and her daughter Meredith. As I parked my car, I was able to enjoy the Fugue for Weed Wacker and Leaf Blower performed by Ann's husband Tom cleaning up the picnic tables. Ann's family rolled in like a force of nature and we owe them a debt of gratitude for bringing this together. I was quickly greeted by Pam Witherspoon N6PWD and Stan Witherspoon AI6NF who helped move tables, set up the tent marquees, unload the com-truck and generally prepare for the day's festivities. We owe the Witherspoons or as they are sometimes called PamanStan a debt of gratitude as well. They are another family who qualify as a force of nature. We also must thank Michael Fischer K6MLF for marshaling the forces, getting the word out and putting the organizational polish on this event that makes our club shine. Then there is Rob Rowlands NZ6J, we started schlepping soft drinks and ice and then without breaking stride he set up the Mesh Network/AREDN kiosk, and later demonstrated that system. He also delivered almost half of the meeting content.

This event allowed me to trot out one of my 70s vintage PA systems (ok the mixer was made in this century) that was a hoot and I had forgotten how much I enjoyed that work when I used to do it. I have tried to thank the usual suspects above and have done so inadequately. But I am moved to recount that this being a Marin Amateur Radio Society gathering as soon as people greeted me, they immediately asked what they could do to

help, and stepped up to whatever task needed attention. As a group everyone who attended made this a success. I know there are some of you who contributed time and effort to the cause, and I have failed to mention your efforts, please blame that on my feeble mind and not my lack of gratitude.

We had over 80 people RSVP for the picnic and 69 people were checked in at the gate which by the standards of our club is an impressive turn out in spite of, and in part because of covid. The meeting portion of the picnic went very well, and I got to give out the much sought-after gold stars, which again reminds me why I would not have been a good elementary school teacher. I would also be remiss if I did not also thank Esther Lee our caterer for delivering the taste boxed lunches. I did convey to her that I received numerous compliments on the food. As we were cleaning up, I was pleased to see everyone helping with that as well, a gentleman approached a knot of us and asked who was in charge. I allowed that was probably me. He identified himself as Jim Brainerd and told me that he had served in our club house when it was a fire station and that he had worked there when it was given to the club. He wanted to know if we were still there, how we used the building and what we did. This gave me the chance to wax rhapsodic about our club. I also thanked him and his fellows for their generosity.

I also seem to be waxing verbose today, so I will wrap it up. Our August meeting will still be on Zoom, but we are still intent on having our September meeting be hybrid, both on zoom and at the club house. With the rise of the much more contagious delta variant of the virus these plans may change as masking rules being reimposed. At present our rules for attending in person is that you are vaccinated, and masks are required. I look forward to seeing you soon in a small rectangle near you.

From the Editor: Welcome to the August issue of the QSA-5 newsletter. As summer comes slowly to a close and fall nears, we have crossed the halfway point of 2021. The Marin Amateur Radio Society has done a great deal over the last few months, namely getting the clubhouse back in shape after a long hiatus from regular use due to the pandemic. Our club has also hosted VE sessions for new ham radio operators and operators upgrading their licenses. In short, we've come back to life!

The QSA-5 is settling on a final format, so the format you see this month will remain in place for the foreseeable future. Of course, there will be slight changes, such as the addition of photographs (when available), graphics, and a table of contents (for those of you who want to go straight to the information of interest). I am still looking for suggestions regarding what you would like to see within our publication's pages. While I spend a fair amount of time looking for material to include in this publication, I can only do so many searches online each day and sometimes miss items of potential interest, so email us anything you might see and we will include it in the QSA-5 (radio or electronics related). Remember, this publication is your publication!

Lastly, if you have any problems reading our publication, email me and I will adjust the format to make it more reader friendly. Again, this is your publication, so you should have voice in its creation. You can send you thoughts and ideas to:

QSA-5Editor@w6sg.net

General Membership Meeting: June 4th, 2021

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

Adopt Agenda M/S/A N/A:

New Members:

Jatin Pandya K6OQ - San Rafael

Jillian Alderson KN6PIV - Pacifica

Loren Atwood KJ6CW - Novato

Board Actions:

Silent auction closes tonight. Approx. \$1,600 worth of bids are showing as of earlier today.

Presentation: N/A

Fun with Ham Radio:

Andrew KI6UOC had various updates on member projects and excursions.

Steve KB6HOH: Winlink gateway at clubhouse is working well, and he now has an HF vertical at his QTH, installed on a mast/tripod set on concrete. It serves as a Winlink **HF** gateway station (KB6HOH-12)

A few members had Field Day contact reports.

Secretary – Communications:

Brian K6EZX is working on a shared password vault for all board members.

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Treasurer's Report:

Bruce N6VLB earlier sent a balance sheet and P&L statement to Curtis that can be included in QSA-5, per previous request.

Committee and other Reports:

1. Membership: Curtis reports 131 | 94%

2. Facilities:

Skip KJ6ARL: Clubhouse cleaning is still the main effort; auction stays open until 21:00 this evening. Next up is to clear the gear from the counter on the west wall or tackle the back room past the engineering bench, TBD.

Bruce N6VLB: Comm truck now has been fitted with new tires due to the extreme age of the previous set.

3. Education: N/A

4. Repeaters

- Doug KF6AKU: Work coming up at Tam W. to add another input into the simulcast system, aimed at cleaning up noise we've experienced going into that input. Should help our Mill Valley area operators with much cleaner access into the system for them.
- Skip KJGARL: 443.250 machine is actively pending with [NARCC](#) and he's nagging them on the 146.700 registration as well.

5. VE – 7/10/21

- Ken AB6JR: Session coming up on 7/10/21, 12 people are signed up at this point.

Old Business: N/A

New Business: N/A

Good of the Order:

- Doug KF6AKU.: Reminding members that the picnic is coming up and we have 70 ppl signed up so far. Parking will be tight as there isn't a ton of it at the Rod & Gun Club and even less at the shoreline access park.
- Ann K6SHO: Please: Park in the back lot at Marin Rod & Gun, not the front lot where members are entitled to park. Also, everyone must be vaccinated and show proof. Please send a photo of your card to Ann at agshores@gmail.com. Masks will not be required, contrary to a previous plan.
- Today is the day we are requesting all attendees to RSVP at [RSVP@W6SG.net](https://www.rsvp@w6sg.net), though we still have a comfortable level of capacity. Doors open at 11:30a for a noon start on the day of the event, 7/17.

Adjourn: 21:13

Post-agenda Presentation: N/A

Next General Meeting: August 6, 2021

Marin Amateur Radio Society Board of Directors Meeting

June 10th, 2021

Call to Order 19:30 Hours (7:30 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 of: 10 June Meeting M/S/A

Secretary's Report/Communications: No News

Treasurer's Report:

Financials (P&L, balance sheet) were sent to the President and Secretary a few weeks ago. Also, will be forwarding reimbursement request for recent expenditure on tires for the Comm Van. Skip KJ6ARL asked about our level of ready cash after we pay for the tires, and Bruce advised that we have a comfortable cushion in the low five figures

Committee and other Reports:

1. Membership: 131 | 94%

2. Education: N/A

3. Facilities:

Rob NZ6J and Skip KJ6ARL: About 40% of the recently listed clubhouse gear was sold via silent auction, and a lot else was taken to Renew Computers by Skip for recycling. A work party is coming in tomorrow to organize the clubhouse before the coming VE session. An

array of small parts remains that will be made available at an in-person meeting soon for members to pick through and take what they like. And another silent auction is planned for early August for some of the better gear we have, i.e., some high-quality older HF radios, etc. Those pending phases should complete this long-awaited housekeeping.

Some talk was had about the role and state of the radio room, and it was generally agreed that it could be cleaned up and made clearer how to operate, as well as kept in good visual condition to make a good impression on anyone who may visit and who we want to have come away impressed by the club's infrastructure.

4. Technical:

Doug KF6AKU: Tomorrow a new remote receiver will be installed at Middle Peak to try and resolve some of the noise signal issues experienced by South Marin operators on our simulcast network.

5. Public Service:

Michael K6MLF: Kickoff will be the coming picnic/public service meeting to launch the 2021 season. 70+ people are signed up, a good turnout, and we'll have a hard out at 1:30 so the agenda must be kept on time.

A month later will be our first public service event in a long time and Tom Boss of MCBC will be at the picnic/PS meeting to help us get oriented for that event, the 2021 Dirt Fondo. Rob NZ6J will demonstrate the mesh, Brian K6EZX will do a pop quiz based on the practices shown in our Best Practices video.

Finally, the monthly critical mass will go in-person again on July 18th for the first time since the pandemic shutdown.

Bruce N6VLB reminds us that there have been discussions about mounting a bright outdoor-rated monitor on the side of the van. There was broad disagreement about the purpose and importance of such a technology addition. We will take it up again when a formal proposal for its use is submitted to the board for discussion.

Old Business:

- Tower: Milt KM6ASI has located an architect and draftsman via Dirk to draw plans that should be suitable for Mill Valley building dept.
- Ward Peak: Milt reported no movement for the last 6 months, will be placed back on the agenda when necessary.
- MARS and VOAD: Skip KJ6ARL: Joint meeting workshop is coming up July 30 at 1600 at 1600 Los Gatos. This will get us into the technical detail of passing traffic and message content protocol. This will get the radio people and the CBO's together for the first time.
- Encouraging membership N/A
- Life membership N/A
- Frequency coordination of 443.250 is currently under review with NARCC and Skip expects a positive result soon. 146.700 system and 147.330 are still pending without feedback from NARCC so far.
- Club house cleanup. Discussed earlier.
- Disposition of Silent Key assets: N/A
- Public Service Luncheon Already covered. Doug KF6AKU questioned if we have enough people assigned to table bus and service duties at the coming picnic meeting. We believe that an ad hoc recruitment of helpers at the meeting will work out well with certain key roles already understood (Curtis as MC, Stan handling raffle/contest winnings, etc.) Discussion followed about verifying vaccine status at event and Ann K6SHO said she will lead that check at the "door". Due to [MR&GC](#) rules we have no ability to allow variance with regards to vaccine status. Pam W. sent an email to the rest of our picnic event production crew to verify that we have a plan to arrange the manpower we'll have on hand.

New Business:

In person and/or hybrid meetings: Curtis: We can move to in-person, but there is a durable group that prefers Zoom meetings and such meetings have been performing well in terms of attracting attendance. Curtis wants to explore making hybrid work well through process and technology. Brian K6EZK will do a simple plan for how to make these meetings work well long term.

The bigger issue is what our vaccine policy will be and do we have the right spacing and ventilation in the clubhouse. We must also have a policy about masking. Milt suggested we have a mask rule, or a mask rule for those who aren't vaccinated, but admits this can get complicated. A motion was made to adopt a policy stating that attendance at an in-person meeting (which we plan to resume in September) will require being vaccinated and willingness to wear a mask during the event. This policy will be monitored and adjusted as conditions evolve. M/S/A unanimously by show of hands.

Marin Century organizers requested use of our clubhouse on 7/20/21. The MARS board decided to allow this use but under the same conditions as adopted above: Only vaccinated and masked attendees are allowed, effective 7/15/21. M/S/A without objection. Ken AB6JR asked about the VE sessions coming up on 8/10. The board decided to take up the matter again closer to the event.

Milt KM6ASI: The county election board contacted us about using the clubhouse for an official election station (which we've done before) and we need to get back to them with our policy. To that end, we authorized Milt to reply back to them that our policy is mask AND vaccine required for access to the building. That may be incompatible with their rules and needs, in which case we will hold fast and let them know we look to work with them again in the future.

Good of the Order N/A

Executive Session N/A

Adjourn 21:13

Next Regular Meeting August 6, 2021

Next Board Meeting August 12, 2021

Questions and Answers

This section of the QSA-5 newsletter is dedicated to questions you have regarding amateur radio. You can ask QSA-5 questions and we will try to find an answer for you, or you can reach out to members of our club for an answer. With that said, here is a question for our members, from May's issue that still needs an answer, asked by David N6OVP who is looking for a large satellite dish.

Can anyone there help me? I am looking for a larger dish for my EmE station here in Corte Madera. I have a 10-foot dish but wish to go larger and I was hoping that there was a way to list a request on a web page for someone out there who might have a lead? Thank you, David N6OVP.

n6ovp@pacbell.net

Hi David! While we are not sure whether you have received any input or solutions to your dish problem, so the QSA-5 did some digging around on your behalf. There is a section of Facebook's Marketplace that is dedicated to antennas and satellite dishes. Here is the link:

<https://www.facebook.com/marketplace/sac/antennas-dishes/>

There also appears to be a modest number of dishes for sale on Craigslist. Here is a link to that page:

<https://sfbay.craigslist.org/d/for-sale/search/sss?query=%22satellite%20dish%22>

The next question, also a holdover the from May issue, comes from the president of our club, Curtis WA6UDS, regarding the installation of our new antenna tower:

We need your help. To get a building permit for the installation of our antenna tower, we need a site map of the club house lot. Do any of you have the ability to produce such a map? We have an assessor's map which includes the PG&E right of way. If you can help us out or know someone who can please contact me at:

wa6uds@w6sg.net

Marin Amateur Radio Society News

Another Successful VE Session

The Marin Amateur Radio Society held another successful examination session on July 10th. A big thank you goes out to Ken AB6JR and his team for further advancing the number of amateur radio operators on the air! Eight candidates passed the Technicians exam, with one candidate going on to pass the General exam as well. Three candidates passed the General exam, and three candidates passed the Amateur Extra Class exam, with one upgrading from Advanced to Amateur Extra Class. A total of thirteen people sat for their examinations and before you scream “your math is off my friend,” note that there was one “no-show.”

It is wonderful that our club can do license examinations again because it helps keep our passion for amateur radio alive and well. Again, we all owe Ken AB6JR and his team a big round of applause for making this possible. There is a lot more to putting on VE sessions than simply handing a test to a candidate and collecting it when he or she is done. Ken AB6JR and his team had to grade the exams, fill out a lot of paperwork and submit that paperwork to the ARRL for processing with the FCC.

Upcoming Licensing Test Session

The Marin Amateur Radio Society will be holding another Volunteer Examination session on October 9th, 2021, at 1:00 pm. If you know someone wishing to get their first license or upgrade an existing license, let them know about our upcoming session. If you have VE credentials and want to volunteer to help Ken AB6JR and his team out, contact Ken at kenab6jr@comcast.net for further information. While the team may have enough volunteers, it is always good to have standby volunteers should they be needed.

Clubhouse Cleanup Progress Report

On July 9th, we had another cleanup party to prepare the clubhouse for the license examination session taking place on the following day, July 10th. The cleanup of the clubhouse and outer property has been slow but steady. Due to the Covid-19 Pandemic, the clubhouse didn't get a lot of use and therefore little general of quickly. Over the last few cleanup parties, donations were organized and sorted, eventually being either sold through our silent auction or recycled if the equipment was not usable. The group of volunteers made quick work of this final phase of dealing with donated equipment, making room for the candidates that would be sitting for their examinations on the following day. Of course, there is still all the equipment sitting under the tables against the west wall, but the cleanup crew will deal with that soon.

MESH Presentation at the Clubhouse

On Saturday, July 31st, the Marin Amateur Radio Society's own Rob Rowlands gave an in-depth presentation and hands-on training session about the MESH Network. Roughly twenty people attended the event to find out more information about the Network. Here are a few points of discussion from Rob:

1. The 5.8GHz AREDN mesh is now extended to San Rafael and hopefully soon to Novato. There's an internet tunnel to the MARS clubhouse.
2. The first public service event of 2021 May used remote video over the mesh
3. See the event's slide presentation
at https://docs.google.com/presentation/d/1wB3RonFnhQXvx7Ea3ioXjNxXVGC8rkjzuXN2EDd_1zk/edit

You can see Rob's fantastic slide presentation at the web address above. It's important to build up this network, so go through the slide presentation and get involved. You can email Rob at rowlands47@gmail.com if you have any further questions or comments.

Help Extend the SF Emergency Wireless Emergency MESH

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.

July 17th Club Picnic and Public Service Luncheon

On July 17th, the Marin Amateur Radio Society held its annual picnic and Public Service Luncheon at the Marin Gun and Rod Club. It was a great opportunity for club members to see one another outside the confines of their computer screens. A Big thank you to Ann Shores K6SHO, Pam and Stan Witherspoon, and all those who volunteered to make this fantastic event a success. Sixty-nine people attended the event. Our Club President, Curtis Ardourel WA6UDS, provided a more detailed accounting of the day's events in his President's Letter at the start of this month's issue. Here are some photographs, provided by Curtis of the event:







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 Boston University News Service regarding the state of amateur radio today:

Ham radio: A hobby still alive and thriving: Boston University News Service investigates the state of ham radio into today's technologically advanced society:

<https://bunewsservice.com/ham-radio-a-hobby-still-alive-and-thriving/>

Connecting with strangers over ham radio cleared my family's static: The next article describes the part amateur radio played in the life of one person during the pandemic:

<https://www.bostonglobe.com/2021/05/22/opinion/connecting-with-strangers-over-ham-radio-tuned-my-husband-back-into-our-little-family/>

Amateur Radio Responds to Flooding in Western Europe: Flooding due to excessive rains have been all over the news lately. Here's an article from the ARRL regarding the role amateur radio operators have been playing in disaster relief and emergency communication services in flooded areas:

<https://mail.google.com/mail/u/0/#inbox/FMfcgzGkZZjfLMxSFdnLQJcxckLmLfdG>

How A Group of Dedicated Volunteers Are Keeping California's Wildfires at Bay: Californians, as well as the populations of other states, are in the middle of a vicious fire season. This final article comes from NPR and addresses the role amateur radio operators are playing in California's battle against an extreme severe fire season:

<https://www.npr.org/2021/07/16/1016747577/how-a-group-of-dedicated-volunteers-are-keeping-californias-wildfires-at-bay>

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 in last month's issue. We will add new regulations to the existing articles, removing the older regulations as new regulations are introduced. As of the August issue of the QSA-5 newsletter, this list of FCC regulations and changes will be greatly reduced, only covering the last two months. 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 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>

FCC Issues Enforcement Advisory: Radio Users Reminded Not to Use Radios in Crimes:

If you have an amateur radio license, then you most likely received an email from the FCC regarding this issue. As the editor of QSA-5, I am bound to present information to you in an unbiased manner and offer no opinion on the subject matter, leaving that to you, the reader. However, you can find some interesting video responses from Amateur radio operators on YouTube by searching under the heading "FCC Enforcement Advisory". Here is a link to the ARRL article regarding the advisory notice, which was sent to licensed radio operators twice this year:

<http://www.arrl.org/news/fcc-issues-enforcement-advisory-radio-users-reminded-not-to-use-radios-in-crimes>

Updated Radio Frequency Exposure Rules Become Effective on May 3, 2021:

Rule changes have been put into effect (based on a 2019 report) on May 3rd, 2021, regarding RF Standards. The new rules do not change the existing RF exposure (RFE) limits. However, the changes do require that stations in all services, including amateur radio, be evaluated against existing limits, unless they are exempt. Here is a link to the ARRL article:

<http://www.arrl.org/news/updated-radio-frequency-exposure-rules-become-effective-on-may-3>

FCC Not Yet Collecting \$35 Application Fee:

In 2020, the FCC stated that it would be increasing licensing fees. Initially, a fee of \$50.00 was set for each license and any license renewals. However, that number was brought down to \$35.00. Here is the latest news regarding the implementation of this new fee from the ARRL:

<http://www.arrl.org/news/fcc-not-yet-collecting-35-application-fee>

ARRL to FCC: Additional Volunteer Examiner Coordinators Not Needed:

The FCC was considering expanding the number of VECs (Volunteer Examiner Coordinators). However, the ARRL has indicated that the existing number is adequate. Here is an in-depth article from the ARRL:

<http://www.arrl.org/news/arrl-to-fcc-additional-volunteer-examiner-coordinators-not-needed>

April 2021 Volunteer Monitor Program Report Released:

Here is the latest report on the Volunteer Monitor Program, a joint effort by the FCC and ARRL to monitor the airwaves and enhance compliance regarding FCC rules and regulations:

<http://www.arrl.org/news/april-2021-volunteer-monitor-program-report-released>

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.

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 Newslane. An AP styled news feel page for amateur radio:

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

Fun With Radio

During the Fun with Radio portion of our July meeting, Andrew KI6UOC, talked about the Nano VNA and it's use during a field day exercise. Rob Rowlands did a presentation about this fantastic device a few months earlier. Today, we will present a brief overview about the Nano VNA, and some video links, for anyone who didn't watch Rob's presentation.

The Nano VNA is a tiny Vector Network Analyzer (VNA) designed by edy555. Its biggest advantage is its portability. The Nano VNO lives up to its name because it is small, slightly larger than a deck of cards. It's self-contained, with a small touch screen and chargeable battery as a power source. The Nano VNA is surprisingly inexpensive, costing around \$50.00 or less online. Prior to the advent of this device, Vector Network Analyzers were costly and large. This high cost kept them out of many ham shacks where they would have been useful. What can a ham radio operator do with a Nano VNA? They work well for analyzing your antennas. Here are some links to videos that go into detail about this device:

Nano VNA Made Easy: This is a quick and easy introduction to the Nano VNA by The Smoking Ape, who does excellent instructional videos about all things amateur radio related:

<https://www.youtube.com/watch?v=ay58sp8VaNM>

Using the Nano Video as an Antenna Analyzer: A good video that will show you how to use the Nano VNA to analyze your antenna from Ham Radio Crash Course:

<https://www.youtube.com/watch?v=tLMAStiaAxU&t=419s>

Steve KB6HOH, shared the club's progress with it's Winlink gateway as well as the progress he has made with his own Winlink HF gateway station (KB6HOH-**12**). What is Winlink, for those of you who are not familiar with it? Winlink is a network of amateur radio and authorized government-licensed stations that provide worldwide radio email using radio pathways where the internet is not present. How do you get Winlink? Start by signing up at Winlink Global Radio Email and downloading their software. Here's a link to their account setup page:

<https://www.winlink.org/user>