

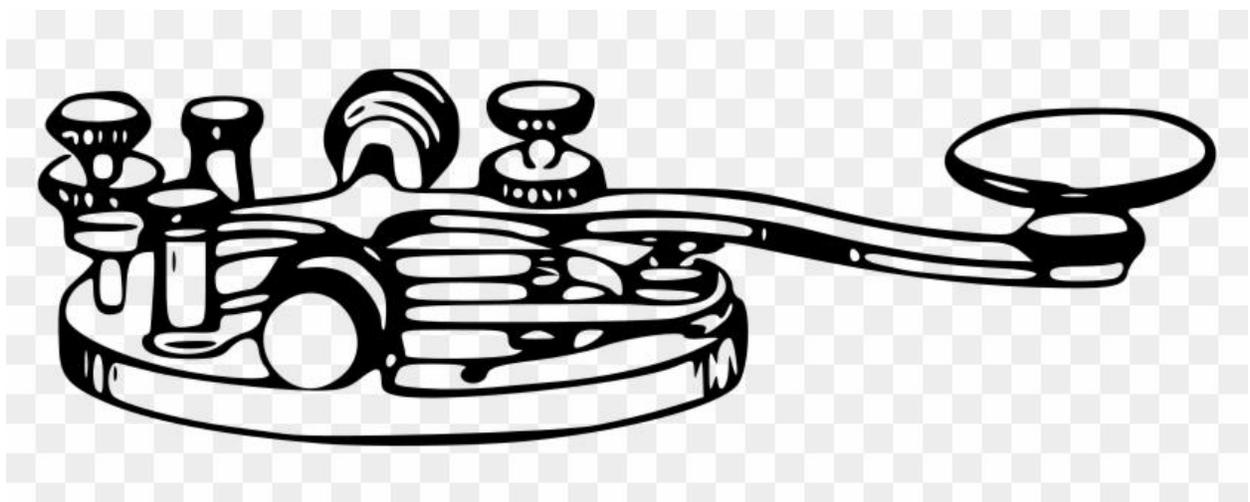


QSA-5

Marin Amateur Radio Society Monthly Newsletter

Established 1933

February 2025



When all else fails, you can count on Amateur Radio

From Our President:

January is behind us now. For whatever reason it just seemed to be a very long month. February has fewer days so I am hoping it will feel more normal. That said there is a lot going on in the club. Owing to the good offices of Milt KM6ASI, Jerry WA6BXB, Gearald W6NOV, Dan KN6PNA, Jim KM6WWY, and Marc KF6VNT, and some folks I missed, we now have a functioning HF station at the club house, including a new multiband dipole. If the stars align perhaps, we can participate in the California QSO Party in October on our club station.

At our next board meeting on February 13th, we will be working out the MARS budget for 2025. While this is not the most exciting way to spend a Thursday evening, it has to be done. We have approved the budget for the Public Service team we will soon be jumping into action with the Public Service Kickoff Luncheon on Saturday 22 February at 11:00 AM at the club house. As usual there will be awards for last year's season, information about events for the 2025 season, discussions about policy and procedures, vegetarian and meat Lasagna, and of course swag. All are welcome, especially those of you who have not yet volunteered for a public service event. If you wish to attend, please email rsvp@w6sg.net so we can insure there will be enough food and swag.

For 2024 the Oxford English Dictionary chose "brain rot" as the word of the year. As a phrase it means: *the supposed deterioration of a person's mental or intellectual state especially vied as the result of overconsumption of material considered to be trivial or unchallenging*. Late in 2024 I began noticing what I will call "software rot" on the w6sg.net web site. The site was built in 2013 based on a content management system. The underlying application has not been brought up to date and various folks have added plugins to the system over the years. The first problem is that the gallery system for creating groups of photos stopped working. This brought the whole site down. I disabled the gallery system, and we got the site back. The next failure came without notification, so I am not sure when it happened. The form you filled out to apply for membership stopped sending the email of the form to me. I only learned of this when a couple of folks emailed me directly to ask why I had not responded to their applications. I have discovered that other maintenance systems now no longer work. I have created a new instance of the site and am slowly migrating the site over to a clean new installation. The

membership application forms sends you to the new site and I am once more getting the emails, and two new club members. More on this as I get more of the site moved over with some needed cleanup.

Enough of my blather.

73 de wa6uds

From the Editor:

The world of amateur radio is alive and well going into February. Winter Field Day 2025 was one of many amateur radio events across the country for the month of January. The MARS Volunteer Examiners held the first test session of the year and, while there was a single person taking the test, amateur radio added one more member among its ranks! Curtiss Kim wrote a piece regarding the Southern California fires and amateur radio which is very interesting. This month's HF for beginners is all about POTA (Parks on the Air) and SOTA (Summits on the Air). While there are some more traditional operators who are not really into the idea of taking gear to a park and operating, many new amateur radio operators have a keen interest in the subject. Therefore, I included a beginner's guide to POTA and SOTA for our members interested in the topic.

Talking with other clubs across the country, the Marin Amateur Radio Society holds and participates in more events than many other clubs. In talking with other clubs and their members, I've been able to discover some great resources for amateur radio operators. One of which is the DLARC Digital Library: <https://archive.org/details/dlarc>

This website provides access to a seemingly endless collection of club publications and technical manuals. I've been trying to go through the website's offerings but there is so much material, I'll probably be at it for the next ten years! This is why I talk to other clubs and their members. I never would have found this site on my own.

One addition the QSA-5 is going to make to our publication is a list of websites with downloadable PDF manuals for older equipment. When I rescued the club's old Ten Tec Corsair, I didn't have any manuals and had to search the internet for them. Fortunately, Ten Tec has a support website for their older equipment. However, with older equipment, it is difficult to acquire user or service manuals. The QSA-5 wants to address this problem, which is why I provided a link to the above website. With that said, thanks to Curtiss Kim, Michael Fischer, and the usual suspects for their contributions. Enjoy the current issue of the QSA-5!

QSA-5Editor@w6sg.net



New Members:

Reede Stockton KO6HGK - Forest Knolls

Gabe Kearney KI6TFB - Petaluma



“Your parents hath given you a name. And the FCC hath given you another...”

Marin Amateur Radio Society

Board of Directors Meeting

01/09/2025



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

Attendance:

President: Curtis Ardourel WA6UDS

Director: Richard Cochran AG6QR

Director: Ed Essick K6ELE

Director: Steve Toquinto KB6HOH

Secretary: James Saltzgaber KM6WWY

Director: Ken Brownfield AB6JR

Treasurer: Bruce Bartel N6VLB

Trustee W6SG: Marc Bruvry KF6VNT

Trustee K6GWE: Brian Cooley K6EZX

Adopt agenda: MSC to adopt as presented

Election of Officers

President – Curtis Ardourel WA6UDS Remained as president by no objection

Vice President – Ken Brownfield AB6JR

Secretary -- Jim Saltzgaber KM6AOW

Treasurer – Bruce Bartel N6VLB

Approve minutes of 14 November board meeting: MSC to approve the minutes as presented in December QSA-5.

Secretary's Report/Communications: Nothing to report.

Treasurer's Report: Bruce – Will be rearranging PayPal receipts to match quick books categories. No changes in amounts or totals. Curtis – Building account has a Red Bell indicator. Bruce will check and adjust account balance if necessary.

Members Present: Skip Fedanzo KJ6ARL, Karen Nyhus KN6SGD, Kathy Spicher KM6URP, Mark Klein KM6AOW, Milt Hyams KM6ASI, Rob Rowlands NZ6J, Scott Pasternack KN6ZDM, Dan Sobel N6HLZ, Larry Loomer KI6LNB, Charlie Benet AI6TT, Larry Bradley KK6QPE

Committee and other Reports:

1. Membership: Curtis WA6UDS: 165 members. This is 100% the membership at this time last year.

2. Facilities: Skip KJ6ARL- Rob Rowlands has been working with property owner Rob next door. Rob has obtained a bid of \$1,250 to remove tree branches that are on the property line on the west side of the clubhouse. MARS will split this cost with him, \$625 each. Skip recommended that we do this work. Milt suggested that the branches over the Comm Van also be removed, and that we approve an additional \$500 for this. M&S that we approve a maximum of \$1200.00 for both jobs, carried by show of hands. Skip gave a shoutout for Dan N6HLZ for purchasing and installing new LED tubes, including modifying the fixtures, to replace the fluorescent tubes in the clubhouse light fixtures, and Gerald W6NOV for helping with the installation. He requested that Dan submit a receipt for reimbursement of the material costs. Dan replied via chat: "No thank you, it's my donation for 2024" Steve KB6HOH requested that someone visit the replacement of the radio room track lighting, due to poor lighting. Following discussion of possible problems and solutions, Curtis will investigate this on Sunday.

3. VOAD/RCV Skip KJ6ARL: Interesting article in IJ regarding Marin County Fire plan to build fire headquarters building in San Geronimo Valley. Nothing else new to report.

4. Technical Milt KM6ASI: Rob Rowlands has been approaching us regarding club interest in a 6 - meter repeater that is currently on Wolfback ridge. It is not currently operating. The owner would like to see it used but it must be relocated from Wolfback to operate due to FM station QRM. Eric, the Wolfback site manager, will make it available to us if we move it to another location to set it up and operate it. After discussion it was determined to do additional research, Curtis will survey membership regarding interest in a 6M repeater. Milt KM6ASI- We have decided to put an HF antenna on the clubhouse roof. The SteppIR vertical antenna received from Alan Bowker's estate has been checked out and appears to be a somewhat high maintenance item and will require radials since it is a vertical. A Cushcraft vertical was investigated, but this antenna still requires radials. The Cushcraft has been put on hold, and additional research will be done on the SteppIR. Various possible combinations of antennas have been explored. The current plan is to mount a Buckmaster HF Off Center Fed dipole antenna. Mounting will be on mast on roof, one end will be on the flagpole at the front end of the clubhouse, feed point at the mast, with a pole mounted beyond the Comm Van shelter. Installation will start this coming Sunday. His goal is to have HF net first Sunday morning in February. Skip inquired about the location of any club house paint remaining from the paint job. It was last seen in the Comm Van shelter. He will check there.

5. Public Service Scott- KN6ZSM: Will present the 2025 Public Service schedule and budget later in the agenda.

6. VE Testing Jim KM6WWY: We have 1 applicant for Saturday. We will have a full complement of VE's for late applicants or walk ins.

7. Comm Truck Jim KM6WWY: Cal Anber and Charlie Benet have volunteered to help do the monthly maintenance check list. I will go over the procedure with them in January.

8. NBAM Kathy Spicher KM6URP: Happy New Year! She met Rob Rowlands 12/27 at the clubhouse and brought him up to speed on the inventory so he can

proceed with updating it complete it and finish flashing and updating the nodes. She will be meeting with Johnathan Brown, AK6VB, Ed Witts, and Chris Stoessel at Bodega Bay to assess problems at the marine lab as well as discuss their upcoming demo project. The NBAM steering committee will be meeting at the club house on Saturday Jan. 18th, noon to 3 to work on their direction for 2025. Sonoma County Radio Amateurs will have a Winter Field Day Jan. 25th at Spring Lake Park. NBAM will be doing an AREDN demo there, in hopes of generating more Sonoma County interest. An AREDN demonstration will be set up. NBAM will be participating in a Disaster Simulation, May 31st, at Sonoma County Fair Grounds, 9 am to 2:30pm, with an AREDN station. Rob went up to Mark West Springs and had it up and running but it had since gone down. Sonoma Mountain as a backbone site has been delayed, so Mark KM6AOW has done some line-of-sight analysis and has an alternative plan for the backbone to connect Mt. Burdell, Mt. Barham, Sears Point and Bay Hill. These are all sites that Sonoma County Public Infrastructure has racks on. Ken Brownfield asked if any backbone access sites are being planned for Novato AREDN access. Mark KM6AOW replied that there are problems, but several workarounds are being looked at. Rob – part of the Barnabe fire lookout parapet was damaged in the recent wind events, but the AREDN radios mounted on the lookout were not damaged. Curtis – The NBAM website domain is due to expire, and he is working on getting a new NBAM domain host account set up. A new account for the MARS owned domain hosting account must also be set up because the County of Marin was the holder of that web hosting account.

Old Business:

1. Paint the Clubhouse Fund: \$9370 S4.5 – \$6750 budget 103.9% - Actual \$26,000, we recovered 36% of total cost. He will leave the donation portal on the website but will no longer actively request donations.

2. Revitalizing Babble Class: Curtis – He was at the club house last Sunday and there were 10 people there having a spirited discussion, a lot like the old days. No further action is required on this item.

3. Donations Committee Charter: Curtis needs to work further on this. Continued to February board meeting.

4. New Google environment: Online storage of club records - Curtis and Bruce N6VLB will work on how we will structure and roll this out. Continued to February board meeting.

5. Website Issues: Curtis – In addition to the previously mentioned domain registry items, we still need to repair some of the web server plugins to restore the pictures gallery. He will work on this problem.

New Business:

1. Public Service Calendar – Scott KN6ZDM: The proposed 2025 Public Service Calendar is:

Event Date	Event Title	Organizer
2/22/25	Public Service Kickoff Event	Scott
3/8/25	* Marin Ultra Challenge	Oliver
4/26/25	Ridge to Bridge	Oliver
5/3/25	Miwok 100	Rob
6/8/25	114th Annual Dipsea	Rob
6/28/25	ARRL FIELD DAY	
6/29/25	ARRL FIELD DAY	
7/19/25	MCBC Dirt Fondo	Don
8/2/25	Marin Century	Don
8/23/25	Double Dipsea	Scott
9/14/25	DC Escape from Alcatraz	Michael
10/25/25	* Kelly Brush Ride	Don

a. Events that will not happen in 2025:

- i. MCBC Jane Fondo
- ii. MCBC Adventure Revival

b. New events proposed in 2025:

i. Marin Ultra Challenge

- 1. MARS organizer: Oliver
- 2. Event operator: InsideTrail
- 3. Information
 - a. 50 Mile & 50K Race
 - b. Start and Finish at Rodeo Beach

c. Hours: 0515-2030

d. More Info: <https://insidetrail.com/calendar/marin-ultra-challenge/>

ii. Kelly Brush Ride

1. MARS organizer: Don

2. Event operator: Kelly Brush Foundation

3. Information

a. Kelly Brush Foundation serves to help people with spinal cord injuries to lead active lives

b. Two routes, Road and Mountain

c. Start and Finish in Mill Valley

d. More details TBA

e. More Info: <https://kellybrushfoundation.org/ride/>

Skip KJ6ARL questioned if the Inside Trail sponsor was a “for profit” or “non-profit” organization. Scott replied that it was “for profit”. Following discussion, including MARS policy on supporting “for profit” sponsored events, past “for profit” events that we have worked with, it was MS& Carried by show of hands to approve the proposed 2025 Public Service Events Schedule.

2. Budget: Curtis WA6UDS - Only the Public Service Events budget will be discussed this month, the remaining budget will be discussed next month. Curtis presented the proposed 2025 Public Service budget. Following discussion, the public service budget amount of 3824.75 was MS & Carried by a show of hands.

3. Board terms: Curtis WA6UDS- At last years’ election, 5 board members terms were ending, and 5 new board members were elected. According to our by-laws, we are to alternate the election of 4 board members one year and 3 the next. Ed Essick and Curtis Ardourel’ terms will end at the end of this year. We must find a way to correct this to conform to our current bylaws. The solution is for a current board member volunteer to run for reelection at the end of this year. Ken AB6JR volunteered to make his seat for one year and it would be up for reelection. That would solve the problem within the guidelines. Rich Cochran AG6QR also volunteered to make his seat available. The person who will step down early will be determined when elections are set up for next year.

Good of the Order: Steve KB6HOH volunteered to be chair for both Field Day and Club Picnic for 2025.

Executive Session: Not required.

Adjourn: MSC to adjourn @ 20:57 Hours (9:57 PM)

Next Regular Meeting 7 February 2025

Next Board Meeting 13 February 2025

Marin Amateur Radio Club

Balance Sheet Comparison

As of January 31, 2025

TOTAL

AS OF JAN 31, 2025

AS OF JAN 31, 2024 (PY)

ASSETS

Current Assets

Bank Accounts

B of A Facilities account - 8795	3,000.90	5,385.61
B of A General account - 4328	75,473.17	61,414.79
CD	0.00	0.00
Money Market	0.00	0.00
VE Session Cash	0.00	0.00
VE Session Cash Received	0.00	0.00
Total Bank Accounts	\$78,474.07	\$66,800.40

Other Current Assets

Uncategorized Asset	0.00	385.00
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Total Other Current Assets	\$0.00	\$385.00
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Total Current Assets	\$78,474.07	\$67,185.40
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	\$137,457.07	\$126,168.40
LIABILITIES AND EQUITY		
Liabilities		
Total Liabilities		
Equity		
Opening Balance Net Assets	124,400.00 1	24,400.00
Retained Earnings	15,577.46	13,748.91
Net Income	-2,520.39	-11,980.51
Total Equity	\$137,457.07	\$126,168.40
TOTAL LIABILITIES AND EQUITY	\$137,457.07	\$126,168.40

Marin Amateur Radio Club

Profit and Loss

January 2025

TOTAL

	JAN 2025	JAN 2024 (PY YTD)
Income		
Christmas Party Income		640.00
Donations	824.00	200.00
Dues	30.00	110.00
Rent	2,700.00	2,600.00
Unapplied Cash Payment Income		385.00
Total Income	\$3,554.00	\$3,935.00
GROSS PROFIT	\$3,554.00	\$3,935.00
Expenses		
Accounting	65.00	60.00

Awards	200.00	
Christmas Party		2,970.23
Contractors		11,000.00
Equipment < \$2,500	431.48	
Food	165.36	
Garbage	52.74	49.50
Insurance	567.00	
Comm Van Insurance	71.83	69.25
Total Insurance	638.83	69.25
Office Supplies & Software	13.00	
Repeater		1,246.67
Taxes & Licenses	4,164.36	
Utilities	95.11	369.86
Web Services Expenses	0.00	
Total Expenses	\$5,825.88	\$15,765.51
NET OPERATING INCOME	\$ -2,271.88	\$ -11,830.51
Other Expenses		
MESH Grant Disbursement	248.51	150.00
Total Other Expenses	\$248.51	\$150.00
NET OTHER INCOME	\$ -248.51	\$ -150.00
NET INCOME	\$ -2,520.39	\$ -11,980.51

LIFE IS SIMPLE



MARS Club News

2025 Public Service Kickoff

Dear MARS Members,

We want to thank each of you for your past service in public service events and look forward to seeing you all at our exciting upcoming events this year!

As you know, these events not only serve our community, but also offer us a unique opportunity to advance our skills in the technical and communication phases of the radio art. Moreover, our public service program has been cited by many as the shining aspect of our club for which we are renown.

We have 9 MARS public service events lined up, plus our free kick off lunch, which will now be named after long-time member Randy Jenkins, who contributed tirelessly over his life to the public service program, building a firm foundation that we enjoy today.

Sign up for the Lunch

The Randy Jenkins Memorial Public Service Kickoff Lunch will be on February 22, 2025 1100-1400 at the MARS clubhouse, 27 Shell Rd, Mill Valley. We have so much to talk about, and of course there is a hot buffet lunch, raffle prizes, and our new first annual award in memory of Randy Jenkins, the Randy Jenkins Rookie of the Year award. This new award recognizes a newer member ham who has demonstrated exemplary commitment to the public service program in the prior season. The award will be a monetary prize that is to be used by the winner to purchase equipment that will assist them in enhancing their public service abilities. **Please RSVP to the lunch by emailing RSVP@W6SG.NET.**

Sign up for the Public Service Events

Please sign up for the public service events using the online google doc at this link: [2025 Public Service Signup sheet](#)

We want as many people as possible to sign up for each event. Even if the requested number of volunteers is exceeded, it is our goal to utilize everyone – so please keep adding. Having extras will allow us to staff the events and also test out new (and old) things in the spirit of continued innovation. Examples of this would be testing the expansion or integration of APRS, DMR, NVIS, LoRa, AREDN by interested individuals. It is going to be an incredible year, and we look forward to seeing everyone at the first event, the lunch! So don't forget to RSVP.

Sincerely,

Your MARS Public Service Committee

Scott Pasternak

Don Magdanz

Oliver Lu

Doug Kaye

Ann Shores, counselor

Michael Fischer, member emeritus

Rob Rowlands, member emeritus

Curtis Ardourel, MARS President

Takeaways from the LA Fire

By Curtiss Kim, KM6GUY

Trying to determine the impact of amateur radio in the devastating Los Angeles fires is somewhat hard to assess since many of those involved have yet to be debriefed. Since 1951 Southern California local law enforcement has been aided by a group of amateurs called The Los Angeles County Disaster Communications Service. Nearly 300 amateur radio operators are scattered throughout 88 cities in LA County providing back up communication services to law enforcement. The group boasts they have radio rooms in twenty Sheriff's substations plus three other county locations. I reached out to the agency for any insights into their impact but have not heard back. Job one for the Disaster Communication Services is facilitating communications between the county and other agencies when all else fails.

Members receive training and are vetted before engaging in any activities. One of the stories emerging is the ham radio repeater that was installed six months ago by the Ronald Reagan Post 283 of the American Legion. Their little “communication center” in the Pacific Palisades neighborhood proved invaluable when cell service was lost. Volunteers kept residents informed on exit routes and the fire’s progress mostly on handie talkies. The repeater was in constant use thanks to a backup battery and generator that was also installed. It was in use up to the very moment the building it was housed in burned to the ground. As soon as legion members were allowed back into the charred area they quickly replaced the repeater. The volunteers were quick to add that their communications saved lives.

Already shortcomings are starting to emerge from the various fires. When flames erupted around the City of Altadena, residents on the east side received evacuation orders but it was eight hours later when the cell alerts went out to residents on the west side of town. Of the 17 people confirmed dead in the Eaton fire, all were on the town’s west side. Then there was the software glitch that led to a county wide order to evacuate when it was meant only for homeowners around the Hurst Fire. Which brings up another concern. As the cell towers went down it delayed evacuation orders from reaching residents. Likewise, when cell service was restored, old evacuation orders that were stored were rebroadcast causing confusion. A friend of mine, State Senator Mike McGuire, the Democrat from Healdsburg was quoted as saying, “Having a functional cell phone isn’t about checking the latest Facebook status, it’s literally about life or death. For local emergency alert systems, if cell phone technology is not up and running during times of disasters, lives are at risk.” Other major flaws, text alerts referred residents to check certain websites for updated information. But many area residents were without internet. One saving grace proved to be Starlink, Elon Musk’s satellite internet system. It offered many in the affected areas some information. Many of the live tv reports emanating from the fire scenes were also done on Starlink. According to an article posted by ARRL, amateurs were deployed to serve evacuation centers as a means of communications. The bulletin goes to say amateur radio operators should be ready to take care of themselves and their families before needing to deploy. As more information starts to flow about the LA fires it’s become increasingly clear Murphy was right, “anything that can go wrong, will go wrong.”



The Importance of Field Day

By Hugh T Patterson KN6KNB

The previous article by Curtiss Kim demonstrates the importance of amateur radio in time of disaster or emergencies. Across the country, local groups of amateur radio operators create emergency response teams able to set up communication systems when cellphone and internet are not an option. Amateur radio operators have the opportunity to hone their emergency communications skills at yearly events, such as the ARRL Field Day and the Winter Field Day. Amateur radio operators from all over the United States and the world participate in these events. So what is an amateur radio field day?

Amateur Radio Field Day (ARFD) is an annual event held each June by amateur radio operators worldwide. It is a unique opportunity for radio enthusiasts to

showcase their skills and demonstrate the capabilities of amateur radio in emergency communications. During this 24-hour period, hams set up temporary stations in parks, schools, and other public locations, making as many contacts as possible with other operators across the country or globe.

ARFD is a celebration of the spirit of amateur radio, a testament to the resilience and ingenuity of the ham radio community. It's a time for camaraderie, technical innovation, and a demonstration of the vital role that amateur radio plays in times of need. This last point is the most critical aspect of the event!

The Origins of ARFD

The origins of ARFD can be traced back to the 1930s, when a group of amateur radio operators in the United States decided to hold a field day to test their emergency preparedness. The event quickly gained popularity, and today, ARFD is celebrated by thousands of hams worldwide. There are many independent field days held across the globe at both country level and club level.

The Purpose of ARFD

The primary purpose of ARFD is to demonstrate the capabilities of amateur radio in emergency communications. During the event, hams set up temporary stations, often with limited power and portable equipment, to simulate emergency conditions. They practice making contacts under challenging conditions, such as limited power, limited battery life, and challenging propagation conditions. Station setups run the gauntlet from simple QRP stations with a wire antenna to custom communication vans with multiple radios and antennas.

The Challenges of ARFD

ARF presents a unique set of challenges for participants. Hams must contend with limited power, limited battery life, and often challenging propagation conditions. They must also be able to set up and operate their stations quickly and efficiently, and they must be able to troubleshoot any equipment problems that may arise. Being able to set up an amateur radio station under adverse conditions prepares operators for real-life emergencies!

The Rewards of ARFD

Despite the challenges, ARFD is a rewarding experience for many hams. It's an opportunity to put their skills to the test, to connect with other hams from around the world, and to contribute to a worthy cause. ARFD is also a great way for new hams to gain experience and learn from more experienced operators. Participating in field day exercises will teach participants more about antenna theory and troubleshooting than any other radio activity.

How to Participate in ARFD

If you're interested in participating in ARFD, there are a few things you can do to prepare. First, make sure you have the necessary equipment, including a radio, antenna, and power supply. Equipment must be carefully considered. While some operators bring powerful rigs and massive antenna systems to these events, in a true emergency or disaster, you will probably be limited to more modest gear. A good mobile transceiver, rechargeable battery, and portable mast based antenna will be more practical.

Do some online research to see when field day events are held. The ARRL holds their yearly field day during the month of June. You don't have to be a member to participate (although joining the ARRL has many benefits). Look for announcements of local clubs holding events. While the ARRL field day is the big yearly event, many emergency preparedness events are held throughout the year.

You should also familiarize yourself with the rules and regulations of the event. Most field day events have simple rules. To have a contact qualify as a contact, you generally exchange callsigns, a category number, a class identifier, and a location. During the last winter field day my contacts were like this: KN6KNB, 1, H, SF. The contact would then give his or her details, and I'd be off to the next contact. Field days are a great way to get over mic fright! Finally, find a local club or group to participate with. It helps to work your first field day with folks who have done these events before. Clubs are a great source of knowledge for new radio operators.

The Future of ARFD

As amateur radio continues to evolve, so too will ARFD. New technologies and operating modes are constantly being developed, and ARFD provides an

opportunity to experiment with these new technologies and push the boundaries of what's possible.

In conclusion, ARFD is a unique and exciting event that celebrates the spirit of amateur radio. It's a time for hams to come together, test their skills, and demonstrate the value of amateur radio to the world. Whether you're a seasoned veteran or a newcomer to the hobby, ARFD is an event that you won't want to miss.

Volunteer Examiner News

Our 2025 schedule will be Jan 11th, Apr 12th, Jul 12th, and Oct 11th. Please mark your calendars. We had one person sit for their technician's test on January 11th and a roomful of Volunteer Examiners. However, we can sometimes get walk-ins, so it is important to have a full roster of examiners. It was a great opportunity to get together and talk about all things radio!

The ARRL Volunteer Examiner's (VE) program has played a pivotal role in the licensing of amateur radio operators in the United States since its inception in 1984. Prior to the establishment of the VE program, amateur radio licensing exams were administered exclusively by the Federal Communications Commission (FCC). This process was often cumbersome, requiring candidates to travel to FCC offices, which were not always conveniently located. The introduction of the VE program decentralized the examination process, making it more accessible to aspiring operators. Under this program, qualified volunteers, themselves licensed amateur radio operators, were authorized to administer exams, significantly streamlining the licensing process and encouraging greater participation in the hobby.

The VE program is a cornerstone of the amateur radio community, reflecting its ethos of self-regulation and mutual support. By empowering experienced operators

to oversee the licensing process, the program fosters a sense of responsibility and mentorship within the community. Volunteer Examiners are required to meet stringent qualifications, ensuring that they possess the knowledge and integrity necessary to uphold the standards of the amateur radio service. This peer-driven approach not only maintains the credibility of the licensing process but also strengthens the bonds within the amateur radio community, as new operators are welcomed and guided by those who share their passion for the hobby.

The importance of the VE program extends beyond its practical function of administering exams. It has been instrumental in promoting the growth and diversity of amateur radio. By making the licensing process more accessible, the program has lowered barriers to entry, enabling individuals from all walks of life to become licensed operators. This inclusivity has helped amateur radio remain relevant in an era of rapid technological change, attracting new generations of operators who bring fresh perspectives and innovations to the field. The VE program has thus played a crucial role in ensuring the continued vitality of amateur radio as a dynamic and evolving pursuit.

Moreover, the VE program has had a profound impact on emergency communications and public service. Amateur radio operators are often called upon to provide critical communication support during disasters and emergencies, when traditional communication infrastructure may be compromised. By facilitating the licensing of new operators, the VE program helps to expand the pool of skilled individuals who can contribute to these efforts. The program's emphasis on rigorous testing ensures that licensed operators are well-prepared to handle the technical and operational challenges of emergency communication, thereby enhancing the overall resilience of the amateur radio service.

In summary, the ARRL Volunteer Examiner's program has been a transformative force in the world of amateur radio. By decentralizing the licensing process, fostering community engagement, and promoting inclusivity, the program has made amateur radio more accessible and vibrant. Its role in supporting emergency

communications further underscores its significance, as it equips new operators with the skills needed to serve their communities in times of crisis. The VE program stands as a testament to the enduring spirit of amateur radio, embodying its values of innovation, collaboration, and public service.



2025 North Bay 2-Meter Critical Mass Calendar

2025

January 19th, (third Sunday) James

February 23rd (fourth Sunday; third is President's Day) Milt

March 16th (third Sunday) Rob

April 27th (fourth Sunday; third is Easter) Michael

May 18th (third Sunday) James
June 22nd (fourth Sunday; third is Fathers' Day) Milt
July 20th (third Sunday) Rob
August 17th (third Sunday) Michael
September 21st (third Sunday) James
October 26th (fourth Sunday; third is Pacificon) Milt
November 16th (third Sunday) Rob
December 14th (second Sunday; third is too close to Christmas) Michael

North Bay Critical Mass Report

January 19th marked the monthly meeting of the North Bay Critical Mass group. It took place at the Jury Parking lot, Marin County Civic Center. Across the street from the southern end of the Civic Center lagoon.

The North Bay Critical Mass group is a great place to learn more about and improve your radio communication skills. If you're new to amateur radio, this is a great opportunity to build up your skillset. This group also offers crucial radio support in times of need. From Michael K6MLF: Here's what happened at the last gathering: After self-introductions, the group talked about the phonetic alphabet and did their net check-in.

If anyone attending was confused by the terms CTCSS, CTC, PL, Tone, DPL, DTC, DCS, Sub Channels, Privacy Codes, these sorted out. Also explained were Squelch Tones, how they work and how to use them properly.

They also did a show & tell some newer antennas to use with AREDN. This monthly meeting is a great opportunity for newer amateur radio operators to learn about many of the features found on both handheld and mobile transceivers that are barely explained in the user manual. Here are some photographs from the event:









San Francisco's FW: 2 Meter Critical Mass

From:

Michael Fischer **K6MLF**

Some of you might not be aware of this additional opportunity for radio practice. It's our older brother, established by our friend Peter McElmury AA6SF (SK).

It's held on the second Saturday of each month at the NW end of Spreckels Lake in Golden Gate Park (36th Ave just south of Fulton.)



Join us for a hands-on, engaging amateur radio practice session where you'll sharpen your communication skills, test your equipment, and connect with fellow radio enthusiasts in a friendly, supportive environment. Whether you're a seasoned operator or just starting, these sessions are designed to help you stay prepared, share knowledge, and build confidence in your radio abilities.

Don't miss this chance to tune in, troubleshoot, and work together as a community of dedicated operators. Let's keep the airwaves alive—hope to see you there!

Here's what you need to know:

During the morning meetup, we'll be practicing 2-meter radio communications.

Please stay home if you're feeling unwell, have flu-like symptoms, or have had a positive Covid test result in the last five days.

If the weather turns inclement, we will let you know if our plans change on Saturday morning.

Please bring your freshly charged 2M radio, user manual, clipboard (plus pens or pencils), and a filled water bottle.

What: 2-Meter Critical Mass Radio Practice

Where: Spreckels Lake, 122 Spreckels Lake Drive

When: Saturday, December 14th, 10:00 AM to 12:00 PM

Please program your radios in advance, and here are the frequencies we'll use:

Channel Alpha: 146.475 PL 100

Channel Bravo: 147.585 PL 100

Channel Charlie: 146.445 PL 100

You're all set if you have the NERT Band Plan on your radio!

We're excited to see you there! If you have any questions or concerns, please don't hesitate to let us know. We're always here to help.

Warmly,

The Organizers

2MCMv2.0@gmail.com

ACS/RCV Mission Statement

Mission: During national, regional, or local emergencies provide effective backup radiocommunications in support of the EOC/VOAD and Community Based Organizations (CBOs) or other non-public safety agencies within the Marin County OA when requested by competent authority.

Capabilities: Proven ability to establish and maintain radio communications between OA EOC/VOAD and CBOs during exercises including the three annual Golden Eagle and two Great Shakeout exercises. Ability to deploy and operate portable stations as needed to establish reliable communications in areas that are otherwise out of touch with the EOC/VOAD.

Resources: Develop and maintain the resources that may be needed to support the overall mission:

1. Operators – A corps of trusted radio operators with: (1) basic skills and a commitment to establishing radio communications when needed; (2) ongoing participation, training, and practice in accurately passing message traffic using a variety of basic analog and specialized digital means.
2. Mobile stations – Individual operators routinely test and maintain their own radio transceivers and related equipment including power supplies, which can be deployed to locations otherwise lacking reliable communications with the EOC/VOAD or between two or more CBOs.
3. Relationships – Establish on-going relationships of familiarity and trust

between RCV operators and with key staff of served agencies, including EOC and VOAD.

RCV 2024 Year End Activities Report



Radio Communication Volunteers (RCV)

2024 Year End Activities Report

Summary

Marin RCV conducted six (6) field exercises and/or trainings during 2024. Most of the exercises were tests of signal propagation quality between multiple Community Based Organization (CBO) sites via both repeaters and simplex relays. All were completed satisfactorily and without accidents. The following activities were between 2- and 6-hours total duration.

Field exercises and trainings

1. 2024-01-30 MCCT GMRS training
 - a. The Marin County Cooperation Team (Marin City) requested a class on basic radio operations skills. Six (6) MCCT staff members were trained using their Midland GXT1000 handheld radios.
 - b. They were encouraged to test communications between their main office and to likely client service locations in the Marin City/Sausalito area.

2. 2024-02-10 Canal Alliance
 - a. We conducted signal propagation tests between Canal's current 91 Larkspur St. and their new headquarters building at 755 Grand Ave. Both are in San Rafael. We also tested signals between Canal's two sites and the SF-Marine Food Bank in San Rafael.

- b. A final portion of the test confirmed we had good signals between both Canal sites, the Food Bank and EOC via three (3) different UHF repeaters: Mt. Tam, Big Rock and San Rafael Hill.
3. 2024-03-08 Workshop
 - a. This RCV-CBO Exercise is a tabletop simulation of how RCV Operators, CBOs and VOAD work together during a disaster.
 - b. Provide RCV Operators and CBOs an opportunity to work with elements of a simulated real RCV activation in a low-stress environment.
4. 2024-05-18 West Marin
 - a. We identified which locations along Hwy.1 can reach other locations in West Marin via simplex, the Muir Beach UHF and/or another VHF or UHF portable repeater.
 - b. Use of the portable repeater enabled five (5) of the six (6) stations tested could communicate sufficiently. Muir Beach was the lone exception.
 - c. All stations except Stinson Beach had acceptable two-way communications with Mt. Tam Simulcast.
5. 2024-06-26 Golden Eagle
 - a. The theme of this year's Golden Eagle exercise was restoring logistics and supply in the East Bay starting about 96 hours after a major earthquake.
 - b. RCV participated by setting up a radio net and passing messages that are likely during emergency situations such as an earthquake, wildfire(s) or flooding.
6. 2024-10-17 Great Shakeout
 - a. RCV and RACES collaborated in simulated "No-Notice" activation exercise which taxed our ability to create and manage a Resource Net and its documentation.
 - b. The net collected callsigns and names of any radio operator who checked into the Resource Net. This was needed for creating an initial staffing plan in case of activation.
 - c. RCV deployed operators to four (4) CBOs who filled out and filed an

“Initial Status Report” when they arrived.

Other RCV activities

1. 2024-05-18 DPW Fair: As an officially sponsored Program of Marin County Department of Public Works, RCV was invited to the May 18th DPW Fair. We setup radios and antennas under a canopy and chatted with many visitors about the RCV Program between 1000 and 1400 hours that Saturday.
2. RCV continued its Sunday morning 0945 “Roll Call Net” on the Big Rock UHF repeater. This net enables as many RCV members as possible to experience being a Net Control Station (NCS) operator or to simply maintain their radio skills.
3. RCV members advised Canal Alliance on costs and use of GMRS mobile radios as fixed stations for “intercom type” and emergency use between their 91 Larkspur St. and 755 Grand Ave. buildings.
4. RCV members also performed an informal communications site-survey of San Geronimo Valley’s Community Center (SGVCC) buildings and area. This was a preliminary step requested by the SGVCC for their planning for next year.
5. Novato members of RCV advised and assisted North Marin Community Services (NMCS) in installing a GMRS radio system similar to that of Canal Alliance. Also at NMCS’s request, RCVs also are working with NMCS on evaluating whether 5 GB Mesh technology is appropriate for their operations.

HF Radio 101

POTA and SOTA: Exploring the Outdoors Through Amateur Radio

From: Hugh Patterson KN6KNB: When I first got involved with HF radio, I spent a lot of time on the 20-meter band. I would hear these QSOs that go something like this, “this is W7MOK calling CQ POTA.” I understood everything but POTA. I initially thought it was a special callsign denoting something like a special event. It was only after I heard another radio operator talking about POTA that I learned about this great offshoot of amateur radio. I became hooked, and to this day, I actively hunt POTA and SOTA operators. Thus, I’m a hunter. I’m also getting ready to activate my first park which will make me an activator. More on that later.

POTA (Parks on the Air) and SOTA (Summit on the Air) are popular activities for amateur radio operators who enjoy combining their hobby with outdoor adventures. These programs encourage operators to activate parks and summits, respectively, and make contacts with other stations around the world.

POTA involves activating national parks, state parks, or other designated public lands. By operating from these locations, POTA participants can promote awareness of the natural world and encourage others to visit and explore these parks. To qualify for a POTA activation, operators must make a specified number of contacts with other stations, often using a unique callsign that identifies their location.

SOTA is similar to POTA but focuses specifically on activating summits. By operating from mountain peaks or other high points, SOTA participants can challenge themselves physically and mentally while also enjoying the thrill of making contacts from unique locations. SOTA activations are typically categorized by their difficulty level, allowing operators to choose summits that match their abilities and interests.

Both POTA and SOTA offer a variety of benefits for amateur radio operators. They provide an opportunity to explore new places, connect with other operators, and challenge yourself physically and mentally. Additionally, these programs can contribute to conservation efforts by promoting awareness of public lands and

encouraging responsible outdoor recreation.

To participate in POTA or SOTA, you will need a valid amateur radio license, suitable equipment for operating in the field, and a willingness to explore new places. Both programs have online databases where you can register your activations and track your progress.

One of the challenges of POTA and SOTA is the potential for difficult operating conditions. Depending on the location, you may encounter obstacles such as limited access, harsh weather, or interference from other radio sources. However, these challenges can also add to the adventure and sense of accomplishment that comes with participating in these programs.

In addition to the physical and mental challenges, POTA and SOTA can also offer opportunities for social interaction and camaraderie. By meeting other operators at different locations, you can expand your network and make new friends. The shared experiences and camaraderie that develop among POTA and SOTA participants create a strong sense of community.

Whether you are an experienced amateur radio operator or just starting out, POTA and SOTA offer a unique and rewarding way to explore the outdoors and connect with others. By combining your passion for radio with your love of nature, you can embark on unforgettable adventures and make a lasting impact on the amateur radio community.

Hunters and Activators

POTA Hunters: Connecting with Park Activators

POTA (Parks on the Air) hunters are amateur radio operators who seek out and contact stations that are activating parks. They play a vital role in the POTA program, providing opportunities for park activators to make contacts and earn points. Hunters can receive a series of certificates based on the number of contacts they make, as well as other certificates based on specific criteria. POTA hunters typically use online resources and social media to find active parks and the corresponding callsigns of the operators who are activating them. These resources often include maps, schedules, and real-time updates on active parks.

By monitoring these resources, hunters can identify potential contacts and plan their listening sessions accordingly.

Once a hunter has identified an active park, they can tune to the designated frequency and listen for the activator's callsign. When the activator calls CQ, hunters can respond with their own callsign and initiate a contact. It is important to listen carefully to the activator's callsign and ensure that you are responding to the correct station.

During the contact, hunters can exchange information about their location, equipment, and operating conditions. They can also discuss the park they are operating at and share their experiences. By engaging in conversation with the activator, hunters can learn more about the park and the challenges of operating in the field.

Successful POTA hunting requires patience, persistence, and a good understanding of HF (High Frequency) radio techniques. By actively searching for active parks and listening carefully for their callsigns, hunters can connect with a wide range of operators and contribute to the success of the POTA program.

Activators: The Backbone of POTA and SOTA

If you like camping or just spending some time outdoors, become a POTA/SOTA activators. Many amateur radio operators love camping and the outdoors in general and combine their love of radio and nature by activating parks. Activators are the individuals who initiate and conduct POTA (Parks on the Air) and SOTA (Summit on the Air) activations. They are the ones who venture into the field, set up their radio equipment, and make contacts with other stations. Activators play a crucial role in these programs, providing opportunities for other operators to participate and earn points.

Activators typically choose parks or summits that they find interesting or challenging. They may consider factors such as accessibility, elevation, and scenic beauty when selecting their activation sites. Once they have chosen a location, they plan their trip, pack their equipment, and prepare for the potential challenges of operating in the field.

Once at the activation site, activators set up their radio equipment and begin making contacts with other stations. They use a unique callsign that identifies their location, making it easy for other operators to recognize their activation. Activators strive to make as many contacts as possible during their activation, often working on multiple bands and using various modes of communication. Activators are the driving force behind POTA and SOTA. Their dedication, enthusiasm, and willingness to explore new places contribute to the success and popularity of these programs. By activating parks and summits, activators provide opportunities for other operators to participate and enjoy the benefits of these activities.

Official Activation Locations for POTA and SOTA

POTA (Parks on the Air) and SOTA (Summit on the Air) have specific guidelines for what qualifies as an official activation location. For POTA, the activation location must be a designated park, including national, state, or provincial parks. This ensures that activations are taking place in protected areas and contribute to conservation efforts. The park must be officially recognized and listed on the POTA database.

SOTA, on the other hand, focuses on summits. To qualify as a SOTA summit, the location must meet certain elevation and prominence criteria. These criteria vary by region, but generally, a summit must have a minimum elevation and prominence above surrounding terrain. Additionally, SOTA summits must be listed on the official SOTA database.

It's important to note that both POTA and SOTA have specific rules and guidelines regarding what constitutes an official activation. These guidelines may vary depending on the region or country where the activation takes place. It's essential to consult the official POTA and SOTA websites for the most up-to-date information and requirements.

Choosing the Right POTA or SOTA Location

When selecting a park or summit for your first POTA (Parks on the Air) or SOTA (Summit on the Air) activation, it's essential to consider factors that will make the experience enjoyable and rewarding. Here are some key considerations:

Accessibility: Choose a location that is accessible to you. Consider factors such as distance, terrain, and any required permits or permissions. If you're new to POTA or SOTA, it's often best to start with a location that is relatively easy to reach.

Popularity: While popular parks and summits can offer more opportunities for contacts, they may also be more crowded. If you're new to POTA or SOTA, you may want to start with a less popular location to avoid excessive interference and competition.

Elevation: For SOTA activations, elevation is a key factor. Higher summits offer more points and can provide better propagation conditions. However, it's important to choose a summit that is within your physical capabilities and that you can safely access.

Environmental Factors: Consider the weather conditions, terrain, and any potential hazards at your chosen location. Be prepared for changing weather conditions and be aware of any safety concerns. Research the area beforehand to ensure that it is suitable for your activation.

Getting Started with POTA and SOTA Hunting

For new amateur radio operators interested in POTA (Parks on the Air) and SOTA (Summit on the Air), the first step is to familiarize yourself with the programs and their requirements. Research the rules and regulations for both programs, including the criteria for qualifying activations and the types of parks or summits that are eligible.

Once you have a good understanding of the basics, start by identifying potential parks or summits in your area. Use online resources, maps, and local guides to find suitable locations. Consider factors such as accessibility, elevation, and the potential for interesting contacts when selecting your targets.

Once you have chosen a location, plan your activation carefully. Consider the distance to the site, the terrain, weather conditions, and the necessary equipment. It's essential to be prepared for potential challenges and to have a backup plan in case of unforeseen circumstances.

To make contacts, you will need a portable HF (High Frequency) radio, a suitable antenna, and a power source. Consider the specific requirements of the park or summit you plan to activate, as some locations may have restrictions on the use of certain equipment.

Once you are ready to activate, tune to the designated frequency for POTA or SOTA activations. Listen for other operators calling CQ or identifying their location. When you hear an active station, respond with your callsign and indicate that you are a POTA or SOTA hunter. Engage in a brief conversation with the activator, exchanging information about your locations and operating conditions. By following these steps and actively participating in POTA and SOTA, you can discover new places, challenge yourself, and connect with other amateur radio enthusiasts. These programs offer a rewarding and enjoyable way to explore the outdoors and contribute to the amateur radio community.

Activating Parks in POTA and SOTA

For new amateur radio operators interested in POTA (Parks on the Air) and SOTA (Summit on the Air), the first step is to research and select a suitable park or summit. Consider factors such as accessibility, elevation, and the potential for interesting contacts. Once you've chosen a location, plan your activation carefully, considering factors like weather conditions, terrain, and necessary equipment. To activate a park or summit, you'll need a portable HF (High Frequency) radio, a suitable antenna, and a power source. The specific equipment required may vary depending on the location and the level of difficulty involved. Be prepared for potential challenges, such as limited access, harsh weather, or interference from other radio sources.

Once you arrive at the activation site, set up your radio equipment and ensure that your antenna is properly installed and grounded. Tune your radio to the designated frequency for POTA or SOTA activations and begin calling CQ. Be patient and persistent, as it may take some time to connect with other operators. When making contacts, provide your callsign, location, and the park or summit you are activating. Exchange information with the other operator and engage in a friendly conversation. Be sure to note the callsigns of the stations you contact, as you will need to submit a list of contacts to qualify for your activation. You need to

make ten contacts to officially activate a park.

After completing your activation, submit your log to the appropriate POTA or SOTA database. This will allow you to officially record your activation and earn points. You can also share your experiences and photos with other operators on social media or online forums.

Managing Pileups as a POTA Activator

When you activate a park, in POTA (Parks on the Air), you may find yourself dealing with pileups, where multiple stations attempt to contact you simultaneously. While pileups can be exciting, they can also be challenging to manage. Here are some tips for handling pileups effectively:

Maintain a Clear Frequency: It's essential to maintain a clear frequency throughout your activation. Avoid transmitting excessively or overlapping with other stations. This will help to prevent confusion and ensure that everyone can hear your callsign and responses.

Respond to Calls in Order: When responding to calls, try to do so in order of receipt. This shows respect to all stations and helps to maintain fairness in the pile-up. If you're unable to respond to every call, prioritize those that have been waiting the longest or those that are closer to your location.

Use a Clear and Concise Format: When responding to calls, keep your transmissions brief and to the point. State your callsign clearly, followed by the other station's callsign and a brief exchange of information. Avoid lengthy conversations or unnecessary chatter, as this can slow down the pile-up.

Be Patient and Persistent: Pileups can be intense, but it's important to remain calm and patient. Don't get discouraged if you can't respond to every station. The goal is to make as many contacts as possible, but it's also important to maintain a positive and enjoyable experience for everyone involved.

POTA and SOTA Equipment: Be Prepared: Essential Equipment for POTA and SOTA Activations

For successful POTA (Parks on the Air) and SOTA (Summit on the Air) activations, having the right equipment is crucial. While the specific gear may vary depending on the location and your preferences, here are some essential items to consider:

Portable Transceiver: A compact and lightweight HF (High Frequency) transceiver is essential for making contacts from remote locations. Look for a model that offers good sensitivity, selectivity, and power output. Consider factors such as battery life, size, and weight when choosing a transceiver.

Antenna: The choice of antenna depends on the specific location and operating frequency. A versatile option is a telescoping vertical antenna, which can be easily set up and adjusted. For higher elevations or more challenging environments, a more robust antenna may be necessary. Ensure your antenna is compatible with your transceiver and can be easily carried to the activation site.

Arborist's Throw Bag and Line: If you're going to use wire antennas, you need a way to get them up to higher tree branches. When it comes to antennas, "height is might." Generally, the higher up your antenna is, the better it will work. An arborist's throw bag and line (paracord or fishing line) will let you reach those high branches!

Power Supply: A reliable power source is essential for operating your transceiver in the field. Consider using a battery pack, solar panel, or generator, depending on the availability of power at your activation site. Practicality dictates that you use a rechargeable LiPo battery. Ensure that your power source can provide sufficient power for your equipment and the expected duration of your activation.

Antenna Tuner: An antenna tuner is often necessary to match the impedance of your antenna to your transceiver, improving efficiency and reducing SWR (Standing Wave Ratio). This is particularly important for portable antennas or when operating in challenging environments.

Carrying Case: A sturdy carrying case will protect your equipment during transportation and storage. Look for a case that is large enough to accommodate your transceiver, antenna, power supply, and any other necessary accessories.

Accessories: Additional accessories may include a microphone, headphones,

cables, and a battery charger. Consider the specific requirements of your transceiver and the conditions at your activation site when selecting accessories.

Backup Equipment: It's always a good idea to have backup equipment on hand in case of emergencies. This may include a spare battery, a backup antenna, or a handheld VHF/UHF radio for local communication.

Comfort and Safety: Don't forget to pack essentials for your comfort and safety. This may include food, water, sunscreen, insect repellent, and appropriate clothing for the weather conditions. Research the area you plan to activate and be prepared for any potential hazards.

By having the right equipment and planning ahead, you can ensure a successful and enjoyable POTA or SOTA activation. Remember, the goal is to have fun and connect with other operators while exploring the outdoors.

POTA and SOTA Equipment in More Detail

The previous section gave you an idea about what kind of equipment you'll need to bring with you for a POTA or SOTA activation. Now, we're going to look at the equipment in greater detail. While all the suggestions I made will work, some are more practical than others. You want to make your activation experience as pleasant as possible. To achieve this goal, you need to keep your equipment as simple as possible while still being able to operate fully. We'll start with the two most important pieces of equipment, the transceiver and antenna.

Choosing the Right Portable Transceiver for POTA and SOTA

For amateur radio operators who enjoy the outdoor adventures of POTA (Parks on the Air) and SOTA (Summit on the Air), a portable HF (High Frequency) transceiver is an essential piece of equipment. These compact and lightweight devices allow operators to make contacts from remote locations, expanding their operating horizons and enjoying the thrill of these unique activities.

When selecting a portable transceiver for POTA and SOTA, several factors should be considered. **Portability** is paramount, as you'll be carrying your equipment to various locations. Look for a transceiver that is lightweight and compact, with a

comfortable carrying case. **Battery life** is another important factor, as you may not have access to a power source in remote areas. Choose a transceiver with long-lasting batteries or consider using external power sources like solar panels or portable generators.

Power: You could try QRP transceivers, which are small and lightweight. However, they tend to only put out 5 to 10-watts, which can make activating difficult. Remember, you have to make a minimum of ten contacts to officially activate the park you're in. Using a 20-watt transceiver will give you enough power to make contacts under most circumstances. I use a Xiegu G90, which is 20-watts, and talk all over the world. Many people prefer 100-watts which all but guarantees you a successful activation. The problem with 100-watt Transceivers is that they consume a lot of power and if you're using a battery, you may run out of juice faster than a lower wattage transceiver.

Frequency coverage is also crucial for POTA and SOTA activations. Ensure that your transceiver covers the HF bands commonly used for these activities, typically 160 meters through 10 meters.

Sensitivity and selectivity are essential for making contacts in challenging conditions. Look for a transceiver with a low noise figure and good selectivity to ensure clear and reliable communication.

Durability is another important consideration, as you'll be using your transceiver in outdoor environments. Choose a model that is rugged and can withstand the elements. **User-friendliness** is also essential, especially for beginners. Look for a transceiver with a simple and intuitive interface that is easy to learn and operate. Finally, **price** is a factor to consider. Portable HF transceivers can vary widely in price, so it's important to set a budget and find a model that fits your needs and financial constraints. By carefully considering these factors, you can select the best portable transceiver for your POTA and SOTA adventures and enjoy the thrill of making contacts from unique and challenging locations.

Choosing the Best Antenna for POTA Activations

When deciding on antenna for POTA and SOTA activations, you'll want to have multiple antennas that are different from one another. An example of this would

be a vertical antenna and a half wave wire antenna. I bring three different antennas with me when I operate outdoors. The reason is simple: You may not know your activation location and its topography. You want to be prepared for any type of terrain.

Let's say you went to a park that was in the desert and all you brought was a dipole, you probably couldn't find any trees tall enough to get a good frequency signal. A vertical antenna would have been better. What if you're in a forest and you had only a vertical antenna? You might get some signal action but a wire antenna you could hang from tall trees would work better. Bring multiple antennas of differing types and you'll be prepared for anything! Selecting the right antenna is crucial for successful POTA (Parks on the Air) activations. The ideal antenna will be lightweight, portable, and provide good performance in various conditions. Here are some popular options for POTA activations:

Vertical Antennas: Vertical antennas are a popular choice for POTA due to their simplicity and ease of setup. They are often used in conjunction with a ground plane, which can improve their efficiency. Some popular vertical antennas for POTA include the End-Fed Half Wave (EFHW) antenna and the inverted-V antenna.

End-Fed Half Wave (EFHW) Antennas: EFHW antennas are a type of vertical antenna that require only one end to be connected to the transceiver. They are compact and lightweight, making them ideal for portable operations. EFHW antennas can be used with or without a ground plane, but a ground plane can improve their performance.

Inverted-V Antennas: Inverted-V antennas are another popular option for POTA. They are formed by suspending a dipole antenna at a height above the ground, with the ends sloping downward. Inverted-V antennas can be used with or without a ground plane and offer good performance in various conditions.

Dipole Antennas: Dipoles are a classic antenna design that can be used for POTA activations. They are relatively simple to construct and can be used in various configurations, such as horizontal or sloped. However, dipoles may require more space for setup and can be affected by ground effects.

Wire Antennas: Simple wire antennas, such as the wire dipole or random length

wire, can be effective for POTA activations. These antennas are lightweight and easy to set up, but they may require more tuning and adjustment to achieve optimal performance.

Magnetic Loop Antennas: Magnetic loop antennas are a popular choice for portable operations due to their compact size and lightweight design. They offer good performance in various conditions and can be used with or without a ground plane.

Ground Planes: A ground plane is a conductive surface that helps to improve the efficiency of vertical antennas. A simple ground plane can be formed using a wire or sheet of metal placed under the antenna. Ground planes can be especially helpful in areas with poor ground conductivity.

When choosing an antenna for POTA activations, consider factors such as the size of the park, the terrain, and the frequency bands you want to operate on. A versatile antenna that can be used in various conditions is ideal for POTA. Additionally, consider the ease of setup and portability of the antenna, as you may need to set it up and take it down multiple times during your activation.

Portable Power Supplies for POTA and SOTA

For amateur radio operators who enjoy the outdoor adventures of POTA (Parks on the Air) and SOTA (Summit on the Air), a reliable portable power supply is essential. These devices ensure that your transceiver can operate continuously during your activations, allowing you to make the most of your time in the field. I use a rechargeable LiPo (Lithium-Polymer) battery I purchased on Amazon for \$38.99. It came with a recharger, and it provides a full day of power for my Xiegu G90 (which doesn't use a lot of power). It has served me well!

One of the most popular and convenient options for POTA and SOTA is **LiPo (Lithium-Polymer) rechargeable batteries**. These batteries offer a high energy density, meaning they can store a significant amount of power in a small and lightweight package. This makes them ideal for portable applications, as they can provide extended operating time without adding too much weight to your setup. LiPo batteries are available in various sizes and capacities, allowing you to choose the best option for your specific needs. Larger batteries can provide longer

operating times but may be heavier and bulkier. Smaller batteries are more portable but may have shorter battery life. Consider the expected duration of your activations and the weight you are comfortable carrying when selecting a LiPo battery.

In addition to their high energy density, LiPo batteries are also known for their fast-charging capabilities. This allows you to quickly recharge your batteries between activations, minimizing downtime and maximizing your operating time. However, it is important to handle LiPo batteries with care, as they can be damaged if overcharged or mishandled.

Another advantage of LiPo batteries is their versatility. They can be used with a wide range of electronic devices, including transceivers, laptops, and cameras. This makes them a valuable asset for outdoor enthusiasts who need a reliable power source for multiple devices.

While LiPo batteries offer many advantages, they also have some limitations. They are generally more expensive than traditional lead-acid batteries, and they require special charging circuits to prevent damage. Additionally, LiPo batteries can be sensitive to extreme temperatures, so it is important to protect them from excessive heat or cold.

Despite these limitations, LiPo batteries are an excellent choice for POTA and SOTA activations. Their combination of high energy density, fast charging, and versatility make them a valuable asset for any outdoor-oriented amateur radio operator. By selecting the right LiPo battery and taking proper care of it, you can ensure that your transceiver has the power it needs to make successful contacts and enjoy your adventures in the field.

Portable Antenna Tuners for POTA and SOTA

Portable antenna tuners are essential tools for optimizing the performance of your HF (High Frequency) radio setup during POTA (Parks on the Air) and SOTA (Summit on the Air) activations. These devices allow you to match the impedance of your antenna to your transceiver, reducing SWR (Standing Wave Ratio) and improving power transfer.

A well-matched antenna can significantly enhance your communication range, reduce interference, and improve the overall efficiency of your transmissions. Antenna tuners are particularly valuable in portable operations, where antenna conditions can vary significantly, and it may be difficult to achieve a perfect match without tuning.

There are various types of portable antenna tuners available, including manual tuners and automatic tuners. Manual tuners require the operator to manually adjust the matching network, while automatic tuners can automatically adjust the matching network to achieve the optimal match. The choice between manual and automatic tuners depends on your personal preference and the complexity of your setup.

When selecting a portable antenna tuner, consider factors such as power handling capacity, frequency range, and size and weight. The tuner should be able to handle the power output of your transceiver and cover the frequency bands you plan to operate on. Additionally, the tuner should be compact and lightweight for easy portability. By using a portable antenna tuner, you can optimize the performance of your HF setup and enjoy more successful POTA and SOTA activations.

I use an ATU (Automatic Antenna Tuner) 100, which is a small, often battery powered antenna tuner. I paid \$95.00 for it on Amazon. These tiny antenna tuners are made in China. Most of them are well made. Some come with a built-in rechargeable battery. The model I use works extremely well and will handle up to 100 watts. Of course, my Xiegu G90 has an excellent built in tuner, but there have been times when I've used an external tuner.

The Importance of a Carrying Case for Your HF Transceiver

A carrying case is an essential accessory for any portable HF (High Frequency) radio transceiver. It provides protection for your equipment during transportation and storage, ensuring that it remains in good condition for years to come. A well-designed carrying case should be durable and rugged, able to withstand the rigors of travel and outdoor use. It should also be adequately padded and cushioned to protect your transceiver from shocks and vibrations. Additionally, the case should be compact and lightweight, making it easy to carry and

transport.

When choosing a carrying case for your HF transceiver, consider the size and weight of your equipment. The case should be large enough to accommodate your transceiver, antenna, batteries, and any other accessories you may need. It should also be lightweight and easy to carry, especially if you plan to use it for extended periods of time.

Many different types of carrying cases are available for HF transceivers. Some are specifically designed for a particular model of transceiver, while others are more generic and can be used with a variety of equipment. Consider your specific needs and preferences when choosing a carrying case.

In addition to protecting your transceiver, a carrying case can also help you organize your equipment and keep it easily accessible. Many cases include compartments and pockets for storing accessories, such as antennas, cables, and batteries. This can help you stay organized and prepared for your next adventure. By investing in a high-quality carrying case, you can protect your HF transceiver and ensure that it is ready for any adventure. A well-maintained carrying case can extend the life of your transceiver and provide you with peace of mind, knowing that your equipment is safe and secure during transportation and storage.

Essential Accessories for POTA and SOTA Activations

For amateur radio operators who enjoy the outdoor adventures of POTA (Parks on the Air) and SOTA (Summit on the Air), having the right accessories is essential for a successful and enjoyable experience. These accessories can enhance your operating capabilities, improve comfort, and ensure the safety of your equipment.

Antenna Accessories

- **Antenna Support:** Depending on the type of antenna you use, you may need a support structure to keep it upright and stable. This could be a tripod, mast, or other suitable support. If you are using wire antennas that must be hung from tree branches, you'll need an arborist's throw bag and line. This is a small, weighted bag attached to the end of a line. You can also use a slingshot with a fishing line and a weight attached to the line.

- **Ground Plane Kit:** For vertical antennas, a ground plane kit can improve efficiency and reduce ground effects. It typically consists of a radial wire system that is laid out on the ground around the antenna. Have either pre-cut wire or wire cut to specific lengths. It's a good idea to bring extra wire with you. The wire ground plane radials can be attached to the antenna with alligator clips or any other attachment device.

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Power Supply Accessories

- **Battery Charger:** A reliable battery charger is essential for keeping your batteries powered up during your activations. Choose a charger that is compatible with your battery type and can provide sufficient charging current. If you buy a LiPo battery, make sure to have a charger for it. You don't need it in the field but you'll need it at home.
- **Solar Panel:** For extended activations in remote areas, a solar panel can be a valuable source of power. Solar panels can recharge your batteries even in low-light conditions, ensuring that you have a steady power supply.
- **Power Inverter:** If you need to power other devices, such as a laptop or a camping light, a power inverter can convert DC power from your battery to AC power. Having a power panel for your solar panel will allow you to trickle charge your batteries and devices while in the field.

Comfort and Safety Accessories

- **Backpack:** A sturdy backpack is essential for carrying your equipment to and from the activation site. Choose a backpack that is comfortable and can accommodate all of your gear. For your transceiver, a hardshell case is better. However, you should use a back pack for everything else.
- **Camping Gear:** Depending on the location and duration of your activation, you may need to bring camping gear such as a tent, sleeping bag, and cooking equipment.
- **First Aid Kit:** A first aid kit is essential for any outdoor adventure, including POTA and SOTA activations. Be prepared for minor injuries or illnesses by carrying a basic first aid kit.
- **Communication Devices:** In addition to your HF radio, consider carrying a handheld VHF/UHF radio for local communication or emergency use. A personal locator beacon (PLB) can also be valuable in case of an emergency.

Make sure to charge your cell phone before doing a POTA or SOTA activation.

Additional Accessories

- **Microphone:** A high-quality microphone can improve the clarity and quality of your transmissions. Consider using a microphone with a windscreen to reduce wind noise. The caveat is that the microphone's connection point must match the transceiver's connection point (or an adaptor is needed). With the Xiegu G90, the microphone is of excellent quality, so I've never felt the need to replace it.
- **Headphones:** Good-quality headphones are essential for monitoring your transmissions and listening to other operators. Many amateur operators prefer not to use headphones. However, headphones can be an extremely useful accessory if in a noisy environment (such as a park full of people), or when you need to identify hard to hear signals.
- **Notebook and Pen:** A notebook and pen are helpful for recording your contacts, observations, and notes. Most people log contacts using a digital format, such as logging software. However, there might be a situation in which you can't access your software due to a computer, tablet or cellphone malfunction.
- **Sun Protection:** Protect yourself from the sun by wearing sunscreen, a hat, and sunglasses. This goes without saying: The Sun will burn your skin if you spend too much time outdoors. Do yourself a favor and bring sunscreen with you to POTA/SOTA activations.
- **Insect Repellent:** Depending on the location, insect repellent may be necessary to protect yourself from mosquitoes and other pests. It's difficult to log contacts when you're using your hands to scratch insect bites.

By having the right accessories on hand, you can ensure a successful and enjoyable POTA or SOTA activation. Remember to pack your equipment carefully and consider the specific requirements of your chosen location. With the proper preparation, you can maximize your chances of making successful contacts and exploring the outdoors.

Safely Raising HF Antenna Wire to Tree Branches

Raising HF antenna wire to tree branches is a common practice for amateur radio operators, especially in areas where a tower or mast is not practical. However, it is important to proceed with caution and safety in mind.

Safety First: Before attempting to raise an antenna wire to tree branches, ensure that you have the necessary safety equipment and knowledge. Wear appropriate safety gear, such as gloves, eye protection, and sturdy footwear. If possible, have a helper to assist you with the process.

Choose the Right Tree: Select a healthy, sturdy tree with strong branches that can support the weight of your antenna. Avoid trees that are damaged, diseased, or near power lines. Ensure that the tree is tall enough to provide adequate height for your antenna.

Prepare the Antenna: Assemble your antenna and ensure that all connections are secure. If you are using a dipole antenna, determine the appropriate length for your desired operating frequency.

Access the Tree: Use a safe and reliable method to access the tree branches. This may involve climbing the tree yourself or using a ladder or pole. The best method is to use an arborist's bag and throw line. Ensure that you have a secure footing and are stable before attempting to raise the antenna.

Attach the Antenna: Carefully attach the antenna to the selected tree branch. Use appropriate materials, such as rope or cable ties, to secure the antenna without damaging the branch. Avoid tying the antenna too tightly, as this can restrict the movement of the branch and potentially cause damage.

Adjust the Antenna: Once the antenna is attached to the tree, adjust its position to achieve the desired height and orientation. Consider factors such as the direction of the antenna, the height above ground, and any potential obstructions.

Grounding: Ensure that your antenna is properly grounded to provide a safe path for electrical current in case of lightning strikes. Use a grounding rod or stake

driven into the ground, connected to the antenna with a grounding wire.

Monitor and Adjust: After raising the antenna, monitor its performance and make any necessary adjustments. You may need to readjust the antenna's position or length to optimize its efficiency.

By following these guidelines and prioritizing safety, you can safely and effectively raise your HF antenna wire to tree branches. Remember, always use caution and common sense when working with electrical equipment and heights.

Logging POTA and SOTA Contacts: A Comprehensive Guide

Logging your contacts is a crucial aspect of POTA (Parks on the Air) and SOTA (Summit on the Air) activations. It provides a record of your achievements, allows you to track your progress, and helps you claim credit for your activations. Accurate and detailed logging is essential for both personal satisfaction and official recognition.

There are several methods for logging your POTA and SOTA contacts. Many operators use digital logging software, which can automate the process and provide additional features such as mapping, statistics, and QSL card management. Popular logging software options include Cabrillo Log4Win, N1MM Logger+, and Ham Radio Deluxe.

If you prefer a paper-based approach, you can use a logbook specifically designed for POTA and SOTA activations. These logbooks often include pre-printed fields for recording essential information such as the date, time, frequency, callsign, and signal report.

Regardless of the method you choose, it is important to log each contact accurately and completely. Include the following information:

- Date and time of the contact
- Your callsign and the callsign of the station you contacted
- The frequency you were operating on
- The mode of communication (SSB, CW, etc.)
- The signal report you exchanged
- Any additional comments or notes about the contact

After completing your activation, you will need to submit your log to the appropriate POTA or SOTA database. This will allow you to officially claim credit for your activation and receive a certificate or other recognition. The specific requirements for submitting logs may vary depending on the program and your location.

Logging your contacts is not only essential for official recognition but also provides a valuable record of your POTA and SOTA adventures. It allows you to track your progress, analyze your operating habits, and identify areas for improvement. By maintaining a detailed log, you can create a lasting record of your experiences and share them with others.

In addition to logging your contacts, you may also want to consider keeping a journal of your POTA and SOTA activations. A journal can provide a more personal account of your experiences, including details about the location, weather conditions, and challenges you faced. It can also be a great way to document your personal growth and development as an amateur radio operator.

By diligently logging your POTA and SOTA contacts, you can ensure that your achievements are recognized and celebrated. Accurate and detailed logging will also provide you with a valuable record of your experiences that you can cherish for years to come.

SOTA vs. POTA: A Comparison of Amateur Radio Activities

SOTA (Summit on the Air) and POTA (Parks on the Air) are both popular activities for amateur radio operators who enjoy exploring the outdoors and making contacts. While they share some similarities, there are distinct differences between these two programs.

SOTA focuses specifically on activating summits. To qualify for a SOTA activation, an operator must operate from a designated summit that meets certain elevation and prominence criteria. This adds an element of physical challenge and adventure to SOTA activations, as operators often need to hike or climb to reach their chosen summits.

POTA, on the other hand, is more inclusive, encompassing a wider range of public

lands. While parks are the primary focus, POTA also includes other designated areas such as forests, historic sites, and wildlife refuges. This broader scope allows for a wider variety of activation opportunities and makes POTA more accessible to operators of all fitness levels.

In terms of difficulty, SOTA activations tend to be more physically demanding due to the need to reach summits. POTA activations can also be challenging, but they often involve less strenuous activities such as hiking or biking. Both programs offer opportunities for operators to challenge themselves and explore new places. Another key difference between SOTA and POTA is the emphasis on summit points. In SOTA, the primary goal is to activate as many summits as possible and earn points for each activation. The difficulty level of the summit is also taken into account when awarding points. In POTA, while points are awarded for activations, the focus is more on exploring parks and connecting with other operators. While SOTA and POTA share many similarities, they offer distinct experiences for amateur radio operators. SOTA emphasizes physical challenges and the thrill of operating from summits, while POTA focuses on exploring public lands and connecting with other enthusiasts. Both programs provide opportunities for adventure, camaraderie, and the satisfaction of making contacts from unique and challenging locations.

Respecting Our Parks and Summits: A POTA and SOTA Imperative

As amateur radio operators participating in POTA (Parks on the Air) and SOTA (Summit on the Air) activations, it is essential to treat the parks and summits we visit with respect and care. By leaving no trace and minimizing our impact on the environment, we can help to preserve these valuable natural resources for future generations.

One of the most important principles of responsible outdoor recreation is to "leave no trace." This means taking all of your trash with you, including food wrappers, cigarette butts, and other litter. Avoid leaving anything behind that could harm wildlife or damage the environment.

It is also crucial to respect the natural features of the park or summit. Avoid damaging trees, plants, or other vegetation. Stay on designated trails and avoid trampling sensitive areas. If you need to set up a tent or other equipment, choose

a designated campsite or area that has minimal impact on the environment. Be mindful of wildlife and avoid disturbing their habitat. Keep a safe distance from animals and avoid feeding them. If you encounter wildlife, observe them from a distance and avoid interfering with their natural behavior.

In addition to protecting the environment, it is also important to respect other visitors to the park or summit. Be courteous and considerate of other people, and avoid disturbing their activities. If you encounter other visitors, be willing to share information and engage in friendly conversation.

By following these guidelines, we can ensure that our POTA and SOTA activations have a positive impact on the environment and contribute to the preservation of our public lands. Let us all strive to be responsible stewards of the parks and summits we visit, leaving them as pristine as we found them.

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 article comes from the ARRL regarding World Radio Day:

Get Ready for "Ham Radio Open House" on World Amateur Radio Day 2025: For all you DXers, this is a great opportunity to make those hard to get contacts!

<https://www.arrl.org/news/get-ready-for-ham-radio-open-house-on-world-amateur-radio-day-2025>

Ham Radio Call Signs Discovered During Clayton UC Renovation Revive Memories of Lehigh's Amateur Radio Society: This is an interesting read regarding amateur radio's rich history.

<https://news.lehigh.edu/ham-radio-call-signs-discovered-during-clayton-uc-renovation-revive-memories-of-lehighs-amateur>

WKHS Makes International Contact with Amateur Radio: A nice look at introducing amateur radio to youth.

<https://www.radioworld.com/tech-and-gear/wkhs-makes-international-contact-with-amateur-radio>

Local Club Connecting Amateur Radio Enthusiasts: From the Weirton Daily Times.

<https://www.weirtondailytimes.com/news/local-news/2024/12/local-club-connecting-amateur-radio-enthusiasts/>

The Rich History of Ham Radio Culture: A really nice piece looking at the history of our beloved hobby (really a passion).

<https://thereader.mitpress.mit.edu/the-rich-history-of-ham-radio-culture/>

Ham Radio In the Internet Age: An interesting article that looks at how amateur radio has changed with the times.

<https://hackaday.com/2024/10/25/ham-radio-in-the-internet-age/>

Masonic Amateur Radio Club demonstrates ham radio hobby in Great Falls: A nice piece on what all amateur radio clubs should be doing to keep amateur radio alive.

<https://www.krtv.com/news/great-falls-news/masonic-amateur-radio-club-demonstrates-ham-radio-hobby-in-great-falls>

Amateur Radio is Put in A New Light Thanks to Brandon Radio Club: The Brandon Radio Club is getting people interested in amateur radio by getting them on the air at their events.

<https://www.ospreyobserver.com/2024/07/amateur-radio-is-put-in-a-new-light->

[thanks-to-brandon-radio-club/](#)

Estate Planning for Hams (What happens to all your stuff?): This is an important topic. Brought to you by the ARRL.

<https://www.arrl.org/news/estate-planning-for-hams-what-happens-to-all-your-stuff>

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 last 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 2021 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. We found one new article of interest.

FCC Upholds Record \$34,000 Forfeiture Against Amateur Licensee: The story started a few years back but finally came to a sticky financial end for the offender.

<https://www.arrl.org/news/fcc-upholds-record-34-000-forfeiture-against-amateur-licensee>

FCC Seeks Comments on Tribal FM Allotment in Wyoming: This is an interesting read about an area of radio outside the norm.

<https://www.radioworld.com/news-and-business/business-and-law/fcc-seeks-comments-on-tribal-fm-allotment-in-wyoming>

Solar Activity Significantly Affecting Ionosphere, FCC Opens Docket for Comments on Impact: The impact of solar activity has been driven the FCC to solicit comments regarding it's impact:

<https://www.arrl.org/news/solar-activity-significantly-affecting-ionosphere-fcc-opens-docket-for-comments-on-impact>

FCC to Require Two Factor Authentication for CORES Users: It seems that the powers that run the big show have found yet another fee to tack on to the amateur radio operators ability to operate:

<https://www.arrl.org/news/fcc-to-require-two-factor-authentication-for-cores-users>

FCC To Vote on Removing Symbol Rate Restrictions: From the ARRL regarding the digital modes.

<https://www.arrl.org/news/fcc-to-vote-on-removing-symbol-rate-restrictions>

Propagation News

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

The K7RA Solar Update: This is the K7RA solar update, which is updated regularly:

<https://www.arrl.org/news/the-k7ra-solar-update-862>

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/>



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.

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 amateur 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/>