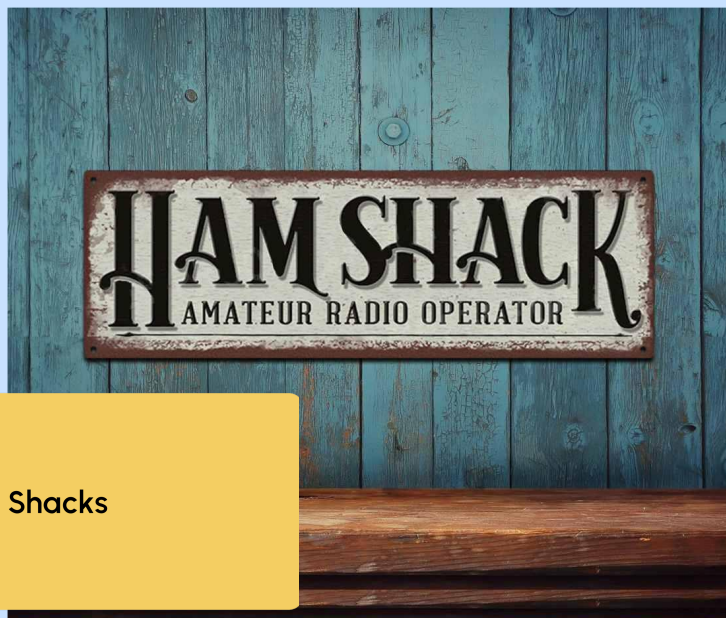
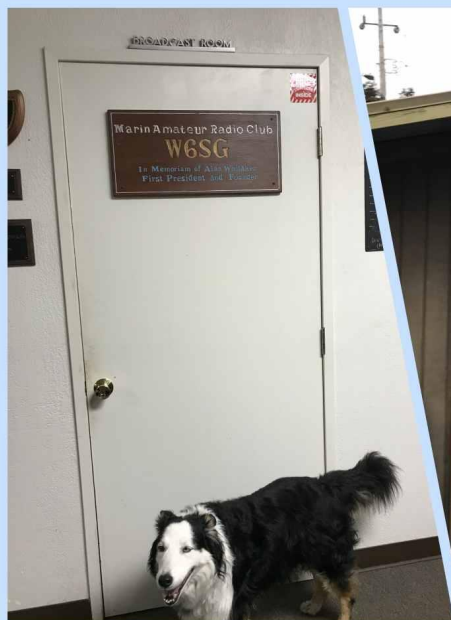


QSA-5



Ham Shacks



Inside the Clubhouse

Board actions, club activities, and upcoming opportunities to share and get involved..

Ham Radio in the News

From local to national to international – stories, inspiration, and legislation.

Ham Classroom

Every month, we showcase interesting subjects..

"When all else fails, you can count on Amateur Radio"

From the MARS President

When someone prompts me with a phrase like "I have good news and bad news, which one do you want first?" I always answer bad news first, at least I get something to look forward to. So in that vein I have good news and bad news. The bad news is that we are not yet ready to start meeting at the clubhouse again.



The good news is that amazing things are happening at the club house. Interior walls have been enclosed, electrical issues have been resolved, we are in the process of painting the interior and once that has been completed we can rearrange our storage and get back on track to give you all the opportunity to take home some of the cool gear that has recently been donated to the club.

While we did contract with some professionals like electricians and drywallers (MS Word says drywallers is a legit word). The bulk of the work has been carried out by volunteers. We all owe a huge debt of gratitude for their Herculean efforts to the folks who have been moving this forward. I apologize in advance to the people I omitted from the list. Your work counts as much as others. When you see any of these folks please take a moment to thank them. Milt Hyams KM6ASI for acting as project manager or "Colonel Contractor", Gerald McCarthy W6NOV as technical adviser and prime mover, James Saltzgaber KM6WWY as utility infielder, Ann Ivan KM6QIW leading our painting crew, Kathy Funke-Spicher KM6URP for herding volunteers, Andrew Musselman KI6UOC who evidently has skills beyond software, music, and electrical engineering, Dan Sobel N6HLZ, Dan Greely KN6PNA, and a host of others who contributed. I will keep you all updated as we get closer to reopening the clubhouse. We still need volunteers for April 4th, so RSVP@w6sg.net please!

The vernal equinox has passed and just like that we seem to be in spring or summer sprummer? That means lots to think about and do. We have started planning our 2026 Field Day. Scheduling some kind of cookout (burgers and dogs, etc.) at the clubhouse combined with some form of auction to get our recent donations out to you. It is on the agenda for the April board meeting to decide what, when, and how. Contesting training at the clubhouse to prep for Field Day and learn about the new club station. Your membership dues become past due at the end of the month and I will be sending out another reminder email around the end of the month.

Curtis Ardourel, WA6UDS
wa6uds@w6sg.net

Resources

[Membership Application](#)

[Membership Renewal](#)

[Club Calendar](#) May 17

[Local Repeaters](#)

[Our Weekly Net](#)

[North Bay 2-Meter Critical Mass](#)

[Get Licensed](#)

[For Newcomers](#)



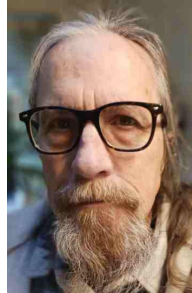
© 2026 Marin Amateur Radio Society
 P.O. Box 6423
 San Rafael, CA 94903-0423
 A 501(c)3 not for profit corporation

Clubhouse Address
 27 Shell Road
 Mill Valley, CA 94941

[Membership in the Marin Amateur Radio Society](#) is open to any person with an expressed interest in amateur radio. Annual dues are currently \$30/individual or \$35/family.

From the Editor

Greetings and Salutations. April is here and summer is just around the corner. We are now in the third month of our new look for the QSA-5. As always, the lion's share of thanks goes to Jay Hamilton-Roth (KO6FIR) for his brilliant design and layout talents. Jay is also the person that suggested having monthly themes. A special thanks to Curtiss Kim, Gerald McCarthy, Jim Saltzgaber, Curtis Ardourel, Milt Hyams, and anyone I might have missed.



I was looking at some photographs from the Marin Amateur Radio Society's distant past and wished I could go back in time and ask those members what they thought the future of amateur radio equipment would be like. Judging from some of the equipment used back then, I suspect someone from the past would say "I bet they'll make a transmitter and receiver in the same unit, and I bet it will only be the size of a small suitcase and only weigh 40 pounds. That would be something!" Little would they imagine transceivers that would fit into the palm of your hand and be powered by rechargeable batteries.

I also wondered how they would feel about the QSA-5 as it is today. After all, it has been published since 1933. In seven years, it will celebrate its 100th anniversary. That's a long life for a publication and only a small majority of publications reach this milestone. Therefore, we're going to work hard to be worthy of our predecessors' efforts. If I had one wish for the QSA-5, it would be to see a 150-year anniversary!

Amateur radio club's publications are the lifeblood of the clubs they represent. They provide an anchor for the club's members, a central hub for their community. They let members know what's going on and are important for members who can't go to every club event. They also bring members together as a community. Jay Hamilton-Roth recognized this idea right away and has guided the way the QSA-5 is designed for this purpose. This is why we need to have members of our club participating in the QSA-5! I look forward to seeing how the QSA-5 grows into a valuable resource for all of us. Have a great April!

Hugh Patterson, KN6KNB
QSA-5Editor@w6sg.net

Committees

Communications Truck

Education

Facilities

[Field Day](#)

[Marin Radio Communication
Volunteers \(RCV\)](#)

Membership

[North Bay Area Mesh \(NBAM\)](#)

[Public Service](#)

Recreation

Technical

[Volunteer Examiner \(VE\) Testing](#)



QSA-5 is published monthly by the Marin Amateur Radio Society (MARS) and sent electronically to its members.

"QSA-5" is a [ham radio Q-code](#) which means "The strength of your signal is very strong."

Have an article or fun ham-related photos you want to share? Please send by the 24th of the month to QSA5@w6sg.net for publication consideration.



Inside the Clubhouse

Board actions, club activities, and upcoming opportunities to share and learn.

Board of Directors

[Meeting Notes](#)

Next Board Meeting: Thursday, April 9, 2026

[Financials](#)

Next Club Meeting: Friday, April 3, 2026

New Members: Dante Casanova (KO6MJZ), Novato

New Callsigns: Nancy Wein is now NW6Y (was KO6GII)

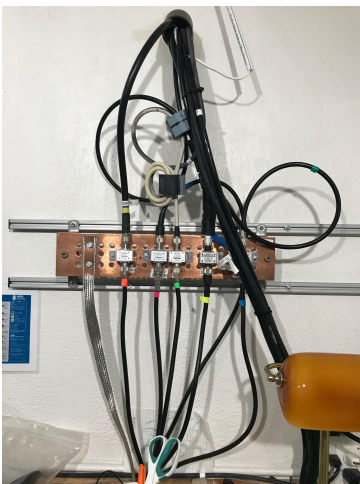
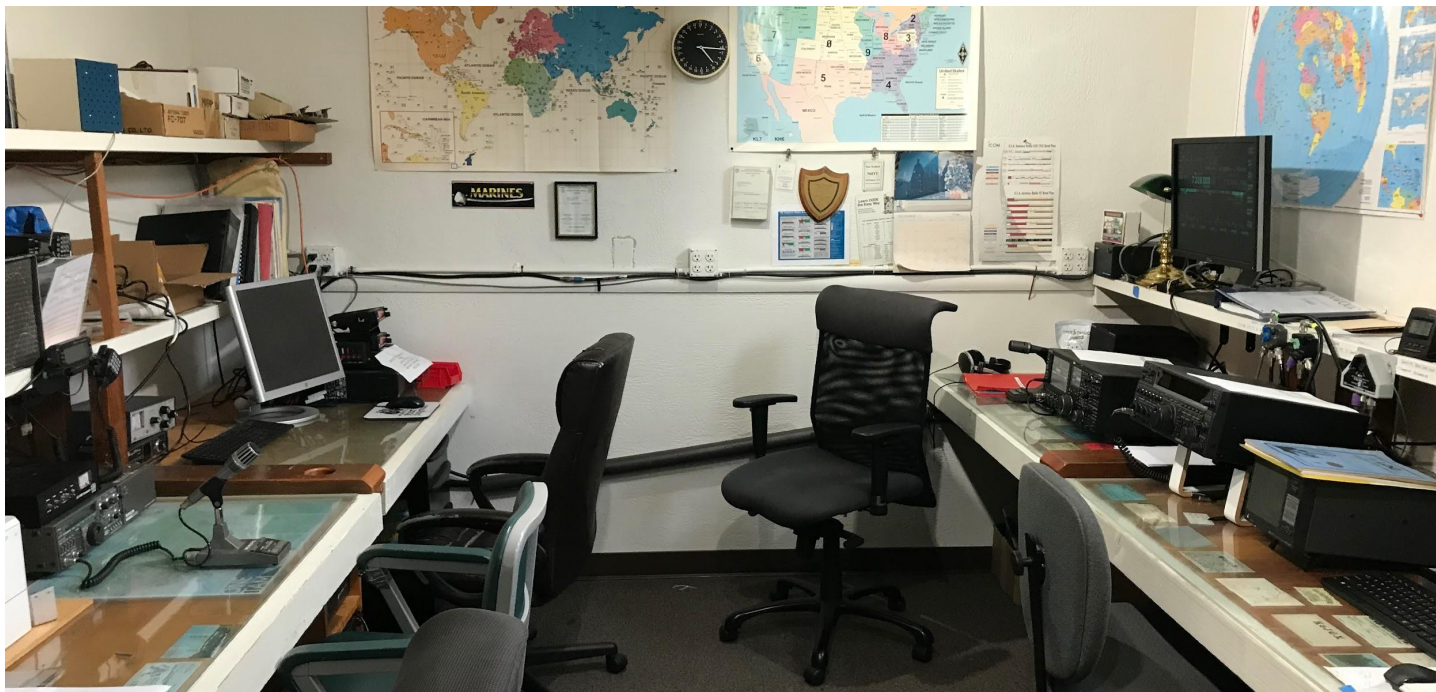
News

- [4 Ham Shacks](#)
- [Introducing the Oral History Project](#)
- [Equipment Recommendations](#)
- [HamClock](#)
- [Office of Emergency Management's FRC/FAC Exercise](#)
- [You're Invited...](#)
- [North Bay 2m Critical Mass \(NB2mCM\)](#)
- [April Calendar](#)

Inside the Clubhouse: 4 Ham Shacks

If you're looking for inspiration or are simply curious about how others have organized their gear – take a peek!

Marin Amateur Radio Society (W6SG)



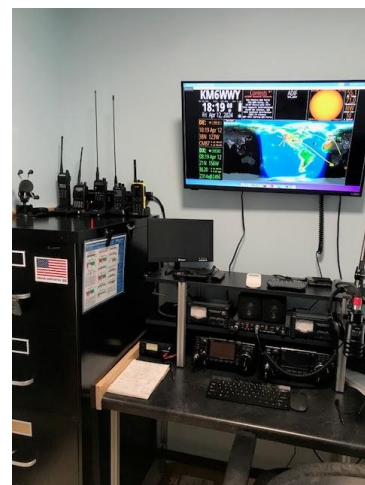
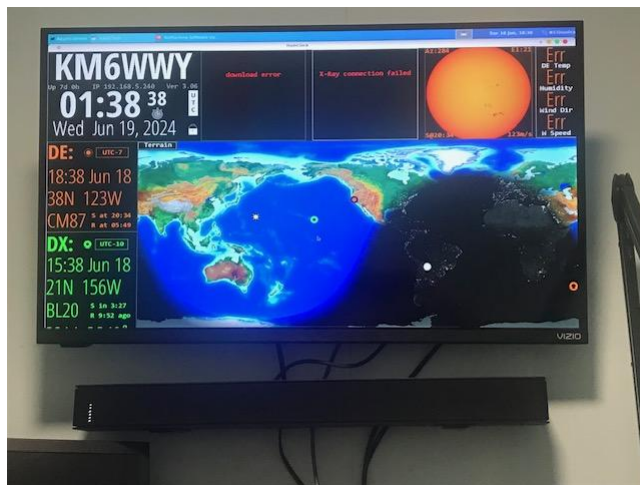
Inside the Clubhouse: 4 Ham Shacks (cont'd)

Steve Wilson (W6SDY)



Inside the Clubhouse: 4 Ham Shacks (cont'd)

Jim Saltzgaber (KM6WWY)



This Month's Quick Online Survey



[From where have you operated your radio?](#)

Inside the Clubhouse: 4 Ham Shacks (cont'd)

Steve Toquinto (KB6HOH)



Inside the Clubhouse: Introducing the Oral History Project



Are you a ham operator and have stories to tell?

Know someone who's got a wealth of knowledge?

We're starting up an Oral History project!

All sessions will be recorded in a professional recording booth in Mill Valley (ADA accessible). All you have to do is schedule a time, show up, and share. Your session will be edited, transcribed, and showcased in a future QSA-5 as well as archived online for others to listen to.

Contact Jay KO6FIR (jay@w6sg.org) to find out more and schedule a recording session.



Memories of Ham Shacks of my Youth

In one town, Biloxi we lived in a really small and ratty house right next to the railroad tracks. The house would shudder and shake at all hours. Our next door neighbor was a ham. His ham shack was really just that: a tarpaper shack. Dark and windowless. Really noisy when the trains came hooting and rumbling by. The inside walls were covered with QSL cards—I can still see them posted at crazy angles, held down with rusty thumbtacks. He was delighted to have me, a wide-eyed, curious 5-year-old kid, sit and listen to his stories and to listen to the hiss, crackles, distorted voices and tinny CW signals...

Then at age 10, we moved to San Antonio. Once again, there was a crusty, elderly (to me, anyway) ham with a similar, but less flimsy, ham shack. QSL cards hanging on all available wall space. Oscilloscope flickering. The smell of the ozone from the heated vacuum tubes and the hum of the amplifier...and listen to his stories about the stations contacted, far, far away. Magical and mesmerizing. 1950? Air travel for poor people? Not even imaginable. To be able to talk to people on other continents? A magic carpet was no more exotic a concept than HF radio.

When I got my license only 15 or so years ago, my younger brother said, "Mike has wanted to be a ham ever since he was a little kid—maybe he's entered his second childhood?"

Michael Fischer, K6MLF
MARS Oral History

Inside the Clubhouse: Equipment Recommendations

(As suggested by club members)

— Dual band UHF/VHF Radios —



The [AnyTone AT-D878UVII Plus](#) has the recommended features needed for working on a public service event as a hiker, runner, or cyclist. It has dual band (UHF/VHF), [DMR](#), and [APRS](#). Net control operators can track your location. Bluetooth will allow you to operate hands-free while you're doing your service sweeps. It has good battery life (USB-C charging batteries available), good support, programming software available and software updates available online without additional cost. It's not a cheap radio but is a good value (used and newly discontinued available if you shop around). It is not waterproof, however.



If you're going to be in wet conditions, then a dual band radio like the [Mirkit UV-9R Plus](#) could be a good choice. While it doesn't have DMR nor APRS nor Bluetooth, it is rated to be able to be submerged for up to 30 minutes ([IP67 protection](#)). Note: waterproof testing is only for fresh water, and salt water is corrosive and can damage the radio's seals (rinse with fresh water if exposed to sea water).



If you're looking for a waterproof and APRS-enabled radio, look at the [Ailunce HA2](#). This is the radio that MARS has purchased for public service event volunteers to use who are hikers, runners, or cyclists.



Some consider the [Quansheng UV-K5](#) to be the [king of hackable radios](#): low cost (under \$30 gets you a multiband radio, charging cable, and a headset), a wealth of resources detailing how to access other frequencies, create custom displays, improve audio, etc ([IEEE Spectrum article](#), [Geeky Electronics](#), and [Worldwide DX Radio Forum](#), for example), and you don't have to be a software or hardware engineer.



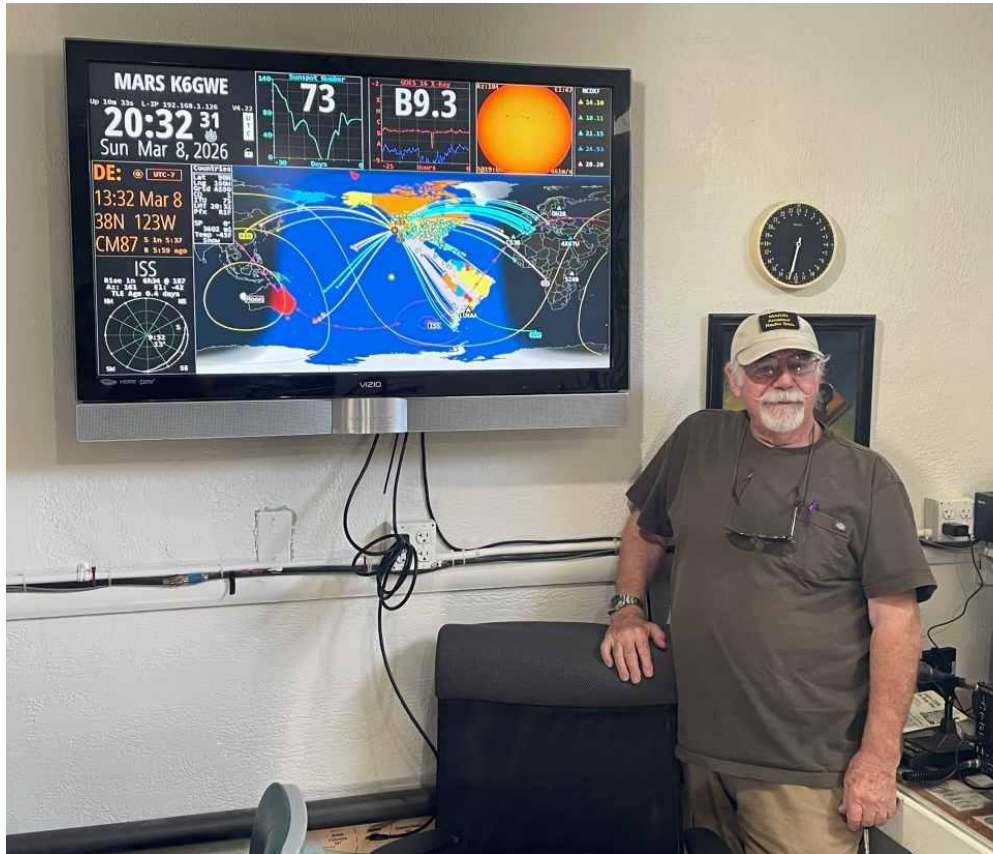
The [TYT TH-8600](#) dual-band 25 watt radio is a good and inexpensive choice for public service events for those working at a fixed position. A good choice for a ["Go Box"](#) or auto installation as well. Bonus: it's waterproof.

— HF Radios —



At [Marin Amateur Radio Society's Field Day](#), HF radios are often the [Icom IC-7300](#). Using a shared familiar resource will make your Field Day a little easier. 2 Meters and 70 Centimeters are not supported.

Inside the Clubhouse: HamClock



The next time you visit the MARS clubhouse's radio room, you won't be able to miss our newest addition!

The setup, spearheaded by club board member Jim KM6WWY, features the popular [HamClock software](#) running on an Inovato mini-computer. The compact device is connected to a generously donated television provided by fellow member Dan KN6PNA, transforming the screen into an always-on kiosk for real-time ham radio data.

HamClock serves as a comprehensive dashboard that combines utility with visual appeal. At its core is a dynamic world map displaying the current grey line (the twilight zone ideal for [long-distance HF propagation](#)), sunlight illumination patterns, and day/night transitions. The display includes UTC and local time clocks, [solar flux index](#) (SFI), [sunspot numbers](#), [geomagnetic K-index](#), live [DX cluster spots](#) showing active stations worldwide, propagation forecasts (such as [VOACAP-based predictions](#)), satellite tracking elements, and [POTA/SOTA](#) activity markers. Operators can quickly spot band openings and plan contacts more effectively—all without needing to consult multiple websites or apps.

"HamClock is a game-changer for the shack. It puts everything you need to know about propagation and activity right there on a big screen, making it easier for everyone at the clubhouse to stay informed."
— Jim KM6WWY

To access it, members simply need to point the remote at the television, press the power button, and the screen should illuminate. The HamClock is configured to launch automatically and is already fully operational—no additional setup is required from users.

The recent Family Reception Center (FRC) / Family Assistance Center (FAC) functional exercise was held on March 4, 2026 at the Marin Civic Center. As described in the email invitation: *"This exercise is designed to strengthen our community's preparedness and response capabilities during emergencies, ensuring families can reconnect and receive essential support services during a crisis. Volunteers will have the opportunity to play a vital role in improving local disaster response efforts and gain firsthand insight into emergency management operations."* While there were six MARS club members present, the exercise did not involve any radio operations. More details in [3/5/2026 Marin IJ article](#).



Inside the Clubhouse: You're Invited...

In those famous words from the tv game show, The Price is Right...."Come on Down!" It's your invitation to share in food, frivolity and friendship. The twice monthly get-together is a no-host luncheon at Sam's Restaurant in Novato.



The meetup was the brainchild of Steve Toquinto (KB6HOH), a former pilot who



determined the best way to have some downtime was to get together for lunch. He chose the Two Niner Diner at the Petaluma airport with the thought you might like some soup while watching the aircrafts soar. The lunches became an attraction and the crowd varied but the event became popular. Just before Covid set in, the owner of Two Niner Diner passed and the restaurant was closed down for a while.

The substitute turned out to be the restaurant at the Indian Valley Golf Course in west Novato. There was only one problem. The steep driveway leading up to the dining room proved to be a hard fairway to navigate for some. Toquinto thought about other locations like the Stars restaurant or Round Table Pizza but then his search led him to Sam's Place. The banquet room in the rear of the eatery proved to be ideal. Now on the first and third Thursdays of the month club members and non members gather to tell their stories and share a meal. As Toquinto touts, it is a non club sponsored event and all are welcome whether you're into ham radio or not. If you are an operator you're encouraged to bring your latest toys and to show and tell and don't be surprised if there are simultaneous conversations going on all at the same time. Stop by. Soups on.



Left to right: Rich Slusher (KIGUIM), Alex Peck (KN6RST), Curtiss Kim (KM6GUY), Steve Toquinto (KB6HOH), Steve Smith (WAITOV), Bruce Bartel (N6VLB), and Ed Essick (K6ELE).



Curtiss Kim, KM6GUY

Inside the Clubhouse: North Bay 2m Critical Mass (NB2mCM)

On Sunday, March 15 our special guest speaker was Martin Rothfield (W6MRR). He's been involved in high-altitude ballooning and amateur radio since 2010 and is now part of [SF-HAB](#) (High-Altitude Ballooning).



Northbay 2m Critical Mass Team

They launch 3+ times a year (often from the East Bay) inexpensive (pico) balloons with various payloads which can go up to 120k feet and then back down to earth (flight time: 1-4 hours). While he didn't show us the process for inflating/launching balloons, he explained a wide number of considerations: payload, FAA rules, thermodynamic issues (issues with cold and lack of air), cost, and flight path.

To find out more: SF-Hab forums (<https://groups.io/g/sf-hab> and <https://groups.io/g/sf-hab-chatter>), [realtime balloon tracking](#), [pico balloons](#), or [download Martin's Powerpoint presentation](#).



Inside the Clubhouse: April 2026 Calendar

Curious what's coming up? You'll find details on all of our weekly nets, upcoming meetings, public service events, and other local activities on our [online calendar](#). You can even [subscribe to the calendar](#). Please submit corrections or suggestions to: QSA5@w6sg.net.

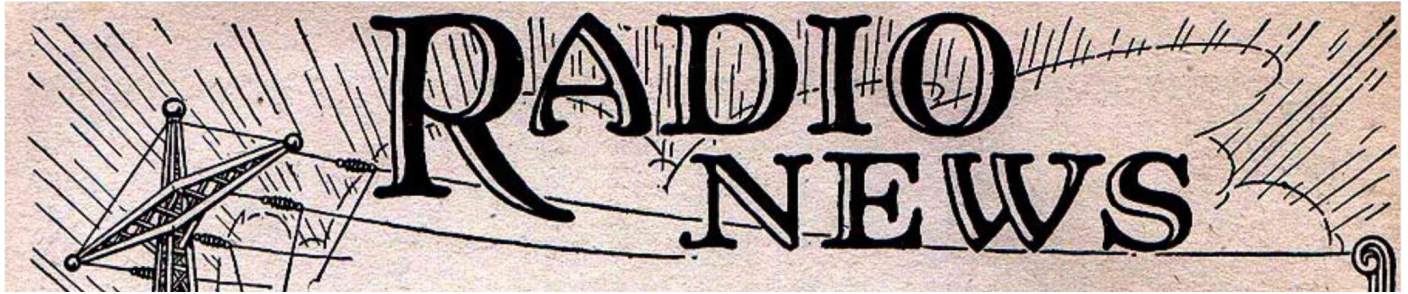
upcoming SPECIAL EVENTS

APRIL

Friday, 3	MARS Club Meeting
Saturday, 11	SF 2 Meter Critical Mass
Saturday, 11	Amateur Radio Exams 📄
Saturday, 18	Ridge to Bridge 🏃
Saturday, 18	VOMARC Hamfest 📻
Sunday, 19	North Bay 2 Meter Critical Mass
Sunday, 26	Big Sur International Marathon 🏃
Sunday, 26	Sonoma County Wildfire and Earthquake Expo 🧑‍🚒
Thursday, 30	2026 BEACON Exercise 🛡️

MAY

Friday, 1	MARS Club Meeting
Saturday, 2	Miwok 100 🏃
Sunday, 3	BORP Revolution 🚲
Saturday, 16	Davis Double Century 🚲
Sunday, 17	North Bay 2 Meter Critical Mass



Ham Radio in the News

From local to national to international – stories, inspiration, and legislation.

☀ [Radio Operators Were Too Slow — Until a 53-Year-Old Piano Teacher Taught the Navy "Code Is Music"](#)

☀ [A new bipartisan bill that seeks to eliminate FCC's satellite licensing delays wins unanimous approval in Senate Commerce](#)

☀ [High Cost DX-peditions](#)

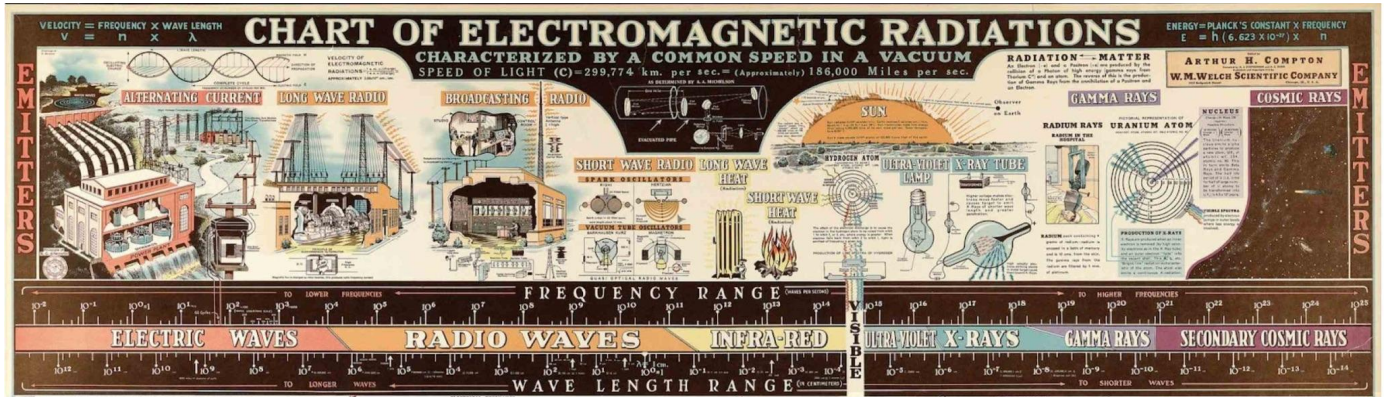
☀ [ARRL Solar Update](#)

Trusted Radio News Sources

[ARRL News Page](#) for national news regarding ham radio.

[QRZ Now](#) for ham radio news from around the globe.

[Amateur Radio Newsline](#) weekly amateur radio story highlights.



Ham Classroom

Every month, we showcase interesting subjects.

Your First HF Station (On a Budget)

Building your first High Frequency (HF) station is a rite of passage for the novice DXer (amateur radio operator who specializes in making contacts with other countries). It is the moment you transition from localized VHF/UHF "line-of-sight" chatting to bouncing signals off the ionosphere to reach people in different time zones, climates, and cultures. You dream of having a fully functional HF station full of high-tech radio gear. You look at pictures of long-time amateur radio operators ham shacks and dream of operating all that impressive equipment. You get a bad case of "shack envy."

Your case of "shack envy" is real. You see photos of "Super-Stations" with six-foot-tall equipment racks and rotating towers that cost more than a mid-sized sedan. It's intimidating! **Don't let that intimidate you.** You can get on the air, make global contacts, and have a blast on a "ramen-noodle" budget.

Here is a simple guide for building your first HF station without breaking the bank. It's a model for anyone who wants to do HF DXing. This will give you an idea of how and where to start:

I. The Minimalist Philosophy: The "Big Three"

To talk to the world, you only *truly* need three things. Everything else—the fancy microphones, the backlit SWR meters, the external speakers, the billion watt amplifier — is "nice to have" but it isn't going to make a huge difference in terms of making contacts.

1. **Transceiver:** The brain and heart.
2. **The Power Source:** The fuel.
3. **The Antenna:** The voice and ears.

In ham radio, we often say that it is a **game of compromises**. If you have a small budget, you compromise on automation and "bells and whistles," but you never have to compromise on the thrill of making a contact. Plenty of the top DXers (amateurs making contacts across the globe) use simple equipment. My HF setup is so simple that I could pack it up in 10 minutes, put it into a small backpack, and take it anywhere.

Note: Every item mentioned in this article can be purchased at [Amazon.com](https://www.amazon.com). Amazon offers free shipping to members and has a great return policy. Also, their prices tend to be lower than most other retailers. 99.9% of my shack's equipment has come from Amazon.com.

Ham Classroom: Your First HF Station (On a Budget) (cont'd)

II. The Heart: Choosing a Budget Transceiver

The transceiver is your biggest expense. Don't spend a fortune on an HF transceiver when you first start. You could spend \$5,000 on a Kenwood Transceiver and not use 90% of the features you're paying for. Start with a simple yet functional transceiver that will get you on the air. You have two main paths: **The Modern Budget Rig** or **The Used Market**.

The Modern Budget Champ: Xiegu G90



The **Xiegu G90** is currently the king of budget HF transceivers. For roughly **\$450**, you get a Software Defined Radio (SDR) with a waterfall display (a visual representation of the band) and—crucially—a built-in wide-range antenna tuner. I have used this transceiver for two years and logged contact all over the planet.

The Pro: The built-in tuner and SWR meter will save you \$150+ on an external one. The G90's tuner will tune antennas the expensive transceivers won't.

The Con: It puts out 20 Watts. While 100 Watts is the "standard," 20 Watts is plenty to reach Europe or South America from the U.S. if your antenna is decent. I've made a 10,000 mile contact to South Africa from Northern California.

The Used Market: "The 100-Watt Workhorse"



If you want the full 100 Watts of power, look for older "analog" rigs like the **Yaesu FT-450D**, **Icom IC-718**, or the **Kenwood TS-480**.

- **Where to look:** Radio clubs or local "Hamfests" (swap meets).
- **The Risk:** Older radios may have "drift" or drying capacitors. Always ask to see a used radio "on the air" before buying. Avoid buying transceivers online if you cannot physically examine them first.
- **Repairs:** Getting used transceivers repaired can be costly if you can even find someone who repairs them.

A Warning on "QRP" (Ultra-Low Power)

You will see tiny radios for \$150 that put out 5 Watts (QRP). **Avoid these for your first station.** Operating at 5 Watts requires expert-level antenna setups and saint-like patience. Start with at least 20 Watts to keep from getting discouraged.

Ham Classroom: Your First HF Station (On a Budget) (cont'd)

III. The Ears: The Budget Antenna

If you have \$500 to spend, spend \$400 on the radio and \$100 on the antenna. If you have \$500 to spend and you spend \$495 on the radio, you'll have a \$495 paperweight that does nothing in terms of making contacts. You can make a bare bones dipole antenna for about \$20 but you may want to purchase an antenna first for ease of use. You can have a cheaper radio with a great antenna and make lots of contacts or you can have an expensive radio with a cheap, so-so antenna and get nowhere fast, making no contacts!

The Dipole: The King of Value

A dipole is just two pieces of wire cut to a specific length. You can build one for \$20. It is an excellent antenna that rarely disappoints the user. Building your own antennas will teach you antenna theory basics and save you a lot of money:

- Standard 14-gauge house wire.
- A Binding Post or a simple center insulator.
- A BNC to SO-239 adaptor
- Electric Fence Insulators
- Some rope to attach it to a tree branch.

The "End-Fed Half-Wave" (EFHW)

This is the most popular beginner antenna today. It's a single wire that runs from your window to a tree. It's stealthy, easy to install, and covers multiple bands. A budget EFHW (like those from Taurus/Harvest Antennas will run you about \$45-65.. I used one of these with a Xiegu G90 for four years and made contacts on every continent. The only downside is that these antennas need to be at least 25-30 feet above the ground.

IV. The Fuel: Powering Your Station

Most HF transceivers do not plug into the wall; they require **13.8V DC power**. Power supplies are inexpensive.

Switching Power Supplies

Modern "switching" power supplies are the best bang for your buck.

- **The Budget Choice:** A **Pyramid** or **Tekpower** 30-amp supply will cost about \$90-\$110. If you're running a Xiegu G90 transceiver, you can pick up a 20 Amp supply for about \$60.
- **The Cheap Route:** Some hams convert "Server Power Supplies" from old computers for \$20. It works, but it requires soldering skills and can be electrically "noisy." I warn against this unless you know what you're doing.

Safety Tip: Always ensure your power supply is **regulated**. An unregulated supply can have voltage spikes that will "fry" the sensitive computer chips in a modern SDR radio. The power supplies for amateur radio transceivers sold on Amazon are regulated.

Ham Classroom: Your First HF Station (On a Budget) (cont'd)

V. The "Hidden" Costs: Coax and Connectors

You've bought the radio, the antenna, and the power supply. You're ready, right? Not quite. You still need to connect them. As with most hobbies, all the extras that are needed add up in cost!

- **Coaxial Cable (Coax):** This is the garden hose that carries your signal. For HF, **RG-8X** is the "Goldilocks" cable—thick enough to prevent signal loss, but thin enough to be flexible and cheap. Budget about **\$30 for 50 feet**.
- **SWR Meter:** If your radio doesn't have a built-in tuner or meter, you *must* buy an SWR meter (around \$30-50). It tells you if your antenna is working at maximum efficiency or if it's reflecting power back into your radio (which causes damage).
- **Grounding:** Do not skip this. A simple copper rod driven into the earth near your station, connected to your gear with thick wire, protects against static build-up and "RF in the shack" (which can give you a literal sting when you touch the mic). If you're using an SDR transceiver like the Xiegu G90, you can put off installing a ground rod but you should eventually consider doing this.

VI. Station Layout and "The First Contact"

Ergonomics

I need to be comfortable when I work the HF bands. I can be working DX for hours. You're going to be sitting at the transceiver for hours. Don't put your radio in a dark corner where you need to hunch over it to access key controls. DXing with an aching back isn't fun! Use a desk with plenty of "elbow room" for your logbook or laptop.

Making a Contact

Once you're hooked up, tune to a band like **20 meters** (14.250 MHz range) during the day or **40 meters** (7.175 MHz range) at night. For a novice, the 20-meter band is more beginner friendly. There are a lot of NETS on the 40-meter band, and they have a specific way of checking in with stations.

1. **Listen first.** Scan the band you're searching and find a station that comes in loud and clear, with minimal interference.
2. Find a station calling "CQ" (calling anyone). Listen to the cadence of other people initiating contact with the station. You'll be able to hear when there is a gap in the conversation and what information the two parties are exchanging.
3. Wait for a gap and say your callsign clearly using the phonetic alphabet (KN6KNB = e.g., "Kilo November Six Kilo November Bravo").

The Secret Ingredient: Membership

Join a local ham radio club. Hams are notorious "hoarders" of gear. Often, if a veteran ham sees a newcomer who is eager to learn but short on cash, they will "loan" (or give) you an old tuner, a roll of coaxial cable, or even an entry-level radio to get you started.

Conclusion: Your Journey Begins

Building a station on a budget isn't just about saving money; it's about **learning how the gear works**. When you build your own dipole and hear a station in Japan for the first time, the satisfaction is far greater than if you had simply clicked "buy" on a \$5,000 "plug-and-play" system.

Ham Classroom: Your First HF Station (On a Budget) (cont'd)

Building a Budget Station

Since you're ready to get your hands dirty, let's break this down into two parts: the **\$600 Shopping List** and the **\$20 "Homebrew" Dipole Guide**.

Building your own gear is the secret to staying under budget—plus, it's the best way to actually learn how everything works.

Part 1: The \$600 "Global Reach" Shopping List

This setup focuses on the **Xiegu G90**. While it's only 20 watts, its built-in antenna tuner and SWR meter is a "budget-saver" because it allows you to use cheap, homemade wire antennas without needing a \$80-100 external tuner. This transceiver is a game changer!

Item	Recommendation	Estimated Cost
Transceiver	Xiegu G90 (HF 20W SDR)	\$445
Power Supply	Pyramid PSV300 (30 Amp Switching)	\$75
Coaxial Cable	50ft RG-8X with PL-259 connectors	\$45
Antenna	DIY 40-Meter Dipole (See below)	\$20
Misc Hardware	Rope, Electrical Tape, Solder	\$15
TOTAL		\$600

Pro-Tip: Check sites like **Ham Radio Outlet (HRO)** or **Gigaparts** for "Open Box" or "Holiday Sale" deals on the G90. You can often shave another \$20–\$30 off the price. Amazon.com currently sells them for \$435-465,

Part 2: The \$20 "Homebrew" 40-Meter Dipole

The **40-meter band** is the best place for a beginner. It's "open" almost 24 hours a day and allows for both regional and long-distance contacts. A dipole is just two equal lengths of wire connected to a center point.

The Materials

- **14-Gauge Wire:** 70 feet of stranded copper wire (you can even use "THHN" wire from a hardware store).
- **Center Insulator:** A piece of scrap PVC pipe or a heavy-duty plastic cutting board.
- **Rope:** 100 feet of 1/8" polyester rope (don't use nylon; it stretches and rots in UV light).
- **Connectors:** One **SO-239** Binding Post mount (about \$8 for two).

Ham Classroom: Your First HF Station (On a Budget) (cont'd)

Step 1: Do the Math

To find the total length of a half-wave dipole in feet, we use the standard formula: $486/\text{Frequency}$. For the 40-meter band it would be $486/7.150 \approx 65.45'$ of wire (where 7.150 is your target frequency in MHz. For the center of the 40-meter band (7.150 MHz)).

Since a dipole has two "legs," we divide that by two. Each leg should be roughly **32 feet, 9 inches**. ADD AN EXTRA 12 INCHES TO THIS LENGTH. You end up trimming some or all of this off. This gives you a bit of extra length to work with when tuning the antenna's legs for a good SWR reading. It's easier to cut excess wire off than it is to add it on.

Step 2: Assembly

1. **Cut the Wires:** Cut two lengths of wire, each about **34 feet** long. (We cut them a little long, so we have room to "tune" them later).
2. **The Center:** The **SO-239 jack/Binding Post** is going to be the center of your dipole antenna. Attach **Leg A** to the red binding post. Attach **Leg B** to the black binding post (it really doesn't matter which leg goes to which post). Make sure to attach them firmly because when the two wire legs are strung up, a fair amount of pressure will be placed on the center of the antenna.
3. **The Ends:** Loosely tie the far ends of the wires to small plastic insulators (old pill bottles or PVC scraps work great), then tie your rope to those. Attach the other end of the rope to a tree branch.

Step 3: Deployment & Tuning

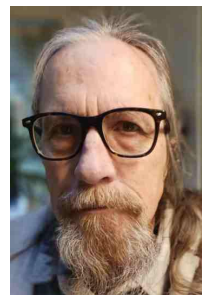
1. **Hang it High:** Get that center point as high as possible (ideally 30+ feet) in a tree. In the world of antennas, height is might. The higher up from the ground an antenna is, the better it works. Pull the two legs out away from each other to form a straight line.
2. **Check SWR:** Plug it into your G90. Use the radio's built-in SWR scanner.
3. **Trim to Fit:** If the SWR is lowest at a *lower* frequency than you want, your antenna is too long. shorten each side and re-test. Don't trim the wire. Instead, shorten the length by moving the insulator that attaches to the mounting rope toward the antenna's center, which shortens the length. Temporarily tie the wire to the insulator. **Small adjustments can make a big difference! Remember, add an extra foot to each antenna leg because it's easier to trim wire from each leg than to add wire to each leg.**

Why this works

By building the antenna yourself, you save nearly \$40-100 compared to a "brand name" wire antenna. That \$40-100 is now back in your pocket for your next piece of gear - perhaps a **Morse Code (CW) key** or a **digital interface**.

Conclusion

This is all you need to get started in HF radio. As you progress in your abilities as an amateur radio operator, you'll pick up new equipment. By acquiring one piece of equipment at a time, you'll master each piece of gear. You'll know it inside and out. Doing this will help you make better decisions when you do consider buying an expensive piece of equipment. As the adage goes, "slow and steady wins the race every time."



Hugh Patterson, KN6KNB

Marin Amateur Radio Society Board of Directors Meeting 3/12/26

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

Attendance:

- | | |
|--|---|
| <p>☒ President: Curtis Ardourel WA6UDS</p> <p>☒ Secretary James Saltzgaber KM6WWY</p> <p>☐ Director Richard Cochran AG6QR</p> <p>☐ Director: Ed Essick K6ELE</p> <p>☒ Trustee W6SG Marc Bruvry KF6VNT</p> | <p>☒ Vice President Kathy Funke-Spicher KM6URP</p> <p>☒ Treasurer Bruce Bartel N6VLB</p> <p>☒ Director Steve Toquinto KB6HOH</p> <p>☐ Trustee K6GWE Brian Cooley K6EZX</p> |
|--|---|
- ☒ **Adopt agenda** Jim S – Old business Item #1 - Add Ann Ivan to Club Cleanup Committee – MSC to adopt agenda as amended.
- ☒ **Approve minutes of** 12 February board meeting MSC to approve minutes.
- ☒ **Secretary's Report/Communications** – Jim KM6WWY – Certificates of Insurance have been sent to current holders upon renewal of insurance.
- ☒ **Treasurer's Report** Bruce N6VLB -Published in QSA-5.

Members Present: Mark Klein KM6ASI, Gerald McCarthy N6NOV, Milt Hyams KM6ASI, Skip Fedanzo KJ6ARL, Dan Sobel N6HLZ, Annie Ivan KM6QIW

Committee and other Reports:

1. **Membership** Curtis 104 62% (66%)
2. **Facilities** – Skip – A neighbor requested to run a pipe to the drainage pipe along the west side of the building. Skip advised her that we don't have a pipe, we have a ditch, and that goes into our neighbor's pipe. She will have to contact them. Jim KM6WWY advised that the Key Locker has been relocated from the back wall to inside the Radio Room, as well as the combination key safe that has the key to the key locker.
3. **VOAD/RCV** – Skip - Both are alive and well. Working of plan for RCV participation in the BEACON 2026 Exercise, as well as RACES. Also planning to hold Winlink exercise from each of the CBO's but open date was not readily available. RCV Planning team meeting with San Rafael Emergency Co-Ordinator/Liaison to talk about San Rafael CERT.
4. **Technical** – Milt – No report
5. **Public Service** – Scott – No Report
6. **VE Testing** – Jim KM6WWY– Next test will be April 11. No applicants currently.
7. **Comm Truck** – Charlie AI6TT via email– Nothing to report
8. **NBAM** Kathy KM6URP- NBAM equipment cage – approval was previously received to expand the cage across the back wall. Would they need new board approval? They are expecting an increase in equipment use and need additional space. Subsequently plans are being made for other storage there. Dan Sobel N6HLZ– Expanding the cage would effectively remove about 25% of the storage area. Mark to Gerald– Does the current state of the NBAM LOCKER have issues for fire safety. Gerald W6NOV- It must be neat and orderly. Discussion on space allocation decided that we will include the NBAM storage in the overall storage space allocation. Mark KM6ASI– upcoming mountain top equipment will be purchased as needed. Gerald W6NOV- This storage issue is part of a much greater storage issue that is being addressed by the Clubhouse Cleanup. Committee.

9. **Field Day** Steve – June is coming – we need to schedule the Field Day Committee meetings. Jerry Curtis WA6UDS -Suggested that we use the previous schedule of having FD meetings on the Wednesday before monthly board meetings. Curtis will send out invitations to last year's committee members, and Steve will be announcing it on our nets. Jim KM6WWY – Our Band Pass filters have been tested, Rob NZ6J ran analyzer traces on each filter, compared them with manufacturer's traces, and all are good. We had some perceived problems last year. We need to test the coax jumpers and do a test station prior to field day to make sure the filters and associate gear are working. Curtiss KimKM6GUY – Will be able to do publicity but will not be attending as he will be out of town. We will have to get a greeter and photographer, etc. We did not have a Proclamation from the Board of Supervisors last year. He has the instructions for getting one for this year. We need to get it moving forward. He has sent Curtis the suggested wording.

Old Business:

1. Club Cleanup Committee
 - a. Set up formal committee Jim Saltzgaber KM6WWY as Chair, Milt KM6ASi, Gerald W6NOV, and Rich AG6QR, Ann Ivan KM6QIW + additional members as they determine – Will project manage the long-term cleanup, to be a standing board Committee.
 - b. Add as a regular reporting committee
 - c. Authorizing a door fob for Ann Ivan KM6QIW MSC to establish committee.
 - d. Patches in A Day Drywall repair – March 18th start, Gerald will be manager for this phase.

Following discussion, MSC to establish Club Cleanup Committee.

2. Looking for a new member of the Facilities management team – Skip KJ6ARL will remain as Facilities manager until a replacement found. Anyone interested should contact Curtis WA6UDS.
3. Club budget for 2026- Curtis WA6UDS – Due to late hour, we will table budget discussion until next month's meeting. This will also allow us to factor some of the clubhouse cleanup costs into the budget. Discussion was held and it was decided to retire the Clubhouse painting fund and focus on the Building Fund. Curtis will make these changes on the website. No further Board action required.

New Business:

1. Clubhouse Inspection and EAP (Attachment 1) Gerald W6NOV- Presented the 1. Monthly Safety Inspection Checklist and 2. Seasonal Safety Inspection Checklist, 3. MARIN AMATEUR RADIO SOCIETY EMERGENCY ACTION PLAN as a suggested set of “guardrails” to set policies and procedures for properly managing the clubhouse to prevent unauthorized actions and activities, conduct scheduled inspections and respond to emergency situations. These are proposals for discussion of adaptive changes to better manage our facilities. Skip KJ6ARL – These are good documents for us to set up our working procedures. Curtis WA6UDS – All please read these documents and we will discuss them at the April Board meeting.

☒ **Good of the Order – Nothing to add**

☒ **Executive Session – Not Required**

☒ **Adjourn – 21:03**

Next Regular Meeting 3 April 2026

Next Board Meeting 9 April 2026

Suggested EAP and Inspection Checklist (Attachment 1)

1. Monthly Safety Inspection Checklist

Frequency: First meeting or first Sunday of each month

Inspector(s): _____

Date: _____

General Building & Emergency Egress

- ☐ All exits, doors, and hallways clear of obstructions
- ☐ Emergency lighting and exit signs functional
- ☐ Interior lighting (all rooms, hallways, bathrooms, office, garage, comm room no burned-out bulbs)
- ☐ Exterior lighting (entryways, parking area, perimeter) functional and timed/motion-sensor working
- ☐ US Flag (exterior or meeting room display) in acceptable condition: clean, no tears/fraying, properly displayed
- ☐ First aid kit(s) stocked and unexpired
- ☐ No extension cord or “zip” cord use
- ☐ No tripping hazards, loose carpeting
- ☐ No accumulating boxes or electronics (mark with blue tape with date for disposal after 30 days unless directed otherwise)

Fire Safety

- ☐ All fire extinguishers present, pressure in green, pins/seals intact, tags current
- ☐ Smoke/CO detectors tested and batteries fresh (if so equipped)
- ☐ Replace batteries annually in CO/Smoke detectors. Date: _____

Electrical & Electronics Safety

- ☐ No overloaded outlets, daisy-chained cords, or damaged wiring
- ☐ GFCI outlets in kitchen/bathrooms test properly
- ☐ Surge protectors if used on radio/electronics/ computers working
- ☐ No extension cords under rugs or through doorways

Kitchen

- ☐ Appliances clean and operating.
- ☐ Refrigerator $\leq 38^{\circ}\text{F}$; no spoiled food, clean and organized
- ☐ Sink/drains clear, no water leaks under or around

Bathrooms (2)

- ☐ Fixtures functional, no leaks
- ☐ Exhaust fans operating
- ☐ Floors dry and slip-resistant
- ☐ Windows secured

Meeting/Classroom

- ☐ Tables/chairs clean and free of damage
- ☐ Tables/chairs in place with aisle access
- ☐ AV equipment secure, cords managed
- ☐ No debris / orphaned equipment (blue tape, date, discard in 30 days)
- ☐ Drop ceiling tiles in place, undamaged (no sagging or stains)

Office

- ☐ Furniture anchored (earthquake zone)
- ☐ No overloaded shelves
- ☐ No extensions cords or “zip” cords
- ☐ Windows secured

Electronics Workbench

- ☐ Tools organized
- ☐ ESD mats/grounding good
- ☐ No exposed wires or chemicals
- ☐ Racks/antennas secure
- ☐ No extensions cords or “zip” cords
- ☐ All coax connectors tight on radios
- ☐ Grounding present and properly secured to radios

Communications Room

- ☐ Antennas coax secure to Polyphaser(s) and ground bus
- ☐ Grounding bus secure to grounding station ground
- ☐ Ground pipe beneath radios secure and undamaged
- ☐ All coax connectors tight on radios
- ☐ Grounding present and properly secured to radios
- ☐ Radio vents clear; no overheating, no storage on radios
- ☐ Grounding present and properly secured to power supplies
- ☐ Power leads from power supply to radios properly secured
- ☐ All coax in good condition

Garage/Storage Area

- ☐ Flammables in approved containers
- ☐ Heavy items secured
- ☐ Floors clear; no spills
- ☐ No signs of water leaks
- ☐ No signs of rodent activity
- ☐ Garage door in working order
- ☐ Garage door locks in working order
- ☐ Garage lighting working

Exterior (Quick Visual)

- ☐ Doors (front and old app bad doors secure/weather-tight)
- ☐ No new damage or pests
- ☐ Windows secured and without damage
- ☐ Clear exit path for tenant
- ☐ No items on stairs
- ☐ Hot water heater room clean, free of storage

Update Station Manual (Routine Operations, Emergency Operations, Appliance Information, Emergency Contact Information, Pending Maintenance Issues)

- ☐ Insurance company information updated
- ☐ Emergency contact list updated
- ☐ Emergency vendor list updated
- ☐ Plumber
- ☐ Electrician
- ☐ Roofing Co
- ☐ Safety policies
- ☐ Duplicate Comm Van information updated
- ☐ Insurance
- ☐ Registration
- ☐ Emergency Procedures

Notes / Actions Needed (include pro reports):

Inspector Initials: _____ **Signature:** _____

2. Seasonal Safety Inspection Checklist

Frequency: October to April, prior to and immediately following major storm

Inspector(s): _____

Date: _____

- ☐ Roof, gutters, downspouts cleared
- ☐ Side drainage ditch clear, functioning, no blockages/erosion
- ☐ Drains in front parking lot working, no blockages
- ☐ No leaks around windows/doors
- ☐ Heating system clean; air filter replacement date: _____ (replace 1–3 months)
- ☐ Mold inspection in wet areas
- ☐ Wood framing checked for rot
- ☐ Windows/doors seal; weather stripping good
- ☐ Dipole Antenna mounts secure
- ☐ Flag Pole in place
- ☐ Garage mounted antenna(s) guy wire and antenna condition
- ☐ Roof Antenna mounts secure

Notes / Actions Needed:

Inspector Initials: _____ **Signature:** _____

Summer (Hot/Dry Season) – May to October or before and after predicted East Wind Event and/or Red Flag Warning for Marin (Below 1000' elevation)

Inspector(s): _____

Date: _____

- ☐ A/C, fans, ventilation clean/operational; air filter replacement date: _____
- ☐ Equipment (radios, HVAC) not overheating
- ☐ Wood surfaces checked for drying/cracking
- ☐ Perimeter cleared of all combustibles (defensible space)
- ☐ Generator serviced
- ☐ Pest nests removed
- ☐ Roof vents clear
- ☐ Roof clear of combustible materials (tree litter)

Notes / Actions Needed:

Inspector Initials: _____ **Signature:** _____

MARIN AMATEUR RADIO SOCIETY EMERGENCY ACTION PLAN

California Code of Regulations, Title 8, Section 3220

1. Fire Safety and Evacuation

- If you smell smoke, see fire, or hear the smoke / CO alarm immediately evacuate —do not investigate or delay.
- Alert others including the tenant(s) calmly Call 911 from outside (provide address: 27 Shell Road, Mill Valley; describe the emergency).
- Evacuate using the nearest safe exit — close doors behind you but do not lock them.
- Follow posted exit signs/routes
- Proceed to a pre-designated assembly point (e.g., across the street or in the parking area away from the building and overhead power lines).
- Do a head count/account for people; report missing individuals to firefighters or 911.
- Never re-enter the building until cleared by emergency responders.
- Fire extinguishers — know locations (often near kitchen, radio room, exits); use PASS method (Pull pin, Aim low, Squeeze, Sweep) only if trained and the fire is small/contained — otherwise, evacuate.

2. Utility Shut-Off Procedures

- All members with key fob access should be able to identify, locate and shut down natural gas, water and electric services.
- **Natural Gas Shut-Off:**
 - Main valve: Need to locate — turn quarter-turn so handle is perpendicular to pipe (off position).
 - If smell gas: Do not turn lights/switches on/off, use phone inside, or create sparks; evacuate, open doors/windows from outside if safe, call 911 first, address is 27 Shell Road, Mill Valley;. Call PG&E (800-743-5000) when told to do so by 911 operators.
- **Water Shut-Off:**
 - Main valve: Often at the street meter (curb box) or inside near water heater/entry point — wheel/lever valve; turn clockwise to close.
 - Internal valves: Near sinks, water heater, or bathrooms for isolating sections (useful for leaks/clogs).
- **Electricity Shut-Off:**
 - Main breaker: In electrical panel (need to identify location); flip main switch to off.
 - Sub-panels: May exist for radio room? — label important circuits (e.g., don't shut off security cameras - I can explain later).

3. Earthquake Procedures

- During shaking: Drop, cover, hold on — get under sturdy furniture; protect head/neck; stay away from windows, heavy objects, antennas outside, overhead power lines or utility poles.
- After shaking stops: Check for injuries, fires, gas smells, or damage. If gas smell: Evacuate and shut off main gas (need to locate) if accessible/safe. Inspect for hazards (downed wires, structural issues).
- Evacuate if building damage suspected; assemble at safe point.
- Use club radios/nets for status checks if power/cell service out.

4. Medical Emergency

- Once the club can pass a fire inspection, I would like the club to consider adding a AED and CPR masks.
- Call 911 immediately — provide address, nature of emergency, number of victims.
- If trained, provide first aid/CPR; use any onsite first aid kit.
- Designate someone to meet responders at entrance.
- Clear space; keep calm crowd control.

5. Power Outage / General Safety

- Use flashlights (avoid candles/open flames).
- Unplug sensitive equipment (radios, computers) to prevent surges on restoration.
- For extended outages: Club may activate emergency nets or generator (if van/on-site).
- Secure building before leaving (lock doors, check stove off).

6. General Daily/Closing Procedures

- Kitchen/Stove: Double-check stove is fully off (knobs to OFF, pilot if any); never leave unattended.
- Exits/Doors: Ensure clear access
- Security: Arm/disable alarms if present; lock up; report suspicious activity.
- Last out: Walk through — check appliances, lights off, thermostat set, doors/windows secure empty garbages (bathroom, kitchen, comm room, meeting room).

7. Contact Information

- Plan must contain the name and contact information for Club President, whomever has delegated responsibility for implementing plan / facility manager and/or club emergency preparedness manager

We will need to document site-specific details (e.g., exact shutoff maps, extinguisher locations, and assembly points) and create a simple laminated map.

All members with key fob access should have a working knowledge of the above information, the “club binder” location along with procedures to contact Insurance Co etc., and fire extinguisher.

Marin Amateur Radio Society

Balance Sheet Comparison - Custom

As of February 28, 2026

Distribution account	TOTAL	
	As of February 28, 2026	As of February 28, 2025 (PY)
Assets		
Current Assets		
Bank Accounts		
CD	0.00	0.00
MARS BUILDING FUND (8795) - 3 - 2	1,960.40	2,078.400
MARS GENERAL FUND (4328) - 9 - 1	79,300.71	76,905.63
Money Market	0.00	0.00
VE Session Cash	0.00	0.00
VE Session Cash Received	0.00	0.00
Total for Bank Accounts	\$81,261.11	\$78,984.03
Accounts Receivable		
Other Current Assets		
Uncategorized Asset	0.00	0.00
Total for Other Current Assets	\$0.00	\$0.00
Total for Current Assets	\$81,261.11	\$78,984.03
Fixed Assets		
club house- 27 Shell Rd. MV	58,983.00	58,983.00
Total for Fixed Assets	\$58,983.00	\$58,983.00
Other Assets		
Total for Assets	\$140,244.11	\$137,967.03
Liabilities and Equity		
Liabilities		
Current Liabilities		
Accounts Payable		
Credit Cards		
Other Current Liabilities		
Total for Current Liabilities		
Long-term Liabilities		
Equity		
Retained Earnings	22,664.10	15,577.46
Net Income	-6,819.99	-2,010.43
Opening Balance Net Assets	124,400.00	124,400.00
Total for Equity	\$140,244.11	\$137,967.03
Total for Liabilities and Equity	\$140,244.11	\$137,967.03

Marin Amateur Radio Society

Profit and Loss Comparison (January-February, 2026)

Distribution account	TOTAL	
	Jan 1 - Feb 28 2026	Jan 1 - Feb 28 2025 (PY)
Income		
Donations	170.00	904.00
Dues	60.00	90.00
Rent	5,700.00	5,400.00
Total for Income	\$5,930.00	\$6,394.00
Cost of Goods Sold		
Gross Profit	\$5,930.00	\$6,394.00
Expenses		
Awards	200.00	400.00
Food	1,843.37	330.72
Garbage	108.44	105.48
Insurance	\$860.81	\$567.00
Comm Van Insurance	149.16	143.66
Total for Insurance	\$1,009.97	\$710.66
Office Supplies & Software	26.00	26.00
Public Service Expense	2,986.57	28.35
Repairs & Maintenance	981.27	922.50
Taxes & Licenses	4,442.48	4,164.36
Telephone	222.98	
Utilities	714.09	537.43
Accounting		130.00
Equipment < \$2,500		431.48
Station Upgrades & Maintenance		154.09
Water		214.85
Web Services Expenses		0.00
Total for Expenses	\$12,535.17	\$8,155.92
Net Operating Income	-\$6,605.17	-\$1,761.92
Other Income		
MESH Grant Income	150.00	
Total for Other Income	\$150.00	
Other Expenses		
MESH Grant Disbursement	364.82	248.51
Total for Other Expenses	\$364.82	\$248.51
Net Other Income	-\$214.82	-\$248.51
Net Income	-\$6,819.99	-\$2,010.43