

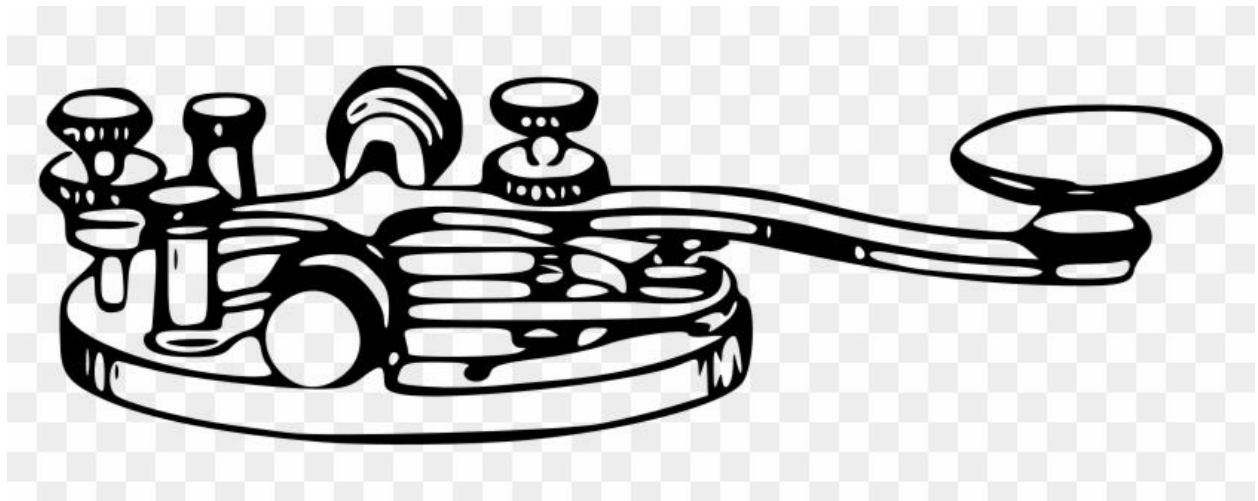


# QSA-5

## Marin Amateur Radio Society Monthly Newsletter

Established 1933

December 2023



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

## **From Our President:**

I wish everyone a Merry Christmas and a happy and healthy New Year. This is my last message to you all. My two-year term on the MARS Board ends on Jan 1, 2024. It has been a privilege to serve as your Board President this year. I want to thank the fellow Board members for their dedication to the club and to the Committee Chairs and members for their participation. I especially want to thank Curtis WA6UDS and Milt KM6ASI for their guidance when I had a question.

Best wishes

Ken Brownfield AB6JR

## **From the Editor:**

It seems, that in a blink of an eye, the holiday seasons is halfway over. Halloween and Thanksgiving have passed, and Christmas is approaching quickly. Then it's time to celebrate the arrival of 2024. It has been a good year for amateur radio and the Marin Amateur Radio Society. The club had a full year of normal, non-Covid restricted events. Of course, medical professionals told us older folks to get the new Covid, Flu, and RSV vaccines, ahead of the winter season. I managed to have a reaction to each. However, the reactions beat ending up in the hospital!

One thing I do regularly is talk to other radio clubs around the country to see how they do their newsletters in terms of content. In talking to other amateur radio enthusiasts, I can get a better sense of where ham radio is going. It appears there's a decent number of younger people who are discovering amateur radio and getting their licenses. In a world of fast technological changes, it nice to see that a form of communication that hasn't change much over the decades, still appeals to new audiences. It is in that spirit that I've decided to start including a small section for new ham radio folks, starting in January 2024.

As always, thanks to everyone who contributed to this month's issue. We couldn't have done it without you all. Have a great holiday season everyone!

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



### **New Members:**



Stuart Green KN6AQG – Ross

Paul Perez KM6VBM - San Francisco



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



## **Marin Amateur Radio Society – Board of Directors Meeting**

**Nov 9, 2023**

**Call to Order 19:30 Hours 1935 Hours Actual Start**

### **Attendance**

**President:** Ken Brownfield **AB6JR**

**Director:** Rich Cochran **AG6QR**

**Vice President:** Tom Jordan **KG6TCM**

**Director:** Jeff Young **KM6Y**

**Secretary:** Jim Saltzgaber **KM6WWY**

**Trustee K6GWE:** Brian Cooley **K6EZX**

**Treasurer:** Bruce Bartel **N6VLB**

**Trustee W6SG:** Marc Bruvry **KF6VNT**

**Director:** Steve Toquinto **KB6HOH**

**Adopt agenda-** MSC.

**Approve minutes of:** **Oct 12, & 25, 2023-** MSC to approve.

**Secretary's Report:** Minutes of 12<sup>th</sup> and 25<sup>th</sup> published in QSA-5

**Treasurer's Report:** In QSA-5, First half of taxes have been sent in. The second half payment, approx. \$4000 will be scheduled once the clubhouse painting total is determined.

**Club Members Present:** Larry Bradley K6QPE, Mark Klein, Ed Essick

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**Committee and other reports:**

**Membership:** Curtis Ardourel WA6UDS- Current membership is 163, 104% of last year's membership as of this date.

**Facilities:** Skip Fedanzo KJ6ARL- Paint bids are in from McCarthy about \$30K. Bids are equivalent to each other. Further information on painting in discussion.

**Public Service:** Rob Roland NZ6J/Pam Witherspoon N6PDW- Nothing new to report.

**Technical:** Milt Hyams KM6ASI- Not present.

**VOAD/RCV:** Skip Fedanzo KJ6ARL- Still working with RACES for OEM presentation and makeup of group. Working on training information is needed going forward. Starting with the basic skills set and forms proficiency and then determining the special skills that may be needed, I.E. qualified to work with Law enforcement and or fire/EMS. Once approved, will go out to RACES and RCV operators. RCV conducted a test on Nov 6<sup>th</sup> to find paths to get simplex traffic from Sausalito/Marin City to San Rafael – 3 paths found that require only one relay to reach EOC.

**VE Testing:** Ken Brownfield AB6JR- Next VE test session will be January 2024, schedule will be set and submitted to ARRL.

**NBAM:** Jeff Young KM6Y- No report.

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**Old Business**

- 1. Bids for Clubhouse painting:** Skip Fedanzo presented an updated spreadsheet of the 5 painting bids under consideration. After discussion

of the bids, it was determined that the painting could be accomplished now with existing funds. Further discussion of services presented, need or not to rent scaffolding, paint warranties, workmanship warranties, and the likelihood of additional repairs during the painting, it was decided to recheck warranties with McCarthy Painting (2 Yr. warranty), and NGD Painting (warranty to be determined). NGD was selected by a majority board poll, subject to their warranty being comparable with the other bids and confirmation of priming details. Jeff Young moved that we select NGD painting, and subject to their warranty award the contract to them, and to add 10% to their bid amount for unknowns as our total painting budget. The painting motion was seconded and carried by show of hands unanimously. Skip Fedanzo was authorized to review and to accept their final bid. Skip opened discussion regarding paint color. Our tenant requested a gray shade. It was decided that some samples of Benjamin Moore paint be obtained, light grays, flat sheen for building walls, and darker grays, semi-gloss sheen for trim. Skip Fedanzo, Curtis Ardourel, and our tenant will review and select the final color.

- 2. Discussion on funding Clubhouse exterior painting:** It was determined that the painting could be accomplished with existing funds. However, a separate painting fund will be established, and a campaign will be set up to solicit membership donations in conjunction with renewal. MARS has an existing building fund, but it was preferred that a specific painting fund be used for this outreach.
- 3. Test Equipment follow-up:** No follow-up with Rich Slusher on the repeater test equipment previously discussed. Steve Toquinto will contact Dan Healy, Rob Rolands and Rich Slusher.
- 4. Holiday Party (Christmas) update and action:** Curtis Ardourel- Bid requested from Esther Lee, Simp-Lee Catering. She returned a bid for 40 meals, consisting of the same menu we have had in past years. Food will be \$45.00/person, non-alcoholic beverages, BYOB for Alcoholic beverages. Curtis will send out Holiday Party invitations and RSVP info.

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**New Business:**

- 1. Election update:** 2 board positions to fill. Candidates will be John (Jack) Woo WA6CR, Curtis Ardourel WA6UDS, and Ed Essick K6ELE. Renewal of our W6SG club license trustee Marc Bruvry KF6VNT will also be on the ballot as a Yes/No answer. Email voting opens Nov 20<sup>th</sup> and ends on 12 noon Dec. 1<sup>st</sup>. Results will be presented at the Dec. 1<sup>st</sup> General Meeting.
- 

**Good of the Order:** None

**Executive Session:** The board retired to executive session at the request of board member Jeff Young to discuss an NBAM item. Returned from executive session at 2118 hours.

**Adjourn:** MSC 2120

**Next Membership Meeting: Dec 1, 2023**

**Next Board Meeting: Dec 14, 2023**

## **Marin Amateur Radio Club**

### **Balance Sheet Comparison**

As of November 28, 2023

TOTAL

AS OF NOV 28, 2023

AS OF NOV 28, 2022 (PY)



## ASSETS

### Current Assets

#### Bank Accounts

B of A Building account - 8795	5,485.61	6,319.44
B of A General account - 4328	77,569.49	11,697.83
CD	0.00	25,000.00
Money Market	0.00	5,000.00
VE Session Cash	-129.00	
VE Session Cash Received	-45.00	
<b>Total Bank Accounts</b>	<b>\$82,881.10</b>	<b>\$48,017.27</b>
Other Current Assets		
Uncategorized Asset	-95.00	-95.00
<b>Total Other Current Assets \$</b>	<b>-95.00 \$</b>	<b>-95.00</b>
<b>Total Current Assets</b>	<b>\$82,786.10</b>	<b>\$47,922.27</b>
Fixed Assets		
club house- 27 Shell Rd. MV	58,983.00	58,983.00
Total Fixed Assets	\$58,983.00	\$58,983.00
<b>TOTAL ASSETS</b>	<b>\$141,769.10</b>	<b>\$106,905.27</b>

## LIABILITIES AND EQUITY

### Liabilities

#### **Total Liabilities**

### Equity

Opening Balance Net Assets	124,400.00	124,400.00
Retained Earnings	-20,412.57	-16,461.90
Net Income	37,781.67	-1,032.83
<b>Total Equity</b>	<b>\$141,769.10</b>	<b>\$106,905.27</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>\$141,769.10</b>	<b>\$106,905.27</b>

# Marin Amateur Radio Club

## Profit and Loss

January 1 - November 28, 2023

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TOTAL

JAN 1 - NOV 28, 2023

JAN 1 - NOV 28, 2022 (PY YTD)

Income		
Auction Income		60.00
Donations	1,699.17	142.99
Dues	7,074.75	6,305.00
Field day refund		1,375.00
Income from club activities		90.00
Interest Income	792.77	
Public Service Refund	450.00	450.00
Rent	26,000.00	29,100.00
Sales of Product Income		24.69
Unapplied Cash Payment Income		250.00
<b>Total Income</b>	<b>\$36,016.69</b>	<b>\$37,797.68</b>
<b>GROSS PROFIT</b>	<b>\$36,016.69</b>	<b>\$37,797.68</b>
Expenses		
Accounting	1,215.00	110.00
Awards	299.99	
Car & Truck	2,327.80	637.04
Car & Truck Gas	258.02	177.39
<b>Total Car &amp; Truck</b>	<b>2,585.82</b>	<b>814.43</b>
Field day	1,370.26	2,184.67
Garbage	534.54	478.40
Insurance	5,537.00	7,191.75
Comm Van Insurance	2,790.25	
<b>Total Insurance</b>	<b>8,327.25</b>	<b>7,191.75</b>
Legal & Professional Services		575.00
Meals		2,208.00

Other Business Expenses		104.93
Picnic	1,757.51	2,290.60
Public Service Expense	1,379.96	3,342.98
Reimbursable Expenses	2,496.73	2,272.86
Repair & Maintenance	415.00	1,858.72
Repairs & Maintenance		2,880.00
Repeater	1,567.50	
Taxes & Licenses	4,074.67	7,930.84
Telephone		94.47
Uncategorized Expense		275.00
Utilities	4,219.81	3,375.20
VE Session	174.00	275.00

### Marin Amateur Radio Club

#### Profit and Loss

January 1 - November 28, 2023

#### TOTAL

	JAN 1 - NOV 28, 2023	JAN 1 - NOV 28, 2022 (PY YTD)
Water	949.03	672.59
<b>Total Expenses</b>	<b>\$31,472.00</b>	<b>\$38,830.51</b>
NET OPERATING INCOME	\$4,544.69	\$ -1,032.83
Other Income		
MESH Grant Income	33,500.00	
<b>Total Other Income</b>	<b>\$33,500.00</b>	<b>\$0.00</b>
Other Expenses		
MESH Grant Disbursement	263.02	
<b>Total Other Expenses</b>	<b>\$263.02</b>	<b>\$0.00</b>
NET OTHER INCOME	\$33,236.98	\$0.00
NET INCOME	\$37,781.67	\$ -1,032.83

# LIFE IS SIMPLE



# MARS Club News

## Annual Club Holiday Party

MARS Holiday Celebration  
Saturday 16 December 2023  
1:00 Pm to 4:00 Pm  
At the Club House





The Marin Amateur Radio Society will once again be holding an in-person holiday celebration on Saturday 16 December between 1:00 Pm and 4:00 Pm in our club house. As in the past we will serving a traditional meal and we will give away door prizes. The cost will be \$45 per person. You can pay online at [Pay Now](#) or send us a check or pay at the door. This year we are limiting attendance to 40 people so we are allowing only one guest per member. Due to these restrictions we really need you to let us know if you will be attending and how many of you will be coming. Please RSVP to [rsvp@w6sg.net](mailto:rsvp@w6sg.net)

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#### **Menu**

**Caesar Salad**

**Rolls & Butter**

**Cider Glazed Baked Ham**

**Herbed Roast Turkey**

**Stuffing and Gravy**

**Yukon Gold Mashed Potatoes**

**Candied Sweet Potatoes**

**Seasonal Vegetables**

**Dessert**

**Sodas and Water**

**The club will not provide adult beverages but you can bring beer or wine for yourself.**

## Battery Fire Warning

Thank you to Michael K6MLF for bringing this to our attention. We use batteries in our handheld radios, as well as other devices we own. Lithium-ion batteries are a staple in handheld communication devices but can cause dangerous fires. Here's a link to the article Michael forwarded to us, followed by some things to consider regarding lithium-ion batteries and their potential for causing fires:

[https://gcaptain.com/thermal-runaway-of-lithium-ion-battery-destroys-tankers-bridge/?subscriber=true&goal=0\\_f50174ef03-008d870e20-170023329&mc\\_cid=008d870e20](https://gcaptain.com/thermal-runaway-of-lithium-ion-battery-destroys-tankers-bridge/?subscriber=true&goal=0_f50174ef03-008d870e20-170023329&mc_cid=008d870e20)

Lithium batteries can catch fire due to a phenomenon known as thermal runaway. Thermal runaway is a self-perpetuating, exothermic reaction that occurs when a battery cell overheats, leading to a further increase in temperature and the release of more heat. This cycle can escalate rapidly and result in the battery catching fire or even exploding.

Several factors can contribute to thermal runaway in lithium batteries:

1. **Internal Short Circuit:** If the separator inside the battery fails or if there's a defect in the manufacturing process, it can lead to an internal short circuit. This allows the electrodes to come into direct contact, causing rapid heat generation.
2. **Overcharging:** Charging a lithium battery beyond its specified voltage limits can lead to the breakdown of the electrolyte and the formation of internal shorts, initiating thermal runaway.
3. **External Factors:** Physical damage to the battery, such as punctures or crushing, can compromise the integrity of the cell and trigger thermal runaway. Exposure to high temperatures can also contribute to the process.
4. **Contamination:** Contaminants introduced during the manufacturing process or as a result of wear and tear can create conditions conducive to thermal runaway.

5. **Poor Design:** Inadequate design of the battery or its associated protection circuitry can increase the risk of thermal runaway. For instance, if the battery management system (BMS) is not effective in controlling the charging and discharging processes, it can lead to unsafe conditions.

Manufacturers implement various safety features and precautions to minimize the risk of thermal runaway. This includes incorporating safety mechanisms within the battery, such as thermal protection devices, pressure relief vents, and advanced battery management systems. However, despite these precautions, mishandling, manufacturing defects, or other unforeseen circumstances can still lead to the rare but serious incidents of lithium battery fires.

## Free General Class License Course starts Nov 2

Hello, fellow radio ops--

If you (or someone you know) is interested in stepping up to a General-class FCC license, check out this free Zoom class--Thursday evenings through November and December, 3:30 pm on the Left Coast.

Cordially,

Michael K6MLF

As you see below, Ms. Burleson is with the Los Angeles Fire Department's ACS and with OMIK, the first Black-founded amateur radio club.

<https://www.omikradio.org/> I've been a member for, hmmm, more than 15 years...

If you or anyone you know is interested, here is the information for our upcoming, free, live General Class Licensing course on Zoom. Please feel free to share the following announcement on line or at your club meetings.



A free, weekly, live, Amateur Radio General Class Licensing course on Zoom will begin on Thursday, Nov 2, and will run through Thursday, January 11. The three-hour sessions will start at 6:30 PM Eastern Time. These are the classes that we have been holding for years sponsored by the National Electronics Museum. Prerequisite is to have or be studying for the Technician Class License. Please publicize this with anyone you know that you think would be interested. Those wishing to sign up should email Roland Anders, K3RA, at [roland.anders@comcast.net](mailto:roland.anders@comcast.net).

\*-- 73\*

\*Carolyn O. Burleson\* (K6COB)  
LAFD ACS - 11-268  
LAARC EmComm  
OMIK  
WRMK269  
[k6cob.usa@gmail.com](mailto:k6cob.usa@gmail.com)

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# **RCV News**

## **The Great Shakeout**

### **RCV's After Action Report for**

### **The Great Shakeout 2023 Exercise on 10/19/2023**

#### **Overview**

As public safety-first responders return to normal operations during the first 12-36 hours following a major disaster, Community Based Organizations (CBOs) must continue to provide “wraparound” services (e.g., food, water, shelter, medical and financial) to Marin’s most vulnerable populations. How well CBOs are able to meet the needs of their clients will depend on whether they can communicate effectively with other CBOs plus County resources like HHS, Public Works and the VOAD position in the EOC.

The Radio Communications Volunteers (RCV) program exists to ensure vital communications between civilian relief organizations (i.e., Marin CBOs), the VOAD and County relief efforts when normal telecommunications and Internet services are unavailable. The Great Shakeout and Golden Eagle exercises afford ample opportunity to practice how well RCV can standup operating communication systems among designated client organizations.

#### **Goals**

RCV’s primary goals for this exercise were:

1. Test RCV activation procedures and documentation;
2. Practice messaging for CBOs to/from the VOAD/EOC;
3. Practice working with CBOs to craft shorter, simpler messages.

## Discussion

On October 19th, 2023, RCV successfully established effective two-way radio communications between CBOs and the EOC in a simulated post-earthquake environment (i.e., as if all normal civilian communications services were unavailable). This was done by a cadre of 13 experienced amateur radio operators deployed to eight (8) CBOs located in north, south, central and west Marin County (see [Appendix A](#)). An additional RCV Net Control Station (NCS) was operated in the ACS-RACES radio room at the Marin County Emergency Operations Center (EOC).

RCV on-air activity occurred between approximately 1300 and 1600 hours.

RCV's major goals were achieved for procedural activities. Satisfactory headway was made on documentation as well, the latter being especially relevant since a primary goal for RCV is accurate message passing. During this exercise we introduced a new form intended to provide an initial situation summary upon arrival at CBO site. The form was arbitrarily titled *ACS-201* and a sample is provided in [Appendix B](#). It is similar to the "CAN" report familiar to firefighters.

Somewhat surprisingly, two CBOs filled in ICS-213 forms themselves and indicated they'd prefer to do that. Another CBO requested training on basic radio protocol and procedures for effective use of their GMRS handheld radios. RCV is following up on both of these CBO interests.

Feedback from participating RCV Operators highlighted the following:

1. RCV Net Control station requires a minimum of two persons: a radio operator and a scribe. Having a third person to act as a runner for direct communication with the VOAD position is highly desirable.
2. We need to continue to work with CBO staff so more of them know what

RCV is and the basics of what we can do. This will enable them to work with RCV even if RCV's usual CBO contact person is not available.

3. Having the VOAD position in the EOC available to resolve questions and direct messages to CBOs is a key to optimizing use of RCV and CBO resources. 4. Recruiting additional RCV Operators remains a priority.

5. We found another location in Pt. Reyes Station that provided good signal quality. 6. RCV Operators suggested we create a one-page handout to CBOs on arrival outlining what RCV can do and how best to work with RCV.

## Conclusions

Overall, the exercise was a success. Our experiences suggest that we should hold a table-top workshop with the CBOs in early 2024 to replicate the activities of all three parties (CBOs, VOAD and RCV), with the aim of clarifying the response process. Also, results from both Golden Eagle 2023 and this exercise suggest we should hold two additional kinds of exercises in future:

1. Multi-day exercises with shift changes;
2. Concurrent on-air activities with ACS-RACES to replicate conditions where both ACS sections are active.

A final open issue is RCV's physical access to the EOC radio room after ACS-RACES stands down and/or when RCV needs to activate (e.g., a Public Safety Power Shutdown), but RACES is not activated.

## APPENDIX A – RCV Operators, CBO Locations Tables & RCV Forms

**Table 1: Radio Operators**

Operators	Callsigns
-----------	-----------

Curtiss Kim	KM6GUY
Brian Cooley	K6EZX
Bruce Bartel	N6VLB
Jerry Foster	WA6BXV
Ed Essick	K6ELE
Ken Brownfield	AB6JR
Kevin Johnston	W6KPJ
Dan Greely	KN6PNA
Jim Saltzgaber	KM6WWY
Dirck Brinckerhoff	KM6VKQ
Andrew Musselman	KI6UOC
Ann Shores	K6SHO
Skip Fedanzo	KJ6ARL

**Table 2 – CBO Radio locations**

Canal Alliance	San Rafael
SF-Marin Food Bank (San Rafael)	San Rafael

Community Action Marin	San Rafael
North Marin Community Services	Novato
Homeward Bound	Novato
San Geronimo Valley Community Center	San Geronimo
Marin Community Cooperation Team	Marin City/Sausalito
West Marin Community Services	Pt. Reyes Station
EOC / NCS	San Rafael

**Table 3 - ICS Forms**

- ICS-205 RCV Communications Plan
- ACS-201 RCV Initial Status Report
- ICS-214 Activity Log
- ICS-309 Communications Log
- ICS-213 General Message

Revised 10/30/2023

**APPENDIX B – ACS-201 Form**

**RCV Initial Status Report Form ACS-201**

This form provides situational awareness of the organization's operations to the EOC. This form must be completed and reported to RCV's Net Control Station by the first RCV Operator to arrive at an assigned location each day.

*Complete before contacting staff or other on-site persons!*

Item	Questions	Answers (print)
1	<b>Date &amp; Time</b>	
2	<b>Location/Address</b>	
3	<b>Tactical Callsign</b>	
4	<b>Conditions:</b> What is seen including safety concerns (e.g., crowds, hazards, resources, roadways, weather); indicate if there are no changes since last report	
5	<b>Operations/Actions:</b> What has and is taking place (what services is the CBO providing today: feeding, loading supplies, sheltering, other)	

6	<b>Needs:</b> what resources are requested (includes EMS, fire, law, public works, transportation)?	
7	<b>Your FCC Callsign</b>	

Reported to ACS NCS by callsign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ hrs.

Version 11/11/2023

## After Action Report

### Marin City/Sausalito Area UHF Simplex Test on 11/06/2023

#### Overview:

On Monday November 6<sup>th</sup> 2023, nine RCV Operators tested various UHF simplex paths to and from two key sites in Southern Marin as well as San Rafael area including the Los Gamos EOC.

#### *A. Marin City/Sausalito area:*

1. Marin County Cooperation Team (Marinship Way) – Warren Leiden K6WRL
2. Marin City (Target Store) area – Charlie Benet AI6TT

#### *B. San Rafael area stations were:*

1. San Rafael Food Bank – Ann Shores K6SHO
2. Canal Alliance area – Dick Brinckerhoff KM6VKQ
3. Homeward Bound area – Kevin Johnston W6KPJ
4. Home Depot area – Dan Greely KN6PNA

#### *C. Two simplex relay stations for this test:*



1. Ring Mountain area – Greg King KO6BHM
2. Camino Alto – Andrew Musselman KI6UOC

*D. Net Control Station:*

1. 1600 Los Gamos East side parking lot near Lobby B – Skip Fedanzo KJ6ARL

As **Table 1** shows there were mixed results for most stations. **Table 2** lists the test stations locations and radio equipment deployed. When the data in **Table 1** is represented as diagrams (**Figures 1 & 2**), we see two signal circuits for successful two way communications between Marin City/Sausalito sites and CBO stations along the Hwy 101 corridor.

These tests do not preclude other San Rafael area CBOs from being able to serve as relays to/from Marin City / Sausalito locations. Nor do these test results guarantee equivalent results if the San Rafael locations change. However we now have proof that simplex relays via San Rafael and on to the EOC are practical if repeaters are out.

**Lessons Learned:**

1. Net Control should have been consistent on using tactical callsigns.

1 | Page  
Version 11/11/2023

2. Not a new finding, but results did improve due to increased antenna height and/or transmit power.
3. RCV Net Control could be located in other locations as long as traffic can be sent to the EOC or its ultimate destination.
4. Ring Mountain tests proved coverage into San Rafael with 5 watt HT, but wind noise and lack of a pole-mounted antenna diminished that station's capabilities. It should be noted that Ring Mountain locations require a significant uphill hike and there is no real shelter from the environment conducive to radio operations.

**Table 1: Simplex Test Results of successful signal paths**

<b>CBO</b>	Camino Alto	Canal	EOC	Food Bank	Home Depot	Homeward Bound	MCCT	Marin City	Ring Mt n.
Camino Alto			3	4-5	4-5	4-5	4-5	4-5	
Canal					5		4*	4*	1*
EOC	4-5			4	5	5			
Food Bank	3*		5		5	1	3-4		
Home Depot	5	5	5	5		5	5	5	4**
Homeward Bound	4-5		5	2	4-5		3-4	3-4	5*
MCCT	4-5			4-5	4-5	4-5		4-5	0-1
Marin City (Target)	5	2*			5	3-5	5		3*
Ring Mountain	3*	3*	3*	3*	3*	3*	3*	3*	

**NOTES:**

1. Empty cells indicate no signal was received.
2. Numbers marked with an asterisk "\*" indicate only signal receptions are reported.
3. Number marked with two asterisks "\*\*" indicate a single

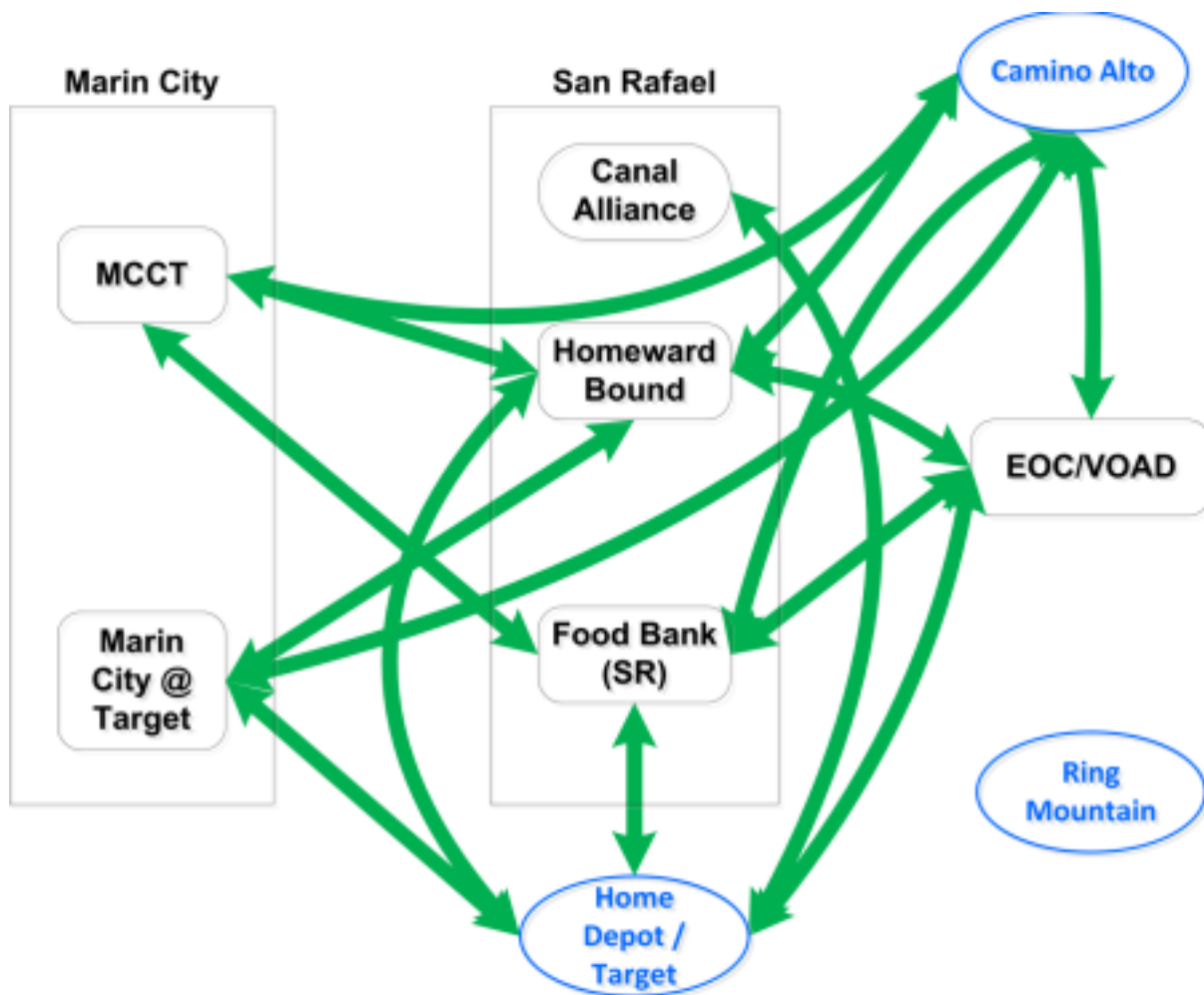
instance.

**Table 2: Test Stations Locations and Radio Equipment**

<b>CBO</b>	<b>Station Location</b>	<b>Equipment</b>
Camino Alto	Camino Alto	Yaesu FT-8900R, 25W, Tram 1185 mag mount
Canal	91 Larkspur Street, San Rafael. Transmitter issue at Canal*	Yaesu FTM-100, Dipole car roof, 8W
EOC	Parking Lot East side of 1600 Los Gamos.	Kenwood TM-V71, 10W, Diamond 6db gain mag mount
Food Bank	2550 Kerner Blvd, San Rafael, N. end of lot @ Vol. Welcome Center	Kenwood TM-V71A, 45W, J pole antenna on 16' mast
Home Depot	111 Shoreline Pkwy and Target's parking lot, San Rafael	Icom ID-5100, 5/8λ truck mount, 12.5W
Homeward Bound	At end of Del Oro Lagoon (Bel Marin Keys, NE. of Hamilton).	Yaesu FT-8800, 35W, mobile antenna
MCCT	Main Plaza parking lot, on the SF Bay side.	Kenwood TM-V71A, 45W, X50 pole antenna on 16 ft mast

Marin City (Target)	Donahue going north (uphill) directly behind Target.	Kenwood V71A and a Diamond X30
Ring Mountain	Ring Mtn, South of end of Taylor Rd.; hike up hill to top.	Icom HT @ 5W

**Figure 1: Pathways with Non-CBO Relay Stations**



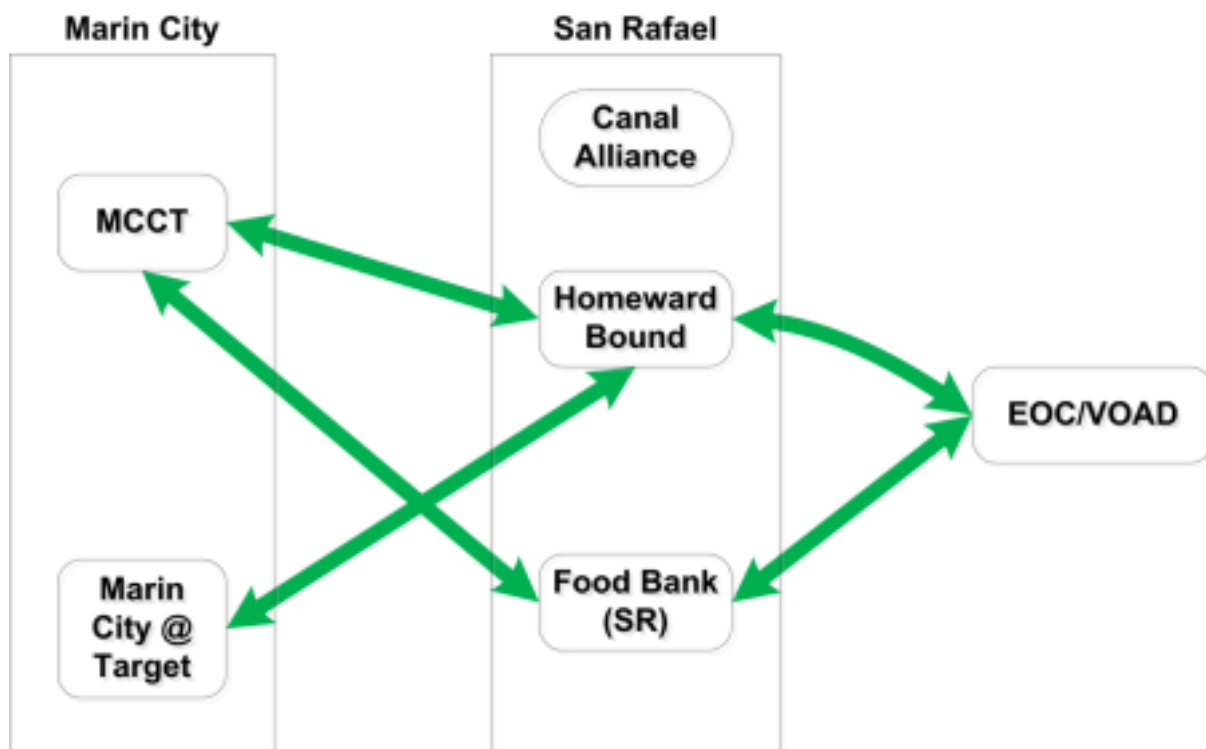
### Legend:

1. Green Arrows show Two-way communications
2. Blue Ovals are non-CBO relay sites

### Notes:

1. Technical issues at Canal Alliance and weather at Ring Mountain precluded adequate two-way tests.
2. Ring Mountain could hear the other stations, but was not heard by most other sites at CM 3 or more.
3. Camino Alto relay station had good communications with MCCT and Marin City (@ Target) sites as well as the EOC.

**Figure 2: Pathways with only CBOs as Relay Stations**



**Legend:**

1. Green Arrows show Two-way communications
2. Heavy Green Arrows show paths from Marin City to EOC

**Figure 2** shows relay paths without the external (i.e., non-CBO) relay stations. It is likely although untested whether Canal Alliance would serve as well to relay from Marin City / Sausalito area stations.

Note that technical issues at Canal Alliance precluded adequate two-way tests. We may want to re-test at that location in future.

## 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.

## **Marin RCV UHF simplex frequency update**

This was sent out from Skip Fedanzo, KJ6ARL, RCV Lead Operator. We are changing today's test UHF simplex from 446.675 (RACES Tac 3) to 446.9000 (Tac 4). Both should be NO PL and preprogrammed. Monitoring this morning indicates repeater traffic on 446.675 is constant. Sorry for the late update...Skip

## **RCV Sunday Net Script**

**Marin Radio Communications Volunteers (RCV)**

**09:45 am Sunday Weekly Roll Call Net UHF 447.175 MHz, - PL=156.7 Hz**



**SCRIPT:**

QST QST QST This is the Marin Radio Communication Volunteers (RCV) 9:45 am Sunday roll call on the UHF Big Rock repeater at 447.175 MHz with *negative* offset and PL of 156.7. For information on this program please contact *Skip Fedanzo* at [kj6arl@arrl.net](mailto:kj6arl@arrl.net)

This is a directed net so please go through net control to contact another station. Your net control operator today is (*Your Name & Call*)

This net meets every Sunday morning from 9:45 to 10:00 AM local time.

Stations checking in, please give your callsign, name and location. Let Net Control know if you have any traffic or comments for the net.

Does anyone have any emergency or priority traffic for the net?

*[Handle any emergency or priority traffic]*

Stations with emergency traffic can break in at any time by saying "BREAK BREAK" followed by your call sign.

Net Control Operators rotate each week. If you wish to volunteer for Net Control on any Sunday in [NEXT MONTH], please let net control know the week: 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, or 5<sup>th</sup> whenever you check in to the roll call, **AFTER THIS NET HAS COMPLETED AND SIGNED OFF. DO NOT OPEN OR ATTEMPT TO EDIT THE NET LOG SPREADSHEET DURING THIS NET.**

I will now start the roll call. [Use roll call spreadsheet, log all stations checking in]

**After completing the roll call:**

This concludes the roll call as I have it. Are there any late or missed members?  
[Log all missed and late check-ins.] Are there any Guest check-ins?

[TIME PERMITTING] Does anyone have any RCV news or items for the good of the net?

*[Handle any RCV news or other items]*

With no further traffic, this concludes the Sunday RCV Roll Call Net. The next RCV Sunday net will be at 9:45 am (*date of next net*)

Thanks to everyone who participated in this morning's net, and to the Marin Amateur Emergency Communications Unit (W6ECU) for use of this repeater. This is *your name, your call sign*. This repeater is now returned to normal operations.

## **North Bay Critical Mass Report**

On Sunday, November 19<sup>th</sup>, the monthly North Bay Critical Mass Event was held at the Marin Civic Center. Milt KM6ASI and Rob NZ6J opened up their RACES yellow boxes for all to see. These are set up as self-contained VHF/UHF stations with a

Kenwood V71A radio, computer, interfaces, and antenna. All that's needed as a power source - car cig lighter or battery to setup a station capable of voice, packet or Winlink. We used our stations to send Winlink messages across the parking lot.

I encourage anyone new to the Marin Amateur Radio Society to go to this monthly event and find out more about the club's participation in Critical Mass. The next meeting is on December 17<sup>th</sup>, at the San Rafael Civic Center. Contact Michael Fischer at [michaelfischer149@gmail.com](mailto:michaelfischer149@gmail.com)

## VE Examination Report

The Marin Amateur Radio Society's VE Program is an extremely important component of amateur radio. The national program MARS is a part of allows member radio clubs to administer licensing tests on behalf of the FCC. What this means to people getting into ham radio is that there are more test locations and a more flexible schedule for taking the license exam. The 2024 examination schedule will be announced next month. We have finished this year's scheduled exams on October 14<sup>th</sup>. Here are the results of our final examination session from Ken Brown:

Hello All,

Once again, we had a successful exam session. Thank you all for giving of your time. Pam Witherspoon N6PDW is now an Extra Class license holder. Thomas Childers KO6BQU, Fairfax, passed both Tech and General exams. He is also one of our newest members at MARS. Jared Tamamachi KO6BRM, Fairfax, is now a Tech. Zoe Jacobson, Petaluma, passed her tech exam. She has not been issued a license yet. Our next exam session will be in January 2024, unless we need one before.

Ken Brownfield AB6JR

## License Renewal Can Be a Hassle

This was brought to our attention by Ken Cochrane: "License renewal is not for the faint of heart. Kim and I just renewed, and we spent over an hour with the FCC help line. I asked her if everyone had such a hard time and she said yes. Just start early!" We're sorry you and Kim had such trouble with the FCC Ken. Thanks for the heads-up.

## 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 Hackaday, who covers the tech end of amateur radio:

**Ham Radio May Speed Up Soon:** An interesting piece from a online journal dedicated to advances in technology.

<https://hackaday.com/2023/10/29/ham-radio-may-speed-up-soon/>

**Hurricane Lee: Radio Amateurs and Nets Activated:** Another case of amateur radio coming to the rescue when communications are needed.

<https://www.arrl.org/news/hurricane-lee-radio-amateurs-and-nets-activated>

**Solar Eclipse QSO Party Seeks Amateurs and Radio Enthusiasts for Global Experiment:** This sounds very interesting.

<https://www.arrl.org/news/solar-eclipse-qso-party-seeks-amateurs-and-radio-enthusiasts-for-global-experiment>

**Tropical Storm Hilary: Amateur Radio Activates:** This is why it is important to have amateur radio operators.

<https://www.arrl.org/news/tropical-storm-hilary-amateur-radio-activates>

**Devastating Hawaii Wildfires Prompt Response from Amateur Radio Emergency Service:** The ARRL was monitoring the terrible wildfires in Maui.

<https://www.arrl.org/news/devastating-hawaii-wildfires-prompt-response-from-amateur-radio-emergency-service>

**No cellphone? No problem! The vintage radio enthusiasts prepping for disaster:** Another reason amateur radio is so important!

<https://www.theguardian.com/us-news/2023/may/27/ham-radio-emergency-natural-disaster-climate-crisis>

**Ham radio operators participate in Field Day:** Here's an article regarding what another radio club did for Field Day 2023.

<https://www.thesnaponline.com/2023/06/27/ham-radio-operators-participate-in-field-day/>

**Ham radio operators take to the air at annual field day across Oklahoma:** Another Field Day 2023 report. This is from Oklahoma.

<https://okcfox.com/news/local/oklahoma-ham-radio-operators-amateur-communication-drill-world-household-electricity-focus-battery-solar-generator->

[power-nation-country-field-day](#)

**Ham radio operators practice for emergency, build community:** A nice article regarding the importance of amateur radio.

[https://www.southernminn.com/faribault\\_daily\\_news/news/ham-radio-operators-practice-for-emergency-build-community/article\\_c305405c-1446-11ee-9e1c-17bef3ed0921.html](https://www.southernminn.com/faribault_daily_news/news/ham-radio-operators-practice-for-emergency-build-community/article_c305405c-1446-11ee-9e1c-17bef3ed0921.html)

**How Far Will A Radio Transmit?** This is very useful information to have, and it's well explained.

<https://www.radioddity.com/blogs/all/how-far-will-a-radio-transmit>

## **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.

**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>

**Job Posting: FCC Recruiting Field Agents:** In case any of you have wanted to become a field agent. Does it come with a badge?

<https://www.arrl.org/news/job-posting-fcc-recruiting-field-agents>

**FCC Grants an ARRL Emergency Request to Permit Higher Data Rate Transmissions for Hurricane Relief Communications:** The FCC has granted an [ARRL](#) emergency request for a 60-day temporary waiver intended to facilitate amateur radio emergency communications for hurricane relief.

<https://www.arrl.org/news/fcc-grants-an-arrrl-emergency-request-to-permit-higher-data-rate-transmissions-for-hurricane-relief-c>

## 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-805>

**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.

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

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

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

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

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

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

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

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

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

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

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

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

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

**Homemade Antennas:** Many new 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://grp-labs.com/>

Offering several kits and finished transceivers:

<https://youkits.com/>

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

Real time band conditions:

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

VOACAP band conditions:

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

ARRL Propagation Page:

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

Real Time HF Propagation Prediction:

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

**Ham Radio Websites of general interest:**

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

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

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

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

<https://qrznow.com/>

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

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