

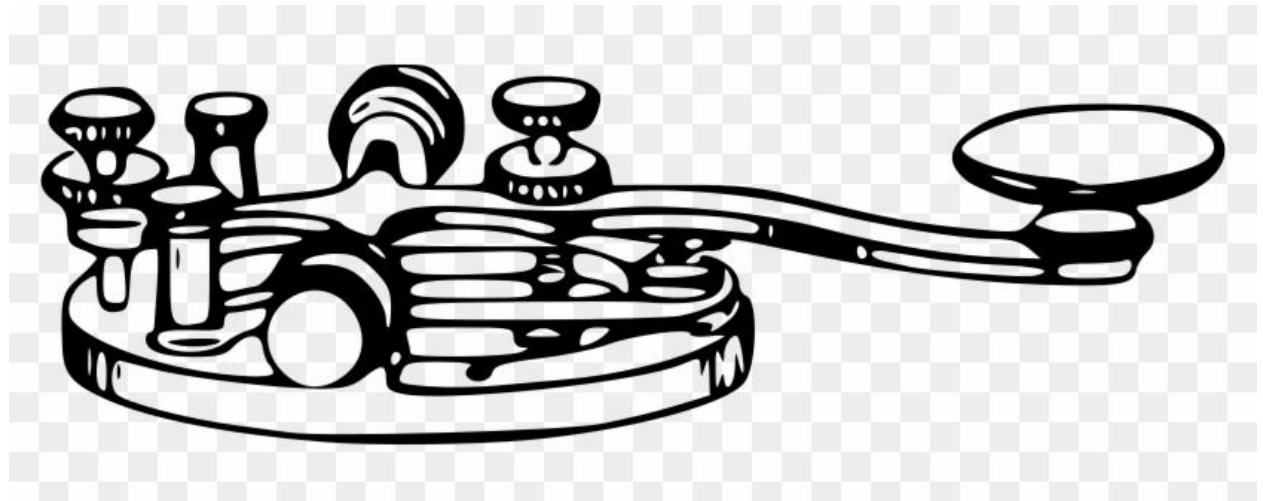


QSA-5

Marin Amateur Radio Society Monthly Newsletter

Established 1933

August, 2022



When all else fails, you can count on Amateur Radio

In Memory of Doug Slusher KF6AKU



A Message from Rich Slusher:

July 31, 2022

To The Officers and Members of the Marin Amateur Radio Society:

I wish to express my heartfelt gratitude and appreciation for all aid and comfort that you have given to me since Doug's passing.

First, thank you for the use of the clubhouse and catering for Doug's Celebration of Life on July 10th. I have received many favorable comments from in-house and ZOOM attendees and was overwhelmed by all the stories of Doug that were shared, some of which I had forgotten about. I hope that the Celebration was as cathartic for all of you as it was for me and my family. It couldn't have been pulled off without the Club's considerable help.

Second, I wish to express my infinite gratitude for all of the club members, especially Curtis, who spent several weekend days coming over to American Canyon and removing the considerable amount of radio equipment in Doug's garage and transporting it to the clubhouse. I hope a lot of that equipment will provide value to the Club. There were many days in the last two months when I sat alone in the garage and could not envision how all of that equipment could ever be cleared out. Thanks to the volunteers' considerable efforts, I was able to turn the keys over to the landlord on July 31st and be out of the house.

During the equipment removal process, a very important briefcase was unearthed (almost literally) by Greg Dupree (KU1C) that contained the original version of Doug's Will and Trust. I had literally torn the house apart looking for these documents and had given up hope of ever finding them. Their discovery has saved me months of time and considerable money, not to mention about 40 points off

of my blood pressure. I nominate Greg to receive a MARS golden star pin at the annual awards banquet.

Your kindness, compassion, and hard work have been a Godsend to me and have provided comfort to me through my personal grieving process. It is very gratifying to be a part of a group that still holds dear the idea that the club is there not only to give support to the community, but to be there for each other in times of need. Thank you.

Sincerely,

Rich Slusher (KI6UIM)

From Our President:

This space is not often blatantly used for advertising and you won't see much of it here in the future either. That said here we go. Michael Fischer K6MLF put a post on the excellent North Bay 2 Meter Critical Mass mailing list nb2mCM@groups.io asking if anyone wanted to order MARS badges and he got a flood of orders. The badges cost \$15.00 each and that is our cost. You must be a current club member to order one, and of course you can renew your membership on line at <http://w6sg.net/site/members/renew-2/> The badges are available with either a pin or magnetic back for attachment. Michael is going to place the order on 10 August so act quickly. Email Michael directly, he is good on QRZ or in the club roster. Supply your name callsign, and city. The badges are 3" wide and look like this:



The Marin Amateur Radio Society has long been a destination for the radio equipment of silent keys, and we consider it an honor to help a family dispose of equipment left by their loved ones. Internally we have not always made best use of that equipment. While in recent years we have had a couple of successful silent auctions where people have found some great deals, we have accumulated a lot of bodacious boat anchors. We recently did a major purge of old gear from the club house. I have to again thank Rob Rowlands NZ6J, Skip Fedanzo KJ6ARL, Milt Hyams KM6ASI, Bo Lamb KN6EIF, and Steve Toquinto KB6HOH for their work cleaning out the club house. With the passing of Doug Slusher KF6AKU we have once again filled the clubhouse with several car and truck loads of gear. Some of this gear belonged to MARS and was at his home because he was working on it. Some of it belongs to other clubs that sought his expertise, and the rest was the sort of really great s**t that hardware junkies like Doug and I seem to accrete. We as a board have several tasks ahead of us because of this. First, we have to sort out what we basically dumped in the club house. We need to return those items that belong to others, identify club assets that are spares or upgrades to our club station, repeaters, and service shop, and finally determine an equitable way to dispose of the rest. The guiding principle in my mind is that gear should go to someone who will use it. If the clubs' coffers can be enriched a little so much the better. Most of all I want to establish a clearly documented and transparent way to deal with whatever comes in the door. The bottom line is for now don't make any assumptions about the ownership or availability of the gear, it very well may belong to someone other than Doug or MARS. In order to better manage donated gear the board will be working on a policy and I welcome your suggestions. Please send me your suggestions for our policy.

From the Editor:

Summer is sure passing by quickly! Thankfully, the pandemic seems to be under control, and we've been given at least a somewhat normal life again. Of course, you never know what will show up next. However, at least amateur radio operators are ready for anything, and that's what makes us so unique. On that note, I am thinking about adding a monthly column on dealing with emergency situations, such as fires, earthquakes, pandemics, etc. I believe it would be useful for new members who may not have developed a preparation plan for emergencies. Knowing what to do in the event of a disaster is often a matter of life and death in which seconds and minutes count!

It has been a slow news cycle all around and we haven't received the usual event updates this month. Therefore, our contents are a bit threadbare this month. Rest assured that this will not be the case for the following month's issue. I understand that folks are busy and can't always provide content. Besides, that falls on me as editor. No worries, I say. The ship will continue to float and new content will present itself.

Keep sending in suggestions and ideas for stories, as well as photographs and details of events you've attended or participated in. As I mentioned last month, I can't get to a lot of our events because of work. Therefore, I rely on you for coverage, when possible! As I've said before it takes the entire club to make this publication the best it can be!

With that said, have a great August and enjoy the end of your summer. I look forward to your suggestions and input. If I have missed anything, make sure to let me know.

QSA-5Editor@w6sg.net



Remembering Doug Slusher KF6AKU

QSA-5 is going to keep this post up for one more issue because of Doug's enormous contributions to the Marin Amateur Radio Society. This piece, which I've read a few times, is very touching and was written by our club President, **Curtis Ardourel WA6UDS**

I met Doug Slusher KF6AKU back in the fall of 1970 in the electronics shop at Redwood high school. We were both freshmen and in the same section of first semester electronics with Truman Whorton WB6QFV SK as our teacher and as it turned out also our mentor. We immediately hit it off. We had similar family stories. Both of our fathers returned from serving in World War Two and used the GI bill to go to college. Both our fathers became teachers at about the same time and, had kids about the same time and of course lived in Marin. In spite of both

being “nerds” we had different personalities. Doug was outgoing made friends easily, while I was more distant, and some would say aloof or perhaps shy. None the less we became lab partners in electronics and close friends. Doug’s family welcomed me into their home as if I were another one of their kids. His parents were the sweetest kindest folks you would be lucky enough to meet, and I was honored to be a part of scattering both his parents’ ashes. At that point I had the pleasure of meeting Doug’s brother Rich Slusher KI6UIM who is a member of our club.

Our teacher Mr. Whorton recognized something in both of us, maybe it was aptitude, maybe it was free labor. He asked us to help remodel the electronics lab. We built work bays with carpeted benches, built in test equipment, and trays for components used in lab exercises. Mr. Whorton was in the wood shop cutting out the plywood pieces which Doug, and I were assembling in the electronics lab. We reported to him that we had assembled the first one for his inspection. He gave our work a close inspection and asked about slight gaps in fit of the plywood sheets. Doug confessed that in order to get the trays of components to slide in and out we had used finishing nails as shims. He took this a teachable moment and disassembled all our work and reassembled it himself. Of course, the trays would not slide in and out. Doug and I triumphed when Mr. Whorton allowed that we would have to finishing nails as shims.

Redwood high school had a radio club WB6NVY, and Doug and I were both members. Our club held car washes and painted house numbers on curbs to fund TH6DXX beam and rotor and built a collapsible tower out of pipe sections that sat on the roof of our classroom. Our club did field day on a hilltop in Tiburon. Keep in mind that this was the early seventies, and we were a lot more lax about safety then. We used a WWII vintage gas generator that would run for about five hours on a tank of gas. Its carburetor was such that once the engine was warm it would not restart unless it cooled for about half an hour. It also had a “muffler” made of steel pipe which at night glowed a dull red after an hour or so of running. Every four hours Doug and I took turns pouring gasoline into the running generator while the other stood back with a fire extinguisher in case of an accident. I would not let anyone do that now, but we were young and as I say it was a different time.

Doug and his brother Rich introduced me to car rallies. These were not the kind that involved a stopwatch but rather were more a succession of logic problems and observations of streets and signs. I was late to the party getting a driver's license, and Doug essentially taught me how to drive on rallies. Doug, Rich, and I also wrote these rallies as a team. I had some of the happiest times of my life as the three of us would drive around, thinking up puzzles, looking for odd intersections, or street signs, and laughing at each other jokes or quoting Monty Python, Stan Freberg, Alan Sherman, and Jonathan Winters. The sort of rallies we wrote involved stapling 5" by 8" cards with reflective tape and number and letters on them about 8 feet up on telephone poles. Sometimes a resident on a street where our course ran would object to the rally, the rallyists, and the card. We would roll up on a heated discussion between a local and a rallyist. I would cower in the car while Doug would with grace and charm talk both parties back from the edge of coming to blows or tearing down the card. The price of gasoline eventually caused a decline in the number of available rallies although they still exist and during the pandemic Doug, Rich, and I ran as a team on zoom using google maps. Doug was the navigator; Rich was the brains of the team, and I was the comic relief. I will cherish those hours we spent together cooped up in a car or on zoom for the rest of my life.

Doug's family loved the out of doors, camping, fishing, and exploring. They invited me along to their annual camping trip to Mt Shasta. I missed a few of the forty-nine years I was invited but was there for most of them. In the early years there were four or five families all camping together as years past it dwindled to just a few of us. My family was not outdoorsy, so I learned to camp and fish from Doug and his family. Some many of the things I love to do, I was fortunate to do with Doug and his family.

In 2007 as the economy worsened Doug hired me at the Marin Independent Journal in Technical Services. We did phones, IT, and repaired hardware. All in service of a paper that had to come out every day. Once again Doug educated me in the workings of a daily paper. There are few things quite as impressive as hearing the press run up to speed or watching the press switch from one roll of paper to another while printing at speed. Sadly, even then the newspaper business was beginning to decline, and Doug's department got smaller and smaller until it was just the two of us. During the budget process Doug came to

me and said that our department was only budgeted for one person in the next year. He went on to tell me that he thought my software skills would be of more use to the paper than his skills. I did argue with him but he was adamant and he retired and allowed me to keep my job. That is pure Doug, always thinking of the other guy.

Back in high school Doug and I were members of the Amateur Communications Society which later merged with the Marin Amateur Radio Club to form the Marin Amateur Radio Society. Doug was part of the team that engineered that merger. While all that was going on I was living in New York City and not really involved in amateur radio except the odd 2-meter QSO in NYC. I joined the new Marin Amateur Radio Society and in 2009 Doug asked if I would run for a seat on the board. I said OK and to my surprise I was elected. At the January meeting of the board, the board as a whole elects the officers and they saw fit to elect me president. Once again Doug led me to something I was proud to do and better able to do because of his mentorship.

I personally am not given to having a favorite anything. I could not tell you my favorite food, or movie, or book. Doug however always introduced me as his best friend. For knowing him and all the ways he has made my life better I cannot be prouder than to call him my best friend. I will miss him all the rest of my days. I will always aspire to be more like him. To quote Shakespeare as I am wont to do "He was a man, take him for all and all, I shall not look upon his like again"

New Members:

David Sneed WD6L - Napa

Chris Bigall KC6ZKO - Rohnert Park

Benjamin J. Winston KM6ZEB - San Rafael

Sean Peisert KN6UHT - San Rafael

Next General Meeting: August 5th, 2022



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

**Marin Amateur Radio Society Board of Directors
Meeting July 14th, 2022**

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

Attendance:

President: Curtis Ardourel **WA6UDS (1)**

Director: Skip Fedanzo **KJ6ARL (2)**

Vice President: Tom Jordan **KG6TCM (2)**

Treasurer: Bruce Bartel **N6VLB (1)**

Director: Ken Brownfield **AB6JR (2)**

Director: Mark Klein **KM6AOW (1)**

Secretary/Trustee K6GWE Brian Cooley **K6EZX (1)**

Trustee W6SG: Mitch Martin **WU1Q**

Adopt agenda: M/S/A but **Tom KG6TCM** then mentioned a previous conversation about some equipment (Tam West Receive Antenna), which was added to New Business

Approve minutes of: 9 June meeting M/S/A

Secretary's Report/Communications: T3 process: We will move forward on this effort to gather all club operational tech knowledge in the Technical Committee section below.

Site visits: Brian will arrange with Milt starting next month, as available.

Van insurance: Brian is housekeeping the people who should and shouldn't be on the policy. Curtis also brought up the topic of our van maintenance. checklist and **Michael K6MLF** said he would add regular starting of the on-board generator at established van maintenance intervals that he has previously created.

Treasurer's Report: Bruce N6VLB reported that we have incurred an expense related to Field Day that will be tackled in that topic below.

Committee and other Reports:

- **Membership** – 142 | 92%
- **Facilities:** Skip **KJ6ARL** reported that the last of the club room surplus gear has been distributed to takers. Cleanup of the far back room is still pending. Our tenant had a clogged sink issue which she took care of with Dan's Plumbing and for which we will soon reimburse her. Curtis updated us on last meeting's concern that some gear had been stolen from the clubhouse, including at least one important piece (a Collins radio) that was given away to a member by a couple of other members. Other gear is still tentatively missing but there isn't complete agreement on the status of these pieces. Steve KB6HOH indicated that some of the missing gear (HP sig gens) seem to have gone to recycling inadvertently. Further discussion of specifics will take place in closed Exec Session, below, during this meeting.

- **Public Service: Pam N6PDW** reported that staffing looks good for the Dirt Fondo on 7/23 with the prep Zoom link going out soon. Marin Century follows on 8/6, which **Rob NZ6J** is primarily coordinating upon his return from travel. Skip mentioned that Paul Smith who is a lead on the Dirt Fondo will be having a debrief meeting for rest stop captains' post-event and that we can send a club delegate. Skip will connect Pam with Paul.
- **Technical:** Curtis recapped that the [T3 knowledge gathering process](#) needs to start its 1:1 meetings first. **Brian K6EZX** reminded all present to use the shared link in the chat (and linked inline above) to add their expertise and other suggested names to the list. **Milt KM6ASI** reported that the Tam W. Peak receive node went deaf a while ago due to a disconnected antenna, possibly removed by the Coast Guard in a confusion over which antenna is who's. A very temporary antenna has been serving so far, but a proper antenna is needed. Milt obtained 3 bids for potential antennas but debate over the exact design of the antenna needed continues. Milt requested an authorization to spend at no more than \$1,500 to acquire an antenna and related mounting supplies. Skip questioned the amount of the expense for what seems like a simple antenna. Milt described some technical requirements that are driving up the cost, most centered on operating in an RF-saturated environment. M/S/A by show of hands.
- **VOAD/RCV:** Skip reported that RCV has a meeting with its served clients to review needs and procedures on 7/22. Radio comms aren't the issue, matching skills and processes with those of RCV client staff is - human comms & procedure, not technical. Skip is also working to set up VOAD chief Adriana Rabkin with some kind of radio that will keep her and at least Skip in contact should all other comms fail. Tom reported that all future regional exercises of Bay Area UASI will start to include CBO's and aux communications orgs into their leagues of professional responders. Tom described this as a major win for orgs like RCV and thanked Skip for his work in making RCV prominent as a key factor in making this happen.
- **VE Testing: Ken AB6JR** reported that the latest test session had 5 attendees after 3 canceled due to COVID. One attendee pulled off a trifecta, getting his Tech, General and Extra in one sitting!
- **NBAM:** Michael reported progress on signing up volunteers to be ready to augment the thin RACES presence in S. Marin as non-RACES ham operators ready to work out of the S. Marin CERT trailer where a properly configured Kenwood V71 is installed. Michael also reported that the NBAM site is now up

at: northbaymesh.org. Early testing has shown that Mt. Barnabe will be a key node for the NBAM, with a good shot to Dillon Beach (under construction at this time) and to Berkeley. On 8/26 our NBAM team will start working on infrastructure in the Sea Ranch area with a site trip. Will coordinate with the [Anchor Bay radio club](#) which will help establish key rungs in the “ladder” of mesh nodes from Bodega Bay to there. Michael also reported solid progress with the [Sonoma club](#) and the private owner of the English Hill radio site. NBAM gear has been mostly removed from the MARS clubhouse at this point, staging it in Jeff Young’s garage instead.

- **Picnic:** 10 September Format of the picnic is TBD, but Curtis noted that the most recent previous picnics saw the club purchase dogs, burgers buns and fixin’s, encouraging attendees to bring sides and desserts. During COVID we catered instead. With those options in mind, Curtis asked for input where we want to fall on the continuum of these past formats. Tom asked for volunteers to help with logistics. He suggested we make it a multi-format event with components of all the above offered. Milt brought up COVID and health considerations as a threat to attendance; He thinks catering will appeal to more people for those reasons. Tom suggested that we make this a catered picnic that will also accommodate those who want to bring food to cook. Further consideration is needed; Tom, Bruce and Milt volunteered to become an ad hoc subcommittee and come back to the board with more formalized format options at the next meeting.

Old Business:

1. Frequency coordination: Skip reported that NARCC thinks we have a power change on our Middle Peak 146.700 machine which we suspect is probably a case of confusion with 147.330. Progress is slow.
2. Drainage: Covered already.
3. Transfer from Doug:
 - a. Site Keys:
 - b. Card Key System: Curtis verified that a known password still works to admin the system and he has a bag of spare key tags, etc. They will be stored offsite for access control. Curtis is available to make new key tags as needed at this point. Mark KM6AOW asked how many key tags are issued and did their number have any bearing on the

equipment loss issues noted earlier in this meeting. Curtis said he will send a list of key tag holders to the full board.

- c. Club Assets/Other assets: Curtis reported that a lot of gear is at the home of the late Doug Slusher. This weekend (7/17 from 10 am on at 55 James Road, American Canyon) a collection party is being solicited to gather and move gear to the clubhouse where it will be sorted for disposition. All of this is with the understanding and encouragement of Rich Slusher, Doug's executor.
4. Celebration of Life for Doug: Curtis pointed mentioned a catering receipt (below) which indicates an expense related to the celebration that was not approved in advance. Additionally, Rich Slusher has formally forgiven 3 uncashed checks payable to Doug from MARS, the total amount of which well exceeds the cost of the event catering + typical tip. It was decided that the club would pay for the event expenses and recognize the difference between that and the forgiven checks as a contribution to the club from Rich Slusher/The Estate of Doug Slusher. M/S/A with a show of hands.
5. Field Day: The accounting of costs shared with [Redwood DX](#) around this event is still being sorted out. Curtis requested a motion that MARS pay the full \$741.18 detailed below (catering costs) which may change somewhat as we finish truing up costs with (and expense sharing contributions from) RedX. Bruce also reported a Field Day setup lunch reimbursement request from Marilyn Bagshaw, which we will also pay (approx. \$50). M/S/A

New Business:

1. Tam West repeater (covered in Technical above)

Good of the Order:

Executive Session: Commenced at 21:14. See separate minutes. Returned to main sessions at 21:36.

Adjourn 21:37

B. Cooley

Next Regular Meeting 5 August 2022

Next Board Meeting 11 August 2022

July 13, 2022

Curtis Ardourel
MARS
27 Shell Road
Mill Valley CA 94941

Dear Curtis,

Thank you for referring me to Doug's family. It is a privilege to have been of service.

Kind regards,
Esther

Doug Slusher Memorial Reception
2:00 PM on Sunday, July 10, 2022

Buffet Menu

~

Potato Salad

Cold Shrimp Platter
with Lemony Cocktail Sauce

Roast Beef and Roast Turkey Finger Sandwiches
on White and Wheat Breads

Chicken Salad Mini Buns
on Hawaiian Sweet Rolls

Fresh Fruit Platter
Melons, Strawberries, and Pineapples

Cookie Tray
Chocolate Chip, Oatmeal Raisin, and Iced Lemon

Beverages
Clear Waters, Pellegrino, Coke, Diet Coke, Dr. Pepper

\$	550	Food Cost / 40 Attendees
	110	Beverages
	100	Disposable Tableware
	880	Shopping and Food Prep / 22 hours @ \$40
	200	Catering Attendant, Victoria / 5 hours @ \$40
\$	1,840	Total

Gratuity for Victoria is at your discretion.

Richard Slusher
(415) 686-6591

July 7, 2022

To The Board of Directors
Marin Amateur Radio Society

Re: Douglas Slusher Uncashed Checks

Dear Sirs:

At the date of Doug's death on May 21, 2022, my records indicate that he had been written three checks (for reimbursement of expenditures made by him on behalf of MARS) from MARS that he had never cashed, totaling \$4,295.28. The checks were:

#1952 - \$3,587.41

#1908 - \$205.00

#1907- \$502.87

Some months before Doug's death we talked about those outstanding checks and he stated something to the effect that he would donate those back to MARS. He never issued a formal letter to the Board but, as Executor of his estate and as his brother, I believe that his oral representation to me indicated his intent and action at that time.

Therefore, to honor his wishes prior to his death, I wish to have you cancel those checks, retroactive to January 2022, and not reissue any new payments. The cancellation of these checks will represent a forgiveness of MARS' obligations to Douglas Slusher and should be considered a de facto contribution to MARS.

Sincerely,



Richard Slusher

50 Via Belardo #3, Greenbrae CA, 94904

Check 1952	\$3,587.41
Check 1908	\$205.00
Check 1907	\$502.87
Total owed	\$4,295.28

Catering	\$1,840.00
Tip	\$368.00
Total Catering	\$2,208.00

Donation to club	\$2,087.28
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Rewards Code: Dn9K7WnG
#7915 Domino's Pizza
(415) 456-9950
6/25/2022 11:59 AM

D

****NEW CUSTOMER****

#10
PAID

BAGSHAW MARILYN
2675 FRANCISCO
BLVD E
SAN RAFAEL, CA
94901
(415) 302-8300

Est Order Ready: 12:15 PM

DELIVERY INSTRUCTIONS: MARINROBIN GUN
CLUB TIP 10 CALL

SUMMARY

#10

2-LRG HandToss -
1-LRG HandToss ZZ
TOTAL ITEMS: 3

----- ORDER: Oven -----

1 LRG HandToss ZZ	\$25.49
(ZZ)	
1 LRG HandToss -	\$17.99
1 LRG HandToss -	\$19.49
Pepperoni	
TOTAL BOXES: 3	

----- ORDER: Non-Oven -----

COUPONS/ADJUSTMENTS

2 LG 2-Topping \$31.99	\$5.49-
(_5318)	
1 Delivery Charge	\$5.99
Sub Total	\$63.47
Tax 1	\$5.71
	\$69.18

PAYMENTS

Amount Tendered	\$69.18
Balance Due	\$0.00



July 1, 2022

Curtis Ardourel
President and Membership Chair
Marin Amateur Radio Society

Dear Curtis,

Thanks as always for calling on me.

Happy Fourth!
With kindest regards,
Esther

Breakfast Delivery to Marin Rod & Gun Club
June 26, 2022

Sausage & Vegetable Strata (14)
Vegetarian Strata (6)
Honey Vanilla Yogurt Parfait
Fresh Cut Pineapple, Melon, and Strawberries
Mini Muffin

20 Boxed Breakfasts @ \$25	\$ 500
3 Starbucks Coffee Travel Boxes	<u>60</u>

Total Due \$560 Thank you very much!

Pizza Saturday Lunch	\$69.18
Breakfast Sunday	\$560.00
Tip for breakfast	\$112.00
Total	\$741.18

Field Day 2018	\$408.00
Difference	\$333.18

Marin Amateur Radio Club Balance Sheet Comparison As of July 31, 2022

	AS OF JUL 31, 2022,	AS OF JUL 31, 2021 (PY)
ASSETS		
Current Assets		
Bank Accounts		
B of A Building account - 8795	7,053.93	2,413.68
B of A General account - 4328	7,379.20	12,211.51
CD	25,000.00	25,000.00
Money Market	5,000.00	5,000.00
Total Bank Accounts	\$44,433.13	\$44,625.19
Total Current Assets	\$44,433.13	\$44,625.19
Fixed Assets		
Clubhouse - 27 Shell Rd. MV	58,983.00	58,983.00
Total Fixed Assets	\$58,983.00	\$58,983.00
TOTAL ASSETS	\$103,416.13	\$103,608.19
LIABILITIES AND EQUITY		
Liabilities		
Total Liabilities		
Equity		
Opening Balance Net Assets	124,400.00	124,400.00
Retained Earnings	-22,228.35	-22,636.76

Net Income	1,244.48	1,844.95
Total Equity	\$103,416.13	\$103,608.19
TOTAL LIABILITIES AND EQUITY	\$103,416.13	\$103,608.19

**Marin Amateur Radio Club
Profit and Loss
January - July 2022**

	TOTAL JAN - JUL 2022	JAN - JUL 2021 (PY YTD)
Income		
Auction Income	60.00	
Donations	118.98	187.03
Dues	6,305.00	6,676.47
Field day refund	625.00	
Income from club activities	90.00	628.00
Public Service Refund	450.00	475.00
Rent	18,300.00	17,525.00
Sales of Product Income	24.69	
Total Income	\$26,223.67	\$25,491.50
GROSS PROFIT	\$26,223.67	\$25,491.50
 Expenses		
Awards		200.00
Car & Truck	54.49	1,017.34
Equipment < \$2,500		322.79
Field day	1,591.18	
Food	850.00	1,280.00
Garbage	287.04	188.56
Insurance	3,628.75	3,164.68
Legal & Professional Services	575.00	25.00
Meals	2,378.00	
Public Service Expense	841.09	
Reimbursable Expenses	4,017.42	2,965.04

Rent & Lease		150.00
Repair & Maintenance	885.00	2,281.66
Repairs & Maintenance	2,880.00	895.18
Repeater		-177.27
Taxes & Licenses	3,950.64	4,550.56
Telephone		93.24
Uncategorized Expense	275.00	940.00
Utilities	2,152.58	5,183.71
VE Session	215.00	188.00
Water	398.00	378.06
Total Expenses	\$24,979.19	\$23,646.55
NET OPERATING INCOME	\$1,244.48	\$1,844.95
NET INCOME	\$1,244.48	\$1,844.95

Questions and Answers

This section of our publication is dedicated to any questions you have. If there is something you need or a problem you cannot solve, this is the place to seek assistance. Who provides the answers? Readers of the QSA-5 publication! Since we have not received any new questions for a few months, we are leaving a question up from March (hopefully we'll get a few new questions in soon):

This question was not directly sent to the QSA-5 Question and Answer section of the newsletter, I believe that the subject matter warrants our attention. This is the email I received from Steve & Melanie Kramme KD6KXT & KD6KXS:

Hello, my wife and I are licensed HAMs in Novato and have not been on the air due to location and HOA issues. We would, however, like to install a VHF / UHF radio into our truck camper. I am seeking advice regarding which brand and features that they have that would best fill the needs of our local area and when camping. I contacted you in hopes that you could put me in touch with someone in the club that could answer my questions. I was thinking maybe meeting someplace for coffee. Some time ago I attended meetings in Mill Valley, but my membership has lapsed. I know that with COVID concerns there may still not be any in person club meetings.

You can reach them via email at: skramme@gmail.com

Here are some links to get you started regarding an antenna mount for your rig and vehicle. Hopefully, some of our club members will follow up via email!

Here's a link to the Radio Reference website's forum page that discusses this question:

<https://forums.radioreference.com/threads/best-place-to-mount-dual-band-antenna-on-pickup-truck.324814/>

Here is a page dedicated to mobile antenna mounting from Comet Antenna:

<https://cometantenna.com/land-mobile/no-holes-mobile-mount/mobile-mount-faqs/>

This final link comes from KV5R and is nicely detailed and explains the subject clearly.

<https://kv5r.com/ham-radio/mobile-antenna-placement/>

LIFE IS SIMPLE



Marin Amateur Radio Society News

Hamfest 2022

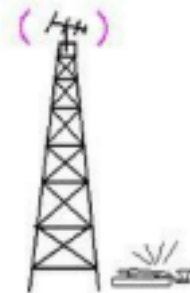
One of the things radio clubs do, in addition to supporting themselves and their community, is supporting other clubs around their area or region. With that said, we would like to support the Western Placer Amateur Radio Club and their fantastic event. Here is the official announcement:

Greetings from the Western Placer Amateur Radio Club:

Saturday, September 17th is the big day – the last Hamfest of the year in the Sacramento Valley! Gates open at 7:00 AM for buyers, 6:00 AM for sellers in downtown Lincoln in McBean Park. Mark it on your calendar. Don't forget. Just 7 weeks away. Lots of free parking. \$10 vendor spots. Record busting buyers and sellers every year. Great drawing prizes! Below is the event flyer (QSA-5 note: It got slightly butchered in translation, but the information is all there). Please distribute to your local clubs and friends. You don't want to miss this one! See you there.

73,

Michael Buck
K6BUK
WPARC Secretary/Treasurer
916.765.5910



Sixteenth Annual Sacramento Valley Hamfest!



***Hi-Tech Saturday, Sept 17, 2022,
Liquidators 0700 to 1200 Hours***

**Presented by Western Placer Amateur Radio Club 65
McBean Park Dr. (Hwy. 193) Lincoln CA Bandstand**

Parking Lot



Lots of Good Stuff!



Drawing Prizes!



Vendor Setup 0600



Buy and Sell



Ham Radio Related Stuff Only

No Inflation - Same price every year!

\$10 per space-Approximately 9' x 12'

Bring Your Own Tables

Hamfest Info at WWW.WPARC.US



Talk-in Frequency



147.300 (+) 67 Hz Please Support Our Sponsors

San Francisco Marathon - July 24th

One of the activities that amateur radio operators participate in is marathon races. Amateur radio operators provide much needed communications to races across the globe. The world-famous San Francisco Marathon was held on July 24th and the Marin Amateur Radio Society was there to help ensure that this legendary race went smoothly. The San Francisco Radio Club managed the communications team made up of Bay Area radio club volunteers, including our own folks. We will include photographs and a more details when we get them (next month's issue)!

Club Badges

Some of our newer members, myself included, have noticed other members sporting badges with the name and callsign on them. It just happens that you can get in on the next order of badges by contacting **Michael K6MLF**. Here's the email he sent out to club members, in case you missed it:

Hello, fellow radio operators—

I am about to place an order for callsign badges with the Marin Amateur Radio Society logo.

The price is \$15.

If you'd like one and are a MARS member, just shoot me an email with your name and call and say if you want a magnet or a pin—you can pay me when I deliver it to you.

If you're not yet a member of our friendly Society, Curtis would be delighted to receive your membership application. Just tell me it's in process, and we'll be good to go.

Please send your specs by August 10th so I can place a group order. If you want to see a photo of what they look like, let me know and I'll send a photo.

Cordially,

Michael K6MLF

Winlink and CARLA Slide Presentation

Winlink, is a worldwide radio messaging system that uses amateur-band radio frequencies and government frequencies to provide radio interconnection services that include email with attachments, position reporting, weather bulletins, emergency and relief communications, and message relay. The system is built and administered by volunteers and is financially supported by the Amateur Radio Safety Foundation.^R **Rob Rowlands N26J**, has put together a great slide presentation regarding winlink. If you want to know more about Winlink, please check out Rob's presentation:

https://docs.google.com/presentation/d/1H0QpNM66Y--DVE1srzc7nuqneD1EJD4Gg4-jO6GwNGA/edit#slide=id.gd24ce52c18_0_30

Rob also has a great presentation on **CARLA, the California Amateur Radio Linking Association**. The Mission of the California Amateur Radio Linking Association is to provide a wide ranging, robust radio communications system to facilitate daily, routine communication and provide emergency communications resources to local and state agencies and departments in times of disaster or public need. Here is a link to Rob's presentation:

https://docs.google.com/presentation/d/1_XNliamRsxloPhxmuYLeOQ-BmDwiEzHFrplz9ybulMw/edit#slide=id.p

How Critical Mass Started

The QSA-5 often reports on critical mass events in the Bay Area. While the QSA-5 has provided the “what is” regarding critical mass, we had not given you the “how” of the story, as in how critical mass started. Thanks to Michael Fischer, who forwarded this piece, you can now learn about the founding of this crucial service.

First written by AA6SF - SK - April 24, 2012)

Way back in early 2010, I was sitting at home looking at my HT radio that hadn't needed charging in some time. Since I got my license in January 2009 (Technician & call sign KI6NYQ), I had taken all the HCT (Ham Communication Team) classes offered by SF NERT and many emcomm classes offered by Santa Clara County ARES/RACES, even participated in their drills, volunteered as a radio operator for Bay to Breakers, SF Marathon, SF Nike Marathon, joined SF ACS; but I still did not feel like I knew that much about my radio and emergency communications and needed more radio practice opportunities.

I came to the realization that here in San Francisco there were few opportunities to learn more about my radio, simple UHF/VHF radio communications and few opportunities to practice using my dual band HT.

I decided to start a radio practice group. I thought I would gather together other ham radio operators to learn and practice with them and help them to learn and practice— about simple UHF/VHF radio communications. For weeks I scouted many venues in San Francisco and chose Spreckels Lake in Golden Gate Park. I announced the radio practice at the end of weekly ham nets, handed out announcements at an ACS meeting and an SFARC meeting.

Two of my best friends, Jan WB6SPX and Jim KI6RYE, said they would help and we three met over a nice bottle of red wine at Jim's house to work out (loosely) the details of the first practice. (Better than a garage in Los Altos.) I told them I had a name for the radio practice: “The 2 Meter Critical Mass Amateur Radio Practice”. **On July 10, 2010, the first 2 Meter Critical Mass Amateur Radio Practice took place from 1000 hours to 1200 hours at Spreckels Lake in Golden Gate Park.** Twenty (20) hams were in attendance. Imagine that!

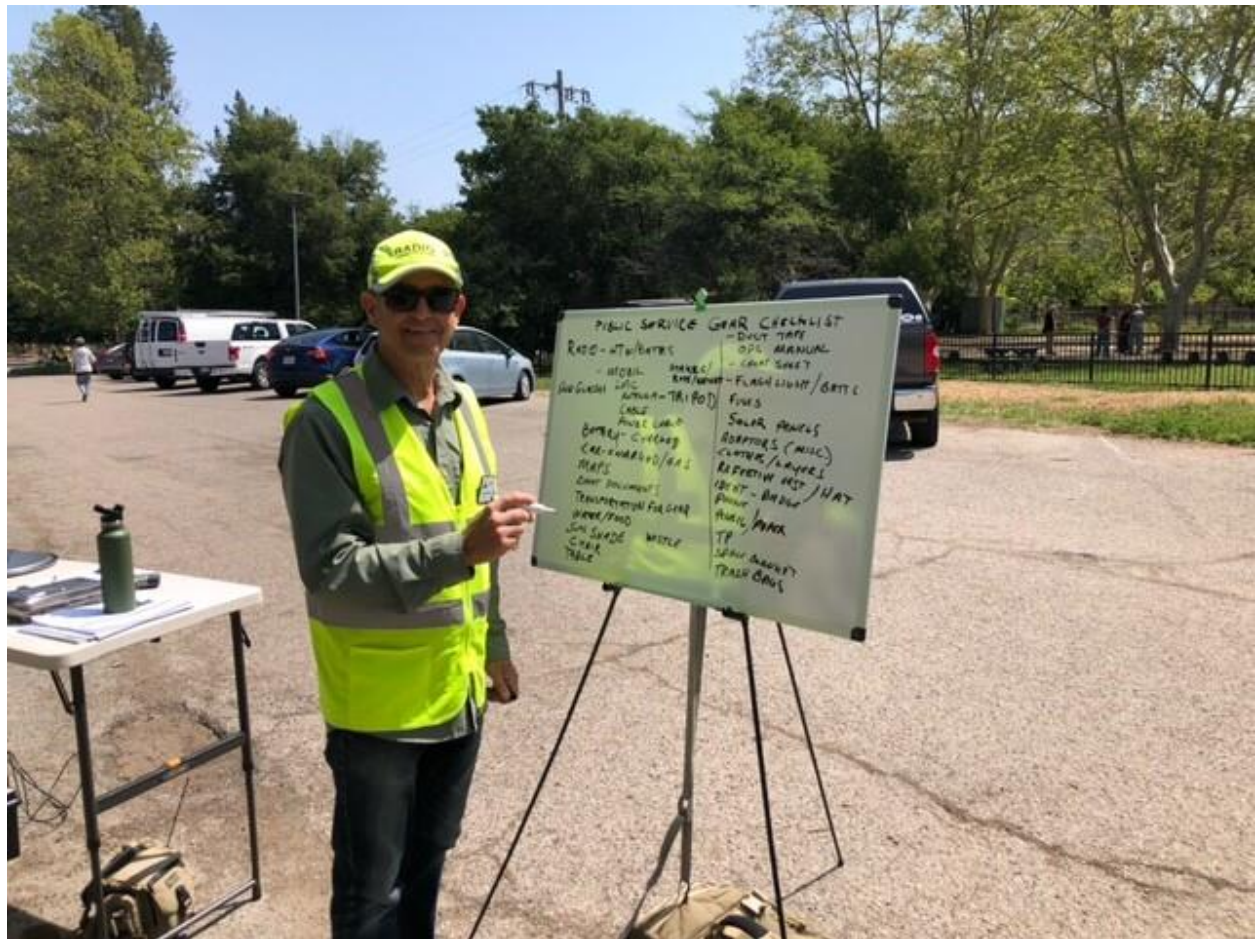
We talked on our radios. Some had trouble with Tone, Tone Frequency, offsets,

phonetics, low battery power. There were lots of questions and the Elmers answered them.

I learned a lot that day. Exactly what I had wanted. Since then, when we meet, we continue to talk on our radios, solve problems and learn new things about our radios. I have learned something every time we met. Only once a month. Only two hours from 1000 to 1200 hours on a Saturday. Where else can you go in the city to learn about ham radio and help others learn? If you know of another place for radio practice, please tell me.

Thank you Peter McElmury AA6SF-SK for developing this for our community. We look forward to carrying on your tradition.







Meshing at Muir Beach

Here's a report from another MESH event recently held by the Marin Amateur Radio Society. The report comes to us via email from Michael Fischer: "Logging Ridge to Bridge participants on the same "live" spreadsheet that was being updated at Tennessee Valley and at net control. The Mesh enabled all of us to see the real-time progress of the event. To connect the three locations, Rob biked up to place two portable mesh nodes that linked the three points to the larger Bay Area Mesh. Bob Salter enabled the spreadsheet which was populated with the roster by Bay Area Ridge Council staff. It worked just fine - even in the face of stiff winds - which required some creative adjustments." Here are some photographs from the event:







North Bay Critical Mass Schedule & Updates

May Critical Mass Cancelled: Due to the passing of Doug Slusher, the May 22nd critical mass event was cancelled. Contact Rob Rowlands for details regarding the next critical mass event.

In you are interested in participating in our critical mass events, here is a schedule for critical mass meetings:

North Bay 2 Meter Critical Mass

Calling all hams! Attention all stations, attention all stations:

The Marin Amateur Radio Society sponsors a monthly opportunity for Marin and Sonoma hams (actually, anyone interested) to get together and practice radio protocol. **Rob Rowlands NZ6J, Milt Hyams KM6ASI, Michael Fischer K6MLF, James Renney KI6RGP, Doug Slusher KF6AKU**, and other local experienced hams will be there with an entertaining program, usually featuring hands-on practice with radios.

The ***North Bay Two-Meter Critical Mass*** sessions will be useful for newly licensed amateur radio operators. But it's also a chance for experienced hams to gather and learn new tips. And to become an Elmer to assist those hams who are just learning how to operate their new radios.

During the COVID-19 limitations on gathering, **we will meet on Zoom at 10:30 on the third Sunday of each month.** When those limitations are lifted, we will resume in-person gatherings at the Marin County Civic Center lagoon, just across from the Jurors' parking lot. Those **in-person sessions will start at 10:00—again, every third Sunday. If the third Sunday falls on a holiday, it'll be held on the 4th Sunday.**

To get the Zoom link, and to learn of the agenda for each monthly session, go to <https://groups.io/g/nb2mCM> and click on "subscribe."

Learn (or practice) the NATO phonetic alphabet; learn how to program your handheld radio in the field. Practice speaking on the radio at writing speed; learn how to "make every word an event." Learn about the two types of ambulances: ALS and BLS—and what's the difference between them. Learn the basics on how to communicate with satellites, using them as high-elevation repeaters to make long-distance contacts with your HT. Check out the "go-boxes" used by members to operate in public service events. Get familiar with the repeaters in our area. The basics of battery management, and more—something new each month. Check out this video on radio protocol produced by CNET tech journalist and MARS member Brian Cooley K6EZX:

<https://www.youtube.com/watch?v=HHxNOMGSwAI> That's an example of what we'll be practicing when we get together—again, **on the third Sunday of each month; join us!**

July 9th, 2022, VE Test Session Report

The Marin Amateur Radio Society held another Volunteer Examination session on July 9th, 2022. One of the reasons the number of amateur radio operators grows each year is because of the dedicated work of Volunteer Examiners. **Ken AB6JR** and his team of Volunteer Examiners did a great job of testing new licensees and individuals upgrading their current licenses. Those who sat for their license exams on the 9th, had a seamless experience. It is extremely important to run a problem free, smooth testing session because the VE program has a great responsibility to both the examinees and the FCC. As always, Ken and his team did a brilliant job. Here is the final report from Ken regarding the July 9th testing session:

Hello All,

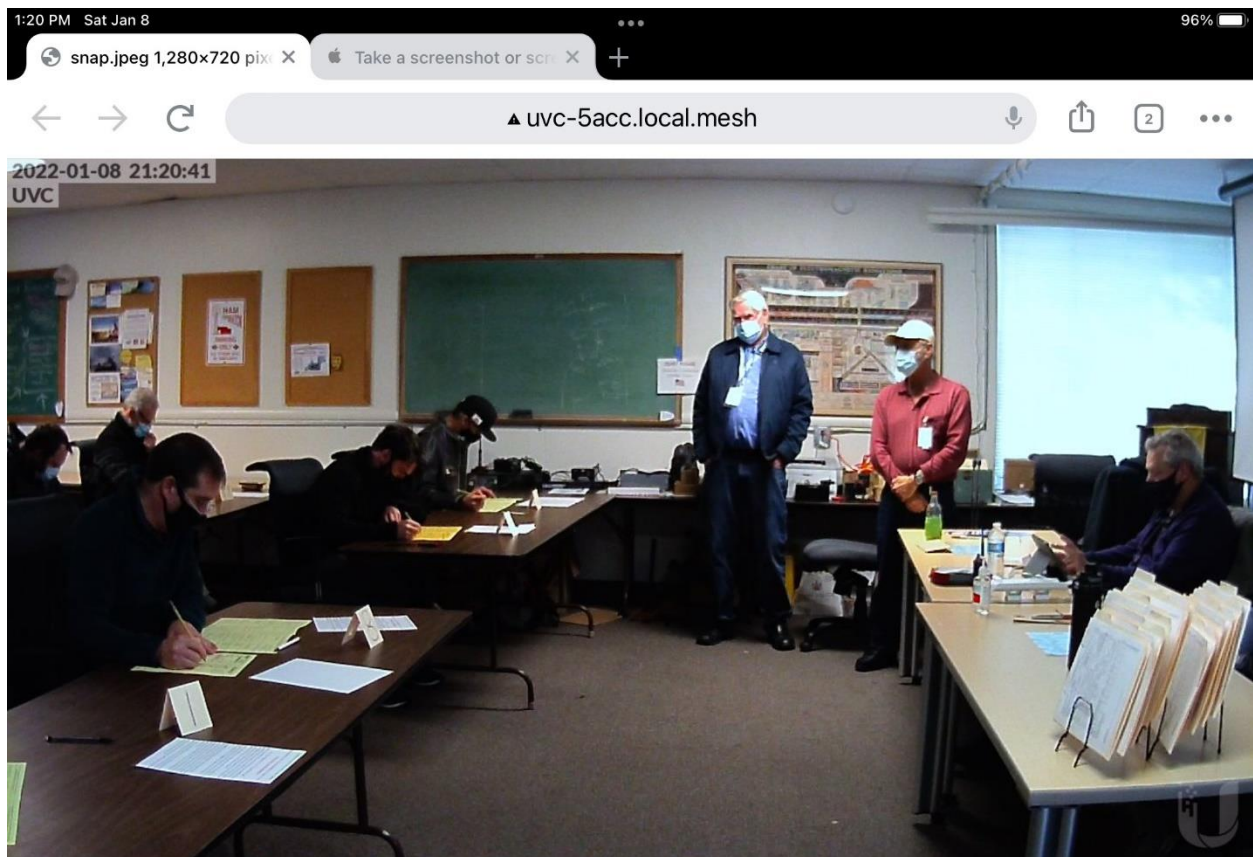
Thank you all for being on the MARS VE team. We had a good VE session and one individual hit the trifecta, passing all three class exams.

At one time we had 8 applicants that was reduced to 5 due to cancellations. Our applicant pool was distributed to one each from San Francisco, Salinas, Santa Rosa, Alameda, and Mill Valley. The "trifecta winner" was from Alameda. Santa Rosa Has a new General, Salinas has a new Extra, San Francisco has a new Tech and Mill Valley has a new Tech.

The paperwork was uploaded to the ARRL which will be passed on to the FCC Monday morning. The FCC will process the upgrades by close of business Monday. The new Tech licenses will depend on how fast the FCC receives payment from the new Hams. Experience so far says it takes two to three days.

The Next scheduled exam will be 10-8-22.

73
Ken



Here's a photograph of our Volunteer Examination test session

2022 Exam Fee Updates

As of **April 19th, 2022**, the licensing fee you pay upon sitting for your amateur radio examine will be \$35.00. The new Amateur Radio license application fees will take effect on **April 19, 2022**. The Federal Communications Commission's

authority to impose and collect fees is mandated by Congress.

The \$35 application fee, when it becomes effective on April 19, will apply to new, modification (upgrade and sequential call sign change), renewal, and vanity call sign applications. The fee will be per application.

Administrative updates, such as a change of name, mailing or email address, will be exempt from fees.

VECs and Volunteer Examiner (VE) teams will not have to collect the \$35 fee at exam sessions. Once the FCC application fee takes effect, new and upgrade applicants will pay the \$15 exam session fee to the ARRL VE team as usual, and pay the \$35 application fee directly to the FCC by using the CORES FRN Registration system ([CORES - Login](#)).

When the FCC receives the examination information from the VEC, it will email a link with payment instructions to each successful candidate who then will have **10 calendar days** from the date of the email to pay. After the fee is paid and the FCC has processed an application, examinees will receive a second email from the FCC with a link to their official license. The link will be good for 30 days.

Additionally, the FCC stated that applications processed and dismissed will not be entitled to a refund. This includes vanity requests where the applicant does not receive the requested call sign.

The FCC published the notice in the Federal Register on March 23, 2022, stating that the amateur radio application fees, including those associated with Form 605 application filings, would become effective on April 19, 2022.

Further news and instructions will follow as the FCC releases them.

Ken AB6JR and his team of volunteer examiners has sent three dates to the ARRL for examination sessions. Those dates are Jan 8, April 9, July 9, and Oct 8, 2022. The testing sessions will start at 1:00 PM and will take place at the Marin

Amateur Radio Society's clubhouse. Ken noted that the club is not restricted in the number of exam sessions taking place, meaning more could be added if need be.

There's been some discussion about possible evening examination sessions as well. Ken has also requested some information regarding do online exams, which would extend the scope of the VE team's abilities. **Jim Saltzgeber KM6WWY**, has volunteered to take the position of Assistant Lead Examiner, should anything happen to the lead examiner, Ken.

2022 is going to be a great year for the club's VE program! Again, a big thank you to Ken and his VE team for bringing new amateur radio operators in the fold. You can only grow interest in an endeavor by increasing the number of people involved. Anyone who has VE credentials and wants to help should contact Ken.

Wondering About Babble Class?

Have you ever had a radio related problem and after searching around the world wide web, found yourself frustrated and confused? Have you ever wished there was a place you could go to sit around and talk about all things ham radio? Your prayers have been answered!

The Marin Amateur Radio Society holds a weekly babble study class on Sunday mornings at our club house in Mill Valley. Here's what Germaine had to say about one of our babble classes:

Success!

The radio received Francis' transmission and in turn will transmit at 100W. It looks like I just need to clean up the effects of the saltwater environment the radio lived in for a good 20 years. (I don't think I have a photo of me in action at the nav station.) Thank you so much, Jan, and also for bringing the pastries. Thank you to the rest of the Babble class for the antenna tips and . . . who was it that finally got that fuse holder open? It was passed around like an offering basket.

Tom is very impressed with my new badge so thank you for wrangling that, Michael. I will show it off at the family zoom blab fest with my 91-year-old dad.

Take care, Germaine

You can join in the fun and learn something you probably didn't know from our club members. Here are some photographs of the last few babble classes:

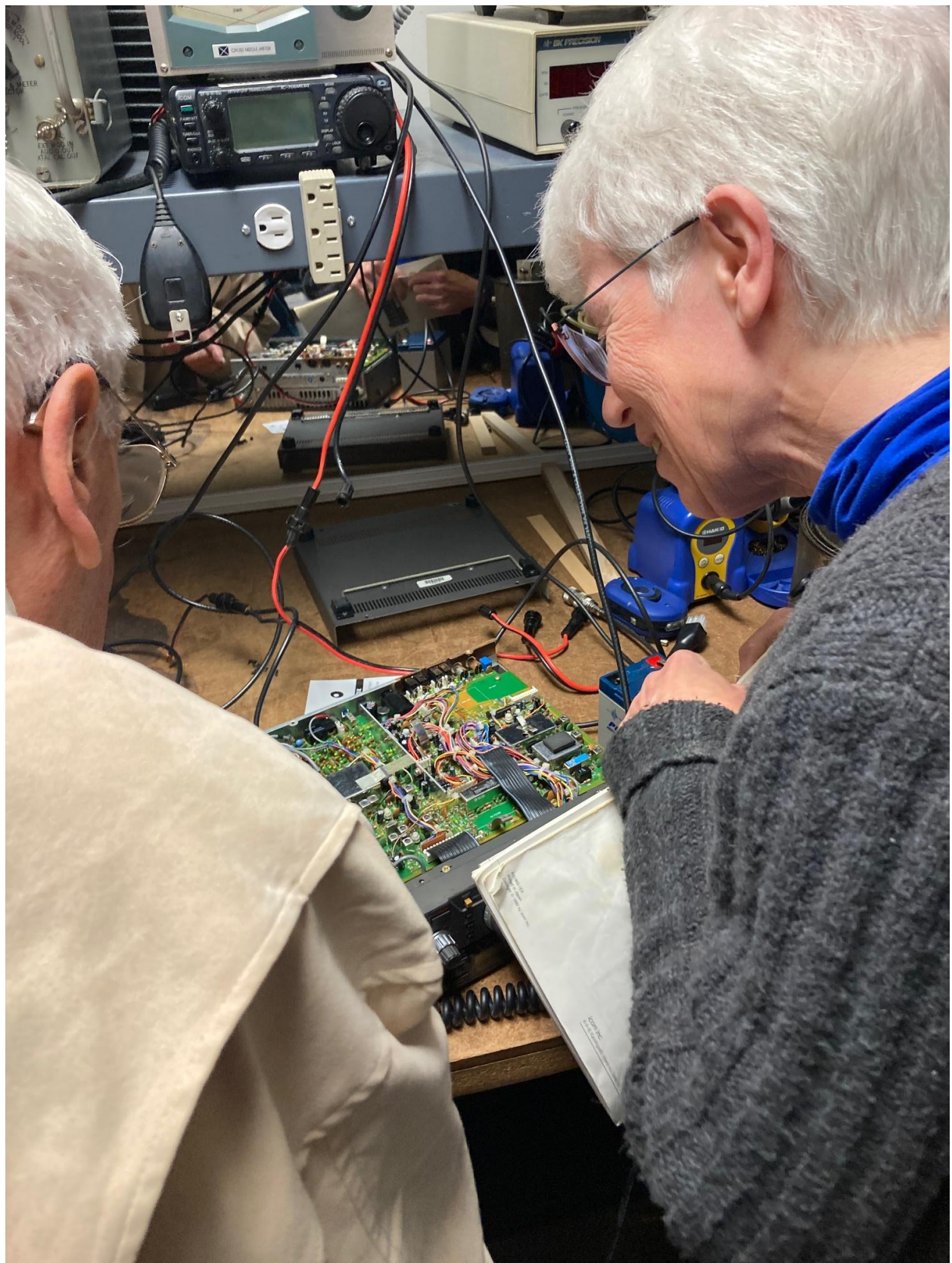












NBAM North Bay Area Mesh

New Backup Emergency Communication Network for Marin and Sonoma

The Marin Amateur Radio Society has received a grant of \$92,000 to install a microwave “mesh” network in Marin and Sonoma Counties. The mesh network, utilizing microwave frequencies allocated to amateur radio, will provide an alternative to the internet, should power outages or other events render the internet unusable. It is also intended to provide an important means of disaster communication with community-based organizations, such as food banks, in underserved and rural communities.

The grant was made by Amateur Radio Digital Communications, a Seattle-based nonprofit funded by proceeds from the sale of microwave frequencies to cellular telephone providers.

The Marin-Sonoma network, called NBAM (North Bay Area Mesh) is connected to the already-established BAM (Bay Area Mesh) which serves the emergency operations centers of San Francisco, San Mateo, and Alameda Counties. There is a parallel effort in Contra Costa County. The long-term objective is to provide a statewide communications network, operated by ham radio volunteers, that will provide a robust backup to existing means of communication among the various Emergency Operations Centers used by police and fire agencies in each county.

Using off-the-shelf low-power microwave antennas, NBAM will identify and install key nodes on hilltop locations up the US101 corridor from the Golden Gate Bridge north to Healdsburg and beyond. On the coast, the nodes will provide service to the rural communities of Tomales Bay, Bodega Bay, Timber Cove and up to The Sea Ranch. The Marin Amateur Radio Society will partner with—and provide equipment and training to—other radio clubs in each of the two corridors to place, maintain and utilize the mesh network.

BAM is working closely with the Sheriff's Departments in both counties. The Marin Amateur Radio Society has been an active nonprofit amateur radio Club since the 1930s with its own clubhouse (a retired fire station) in Mill Valley. Its FCC-licensed volunteers provide communications support to a dozen bicycle rides and footraces—including the fabled Dipsea—each year.

Quote from Tom Jordan, Emergency Management Coordinator or Rob Ireson, Chief Radio Officer, Marin County Sheriff's Auxiliary Communications Service: "The mesh will provide us with another redundant means of emergency communications—in a disaster, redundancy spells resilience."

Quote from Dan Ethan, Chief Radio Officer, Sonoma County Sheriff's Auxiliary Communications Service: "The importance of establishing alternative methods and modes of high-speed reliable communication between the North Bay Counties is more important now than ever before."

Quote from Curtis Ardourel, President, Marin Amateur Radio Society:

Quote from Kristen McIntyre, Pacific Division Director, national Amateur Radio Relay League: "Mesh networks like this are both a way to offer resilient communications during emergencies and a platform to further explore the development of mesh technology on the amateur radio bands."

Contact in Sonoma County: Jeff Young KM6Y 707 322 3221 Jeff.KM6Y@gmail.com

Contact in Marin County: Michael Fischer K6MLF 415 519 2201
michaelfischer149@gmail.com

Here are some photographs from an event held on April 17 in which the mesh connection was set up and tested. The network ran from Wolfback to Tennessee Valley to Coyote Ridge to Muir Beach.



NZ6J-NSM5-PubSvc-1

Location Not Available

[Help](#)

[Refresh](#)

[Mesh Status](#)

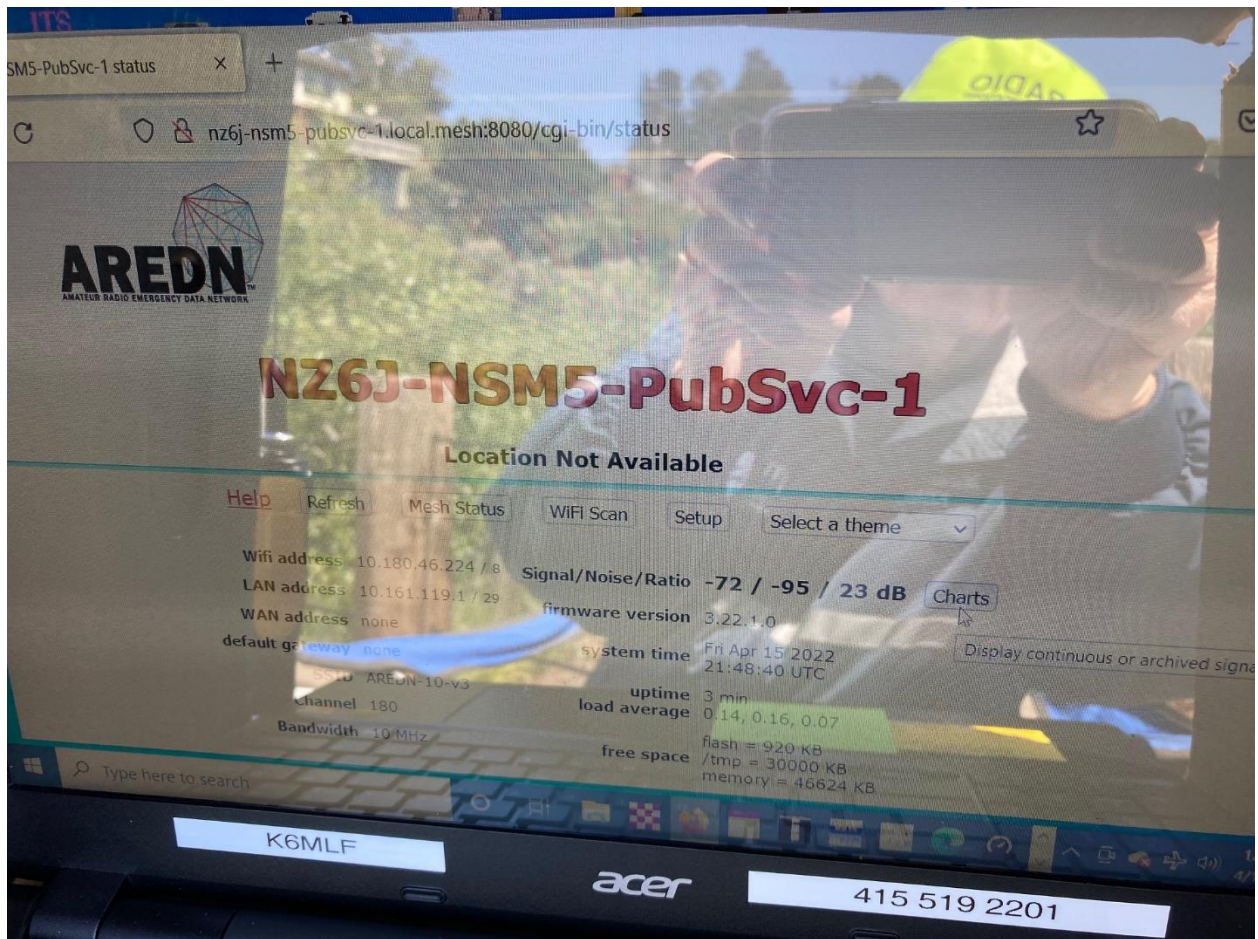
[WiFi Scan](#)

[Setup / LAN](#)

[Select a theme](#)

Wifi address	10.180.46.224 / 8	Signal/Noise/Ratio	-72 / -95 / 23 dB	Ch
LAN address	10.161.119.1 / 29	firmware version	3.22.1.0	
WAN address	none	system time	Fri Apr 15 2022 21:48:40 UTC	
default gateway	none	uptime	3 min	
SSID	AREDN-10-v3	load average	0.14, 0.16, 0.07	
Channel	180	free space	flash = 920 KB /tmp = 30000 KB memory = 46624 KB	
Bandwidth	10 MHz			









Help Extend the SF Emergency Wireless Emergency MESH (Update)

Since the previous article was about the MESH network, the QSA-5 decided to leave this posting up: The MESH network is not simply an idea being employed by our club for emergency communications. The MESH system was recently on the news in New York City where it's being used to provide affordable WiFi for city residents (note, this is a different MESH system than our club is using). MESH networks are becoming commonplace and easily available. The router needed for a MESH network connection can be found on Amazon. While the MESH system in New York City is being used for internet connectivity, it still serves an emergency service in

that people can receive important information via the MESH system in times of disaster. Here's a link to a news story about the installation of a MESH internet system in New York:

Sick of Traditional Internet Providers, BK Neighbors Are Setting Up Their Own WiFi with NYC Mesh

<https://bkreader.com/2021/05/10/nyc-mesh-brooklyn-new-york-community-mutual-aid-pandemic/>

Because the San Francisco Emergency Wireless Emergency MESH is such an important project, we are once again reposting this writeup about it.

From Rob Rowlands: We have about 6 nodes working in Marin so far and need people with property in high places to host more nodes. The mesh depends on line-of-site (LOS) paths between nodes interworking and while we have a great site on Wolfback ridge above Sausalito, there are multiple places we can't reach, for example the Club house! If you have access to homes or buildings with great views, we may be able to mount a node, regardless of whether you want to connect (see the following page for a picture of the node).

http://meshmap.sfwem.net/map_display.php#11/37.8586/-122.3836



This is an example of a MESH Node

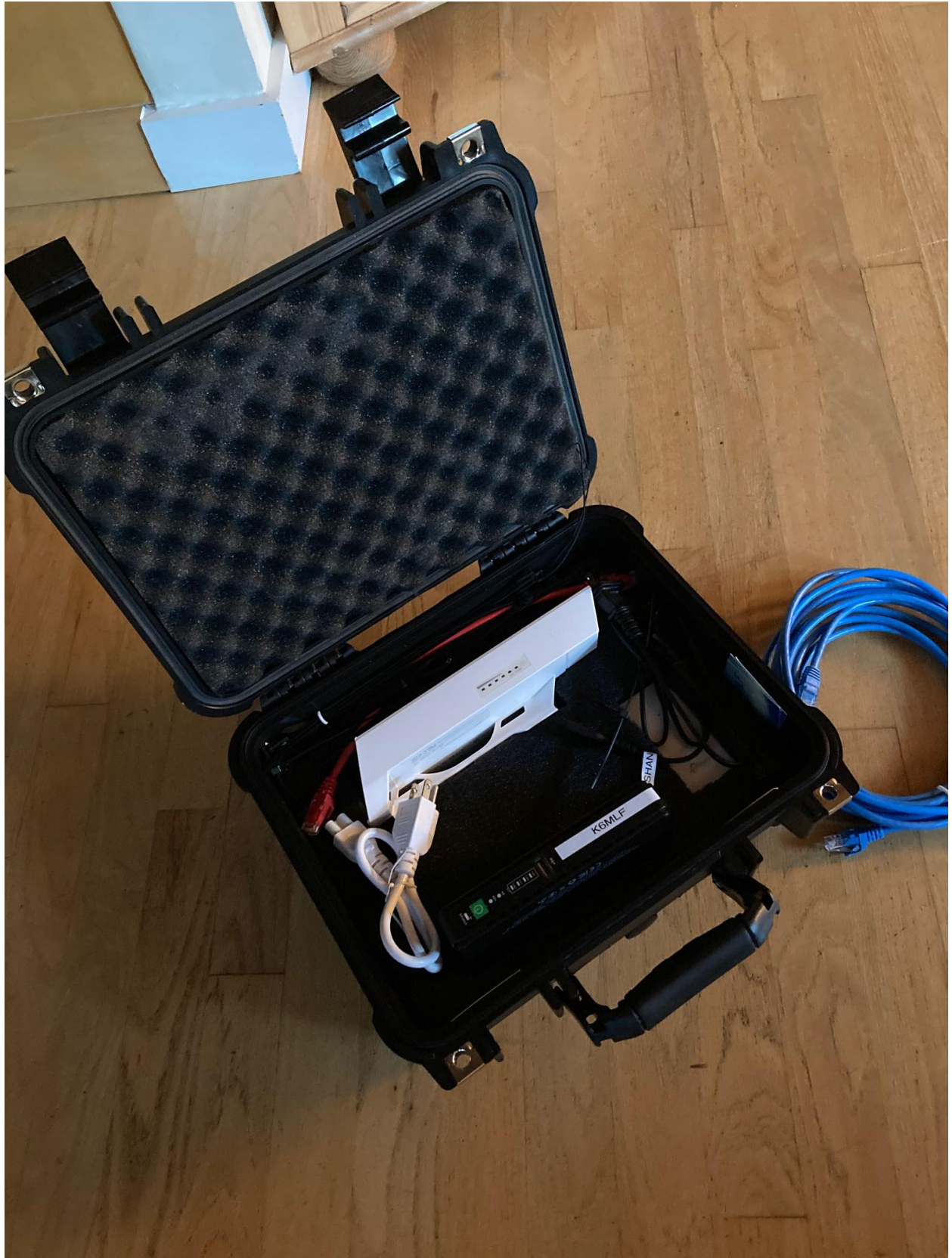
All it takes is space to mount a \$50 radio on a wall and connect it via ethernet cable to a power feed adapter. The radio node is about the size of a small loaf of bread and can be painted to appease your family! Call Michael Fisher (415) 519-2201 or Rob Rowlands (415) 849 5667 if you can help.

Portable MESH Unit

This is a portable MESH unit Michael Fischer and Rob Rowlands have been working on. It consists of a Ubiquity or TP-Link 5Ghz radio, Shanqiu POE battery, Cat5 cables and zip ties. Total cost about \$125-150, including the case. Here's a link to the radio (just the radio) and below that is a photograph of the assembled

unit:

https://www.amazon.com/TP-Link-300Mbps-dual-polarized-directional-CPE510/dp/B00N2RO63U/ref=sr_1_1?crid=3ARISN3BGBB7X&keywords=TP-Link%2B5Ghz%2Bradio&qid=1651681076&srefix=tp-link%2B5ghz%2Bradio%2Caps%2C1163&sr=8-1&th=1



Just add a camera tripod or use a fencepost. If operating from the node, add a laptop or tablet with battery backup for extended time.

Ham Radio News

Each month, QSA-5 searches the internet for stories about amateur radio in the news. As editor of our publication, I merely present these articles and do not take a position regarding their message or content. Our first story regards the Amateur Radio operators preparing for emergencies:

Ham radio operators practice for emergency: This comes from the Times online and is a decent article

<https://www.tnonline.com/20220627/ham-radio-operators-practice-for-emergency/>

QST Now Offering a Column for Radio Clubs: This should be of interest to all radio clubs:

<https://www.arrl.org/news/qst-now-offering-a-column-for-radio-clubs>

Amateur or ham radio club gathering in Enterprise: Thanks to the Enterprise Radio Club, amateur radio is growing in Alabama.

<https://www.wdhn.com/news/local-news/amateur-or-ham-radio-club-gathering-in-enterprise/>

Why is it called Ham Radio? This one comes from our own Anthony Fedanzo:

<https://fieldradio.org/why-is-it-called-ham-radio/>

Ham radio operators: A long-lasting technology: A nice piece on the endurance of

amateur radio and it's operators

<https://www.winknews.com/2022/06/24/ham-radio-operators-a-long-lasting-technology/>

ARES® Activated in Oklahoma for Tornado Clean-Up Communications: One of the roles that amateur radio plays is aiding our communities during disasters. Here's a piece from the ARRL:

<https://www.arrl.org/news/ares-activated-in-oklahoma-for-tornado-clean-up-communications>

Amateur radio is more than just a cool hobby: We all know just how cool amateur radio is. This article articulates what we already know, giving the rest of the world a glimpse of just what it is we do!

https://www.timesnews.net/living/features/amateur-radio-is-more-than-just-a-cool-hobby/article_02f01e08-c01a-11ec-bc34-bf15c0fb6937.html

Are decommissioned satellites susceptible to hackers? As someone who holds cyber security credentials, I can assure you that this is an interesting topic. This is a video but newsworthy.

<http://www.southgatearc.org/news/2022/april/are-decommissioned-satellites-susceptible-to-hackers.htm#.Ymcq-trMLIU>

Scientists hope to broadcast DNA and Earth's location for curious aliens: Well, this article speaks for itself. It's quite interesting.

https://www.theguardian.com/science/2022/apr/18/scientists-hope-to-broadcast-dna-and-earths-location-for-curious-aliens?CMP=Share_AndroidApp_Other

The Uncertain Future of Ham Radio: Is the future of amateur radio in peril? Will younger generations become involved and thus, carry ham radio into the future? This article looks at those very questions:

<https://sdr.news/military-sdr/the-uncertain-future-of-ham-radio-2/>

Amateur Radio News: This is an interesting site for those interested in listening to ham related Podcasts:

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

Our next two stories come from Rob Rowlands:

Russian Forces Invading Ukraine Using Civilian (Baofeng) Radios: Invading Russian forces in the Ukraine are using civilian radios such as the Baofeng UV-82. Here's a link to an image from Twitter:

https://twitter.com/CITeam_en/status/1498233574834716674

Here is another link from Reddit with an image of captured gear, including a Baofeng UV-82.

https://www.reddit.com/r/ukraine/comments/t2mj0i/they_really_are_using_baofeng_radios/

The last mile and the longest! Communications challenges February 2022: An interesting piece on the James Webb Space Telescope and the great complexities involved in communicating across vast distances in space.

https://docs.google.com/presentation/d/1VyQ2NRQhZpRPd7-qcyWB9TwFjFNwdV3XANcGoaLZgY0/edit#slide=id.g1152e6bfe65_0_1

Strong Winds Power Electric Fields in the Upper Atmosphere: From Ken AB6JR regarding electric fields in the upper atmosphere. Some interesting news from the NASA/Goddard Space Flight Center

<https://www.sciencedaily.com/releases/2021/11/211129172751.htm>

Is the Game Up for Baofeng in Europe? Yes, an article, thanks to Rob Rowland, about the radio many Hams love to hate. However, there's a review of the Baofeng GT-5R in the ARRL's QST January issue (page 39 Product Reviews).

<https://hackaday.com/2021/12/05/is-the-game-up-for-baofeng-in-europe/>

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 Legacy CORES System to be Retired: It seems that the FCC is retiring their CORES system:

<https://www.arrl.org/news/fcc-legacy-cores-system-to-be-retired>

FCC Proposes Record \$34,000 Fine for Alleged Interference and Unauthorized

Transmissions During Idaho Wildfire: The FCC takes using unauthorized frequencies very seriously.

<http://www.arrl.org/news/fcc-proposes-record-34-000-fine-for-alleged-interference-and-unauthorized-transmissions-during-idaho>

FCC Has Resolved Technical Issues and Resumes Processing Amateur Radio License Applications: It's been a rough month for the FCC and their ability to process license applications:

<https://www.arrl.org/news/fcc-has-resolved-technical-issues-and-resumes-processing-amateur-radio-license-applications>

FCC Has Resumed Processing License Applications and Exam Session Files: The FCC was having some computer issues that put a temporary halt to their licensing and examination session fee processing. It appears the problem has been resolved:

<http://www.arrl.org/news/fcc-has-resumed-processing-license-applications-and-exam-session-files>

New FCC Application Fee Will Not Apply to Amateur Radio License Upgrades: This has been a confusing issue for many amateur radio operators looking to upgrade their licenses. This article should clear things up:

<http://www.arrl.org/news/new-fcc-application-fee-will-not-apply-to-amateur-radio-license-upgrades>

New Amateur Radio License Applications Fee to Become Effective April 19, 2022,
The fee changes will be here soon. Read more:

<https://www.arrl.org/news/new-amateur-radio-license-applications-fee-to-become-effective-april-19-2022>

FCC: Amateur Service Licensees May Not Use Radio Equipment to Commit Criminal Acts: This really should not have to be repeated by the FCC is still sending this out:

<https://www.arrl.org/news/fcc-amateur-service-licensees-may-not-use-radio-equipment-to-commit-criminal-acts>

Two Radio Amateurs Appointed to the FCC Technological Advisory Council (TAC)
FCC Chairwoman Jessica Rosenworcel named two prominent radio amateurs among her appointments to the FCC Technological Advisory Council:

<https://www.arrl.org/news/two-radio-amateurs-appointed-to-the-fcc-technological-advisory-council-tac>

FCC Seeks Attorney-Advisor for its Mobility Division. The Federal Communications Commission (FCC) has [posted](#) an opening for an attorney-advisor in the Mobility Division of its Wireless Telecommunications Bureau in Washington, DC:

<https://www.arrl.org/news/fcc-seeks-attorney-advisor-for-its-mobility-division>

FCC Orders Amateur Access to 3.5 GHz Band to “Sunset” It doesn’t look for amateur access to the 3.5 GHz band. While many amateur radio operators, especially those who hold new licenses, may not be familiar with this band, some older license holders (especially those with specialty interests) use it. Here is the article from the ARRL:

<http://www.arrl.org/news/fcc-orders-amateur-access-to-3-5-ghz-band-to-sunset>

The FCC Headquarters Relocates: The government organization that regulates amateur radio is moving their headquarters. Here’s a piece on the move from the

ARRL:

<http://www.arrl.org/news/fcc-headquarters-relocates>

ARRL Urges Members to Join in Strongly Opposing FCC's Application Fees Proposal: The ARRL is asking their members to oppose the FCC application fee proposal. Here's the article:

<http://www.arrl.org/news/arrl-urges-members-to-join-in-strongly-opposing-fcc-s-application-fees-proposal>

FCC Grants 60-Day Waiver of Part 97 Data Rate Rules for Hurricane Relief Traffic: The FCC has granted a sixty-day waiver permitting radio amateurs handling hurricane relief communications on HF to use any protocol that would comply with the FCC's rules but for the symbol rate limits.

<https://www.arrl.org/news/fcc-grants-60-day-waiver-of-part-97-data-rate-rules-for-hurricane-relief-traffic>

FCC Investigating Alleged "Jamming" on 40 Meters:

Amateur radio operators have reported that there is some sort of signal jamming on the 40-meter band. Here is an article from the ARRL that covers the story in greater detail.

<https://www.arrl.org/news/fcc-investigating-alleged-jamming-on-40-meters>

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-739>

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://qrp-labs.com/>

Offering several kits and finished transceivers:

<https://youkits.com/>

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

Real time band conditions:

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

VOACAP band conditions:

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

ARRL Propagation Page:

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

Real Time HF Propagation Prediction:

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

Ham Radio Websites of general interest:

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

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

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

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

<https://qrznow.com/>

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

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

DMR Radio

Creating a Codeplug

I've been using DMR radios for roughly one year. I was attracted to DMR because it allowed me to easily communicate, via radio, with people around the world. While there is no replacement for setting up an HF rig and antenna, it can be expensive and difficult, especially if you need to work with an HOA (homeowner's association). DMR gives amateur radio operators, especially those new to the hobby, an opportunity to rag chew around the globe!

In many ways, DMR is easier for global radio communication. You don't have to worry about mastering the use a bunch of knobs and buttons that fine tune your signal, as is the case with traditional, old-school HF rigs. However, the initial set up of a DMR radio can be daunting. You must first set up a WiFi hotspot and then create a codeplug. We examined setting up the WiFi connection last month. This month, we'll look at setting up a codeplug. What's a codeplug?

A codeplug is simply a name for a software file that gets uploaded to your radio. That's it. There is no great mystery to it! Well, in all honesty it is not as easy as conventional analog radio software used for a similar purpose.

Most new radios are programmed via a software program. You connect your radio to a computer, open the radio's software program and start entering frequency data. Each radio today comes with its own software for programming it. This can be a real pain if you own three or four radios, all with their own software program. Enter the CHIRP software program. CHIRP allows you to program a variety of radios from a single software program. CHIRP covers a large number of radio brands and models. However, when program a DMR radio you need to use a DMR software program, which is a bit more complicated!

I had problems when I first tried to program my DMR radio. I'd follow a set of instructions that came with the software, and it wouldn't work! When I did a Google search, I discovered that plenty of other radio operators had trouble with the programming of their DMR radios. There's a consensus that codeplugs are difficult to create. The problem people run into is that there are a few additional steps to creating the codeplug and you need to follow those steps in a specific order. When you program an analog radio via a software program, it is very straight forward. All pertinent data is entered left to right, with one frequency per program line. DMR radio programming is similar, but you need to bounce back and forth between files and that is where things become seemingly complicated. It's in this back-and-forth action that things go wrong.

What I decided to do was to provide you links to the websites and webpages that I used to be able to program my DMR radio successfully. I suggest reading through them and watching the videos first, taking notes, and then start programming.

Look at all the links, not just one. While the radio brands differ, the basics are the same.

Videos:

How To Write a DMR Codeplug in 2021:

<https://www.youtube.com/watch?v=T3sUntEVqCY>

How to program a DMR radio Codeplug:

<https://www.youtube.com/watch?v=VExx628R0DM>

How to Build your own DMR Digital Radio Code Plug - Ham Radio Q&A

<https://www.youtube.com/watch?v=h0ssXJUT458>

Articles:

Creating a DMR Codeplug

<https://www.jeffreykopcak.com/2017/06/11/dmr-in-amateur-radio-programming-a-code-plug/>

How to Build Your Own DMR Digital Radio Codeplug

<https://www.jpole-antenna.com/2018/02/20/how-to-build-your-own-dmr-digital-radio-code-plug/>