



MARC Beacon

Volume 11, Issue 2

The Morongo Basin Amateur Radio Club Newsletter

FEBRUARY 2022

Hello Radio Operators! Wishing all of you good health during this virus season.

Indoor Meeting Policy

In order to protect our health, all indoor monthly MARC meetings will be canceled while the California Department of Public Health (CDPH) requires masks to be worn in all indoor public settings, irrespective of vaccine status. The mandate is located at the following websites:

<https://covid19.ca.gov/masks-and-ppe/>

<https://sbccovid19.com/faq/>

February Events

Wed 2 Feb: Ground Hog Day

Mon 14 Feb: Valentine's Day

Thu 17 Feb: MARC meeting (Zoom if above policy applies)

Mon 21 Feb: President's Day

Sat 26 Feb: Judy's Birthday

Here's a question for the team. Why did you get your HAM license, and what do you use your HAM radio for? Here are my answers:

- Emergency communications when power and telephone lines go down.
- Off grid communication with family and friends.
- Wireless remote control of electronic devices.
- Experimenting with do it yourself (DIY) radio antennas.
- Long distance communications contests.

Please schedule time to check in on the 7 PM Tuesday net, and if you can, please join us on the "Cawfee Tawk" net every morning at 10 AM.

Take care of yourself and enjoy each day. If you're not having fun, then you're doing something wrong.

Rob Cloutier
WO4ROB

Joshua tree
Club President
(760)401-6666

rob_cloutier@hotmail.com



Nets

Amateur Radio Emergency Service (ARES)

Mon @ 1915

Morongo Basin Amateur Radio Club (MARC)

Tue @ 1900

MARC Daily informal Kawfee Talk

1000-1100 DAILY

Social Media,

Club web page: <http://www.w6ba.net>

Facebook:

<https://www.facebook.com/MorongoBasinAmateurRadioClub>

Club Meeting

Every 3rd Thursday of the month at 6 PM. At the church of the Nazarene in Yucca Valley at 56248 Buena Vista Dr

Linked Repeaters

Yucca Valley, W6BA

146.790 MHz (- shift = 146.190 MHz) 136.5 Hz PL/CTCSS

Twentynine Palms, W6BA

147.060 MHz (+ shift = 147.660 MHz) 136.5 Hz PL/CTCSS

Landers, WB6CDF

447.580 MHz (- shift = 442.580 MHz) 173.8 Hz PL/CTCSS

OTHER AREA REPEATERS

IRLP Node KD6DIQ 145.770 pl 67.0

ONYX Peak N6LXX 446.880 (-) pl 110.9

San Jacinto TRAM one 145.480 (-) pl 107.2

Snow Peak 445.160 (-) pl 67.0

ALLSTAR NODE on the mesa 147.705 pl 146.2

ALLSTAR NODE in Y.V. 446.120 pl 131.8

29 PALMS rpt linked to KELLER peak

448.580 pl 146.2



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WU WEATHER UNDERGROUND

The weather station on Paxton Hill at the W6BA repeater site is working great. It will show accurate wind speed and direction measurements for the top of the mountain .

<https://www.wunderground.com/personal-weather-station/dashboard?ID=KCAJUCCA57>

Glenn N6GIW

KEN HENDRICKSON, W6BZY



Some helpful you tube videos from Ken W6BZY about Linux and raspberry Pi.



Search **W6BZY** on YouTube.

US Amateur Radio Band Chart

<http://ham.band>

- Easy to remember link
- Easy to use on desktop or mobile
- Light-mode/Dark-mode switchable
- Familiar layout

Send feature requests to Aaron@KM6IAU.net



OUR CLUB MEETING!!!!

IN THE MONTH OF JANUARY, OUR LOCAL CLUB MEETING WILL BE :

6:00 P.M. JANUARY 20TH

**At Church of the Nazarene in
Yucca Valley at
56248 Buena Vista Dr.**

NEW CLUB FACEBOOK GROUP FOR THE MARC CLUB

I have created a Facebook "Group" for the Club. We currently have a FB "Page" which only allows Admins and Moderators to post directly on the Posts section.

Here is the link to the new "Group" - so if you are on Facebook, please click on this link and LIKE our new Group.

<https://www.facebook.com/groups/577155023327981>

The new Group will be must more user friendly. Feedback is most welcome. Thanks, Judy, N6JLL

THANK YOU JUDY N6JLL

Membership Dues

We are doing our club dues round up at the beginning of the year.

If you're not sure if your dues are up to date, please check with Glenn N6GIW and he can let you know if they are due or when they are due.

Not everyone is due at the same time of the year



ROBS PROJECTS CORNER

DIY HAM Radio Antennas

Here is an update to the May 2020 MARC newsletter dipole antenna connector article. The original article explained how to make a dipole antenna using a 3/4" PVC Tee Fitting. After setting up a radio communication canopy in the Walmart parking lot, I discovered I could put a 2 meter ground plane antenna on top of a 6 meter dipole antenna using two 3/4" PVC Cross Fittings on a single 3/4" PVC center pole.

Antenna Formulas:

$234/\text{MHz} = 1/4 \text{ wave length in feet}$

$2808/\text{MHz} = 1/4 \text{ wave length in inches}$

Use the above formulas to determine the length of the antenna radials. For example:

52 MHz (6 meters) = 4.5 feet or 54 inches

146 MHz (2 meters) = 19.23 inches

224 MHz (1.25 meters) = 12.54 inches

435 MHz (70 centimeters) = 6.46 inches

I use one vertical radial, or radiator, and two ground radials for my 2 meter ground plane antenna. (See photo) The radials could be any piece of metal. I use telescopic antennas, or rabbit ears, for my mobile radio station, that can be purchased online, or at the 99 Cents Only Store. I use copper tubing on my home radio station, that can be purchased at the Home Depot.

For my 6 meter dipole HF antenna, I used white stranded lamp wire, that can be purchased at the Home Depot. (See photo) You could make any HF band dipole antenna, as long as you use the above formula to determine how long each end of the antenna should be. For example, you would need two 16 feet pieces of wire for a 20 meter dipole antenna.

PVC Antenna Connector Parts List:

- \$3.00 SO239 Coax Connector
- \$3.00 3/4 Inch Cross PVC Fitting
- \$3.00 adjustable telescoping antennas x 3
- \$0.16 #6-32 x 3/4 in bolt & nut x 1
- \$0.26 #6-32 x 2 in bolt & nut x 1
- \$0.13 #6 lock washers x 2
- \$0.43 #6-32 wing nuts x 2
- \$0.17 #6 flat washers x 4

WO4ROB





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Locate the HAMs around you. It's easy.

<https://haminfo.tetranz.com/>

Use the link above and have fun



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Our next **QSO Today Virtual Ham Expo** will be held live from March 12-13, and then on-demand for 30 days afterwards. We promise an amazing learning and networking experience to help you improve your amateur radio knowledge and get exposed to new ideas, equipment, and practical techniques. No need to travel - participate from your home or office! Information can be found at <https://www.qsotodayhamexpo.com>.

Here are 5 reasons why you must attend:

Listen, engage with 60+ internationally recognized ham radio luminaries. Our speakers are experts and deeply know their material. Most importantly, they've worked hard to make sure that you'll understand the material and can apply it immediately to your projects.

So, so many different topics - everybody will find something of high value. There's content for everyone whether a newly licensed ham looking for next steps to using that license or a 30+ year experienced ham looking for new projects. Some of the more interesting presentations include: *Core HF Communication Concepts; Fundamentals of Shortwave Propagation; Deep Dive of An FPGA DVB-S2 Implementation; Fun With The NanoVNA; and Helically Wound Vertical for 160M.*

[Click Here for Presentation List](#)

Watch as many presentations as you want! A big limitation of in-person events is that you can't watch many of the presentations (you can only be in one room at a time). At the Expo, return anytime within 30 days to view any speakers and presentations you missed as well as explore exhibitor offerings.

Check out our live [Kumospace](#) video lounges for attendees to interact with each other and exhibitors. At the Expo we'll debut exciting but proven technology to further improve the live video interaction experience with exhibitors and fellow operators. You'll find this is a great way to meet up with friends, talk to vendors, and network on specific subject areas.

Take advantage of our calendar technology to efficiently organize your time. Once our presentations are scheduled, you can download speaker times in your local time zone directly to your Google or Outlook calendar. You'll then have a complete schedule of sessions to join to maximize your time during the Live period with speakers that are the most important.

ARRL, the national association for Amateur Radio®, is a QSO Today Virtual Ham Expo Partner. FlexRadio is the Expo's Platinum Sponsor, Elecraft is our Gold sponsor as of this time.

Early Bird Tickets will go on sale February 1st, 2022, and are just \$10 (through March 6) and then \$13.50 to the end of the on-demand period. Tickets include entry for the Live 2 day period and the 30 day on-demand period. Save on gas, lodging, and transit time to attend the QSO Today Virtual Ham Expo on March 12th and 13th. For more information, go to <https://www.qsotodayhamexpo.com>, or click on the blue button below.

Save the dates: March 12-13, 2022 on your calendar!



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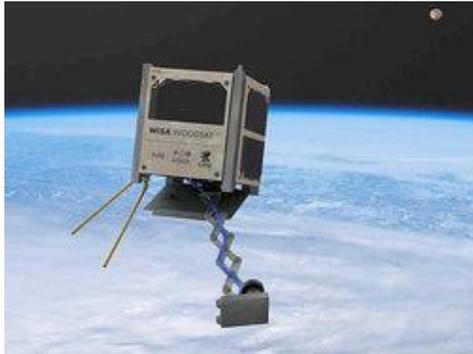
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Launch of a Wooden Satellite Still Pending

Two spacecraft comprised of wood or using wooden framing are hoping to launch this year and next. One will carry an amateur radio payload.

WISA Woodsat, a Finnish spacecraft that planned to include an amateur radio payload, was forced to postpone its announced launch target from 2021 to 2022 after the International Amateur Radio Union (IARU) Amateur Satellite Frequency Coordination system turned away its request to use amateur radio frequencies.

"I regret to inform you that IARU is not in a position to support the WISA Woodsat coordination request," the coordinator



WISA Woodsat, with its selfie stick extended.

said. "The main reason is that the primary mission doesn't seem to be an amateur mission."

As announced last year, WISA Woodsat was designed to accommodate multiple missions -- from materials science, space education, and awareness to promoting and facilitating amateur radio communication with and via satellites. No transponder was on board, but the satellite's sponsors said they had the support of Finland's IARU member-society, SRAL, to use amateur radio frequencies. They are now reworking the spacecraft to use commercial radio frequencies.

Meanwhile, LignoSat, a 1U-sized CubeSat with an outside structure mainly composed of wood, has applied for IARU frequency coordination and hopes to launch from the ISS in 2023. Built by students at Japan's Kyoto University,

LignoSat includes a unique amateur radio payload but not a transponder.

The LignoSat application for IARU Satellite Frequency Coordination in December said the CubeSat would carry amateur radio equipment that will extract call signs of amateur radio stations from uplinked FM packet signals and respond to them via the CW downlink and the sender's call signs to convey thank you messages. The plan proposes UHF downlinks for CW and FM.



An artist's depiction of LignoSat. [Photo courtesy of Kyoto University]

The satellite's development team, comprised of Kyoto University and Sumitomo Forestry Company, said it's aiming to harness the environmental friendliness and the economy of wood in spacecraft development. They say a satellite with a wooden exterior would burn up upon re-entering Earth's atmosphere at the end of its mission, lessening its burden on the environment. The wooden framework also will permit the satellite's antennas to be inside the spacecraft. A plan is under way to use an experimental apparatus on the International Space Station to hold wooden sheets of varying hardness, taken from several tree species, attached. These would remain exposed to the space environment for about 9 months to determine their deterioration.

LignoSat would be deployed from the ISS in July 2023. Read [an expanded version](#). -- Thanks to Joey Ferguson, W4JF, and Japan Times.



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Pandemic Project: Trailer renovation allows for extended emergency radio assistance



Frank Hutchison's pandemic project started with a question: how could he better help communities during emergencies like natural disasters?

"I'm an Assistant Emergency Coordinator for the Spokane County Amateur Radio Emergency Service (ARES)/Auxiliary Communication System (ACS)," he said. "In this role, I needed to be able to deploy to any location and provide emergency communications including for extended periods of time."

For example, two years ago during the wildfires in Oregon, a call went out for radio operators. Without a place to sleep, eat, or operate his UHF/VHF (ultra-high frequency/very high frequency), and HF (high frequency, formerly known as short-wave) radios, he felt he'd be more of a burden than a help.

At 71, the retired Navy commander and former Boy Scout leader said it became obvious that tent-camping and sleeping rough was no longer wise. He decided to look for a trailer to build out to his specific needs.

Hutchison's son, Richard, had introduced him to the world of amateur radio three years ago.

"My son said he was coming to Spokane for the annual Hamfest event and he was going to pay for me to take the amateur radio license test," explained Hutchison.

He passed it and went on to take and pass two additional tests. However, he still didn't own a radio.

"Richard fixed that," he said. "As soon as I passed the tests he gave me one."

But the hobby quickly proved addictive.

Hutchison grinned.

"I now have 14 radios."

Not content to be a hobbyist, he quickly became involved in the Amateur Radio Relay League, the Amateur Radio Emergency Service (through Spokane County Department of Emergency Management), as well as the Church of Jesus Christ of Latter-day Saints communication system. All told, he's completed 220 hours of training in the past three years.

"I have a terrible habit of every time I get involved in something, I end up in leadership," he said.

After months of searching for a suitable trailer finally in October 2020, his daughter found one on Facebook.

"It's a 1961 15 1/2-foot Santa Fe camper trailer that had been gutted by a previous owner," he said. "A blank slate for me."

He'd written a list of specifications and using that, he began to work on it in February. His naval experience came in handy.

"One of the last courses I took in the Navy was submarine design," Hutchison said.

He gestured to the trailer parked at his Spokane Valley home.

"I used a lot of that knowledge in this."

The first thing he created was a built-in communication center for three radios. He tucked them neatly under a cabinet holding supplies and



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installed a slide-out desktop. Two heavy-duty rechargeable batteries, each capable of 100 amp-hours are stored in a cupboard above a file drawer. Two 200-watt solar panels on the roof power the lights inside the trailer. When electric power is available, handy USB ports can charge phones and computers.

Hutchison's wife, Mary Lynn, enjoyed helping to furnish the interior.

"She insisted on a water closet," he said, grinning.

Those facilities, plus a compact kitchenette mean they can use the trailer to go visit grandkids, too.

Their granddaughter Lorelei Hartley, 13, did all the roof work for her grandpa, including replacing the vent.

For Hutchison, the importance of amateur radio is simple.

"It works when everything else fails," he said. "When cell towers and power lines go down during a natural disaster, these radios keep us connected."

A vast network of repeaters, plus satellites, enables communication around the globe.

"I can even hook up a computer to my radio and send email," he said.

A trial run at an emergency exercise through his church in October proved enlightening.

"I came up with a long list of things that needed to be fixed, but I finished it about six weeks ago."

Hutchison paused.

"It's still not complete—it's kind of like having a boat."

While he's not worried about a natural disaster incapacitating the Spokane region, he's glad he's able to offer assistance if needed.

"It gives me the capability of helping others. I can support local and state-wide emergency communications for one week without any outside support." said Hutchison. "It's one of those things you hope you'll never have to use."



YUMA HAMFEST

**The Yuma Hamfest is happening!
It will also be the Southwestern Division
Convention. Camping, tailgating, and
booth registrations are NOW open.**

The 17th Annual Yuma Hamfest is the site of the ARRL's premier event for the Southwest in 2022, The South-western Division Convention. The Yuma Hamfest has two aspects. It is a hamfest for Amateur Radio enthusiasts, complete with commercial exhibits, seminars, license testing and tailgating. For members of the general public, it is a trade show for emergency and disaster prepared-ness, with informational presentations and displays of emergency supplies and equipment.

There are hourly drawings for door prizes both Friday and Saturday. The numbers will be posted just inside the main Theater Building. You must be onsite to win the door prizes and claim them by 5:00 p.m. Saturday. On Saturday evening, in what has established itself as an annual tradition, the Buzzard Barbecue will be held in the Theater Building. Additional door prizes are given away following the barbecue dinner. And then at the end of the evening, we hold what has become the high-light of the Yuma Hamfest, the Grand Prize drawings.

For several years the Yuma Hamfest focused primarily on amateur radio, especially the emergency communications

aspects of that hobby. Starting with the 2009 event, the event was expanded to include all facets of emergency and disaster preparedness. Would you know what to do if your home was without power, telephone service or water for ten days? By attending the Yuma Hamfest, you can find out the answer.

Last, but not least, there is a full seminar program scheduled for both Friday and Saturday. We have a selection of seminars at three different times on Friday and six different times on Saturday, presented in separate buildings on the fairgrounds. Seminar presentations on radio and emergency preparedness topics are planned. A list of seminars and their times can be found on the [seminar](#) link.



Amateur Radio Club bands together during pandemic



As the pandemic picks up speed once again and people are advised to limit their in-person social interactions, a small group of people are reaching out across the airwaves from Barrie to connect with others in a much different way.

The Barrie Amateur Radio Club has been one of the few activities that has thrived during the now two-year COVID crisis.

Formed in the 1960s, its current band of roughly 60 like-minded members are armed with dependable radio technology that has been in use for over a hundred years. And they use the equipment not just for the social aspect, but also to fulfil a need if called upon in our city when disaster strikes.

Part of the club's mission statement is to "maintain radio systems suitable for providing communications for the benefit of the community and, when requested, to assist civil authorities."

An example of this assistance would be to provide emergency services in the city as a way to communicate in an event where existing critical communications and infrastructure fails.

Prior to the pandemic, the club held monthly meetings with police and fire services to discuss training scenarios and what the club's role could be in helping during an emergency.

But for most days, the main activity of the group is to just have fun.

Ed Murray, the club's public information officer, enjoyed listening to shortwave radio as a kid and waited until he retired in 2019 to learn how to become an amateur radio operator.

When asked about what his favorite part of being a member is, he says, "helping the community and the camaraderie with the 60 different members that have a wide range of talents and experiences to share."

Technical milestones are thrilling as well, he said.

"I also managed to bounce a signal off the International Space Station and receive their repeater message. It calls out the frequency, its call letters, and gives out the time in Universal Time," Murray tells *BarrieToday*.

To help demystify some radio jargon, a repeater is an electronic device that can receive a weaker radio signal, or a signal from a portable radio user, and re-transmit it over a much wider area so that other users can receive the signal.



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"During the early days of the pandemic during isolation, in 2020, I spent a lot of time down here in my radio shack, talking. We had a wellness check where people would get on their radios at 1:30 every afternoon and we would all take our turns to say what is going on and how we were doing," Murray says.

"Clubs would reach out to other clubs as well. We've been able to take a situation and turn it around and put it into a positive light," he adds.

With most of the members in their 50s and 60s, the current challenge for the group is finding interest among younger folks.

"This time of year, many clubs will set up a radio net with various members so that kids can talk with Santa at the North Pole," Murray says.

There is also an event called Jamboree on the Air where scouts and guides gather at the Tiffin Centre for Conservation, located just west of Barrie, to learn about amateur radio sets and communicate with other scout groups throughout North America.

"Cellphones and the internet have been a stumbling block for explaining our hobby because a lot of people say, 'just pick up a cellphone and call France'," Murray says. "The challenge here is that I will construct myself an antenna made out of wire, string it up in my backyard, hook it up to my radio, and make the effort to reach out to someone over the air. There is nothing more satisfying than seeing something you've built actually work.

"When we were showing the scouts our radios and they started hearing other kids and they were able to talk to them by clicking the mic, the cellphones went into the pocket pretty quick," Murray adds with a chuckle.

It doesn't take much to get started in the hobby. Fifty bucks can get you a beginner radio. Every year, the club offers a course from Industry Canada which helps you prepare for an exam, as certification is required to be an operator in Canada.

Club meetings are currently being held online.

"Anyone is invited to attend and see what we are about and try using a radio with a licensed member," says Murray.

More information, including membership details, can be found at the Barrie Amateur Radio Club website by [clicking here](#).

Philadelphia Club Supports Wounded Veterans via Stamp Collecting Program

What do you do with the envelopes when you receive about 1,000 QSL card requests following the 13th Annual 13 Colonies Special Event in July?" Do you just throw out the envelopes, or is there something you can do with the cancelled stamps? This was a question discussed by the QSL managers for WM3PEN, the club call of the Holmesburg Amateur Radio Club (HARC).

WM3PEN trustee Bob Josuweit, WA3PZO, learned of a program called Stamps for the Wounded. Stamps for the Wounded (SFTW) is a service organization dedicated to providing comfort and stimulating activity to US veterans through stamp collecting. SFTW sends donated US and foreign postage stamps and other philatelic material and supplies to wounded, ill, and isolated veterans. SFTW has been helping veterans since 1942. The program gives the wounded something to spark their interest and stave off boredom.

Just how many stamps has the club shipped? According to Rich Shivers, K3UJ, who coordinates the shipments, HARC has shipped over 60 pounds of stamps. Shivers says approximately 4,000 stamps equal 1 pound. That means that about a quarter of a million stamps have been shipped to SFTW! Stamps have been received from several countries, including Great Britain, Germany, and Canada. People learn about amateur radio through local publicity. Several hams who are active in other organizations have started their own stamp collection and are sending them directly to the SFTW program.

Josuweit says that this is a project that clubs, special event organizers, or even individuals can start. They promote the program on our QSL cards as well as on the web and social media sites. For further information on the SFTW program, go to <https://www.stampsforthewounded.org/> or contact HARC at WM3PEN



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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		MARC Net 7:00 pm NCS FRED		ARES Meeting TODAY 6:00 pm		
6	7	8	9	10	11	12
	ARES Net 7:15 pm	MARC Net 7:00 pm NCS KEITH				
13	14	15	16	17	18	19
	ARES Net 7:15 pm	MARC Net 7:00 pm NCS JESSY		CLUB MEETING AT 6PM	YUMA HAMFEST	YUMA HAMFEST
20	21	22	23	24	25	26
	ARES Net 7:15 pm	MARC Net 7:00 pm NCS LARRY				
27	28					
	ARES Net 7:15 pm					