

CCARC News

Capital City Amateur Radio Club

February 2024 – Helena, MT

Monday February 5, 2024

CCARC monthly meeting
at the Salvation Army, 1330 Hudson Street,
Helena
at 7 pm. Or on Google Meet,
<https://meet.google.com/zfs-ctwp-bax>

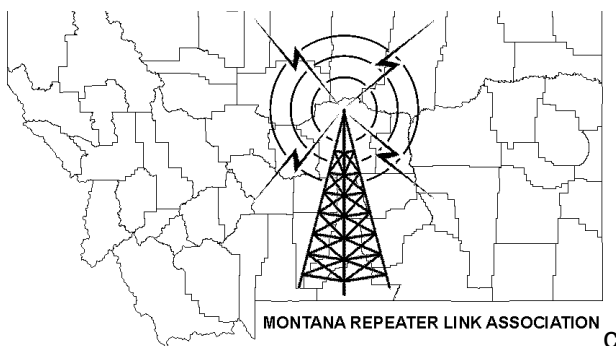
Paradise Valley from Livingston into Yellowstone Park.

History of the MRLA Repeater System

By Don Heide W7MRI

The Montana Repeater Link Association was started in the late 1980s by several repeater owners who discussed starting a linked repeater system that would cover the main highways of Montana. These were mainly I-90 east/west and I-15 north/south. Each repeater is owned and maintained by the individual amateur.

The first repeaters were in Billings and Greycliff. Shortly after, Quinn (Bozeman) and Cardwell (Three Forks) were added to the system. Next Hogback (Helena) and Great Falls were added, followed by Sweetgrass. This made a full-time linked system from the Canadian border down to I-90 and east to Billings.



With the hope of expanding farther east, a repeater was added at Pompey Pillar, but soon became silent and has not been reactivated. Due to a long weak path from Cardwell to Hogback, a repeater was added in Townsend to make the link paths shorter. Most recently, repeaters were added at Livingston and Gardiner to cover the

The main idea was to provide linking on amateur bands so as to not depend on outside entities to keep the system intact. This is done on UHF from site to site, though at one time early in its history there was a microwave connection from Billings to Spokane that allowed access to the original Evergreen Intertie that covered the major highways in Washington, Oregon, and Northern California. This link was removed in the late 1990s by the company that had provided the microwave due to a higher demand by them for bandwidth. Sometime after that, a link was established to the new repeater installed near West Yellowstone that was connected to the Snowbird system (Intermountain Intertie) which covers down to Las Vegas and over to Boise and connects to other repeater systems. This link is only connected on demand and will disconnect automatically to keep the traffic to a minimum on our system.

All the repeaters on the MRLA system are connected full time, so no codes are needed to connect to any part of the system. Remember that this is maintained by volunteers, so if a portion of the system is down it might take “one amateur time unit” to get it back up.

Hopefully the system can be expanded if sites and interested amateurs can be found, though a path up through Havre to Glasgow is in the works. There is also interest in the Missoula and Kalispell areas.

A good list of the current repeaters that are the present part of the MRLA system is available at: https://gallatinhamradio.com/?page_id=9735

NOTE - If you are using a cross-band repeater or mobile for access to the Belmont or MRLA repeaters, please use a PL tone other than 100Hz on your input side to prevent spurious signals from keying your cross-band and therefore kerchunking the repeaters with bursts of noise.

If you have an interest in expanding or helping maintain the system you can contact Don W7MRI.



Don is in the middle in this photo from ARRL.org, receiving the award for CCARC's 76th anniversary.



VE Testing By John Geach KS7R

VE exams were held on January 25 producing two new Helena hams and one license upgrade. Congratulations to Steve Drydahl KK7QXD Technician and Randy Kaminsky KK7QXB General on their new licenses. Congratulations also go to Jeremiah Porter KJ7VUB who upgraded to General. Please listen for these new hams on the

air and welcome them to the Helena ham community.

Special thanks to John Monson AJ7MT and Bill Erhardt K7MT for helping to administer these exams.

The next VE exams are scheduled for March 7 and April 18th.

Reservations are necessary for each exam date. Please make your reservation request at least one week prior to the exam date. Contact John KS7R at jcgeach@gmail.com with any questions or to make an exam reservation.

LORA Devices on Meshtastic

By Jeff Brubaker N7JFF

Meshtastic makes a fun winter project, and I am testing LoRa devices for that project.

See: <https://meshtastic.org/> and/or look up Meshtastic on YouTube.



What Is LoRa®? LoRa (short for long range) is a spread spectrum modulation technique derived from chirp spread spectrum (CSS) technology. Semtech's LoRa is a long range, low power wireless platform that has become the de facto wireless platform of Internet of Things (IoT). (from semtech.com)

I am starting with non-ham radio frequencies, but the devices can be purchased in the 440 MHz ham band. This is very similar to the mesh nodes being toyed with years ago with old WiFi routers. These devices have WiFi and Bluetooth

to connect to your cell phone for texting to other Meshtastic users. With onboard GPS, you can share your location with those you are communicating with.

My goal is to put a solar powered node up that will cover most of the valley, line of sight.



Elecraft K3 For Sale

By Bob Solomon K7HLN

After a lot of soul searching, I have decided to sell my Elecraft K3/100 HF 160-6 Meter Transceiver and its accessories. It has recently returned from the Elecraft factory where it had some minor repairs and upgrading, as well as tuning and alignment. It currently meets or exceeds all factory specifications.

The radio was built from a kit in January, 2010. The K3/100 transceiver and KAT3 internal tuner were then put in service without factory level calibration and alignment. A year later we added 6 meter capabilities, a P3 Panadapter and a KXV3 Antenna interface. A 22" TV monitor was added later to provide an enlarged image of the information on the pan-adapter screen. I will not ship it. If you are interested, contact me and we can arrange an appointment to see the equipment. *Bob Solomon K7HLN, 406-442-6118*

k7hln@msn.com



CCARC to Tarawa

By Tim Sowa KB7DMK

I just completed a trip to Kiribati. I was with the Department of Montana VFW trying to recover the remains of a Marine still buried on the island of Tarawa from the Battle that started 20-23 November 1943. My journey started early in 2019 in Washington DC when the Defense Dept of Accounting met with the VFW national leadership.

While there, Montana VFW also obtained permission from History Flight for four veterans from Montana to go on this recovery mission. History Flight is a nonprofit that has identified and returned over 600 sets of remains and has determined that there are still 400 or so left to recover.

When I found out about the trip I asked if I could go and found out I would be included. The trip would be paid for by donations and by contributions from our own pockets. Originally the Dept of MT VFW started fund-raising to support 8 individuals. We submitted our application paperwork and after a few months we were accepted. Now there was a wait to get work visas.



One of the Embassy officers was from my town in Minnesota. His house was three miles from where I had lived 30 years before. The ops chief's wife worked with my son when he was in Quantico. Small world.



Then the dreaded COVID came and locked down the world. Kiribati was still restricting visitors to the country in early 2023. People could enter the country if they had the Covid shots, and four of our team dropped out because of that. Our airlines ticket had been purchased in early 2023, yet we were still waiting for work visas.

Five of the Marines were from the 2nd Div whose predecessors attacked the island. Based in Camp Lejeune, North Carolina, they were in Okinawa for 6 months of training. With the ceremony scheduled for 0600 the next morning, they all went right to work practicing for the ceremony. We helped to set up the venue.

Could I operate a ham radio station in Tarawa? The Communications Commission of Kiribati sent me the application, and I informed them that I was awaiting a work visa. But as of September, there were still no work visas. We decided to go in November so we could be there for the 80th Anniversary of the Battle. We booked flights for the last two weeks of November. However, after I had my shoulder surgery on 23 October I realized that I could not put up an antenna. I canceled my request for a radio license.



I left Helena on the afternoon of 18 Nov and met my other team members in LA. (Another one had dropped out because of a heart attack.) We left LA, flew to Fiji, and landed 11 hours later, on 20 Nov. (dateline change). We were in Fiji about 2 hours and then flew 3 hours to Tarawa. With us were two of the History Flight reps on our flight, the archaeologist and the operations chief. We were in time to greet the Marines honor guard on the 21st and to attend the memorial ceremony on the 22nd. Our motel was the headquarters for the US Embassy staff. Our embassy is in Fiji and serves 5 countries.

The President of Kiribati, the US Ambassador, and the Japanese Ambassador were there, as were many other local dignitaries. They made speeches, and then *Taps* was played as we

honored a set of remains in a flag-draped coffin, followed by a wreath-laying ceremony. A moving experience!

The locals were surprised to see a veterans' group from Montana. However, the Embassy personnel gave us our own wreath to lay at the memorial, and Fred Hamilton from Whitefish did the honors.

The next morning, we went to the repository to load the remains onto a truck for the ride to the airport where four Marines loaded the coffin onto the C-130. The President of Kiribati, the rest of the Marines, and the VFW members from Montana stood in formation and saluted the remains as *Taps* was played. Again, a very moving and humbling experience.

The next three days we worked with a team from Australia that was doing Explosive Ordnance Disposal work for a new building. Using a mine detector, we searched to a depth of 3 meters looking for metal. We did not find much while we were there, but after we left others found many dangerous items.

On the day before we left, we walked the same beaches that Marines landed on 80 years before. The beaches haven't changed that much in 80 years, but this time no bullets were flying at us or artillery shells landing next to us. It really made you think about what those people went through.

We left on 27 November to fly to Fiji where we would stay till the evening of the 29th, then left at 10 pm that evening for another long 10-hour flight to Los Angeles, and on to Salt Lake City. There the team split up, and I went onto Helena.

Overall, this was the trip of a lifetime. I thank Cindy for understanding my need to be there, the VFW of Montana, all the posts, and all the people that made this possible.



Image from Barnstable ARC

From the Foxes' Den

By Bob Gomes

Great news from the Foxes' Den! The foxes are now all upgraded Fancy Foxes by Eric Webb KE7NLU. They all have their own software, making programming very easy for Brian or me if we need to make any changes before the hunt. Each fox has an onboard voice recorder, 1 watt transmitter, passcode, and 6000 mA battery (30-hour standby).

With the Foxes' Den full of new Fancy Foxes, WHAT DO WE SAY ABOUT A FOX HUNT?

Brian and I are ready to put one on, anytime the club would like to have a fox hunt. If during the week it looks like the weekend would be nice for a hunt, let Brian or me know and we will set up a fox hunt. For the next couple of weekends, it does not look like the weather will be good, so we'll check on the weather report towards the end of February and beginning of March.

From the Foxes' Den to all the Fox Hunters, let's have some fun, so we in the den can have some laughs. Let's do a fox hunt as soon as we can.

SOTA T-Shirt Design

by Al Le Vie KH7AL



The Good Ship *Ruddy*

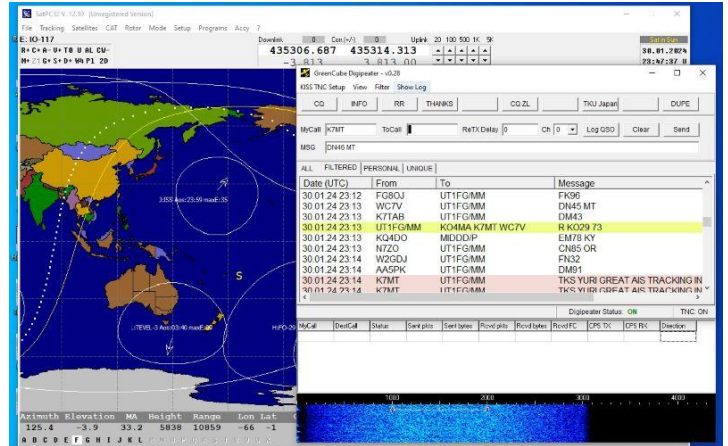
By Bill Erhardt K7MT

Over the last month or so, I have had the wonderful opportunity to work the maritime mobile vessel *Ruddy*, call UT1FG/MM (Yuri) on the IO-117 Satellite.

It started when I heard him halfway across the Atlantic Ocean heading to Canada/USA. I tracked him down the St. Lawrence, across Lake Ontario, through the Welland Canal/ Locks around Niagara Falls into Lake Erie, to dock at Buffalo NY; then all the way back out to the Atlantic. I watched him go through Welland/Canal Locks # 3 on their Webcam.

He then went to Ireland, Gibraltar, Tunisia, through the Mediterranean Sea; then back out enroute to Finland. My last contact in the picture was near Talin Estonia in the Baltic Sea.

If nothing else, I got a wonderful geography lesson and just had a lot of fun. That's what ham radio is all about.



Capital City Amateur Radio Club Helena, Montana



Editor: Marla Unruh KM7LIB
Writers: Kathe Simons N1NYT and

CCARC members

Club website: n7rb.org

(under construction)

CCARC Shack Tour – website

with member profiles

JOIN US!

Info on membership and on testing:

Click the envelope on n7rb.org

current homepage.