

CCARC News

Capital City Amateur Radio Club

October 2025

The Great Belmont Repeater Swap!

By Al Simons WA1TYB

Saturday, September 27, 2025 was the culmination of weeks of effort, primarily by Eric, KE7NLU, and Tom, KE7VUX, to build a new N7RB repeater for Mount Belmont. The aging MSF-5000 Motorola repeater which had served us well for many years was becoming more and more unreliable, with the club voting at the September meeting to replace it. Eric obtained and configured a new (to us) used Midland 91-1110B repeater with a new ARCOM RC-210 controller, and Tom created a network configuration for the site. More on that later.



KE7NLU installs the repeater controller.

COMING EVENTS

CCARC monthly meeting – October 6, 7 pm at the Salvation Army, 1330 Hudson St. or on Google Meet, <https://meet.google.com/zfs-ctwp-bax>

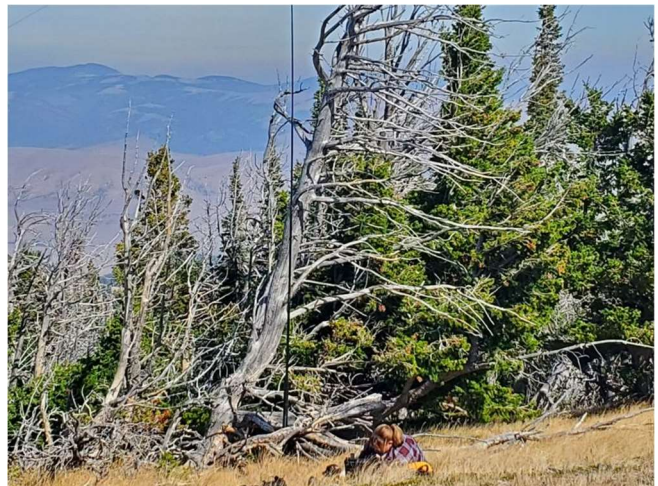
October 19 - Just for the Helena of It Run. Jo Lee Hawkins. joleehawkins@gmail.com

Coffee Net – Every Saturday at 9 am on 147.22 Belmont Repeater.

Eyeball @Red Atlas, 9:30 am Saturday Mornings.

Trivia Net, Sunday evenings, 7:30 pm on the Belmont repeater.

Along with the other members of the repeater committee: Al KH7AL, Al WA1TYB, Bill N7MSI, Brian KJ7OUF, Dan N7SHM, and Stacey KK7CJV, Eric, and Tom headed up the mountain for a very full day of work after a short appearance at coffee. Tom led the networking effort, Eric led the removal of the old and installation of the new repeaters, and Bill climbed the tower. Dan was the backup climber in case of problems aloft, and Al, Al, and Brian were gofers. Stacey, who had spent many long days with Eric configuring and testing the new repeater, took a break and played radio with a SOTA activation.



KK7CJV at the bottom edge of the clearing. SOTA! SOTA!

Tom provided the hardware and bandwidth to establish an Internet connection at the site with a microwave link in the 5.8 GHz Wi-Fi frequency range down to his house, giving us much more control than was previously available through DTMF signaling.



N7MSI confirms the direction to point the microwave link to KE7VUX's house.

This is already helping Eric tune the repeater parameters. It also opens the possibility of adding new amateur features, such as an APRS “I-gate,” to the site. An I-gate, or “Internet Gateway” forwards APRS packets it receives to the Internet, where they can be seen, for instance at <https://aprs.fi>. For the foreseeable future, Internet access to the repeater site will be restricted to a subset of the repeater committee. In addition to the Internet, Tom also provided the hardware for an Amateur Radio Emergency Data Network (AREDN) node, which is aimed at Helena Valley. This can form the hub for an AREDN mesh network here. AREDN is a technology which forms self-configuring networks of nodes. For more information see www.arednmesh.org.

The next step in the project will be extensive documentation, led by WA1TYB.



N7MSI on the tower with the Internet link antenna (top) and AREDN antenna (lower).

As with any large project there will be glitches we need to correct; if you hear something or notice an odd repeater behavior, please let one of the above team know so we can correct it!

As an added bonus, KH7AL joined Stacey with his own SOTA activation when not needed for the project, and KE7VUX had fun using the tower guy wires as an HF antenna! It is always fun to “play radio.”



KH7AL makes one of his SOTA contacts.



KE7VUX uses the tower guy wires as his HF antenna. Notice the tuner hanging from the guys!

Photos by N7MSI and KH7AL.

The Great Montana Shakeout

By Lynn Wagner K7WGR

This year's International ShakeOut Day for Montana is October 16, when millions of people worldwide will participate in earthquake drills at work, school, or home! There are over 44,000 participants registered in Montana. The members of CCARC are already registered.

At 10:16 a.m. (local time) on 10/16, you can join people across Montana practicing earthquake safety. CCARC will make an announcement on the club repeater announcing the drill and the procedure to follow.

For further information please go to any browser search and type Great Montana Shakeout.

Montana is one of the most seismically-active states in the United States.

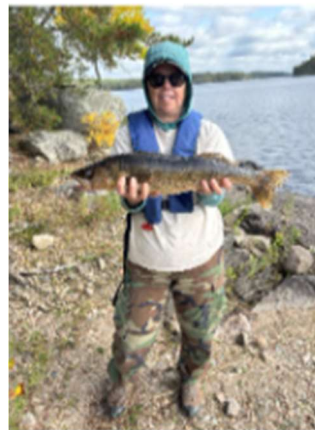
Roving and Radioing in Minnesota

By Sally Dial KJ7WFN

Our visit to Northeast Minnesota area this fall was not only a time to enjoy the autumn tree colors but also a great time to learn about my radio and improve my portable operating skills. My most recent purchase is the ATAS 120A Yeasu antenna system. I mounted it on top of my truck with a Moonraker triple magnet mount .

While we stayed in the Superior National Forest I activated the park so many times, I lost count! It did add up to over 600 contacts, including some from the east coast of the US. I even had an aeronautical QSO. He was 36,000 feet above me.

I also caught my personal record walleye - twenty-five inches!



Studying trail maps and forest maps, along with the POTA map, I decided I could do a Rove. A Rove is a POTA Award based on how many parks a person activates in one UTC day.

I did it! I earned the Warthog award by activating 5 parks along State Hwy 1 near Ely, MN.!

We did some fishing along the Boundary Waters Canoe Area. But I had so much fun on the Warthog Rove, I returned to the maps, studied, and found out I could do a Rhino, 10 parks in one UTC day!



For this higher Rove award I activated snowmobile trails, an old ore mine, North Country Trail, and some forests. It was a bonus to learn more about this region and the history of the settlers.



Split Rock Lighthouse

Sally is a member of the Gallatin Valley Radio Club

Woodcutters and Radios

By Zhaun Paddock AI7BM

For the past few years AI KH7AL and I have been combining our efforts to haul wood. We use ham radio to coordinate the meet in the morning on Belmont repeater then QSY to simplex for communication while traveling together.

This year despite the fact that my old Ford hauls more wood per trip, AI's pile was full first. Since AI was on Wake Island last winter his fire didn't light itself while he was gone (hi hi).

Next, we checked with Dave W7MIT to see what wood he could use to keep warm. It's always good to hear Dave reminisce about adventures from his youth. You can hear Dave come to life when he tells stories, like how the mail used to come over Confederate gulch. AI and I planned to go where we could find both a load of fir for me and a load of pine for Dave.



We met in the morning and traveled to our planned location using simplex to chat on the way. We were a few people short this trip as AI's XYL was still traveling home from a soccer game with one of their boys.

We planned to split the wood for Dave in advance so that it could be offloaded directly into his basement. He can fit in a heck of a pile down there!

I loaded a few extra splitting mauls. While AI and I cut logs into roughly 2 block lengths and tossed them down the mountain, the kids did the rest. My oldest son Matthew has been learning to run a saw, so he cut the blocks in two. Tanner then chopped them and the twins stacked the pile. It went well and we had 2 1/2 cords loaded with another cord chopped by 12:15. You just can't beat a day in the mountains. The fall colors are starting to show and we worked hard and enjoyed the adventure.



Hear Ye! Hear Ye! NEW POTA SITES IN MONTANA By Kathe Simons N1NYT

Parks on the Air has once again thrilled those of us who like to activate Montana locations by recently adding more than a dozen new POTA sites! Several members of our club (you know who you are!) have been clocking a good number of miles around the state in the pursuit of the “First Activator” title for some of these new sites. Al and I recently traveled to the Ennis / Virginia City area to seek a first activation at the Axolotl Lakes BLM Wilderness Area. Even though we usually use the Subaru when traveling together, we took the Jeep since we read that a high clearance vehicle would be necessary for some rough roads ahead. The views heading in were absolutely stunning!



This is always one of the best parts of our POTA travels---exploring new (to us) parts of the state---can’t believe we get to live here! The storm clouds were looming so we wanted to make quick work of our set-up.



Aided by CalTopo.com and onX Offroad from onxmaps.com, we found a perfect spot from which to activate that was well within the border of the BLM area. We did have some observers but at least one of them was more interested in snack time than what we were up to!



I popped the mag-mount onto the roof of the Jeep while Al finished the set-up in the car. I was able to spot myself on the POTA website and got to it! My first contact was to Washington State but I only received a 33 signal report (I sent a 58-he sounded great). CQ, CQ, CQ. Nothing. Things went south---I wasn’t get any responses and couldn’t figure out what was going on. Al was busy getting his

computer ready to run some FT-8 and looked over to see what was happening. He got out of the Jeep to check the roof – and sure enough, I had popped the mag-mount onto the glass of the SUNROOF instead of the roof. Thirty-eight contacts later, Al took over and secured the “second” activation. What a kick to get another beautiful POTA site into our logs! I hope to reach 300 activations before the end of the year. And maybe a few more first activations – you never know where I’ll be! POTA on!

(The following is taken from KH7AL’s blog, at <https://kh7al.site/drive-up-sota-summits/>. Go look at his post for some great pictures! Thanks, Al!)

Helena Area Drive Up SOTA Summits

By Al LeVie KH7AL



21 September, 2025

Trying anything new for the first time can be a daunting task. Fear of goofing up too often keeps us from starting, and enjoying, new experiences sooner. *Summits on the Air* (SOTA) is no different in that regard.

Our annual Field Day is one thing, but asking any ham operator to go set up a completely off-grid radio station, with the goal of making as many contacts as possible, can sound pretty intimidating if you haven’t practiced. Add in the thought of a grueling hike and trying to believe that being a fun experience can be hard to imagine. But that’s where the beauty of SOTA comes in—whether you are an activator or chaser, it’s a great way to test

your skills, enjoy the outdoors, and have a lot of fun along the way.

Now, I know what you might be thinking:

“Wait a minute there, Allen. You expect me to go tromping through the woods, climb thousands of feet, all while carrying a boat anchor in my backpack and fending off a grizzly?”

Well, you *could* do that... or you could ease into the fun with a **drive-up SOTA summit**.

Drive-Up SOTA: The Best of Both Worlds

Not every summit requires a grueling hike. Drive-up summits offer an easy entry point to the SOTA world—and could even inspire you to lace up those hiking boots later on. These vehicle accessible peaks can hook you into a whole new aspect of amateur radio.

Just remember: while the road or 4-wheel trail may lead you to that dreamy summit, there are a few important SOTA rules to keep in mind to make your activation *official*.

Key Differences Between SOTA and POTA

A major difference between **Summits on the Air (SOTA)** and **Parks on the Air (POTA)** is that **you must be completely disconnected from your vehicle in SOTA**. That means:

- No using the car battery for power.
- No sitting inside the car.
- No running the radio from the trunk.

Use your vehicle to *get there* and carry your gear, but once you’re within the **Activation Zone**, it’s time to go set up a station a short distance away and start calling, “CQ SOTA.”

Activation Zones

In SOTA you must be within the Activation Zone (AZ) of the designated summit for any contacts made to count. Imagine the AZ as a horizontal line drawn on contour around the mountain that is 25 meters (~82’) vertically down from summit. If you start going back uphill from the real summit (say

along a ridge), that is no longer in the AZ. So beware of false summits.

Local Drive-Up Summits to Get Started

Here are some Helena-area drive-up summits (with SOTA reference numbers) where you can get a taste of SOTA without the uphill slog. These are loosely organized from easiest (top) to more challenging (bottom):

- **Strawberry Butte** – W7M/HB-128
- **"7215"** (North of MacDonald Pass) – W7M/CL-105
- **Mount Belmont** – W7M/CL-099
- **Hogback Mountain** – W7M/CL-071
- **Occidental Plateau** – W7M/HB-146

If you decide to try one of these for the first time I highly advise you to check with someone who has gone before to get a good idea about the trail and conditions. Also make sure your vehicle is up for the adventure. A 4-wheel drive vehicle with a little clearance is also recommended.

If you're up for giving this adventure a try, don't wait too long—some of these peaks become inaccessible once the snow flies. Have questions about gear, access, routes, or SOTA in general? Don't hesitate to reach out to me or Rob Kingery (AE7AP). Rob has an even longer list of drive-up, and short hike, summits and would be glad to share more info.

Final Thoughts

SOTA doesn't have to mean extreme hiking, brutal pack-outs, or bear encounters (unless you're into that). A drive-up summit might be just the thing to get your feet wet—and maybe, just maybe, it'll spark your next great ham radio adventure. Above all (pun intended) the views from our Montana summits are amazing and leave you with a deeper appreciation for this area we call home. I am confident you will find the SOTA community very welcoming and encouraging to new operators. Let me know if I can help in anyway. 73, Allen

Scurvy Lookout

Rob Kingery AE7AP

The drive to the Scurvy Mountain Lookout (W7I/NI-048) was an enjoyable 54 miles of gravel, single lane asphalt and easy 4wd south from Superior. We hiked another 3.6 miles and 2,100 vertical feet up an ATV road to reach the lookout. While we briefly had limited views of the nearby mountains when we arrived, a foggy cloudbank soon enveloped the lookout for the rest of the evening and nearly all the next day, finally lifting for a beautiful sunset on our second evening. Visibility was generally only about 100 to 300 feet before the clouds lifted.



We had a great time despite the limited views and spent our evenings and free day mostly eating, reading, playing cards, and playing radio. We hiked about $\frac{3}{4}$ miles down to a spring to fill up with water, and to fill our packs with firewood using a small saw and hatchet that I had packed in. I set up the mast on the side of the lookout and anchored the link dipole to the ground below. While this resulted in a fairly acute "Inverted-V" configuration, it still seemed to work well. I was able to make over 45 QSOs on 40m and

20m. Twenty meters was the most effective during the afternoon and evening of the first day, and 40m was the most effective during the second day. I was able to work both Bob - WB7BWZ and Dennis KR7Q here in Montana, two Summit-to-Summit contacts (S2S), and even managed some DX to France and Japan.



We wanted to get an early start for our hike out, so I preemptively packed up the antenna before turning in for the night. This was fortunate because there was a terrific wind in the middle of the night that really shook things around and even tried to tear the shutters/shades off of the lookout. We had to secure the two shutters on the windward side, which was a bit of an adventure in the dark.



After hiking out, we drove to Peak 6863 W7I/NI-036 just east of Hoodoo Pass on the Idaho side of the stateline south of Superior. Vick K7VK suggested this summit, and it turned out to be a great choice. It was an easy hike, and I made 17 QSOs in short order. I was able to hear Vick on 2m, but he could not hear me.

73, Rob AE7AP

Hams and Hobbies

Amateur radio enthusiasts are typically multitasked and participate or lead in other hobbies.

Examples:

- The BMW Motorcycle Club,
mtbmwrider.org Bill Erhardt K7MT
- Capital City Classic Auto Club
Front page below Contact Darrell Beckstrom,
mtbeckstrom@gmail.com
- Rocky Mountain Land Rovers
<https://www.instagram.com/rockymountainlandrovers/> Jay KG7SYX or Daysee Swant KI7CNG
- Last Chance Square Dancers
www.helenalastchancesquares.com Bob Thola N9IB and Annie Bailey,
anniebailey825@yahoo.com

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