



The Hellgate Static

June 2021



Hellgate Amateur Radio Club
P.O. Box 3811, Missoula, MT 59806-3811

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Officers:

President: Mike Leary, K7MSO
Vice-President: Eric Sedgwick, NZ7S
Treasurer: Dick Walton W7XT
Secretary: Donna Pecastaing, KC5WRA

Standing Committees:

Emergency Coordinator: Jerry Ehli, N7GE
QSLs, Awards: Bob Henderson, N7MSU
Webmaster: Mike Leary, K7MSO
Radio License Exams Contact VE:
Paul Shuey, N7PAS
Static Editor: Terry Cook, KF7BQ
Bluetooth_one@hotmail.com

Repeater Advisory Committee:

Eric Sedgwick NZ7S (Chair)
Tom Hellem, K0SN
Paul Shuey, N7PAS
Tom Mc Ginley, K7QA (Re-elected)

Upcoming Events (Tentative)

- **June 12, 2021** [Trail Rail Run](#)
- **June 21** **Transmitter Hunt**
- **June 25 – 27, 2021** [Field Day](#)
- **July 4, 2021** [Club Special Event Station](#)
- **July 16th – 18th** [Glacier Waterton Hamfest](#)
- **October 15 – 16, 2021** [JOTA](#)
- **October 21, 2021** [The Great Montana Shakeout Drill](#)
- **October ??, 2021** **Dirt Dash**
- **December 4 – 5, 2021** [Sky Warn Recognition Day](#)
- **December 13, 2021** **Christmas Dinner Party**

June HARC Meeting

We are back to having monthly meetings and license class testing in person. The meetings are on the 2nd Monday of each Month (June 14th.)

Meetings will be held at The Church of Jesus Christ of Latter Day Saints, 3026 South Avenue West, across the street from Big Sky High School. Use the North entrance as all others will be locked.

Testing will began promptly at 5:30PM, and end at 6:30PM.

Meeting area will be set up between 6:30-7:00PM and meeting will began at 7:00PM (Business & Program).

Cleanup and Sanitizing will be done from 9:00-9:30. Volunteers may assist.

May Transmitter Hunts

Transmitter hunt season is on us again. We had our first hunt on May 5th, with four persons signed in to hunt for the transmitter. Due to time constraints of many of the participants, only Arron N7BOI was successful in finding the fox,

The second hunt of the season was on May 21st, and all of the participants were successful. Joe, AG7FH and Harley KI7XF, were the first to find the fox in a mere 16 minutes. Harley lives in Bozeman and is a avid fox hunter. Aaron N7BIO was second, followed shortly by Eric NZ7S.

Eric has agreed to play the fox on June 4th. We are using the hidden transmitter controller which produces a series of very distinctive tones on 146.56 MHz, the hunt frequency.

Participants should check in prior to the hunt on the 146.90 repeater. Unlicensed persons are welcome to participate without checking in.

- For this hunt, the fox's callsign will be W7PX.
- The hunt will be held on the simplex frequency of: 146.560 MHz
- The transmissions will begin at: 7:00 PM Local Time
- The hunt may continue for 2 Hrs, longer at the fox's option.
- The fox will transmit for approximately two minute and then be silent for 1- 4 minutes.
- The fox will not significantly change transmitted power levels during the hunt.
- The fox will be in a location accessible by the public, without charge and will not be inside of a building.
- For this hunt the fox will be within the Missoula Valley, and in a place accessible by vehicle.
- For this hunt, participants can begin the hunt from anywhere he or she prefers.
- After the first hour of the hunt, the fox may at his or her discretion, provide hunters with clues to the fox's location.
- We would like the hunt to be fun for all. If you have suggestions on how we can improve this or future hunts please let us know.
- Drive carefully and observe all traffic statutes during this hunt, for everyone's safety.
- Have fun, we are all novices at this and the object is to have a good time.

June 4th Transmitter hunt

Eric Sedgwick NZ7S was the fox for this hunt, he was fortunate enough to be accompanied by his XYL, Paige.

Due to some difficulties with the transmitter controller, the hunt started with manual control and a one minute on five minute off schedule. Later in the hunt, the controller cooperated and the transmit vs off ratio was decreased some.

Terry KF7BQ found the fox first, followed shortly by Aaron N7BIO. Our next hunt is scheduled for 7:00 PM Monday, June 21st. We hope you will participate with us.

THE CHARLIE WIGGLY BULLSHEET

News and Views from HARC's CW ops

Last month's issue of this journalistic gem, the "CW Bullsheet," reported that the members of HARC's HF Committee had slugged it out in the Seventh Area QSO Party, the 7QP. Final results have now been posted, and they show K7QA in first place in the high power CW only division, and K0SN, working with N7IP, Bob Tabke, first by a large margin in the multi-op category. Your humble correspondent, unable to employ his favored method of winning such contests, namely, being the only entrant, managed only second place in the low power CW Assisted group.*

One of the most important operating events of the year, Field Day, is close upon us. HARC has usually operated two FD stations, one CW and one Phone. Occasionally we have also had a GOTA ("Get On the Air") station, as well. Strictly understood, Field Day is not a contest; however, operation is contest style. Thus, it might be well to review a few basic facts about contest operating technique.

There are two basic modes of contest operating, whether CW, phone or even digital: "run" and "search and pounce," S&P. A running station sits on a frequency and calls CQ, while an S&P station tunes for runners and answers their CQs. Successful runners must command their frequency. Whether they do that with high power, gain antennas, or location matters not.

HARC's CW Field Day station year before last was on top of Mount Sentinel. Even though low power (100 watts) many stations reported that we were the strongest signal on the band. It helped, too, that on 20 meters and above we had good beam antennas, and on the lower bands dipoles up 60 feet or so, fed with ladder line.

The club, or individual, attempting to run with a barefoot transceiver, a dipole in the air 25 feet, and a deep valley location (think Alberton) is not going to be very successful. Operating S&P, however, such a station will yield some fun. And let's not forget that having a good time is a major goal of Field Day. Do some S&P operating even if you don't feel that you really know what you're doing. Fact is, even the hot shots were once mystified and all thumbs.

Let's all pitch in as our abilities permit, and have a great Field Day. That will be a fitting way to end this lousy pandemic.

*N9RV's' score also warrants mention, since, while not a member of the HF Committee or HARC, he is a Missoula County resident (Potomac) and a UM Faculty member. Pat's score ranked second in the Mixed Mode, High Power Class.



A CubeSat that produces visible light on the ground to be launched in NASA initiative

NASA has selected a CubeSat that when in orbit can be commanded by anyone with an amateur radio license and a ham radio to set off a xenon flash from the spacecraft which will be visible from the ground. Roughly the size of a toaster, the 1U CubeSat named LightCube, was designed, built, and tested by an interdisciplinary team of students, advisors, and engineers across multiple organisations at the Arizona State University.

It is scheduled to head to the International Space Station (ISS) as an auxiliary payload aboard a rocket launching between 2022 and 2025. Once deployed the CubeSat will respond with a flash using on-board xenon flashtubes that will be visible to the naked eye of the commander.

“The public will be able to track the LightCube satellite using an app, then transmit to the satellite with a ham radio. Once the signal has been received, they will see a flash from the satellite in the night sky,” said Principal Investigator Jaime Sanchez de la Vega, of Vega Space Systems,

According to the CubeSat’s website, its mission objective is “to produce a light visible to the naked eye of observers on Earth”, as well as “aiming to inspire and provide a learning experience to people across the planet Earth.”

“This is an education-based mission,” said Danny Jacobs, assistant professor at ASU’s School of Earth and Space Exploration and the initiative’s associate director. “Our goal in building and launching a spacecraft that can be commanded by the public is to inspire everyone to learn about telecommunications, spacecraft design, atmospheric and climate science, and orbital mechanics.”

The spacecraft will include a UHF antenna led by the CETYS Universidad team, in Baja California, Mexico, xenon flashtubes, solar panels, an onboard computer, transceiver and a deployable gravity gradient boom that orients the light toward Earth.

The current plan is to deliver the spacecraft to NASA for launch no earlier than September 2022 following a full system integration and test campaign starting later this year.

Once in space, LightCube will circle our planet for approximately 2 years before safely deorbiting, say its designers.

LightCube is among 14 small research satellites that were chosen by NASA as part of its CubeSat Launch Initiative (CSLI)

Other CubeSat ideas also selected as part of the Initiative include SPRITE (Supernova Remnants and Proxies for ReIonization Testbed Experiment), a scientific investigation mission designed to observe ionising radiation escape from low redshift star-forming galaxies, and AEPEX (Atmospheric Effects of Precipitation through Energetic X-rays), a scientific investigation mission that aims to better understand the influence of the magnetosphere on the Earth’s upper atmosphere through energetic particle precipitation (EPP). “These innovative partnerships benefit both NASA and the greater science community by helping to bridge gaps in knowledge and, ultimately, accelerate technology,” says Sam Fonder, program executive, Launch Services Office.

Promoted as an educational-based mission, the idea behind LightCube however is already garnering skepticism from those who study the night sky.

Meeting Notes – May 2021 meeting

Attendance: Mike K7MSO, Aaron N7BIO, Dan KI7HLW, Jerry N7GE, Rich K7QNZ, Joe AG7FH, Terry KF7BQ, Bill KJ7PCR

Presentation: Home Made measuring tape antenna for Fox Hunting by Aaron N7BIO

Approval of last meeting's minutes. Passed

Approval of Treasurer's report. Tabled until next month

Repeater Committee Report: None

HF Committee: None

Events:

YMCA Riverbank Run

MARS Interoperability Exercises – Eric NZ7S will keep us advised

1st week of each month for 2021. Check in on 60 meters. Noon and 8 p.m. Channel 1.

Fox Hunts – Next on 11th and 21st of June

Trail Rail Run – Volunteers needed 12 Jun!!!

Missoula Marathon - canceled

VHF Net Control operators

- 12 May Mike K7MSO

- 19 May Paul N7PAS

- 26 May Mike K7MSO

- 02 Jun Donna KC7WRA

- 09 Jun

*** Next Club meeting: 14 June