



The Hellgate Static

March 2019



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

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Upcoming Events

- 14 April – Grizzly Triathlon
- 27 April – Riverbank Run
- 22-23 June – Field Day
- 30 June – Missoula Marathon
- 4 July – W7PX Special Event Station
- 18 -19 October – Boy Scout Jamboree on the Air
- 6-7 December – Skywarn Recognition Day
- 9 December – Christmas Dinner

Officers:

President: Mike Leary, K7MSO

Vice-President: Eric Sedgwick, NZ7S

Treasurer: David Herzberg, K7MTD

Secretary: Donna Pecastaing, KC5WRA

Standing Committees:

Emergency Coordinator: Jerry Ehli, N7GE

QSLs, Awards: Bob Henderson, N7MSU

Webmaster: Mike Leary, K7MSO

Static Editor: Terry Cook, KF7BQ

Radio License Exams Contact VE:

Paul Shuey, N7PAS

Repeater Advisory Committee:

Eric Sedgwick NZ7S (Chair)

David Herzberg, K7MTD

Tom Mc Ginley, K7QA

Tom Hellem, K0SN

Paul Shuey, N7PAS



New ARRL Introduction to Emergency Communications Courses Open

The ARRL Lifelong Learning Department has launched a revised and updated *Introduction to Emergency Communications* (EC-001) course, and demand to sign up is prompting the recruitment of additional course mentors to expand the schedule. [Registration](#) just opened for the first of four EC-001 online sessions, which will run from Monday, April 1, until Friday, May 31.

“The demand for this course has exceeded our projections, and the four sessions scheduled for 2019 are already filling quickly,” ARRL Lifelong Learning Manager Kris Bickell, K1BIC, said. “This course is designed to be interactive with mentors guiding each session, so we’re seeking additional mentors and will schedule more course sessions as quickly as possible. Thanks for your patience as we expand capacity for this updated version of EC-001.” Bickell is developing a [notification list](#) (scroll down) to alert those who didn’t get into the first round of courses when a new round of sessions becomes available.

EC-001 is designed to provide basic knowledge and tools for emergency communications volunteers. With the online format, students can access the course at anytime from anywhere during the 9-week period and may work at their own pace and on their own schedule. As in the past, students will be able to register and take the course entirely online. The Canvas platform is also mobile-responsive, meaning that students can view the course materials, interact with fellow students, and complete assignments from any mobile device.

“We hope this course will be the starting point for you in your service to your community as radio amateurs and inspire you to think outside the box and look at new and useful ways the radio amateur can lend a hand to the public that has given us the trust of our spectrum of skills,” ARRL Assistant Emergency Preparedness Manager Ken Bailey, K1FUG, said.

Individual EC-001 sessions will serve up to 30 students, supported by an experienced mentor. Courses are free of charge. To be eligible, students must meet certain prerequisites, listed on the [registration page](#). The registration page includes the entire 2019 schedule of EC-001 sessions.

WWV Centennial Special Event Will Use WW0WWV

With its funding secure for another year, WWV, the world’s oldest continuously operating radio station, will have extra reason to celebrate its centennial this fall. The National Institute of Standards and Technology (NIST) and the Northern Colorado Amateur Radio Club (NCARC) have teamed up to organize 100th anniversary events. A memorandum of understanding is pending. The WWV Committee has announced that the call sign WW0WWV was granted on February 23 to the WWV Amateur Radio Club for use during the Amateur Radio special event, planned to run September 28 – October 2, with operators on the air — no pun intended — around the clock. NCARC predicts the effort will require “hundreds” of volunteer operators.

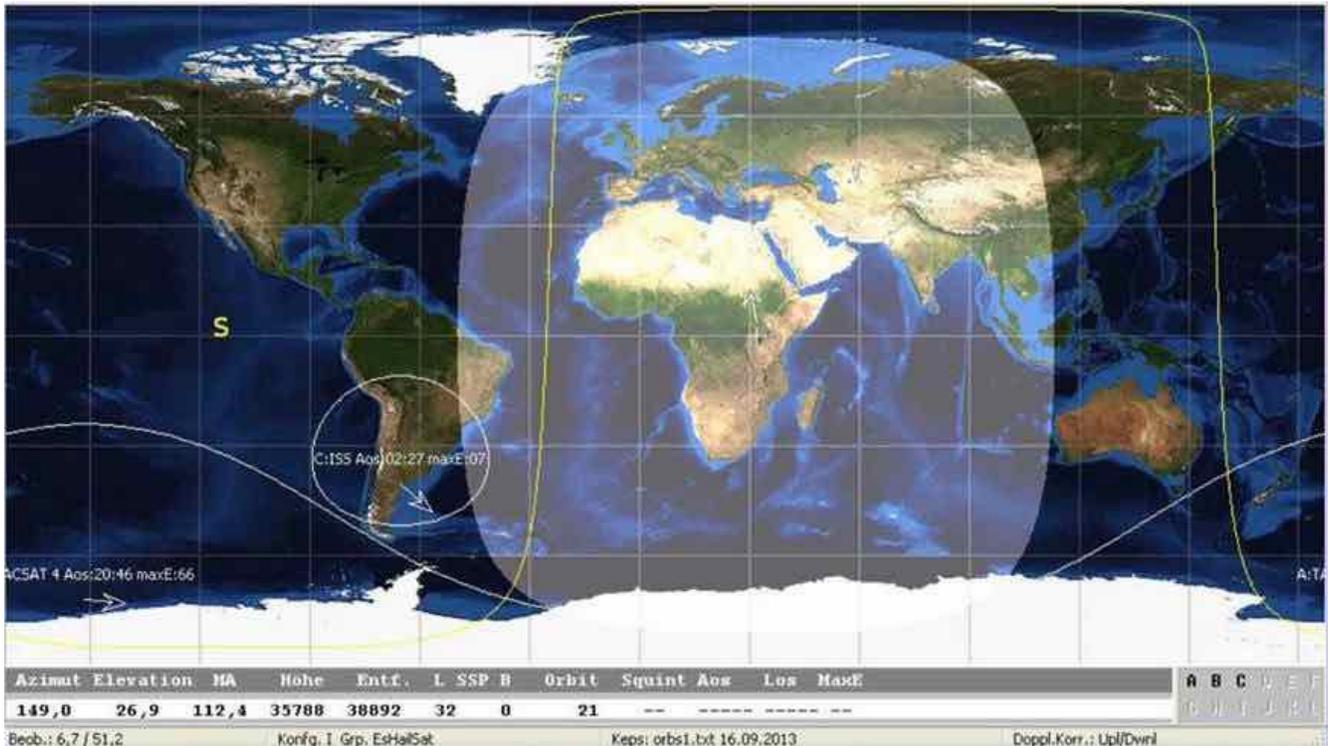
“The 100th anniversary is an occasion to celebrate radio and our understanding of the electromagnetic spectrum, and an opportunity to help people everywhere appreciate what radio does in their everyday lives,” said Dave Swartz, WODAS, who has been spearheading the on-the-air event.

The WWV Committee met on February 22, with representatives of NCARC and NIST on hand, to further firm up plans for the centennial celebratory events. Although the US government cannot fund any Amateur Radio special event expenses, club members will be allowed to use a 15-acre parcel on WWV property, Swartz has explained. The operating site lies outside the security fence.

For its part, NIST will focus on plans for an October 1 recognition ceremony and an open house at the radio station north of Fort Collins.

Es'Hail-2 Geostationary Amateur Radio Satellite is Now In Operation

The geostationary satellite Es'hail-2 carrying amateur radio transponders launched from Kennedy Space Center at 20:46 GMT on November 15, 2018 and is now in a geostationary orbit at 25.9° East. These are the first amateur radio transponders to be put into geostationary orbit and they link radio amateurs from Brazil to Thailand.



Es'hail-2 carries two “Phase 4” amateur radio transponders operating in the 2400 MHz and 10450 MHz bands. A 250 kHz bandwidth linear transponder intended for conventional analogue operations and an 8 MHz bandwidth transponder for experimental digital modulation schemes and DVB amateur television.

Narrowband Linear transponder

2400.050 - 2400.300 MHz Uplink
10489.550 - 10489.800 MHz Downlink

Wideband digital transponder

2401.500 - 2409.500 MHz Uplink
10491.000 - 10499.000 MHz Downlink

Es'hail-2 was designed by AMSAT-DL (Germany) and is hosted on a Qatar Digital Television Satellite platform. Also known as Oscar 100, its footprint covers the Eastern Hemisphere, so we cannot use it here, but AMSAT is currently working with several partners, designing a geosynchronous amateur radio satellite that will serve the Western Hemisphere. (See another article in this issue)

You can listen to Es'Hail-2/Oscar 100 on a Web SDR receiver, and find many links to information about AMSAT UK Phase 4A project here: <http://websdr.is0grb.it:8901/>

AMSAT North America Phase 4B Geosynchronous Satellite

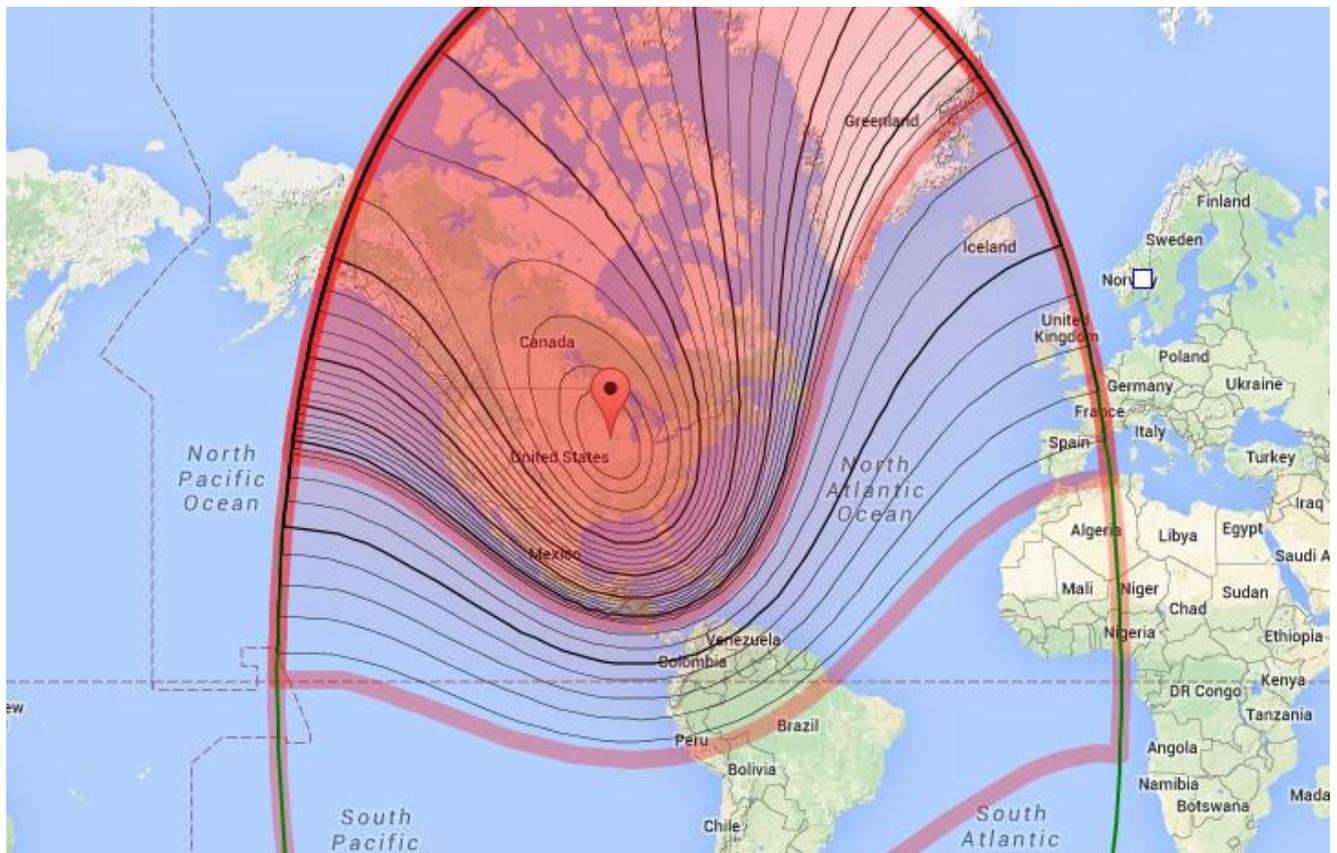
A geosynchronous amateur satellite has been a dream for US Hams for years. The AMSAT Phase 4B program aims to deliver on this dream. It will provide 24/7 - 365 days a year connectivity on a satellite that appears to remain in one position in the sky. The satellite has been in the works for about 5 years and will be hosted on a US Air-force satellite which is expected to launch late in 2019, or 2020.

The transponder will be 5Ghz uplink, 10 Ghz downlink and will allow for about 1000 5khz channels or 100 100khz channels, which can be used simultaneously. All communications will be digitized packet format and will allow for digital voice, video and other media. The uplink will be FDMA (frequency division multiple access) and the downlink will be TDMA (time division multiple access).

The goal for the project will be to allow for small dish antennas as are used by Direct TV and Dish TV. Designers are also using standard digital video codecs and formats that are readily available at low cost because they are mass produced for consumer products.

Several manufacturers have expressed interested in developing commercial versions of the ground station, and FEMA has committed to supporting the project by equipping their communications go kits with ground stations when they become available.

The graphic below shows the expected footprint of the Phase 4B satellite



This month's Hellgate Static is pretty much devoid of local news. If you have any interesting information, news or photos that HARC members would be interested in, please send them to your editor at: bluetooth_one@hotmail.com

February 2019 Attendance and Tentative Meeting Minutes

Attendance: Terry Cook KF7BQ, Paul Shuey N7PAS, Rich Kingdon K7QNA, Mike Leary K7MSO, David Herzberg K7MTD, Jackie Harrington KC7RBC, Paul Wisniewski KJ7CBT, Tom Mc Ginley K7QA.

License Exams: Four candidates testing, of which three passed their exams.

Monthly Program: None

Approval of last month's meeting minutes: Approved.

Approval of Treasurer's Report: David K7MTD Treasurers report was approved on a motion by Paul and seconded by Terry.

Repeater Committee: Paul reported that the 147.04 repeater is down and suggested that the 146.90 repeater be used until the problem is resolved.

HF Committee: No report

Additional Business: Discussion about 2019 budget. Repeater budget: carry over \$1,200 unspent from last year. HF Committee budget \$1,000.

There was also some discussion about the possibility HARC sponsoring vhf transmitter hunt(s) this spring or summer. Paul and David will look into building a small low power 2 meter controlled by a raspberry pi for use as the hidden transmitter.

The door prize, a nifty amateur radio calendar was won by Paul.

Meeting adjourned: 1945 Hrs. The next meeting will be March 11th.

Classified Advertisements

Collins HF 80xx Equipment for Sale

Selling Vietnam war era portable radio set container contents.

Included are two each: HF8054A receiver, HF-8014A transmitter, HF-8064B preselector, HF-8023 1 KW solid state amplifier, HF 8032 power supply, HF 8040A antenna coupler.

One each items: power control panel, jack field plug panel, monitor/switching panel, VOX/Control/Modem panel. set of 6 manuals.

Two antenna coupler control cables and other stuff are included

All transmitter and receiver functions and frequency selection can be controlled through an RS-232 port. I used a laptop computer and it worked great! The control codes are in the included manual set. The HF-8032 amplifier power supplies are for 3 phase. They also work just fine on single phase. This equipment is in Missoula, MT.

If you are interested, please make an offer.

Call Dave at 406 543-73niner fiver K7PGY
