

THE HELLGATE STATIC



January 2010

Skywarn a Success

From Elmer, WG7P

The 11th annual NOAA Skywarn Recognition Day held at the Missoula Weather station was a big success. The Hellgate Amateur Radio Club operated the full 24 hours from 5 PM Friday, December 4 through 5 PM Saturday, December 5. Much of the success was due to the time and effort of Chair Jerry N7GE and to Eric NZ7S prior to the beginning of the event. The weather station purchased a new Titan DX vertical antenna that Eric put together, and he and Jerry erected at the weather station. The duo then tuned the antenna, and got the multiple radio station up and operational.



Friday afternoon we saw Eric NZ7S, Jerry N7GE, Larry K7GIS, Donnie W7XY, Bill W4YMA, Bob N7MSU, Liz WG7E, and Elmer WG7P braving the cold weather to put up the club's beam, running coax, and making

last minute adjustments prior to the beginning of the Skywarn Recognition program. Lewis AC7UZ was inside making sure everything was ready to go and supervising the operation.

This year we had two HF rigs, a computer working Echolink, and a VHF rig operating. Propagation was not our friend, and Donnie



W7XY was not making many contacts as we started the Skywarn program. Kevin W1KGK and Bill

W4YMA continued operation past midnight when Vick K7VK, Steve K7PX and Bob N7MSU took over with their keys for CW. Again, because of propagation, contacts were rather scarce. Lewis AC7UX started his shift at 8 PM with Mike KE7IZG, Paul N7PAS, Michael AE7MH, Eric NZ7S, Dusty W7DGR, and Elmer WG7P giving a hand at making contacts throughout the day. Liz WG7E and Paul N7PAS kept the contact log going. Fortunately, propagation did improve during the day, and we ended with a total of 152 QSO's, about 30 over last year. Out of the 152 contacts, we had made contact with 27 of the 100 of the other NOAA stations participating in the Skywarn program.



The beam was dismantled, radios put away, and all in all the Hellgate Amateur Radio Club had a successful Skywarn program, and are looking ahead to next year. Thanks to all who helped to make this another successful program of the HARC.

Special thanks to John Farey, Les Impressions de Moi <http://lesimpressionsdemoi.printroom.com>, for contributing pictures for the newsletter.

2010 HARC OFFICERS

Before the Christmas Party, elections were held for the 2010 club officers. The results of the elections were: President-Elmer Myers WG7P, Vice President-Eric Sedgwick NZ7S, Secretary-Mike Henry AE7MH, and Treasurer-Jerry Ehli N7GE. Two members of the four member repeater committee were elected for a two year term: Donnie Fort W7XY and Kevin Goffe KE7WR. Congratulations to the newly elected club officers.

Events Calendar

January 1 st	New Year's Day
January 11th	HARC monthly meeting at 7:00 pm, VEC testing starts at 5:30 pm.
February 8th	HARC monthly meeting at 7:00 pm, VEC testing starts at 5:30 pm.
February 27 th	Argus Hamfest - Stevensville starts at 11:00 am. VEC testing available
1 st & 3 rd Sundays	Montana Races Net, 3.947 MHz at 8:00 am http://www.mtraces.org/
Saturday	Montana QCWA net, 3.935 MHz at 8:30 am
Daily	Montana Traffic Net, 3910 kHz at 6:30 pm MDT (00:30 GMT) http://montanatrafficnet.com/
Every Sunday	ARRL Montana Section HF Information Net, 3880 kHz at 8:00 am
Every Tuesday	Coffee at Arby's South, 2:00 pm, give a shout on 147.04 MHz to see if we are meeting.
Every Wednesday	HARC VHF Net meets at 147.04 MHz (+offset) at 9 pm
Every Saturday	"Ham" breakfast, Lucky Strike Casino Restaurant, 7:00 am

Ham Radio Classes Forming Now!

Hellgate Amateur Radio Club will be holding a six week course where you can learn everything you need to earn your Technician (entry level) FCC Amateur Radio License.

Registration is required. Please contact

Kevin Kerr, W1KGK 406-829-4643 or W1KGK@yahoo.com

If you are interested in classes for General and Extra class licenses or you would like to participate in the instruction and presentation of learning materials, please contact Kevin.

Next VEC Testing Session!

The next VE exam session will be held at 5:30 pm January 11th before the meeting.



Hellgate Amateur Radio Club is a 501(c)3 not for profit organization. Information concerning tax deductible donations of funds or equipment, or donations of any other kind, should be addressed to:

Hellgate Amateur Radio Club
PO Box 3811
Missoula, MT 59808-3811

Meetings held 2nd Monday of each month, 7:00 pm at Missoula Fire Station #4, 3011 Latimer off of West Broadway near Quality Supply. HARC members have a chance to win the Door Prize.
You must be present to win!

Visit our web site at <http://www.w7px.org/>

Club Officers & Volunteers

Elmer, WG7P elmerm@hughes.net
President

Eric, NZ7S nz7s@msn.com
Vice President

Michael, AE7MH ae7mh@arrl.net
Secretary

Jerry, N7GE n7ge@bresnan.net
Treasurer

Liz, WG7E lizm@montana.com
Membership

Bob, N7MSU n7msu@arrl.net
Awards

Vick, K7VK k7vk@arrl.net
Exams VE Contact

Mike, AE7MH ae7mh@arrl.net
January Newsletter (rotates monthly)

Mike, KE7IZG .. michael.leary@umontana.edu
Webmaster

Repeater Committee

Eric, NZ7S (2010) nz7s@msn.com
Byron, NN8A (2010) ... arl3051@wildblue.net
Donnie, W7XY (2010-2011) fort@montana.com
Kevin, KE7WR (2010-2011) .. kgoffe1@msn.com

Amateur Radio Bill Passes Senate, Moves to the House

On Monday, December 14, S 1755 -- The Amateur Radio Emergency Communications Enhancement Act of 2009 -- passed the Senate by unanimous consent; the bill now goes to the House of Representatives for consideration. Sponsored by Senator Joe Lieberman (ID-CT), and Senator Susan Collins (R-ME), S 1755, if passed, would direct the Department of Homeland Security (DHS) to undertake a study on emergency communications. S 1755 points out that "There is a strong Federal interest in the effective performance of Amateur Radio Service stations, and that performance must be given -- (A) support at all levels of government; and (B) protection against unreasonable regulation and impediments to the provision of the valuable communications provided by such stations."

Members of the Senate Homeland Security and Governmental Affairs Committee considered S 1755 on December 10. After it passed through Committee, it was placed on the Senate's calendar to be voted on. "We are grateful to Committee Chairman Lieberman and Ranking Member Collins for sponsoring the bill and arranging for its swift consideration and passage by the Senate," said ARRL Chief Executive Officer David Sumner, K1ZZ.

Similar in language to HR 2160 (also called The Amateur Radio Emergency Communications Enhancement Act of 2009 that was introduced this past April by Representative Sheila Jackson-Lee [D-TX-18]), S 1755 calls on DHS to undertake a study on the uses and capabilities of Amateur Radio Service communications in emergencies and disaster relief and then to submit a report to Congress no more than 180 days after the bill becomes law. The study shall:

Include a review of the importance of Amateur Radio emergency communications in furtherance of homeland security missions relating to disasters, severe weather and other threats to lives and property in the United States, as

well as recommendations for enhancements in the voluntary deployment of Amateur Radio licensees in disaster and emergency communications and disaster relief efforts and improved integration of Amateur Radio operators in planning and furtherance of the Department of Homeland Security initiatives.

Identify impediments to enhanced Amateur Radio Service communications, such as the effects of unreasonable or unnecessary private land use regulations on residential antenna installations; and make recommendations regarding such impediments for consideration by other federal departments, agencies and Congress.

In conducting the study, S 1755 directs the Secretary of Homeland Security to "utilize the expertise of stakeholder entities and organizations, including the Amateur Radio, emergency response and disaster communications communities."

S 1755 makes note of the fact that Section 1 of the Joint Resolution entitled Joint Resolution to Recognize the Achievements of Radio Amateurs, and To Establish Support for Such Amateurs as National Policy -- approved October 22, 1994 (Public Law 103-408) -- included a finding that stated: "Reasonable accommodation should be made for the effective operation of Amateur Radio from residences, private vehicles and public areas, and the regulation at all levels of government should facilitate and encourage amateur radio operations as a public benefit." The bill also pointed out that Section 1805(c) of the Homeland Security Act of 2002 (6 U.S.C. 757(c)) directs the Regional Emergency Communications Coordinating Working Group of the Department of Homeland Security to coordinate their activities with ham and Amateur Radio operators among the 11 other emergency organizations, such as ambulance services, law enforcement and others.

CHRISTMAS PARTY ENJOYED BY ALL

The evening of December 14th was enjoyed by a total of 37 people who attended the Christmas Party at the Eagle's Lodge in Missoula. It turned out to be a nice place with a separate room, rest rooms, coat rack and plenty of space. The meal was well prepared, and the service was great. The party gave hams and their guests an opportunity to socialize and enjoy the evening.

John Vugteveen W7KNT gave a presentation of his Dxpedition to the Kingman Reef/Palmyra Atoll in 1993. His slides were great, showing all aspects of his Dxpedition and giving those present a good idea of what is involved with a Dxpedition. Some people were giving John encouragement to make another Dxpedition so he could give the Christmas presentation next year.

The gift exchange went well with many good and interesting gifts. Although Santa wasn't present the Christmas spirit was felt by everyone.

Getting Back on HF with Code

from KE7WAV on January 2, 2010, www.eham.com

I learned code as a boy but left it for years. Then before I got my general this year (2009), out of pride more than anything else, I picked it up again. I even managed to slowly work my way up to about 13wpm. It felt good for the few months I was on the air. Then my wife and I had our fourth child; which was wonderful! A new baby, for me, means a lot of time at home with the radio off. That little baby is worth every minute away from the radio.

After a month and a half I ventured back to SSB but just for a few brief QSOs. There I sat holding a baby in one arm and bouncing up and down (trying to keep her asleep) while holding the microphone and a pen in the other hand. Not the most ideal situation for a QSO let alone tapping out a QSO in Code. Bouncing up and down didn't help my fist on the old straight key!

Well to make a long story short after about four months I tuned up my old boat anchor and decided to break out my key. I had an hour with both hands free and I intended to enjoy it on 40 meters CW. I found a QSO coming in strong and I sat down to copy and maybe tail end for a QSO. Instead what I found was that I had forgotten a lot. I could copy the characters but they were coming way too fast, when only four or five months before I could copy that same speed with ease. It shouldn't have been a surprise but it was intimidating and frustrating. I decided to try and find a slower QSO. No luck. I tried another QSO and still my copy was horrible. I turned the radio off and just look at it. How had I forgotten so much?

For a couple of weeks I just kept to SSB (I was frustrated and embarrassed). Then a neighbor who has been bitten by the Morse code bug called me and asked if I could practice with him. I wanted to help but now I felt a bit of uncertainty. "Sure," I told him, "you pick the day." A SKED was set for 7.120 that Sunday night. I went home and got out my ARRL code practice CDs and went to work. I pulled up an old code program for the computer, and put in a little more practice.

Sunday night came and I called my Dad, N3DVI, to join in; that way if I totally lost it my Dad could help my friend. I copied as best I could and it turned out okay. But still my copy was strained and hit or miss. We agreed to meet on air again and for the first few minutes of the next QSO I was wondering if I should just tell my friend I couldn't help. Each character was grudgingly recognized and recorded, but it was a painful experience. Yet by the middle of the QSO something clicked in my brain. Now I wasn't grasping at individual characters but the sweet music of the code was just pouring itself out on to the paper. It felt fantastic!

The point is I learned a few things along the way I thought I might share. I am not some Code expert or authority, but maybe my words will help someone else out there when they are sitting looking at the radio and tempted to hide their key and never go back to Morse Code.

It takes work

Just like most things worthwhile it does take work to learn code. (Or relearn code) A friend of mine once wrote, "Happiness is cleverly nested in the pursuit of predetermined worthwhile goals." Work hard and have fun, sure it will be hard but keep trying it will be worth it.

A friend goes a long way

If you can work with a friend it makes learning the code easier. Try joining FISTS or SKCC or some other group and work with some of their Elmers. Just talk to somebody both off of and on the air.

Just do it

No matter how many computer programs or CDs you use nothing equals getting on the air. Nothing will increase your speed or your enjoyment more than getting on the air and meeting new people. If you know the characters you have enough to try copying other people. Once you can do at least 5wpm than just get on the air and do it!

If you don't use it, you'll lose it

You have to stay in shape with your brain just like with any other muscle. Use the code and often and it will stick with you.

This is what I learned and I hope it helps someone else. If you are feeling a bit nervous about that first CW contact, or the first one in a long time, remember you're not the first person; I've been there before, and so have countless others no doubt. I hope to hear you on the bands and maybe see your QSL card on my wall with the memory of another great CW contact!

HELLGATE AMATEUR RADIO CLUB

MINUTES December 14, 2009 MEETING

MEETING called to order at 5:45 PM by ELMER WG7P at the Eagle's Lodge

INTRODUCTIONS were made with 27 member present plus 10 guests

SECRETARIES REPORT—ELMER WG7P — **Motion-Paul N7PAS, 2nd John W7KNT** to approve November 9, 2009 minutes as presented—**Motion passed**

TREASURERS REPORT—JERRY N7GE—**Motion Donnie W7XY, 2nd Norman AE7NW** to approve the Treasurer's report as presented—**Motion passed**

COMMITTEE REPORTS

NET OPERATORS—12/16 Elmer WG7P, 12/23 12/30
1/6 Paul N7PAS 1/13

Elmer stated that we would cancel the net on December 23 and 30th as we have no operators.

ELECTIONS—Bob N7MSU—There were no nominations from the floor and the Bob announced the results after counting the ballots. President-Elmer WG7P, Vice President-Eric NZ7S, Secretary- Mike AE7MH, Treasurer-Jerry N7GE and 2 year term on repeater committee, Donnie W7XY and Kevin KE7WR

SPECIAL PRESENTATIONS—ELMER WG7P—Plaque presented to Jerry K7IMZ for being a member of HARC for 50 years, Jerry N7GE was presented a plaque for his outstanding dedication and contributions to the HARC, especially his efforts in obtaining 501 C-3 non-profit status for the club. Lewis AC7UZ was presented a plaque for 100 % participation at all events and meetings during the 2009 year.

ANNOUNCEMENTS

Elmer WG7P Thanked all members who served as chair of club events and activities and to those who assisted.

MOTION TO ADJOURN—**Motion Jerry N7GE 2nd Donnie W7XY** to adjourn—**Motion passed**

The annual Christmas Party followed the meeting. The meeting and dinner was held at the Eagle's Lodge of Missoula. John W7KNT presented the program after dinner showing slides of his Dxpedition to the Palmyra Atoll and Kingman Reef in the South Pacific



Customize hats, coats, vests and more with the HARC logo and your call sign. The possibilities are endless!

Equipment For Sale:

● Yaesu FT-920 HF + All Mode Transceiver. Covers 160 through 6 Meters (continuous receive 100khz-30Mhz and 48-56Mhz), 100 Watts Output, Scanning, Dual Watch, built in antenna tuner, digital voice recorder & electronic memory keyer. Has optional YF116C 500Hz CW filter installed. Like new condition, non-smoker, with original boxes, manual, dc cords and hand mic. \$840.00

● ICOM IC-756PRO HF/50Mhz All Mode Transceiver. DSP digital IF Filter with 41 selectable bandwidths, 5" color LCD spectrum scope, covers HF and 50 Mhz bands with continuous receive .03-60 Mhz. 100 watts output, memory keyer, analog & digital meters, dual watch, and built in antenna tuner. Like new condition, non-smoker, with original boxes, manual, dc cords and hand mic. \$950.00

● Bird 43 Wattmeter, with rf sampler, Type N connectors, with dummy slug. \$130.00

● Ameritron RCS-8V Remote Coax Switch, new in the box. \$150.00

● Outbacker OB8-HP, Mobile antenna 75-10 meters, High Power 500 watts, 6' tall. \$220.00

● Rohn SBH25G, 3' 4" Hinged Short Base NIB Base section for embedment in concrete. Hinged connection to bottom tower section. \$106.00

● Rohn WP25G Work Platform NIB, snaps into place at any level, no bolts required. \$93.00

● Contact John Vugteveen W7KNT at 777-5122 or cell 381-1415 for further information or e-mail johnw7knt@marsweb.com

● I am looking for a buyer for a ham radio set up I have.

- - Yeasu FT 757 GX II
- - Astron RS-35M power supply
- - Bencher YA-1 low pass filter
- - MFJ 949 D tuner
- - 6 Band Butternut HF 6V-X antenna
- - transmission cable

● From what research I have been able to do, the whole set up is worth about \$800 used. It has been used very little since I got it new. Would like to see \$385 for all of it.

● Have cleaned everything up real good. Original boxes and all of the manuals. Might you know of someone who might be interested. This would be an excellent rig for someone getting into ham radio.

● Todd Webb, Townsend, MT
● 406-266-3185 or todd@imt.net

Propagation de K7RA

Here we are on the last day of the year, with finally some very positive indicators for Cycle 24. Except for Christmas day, since December 9 sunspots have been visible every day. Average daily sunspot numbers for the week December 24-30 were 12.9, an 18.5 point drop from the previous week, which was a 10.3 point rise from the previous week, December 10-16.

Average daily solar flux dropped from 82.8 to 76.2 from the December 17-23 reporting week, but the December 30 forecast from the U.S. Air Force predicts a solar flux value of 79 from December 31 to January 3, 80 for January 4-9, and 85 for January 10-18. They also predict a steady and stable planetary A index of five through February 13. Geophysical Institute Prague predicts quiet for the first week of January. You can get an update on the Air Force/NOAA prediction after 2100 UTC at, <http://www.swpc.noaa.gov/ftpmenu/forecasts/45DF.html>.

Since December 26 we've been blessed with new sunspot group 1039, which is now just past the zero degree meridian, referenced to Earth. This is the spot in the center of the solar image. This is the sixth new sunspot group to emerge in December.

After today we will know the three-month moving daily sunspot average centered on November, and it looks close to the average centered on August, 2007, which was 10.17. The moving average has not been above ten since then. The daily average for the month of December should be close to 15.7, the highest monthly average since March, 2008.

A number of sharp-eyed readers caught the major gaffe in the last bulletin, when I dozed off and with my fingers on autopilot I typed Spring Equinox when I should have said Summer Solstice. Needless to say, Spring is not six months off. The Vernal (Spring) Equinox is only 79 days from today. Thanks to (in order of notification) N5UWY, WE5I, KW6G, KF7FIU, W3DM, N0LNO, and WA3VKG for noticing and not having too much fun at my expense.

Joe Reisert, W1JR, an exceptional low band DXer sent some comments about the solar minimum. I commented that the exceptionally quiet conditions are remarkable, and may partially make up for a lack of solar activity. At least we aren't bothered by large flares.

Joe responded, "I really don't think the low bands are that improved over times when the sunspots were there. Yes, it was nice to work TX3A and K4M on 160 meters for new ones but I still can't get JT1CO to hear me! Sometimes JAs spot me on 160 meters but no JAs call me! Except for early last February when one morning I worked 7 JAs (!) in a row starting at my sunrise (!), I haven't seen any really great Asian openings. I guess I just have to hang in there. I did land VK9XX on 80 near our sunset for number 341 about a month ago. That was a real thrill as he was only working Europeans and somehow I broke the pile up."

Rod Vorndam, K9ROD of Rye, Colorado wrote last week: "The past couple of weeks have seen openings to Europe at sunrise on 20 meters. This Gray Line Effect has made for several strong contacts. I worked I2OHO (Italy), ON5CD (Belgium), HB9RDE (Switzerland), and received several others including OZ1IKY (Denmark) and S51ZZZ (Slovenia). These are my first European contacts into the Western part of the US."

Mark Lunday, WD4ELG of Greensboro, North Carolina has a nice blog with observations on DX from his new QTH. Read it at <http://wd4elg.blogspot.com/>.

Mark wrote, on Christmas Day: "One thing I have noticed recently with the slight up tick in solar activity, is that 40 meters now reminds me of 20 meters during the solar peak. Even during daylight, there is DX open to somewhere on 40 in winter months. The exception is high noon. But mornings and late afternoons have LOTS of activity on 40."

"This afternoon, I copied HS0CZY/4 on 40 meters about an hour before my sunset. The last time I remember something like this was 1 January 2005 when I worked YB1A on 40 CW late in the afternoon."

"On Monday at 0100 local, I heard a fluttery signal RST 529, I copy JA7DLE, call him twice, he gets my call, BAM he is in the log. I have ONE JA QSO ALL-TIME on 80, and this is my SECOND EVER on 40. This is with a single vertical and 100 watts. What is neat about this is that it happens at 0100 local while I can hear EU stations 599 AND South Cook Islands DXpedition 559. So I am copying Pacific, JA, AND Europe at the same time. When the Sun throws lemons, make your own DX/lemonade."

"I heard 4S7NE on 40 CW at 2030 local, just after his sunrise. I have tried to hear Nelson since I worked him on 17 meters back in 2005, but I have never heard him since. Amazing!"
Thanks Mark.

Anniversary of First EME on January 10th

By Randall Noon, KC0CCR

“Sending a radio signal to the moon and back was the first time in history that mankind had in some physical way ‘touched’ the moon, or any other celestial body outside the atmosphere of the earth.”

Just 41 years and 24 days after the first radio messages traversed the Atlantic Ocean, at 11:58 a.m., E.S.T., January 10, 1946, the first ever earth-moon-earth radio signal bounce was accomplished. The effort was part of a military project of the U.S. Army Signal Corps, dubbed project Diana, the Roman moon goddess. Sending a radio signal to the moon and back was the first time in history that mankind had in some physical way “touched” the moon, or any other celestial body outside the atmosphere of the earth. It also proved that radio signals could pass through the earth’s ionosphere, that they could be used for communication to and from places outside the earth’s atmosphere, and that the moon itself could be used as a passive communications reflector.

While the idea had been suggested in 1940 by Mr. W. Bray of the British General Post Office, the first actual moon bounce signal was generated at a laboratory at Fort Monmouth in New Jersey. The transmitter was modified radar set from WWII, an SCR-271 unit. This provided 3000 watts at 111.5 MHz, or 2.7 meters, sent out in 0.25-second pulses. The antenna was a “bed-spring” dipole array. This antenna arrangement provided 24 db of gain. The high power and gain was certainly needed. The moon is a poor reflector of signals, perhaps returning 7 to 12% of the incident signal. Coupled with the distance to and from the moon, and attenuation effects by the earth’s atmosphere, the path loss was estimated to be from 250 to 310 db.

The transmitted signal took about 2.56 seconds to make the round trip, which put the moon at a distance of about 238,000 miles from the transmitting station. The receiver had to be adjusted about 300 Hz, to account for the Doppler Effect due the moon’s motion and position at the time. Because the antenna’s elevation angle was horizontal, the signal could only be transmitted when the moon passed through a 15-degree wide window at moonrise and moonset. This allowed about 40 minutes of time to get the job done. Having shown that the bounce was possible, a little while later the U.S. established an RTTY communication link between the Navy Headquarters in Washington, D.C., and Pearl Harbor using EME.

As the reader may suspect, an amateur operator was involved in this event, Lieutenant Colonel John DeWitt. Mr. DeWitt had been an amateur since 1921 he was 15 years old.

He then went on to build his hometown’s first radiobroadcast station at the ripe old age of 16. By 1940, he was listening to radio noise coming from outer space, using built receivers he built himself. After his military stint, Mr. DeWitt returned to his hometown of Nashville and become president of a commercial radio station, WSM. He passed away in January 1999. Perhaps some readers worked him as N4CBC when he was still active on the bands.

Seven years later in 1953, the first official amateur radio operators accomplished an earth-moon-earth signal bounce on the 2 meter band. The honor of this accomplished goes to two hams: Ross Bateman, W4AO, and William Smith, W3GRP. Like LTC DeWitt’s accomplishment, however, this signal was sent and received by the same station. On July 21, 1960, a true two-way earth-moon-earth bounce was achieved on 1296 MHz between W6HB, the Eimac Radio Club, and W1BU, the Rhododendron Swamp VHF Society.

“Now, 64 years later after the first EME bounce, amateur radio operators bounce signals off the moon for sport on weekends with 300 watts or less, and sometimes even as low as 100 watts on home built antennas.”

Now, 64 years later after the first EME bounce, amateur radio operators bounce signals off the moon for sport on weekends with 300 watts or less, and sometimes even as low as 100 watts on home built antennas. Bounces are being done on nearly all the amateur VHF, UHF and microwave bands: 6, 2, 1.25, 0.70, and 0.23 meters, using a variety of modes. This includes SSB voice, one of the family of WJST programs such as JT65, a multi-frequency shift-keying computer based mode originally developed for meteor scatter work, and of course, always reliable, CW.

By the way, the record for the lowest power, successful two-way EME was set this past summer on June 29, 2009, aka World Moon Bounce Day, to celebrate the first landing on the moon by Apollo 11. The University of Tasmania used a 26-meter dish to send a data signal via the moon to a similar dish at the Dwingeloo Radio Observatory in the Netherlands. The transmit power was 3 milliwatts!

The International EME Contest for the year just finished up this past December, and there are even clubs whose main purpose is EME communication. Recently, a German group even bounced signals off of Venus. Like the slogan says, “Yes, we do that!”

It Seems to Us: Not an Emergency Radio Service?

By David Sumner, K1ZZ, ARRL Chief Executive Officer

January 01, 2010

The FCC raised a few eyebrows by including the following sentence in its Public Notice DA 09-2259: "While the value of the amateur service to the public as a voluntary noncommercial communications service, particularly with respect to providing emergency communications, is one of the underlying principles of the amateur service, the amateur service is not an emergency radio service [emphasis added]."

We might take umbrage at that, but the fact is that you'd be hard pressed to find a definition for "emergency radio service" -- or any other radio service that would qualify as one. The ITU Radio Regulations make no use of the term; rather, the ITU defines "safety service" as "Any radiocommunication service used permanently or temporarily for the safeguarding of human life and property" and offers radionavigation and other safety services a bit of extra protection against harmful interference. The ITU recognizes that a wide variety of radio services including the amateur and amateur-satellite services play a role in public protection and disaster relief (PPDR).

Even the FCC itself no longer uses the term "emergency radio service." There was once a Special Emergency Radio Service (SERS) but it disappeared a decade ago in a consolidation of Private Land Mobile Radio services. SERS spectrum is now part of the Public Safety Pool.

So, let's not waste a lot of energy worrying about what the FCC thinks we are not. Like many other radio services, the amateur service sometimes provides emergency communications. That's not our day-in, day-out function, but neither is it the daily function of any other radio service that's defined in the FCC rules. The point that the FCC presumably was trying to make is that we are not just an emergency radio service. We have a much broader mission as "a voluntary, non-commercial communication service authorized for the purpose of self-training, intercommunication and technical investigations carried out by licensed persons interested in radio technique solely with a personal aim and without pecuniary interest." Our "self-training, intercommunication and technical investigations" are what create our value to the public. That value doesn't come from our licenses; it comes from the knowledge we have acquired, the skills we have developed, and the stations we have constructed in pursuit of our "personal aims" in the field of radiocommunication.

The result is a radio service that is uniquely equipped to serve in emergencies. If we're not an "emergency radio service" it is only because we are so much more.

Watch the Band Edges!

Following the relocation of most broadcasting stations from the 7100-7200 kHz band there has been a significant increase in DX activity by US amateurs on 40 meter phone. Judging from what we're hearing and what others are reporting from around the country, a reminder about band edges is in order.

When in SSB mode, most transceivers display the frequency of the suppressed carrier. This can be a bit confusing, because ideally your station isn't emitting any energy at all on that frequency. All of your transmitter power is going into the voice passband that extends roughly from 300 to 3000 Hz on one side or the other of that frequency.

The bottom edge of the US phone band for Amateur Extra and Advanced licensees is 7125 kHz. Without getting into hair-splitting debates about how wide your SSB signal might be compared to others, if you're operating on lower sideband (LSB) with a carrier frequency below 7128 kHz you're out of the band because some of your transmitter power is below 7125 kHz. For General licensees the band edge is 7175 kHz, so the lowest carrier frequency a General can use on LSB is 7178 kHz. At the top edge, as long as you're on LSB the situation is different; if you're confident that your opposite sideband and carrier suppression are up to snuff you can snuggle up to the band edge of 7300 kHz.

Two other bands where "falling off the edge" is too common an occurrence are 20 and 17 meters, and here -- because upper sideband (USB) is the norm on these bands -- the problem occurs at the top end. Carrier frequencies above 14,347 kHz and 18,165 kHz respectively are verboten. On these bands the lower band edge is not generally a problem because on USB, the carrier and lower sideband are suppressed.

As station licensees and control operators we are responsible for the proper operation of our stations. If a DX Cluster spot lures us out of the US phone band that's our fault, not the spotter's. If a DX station is on 18,160 kHz and is listening "5 to 10 up" it's our fault, not his, if we go up more than 5. And as long as we're talking about 17 meters -- a great band, by the way -- US amateurs must remember that RTTY and data modes are not allowed above 18,110 kHz, even if a RTTY DX pileup extends above that frequency. And remember, too, that if you're generating a RTTY or data signal by injecting audio into an SSB transmitter your actual operating frequency is different from what's shown on your display. How much different? Only you and your software know for sure!

Youth@HamRadio.Fun: A Bird's Eye View

By Duncan P MacLachlan, KU0DM, ARRL Youth Editor

December 30, 2009 Satellites (also referred to as "birds") are nothing new to the science or Amateur Radio community. Since the very first satellite, Sputnik 1, went into orbit in 1957, amateurs have had a special interest in satellites. Ham radio operators were there at the very beginning, tuning in across the globe to try and hear Sputnik's faint beeps. The potential of utilizing satellites for communications was realized very early on, when the United States used a satellite to relay Christmas greetings from President Eisenhower in 1958. The first commercial satellite was launched in 1962 to be used by several companies for direct relay communications.

Since then, there has been massive interest in satellites for both commercial and diplomatic uses. But soon after Sputnik, hams had an idea to utilize satellites not for personal gain, but for fun. After much collaboration between hams on the West Coast, the ARRL and the Air Force, OSCAR I became the first amateur satellite to enter Low Earth Orbit (LEO) in 1961. What started as a simple beacon quickly turned into a transponder in OSCAR III, and soon a whole new sub-set in ham radio.

After a large display of interest in amateur satellites, an organization was born that would help to facilitate amateur satellites and lead the new found capability forward: the Radio Amateur Satellite Corporation -- AMSAT -- was chartered in 1969. Since then, the number of LEO amateur satellites has sky rocketed, with thousands of hams using them on a daily basis.

Amateur satellites don't just appeal to the newly licensed Technician; they have a wow factor that's unlimited and almost unmatched. Whether you're 8 or 80, it seems that using a repeater hurdling through space has an irresistible draw. But it seems that very few have realized the potential that these birds hold for attracting new blood to the hobby. As an Extra class licensee who's been around the block once or twice (even at my young age), I still find huge interest in listening to a satellite as it comes into range.

Hearing a packet burst containing the ID -- followed by a frenzy of scratchy voices fading in and out exchanging a signal report and grid square -- is an experience unparalleled in the amateur world. Listening to a satellite is one experience, but jumping into the fray of a 10 or 20 minute contest (varying on the length of the pass) is another experience. Even with the knowledge in the back of your head that you're just using a repeater, the fact that it's orbiting the Earth makes hearing a station return just as rewarding as working DX. For kids of any age, seeing a satellite is a very cool experience; however hearing one is entirely different.

While there is a definite learning curve to getting on amateur satellites, there is much helpful information on the Internet with easy solutions to gaining access to the birds. You might make it a New Year's resolution to gain satellite capability and show it off to your children, grandchildren or even the neighbor kids. I have yet to try it on young blood myself; however, as a typical American teenager, I'm betting that the birds have a mass of potential for recruiting that we have yet to tap into.

A Resolution for the New Year

It's that time of the year again! Instead of making your New Year's resolution something hard to stick to, such as cleaning the garage, why not make your resolution one that you'll look forward to carrying out? Why not make your New Year's resolution one you can have fun with -- and benefit Amateur Radio?

I have two propositions for a New Year's resolution. The first is that you try something new. Regardless of how long you've been licensed, there is something in ham Radio you have yet to try. Whether it is Morse code or meteor scatter, take a leap of faith and try something that you know absolutely nothing about. The second proposition is an easy, but important one: Make one contact a day, using any mode you wish. Whether it's on a repeater or 20 meters, make one contact each day for the entire year. The most important part of Amateur Radio is using what we have. If you can make one contact a day, it not only preserves our spectrum, it is a display of our passion for Amateur Radio.

Thanks for reading!

73,

Duncan

AWARDS PRESENTED AT THE ANNUAL CHRISTMAS PARTY

One of the highlights of the Christmas Party was the presentation of several awards. Jerry Nelson K7IMZ was presented a plaque for his 50 years of contributions to the Hellgate Amateur Radio Club. Jerry joined HARC in 1959 right after he received his first amateur radio license. Jerry has served several years as President, Vice President and Secretary-Treasurer of HARC. Jerry also began calling the Missoula Area Emergency net (3910 kHz) that was not only the net frequency, but also a continually monitored "calling" frequency for hams across Montana, Idaho, and Eastern Washington. Jerry remains a regular on the Montana Traffic Net, the Noon-time and Jackalope nets, and the HARC Wednesday night VHF net.

Jerry Ehli N7GE was also presented a plaque for his dedication and contribution to the Hellgate Amateur Radio Club. Jerry has served as president for several years, is currently treasurer, coordinates all equipment sales and auctions, takes the photos, brings equipment to the meetings, places info on our web site, and collects the auction money. Jerry also serves as chair of the Grizzly Triathlon, Missoula Riverbank Run, YMCA Triathlon, and Skywarn recognition day. He is also one of the first contacts during NOAA weather emergencies. He is one of volunteer examiners that gives radio license examinations prior to each meeting and acts as the coordinator when Vick K7VK is absent.

One of Jerry's major contributions to HARC that will have a lasting impact on the club was his untiring efforts in obtaining the 501 C-3 non profit tax exempt status for the club. This took a great deal of time, phone calls, submission of forms and applications, and just plain hard work.

Last but certainly not least, Lewis AC7UZ was presented a plaque for being the only member of HARC who has participated in all 14 of the club's activities and events, served as chair of 2 events, and has attended all 12 regular club meetings during 2009. Lewis also served as a volunteer examiner at all of our testing sessions.



Is amateur Radio important to you? Do you know the threats to our hobby?
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