

October 2013

(www.k7id.org)

P.O. Box 1765 Hayden, ID 83835-1765

REGULAR

CLUB MEETINGS:

Monday, Oct. 14, 7:00 p.m.

Search & Rescue Bldg,
Hayden, Idaho

Topic: Constructing Circuit
Boards

Presenter: Allan Campbell,
KE7DFT

Refreshments: Randy Carlson,
KB6YAV

Monday, Oct. 14, 5:30 p.m.

ARRL VE Test Session
Same Location As Above

Monday, Nov. 11, 7:00 p.m.

Search & Rescue Bldg,
Hayden, Idaho

Topic: TBA

Presenter: TBA

Refreshments: Danel Wilkins,
KE7UYQ

Monday, Nov. 11, 5:30 p.m.

ARRL VE Test Session
Same Location As Above

Upcoming Events

KARS Christmas Party

December 9, 2013

Shrine Club of Coeur d'Alene
Event Center

Lancaster Road

Hayden, Idaho

President's Column:

Autumn has officially arrived. Not only has the calendar indicated fall has arrived, but the cooler temperatures throughout the day are convincing. The first morning temperature below 32 degrees cannot be far off. Still procrastinating about those outdoor projects? Time is running short to complete them.

Efforts are moving forward on the new UHF / VHF repeater system. The major pieces for the system have been ordered and many of them have been delivered. There is hope that construction of the new platform on the tower at Canfield maybe started sometime next week. There are also rumors that work may begin on improving the road to Canfield. For those of you who have not had the experience of going to the repeater site on Canfield Mountain, the road is quite crooked and full of large ruts. When you are told it will take an hour to go five miles, they are not kidding. It takes an hour. Any improvement would be welcomed. There should be more details available at the meeting in October.

How far we are able to go with the installation of the new system this fall will depend upon the cooperation of the weather. An early snow fall will shut us down with little accomplished.

For those new to KARS and as a refresher for others, we need to remember that we are guests at both of the repeater sites. We have a Memo of Understanding with the state of Idaho for the Mica site and one with Kootenai County for the site on Canfield Mountain. In each case, we are required to follow good engineering practices, and maintain a clean and tidy installation.

For the Canfield site our only payment to the county is our maintaining the grounds within the fenced enclosure. This includes cutting the weeds and trimming the bushes. We accomplished this towards the end of June and the place looked great. Another trip will have to be made this fall to control what has grown over the summer. It is important that we continue to perform this task in a timely manner.

In the case of the Mica site, we are responsible for maintaining the building. A crew did go to Mica on September 21st and did some building maintenance. The building is quite fragile and some cracks are forming between the cement blocks. Caulking was used to close these cracks. There was also some work done on controlling the flora around the building. In addition, initial prep work for our new

installation was accomplished. The antenna location was moved and the antenna was raised 8 feet. Other steps were taken inside the building to improve our equipment installation. A more detailed report will be given at the next meeting. Pictures taken that day can be seen later in this newsletter.

The bottom line is we need to be good “guests”, if we want to continue to use the facilities.

At the September meeting the topic of relocating our Thursday coffee group was discussed. Since the meeting, Tim Ryan, a resident at Gold Spike and a friend of KARS has made arrangements with the owners of Golden Spike to sponsor our coffee group. Once again we are guests in this building. We need to continue to be good “guests” and give Tim our utmost cooperation in leaving the area clean when we leave.

It speaks well for our group that some many people and organizations are willing to work with us. Keep up the good work.

73, Bonnie

KARS Meeting Minutes recorded 09/09/13

The meeting was called to order at 7:00PM by Bonnie Patterson, KG6QQM, Club President. The first order of business was the Pledge of Allegiance, led by Bob Rosie, W7GSV.

A total of 47 persons were in attendance, including six visitors. Two Amateur Radio exams were administered prior to the Club meeting by the KARS VE team, and both parties passed, General Class. Three new Club members were added to the roster.

Club President Bonnie, announced that Rick Van Landingham, KI7I, has been appointed as Trustee for our K7ID Club Call Sign, and Control Operator Supervisor for the Club Repeaters. Rick succeeds Jerry Hooper, KA7RNX, who has stepped down from the Trustee position as he will be relocating out of the local area.

Treasurers Report: Club Treasurer Pat Patterson, W7SGS, reported the following funds on hand – Savings, \$6,865; Checking, \$2,739, and Petty Cash, \$80; for a total of \$9,684. The funds that had mysteriously disappeared from KARS accounts have been restored, and a bank investigation is in progress.

The Club has selected the Shrine Club of CDA Event Center, located on West Lancaster Blvd. for our Christmas Party location. This arrangement was facilitated by Ted Graff, K7TED, who is a Shrine member. The Christmas Party will take place on 12/09, at 6:30PM. Additional information will be provided to Club members in upcoming Newsletters. Ham testing WILL take place in December, beginning at 5:30PM, at the KC Search & Rescue building (our normal Club meeting location).

The minutes from the August Club meeting were approved as presented in the Propagation (Club Newsletter).

The main event of the business meeting was a presentation and discussion of the Repeater Plan which has been developed by the Club Repeater Committee. [The committee includes the following members: Allan Campbell, KE7DFT; Dale DuRee, KE7VMN; Gary Holland, N7DHL; Bob Kesson, K7CGA; Bob Schaff, KF7VIH; and Rick Van Landingham, KI7I. Rick was added to the Committee when he was appointed as the Club Call Trustee]. The discussion was facilitated by N7DHL.

The principal points brought up were those captured during the August meeting and discussion, as follows: Will repeater coverage improve if the new plan is implemented; Is there an unobstructed Link Path between Mica Peak and Mt. Canfield; Will additional UHF presence on Canfield desense the UHF receiver(s); Is the Proposal a good value; and Are the expected results worth the expense.

Gary pointed out that the “Proof of Concept” proposal proposed last month was not “actionable, as proposed”, because Kootenai County (our host at Mt. Canfield) would not allow non-Club equipment or equipment that does not meet current Kootenai County electrical/communications standards to be installed and tested at the site.

Coverage maps were shown for the Mica Peak and Canfield sites, and several Club members pointed out that they have much better access to one (but not both) sites. This leads to the conclusion that having the two sites

linked together (VHF on Mica, UHF on Canfield) is a good strategy.

A "link path analysis" was conducted (with topographic mapping) to ensure there was an unobstructed path between the two sites.

The UHF coverage of Mt. Canfield was tested as follows: Allan used a low powered HT to contact the Canfield Control Channel, from his home in Post Falls, also as a mobile in CDA. Rick used the same technique to make contact from Spirit Lake.

The Canfield UHF Desense problem would be addressed by mounting antennas with vertical separation; and by situating gain antennas so that the companion antenna(s) are located in signal nulls.

After the above items were thoroughly discussed, attention was turned to "Advantages vs Disadvantages", in view of the estimated \$4,000 cost. Ideas included the following: The proposed system would be well suited to linking with other repeaters, using microwave channels available via Kootenai County. The funds could also be used for other purposes. Is the true cost \$4,000, or is this just the beginning. Are the controllers proposed by the Repeater Committee the latest available, as they run on "Windows XP". Does the proposal include adequate control design. After all of these ideas had been discussed, President Bonnie asked for a motion to adopt the plan, as proposed.

Dave Boss (KF7YWR) moved that "The Club Fund the Proposed Repeater System for \$4,000. The motion was seconded. Those present were then polled by a show of hands. The poll results were, 38 Aye, 3 Nay.

Nominating Committee: The Club Constitution has provision for a Nominating committee to facilitate selection of future Club Officers. The Committee members are chosen as follows: 1 is appointed by the President; 1 is appointed by the current Club Officers; and 1 is elected by the Club Membership. Nominating committee members are: Ed Stuckey (AI7H), appointed by President; Allan Campbell (KE7DFT), appointed by Club Officers; and Dave Boss (KF7YWR), who volunteered and was accepted as the Club Membership appointee. The Committee will be working on a proposed slate of new officers over the next month.

Mica Peak Repeater Site MOU with Idaho Bureau of Homeland Security: The MOU is reviewed annually, and the current MOU will expire on 09/30/13. President Bonnie asked for Club approval to renew the MOU for another year. So moved by Todd Silk (AD7VB), and seconded. During brief discussion, it was proposed that we attempt to extend the term of the MOU to two years. In view of the short time before renewal, it was agreed that the current MOU should be kept in place. By voice vote, those present passed the motion.

Weekly Coffee at Golden Spike Community Center: Although not an official Club activity, a group of Club members and spouses frequently attend "Coffee" at the Golden Spike on Thursday mornings. The Golden Spike has been gracious and allowed us to use their Community Center for the past three years, with the only restriction that someone who lives in the Golden Spike development must "sponsor" the event. Our sponsors have been Club members Dale (KI7PH) and Paula (KC7RIC), who have generously donated their time by going in early to make coffee and staying on site as long as the coffee gang is there. After three years, Dale and Paula would like to have some time off. As an interim measure, Tim Ryan (a Golden Spike resident who is interested in Amateur Radio but not licensed, or a member of the Club) has offered to act as the "sponsor" for Thursday Coffee. But the Club needs to find a new location for the weekly event. During brief discussion, it was noted that people come from great distances to attend the event, so there is no "central" location available.

Equipment Inventory: President Bonnie is trying to get a complete list of Club Assets. If you have any Club equipment, please contact her so that she can add it to the list.

Additional Announcements:

KARS Northwest Traffic Net (NWTN), meets every day at 6:30PM on the KARS Repeater, 146.98, PL 127.3 (the Mica Peak Repeater site).

The Washington State ARRL Convention (aka "Spokane Hamfest") will take place on Saturday 09/28, at the University High School in Spokane Valley, 9AM-4PM, admission \$5.

Allan (KE7DFT) will be our speaker for the October Club meeting, and his topic will be "Circuit board Construction"

The monthly Kootenai County ARES/RACES meeting will take place one week after the regular KARS meeting, same location, on Monday 09/16, beginning at 6:30PM

Kootenai County ARES/RACES holds a VHF net on the first Monday of each month on the KC7ODP repeater (147.080, PL 100), at 6:30PM, all are welcome.

The Idaho ARES Digital Net meets every Tuesday evening at 7:30PM local time, on 3578.5 Khz. Log-In using PSK-31, then NCS will give instructions regarding use of RMS express.

The Idaho ARES/RACES HF Net meets every Thursday evening at 7:30PM local time, on 3929 Khz LSB. All Amateur Radio operators with HF privileges welcome, follow NCS instructions regarding check-in.

Club President Bonnie thanked Ron Phillips (KF6WKR) for providing refreshments for the meeting, thoroughly enjoyed by all.

The Club Business Meeting was adjourned at 8:15PM

Club Drawings were held at 8:30PM, with the 50-50 drawing taken by Mark (N7MA), \$13.00. In the members only drawing, the chip of Howard Scott (KF7USV) was drawn, but he was not present. The members only value is now \$425.

Upon completion of Club Drawings, the evening presentation (a Construction Project) got underway, presented and facilitated by John Hollar (N7JU) and Larry Telles (K6SPP). The Project was to assemble a small interface which would be used between radio and computer, so that the user could participate in Digital Modes. A total of 17 persons stayed on to participate in building up the boards.

Minutes respectfully submitted by Ed Stuckey (AI7H) on behalf of secretary Tom Richmond (NI7W)

KARS 2014 Officers Nominating Committee Report

The Club has a constitutional procedure for selecting Officer candidates, as outlined in the September Club meeting and in a recent e-mail bulletin to Club members. As you may recall, the positions to be filled in 2014 include the following: President, Vice President, Executive Director,

Secretary, and Treasurer. We have completed a preliminary "canvas" of the Club Roster, and find that a total of 76 Club members are possible Candidates to be elected as 2014 Officers. Now we will be individually contacting those members to verify whether or not they might be interested to serve. This will be completed prior to 10/25, and the slate of proposed officers will be listed in the November edition of this newsletter. And yes, it would be wonderful if there were two or three candidates for each open position! If you have an interest in serving as a Club officer, please contact any member of the Committee: Dave Boss (KF7YWR), Allan Campbell (KE7DFT), or Ed Stuckey (AI7H)

Submitted on behalf of the Nominating Committee by Ed Stuckey, AI7H (ai7h@arri.net)

Annual Simulated Emergency Test (SET)

For 2013, Idaho ARES has decided to join Oregon ARES for a multi-state exercise, which will take place on Saturday, 11/02/13. The general scenario will have to do with a very large internet outage, which affects telephones, electrical generating stations, street lights, and "much, much, more". Additional details will be provided to Club members when received by Idaho ARES. The point to be made here – the SET is an exercise for ALL Amateur Radio operators (regardless of ARRL membership, or ARES/RACES affiliation), so you are encouraged to participate in this event. We understand that the duration will be about four hours (8AM-Noon, local time), so please mark your calendar!

Submitted by Ed, AI7H

ARMY MARS INVITES PARTNERS TO COLLABORATE IN HOMELAND SECURITY OPERATION

Army MARS Headquarters has invited the Chiefs of Air Force and Navy-Marine Corps MARS to join in a National Communications Exercise. One that will measure the auxiliary force's capabilities in the event that normal communications are disrupted throughout North America.

The test will run for 48 continuous hours from November 3rd to the 5th and will be closely monitored by a Joint Command responsible to the Defense Department for homeland security. This exercise culminates a year-long series of escalating preparations by Army MARS for responding to all types of complex emergencies. These could be anything from a natural phenomenon or terrorist attack that might render the Internet, long distance telephone, and national news and media networks unusable across the United States. (Amateur Radio Newslines)

Maintenance Work at Mica

On Saturday, September 21st, a five member crew went to our repeater site on Mica to do maintenance and repair on the building. The crew was composed of: Dale DuRee KE7VMN, Allan Campbell KE7DFT, Jacob Bucalo KG7BGF, Mark Avakian N7MA, and Bob Schaff KF7VIH. In addition, to caulking the cracks in the building itself, they also cleared brush and weeds from around the building and did some cleaning inside. Apparently, mice had found their way into the structure. Allan built a mouse discourager and placed it in the building. The antenna was mounted on a different mast and raised 8 feet. The new location has a snow bridge to protect the cable. The entry port for the hiliac was moved to another existing port, which allowed for the shortening of the hiliac run.



The following pictures were taken by Mark N7MA.



If you signed up to be on a work crew to one of the repeater sites and you didn't get invited this time, never fear. There will be more trips to the mountain tops and more work to be done.

FCC Closed! Licensing Functions on Hold

In the aftermath of the congressional failure to reach agreement on a new budget or on a continuing resolution to keep the federal government in business, the FCC is telling consumers that it is closed. This includes all functions at the Commission's Gettysburg, Pennsylvania, facility, which handles all Amateur Radio licensing transactions, including new, renewal and vanity call sign grants.

A security staffer answered the telephone at the Gettysburg office, confirmed that "pretty much everything" is shut down there. A recording on the consumer help line simply states, "The Federal Communications Commission is closed. We regret any inconvenience." It refers anyone calling regarding an emergency "affecting the safety of life or the protection of property" to a Washington, DC, number, 202-418-1122.

In late September the FCC posted a "Plan for Orderly Shutdown" in the event of a federal government shutdown. "Generally, during a shutdown, all FCC activities other than those immediately necessary for the protection of life or property will cease," the FCC plan begins. Only a handful of the FCC's 1754 employees have been scheduled to remain on duty, including eight employees "retained to conduct interference detection, mitigation and disaster response operations."

Only one "senior management official" in the Wireless Telecommunications Bureau - which oversees Amateur Radio - was scheduled to be on duty for the extent of the shutdown.

If the closing date for comments on an open proceeding falls during the shutdown, comments will be considered timely filed on the day after the Commission reopens for business. The Commission's website emphasizes that the FCC "will not be open for normal operations during any government-wide shutdown." (ARRL News)

FCC SAYS NO TO ENCRYPTED HAM RADIO COMMS

Encrypted communications won't be coming to ham radio anytime soon. This as the FCC dismisses a rule making request from a Massachusetts ham who had asked the regulatory agency to amend the Part 97 Amateur Service rules to permit the encryption of certain amateur communications during emergency operations or related training exercises.

RM-11699 was filed earlier this year by Don Rolph, AB1PH. In it, he had asked the regulatory body to add an exception to section 97.113 so as to permit limited encryption during crisis communications or training exercises related to readiness for such events. He argued that communications when participating in emergency services operations or related training exercises which may

involve information covered by medical privacy requirements or other sensitive data required such encryption.

However in denying Rolph's rule change request the FCC concluded that while the proposal could advance one purpose of the Amateur Radio in its value to the public that it would at the same time undermine other characteristics and purposes of the service. Therefore the FCC says that it agrees with those who filed comments opposed the concept of encryption and turned away the request.

Among those who filed in opposition to RM-11699 was the American Radio Relay League. As we go to air we have not heard if AB1PH will appeal the Commission's decision in this matter. (FCC)

VOYAGER 1 ENTERS INTERSTELLAR SPACE

New data indicates that the Voyager 1 spacecraft has been traveling for about one year through plasma, or ionized gas, present in the space between stars. The 36-year-old Voyager is about 19 billion kilometers from our sun in a transitional region immediately outside the solar bubble, where some effects from our home star are still evident.

Voyager 1 first detected the increased pressure of interstellar space on the heliosphere in 2004. That's bubble of charged particles surrounding the sun that reaches far beyond the outer planets. It was at that point in time that scientists then ramped up their search for evidence of the spacecraft's interstellar arrival, knowing the data analysis and interpretation could take months or years.

Voyager 1 does not have a working direct plasma sensor, but does carry a plasma wave instrument. As luck would have it, a massive burst of solar wind and magnetic fields that erupted from the sun in March 2012 provided scientists the data they needed. When this energy from the sun eventually arrived at Voyager 1's location on April 9th of this year the plasma around the spacecraft began to vibrate causing the plasma wave instrument to detect the movement. The pitch of the oscillations helped scientists determine the density of the plasma. The particular type of oscillations meant the spacecraft was bathed in plasma more than 40 times denser than what they had encountered in the outer layer of the heliosphere. This was to be expected and was the confirmation astronomers needed to prove that Voyager 1 had entered into interstellar space. (Amateur Radio Newline)

SCIENTISTS ADMIT SOLAR CYCLE 24 LOW IS PUZZLING

Subdued solar activity has prompted controversial comparisons with the Maunder Minimum. The Maunder Minimum, also known as the prolonged sunspot minimum, is the name used for the period starting in about 1645 and

continuing to about 1715 when sunspots became exceedingly rare, as noted by solar observers of the time. These minimums supposedly coincided with the coldest period in the last millennium.

But Giuliana DeToma, a solar scientist at the High Altitude Observatory in Colorado says that the unusually low number of sunspots in recent years is not an indication that we are going into a Maunder Minimum, but added that researchers do not know how or why the Maunder Minimum started. As such, they really cannot predict the next one.

Other solar experts think the downturn is linked a different phenomenon called the Gleissberg cycle. The Gleissberg cycle, named after Wolfgang Gleissberg, is thought to be an amplitude modulation of the 11-year Schwabe Cycle which predicts a period of weaker solar activity every century or so. If that turns out to be true, the sun could remain unusually quiet through the middle of the 2020s. However, as scientists still do not fully understand why the Gleissberg cycle takes place, the evidence is, at best, inconclusive. (Amateur Radio Newslines)

First IARU Region 2 Emergency Communications Workshop Focuses on Awareness, Cooperation

The first IARU Region 2 Emergency Communications Workshop, held September 24-25 in Cancun, Mexico in conjunction with the IARU Region 2 XVIII General Assembly, explored international issues facing Amateur Radio's response to emergencies and disasters. Sponsored by IARU Region 2 and the ARRL, the event was co-chaired by ARRL Emergency Preparedness Manager Mike Corey, K1IU, and IARU Region 2 Emergency Coordinator Dr. Cesar Pio Santos, HR2P.

Participants represented many nations within and outside of Region 2 - Mexico, Honduras, Trinidad and Tobago, Peru, Chile, India, Australia, Canada, US, and Panama. Over the two-day session, attendees heard presentations that covered ITU response to disasters, technical innovations in disaster response, the *IARU Emergency Communications Handbook* project, and organizational updates. Attendees and presenters also took part in a tabletop exercise. Discussion inside and outside the workshop focused on several key points:

- There is a need greater public education on the value of Amateur Radio. The general public as well as served agencies need to be aware of what Amateur Radio can do and why it is valuable.
- The IARU should consider approaching the ITU (International Telecommunications Union) about developing partnerships with Amateur Radio equipment manufacturers to assist with the

communications response to large international disasters.

- There should be more participation from young Amateurs as presenters and attendees in international emergency communications workshops such as this and GAREC (Global Amateur Radio Emergency Communications).
- Cross border cooperation and coordination of Amateurs should be encouraged. Along with this Amateurs need to be aware of cultural differences that may arise in international response.
- There is a greater need from served agencies for high-speed video, data, and high resolution imagery.
- More input is needed for the *IARU Emergency Communications Handbook* project.

A follow-up document will expand on each of these key points. Organizers say that while attendance was lower than anticipated, the workshop was successful in accomplishing its goals of sharing information on Amateur Radio response to emergencies in the region; increasing the capacity for Region 2 amateurs to respond to large-scale, multinational communication emergencies, and provide an opportunity for national-level Amateur Radio emergency communications leaders to network and increase the level of cooperation and collaboration within IARU Region 2.

Presentations and additional material from this workshop will be made available on the IARU Region 2 website. A second emergency communications workshop is anticipated to follow up on the progress from the efforts initiated in Cancun. Direct comments and questions to Mike Corey, K1IU (English), or Cesar Pio Santos, HR2P, (Español) (ARRL News)

STANFORD SOLAR SCIENTISTS SOLVE ONE OF THE SUN'S MYSTERIES

Solar scientists at Stanford University in California have solved one of the few remaining fundamental mysteries of how the sun works. And it's something that hams will want to know as it does affect propagation.

According to researchers, the mechanism in question is known as meridional flow and is said to work something like a conveyor belt. Magnetic plasma migrates on the sun's surface from the equator to the poles. It then cycles into the sun's interior on its way back to the equator. The rate and depth beneath the surface of the sun at which this process occurs is critical for predicting the sun's magnetic and flare activity, but has remained largely unknown until now.

To find out how it actually worked, researchers used the Stanford-operated Helioseismic and Magnetic Imager or HMI instrument onboard NASA's Solar Dynamic Observatory to track solar waves in much the way

seismologists would study seismic movements beneath the surface of the Earth. Every 45 seconds for the past two years, the HMI's Doppler radar recorded images of plasma waves moving across the sun's surface which were then radioed back to Earth. By identifying patterns of sets of waves, the scientists could recognize how the solar materials move from the sun's equator toward the poles, and how they return to the equator through the sun's interior.

One startling discovery is that the equator-ward flow is actually sandwiched between two layers of poleward flowing currents. This is a more complicated mechanism than previously thought. Its also one that could help refine predictions of the sun's activity.

For example, some computer models projected that the current solar cycle would be strong, but observations have since showed it is actually much weaker than the previous cycle. This inconsistency could be due to the previously unknown inaccuracies of the meridional circulation mechanism used in the simulations. (Amateur Radio Newslines)

NEW INFLATABLE ANTENNA FOR CUBESATS

The Massachusetts Institute of Technology reports that researchers have developed a new design of inflatable antenna for CubeSats that can fold into a compact space and then inflate when on-orbit.

Due to their small size CubeSats have up to now been limited to small monopole or dipole antennas. Such low gain omni-directional antennas have in turn restricted CubeSats to Low Earth Orbits using lower data rates than would be possible with a large directional antenna array.

But the new inflatable antenna may significantly increase the communication range of these small satellites, enabling them to travel much farther in the solar system. It is claimed the distance that can be covered by a satellite with an inflatable antenna array is seven times farther than that of existing CubeSat communications.

The MIT team, led by Alessandra Babuscia, is part of the research group of Professor Sara Seager, KB1WTW. The group also includes graduate students Mary Knapp, KB1WUA, Benjamin Corbin, and Mark Van de Loo from MIT, and Rebecca Jensen-Clem from the California Institute of Technology. (Amateur Radio Newslines)

HAM OWNED COMPANY DEVELOPS HF ASSET TRACKING NETWORK

HySky Technologies Inc. is using High Frequency communications for an innovative asset tracking and reporting network.

The company whose the Chief Executive Officer is Charles Maynard, KJ4PPE, recently gained an FCC license

to use 954 H-F channels each 3 kHz wide. The mobile tracking units using this spectrum will transmit a maximum of 1 watt Effective Radiated Power using a small low-efficiency broadband antenna. The data will be received by nine stations located at low-noise sites across the USA which will then be forward the data to customers.

The signal being transmitted will have a bandwidth of 2800 Hz and an emission designator of 2K80G1D. The company says that a military High Frequency waveform will be used and claims the system will overcome coverage and other problems associated with traditional tracking devices using cell-phone or satellite transmission interfaces.

The license issued to HySky reportedly covers up to 10,000 devices operating in the United States, including Hawaii, Alaska and US territories but word is that this service could expand worldwide. (Amateur Radio Newslines)

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COFFEE & DONUTS
EVERY THURSDAY MORNING

8:00 A.M.
To
10:00 A.M.

The Golden Spike
Community Center
Rathdrum



TALK-IN: 146.98
100 PL

Bring a writing instrument. The Golden Spike has the napkins for our breakfast table engineering!

Deadline for submitting articles, stories, reports, etc., is the 25th of each month for the following month's newsletter.

Kootenai Amateur Radio Society

PO Box 17□5, Hayden, Idaho 83835-17□5



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K7ID.org Request Form

First and Last Name _____ Callsign _____

Would you like your (callsign)@k7id.org email to be forwarded to an existing email account or would you like to access it through a web or post office protocol (POP) system?

Please Forward to My existing Email (Please Complete the Bottom and Sign.) Webmail Access POP Access
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Please Select a username _____ @K7ID.ORG

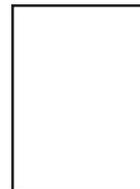
Please Select a Password _____

For Forward Request Only

Email Address _____

Signature _____

KOOTENAI AMATEUR RADIO SOCIETY
P.O. Box 1765
Hayden, ID 83835-1765



DIRECTIONS TO KARS MEETING:

Take U.S. Highway 95 to Miles Avenue (Miles is about 1 mile North of Hayden Avenue). Instead of proceeding west from the corner of Miles and Ramsey, go north about ¼ mile, to the first building on the left (West) side of the road.

2013 CLUB OFFICERS

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Notice

Propagation is published monthly by the Kootenai Amateur Radio Society (KARS). The club is located in Coeur d'Alene, Idaho and serves the North Idaho and the Spokane, Washington areas.

All opinions expressed in this newsletter are those of the individual contributors and not the radio club as a whole.

KARS operates a voice repeater on 146.98 and a packet repeater on 145.510 Mhz.

Anyone interested in Amateur Radio is welcome to join. Dues are \$12.00 (individual) and \$18.00 for a family membership. Contact the Treasurer if you wish to join.

If you know of anyone interested in joining KARS, you can notify the newsletter editor as to that parties email address. A copy of this newsletter will be sent with no obligation to join.

Material can be submitted for publication in Propagation. The deadline for articles, etc., is the 25th of each month for the following month's issue.