

May 2015

(www.k7id.org)

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

REGULAR CLUB MEETINGS:

Monday, May 11, 7:00 p.m.
Search & Rescue Bldg.
10865 N. Ramsey Rd.
Hayden, Idaho

Topic:

Presenter:

Refreshments: ???

VE Testing

Monday, May 11, 5:30 p.m.
10865 N. Ramsey Rd.
Hayden, Idaho

Friday, June 12, 6:30 p.m.
Search & Rescue Bldg.
10865 N. Ramsey Rd.
Hayden, Idaho

Upcoming Events

Lilac City Torchlight Parade
May 16, 2015
Spokane, Washington
POC: Gordon Grove,
WA7LNC
gorgrolnc@juno.com

KARS Hamfest
Saturday, June 13
1138 E Poleline Avenue
Post Falls, Idaho

Letter from the President May 2015

Dave Boss KF7YWR

boss@infinityusers.com

208.290.8590

Hams: The Swiss Army Knife Of Society!

It was sometime in the past few weeks that I came to the understanding why I like this hobby so much. I had come to the realization that Ham radio encompasses many areas of expertise and study, such as, Engineering, Electronics, Geology, Weather prediction, Astronomy and in my case where I prefer to build my own stuff, Welding, Fabrication, Rigging and of course the hard labor of excavation and concrete work. Recently as I was reading an article on grounding, it was mentioned in the text, that the poor soil conditions that I experience at my QTH, could be greatly improved for more efficient transfer of energy into the ground system with the simple addition of Magnesium Sulfate (yes, ordinary Epsom Salts) at "x" number of pounds per square foot. Here we add some Chemistry, Geology, with a little Electrical Engineering thrown in for this fix. I will begin on construction of a sturdy new tower at the end of May. Some serious efforts have gone into the planning and design of the foundation and structure for what will yield a heavy 60' tower of a somewhat different design. Realizing that I am not getting any younger, and climbing is really a young man's sport, the rotor and antennas will be mounted on a carriage that will be winched to the top, thus allowing maintenance and any changes to be done at ground level. (This design was highly approved by my wife). Here we became a Draftsman and Mechanical Engineer for this phase of the project with a pinch of Geologist thrown in. Wind load calculations were necessary to be able to size the foundation. The formulas came from a book I have had since the 70's, Micheal Hackleman's "Homemade Wind Generated Handbook", when I first was interested in wind energy as a power source in a quest to get back to the land. Some minor changes needed to be made in the calculations for the swept area of the wind rotor as the antennas are stationary and not rotating. We hope! In addition to these calculations, were total weight calculations to know just how

much it will weigh, and to make sure I can safely move and erect the finished project. Here, the use of some rarely used math skills came into play and we had to think like the Safety Committee for a while as well. As you can see, there are many hats that the average Ham gets to wear, some more fun than others, but all enjoyable and we have barely scratched the surface nor have we gotten to antenna design, ergonomics of the station or the chance to become an famous international radio celebrity, ah yes, the goal of all this is to make contact with the whole world out there just waiting to hear CQ,CQ,CQ this is....in Idaho.

Hamfest Coming!

Jim Banks, KF7TFJ, will have signup sheet at the meeting for the different positions needed to make this function happen. Make sure you find a spot to help out and also reserve a table if you have valuable stuff (or junk) you would like to sell.

Generator Retrieval

I spent an enjoyable afternoon with Walt Hogeweide, K7ETJ, retrieving the club missing generator that has been store at Walt's QTH for some time, possibly decades, exact date unknown. It is a Military Surplus Onan 4 cyl gas that was born in 1953. Looking for a "few good men" with Korean War era mechanical experience to help breathe some life back into the old beast. Walt thought it *may* have been started as soon as *ten years* ago and ran well! It is currently residing at my QTH. Please contact me if interested. No reason I should have all the fun!

Field Day June 27-28th

Field Day will be held at Majestic Park in Rathdrum this year. Several have scouted it out and we can have antennas galore. Pavilion is similar to last year's location but no trains, close neighbors and there is plenty of parking. If you are not familiar and would like to see for yourself, it is located north of Lancaster turn north on Meyer and east on Majestic. Then just continue east and the road ends at the park.

Coffee and Donuts

Due to a change in management policies at the Golden Spike Estates, where members for several years have been meeting weekly to drink coffee, eat donuts and solve the ills of the world, this time honored tradition will cease the

end of May. Please be on the lookout for an alternate location. We normally meet from 8:00-10:30 Thursday AM, are rarely rowdy, generally clean up after ourselves and most of the time have showered. If you know of a spot that would tolerate a lot such as this please let us know post haste. Time and date are negotiable. Donuts and coffee are not!

Kootenai Amateur Radio Society

April 2015 Meeting Minutes

The Club Meeting was called to order by Club President Dave Boss (KF7YWR) at 7:10pm. Rick VanLandingham (KI7I) led those in attendance in the Pledge of Allegiance. VE testing resulted in the addition of some new hams to the ranks and some advancements as well: Randall Porter and Karen Mossman both passed their General Exam, Kip Laguard passed his Technician exam, and Mike Kelly passed his Technician and Extra exam and because he had an expired Advanced license from years ago, should advance to Extra Class and be back on the air again. Our Treasurer was absent at the meeting and we had thought that we did not have a report on the monies for the month, however on my way home I started thinking that I thought Rod had sent it out to the Board members before he left (hopefully not with our money ☺). Well it turns out that he did in fact send out the Treasure's Report which was lacking at the meeting: Checking \$2803.36, Savings \$2550.29, Petty Cash: \$102.03 for a total of \$5,454.68. Expenses for the month of March were \$88.00. Rod reports that these expenses were the annual expense of the Club Post Office Box and a bank service charge, which Rod is working to reverse, he also reported that the Petty Cash was increased to separate out the cash needed for making change for the club raffles. The March Minutes were approved after a motion made by Secretary Adam Crippen (N7ISP), the motion was seconded and passed by member vote. 501(c)(3) status update is the paperwork has been submitted to get our tax-exempt status reinstated, updates to follow as additional information comes in.

Dale Dupree (KE7VMN) will be teaching a 6-week course for the Technician Class. Classes will start

April 30th and be held at Kootenai Health in Room 2, First Floor of the Hospital Admin Building. Classes will be held from 7pm to 8:30pm. Gary Holland (N7DHL) made a motion that the club purchases some Technician Course Manuals to be sold to those who attend the course; the motion was seconded and passed by member vote. Dave Boss said that he would do the “leg work” on getting the Manuals for the course. The Tech Classes are being organized by Bonnie Patterson (KG6QQM), those interested in more information or to register for the course can contact Bonnie at (208) 683-2939.

Ed Stuckey (AI7H) reported on the Idaho QSO Party and says to-date there have been approximately 100 logs have been received, including 8 European countries. Ed has also been helping to organize the liquidation of some Silent Key’s Amateur Radio equipment: Richard Weitzel (AA9HW/SK). Ed has a list of equipment and if you are interested in anything please contact Ed and he will relay the information to you. The Wayne Cook (KA7DIT/SK) tower needs a work party to help in loading some tower sections bound for their new home in Boundary County. If interested in lending a hand please contact Ed directly.

The Club Sunshine Committee would like to get updated information on member’s birthday and addresses. Club members are asked to please provide this information for the Committee.

Dave Boss (KF7YWR) has received a renewal of the MOU with Kootenai County for the use of the Canfield Mountain site (which is the location of our 443.975 Repeater). The MOU is a 5 year term which will mean the MOU will not need to be re-addressed until 2020. The MOU also addresses the need for two individuals who will be able to get the mountain-top keys and access from Kootenai County. The two who have been nominated to be named in the MOU are Dale Dupree (KE7VMN) and Dave Boss (KF7YWR).

During the Break in the meeting, Fox and Karen Mossman of Naples, ID made a donation to the club; we thank them for their donation.

Upcoming Events/Announcements:

- KARS Hamfest is approaching and will be held this year at the American Legion in Post Falls again this year.
- SeaPac Hamfest is June 5th, 6th, and 7th in Seaside, Oregon.
- Lenny Gemar (N5IEX) Website update. Lenny announced that he has been working and testing the revamped website and should be available for public viewing in only a few weeks. Efforts are also underway to secure or re-secure both K7ID.com and K7ID.org domains.
- A Ham Work Party has been organized to help Frank Henderson get his ham station back on the air. Frank Henderson served in the US Army, Idaho House of Representatives, Kootenai County Commissioner and Post Falls Mayor. Frank has been diagnosed with cancer and is unable to do the work necessary to get his ham station on the air. Volunteers have been organized to help get his station back on the air again. Jim made a motion to have club provided hot dogs and burgers for the work party, the motion was 2nd and passed by member vote. UPDATE: Currently the work party has been canceled due to scheduling conflicts, updates will follow on when the work party will be rescheduled.

Club Raffles: The 50/50 was for the total of \$24, \$12 awarded to the winner: Ed Aycock (WA4HDE). Membership Raffle was \$190 and the winner was: Carol Maddox (KG7HYC) however Carol was not present at the meeting.

Gabbee Perry (KE7ADN) made a motion to adjoin the meeting, the motion was 2nd and passed by member vote at 8:28pm.

US Naval Academy CubeSat Launch to Include Next APRS Satellite

Sometime on or about May 20, the next US Naval Academy satellites and Brno University PSK31 transponders head into space from Cape Canaveral on an Atlas 5 launcher and into an approximately 50° orbit. The launch will include the Psat APRS satellite — a pair of identical 1.5 U cubesats (A and B) — as well as the BRICsat and USS Langley (Unix Space Server Langley) nanosatellites.

“Psat is a Naval Academy student satellite project named in honor of one of our graduates, Bradford

Parkinson, of GPS fame, which contains an APRS transponder for relaying remote telemetry, sensor, and user data from remote users and Amateur Radio environmental experiments or other data sources back to Amateur Radio experimenters via a global network of Internet-linked ground stations,” explained APRS developer Bob Bruninga, WB4APR. In addition to the data transponder, a secondary [Brno University](#) transponder will support multi-user PSK31 text messaging. The APRS downlink will be 145.825 MHz (1200 baud AX.25 APRS).

“We welcome radio amateurs worldwide to tune into the downlinks and either IGate packets into the global APRS-IS system or to [e-mail](#) me,” Bruninga said. “After launch, the next several orbits will be over USA and Europe.” Bruninga said PSAT, including the PSK31 transponder, would not be available for use until all on-orbit checks are complete, a process he said could take “many, many days.” He also requested reports on any PSK31 (FM) heard on 435.350 MHz (the PSK31 uplink is 28.120 MHz).

The PSK31 multi-user FDMA [transponder experiment](#) on Psat and BRICsat is similar to the one on [RAFT](#) and [PCSAT2](#). It will allow messaging among up to 30 modest ground stations simultaneously, Bruninga said.

Psat is one of five APRS-networked Amateur Radio satellites that will be in orbit during 2015, and all will appear on the live [APRS downlink page](#). The others include [PCsat-1](#), in orbit since 2001, [QIKcom-1](#), set to launch in September, [QIKcom-2](#), set to launch in December, and the [ARISS](#) packet radio system on board the International Space Station since 2007.

According to AMSAT-UK, BRICsat will carry a PSK31 transponder with a 28.120 MHz uplink (2.5 kHz bandwidth) and a UHF FM downlink on 435.350 MHz. [Gunter’s Space Page](#) describes USS Langley as “a proof-of-concept mission for providing global internet access via a nanosatellite constellation.” The satellite will act as a web server and router in space, using Internet Protocol and Linux. Downlinks 437.475 MHz (9600 baud AX.25 packet telemetry) with uplink at 145.825 MHz.

Bruninga said satellite experiments such as Psat “serve our educational and outreach goals for student projects encouraging young people to be interested in Science,

Technology, Engineering and Math.” He said he hopes other schools will build either additional 145.825 MHz relay satellites or experimental sensors. “We hope that Psat will be the ‘egg’ in this chicken-egg conundrum,” he added. (ARRL)

AMATEUR RADIO AND VEHICULAR RADARS CAN JOINTLY EXIST ON 77-81 GHZ

The ARRL has told the FCC that Amateur radio and vehicular radar systems can co-exist in the 76 to 81 GHz band as we hear from Amateur Radio Newsline’s Don Wilbanks, AE5DW:

[Don] In comments filed in response to a February FCC Notice of Proposed Rulemaking and Reconsideration Order the ARRL has told the Commission that it should make no change in the Amateur Radio allocation at 76 to 81 GHz. Nor should it impose any additional regulatory constraints on Amateur or Amateur-Satellite uses of the band.

In a Notice of Proposed Rulemaking and Reconsideration in ET Docket 15 dash 26, the telecommunications regulator solicited comment on issues involving expanded use of various radar applications in the 76 to 81 GHz. This is spectrum that Amateur Radio shares with other services. The band 77.5 to 78 GHz is allocated to the Amateur and Amateur Satellite services on a primary basis, and to the Radio Astronomy and Space Research services on a secondary basis.

FCC Notice of Proposed Rulemaking and Reconsideration was in response to a 2012 Petition for Rulemaking RM-11666 by Robert Bosch LLC. It also was in answer to a pair of petitions for reconsideration of a 2012 Report and Order addressing vehicular radar systems in the 76 to 77 GHz band. ET 15 dash 26 also incorporated earlier proceedings.

In its comments, the ARRL suggested that the FCC overreached in proposing unjustifiable changes at 77 to 81 GHz on its own initiative. The League said that this is not called for in the text of the Bosch Petition for Rule Making or in any comments that have been filed thus far. Nor was there any suggestion that there is any incompatibility between Amateur Radio operation and automotive Radars. The ARRL also referenced a current International Telecommunications Union study that has definitively established compatibility between short-range automotive radars and Amateur radio operations. (ARNewsline)

FCC APPROVES RECOMMENDED NATIONWIDE PUBLIC SAFETY CHANNELS IN THE 700 MHz BAND

The FCC's Public Safety and Homeland Security Bureau has approved a recommended set of six channels for use nationwide by 700 MHz deployable trunked emergency communications systems. This as outlined in PS Docket No. 13-87 and WT Docket No. 02-378.

On October 17, 2014, the Commission adopted a Report and Order which released the twenty-four narrowband 12.5 kHz bandwidth reserve channels to the General Use category. These under the administration of the 700 MHz Regional Planning Committees or R-P-C for the benefit of state and local public safety licensees.

This channel set was recommended by the National Public Safety Telecommunications Council and the National Regional Planning Council. This past February 13th both groups recommended a set of six former reserve channels to be allocated nationwide for such a 700 MHz deployable system. A few weeks later on March 3rd, the Public Safety and Homeland Security Bureau issued a Public Notice seeking comment on the recommended channels.

With this latest action 700 MHz Regional Planning Committees may now incorporate these channels into their plans for deployable trunked systems. Also, any region with a T-Band market must give priority to these channels to any public safety T-band incumbent seeking to relocate from the T-band.

The complete text of the approval document released April 23rd in PDF format is at http://transition.fcc.gov/Daily_Rele...A-15-483A1.pdf (FCC)

NEW ALUMINUM BENDABLE BATTERY

Scientists have built a flexible aluminum battery which they say could be a cheap, fast-charging and safe alternative to current designs.

The prototype consists of a soft pouch, containing aluminum for one electrode and graphite foam for the other and all surrounded by a special liquid salt. It can recharge in less than a minute and is very safe and durable compared to lithium-ion batteries.

The only drawback is that the new design currently only delivers about half the voltage but work is ongoing to improve this. On the plus side and unlike other designs,

this battery will not catch fire even if accidentally punctured or drilled through.

The work appears in the journal Nature. You can find it at tinyurl.com/aluminum-salt-battery (BBC, Nature.com, Science Today)

FCC FINES CENTURYLINK AND INTRADO \$17.4 MILLION FOR MULTI-STATE 911 OUTAGE

The Federal Communications Commission has resolved its investigation of an April 2014 multi-state 911 outage that prevented more than 11 million people in seven states from being able to reach emergency call centers for over six hours. This as the FCC's Enforcement Bureau has reached a 16 million dollar settlement with service provider CenturyLink and a 1 point 4 million dollar settlement with Intrado Communications related to the two companies failures to meet their emergency call obligations during the 911 outage. Bill Pasternak, WA6ITF, has the details:

[Bill] Following a comprehensive report by the FCC's Public Safety and Homeland Security Bureau, the agency's Enforcement Bureau took on investigating the April 2014 outage. It focused on the providers whose systems served the affected emergency call centers to determine the failures in those 911 systems and in notifying the affected emergency call centers.

The Enforcement Bureau concluded that the outage could have been prevented if the providers had implemented basic safeguards and that the providers failed to give timely notifications to the affected emergency call centers. These failures resulted in some 6600 missed 911 calls.

CenturyLink served affected emergency call centers throughout Washington, Minnesota, and North Carolina. Intrado Communications served emergency call centers in Florida, South Carolina, and Pennsylvania. The varying settlement amounts reflect the different numbers of emergency call centers served by each provider. CenturyLink's settlement represents the largest 911 related fine ever assessed by the FCC. (ARRL)

Amateur Radio Continues to Provide Reliable Post-Quake Communication in Nepal

Amateur Radio has continued to provide reliable communication in the aftermath of the devastating April 25 7.8 magnitude earthquake that struck an area in and around the capital of Kathmandu. The disaster has so far claimed more than 7300 lives.

Amateur Radio's role has been to provide communication for responders working in more remote regions as well as to help in locating missing people. It also has served to convey information about casualties. Jayu Bhide, VU2JAU, the Amateur Radio Society of India (ARSI) National Coordinator for Disaster Communication, said this week that rescue teams moved into highly devastated areas such as Pokhara and Sindupalchowk, where their work was hampered by rain and blocked roads. "Teams are unable to reach the remotest villages," he said. "The roads are cut off, and no communication is possible."

While Nepal's cell telephone infrastructure has been functional, the batteries in most mobile telephones have discharged. On his own initiative, Bhide was able to secure funds from the Lions Club in Gwalior, where he lives, to buy 500 mobile chargers. "These will be shipped to Nepal soon," he said.

No Nepali stations were on the air for all of May 4, Bhide reported. "Everyone was waiting to get some updates, but no one was there," he said. Satish Kharel, 9N1AA, who has been prominent among the hams in Nepal involved with the earthquake response, and Bhide now are maintaining contact every 2 hours.

Nepal has only about 2 dozen Amateur Radio licensees, according to Suresh Ojha, W6KTM, chairman of the [CAN-USA](#) Disaster Preparedness Committee. He said the Nepal government's lack of experience in regulating ham radio has hampered response efforts. Nepali authorities last week arranged for hams from other countries to obtain 9N3-prefix call signs to assist in the earthquake relief effort, and several hams from India are in Nepal. (ARRL)

FCC PROPOSING NEW PRIVACY RULES FOR AMATEUR RADIO OPERATORS HISTORICAL INFORMATION

The FCC has initiated a proceeding in WT Docket No. 15-81 to amend its rules of organization. This is applied to amateur radio licensee address information that is routinely available for public inspection.

Specifically, the FCC proposes to revise its rules to specify that past amateur radio licensee address information will not be routinely available for public inspection. To implement this change the FCC proposes to remove from public view in the Universal Licensing System an amateur radio licensee's address information

that is not associated with a current license or pending application. Current licensee address information would remain public.

The FCC said in the Notice of Proposed Rule Making that it believes these steps will enhance an Amateur Radio operators' privacy and doing so without undermining the public interest in knowing who is authorized to operate on amateur spectrum.

The Commission is also seeking comment on whether this approach should be extended to individual licensees in any other Wireless Radio Services, such as the General Mobile Radio Service, commercial radio operator licensees, and individuals who hold ship station or aircraft station licenses.

Comments on WT Docket No. 15-81 are due by June 16th. Reply comments must be filed by July 16th. (ARRL)

GRAPHENE BASED LIGHT BULB TO GO ON SALE THIS YEAR

The BBC reports that a graphene bulb is set to go on sale this year. United Kingdom developers said their graphene bulb will be the first commercially viable consumer product using the super-strong carbon.

The dimmable bulb has a filament-shaped LED coated in graphene. Because of its conductivity the bulb can last longer and is said to cut energy use by 10 percent. It is also expected to be priced lower than some LED bulbs.

The bulb is being manufactured by a Canadian financed company called Graphene Lighting. (BBC)

AMATEUR SERVICE USE OF LF AND MF BANDS

Amateur Radio is poised to gain access to two new bands. Stephan Kinford, N8WB, has the details:

In a combined 257 page Report and Order and Notice of Proposed Rulemaking released on April 27, the FCC has allocated a new Low Frequency band from 135.7 to 137.8 kilohertz to the Amateur Service on a secondary basis. Allocation of this sliver of spectrum at 2200 meters was in line with the Final Acts of the 2007 World Radiocommunication Conference.

The FCC has also proposed a new secondary 630 meter Medium Frequency allocation at 472 to 479 kHz to Amateur Radio, implementing decisions made at WRC-12. However no amateur radio operation will be permitted in either band until the FCC determines the specific Part 97 rules it must create to permit operation. This could take some time. (ARRL)

Kootenai Amateur Radio Society



PO Box 1765, Hayden, Idaho 83835-1765

Please complete the entire form and return with your payment

Single Year membership

New member \$15.00 Renewing \$15.00 Family \$23.00 Info Update Only

Two Year Membership

New member \$28.00 Renewing \$28.00 Family \$42.00

Call Sign _____ Class _____ Expires _____

First Name & Initial _____ Last Name _____

If renewing, only fill in information below that has changed since last application, otherwise complete.

Address _____

City _____ State _____ Zip Code _____

Phone Number _____ E-Mail Address _____

ARRL Member _____ May we publish Limited information _____ (Y/N)

For Family Membership, Please complete an additional application and staple together.

Signature _____

K7ID.org Request Form

First and Last Name _____ Call Sign _____

Would you like your (call sign)@k7id.org email 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 Webmail access POP Access
(Please complete the bottom & Sign) I wish to opt-out of K7ID.org

Please select a user name _____@K7ID.org

Please select a Password _____

For forward request only

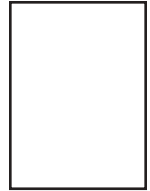
Email address _____

Signature _____

Internal Use Only

Cash	<input type="checkbox"/>	Check	<input type="checkbox"/>	Money Order	<input type="checkbox"/>
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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.

2015 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 repeaters on 146.980 and 443.975, and a packet repeater on 145.510 Mhz.

Anyone interested in Amateur Radio is welcome to join. Dues are \$15.00 (individual) and \$20.00 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.