

April 2015

(www.k7id.org)

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

REGULAR CLUB MEETINGS:

Monday, Apr. 13, 7:00 p.m.
Search & Rescue Bldg.
10865 N. Ramsey Rd.
Hayden, Idaho
Topic:
Presenter:
Refreshments: ???

VE Testing
Monday, Apr. 13, 5:30 p.m.
10865 N. Ramsey Rd.
Hayden, Idaho

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

Upcoming Events

Bloomsday Race
May 3, 2015
Spokane, Washington
POC: Dan Croskrey, NV2Z
dan@croskrey.us

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

Letter From the President

Dave Boss KF7YWR

boss@infinityusers.com

208.290.8590

April is upon us and as the days grow past the equinox, our star continues to produce more of that valuable sunshine we so value after the long winter months. This has been one of the lightest winters that I can remember, having been here off and on since 1967. Listening to the NWS broadcast the other day the official snowfall stands at only 16 inches for the year. I can only wish we will not dry up and burn away is the ensuing warm months to come. At any rate this weather has certainly been nice for a change as the Plow truck has not moved, the snow blower has yet to go through one tank of gas and the snow shovel has only been used a couple of times and my back has really appreciated the vacation from all the winter chores.

My Idaho QSO Party

My push to have the Ham Shack presentable for visitors went unrewarded as no one showed for the invite, which was for the best, as the only visitor was Mr. Murphy and his band of cohorts. Firstly, trying to log onto QRZ was next to impossible and after numerous tries and finally succeeding several power glitches ushered in several more attempts and successes. Once I was able to communicate with the interworld and had the radio warmed up, the antenna tuned and made my first contact I felt now I was finally ready to roll. Until the screen went dark and the indicators on the radio went dark and one half of the lights went dark and with only lights over the workbench still functioning I thought OK just popped a breaker, no biggie, right. Wrong! Having thinking that I just didn't hear the breaker trip, I just turned around to the panel only to find none had tripped, after cycling them several times (this always seems to help, if you don't get the desired results the first time, several more attempts should provide different results, right?) and the power still had not returned, time to check the breaker that feeds the Ham Shack back at the house. Alas, it too had not tripped. Now it's time for the multi-meter. So I check the panel at the house, Panel front off, 240 volts, great, put the cover back on. Check the panel in the Shack, cover off, 120 volts on one leg, 0 volts other leg. Now, off to the electrical vault in the ground that distributes power to the guest cabin, barn and Ham Shack, cover off, stuff the leads into the wire nut connections after removing half a roll of tape from each one and we have 240 volts, great. Now at least I have power only thirty feet from the Shack. After a quick double-check with all the connections at the panel in the Shack and still only 120volts. Back to the house to turn off the power to the outbuildings, now pull the

connections apart in the vault, slather them up with fresh anti-ox and put them all back together. Back to the house to energize the outbuildings, as I approach I hear computers coming back online, radios on, finally success! Of course now there are tools scattered everywhere to put away, panel covers to replace and not a roll of tape to be found in the Shack. Back to the house and garage to search out and gather the rubber tape and electrical tape to keep it in place. Every connection insulated and double taped, finally! Elapsed time for the repair: NO CLUE, other than way too long. Now time to reset clocks, log back into QRZ, try to determine where I was when the lights went out (literally) and try to log a few more QSO's. I did manage to pick-up a few more QSO's before the bands deteriorated, my enthusiasm waned and Mr. Murphy had left the building. Seems sometimes forward progress is not an option.

The Real QSO Party

Ed Stuckey, AI7H is receiving logs for the Successful QSO Party and could probably use some help as in the past.

Hamfest June 13th

The check for the prizes has been sent and we will be receiving them shortly. We will be back to the American Legion Facility again this year. Volunteer list will be passed around at the meeting. With just a few meetings left before the Hamfest please step up soon so we don't have scramble for bodies at the last minute. Contact: Jim Banks, KF7TFJ 699-4353 or Dave, KF7YWR 290-8590 to help or for any questions.

Field Day June 27-28th

Coming soon to an area near you. There has been discussion to have a Pre- Field Day trial run for layout, set-up of the net and generally try to work out a few of the bugs before we set up. All who would like to be involved will be welcome. Date to be determined (of course it will have to be windy and raining if we are to put up antennas). The event was a lot of fun last year and one could even have quality conversation at 3:00 AM, although we were able to cure all the ills of the world at that hour, not many of those came to fruition in the successive months to follow. We had a number of first timers on the radio and a lot of interest from passers by. Keep this on your calendar.

73, Dave KF7YWR

Kootenai Amateur Radio Society - March 2015 Meeting Minutes

The meeting was called to order by Club President, Dave Boss (KF7YWR), at 7:03 pm. Mike Slothower (KG7KSJ) led members in the Pledge of Allegiance. This month three new Technicians have joined the ranks: Lorrie

Erickson (KG7RZZ), Sheila Waller (KG7SAA) and Rod Shobert (KG7SAB). Tina Peterson (KG7GGB) has advanced to General Class.

Club President, Dave Boss made a public apology on behalf of the Board. A few months back Larry Telles (K6SPP) had stated that he was interested in resigning his position as long-time web master. The Club Board got a little over zealous in an effort to revamp the website and took the reins. Larry, on behalf of the Board we all would like to apologize for the error in our ways and hope that you can forgive us for the oversight.

Ed Stuckey (AI7H) ARRL Section Manager: There is a scholarship opportunity for the 2016 school year. Requirements for the scholarship include having a General Class license or higher; Reside in Washington, Oregon, Montana, Idaho or Alaska; Areas of Study include engineering, medicine, or business; and have a GPA or 3.0 or higher. The scholarship is for \$1,000.

Idaho QSO Party will be from noon March 14th to noon March 15th. For information on the contest please go to idahoarrl.info

Gary Holland (N7DHL) ARES/RACES: ARES/RACES will be conducting a group practice session to pass messages from hospital to hospital in the northern counties. Traffic will be voice traffic only and is scheduled for March 20th from 6:30pm to 8pm and will be held at the Search & Rescue Building on Ramsey Road.

Gary Roth (KE7IAT): Inland Empire VHF Club's March meeting presentation will be on Summits on the Air. VHF Club meetings are held the second Thursday of the month at the Spokane Community College. Please check their website for details about locations and topics for the April meeting.

Jim Banks (KF7TFJ): The KARS Annual Hamfest will be June 13th at the American Legion Building in Post Falls on Poleline Road. Swap tables are \$15 and Volunteer are needed for all sorts of jobs and tasks, please consider giving some time to help out. The main door prize is a Yeasu FT-817ND, this is the New Model. Doors will open to the public at 7am on Saturday.

Rod Anderson (K7ZBE) Club Treasurer: Checking \$2752.36, Savings \$2550.23, Petty Cash \$82.03 Total \$5,384.62. Expenses for the previous month were \$164.36. Mike Slothower (KG7KSJ) made a motion to approve the Treasurer's Report, the motion was 2nd and passed by club vote.

The Door Prizes bill for the Hamfest was presented to the club: The prize package from Ham Radio Outlet includes 2 Wouxom portables, 1 FT-817ND, 3 MFJ

1724B, 3 MFJ Dual Band MT Antenna for a total of \$991.70. Rick VanLandingham (KI7I) made a motion to approve the invoice, the motion was 2nd and passed by club vote.

Monthly Presentation: Frank Ten Thy (KG7CUI) and Mike Slothower (KG7KSJ) conducted a wonderful presentation on Slow Scan TV from the International Space Station (ISS). Topics included monitoring, decoding and a little on transmitting. In addition to slow scan TV, the ISS also has the ability for voice repeater traffic and packet, however these modes are not always active. Software used by Frank and Mike during the presentation were as follows: MM Hamsoft MMSSTV, n2yo.com, ARISS.org, Simple Sat Lookdown, and Work-Sat.com. Monitoring traffic from the ISS can be as simple as a rubber ducky antenna and a 2m radio set to 145.8000 MHz. Please check the ISS website for current information on passes and what modes of communication are currently turned on.

Raffle Drawing Results: the 50/50 drawing resulted in \$9 to the club, winner was myself (N7ISP); The membership drawing pot is up to \$157, the winner was Ben Ginter (KG7QIK) however he was not present to the pot will be moved to next month.

Field Day will be held again at the Rathdrum City Park off Highway 53. Field Day is always the last full weekend in June... please mark your calendars.

Jim Banks (KF7TFJ) made a motion at 8:23pm to adjourn the meeting, the motion was 2nd and passed by club vote. Please join us next month's meeting.

CODEC2 MICROPHONE BASED ENCODER BEING READIED FOR DELIVERY

Free DV in the form of a plug in to your radio encoder microphone is coming, but it won't be free. Codec2 digital voice developer David Rowe, VK5DGR, has announced that the first batch of one hundred model SM1000 units are being built in China right now and shipping may start in late March

The SM1000 is an embedded hardware product that allows you to run the FreeDV system without a Personal Computer. Just plug it into your SSB or FM radio, and you now have Digital Voice capability.

The unit is based on a STM32F4 micro-controller, has a built in microphone, speaker amplifier, and transformer isolated interfaces to your radio. It's just 80 x 100 mm, and can be held in your hand and used like a regular push

to talk microphone, or set near your radio in a small box form factor.

While no final price has been announced, its believed that the unit will retail for under \$200 in the United States putting open source digital voice within the reach of most hams. (Southgate, www.rowetel.com/blog/?p=3125)

IARU Emergency Telecommunications Guide Available Online

The International Amateur Radio Union (IARU) Emergency Telecommunications Guide is now available for download from the IARU website. The guide was developed to provide the IARU member-societies with materials suitable for training radio amateurs to participate in emergencies. It also was designed to provide guidance to individual Amateur Radio operators with little or no experience in handling emergency communications but desire to enhance their ability to participate in such events or to simply have a better understanding of the process. The IARU Administrative Council meeting approved the *Guide* at its 2014 meeting.

"IARU member-societies are encouraged to distribute this guide among its membership and, if necessary, to provide a translation into a language used within their own country," an IARU media release said. "This guide can also be used in conjunction with other training materials by leaders within the emergency communication community to train radio operators in the basic theory and practice of handling emergency communications traffic."

The IARU International Secretariat has invited feedback, comments, or suggestions regarding the *Guide*. (ARRL)

FLAWED GRAPHENE STRUCTURE ACTUALLY IMPROVES FUEL CELLS

Researchers are reporting that purposefully introducing flaws into graphene used in fuel cells can improve them and make them more efficient.

Separating protons from hydrogen efficiently is a major challenge for fuel cell technology. Now, Northwestern University scientists collaborating with researchers from five other institutions have discovered that graphene that is slightly imperfect can shuttle protons from one side of a graphene membrane to the other in just seconds.

Franz J. Geiger is a Northwestern chemistry professor involved in the research. He says that everyone always

strives to make really pristine graphene, but this new data shows that if you want to get protons through, you need less perfect graphene. He notes that the selectivity and speed of the imperfect version are much improved over conventional membranes, giving engineers a possible new and simpler model of fuel cell design.

The research was reported in the journal *Nature Communications*. More is on the web at tinyurl.com/imperfect-graphene. (techtimes.com)

QUICK ARREST IN WASHINGTON STATE TRANSMITTER BURGLARY

Authorities in Washington State recently arrested a 30-year-old transient man after he was caught with several thousand dollars in alleged stolen radio equipment. The Grant County Sheriff said the equipment was taken from an FM-radio transmitter tower north of the town of Quincy.

Cherry Creek Radio had called the local electric company because the station's transmitter was out of service, possibly due to a power outage at the Monument Hill tower site. When lineman arrived they saw a man in a white Subaru apparently stealing radio equipment. They said the car fled southbound but Sheriff's deputies caught up with the vehicle and stopped it. In it they found about \$10,000 in electronic components belonging to Cherry Creek Radio.

(A suspect was taken to the Grant County Jail on suspicion of second-degree burglary, and first-degree possession of a controlled substance. The latter charge came about after correction officers also found methamphetamine on him while he was being booked. (Published news reports))

Standard General Affiliate Acquires 1743 RadioShack Stores

The 1743 retail outlets that survived RadioShack's February bankruptcy have been acquired by General Wireless Inc, an affiliate of Standard General LP. General Wireless this week received US Bankruptcy Court approval to acquire the inventory and assume the leases of the RadioShack stores. The acquisition followed an auction, conducted under the US Bankruptcy Code. The current plan calls for "co-branding" about 1440 of the surviving stores with cellular phone provider Sprint Corp.

"This has admittedly been a difficult time for all RadioShack supporters," said Soo Kim, Managing Partner of Standard General, the majority shareholder of

General Wireless. "[T]his transaction is an important milestone in this storied company's history. It has allowed the company to shed stifling debts and unprofitable business lines."

RadioShack once offered entry-level short-wave receivers, Citizens Band gear, a wide array of discrete components — including transistors, resistors, and capacitors — and, for a time, a fairly popular 2 meter hand-held transceiver and two different models of 10 meter single-band transceivers.

Kim said Standard General looks forward to partnering with RadioShack's 7500 employees, its landlords, and with Sprint "to rebuild a great American company."

He said Standard General would be introducing "our talented management team" in the coming weeks. The new team would consist of both new and continuing RadioShack executives.

RadioShack said its partnership with Sprint would help reposition the retailer "as the premier community destination for consumer electronics" and that stores would feature "emerging technologies that enhance the traditional accessories, DIY electronics and innovation for which the company is known."

In the near term, RadioShack has said that it expects to continue to maintain day-to-day operations at its open stores and on its website at RadioShack.com.

Utah Group Puts Broadband-Hamnet to Work for Food Project

A small band of Amateur Radio volunteers in Utah's Salt Lake Valley successfully used a broadband WiFi network set up on the 2.4 GHz amateur band to help coordinate the Boy Scouts of America's "Scouting for Food" project on March 21 in which Scouts collect items donated to a food bank. Local radio amateurs provide both voice and digital mode communication.

This year for the first time they used a Broadband-Hamnet™ (BBHN) system that coupled modified wireless router gear on amateur frequencies to create a peer-to-peer WiFi network to share audio and video over a generous patch of real estate. BBHN is a descendent of the former ARRL High Speed Multimedia (HSMM) Working Group efforts, earlier known as the "Hinternet" and pioneered by John Champa, K8OCL (SK), and others in the early 2000s.

“[W]e would call it WiFi on Steroids!” said David Bauman, KF7MCF. The Utah hams linked 13 nodes across the valley to form a network “that is like a mini private Internet,” Bauman explained. “They then used this network to send live video and audio back to the BSA Headquarters, showing them what was happening at food drop off sites and at the [truck dispatch] headquarters. Bauman called it “a huge step forward in technology from the old days of Morse Code.” Retired clergyman Robert Jelf, KG7OHV, of Magna, headed up the team.

Just outside BSA Headquarters near the University of Utah, Brandon Bauman, KG7RWO, was able to watch via his laptop as volunteers miles away dropped off canned food items and as YRC freight dispatched trucks to pick-up sites around the valley. Brandon was part of an Amateur Radio group that assists the Boy Scouts in the Scouting for Food Project each year by providing communications. This marked the first time BBHN technology was used to support the project in the Salt Lake Valley. Their WiFi network, known as a wireless mesh network, was able to cover a large portion of the valley.

“The farthest point from our hub site was 8.5 miles across the city through a narrow path lined with lots of manmade objects for signals to bounce off,” Jelf said. “While the mesh group was used to show video of the dispatch of trucks and of truck trailers at collection points within the hub site path, collection took place throughout the Wasatch Front area and elsewhere in Utah.” (ARRL)

THE AMATEUR RADIO EMERGENCY DATA NETWORK

The Amateur Radio Emergency Data Network and its associated AREDN Project software is being described as a new method of providing the ham radio community with a quality solution for supporting the needs of high-speed data in the amateur radio emergency communications field.

It comes in part from the developers of Broadband Hamnet which was formerly known as HSMM-MESH. These hams have expanded their unique approach to create environmentally robust, commercially available, Ubiquiti hardware. This in turn has changed the complexion of mesh implementations from an experimental, hobby-oriented, novelty into a viable alternative network suitable for restoring some level of Inter and intra-net connectivity in those instances when all

else fails. ARDEN Project developers say this meets that objective.

A wireless mesh or W-M-N is a communications network made up of radio nodes organized in a mesh topology as a form of wireless ad hoc network. Wireless mesh networks often consist of mesh clients, mesh routers and gateways. The mesh clients are often laptops, cell phones and other wireless devices while the mesh routers forward traffic to and from the gateways which may, but need not, connect to the Internet.

Now the ARDEN Team is inviting those interested to download and adopt the AREDN Release 3.0.2 and give them the opportunity to support your emergency communications mesh implementation, if your group has one.

You can find out more about the Amateur Radio Emergency Data Network and download the software at www.aredn.org. (ARNewsline)

NEW HAM-ORIENTED DATA NETWORKING FIRMWARE FOR THE LINKSYS AND UBIQUITI PRODUCTS

In a related story, Broadband-Hamnet has released version 3.1.0 firmware for the Linksys WRT54G and Ubiquiti families of products. This firmware returns to the use of patch updates, while also supporting add-on tools such as HamChat created by Nikolai Ozerov, VE3NKL and a tunneling solution optimized by Darryl Quinn, K5DLQ.

This firmware release continues support for EMCOM data networking in the 2.4 GHz, 5 GHz and 900 MHz bands using Ubiquiti equipment and in the 2.4 GHz band using Linksys equipment.

Many Hams were concerned about future Broadband-Hamnet support of the Linksys units. The core team has listened to these concerns and has decided to continue support of Linksys devices. For more information, please take a look at www.Broadband-Hamnet.org. (ARNewsline)

WIRELESS POWER TRANSMITTED 170 FEET OF USING MICROWAVES

Wireless energy generation from space is now one small step closer to becoming a feasible delivery source of power. This following a new experiment that successfully transmitted electric power using microwaves. Amateur Radio Newline's Stephen Kinford N8WB has the details:

[Stephen:] The Japan Aerospace Exploration Agency also known as Jaxa conducted the research which sent 1.8 kilowatts of electricity 170 feet through the air in the form of microwave radiation. The beam was transmitted with a great degree of accuracy showing the technique may be used on a larger scale.

Engineers at Jaxa have spent years researching new technologies to enable the delivery of energy from space based solar collectors down to our home planet. Solar cells commonly power satellites, space probes, and the International Space Station. However, delivering that power to Earth in an economical manner is still a challenge facing developers.

Now researchers say that the Sun's energy might, one day, be collected by massive solar panels in space, and the energy generated from the systems could be sent to Earth in the form of highly directional microwaves. Such networks for generating electricity in space would have some advantages over ground-based systems. Solar collectors in space would not be subject to the cycles of day or night, or cloudy conditions.

Current plans to develop an orbiting energy generation system involve sending satellites with large solar panels into geostationary orbits more than 22,000 miles above the Earth. Challenges facing engineers include launching these massive solar arrays and maintaining them once they are on-orbit. Because of these issues, Jaxa engineers believe that a full network to generate electricity in space will not be available until sometime in the 2040's.

[Don:] According to the Japan Aerospace Exploration Agency additional uses for the space-based power system could include sending electricity to remote regions in the wake of natural and man-made disasters. Future development of the current system could produce a device

capable of transmitting and receiving energy from ocean platforms, far from the nearest coast.

(More is on the web at <http://www.techtimes.com/articles/39...0-feet-air.htm>). (techtimes.com)

This space intentionally blank.

COFFEE & DONUTS
EVERY THURSDAY MORNING

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

The Golden Spike
Community Center
Rathdrum



TALK-IN: 146.980, PL127.3
443.975, PL136.5

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 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

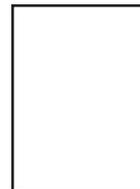
Email address _____

Signature _____

Internal Use Only

| | | | | | |
|--------|--------------------------|-----------------|--------------------------|-------------|--------------------------|
| Cash | <input type="checkbox"/> | Check | <input type="checkbox"/> | Money Order | <input type="checkbox"/> |
| Roster | <input type="checkbox"/> | Membership Card | <input type="checkbox"/> | | |

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

President: Dave Boss, KF7YWR
president@k7id.org

Vice-President: Alan Campbell, KE7DFT
vicepresident@k7id.org

Exec. Director: Lenny Gemar, N5IEX
excdirector@k7id.org

Secretary: Adam Crippen, N7ISP
secretary@k7id.org

Treasurer: Rod Anderson, K7ZBE
treasurer@k7id.org

Newsletter Editor: Gary Roth, KE7IAT
509 993-8468 ke7iat@comcast.net

Repeater Trustee: Rick Van Landingham,
KI7I ki7i@arrl.net

Repeater Tech: Dale DuRee, KE7VMN

Webmaster: Larry Telles, K6SPP
208 762-2548 ltelles@icehouse.net

Past President: Bonnie Patterson,
KG6QQM

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.