



August 2017

([www.k7id.org](http://www.k7id.org))

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

## REGULAR CLUB MEETINGS:

**Monday, Aug 14, 7:00 p.m.**  
Search & Rescue Bldg.  
10865 N Ramsey Rd.  
Hayden, Idaho  
**Topic: DMR and Digital Voice Modes**  
**Presenter: Lenny Gemar, N7MOT**  
**Refreshments: ???**

**VE Testing**  
**Monday, Aug 14, 5:30 p.m.**  
10865 N Ramsey Rd.  
Hayden, Idaho

**Monday, Sep 11, 7:00 p.m.**  
Search & Rescue Bldg.  
10865 N. Ramsey Rd  
Hayden, Idaho  
**Topic: ???**  
**Presenter: ???**  
**Refreshments: ???**

**VE Testing**  
**Monday, Aug 11, 5:30 p.m.**  
10865 N. Ramsey Rd  
Hayden, Idaho

**Upcoming Events**  
**North Idaho Fair**  
**August 23-26**  
**Amateur Radio Info Booth**  
**Spokane Hamfest**  
**Sept 23**  
**University HS**  
**12420 E 32d Ave**  
**Spokane Valley, WA**

Letter from the President

Dave Boss, KF7YWR

208.290.8590

[boss@infinityusers.com](mailto:boss@infinityusers.com)

I believe this one of the hottest summers I can remember. I have lived in the area off and on since 1967. I remember starting school in brand new 501's, shoes and socks for the first time all summer and dying of the heat in the south facing classrooms (lots of glass and tall windows) of the old CD'A High school on 15th Street. I remember the heat while bucking hay bales after school helping my father with his custom haying business. Later on, while working for the State Highway Department, those hot days next to the sweltering asphalt, but to my recollection, never 90°+ days just one right after another. Indeed this summer seems to have been warmer, and having more 90 degree days than I have witnessed in the past. Weather report today again showing another ten days of 90 plus weather. So much for the outdoor projects.

A small group met at my QTH to mock-up our booth for the fair: laying out how much room we would have, what club gear to bring, and make sure it all was in working order. We had success with all points and have just some printing to do and some minor adjustments to the gear. Brats on the BBQ rounded out the work party. More details on the Fair come next meeting.

NWTN

Nightly at 18:30 local time on these K7ID repeater frequencies:

146.98 MHz - 127.3 Hz/

443.975 MHz +136.5 Hz/

(146.98 and 443.975 are normally linked together)

Thursday Morning Coffee and Donuts

8:00-10:0 AM At the Silverlake Mall Community Room (In the old Christopher and Banks shop across from JoAnn's Fabrics) Bring your favorite mug, conversation and a buck.

73,  
Dave Boss  
KF7YWR

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Kootenai Amateur Radio Society  
July 2017 Meeting Minutes

The meeting was called to order at 7:03pm by Club President Dave Boss (KF7YWR).

Rod Anderson (K7ZBE) gave presentation on the Linux for Amateur Radio. Local resources for Linux are the North Idaho Linux Users Group ([www.nilug.org](http://www.nilug.org)) and Spokane Linux Users Group ([www.spokanelinux.org](http://www.spokanelinux.org)) for more information and assistance.

Club Treasurer's Report:

May – Checking \$3,021.93, Savings \$2,201.48, Petty Cash \$118.44, Total \$5,341.85.

Monthly income consisted of: Savings Account \$0.05; 50/50 Raffle \$8.00, Membership \$89.00.

Monthly expenses consisted of: Computer/Radio Cases \$21.18.

June – Checking \$3,625.68, Savings \$2,226.54, Petty Cash \$102.55, Total \$5,954.77.

Monthly income consisted of: Savings Account \$0.06; Donation \$2.00; Ham Fest \$664.68; Membership \$115.00

Monthly expenses consisted of: Ham Fest Prizes \$655.60; Ham Fest Food \$249.72; Ham Fest Facility Rent \$250.00; Ham Fest Supplies (Receipt Books) \$15.89; Field Day – Food \$34.90

Ham Fest –

Admissions

Admissions \$500.00

Tables \$231.00

Receipts \$731.00

Facility Rent \$250.00

**Net \$481.00**

Grand and Door Prize Raffle

Receipts \$380.00

Grand Prize \$500.00

Door Prize \$155.60

Prize Expense \$655.60

**Net \$ -275.60**

Kitchen

Receipts \$391.00

Food Expense \$249.72

**Net \$141.28**

KARS Table

Receipts \$318.00

**Net \$318.00**

**Ham Fest Net \$664.68**

Motion to approve the Treasurer's Report was made by Dave Boss (KF7YWR), 2<sup>nd</sup> by Mike Slothower (KG7KSJ), motion passed by member vote.

North Idaho Fair Preparation. Plans are underway and volunteers are being sought after to "work" the club's booth at the Fair. We need AT LEAST two people in the booth due to bathroom breaks, food/drink breaks, etc. There will be radio equipment and an antenna (maybe two) for getting on the air. The Fair runs August 23<sup>rd</sup> (Wednesday) through the 27<sup>th</sup> (Sunday) some positions have been spoken for, but additional people are always welcome. Having three or four in the booth would be awesome. Please contact Dave Boss.

Mountaintop maintenance. Canfield Weed Patrol will be making a trip to the site to issue a seasonal death sentence to some weeds. If you have never seen CDA from the mountains... the view alone is worth the hour of work needed in killing some weeds. Contact a club board member to volunteer. Although an official date has yet to be set, we are looking at a "cooler" Saturday.

Club Meeting Presentation ideas are needed. If you have an idea for a presentation, something you would like to see, an idea that you would like to present, or whatever. Please contact Club Vice-President Lindy Bryant at [lindyrb@aol.com](mailto:lindyrb@aol.com) or (818) 720-5540

Upcoming Events:

County Fair Booth: Fair is Wednesday, Aug 23<sup>rd</sup> to Sunday, Aug 27<sup>th</sup>.

Raffle Results:

50/50 \$7.50 Rod Anderson, K7ZBE (claimed)

Membership \$51.00 Dave Boswell, N4APY (not claimed)

Mike Slothower (KG7KSJ) made the motion to adjourn the meeting at 9:02pm, 2<sup>nd</sup> made by Lenny Gemar (N7MOT), motion passed by member vote and meeting was adjourned.

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### Amateur Radio Volunteers in British Columbia Reported Assisting Relief Agencies

Radio Amateurs of Canada (RAC) reports that it's monitoring the [wildfire situation](#) in British Columbia. RAC reports that acting British Columbia/Yukon Section Manager Bill Gipps, VE7XS, has advised that Amateur Radio Emergency Service teams have not yet been called out, and that the wildfire situation "has not become a communications event." A state of emergency has been declared in Canada's westernmost province. More than 180 wildfires are reported active in British Columbia.

"There are amateurs on the ground helping other organizations such as the Red Cross," RAC reported. It's been estimated that more than 7,000 people have been evacuated from fire-stricken communities, many now in shelters, and an undetermined number of homes have been destroyed.

British Columbia Minister of Transportation and Infrastructure Todd Stone, who oversees [Emergency Management BC](#), announced a provincial state of emergency on July 7 to ensure a coordinated response to the current wildfire situation as well as public safety.

"Given the current wildfire situation and the expected increase in wildfire activity, the Province is taking this extraordinary measure of declaring a provincial state of emergency," a statement said. "This is an urgent situation, and public safety is the top priority. The Province will continue to keep the public informed in this rapidly evolving situation."

Under the state of emergency, agencies such as Emergency Management BC, the Fire Commissioner, the Ministry of Forests, Lands and Natural Resource Operations and the RCMP have authority to take every action necessary to fight the wildfires and ensure protection of residents and their communities.

Lightning ignited dozens of new wildfires throughout the province over the weekend, and additional evacuation alerts and orders have been issued for several

communities. The extended weather forecast calls for continued hot and dry weather, with a risk of thunderstorms in many parts of the province. According to the CBC, wildfires burning out of control across the interior of British Columbia have prompted the evacuation of at least one airport, two hospitals, an entire town and hundreds more homes throughout the region.

The last provincial declaration of state of emergency was issued in August 2003, also in response to wildfires. (ARRL News)

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### Amateur Radio Participation is Key to University Solar Eclipse Experiment

[Virginia Tech](#) electrical engineering professor Greg Earle, W4GDE, is heading up a National Science Foundation (NSF)-funded solar eclipse experiment dubbed CEDAR - Coupling, Energetics, and Dynamics of Atmospheric Regions. The experiment proposes to study the effects on the ionosphere of the August 21 total eclipse of the sun, using a combination of GPS receivers, the university's [SuperDARN](#) (Super Dual Auroral Radar Network) radar system, HF Amateur Radio, and plasma modeling. Several graduate students and researchers, as well as the Virginia Tech Amateur Radio Association (K4KDJ) and the Amateur Radio community at large have been recruited to help.

"We want to understand how the ionosphere is affected by blockage of sunlight over a relatively short interval (~2 hours), understand how man-made systems are affected by the changes in the ionosphere, and use the data to improve our numerical models," Earle told ARRL, noting that the "plan has morphed a bit" since the initial proposal of more than a year ago. Virginia Tech students Magdalina Moses, KM4EGE, and Xiaoyu "Harry" Han, KM4ICI, along with Tech electrical engineering professor Bob McGwier, N4HY, are among those pitching in.

Earle and his team will use the data they collect to characterize ionospheric plasma density variations caused by the eclipse, measure HF scintillation - rapid fluctuation of signal phase and/or amplitude - during the eclipse, study the motions of plasma irregularities produced in both the E

and F layers, and use numerical models to test cause-and-effect scenarios to compare with empirical data.

“The proposed study will utilize diagnostic capabilities that have never before been used to study a mid-latitude eclipse,” the CEDAR abstract explains. “Through this work we will answer several fundamental questions that remain unresolved, despite previous eclipse studies, and we will engage a huge cohort of non-scientists in gathering data that will constrain our models and enrich our understanding of ionospheric behavior.”

That “huge cohort” includes participants in the Solar Eclipse QSO Party ([SEQP](#)), sponsored by ARRL and HamSCI. “During this event, radio operators will actively communicate throughout the eclipse interval over paths that transect the eclipsed region of the ionosphere,” the CEDAR proposal outlines. “These data will include information on the signal strength and maximum usable frequency in various HF bands, which are directly related to the density and altitude of the ionosphere.” The experiment will also draw on data generated by [WSPR Net](#) and the Reverse Beacon Network ([RBN](#)). “Thus, we expect this proposed effort to have wide-ranging impact on the Amateur Radio community, and exceptionally broad involvement of non-scientists in gathering the data required.”

The Solar Eclipse QSO Party on August 21 runs from 1400 until 2200 UTC. Stations will exchange a signal report and six-character grid locator on 160 through 6 meters (excepting 60, 30, 17, and 12 meters). Participants may work the same station again after 10 minutes have passed. Preferred modes are CW, RTTY, and PSK31, because automated receiving networks will record the contacts, but phone and digital contacts are okay too.

Virginia Tech teams at the start, middle, and end of the eclipse footprint in the US also will measure the phenomenon’s effect on low-frequency radar waves. The scientists will measure how long the waves take to go up and down off of the ionosphere and compare it to normal conditions.

Understanding the data and comparing it to models can help scientists better analyze the effects of space weather events on Earth, Earle said. (ARRL News)

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## WWV 25 MHz Signal Swapped to Circular Polarization, Reception Reports Invited

The resurrected 25-MHz signal of time and frequency standard station [WWV](#) is now emanating from a circularly polarized turnstile antenna. WWV had used a vertically polarized antenna on 25 MHz in the 1970s. Silent since 1977, the 25-MHz signal returned to the air on an “experimental basis” in April 2014, and it’s been transmitting ever since - initially on a broadband discone until August 2015, when it switched back to a vertical, which it used until the July 7 switch to circular polarization.

“[W]e are broadcasting with 2 kW from a circularly polarized turnstile antenna,” WWV lead electrical engineer Matt Deutch, [NORGT](#), told ARRL this week. “It is just your standard plain-vanilla turnstile - two horizontal orthogonal dipoles with a quarter-wave phase-shifting coax linking them.”

Deutch has explained that when the 25-MHz transmitter was shut down in 1977, the antenna’s radiating element was “tossed in the bone yard, and a new longer section put on the tower to make it a 15 MHz stand-by antenna,” Deutch recounted. When WWV first reintroduced the 25-MHz broadcast some 37 years later in response to requests, it used a broadband monopole. But, it was later decided to use that antenna for WWV’s 2.5-MHz stand-by transmitter and to rebuild the 25-MHz antenna. The old radiating section was retrieved and the antenna rebuilt, so that it looked like what was being used in 1977.

Deutch said it’s hoped that the latest antenna change to circular polarization might be helpful to anyone studying propagation during next month’s total solar eclipse, which will be visible across the US. “My effort right now is focused on getting the word out, just to make people are aware that [the 25-MHz signal] is available, if it can be useful to them.”



Before the change, Deutch said WWV had received reports on the 25 MHz signal from across the Atlantic. The 25 MHz broadcast includes the same information transmitted on all other WWV frequencies and at the same level of accuracy.

Located in Fort Collins, Colorado, WWV is operated by the National Institute of Standards and Technology (NIST). WWV has invited listeners' comments and reports on its 25-MHz signal. (ARRL News)

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### Revised FCC Form 605 Will Ask Applicants "the Felony Question"

A revised FCC Form 605 - *Quick-Form Application for Authorization in the Ship, Aircraft, Amateur, Restricted and Commercial Operator, and General Mobile Radio Services* - going into effect in September will ask all applicants to indicate if they have been convicted of or pled guilty to a felony. The Communications Act obliges the Commission to ask "the felony question," as it did on the old Form 610 and still does on other applications. This action will correct its omission on Form 605, which has existed for years. Applicants' responses and explanations will be used to determine eligibility to be a Commission licensee. The FCC told ARRL that it's still deciding whether to issue a public notice on the change.

"The Commission is revising the basic qualifications section of the form to include a question regarding whether an application has been convicted of a felony in any state or federal court," the Office of the FCC Secretary explained in a May filing with the Office of Management and Budget (OMB), which must okay the revision. "Applicants answering YES must provide an explanation regarding the conviction. This item enables the FCC to determine whether an applicant is eligible under sections 310(d) and 308(b) of the Communications Act of 1934, as amended, to hold or have ownership interest in a station license."

The revision also will apply to NCVEC Form 605 - the *unofficial* Amateur Radio-specific version of the application that is completed and filed at volunteer examiner coordinator (VEC) examination sessions. VECs will have to start using the revised form on September 7. Responding to VECs' questions, the FCC offered some guidance, with a particular focus on NCVEC Form 605.

ARRL VEC Manager and NCVEC Vice-Chair Maria Somma, AB1FM, thanked the FCC for honoring a

request to amend the effective date of the change, initially in early August. "At the urging of the NCVEC leadership, the FCC took into consideration the undertaking to change and distribute all affected forms and update software and agreed to push back the execution date by 1 month," she said. The NCVEC will create a revised NCVEC Form 605 and release it to VE teams before September 7.

Once the Form 605 update has been implemented, assuming all other information is correct, negative felony question responses will result in a license grant, the FCC said. A YES will place the application in the "pending file for review" category. Applicants answering YES would have to, within 14 days, provide the FCC with a statement explaining the circumstances, and a statement "giving the reasons why the applicant believes that grant of the application would be in the public interest, notwithstanding the actual or alleged misconduct," the revised Form 605 instructions state. The FCC said an applicant's answer to the felony question and explanation will be public via ULS, unless a separate request is made to the FCC that the applicant's explanation be kept confidential. The FCC will review applications on which the felony question has been answered in the affirmative and decide whether to grant them or designate them for hearing.

"The applicant must provide sufficient information for the FCC to determine whether there exists any material and substantial question of fact regarding whether the applicant has the character qualifications to be a Commission licensee," the FCC said. There is no set checklist of items, but useful information would include such information as details regarding the conduct that resulted in the conviction or guilty plea, including time and place; the date of the conviction or guilty plea; the penalty imposed and whether it has been satisfied, and "any efforts taken to remedy the wrongs committed and ensure that the applicant will not engage in such conduct in the future," the FCC said.

The FCC said the only additional information that VECs will have to collect is the response to the felony question; any explanatory exhibits and confidentiality petitions will go directly to the FCC, and VECs will have no information as to the status of such applications.

The FCC said the felony question must be answered every time - even if previously answered - for New, Modification, Renewal/Modification, and Amendment applications. "Assuming that nothing has changed, the attachment to the subsequent applications can simply reference the file number of the application where the

complete explanation was given, rather than having to set forth the complete explanation each time,” the FCC memo said. “Clubs are not exempt from the felony question. The question applies to the club as an entity and to the trustee, but not to any other individual officers.”

Individuals convicted of a felony and later pardoned or whose record has been sealed should answer YES, and include information regarding the pardon, “as that will be relevant to whether the conviction still presents any material and substantial question of fact regarding whether the applicant has the character qualifications to be a Commission licensee,” the FCC told VECs. “An overturned conviction need not be disclosed — but a conviction still on appeal must be disclosed.” (ARRL News)

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### Assistance Requested

The International Health Service is looking for amateur radio operators to help with its next two-week medical service mission to Honduras in February. While the primary purpose is to provide communications services for doctors treating impoverished villagers in remote areas, John Kirckof KB0UUP describes the radio side of the experience as a kind of “super Field Day,” with messages being relayed from location to location for a variety of health care needs. Most areas have little or no electric, phone or internet service.

Anyone with a General class license or higher who is willing to assist with communications relating to surgical transport, medical supplies or other needs is welcome. It’s recommended that radio operators bring their own portable HF rigs and have the ability for 2 meter communications as well, but John told Newsline that radios can also be provided for those who have none. Organizers will also assist newcomers in the use of the WinLink system, which is used for sending such messages as patient-referral forms or requests for supplies between remote villages and some of the surgery locations. No Spanish-language skills or medical background is needed.

If you’re interested or need more details about what’s required, contact John by phone at 320-634-4386 or email him at [jmkkek-at-yahoo-dot-com](mailto:jmkkek-at-yahoo-dot-com). ([jmkkek@yahoo.com](mailto:jmkkek@yahoo.com))

For information about the nonprofit itself, visit their website at [www-dot-ihsnmn-dot-org](http://www-dot-ihsnmn-dot-org) ([www.ihsnmn.org](http://www.ihsnmn.org))

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### Tiny “Sprite” Satellites Deployed, Transmitting on 70 Centimeters

According to *Scientific American*, six tiny “Sprite” satellites, each consisting of a 4-gram circuit board but packed with electronics, were deployed in late June. The Sprites are the brainchild of Zac Manchester, KD2BHC, whom *Scientific American* interviewed for the [article](#).

The Sprites went into low-Earth orbit as secondary payloads on the Latvian *Venta* and Italian *Max Valier* satellites, launched from India. Signals on 437.325 MHz from at least one of the exterior-mounted Sprites have been received in California and New York. (ARRL News)

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### NOW THAT’S DX!

Finally, listen up: Can you hear it? Scientists in Puerto Rico can and they think the sounds they’ve been picking up are signals from a red dwarf star known as Ross 128. Researchers at the Arecibo Observatory first detected these odd communications back in April and May and the news has since been making its way around the internet. Naturally that’s led to speculation once again about alien life forms. But Abel Mendez, director of the Planetary Habitability Lab at the University of Puerto Rico notes in his blog that space aliens aren’t high on the list of possibilities. He said the source could be a burst from a high-orbit satellite - or emissions like solar flares.

Scientists asked for assistance from two other radiotelescopes: the Allen Telescope Array in California and the Robert C. Byrd Green Bank Telescope in West Virginia. The findings are still pending.

Perhaps what’s really needed instead - just maybe? - is simply to send a QSL card. (PHYS.ORG NEWS)

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**COFFEE & DONUTS  
EVERY THURSDAY MORNING**

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



**Community Mtg Rm  
Silver Lake Mall  
Coeur d’Alene**

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

Bring a Writing Instrument **Community Mtg Rm**  
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 (KARS) MEMBERSHIP APPLICATION

**One year membership Rates:**

New Member: \$15.00  Renewal: \$15.00  Family Membership: \$23.00

**Two year membership Rates:**

New Member: \$28.00  Renewal: \$28.00  Family Membership: \$42.00

**Lifetime membership:**

Member: \$150.00

**Information Update Only**

**Are You An ARRL Member?                      Yes / No ( Please Circle One)**

Callsign: \_\_\_\_\_ Class: \_\_\_\_\_ Expiration: \_\_\_\_\_

First Name: \_\_\_\_\_ M.I. \_\_\_\_\_ Last Name: \_\_\_\_\_

Nickname: \_\_\_\_\_

Address1: \_\_\_\_\_

Address2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_ - \_\_\_\_\_

PHONE NUMBER: (\_\_\_\_) \_\_\_\_\_

**OK to publish phone number?                      Yes / No ( Please Circle One)**

EMAIL ADDRESS: \_\_\_\_\_

**OK to publish Email address?                      Yes / No ( Please Circle One)**

**Do you want to receive the emailed Newsletter?                      Yes / No ( Please Circle One)**

Note: If this is a family membership, (all members with the same address), please complete the following section for your family.

Name: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_

Name: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_

Name: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_

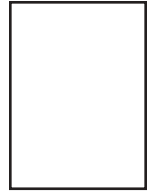
Name: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_

*RETURN THIS FORM WITH YOUR DUES, (CASH OR CHECK), TO THE KARS TREASURER,  
OR, MAIL TO: KARS MEMBERSHIP, P.O. BOX 1765, Hayden, ID. 83835-1765.*

(Office use only.)

Cash:		Check #:		Money Order:	
Membership Card:		Roster:		Newsletter:	

**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.

## **2017 CLUB OFFICERS**

President: Dave Boss, KF7YWR  
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Past President: Dave Boss, KF7YWR

## **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 \$23.00 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.