

KB7ARA

Kamiak Butte Amateur Repeater Association

Spring 2013 Edition

KBARA Gazette

KBARA D-Star Repeater has a new home at Sacred Heart Medical Center on the South Hill of Spokane. See details on page 4 and 5.

KBARA 35th Annual Meeting and Picnic — July 27th

Directions are N 47 31.945 W 117 15.150 DN17IM.

Further details inside this months newsletter and more information on the location other than the latitude and longitude provided for the Geocaching and GPS enthusiasts among us.



ARRL Field Day 2013 - June 22-23

Field Day is coming up quick. This weekend in June will be here before you know it. Check with your local club for their specific activities. Here are some known club activities at the time of publishing:

For KBARA Field Day plans please Contact Mark, K7HPT. markvanwinkle@comcast.net

Kootenai Amateur Radio Society (KARS) will be operating station K7ID (our Club call), from the home of Rick Van Landingham (KI7I), located near Spirit Lake, ID.

The physical location is 117 Old Forest Road, just off Idaho Hwy 41, near Mile Post 20. Our location is "up" on the ARRL Field Day Locator, <http://www.arrl.org/field-day-locator> , search on K7ID to find us.



Like us on
Facebook



Even though KBARA is not on Twitter, it is a great tool for hams to make schedules for QSO's.

From the Desk of our President

Hello:

This has been an exciting few months for KBARA. After much planning, discussing, cussing and design, the new D-Star repeater has been installed and is in operation from SHMC in downtown Spokane. First tests seem to reveal great coverage in the metro area, and some outlining locations. Congratulations to Randy, W4LKS, Glen, KF7QLH and Roger, KF7JJC for their support in moving this project along. If you want to know more, look up DStarInfo.com. If you would like to "Read the Mail" on one of the major reflectors you can do that by going to Shoutcast.com and bring up KBARA-DStar. Randy streams various nets and reflectors for your listening amazement.

Many members are sporting new T's or polos with KBARA Logos. The clubs second excursion into acquiring the apparel went off well and we're planning on adding some hats and other items to the list. These will be embroidered. If you would like something, let us know. You can go to PacificCompany.com to make your selection.

Just let us know the item number and description of the item you want.

Spring is here and summer is fast approaching. This year KBARA will opt out of a weekend campout and instead will be having an annual meeting picnic. Valleyford Park is the location and full details can be found elsewhere in the newsletter.

The secretary position will be vacated the end of this year. (July 2013) This is an elected position. If you would be interested in chairing this position, please let us know so we can include your desires on the ballot. Voting will be made at the annual meeting.

That's it for this entry in the log. Remember if you have questions, need help, want to make suggestions, please don't hesitate to contact any of your officials. We're here for you.

J U L Y 2 7 2 0 1 3

the KBARA 35th Annual Meeting And Picnic



Save the Date!

It's bound to be "FUN"

Join us for the 35th annual KBARA meeting and PICNIC Saturday July 27th. Featured will be the world famous WRQ Pancake Breakfast from 8:00A – 10:00A. Don't miss that.

W5YI Radio Amateur Testing at 11:00AM.

Want to know more about "geocaching"? John, KD7AAT will be conducting an informative seminar to introduce you to this wonderful sport. Learn how to use a GPS, Read the "coords" and yes FIND allusive Caches in and around the park. Fun for sure.

Randy, W4LKS will be conducting D-Star demonstrations throughout the day. Utilizing KBARA's New D-Star repeater located on Sacred Heart Medical Center, see this new mode in action making world wide CLEAR Digital Contacts.

AMAZING!

The Annual Meeting will be held at 1:00PM followed by the annual food in your face, potluck extravaganza. Always good eats. BBQs will be available, as no open fires are allowed in the park. Bring tables if you need. More details will follow. Keep watching the website.

SEE YOU THERE!

WHERE

Valleyford Park,
Valleyford, WA.

11300 E. Palouse Highway:
I-90 Pines exit south on
Pines/Highway 27 past Mica,
East on Palouse Highway to
Valleyford, 1/2 mile west of
Valleyford.

Look For The Signs

22 acres, 15 parking
spaces, play equipment,
hiking trails, basketball
court, shelters, and BBQ
area. Restrooms are
available.



KBARA's newest repeater placed on roof of Sacred Heart Medical Center

By Randy Wilkinson - W4LKS

On Friday April 12th, the KB7ARA D-Star repeater and antenna was placed on the roof of the Providence Sacred Heart Medical Center in Spokane, just above the helipad where LifeFlight helicopters land bringing emergency patients to the hospital. A big thanks to Mr. Phil Kercher, Director of Facilities for Providence/SHMC who personally reviewed our request to place the repeater there and not only approved it immediately, he thanked us for inviting them to help with this service that benefits the Spokane community. Thanks also to SHMC's communications specialist and KBARA member Ken Barker - KF7NTC who coordinated with us to get it done. This prominent location should give wide coverage to locations in the Spokane and Spokane Valley Area.

Currently, only the 443.125 mhz digital voice repeater is up and running. In the coming weeks we will install the antenna for the 1293.30 mhz digital voice repeater and digital data transceiver. For those of you who already own a D-Star transceiver, you are welcome to start using the new repeater now. The Internet connection features are fully functional for use by any registered amateur station.

The D-Star repeater is owned by myself and Glen Ahlborn - KF7QLH. At the annual KBARA meeting last summer, the repeater was officially accepted as a KBARA repeater and as such, will receive all of the same support that KBARA gives for the other repeaters. The trustee for the KBARA club callsign gave permission to the owners for the repeater to use the club callsign, KB7ARA. Fortunately, the site host does not ask for any rent or fees for ongoing use of electric power or Internet connectivity. The repeater cabinet is powered by the hospital's backup generator, so it will be functioning even if power is out for the entire Spokane area.

KB7ARA D-Star Repeater beginner's FAQs:

Q: Is this repeater audio linked to the other KBARA linked repeaters?

A: No. It can never be. All D-Star transmissions must originate from a licensed amateur's transceiver that converts analog voice to a digital data stream that includes the originator's callsign and the destination callsign. That can't be accomplished if the transmission comes from an analog transceiver.

Q: Why is there no 2-meter D-Star repeater? 2-meter frequencies propagate better.

A: Spokane is like many other metropolitan areas in that there are no available 2-meter frequency pairs available for new repeaters. While there are 2-meter D-Star repeaters elsewhere, the vast majority of D-Star repeaters in the US are in the 440 band.

Q: How much power does the new repeater transmit?

A: The 440 repeater transmits at high power setting to attain maximum coverage. It transmits at 25 watts. The 1.2 ghz repeater and data transceiver transmit at a maximum of 10 watts. Each repeater has a 10 foot tall vertical collinear antenna having a gain of about 9 dbi.

Q: Can anyone use the D-Star repeater?

A: Any licensed amateur station may use the D-Star repeater. The same operating rules that govern the other KBARA repeaters will govern the KB7ARA D-Star repeater. To use all D-Star functions you must be registered on any D-Star system world-wide. If you are not registered, you can only use the repeater as a local repeater. You would not be allowed to cause connections to other repeaters or reflectors, or use callsign routing unless you are registered.

Q: How do I become registered?

A: You should register your callsign for use on the D-Star repeater nearest you. If you'd like to register your callsign with the KB7ARA repeater, visit: <https://kb7ara.dstargateway.org/> and follow the link there.

Q: If I'm registered, and I know how to do so, am I allowed to connect our repeater to other repeaters and reflectors to join nets, or have a QSO with a friend in another city?

A: Yes. Please give your callsign verbally (even if you don't, we'll know who you are because your callsign is sent each time you key your transceiver) and state your intentions and ask if there are any objections prior to making connections. Please restore the repeater to the condition you found it. If possible, please check the repeater status page on the Internet to see who might be listening and if any other repeater or reflector is currently connected to our repeater.

Q: Can I get on the D-Star repeater with my Yeasu, Kenwood, Alinco, Radio Shack or other FM transceiver?

A: No. Only ICOM has chosen to manufacture amateur radio transceivers with the necessary AMBE chip that encodes your voice audio into a digital data stream in (almost) real time. Other manufacturers could choose to do so, but have not as of yet.

Q: Do I have to buy an ICOM transceiver to use the D-Star repeater?

A: No. But ICOM does make transceivers that are most useful and easiest to use. A device called a "DV Dongle" contains the required AMBE chip that encodes and decodes the D-Star digital data allowing you to connect to our repeater or any other repeater or reflector using your Internet connected computer's speakers and microphone. There will be new devices coming to market that will also allow access to the D-Star network, for example the UDR56K-4 transceiver from NW Digital Radio.

Q: I have an ICOM D-Star transceiver, but I'm not within the range of the KB7ARA repeater to join in on the fun. Am I out of luck?

A: Not necessarily. A device called a "DV Access Point", made by Internet Labs can make a local D-Star hot spot for your own use. If you have a DV Access Point connected to your Internet connected computer, you can chat on our repeater or any other D-Star repeater in the world.

Q: How do I use D-Star?

A: The answer would fill volumes. The instruction manual for ICOM's newest ID-51 D-Star handheld transceiver is no less than 300 pages. And that doesn't cover use of reflectors and similar advanced features. Google around, sign up for chat groups, come to Frankie Doodles on Saturday mornings and ask some of the Elmers.

Q: Who are the Control Operators for this D-Star repeater?

A: The owners: Randy Wilkinson - W4LKS and Glen Ahlborn - KF7QLH.

I hope to hear more people on the new repeater soon!

de Randy-W4LKS

D-Star Repeater Installation at Sacred Heart Medical Center



KBARA 4/17/13
K2DQX/KB2DQX
K2DQX/KB2DQX 203

Not only is the Christmas Spirit 'alive and well,' but so is the spirit of 'Hams Helping Hams' and you can find that right in Moscow, Idaho!

On December 21, the wife and I drove there for her hair appointment and some last-minute Christmas shopping. My job was to sit in the car, and baby-sit our dog while she took care of the rest. It wasn't all that were that afternoon, so after an hour or so, I turned the key to run the engine, and warm up. When nothing happened, I realized that something was wrong. My battery had given up the ghost!

I got on the handy-talky that luckily had it's own battery, and asked if there was anyone listening that could put in a call to AAA for me, so that I could get a new battery. Within seconds, Jeff, KC7QCS answered and informed me that to rely on AAA in their area may take some time, so he volunteered to come to the Mall, where I was, to see if he could help. He also made phone calls to local dealers to see if they had the particular battery needed for the car.

Presently, he arrived, and helped me remove the battery, and then took it to the dealer who had one. Soon, he arrived again, and helped me re-install the new battery. He then took my payment back to the dealer.

I would also like to say "Thank You" to Harvey who's call suffix is SIF, who stood by his radio for over an hour to ensure that everything turned out OK for me!

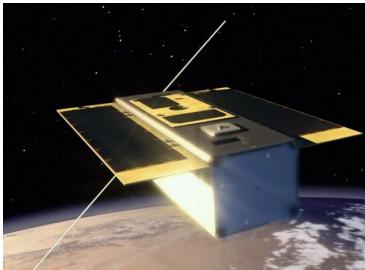
The best part of all this was getting to meet Jeff for the first time, even though we had talked on 2 meters a few times in the past. I want to wish them again, the very best Christmas, and happiest New Year, and fellows, Thank You So Much!!

Jerry Harrois
Jerry Harrois
WB7NCE
Oakesdale, WA

STRaND-1 Smartphone CubeSat Launched

A new amateur radio satellite is in orbit. STRaND-1 was launched from India on February 25th.

The innovative STRaND-1 CubeSat was built and tested in just three months. It will demonstrate the feasibility of using cheap smartphone electronics to control a spacecraft. STRaND-1 carries an amateur radio AX.25 packet radio downlink on **437.568 MHz** using 9k6 bps FSK modulated data HDLC frame, NRZI encoding. Information on decoding the telemetry is available [here](#).



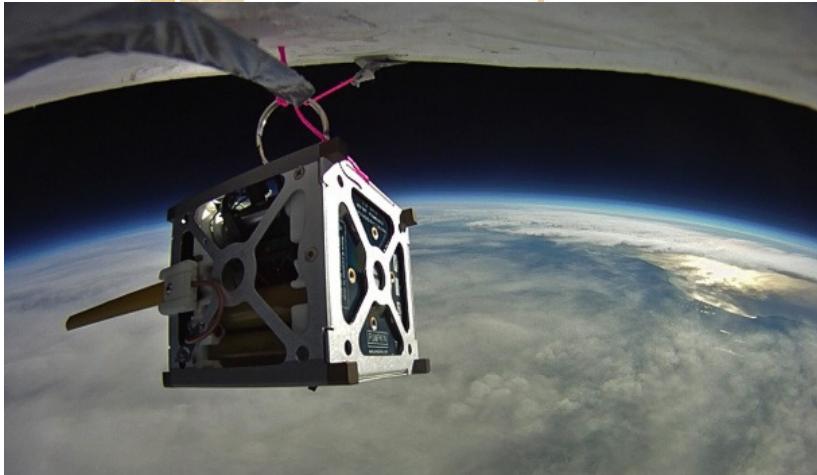
At the heart of STRaND-1 is a Google Nexus One smartphone with an Android operating system. Smartphones contain highly advanced technologies and incorporate several key features that are integral to a satellite – such as cameras, radio links, accelerometers and high performance computer processors – almost everything a spacecraft needs except the solar panels and propulsion.

During the first phase of the mission, STRaND-1 will use a number of experimental 'Apps' to collect data whilst a new high-speed linux-based CubeSat computer developed by SSC takes care of the satellite. During phase two, the STRaND-1 team plan to switch the satellite's in-orbit operations to the smartphone, thereby testing the capabilities of a number of standard smartphone components for a space environment. The satellite will be commissioned and operated from the Surrey Space Centre's ground station at the University of Surrey.

Phonesats—Alexander, Graham and Bell

There seems to be a pattern with using Smartphones for the brains of satellites. On Sunday, April 21st additional three satellites were launched using Smartphones. See the NASA press release here. http://www.nasa.gov/home/hqnews/2013/apr/HQ_13-107_Phonesat.html. Additional information on the satellites can be found here. <http://www.phonesat.org/>. These satellites downlink at the following frequency and mode:

- **Call sign: KJ6KRW**
- **Frequency: 437.425 MHz**
- **Modulation: AX-25 AFSK**
- **Data Rate: 1200 bps**



Area Hamfests—See <http://www.n7cfo.com/amradio/hf/hf.htm>

April 26-27-28, 2013. **Idaho State Convention.** Boise, ID, Voice of Idaho ARC. *This is an ARRL sanctioned event.* Info, Don Lynn, ND7L, (208)899-5801, don_lynn@pacbell.net . <http://www.idahostateconvention.com/>

May 3-5, 2013. **EmComm West.** **Canceled!** Reno, Nevada. <http://www.emcommwest.org/>

May 5, 2013. **Maple Ridge Swap Meet.** Pitt Meadows, BC. http://rac.eton.ca/events/detail.php?event_ID=1583

May 6-12, 2013. **Washington State Search And Rescue Conference.** Ellensburg, WA. Kittitas County Events Center www.wasarconf2013.org

May 11, 2013. **Stanwood Camano Amateur Radio Club Hamfest,** Stanwood Middle School, Stanwood, WA. *This is an ARRL sanctioned event.* Contact Vic, N7KRE (360)387-7705 nwe-cop@tgi.net . <http://www.scarcwa.org/> **Flyer in PDF.** (140K)

May 17-19, 2013, **Pateros 14th Annual Ham Radio, Campout/Potluck.** Pateros WA. Free "dry" camping along the Methow River at Pateros. <http://lakechelanradioclub.com/> Always the weekend prior to Memorial Day Weekend. Buy sell swap old ham stuff, no charge. The main potluck is Saturday the 18th at 1300 hours. DContact Roger W7CH w7ch@arrl.net (509)687-3919.

May 31-June 2, 2013. **Sea-Pac Hamfest and ARRL Northwestern Division Conference.** Seaside Convention Center, Seaside, Oregon. *This is an ARRL sanctioned event.* Registration open Feb 16th. Early bird tickets by April 15th SEAPAC@seapac.org . www.seapac.org/ .

June 8, 2013. **Port Ludlow ARC tailgate swap meet.** Port Ludlow, WA. *This is an ARRL sanctioned event.* <http://www.n7pl.org/>

June 7-9, 2013. **44th Annual Wenatchee Hamfest.** Apple City ARC. Dryden Gun Club. Dryden, WA. *This is an ARRL sanctioned event.* <http://www.gsl.net/w7td/> . **Flyer in PDF.** (217K) For information, contact Judy, KA7ZNA ka7zna@msn.com or Rich, N7PZT rich8102@gmail.com

June 8, 2013. **KARS Hamfest.** Kootenai Amateur Radio Society. Post Falls, ID. *This is an ARRL sanctioned event.* Always the 2nd Sat in June. For information contact Bonnie, KG6QQM, 208-683-2939 or KG6QQM@ARRL.net or John, n7ju@arrl.net

July 20, 2013. **Coos County Radio Club Hamfest and Swapmeet.** North Bend, Oregon. *This is an ARRL sanctioned event.* Contact: zane.albertson@gmail.com (541)404-6908

July 13-14, 2013. **SalmonCon.** Pacific Northwest QRP Group annual weekend outing. Contact Wayne NB6M@Comcast.net .

July 19-21, 2013. **4th Annual KUH Pig Roast & Campout.** Springdale, WA. Contact Ray, (509) 258-7078 cdkhray@wildblue.net **Flyer in PDF** (700K) **Driving Instructions in PDF** (28K)

KBARA REPEATER FUND MEMBERS 2012-2013

We wish to thank the following contributors for their very generous donations to our Repeater Fund this year.

Bronze Membership \$1—\$20

George, W6AEA	Levi, KF7MCD	Link, KC7TV
Mel, KB7BTU	Jonathan, KF7NFD	Gerry, KF7VDE
Dan, W7DCH	Ken, KF7NTC	Ken, KF7WKR
Russell, KA7DKV	Duane, KE7NUB	Richard, AD7XH
Scott, KA7FVV	Jerry, WB7NUE	Richard, N7XKC
Alice, KF7KAC	Jim, N7RHX	Alma, KB7YLO
Brad, KF7MCC	Don, W7SSK	Richard, KC4YTZ

Silver Membership \$21—\$49

Bev, WA7BEV	George, W7TXP	Robert, KF7WOR
Robert, W7GSV	Dennis, KF7UTH	

Gold Membership \$50—\$100

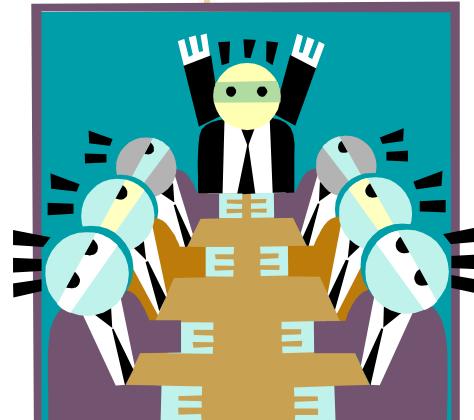
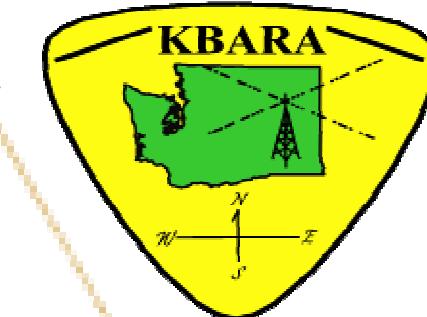
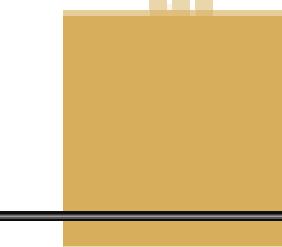
Mark, W7BRT	Wilber, KD7QLT
Jim, KC7QHE	Dan, W0QPO

Platinum Membership over \$100

Roger, KF7JJC

KBARA Members for 2013

Flathead Valley Repeater	Patrick Brandt	KK7VO	Elizabeth Simon
Angela Kaufmann	Randy Wilkinson	W7VW	Dean Simmons
Edward C. Johnson	Leonard Gross	K7WET	Kenneth J. Davis
Juanita M. Johnson	Neil P. Gallup	KF7WKR	Ken Jones
NB1A	K. Todd Wagner	WA7WGX	Stephen Lalonde
KD7AAT	Brad Highley	KF7WOR	Robert Pfiester
KE7ADN	Levi Johnson	N7WRQ	Elizabeth Ashleman
KE7ADT	Donald L. Kloepfel	N7WRR	James Ashleman
W6AEA	Dan Ransom	W7WTO	Royal Moore
W7ALT	Jonathan Rumsey	K0WZA	Donald J. LaFavor
WB7AUK	Michael Maxson	AD7XH	Richard L. Schultz
WX7B	Larry L. Stevens	N7XKC	Richard L. Wurdack
WA7BAA	Ken Barker	KE7YHO	Riley David Grimmett
WA7BEV	Duane Statler	KB7YLO	Alma J. Vogt
WA7BFN	Jerry Harnois	N7YPP	Bert Wesson
W7BRT	Chris Grimmett	KC4YTZ	Richard Fleetwood
KB7BTU	Karl Shoemaker	N7ZUF	Jay F. Lopes
WL7BUI	John P. Dempster	W7ZVD	George C. Copeland
WA7CBX	Oliver Amateur Radio Club		
W7CQW	Tim Carson		
W7DCH	Cathie Hebel		
KD7DDQ	George Hebel		
KA7DKV	Denise Hebel		
K7EFX	Richard J. Hebel		
KF7EHT	Michael R. Cramer		
WJ7F	Sam Lassiter		
AD7FO	James L. Willard		
N9FOX	Glen Ahlborn		
KA7FVV	Wilber H. Earl		
KB7GJY	Daniel G. Cummings		
AC7GL	M.D. "Red" Nierstheimer		
W7GSV	Richard H. Edwards Jr.		
VA7GV	Jim Lawrence		
W7HFI	Charlene E. Davis		
W7HNH	Richard Thorton		
K7HPT	C. Victor Bak		
K7HRT	Roger Eckhardt		
KE7IAT	Andrea Nierstheimer		
N7IIS	Don Wilkinson		
KF7JJC	JoAnn Gemmrig		
KB7JKY	Keith E. Sly		
KI7JO	Link Shadley		
KF7KAC	George L. Wallace		
W7KLL	Kerry Griffith		
AD7KV	Larry L. Sayrs		
KE7LAQ	Richard King		
KC7LBY	Dennis P. Roberts		
AD7LJ	Betsy Grimmett		
N7LKG	Gerry O'Brien		



Amateur Radio Testing Schedule by Betsy, N7WRQ



Chewelah, WA, ARRL VEC

Contact: Karl Miller, WX7DX: (509)258-8922 email: wx7dx@msn.com

Coeur d'Alene (Hayden), ID, ARRL VEC

May 13, 2013; June 10, 2013; July 8, 2013; August 12, 2013; September 9, 2013; October 14, 2013; November 11, 2013; second Monday of every month starting at 5:30PM at the Search & Rescue Building, 10865 N. Ramsey, Hayden, ID 83835.near the South end of CDA Airport

Contact John Hollar, Jr., N7JU, (208) 968-0703 email: n7ju@roadrunner.net

College Place, WA, ARRL VEC

May 19, 2013 2:00PM Walla Walla University, 100 SW 4th 1st Door Bldg, Chan Shun Pavilion, Lecture Hall RM 154, College Place WA 99324-9999

Contact Mable Babbitt WB5AVH, (509)525-7003, email: wb5avh@msn.com

Colville, WA, ARRL VEC

Contact Tommy L Howe, (509)684-5565; email: thowe@hotmail.com

Kennewick, WA, ARRL VEC

May 19, 2013; July 21, 2013; September 15, 2013; November 17, 2013; 2PM; Boy Scout Office, 8478 W Gage Blvd, Kennewick WA 99336-1075

Contact: Michael Tesky, KC7CCK (509)783-6236; email: kc7cck@frontier.com

Pullman/Moscow, WA, ARRL VEC

Contact: Tom Storer, KI6DER, (509)334-6979; email: KI6DER@AmSat.org

Spokane, WA, ARRL VEC

April 20, 2013; May 18, 2013; August 17, 2013; October 19, 2013; Saturday 12:00PM, Outpost (behind Conley's Restaurant) 12624 E Sprague Ave, Spokane Valley WA 99216

Contact: Mary Qualtieri, AA7RT, (509) 991-2192; email: aa7rt@me.com

Spokane, WA, W5YI VEC

April 16, 2013; June 18, 2013; August 20, 2013; October 15, 2013; December 17, 2013; 7PM, Tuesday; 2nd Look Books, 2829 E 29th Ave Ste C, Spokane WA 99223, 509-535-6464 (at 29th Ave & Regal in Lincoln Heights Shopping Center)

Contact: Betsy Ashleman, (509)448-5821 email: n7wrq@aol.com

Please bring two pieces of identification, one having a photo, radio license, if any, plus a photocopy, & any outstanding Certificates of Completion, plus a photocopy, & Social Security number or FCC Registration Number (FRN), and cash or check made out to the "ARRL" (\$15) or "W5YI" (\$14). If you pass a lower class license, you may sit for the next highest class on the same exam fee. You may retake any failed exam for an additional fee at the same testing session



Please remember to renew your membership for 2013



Name: _____

Call Sign: _____

Address: _____

City/State: _____ Zip: _____

Telephone: _____ Amount Paid: _____

E-Mail: _____ ARRL Member #: _____

Would you rather receive the newsletter via computer, instead of receiving it in the mail? YES NO

Dues are a minimum of \$15.00 per year for individuals and \$20.00 for a family (all must be living at the same address). Dues are due January of each year. If they are paid between September 1 - December 31, they will be applied through the entire following year. And any additional amount going toward the Repeater Fund will be graciously accepted. To support **KBARA**, please send your contributions to:

KBARA, PO Box 30801, Spokane WA 99223-3013

Please visit our **KBARA** website for more information: <http://www.kbara.org>

Update on Bozo, N7DRA by Mark, KC7AUI (Bozo's Son) and Scott, KA7FVV

Like many of us we have known Bozo for many years. I met Bozo not long after I got involved in VHF communications back in the early 80's in my early years of membership in the VHF Club. I think I can say that he has been a cherished mentor, Elmer and friend to many of us. His familiar voice has been missing from the air as of late. Here is some update information from his son Mark, KC7AUI.

He's been thru a lot of changes over the past months due to his stroke. We have him living at River View Retirement Community along the Spokane River near Avista's main office (1801 E. Upriver Drive <http://riverviewretirement.org/location.htm>). He's had some problems getting around with his walker so he's been using a wheelchair for the time being.

This last weekend I set him up with a radio but I didn't have a very good antenna setup (I'll bring up one on my next trip) so we weren't able to get into 147.38. He gets into the 146.88 and 147.30 full quieting.

It would be fine for anyone to see him. Just ask at the front desk for his location. They've been doing construction so he was temporarily moved. Also depending on when you visit he may be in the dinning area.

Regards,
Mark
KC7AUI

KBARA Membership / Support Information: The KBARA repeater system consists of several privately owned linked Amateur Radio repeaters. It covers an area from northeastern Washington to northeastern Oregon, and from western Montana to central Washington. The KBARA system is also part of the Evergreen Intertie, an interconnected group of repeaters located in western Washington and Oregon. The primary purpose of the KBARA repeaters is to provide a means for emergency communications within the above areas, and secondarily for routine radio traffic. It makes possible a single system of mobile communications coverage, extending the limited range provided by any single repeater operation. The KBARA FM repeaters operate in the VHF bands and are linked by UHF radios. The repeaters' frequencies, call signs, locations and owners are as follows:

KB7ARA REPEATERS and IRLP Nodes

- 146.74 W7HFI** Kamiak Butte, near Pullman, WA, owned by Bob, W7HFI, John, W7OE, & Jay, N7ZUF
147.02 K7HPT Lookout Pass on I-90 on the Idaho-Montana border, owned by Mark, K7HPT, & John, W7OE
147.28 KD7DDQ Pikes Peak in the Blue Mountains, SE of Walla Walla, WA, owned by Ken, KD7DDQ & Mark, K7HPT
147.36 KF7QLH Stensgar (Stranger) Mountain, near Chewelah, WA, owned by Glen, KF7QLH, & John, W7OE
147.38 W7OE Mica Peak, east of Spokane, WA, owned by John, W7OE
223.90 AK2O Stensgar (Stranger) Mountain, near Chewelah, WA, owned by Karl, AK2O
444.35 N1NG Mica Peak, east of Spokane, WA, with a 192.8 Hz tone, owned by Mike, N1NG
53.750 N7ZUF Kamiak Butte, near Pullman, WA, owned by Jay, N7ZUF
443.125 B KB7ARA Sacred Heart, South Hill of Spokane. Digital Voice D-Star DV A 1293.300 -20, DD A 1249.00 RPS

IRLP Node #3638 KF7QLH South Hill of Spokane, WA, owned by Glen, KF7QLH

IRLP Node #3282 KF7QLH West Spokane, WA on 147.400 simplex, 100.0 Hz tone

Echolink courtesy of Randy, KF7RVY. Look for KF7RVY-R.

All licensed Amateur Radio operators are welcome to use this open repeater system. Your support would also be greatly appreciated.

Please visit these sites for more information: <http://www.kbara.org> and visit <http://groups.yahoo.com/group/evergreenintertie>



To support KBARA, please send your contributions to:



KBARA
PO Box 30801
Spokane WA 99223-3013

Annual support is \$15 per calendar year for a single membership and \$20 for a family membership. Dues are due in January of each year and if paid between September 1 and December 31, they will be applied through the entire following year. Also, any contribution will be gladly accepted to the Repeater Fund.

KAMIAK BUTTE AMATEUR REPEATER ASSOCIATION

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