



# The BAARCer



December 2014

For Anyone Interested in Amateur Radio

Page 1 of 8

**Club Call Sign: WØUJ**

**BAARC REPEATERS**

53.110 MHz- 123.0 Hz  
**147.225 MHz+** (main rptr)  
 145.130 MHz- Echo Link  
 Node number 233515  
 443.925 MHz + 110.9 Hz  
**Packet:** 145.670 MHz  
 MNBRD, BRDBBS  
 144.390 WØUJ APRS  
**Crosslake** 147.030  
 MHz+  
**Crosby** 146.700 MHz-  
 Tone 141.3  
**Crosby** 444.925 MHz +  
<http://brainerdham.org>

**OFFICERS**

**President + WWW**

**Editor:**

Steve Mott **NØCRM**

**Vice President:**

Lyle Amundson **KØLFV**

**Secretary:**

Ron Finger **KØGOP**

**Treasurer:**

Doug Bergsnev **KDØERE**

**Director-at-Large:**

John Luce **WØWY**

**Trustee + BAARCer**

**Editor:** Fritz Bertelt  
**WØKO**

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Thanks to this Team of 2015 BAARC Officers for Serving Again!!!



After a rigorous campaign (Hi), these officers were re-elected. We appreciate their willingness to serve. Pictured are (l-r) VP Lyle Amundson, KØLFV; Pres. Steve Mott, NØCRM; Sec. Ron Finger, KØGOP; Treas. Doug Bergsnev, KDØERE. Not pictured were newly elected Director Al Doree, WØRC and reappointed Trustee and BAARCer Editor Fritz Bertelt, WØKO. Sincere apologies to AL for not including him in this photo. This team, as members know, serve in many different capacities and at various times. The program on Nov. 20 was an example: Lyle and Al on Digital Acquisitions and John WØWY as Emergency Comm. Director. All three contributed to the program . *For more—see p. 4*

**— Events Calendar —**

**Sat., Dec. 6, @ 9—Club Brkfst. @ Northwind Grille in Brainerd**

**Sat., Dec. 20, @ 9—Club Brkfst. @ Northwind Grille in Brainerd**

**Thurs., Dec. 18. @ 4— Monthly BAARC Board and Membership Mtg. @ 7 —  
@Brainerd Fire Hall. (Note: Week earlier because of Christmas)**

**This is Our Christmas Get-together: Bring some Christmas Goodies to share.**

**Future Events:** JC Fishing Contest on Jan. 24th & Dogsled Race on Feb. 14th  
Check the Club's Website and Activity Calendar

**Listen for Activity Updates on our Sunday Night Nets**

**Encourage New Membership: Dues are still only \$20/year—a bargain for all you get. E-mail Doug for info: [djbdesk@gmail.com](mailto:djbdesk@gmail.com)**

See page 7 for new Membership Form

## Thursday-November 20, 2014 - 4:00 PM - BAARC Board Meeting Minutes Brainerd Fire Station

**President:** Steve Mott, NØCRM  
**Vice President:** Lyle Amundson, KØLFV  
**Treasurer:** Doug Bergsnev, KDØERE  
**Secretary:** Ron Finger, KØGOP

**Past Presidents:** Charles Lane, W5CCL; Al Doree, WØRC  
**Director At Large:** John Luce, WØWY  
**Repeater Trustee:** Fritz Bertelt, WØKO  
**Emergency Communications Director:** John Luce, WØWY

**Attendees:** Steve NØCRM, John WØWY, Doug KDØERE, Al WØRC, Shirley KØDCW, Ron KØGOP, Lyle KØLFV, Roger WØWUG, and Dave KBØSCT.

**Secretary's Report:** October Meeting Minutes were published in the November 2014 BAARCer; no corrections were noted. The website and Google Calendar were updated for November. Membership roster shows 61 current/paid 2014 members and 16 paid members for 2015.

**Motion to accept:** Doug KDØERE, **Second** Al WØRC, **Passed.**

**Treasurer's Report:** Treasurer's report submitted showing all month's account transactions and balances to date. Al WØRC reported the sale of a donated HF beam antenna. **Motion to accept:** Lyle KØLFV, **Second** Al WØRC, **Passed.**

**Membership Meeting Program:** Steve NØCRM reviewed recent and future Club programs and events. A **December 18** Christmas party will be the final Club meeting of the year. Future Club programs planned include **January 29**, Mitch ADØHJ: JT65 Digital Mode, **February 26**, Stan K3JKW: Ham license plates, and **March 26**, Steve WØTNT: Cuyuna Country State Recreational Area.

**Upcoming Events:** The next Club events will be the **Jaycee's Ice Fishing Event** on January 24, and the **27th Annual Sled Dog Race** in Emily, Outing, and Remer on February 14. Event Chairmen and 6-10 operators are being sought for each event.

**Digital & Emergency Communications:** **Recent sales** of both the towers supporting the South Brainerd 145.130, and Gull Lake 147.225 Club repeaters were noted. John WØWY will inquire as to any possible changes in our relationship with the new owners. He will also inquire as to the possibility to **raise the antenna height** for the Club 147.030 Crosslake repeater. LSAC1 and LSAC2 are now linked, providing 2m and 6m coverage. It was noted that, although informative, last month's program on **ARMER operation** did not really train operators in the actual use. A future training session will be explored. Locations for installation and testing of the new **System Fusion digital 2m repeaters** was discussed, with Crosby and Crow Wing Power suggested.

**New Business:** The Board passed a motion to simplify Fritz WØKO's publication of the BAARCer newsletter by eliminating the option of receiving paper copies by mail effective January 1, 2015. **Motion to change:** John WØWY, **Second** Al WØRC, **Passed.**

A question regarding our continuing use of the **BFD facility for Club meetings** was answered. As providers of emergency communications, we will continue to be allowed free use as scheduling permits. Steve NØCRM suggested redoubling our efforts to leave the room clean and in order, and will provide a reminder to members at the end of each meeting. The board meeting was adjourned at 5:10 PM.

## Thursday- November 20, 2014 - 7:00 PM - BAARC Membership Meeting Minutes Brainerd Fire Station

**Attendees:** The President opened the Club membership business meeting at 7:00 PM with 24 members and guests present.

**Information supplemental to Board Meeting Minutes:** 2015 Club election ballots were received by the Secretary. With no write-in candidates noted, Fritz WØKO made a motion for the Secretary to cast a unanimous ballot, electing all to 2015 office.

**Motion to accept:** Fritz WØKO, **Second** John W3MQD, **Passed.**

Ham Licensing Classes are being planned for February with Al WØRC and Doug KDØERE teaching.

A program on the Club's new Yaesu digital repeaters and radios was given by John WØWY, Lyle KØLFV, and Al WØRC.

--Respectfully submitted by **Ron KØGOP**, Secretary

## DX and the Paper Chase

I've articulated this many times "any DX is good DX" no matter what or where it might be. This past month was particularly exciting for worldwide DXers when the Tromelin Island DXpedition was announced. Tromelin went on the air as FT4TA with 7 dedicated French radio operators. Tromelin is or was, number 8 of the 10 most wanted DX entities in the world. As the station went QRT, there were over 60 thousand stations in their log. My station is included in this mix with a phone contact on 17 meters as I move closer to DXCC Honor Roll. As expected, the pileups were horrendous on SSB as well as on CW. After working them on SSB, it was time to get them on CW. But after listening to the unruly pileup on CW, it was time for me to move on to something else. I try not to be negative in my monthly DX column, but it's time to make mention of the LIDS who take up valuable space in our wonderful hobby. The deliberate jamming of DX stations operating a split is getting out of hand. Who are these jerks? If we knew who they are, something would be done about it because their emissions are illegal with no call sign ID's. Why?—because they're ashamed to ID themselves as they deliberately disrupt DX operations. Enough of the negative. DX is good and good signals continue to come from Europe and elsewhere around the world making every day a good day for getting my station fired up and on DX. Remember, sit down at your station and call CQ (try some CW) because someone somewhere in the world is listening for your call. That's a wrap for now from Huntersville from my station to yours, 73 es gud DX from Bob/WØZPE.

## New Xcvr Feature! Special Warning to Would-be DXers

**Listen Up, LIDS. Clean up your act before you call a DXpedition station!!!!**

It is not well known, but for many years the major manufacturers of HF transceivers have quietly fitted them with a special circuit that would cause the transceiver to internally combust should one use it to exhibit poor operating practices. Like maintaining a nuclear deterrent, they have always lived in hope that they would never be forced to activate this circuit. However, major manufacturers have been concerned for some time with the increasingly poor operating behavior of many operators when using their equipment and what they have heard during so many DXpeditions. Consequently, and according to all reports from the major American and foreign manufacturers of Ham radio gear, in the immediate future a coded message will be sent to all transceivers activating this circuit. Once activated, the violating transceiver will **internally combust** if the LID undertakes **any** of the following: **(A)** Call when the DX station is transmitting something other than a call sign. It can sense the DX station's signal and what is sent. **(B)** Call when one can't hear the DX station. Yes, it can sense when the DX station's signal cannot be heard. **(C)** Tune up on the DX station's frequency. Then the circuit is activated if one sends a tone for more than 50ms and the radio senses another signal on the frequency. **(D)** Send or say "up" or "down" on a frequency occupied by another signal. **(E)** Send strings of dits or dahs, use profane language, say "ah ah ah" or broadcast music or anything else recorded. **(F)** Call even if the DX op is asking for a region other than the Lid's. Yes--the circuit can sense which region one resides in. (Note it only works if the offenders are in NA/JA/EU).

This list is not exhaustive and can be remotely adapted as poor operating practices change. It has also been acknowledged that there is a risk that people will blow up their rigs by themselves simply because they inadvertently forget to operate split mode. Therefore, the manufacturers are prepared at the owners' cost to install a big flashing red light on top of transceivers as a visual reminder, but, of course, the risk of detonation remains with the LID. It should also go without saying that any attempt to remove the circuit will cause the rig to implode. On a more positive note: it appears manufacturers are also jointly working on a new innovation for transceivers to transmit a signal which blows up plasma TVs within a one-mile radius of one's house. However, this is a special-order item from the rig's manufacturer, and it is expected to be a sure-fire sales winner. Even more seriously, you can stay up to the minute on DX activity with the **Daily DX News**.

You can find out more and check it out: <http://www.dailydx.com>

**BAARC Editor's Note:** This announcement has been inserted and freely edited with the hope future DX enthusiasts will use good operating practices and encourage it in others. If in doubt, check with any of the experienced BAARC DXers for their personal input. The Editor also thanks the contributors to this version of a timely topic.—We BAARC members believe no one in our Club is one of the LIDS referred to in the comments above. Spread the word!!!!

# Program Notes on the new Club acquisitions from Yaesu: DR-1X (Dual-band) digital and conventional mode FM repeater (50w), FTM-400DR dual-band XVCR (50w) and FT-DR Dual-band handheld (5w).

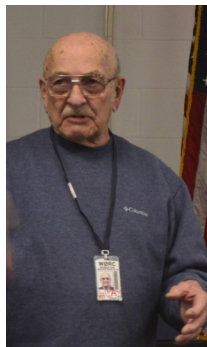
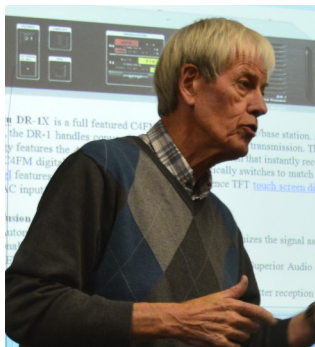
First off, we should mention that through the efforts of our VP Lyle KØLFV, using his connections with Radio City and Yaesu during a special promotion event, the BAARC got a favorable price on all. Al WØRC again used his expertise and programmed them all. He demonstrated the DR-1X using each type of handheld with it —no problems. Earlier, the repeater had a test run on the air from our Echolink repeater. See our Oct. issue. Fantastic quality!! In addition, the units are upgradable to keep them current. All units will work in synch with other repeaters—unlike the D-Star modes protocol we have heard about from Icom. Any digital radios and analog can use these Yaesu repeaters. without the operators’ needing to do anything differently. Lyle provided a promotional video that demonstrated the units. All units are easily field programmable, or via computer. Even cloning is easy once one unit is done. Multiple frequencies can be stored—including those just for listening—like WX service. Prices for the HT—about \$309. The mobile/base station is about \$429.



Top photo shows the DR-1X—Repeater.

At the bottom are our three presenters: (l-r) Lyle KØLFV, Al WØRC, and John WØWY. All expertly demonstrated the newly purchased gear.

Top photo provided by Lyle; others here and the one on page 1 by Fritz WØKO.



# A Century of Amateur Radio and the ARRL

The October 1990 QST reported on the 3Y5X Bouvet Island DXpedition of 1989-1990. This \$330,000 venture -- funded by the participants and by donations from hams around the world -- produced nearly 50,000 contacts on all HF bands on SSB, CW, and RTTY. The first World Radiosport Team Championship was held in Seattle in 1990, as part of the International Goodwill Exchange Event. Marking the 75th anniversary of QST, the magazine's December 1990 issue published an overview of those 75 years, written by WJ1Z. The article noted that at the time the first issue of QST was published, the League's membership was 635. On October 28, 1990, W5UN worked his 100th country via EME (moonbounce). Not content to rest on his laurels, by November 4 he was up to 104 countries. Dave might have made EME DXCC earlier, had it not been for a tornado that wrecked his first 32 dBi-gain moonbounce array. The FCC instituted the new "codeless" Technician license on Valentine's Day 1991. Within the first two weeks, 313 people had applied, and the first such license was issued to N3IFY. An interesting airplane accident story was published in March 1991 QST. Gary, V31KX, was aboard a flight in Belize that went down on November 14, 1990. After the forced landing, Gary retrieved his 2 meter handheld from his luggage, connected it to the aircraft's 121 MHz antenna and made a successful call for help.

Operation Desert Storm began in 1990, and MARS stations were activated to handle personal messages, including phone patches, between members of the military and their families back home -- a major morale-booster. Those efforts of American amateurs operating under their counterpart MARS call signs generated a great amount of positive publicity for Amateur Radio.



The May 1991 QST article, "Last Voice from Kuwait," told how Abdul, 9K2DZ, hid his amateur gear from Iraqi soldiers when they came to confiscate it. When they demanded his radio equipment, he gave them a broken radio! After that, he used AMTOR and APLINK to handle health-and-welfare messages in and out of Kuwait. Many of Abdul's messages were forwarded to the media, Department of Defense, Department of State, and the White House. Again, good reviews for Amateur Radio.

The 3Y5X Bouvet Island QSL card.

During 1991, many hams made contact with the Soviet *Mir* space station, thanks to the efforts of operator Musa, UV3AM. Another Amateur Radio first occurred in 1991: The entire crew of the space shuttle *Atlantis* on its STS-37 mission (April 5-11, 1991) was comprised of hams, and Space Amateur Radio Experiment (SAREX) ham gear was aboard. -- **Al Brogdon, W1AB**

<u>Location</u>	<u>Transmit--MHz</u>	<u>Receive--MHz</u>	<u>Tone*Hz</u>
1-Brd.	147.825	147.225	None
2-Brd.	144.530	145.130	None
3-Crosby	146.100	146.700	141.3 Hz
4-Crossl.	147.630	147.030	None
5-SPX	146.520	146.520	None
6-Aitkin	147.960	147.360	203.5
7-L. Falls	147.735	147.135	123.0
8-SPX	146.580	146.580	None
9-Seb/Wad.	147.930	147.330	None
10-Collegeville	147.615	147.015	100.0
11-Pequot L	147.690	147.090	123.0
12-Isle	146.010	146.610	None
13-Gr.Rapid.	146.280	146.880	None
14-Bemidji	146.130	146.730	None
15-Pk. Rap.	146.700	147.300	None
16-St. Cloud	146.340	146.940	100.0

**Useful BAARC and Area Frequencies: Your programming assignment for now—look for updates.**

**\*indicates PL tone on transmit frequency; no tone on any receive frequencies.**

List provided by WØRC and WØWY—11-05-14

## A Century of Amateur Radio and the ARRL

A first took place on Space Shuttle mission STS-37. SAREX (Shuttle Amateur Radio EXperiment) provided live communication from the shuttle into many school classrooms to teach the students about space exploration and Amateur Radio.

In July 1991, N6CA and KH6HME set a new record on 3456 MHz between California and Hawaii. Each was running 5 W to a 4-foot dish.

In 1992, after 8 years as ARRL President, Larry Price, W4RA, declined to run for re-election. The League's Board of Directors subsequently chose him as the next International Affairs Vice President, which provides liaison with the IARU, which Price served as Secretary. George Wilson, W4OYI, succeeded Price as ARRL President.

N7FKI and W7ZOI reported in the March 1992 *QST* that they had built a one-transistor 10 meter CW transmitter and made contacts with it using lemon power -- essentially a cell made by inserting appropriate electrodes into a lemon. If life gives you lemons, make contacts!

During the early 1990s, interest in digital communication grew, and *QST* published many articles on the subject that helped fan the flames. Also, hams became interested in the old concept of direct-conversion receivers. KK7B presented one of the best in the August 1992 issue of *QST*. Another old receiver circuit was also revived -- the regenerative receiver. WJ1Z described one for 40 meters in the September 1992 issue of *QST*.

By the early 1990s, digital signal processing (DSP) had made its appearance, and had begun to be used by both homebrewing hams and equipment manufacturers.

A September 1992 *QST* article, "ABC: The First Electronic Digital Computer," recounted the fascinating tale of the first real computer, the Atanasoff-Berry computer -- a vacuum tube device -- designed in 1939 and 1940 by university professor John Atanasoff and built by electrical engineering student Clifford Berry, W9TIJ. -- *Al Brogdon, W1AB*

(Photo on the right shows the Atanasoff-Berry computer which used racks of vacuum tubes)



## Century of Amateur Radio and the ARRL

VHF/UHF scanners had become very common by the 1990s, and many local and state governments enacted laws making their use illegal. At the same time, several manufacturers of amateur VHF/UHF equipment started including scanners in their amateur transceivers, which provided reception outside the ham bands. This put some hams between a rock and a hard place.

In the late 1980s, the ARRL launched an effort to have the FCC clarify its rules regarding scanners. Finally, on August 20, 1993, the FCC published a *Memorandum and Order* to settle the issue. The *Order* stated that hams have a federal right to own and operate their equipment, which preempts state and local radio laws. Furthermore, the FCC's decision supported, at length, the very essence of the purpose of the Amateur Service. Once again, the League represented our interests and preserved our place in radio.

One of the Nobel Prizes awarded in 1993 went to Joe Taylor, K1JT, and Russell Hulse, ex-WB2LAV, for their discovery of binary pulsars and their investigation of the gravitational fields exerted by those ultra-dense stars. Joe credited his interest in Amateur Radio while still a teenager as leading to his chosen field of physics and to his Nobel Prize.

By 1995, the FCC had implemented electronic filing of license applications, greatly reducing the time lapse between passing a license exam and getting the license. The new system often reduced the waiting period to as little as 2 weeks.

By the 1990s, digital signal processing (DSP) was coming into use in the form of both homebrewed and factory-made devices. "DSP -- An Intuitive Approach," by W9GR, in the February 1996 issue of *QST* explained how DSP works and urged hams to give it a try. -- *Al Brogdon, W1AB*



# Brainerd Area Amateur Radio Club

## MEMBERSHIP APPLICATION FORM

Dues Year January 1, 2015, to December 31, 2015

(One Application for Each Person)



Name: (First, MI, Last-print) \_\_\_\_\_ Call Sign: \_\_\_\_\_

Address: \_\_\_\_\_ License Class: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone: (\_\_\_\_\_) \_\_\_\_\_ Additional Phone (\_\_\_\_\_) \_\_\_\_\_

Date of Application : \_\_\_\_\_ Circle One: New / Renewal

E-mail Address: \_\_\_\_\_ Member ARRL ? Circle One: Y / N

The Official Club Newsletter, The BAARCer is available each month online at [www.brainerdham.org/baarcerc](http://www.brainerdham.org/baarcerc)

Circle One: \$20 Full Member / \$ 10 Additional Family Member / Student Member \$10

**Note:** For first-time members, pay \$5 per quarter for the time remaining in the year you join. For information on a life membership, contact Doug, Club Treasurer: [djbdesk@gmail.com](mailto:djbdesk@gmail.com)

Membership Dues \$ \_\_\_\_\_

Make checks payable to BAARC. The Club is a 501c3 non-profit organization. Thus contributions are tax deductible.

Voluntary Contribution (Tax Deductible) \$ \_\_\_\_\_

Mail to:

Total Enclosed \$ \_\_\_\_\_

**Brainerd Area Amateur Radio Club**  
Treasurer—Doug Bergsnev, KDØERE  
15912 Olsen Lane  
Brainerd, MN 56401

I hereby make this application and agree to abide by the Club By-Laws.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Disclosure:** Information provided here will not be sold/given to any other organization without the permission of the members.

Please mail one form, along with dues (check/money order) for each person.

**Check our club's Website for other Information and Newsletters.  
Regular Updates on the Sunday Night Nets on 147.225 @ 8 P.M.**

**SUNDAY NIGHT NET OPERATORS**

12-07-14	Rick	NØBJN
12-14-14	Dave	KCØTGT
12-21-14	Tim	KDØYLO
12-28-14	Tim	KDØYLO
01-04-15	Rick	NØBJN
01-11-15	Dave	KCØTGT
01-18-15	Tim	KDØYLO
01-25-15	Tim	KDØYLO

Can't make the schedule? Find a substitute operator. BAARC Sunday Night Net Control Coordinator is Fritz WØKO. To volunteer: w0ko "at" arrl.net

**Can you help fill the schedule above?**

**Merry Christmas:** The officers of the BAARC thank the membership for the vote and support. Have a **JOYOUS AND BLESSED CHRISTMAS** and a prosperous and healthful **NEW YEAR 2015**. Participate with us in 2015.

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**IMPORTANT NOTE TO THOSE FEW MEMBERS WHO HAVE BEEN GETTING THIS NEWSLETTER MONTHLY BY U.S. MAIL:** The Club decided to make the newsletter available to all in the same way—via the Internet—starting with the January 2015 issue. You can access it at any library or perhaps at a friend's house. Besides, the photos are always better via the Internet rather than getting the B&W copy via mail. Increased time and expense were added factors.

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**Treasurer Doug says:** Thanks to all who have already paid dues for 2015. It is still only \$20--a good deal considering the benefits we get from the Club. Plus, we have not raised dues for years.

**Ham Classes coming in early 2015: Watch for details here, on our Sunday nets, and in the newspapers.**

United We Stand



**FIRST CLASS MAIL**  
Address Correction Requested

Brainerd Area Amateur Radio Club  
c/o M. Fritz Bertelt WØKO  
16167 Ahrens Hill Road  
Brainerd, MN 56401