



The BAARcer



December 2011

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-5 APRS
 Crosslake 147.030 MHz+
<http://brainerdham.org>

2011 OFFICERS

President: Charles Lane **W5CCL**

Vice President + WWW

Editor: Steven Mott **NØCRM**

Secretary: Ron Finger **KØGOP**

Treasurer: Doug Bergsnev **KDØERE**

Director-at-Large: Lyle Amundson **KØLFV**

Trustee + BAARcer Editor:

Fritz Bertelt **WØKO**

Index**Presenters of Various Portable/FD Antennas on 11-17-2011**

Pictured (l-r): Lyle KØLFV, Steve WØTNT, Ron KØGOP, Steve NØCRM, and John WØWY—these four gave some very useful information with products they actually used. Lyle made his own 2-mtr. beam; Steve TNT showed various wire antennas to use with his K2 rig; Ron showed the versatility of military antennas available for hams; With QRP Steve CRM was enthusiastic about his Buddipole system; John liked the Comet vertical because of its simplicity for FD—no radials. Bringing lots of demo hardware with overhead projections, these guys showed that you can have fun building, buying, or improvising various antennas to meet your needs—for VHF, UHF, or HF. We thank them for a great practical program. This meeting/program was held at the Brainerd Public Library.(Pix by WØKO)

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— Events Calendar —

Sat., Dec. 3, Club Brkfst. @ 9 @ Northwind Grille in Brd.

Thurs., Dec 15, CHRISTMAS GET-TOGETHER MTG & SOCIAL @ Fire Hall @ 7. Bring some Christmas goodies to share!!!!!!

Sat., Dec. 17, Club Brkfst. @ 9 @ Northwind Grille in Brd.

Sat., Jan. 21 Annual Gull Lake Icefishing Extravaganza—ops needed. HAM Radio Classes Starting Soon:—See page 3 for details.

CHECK THE SUNDAY NIGHT NETS FOR ANY UPDATES/CORRECTIONS

**Note: New DATE: Our 2012 Hamfest is April 14, 2012.
PASS THE WORD ON THE NETS AND IN QSOs.**

Thursday, November 17, 2011 – 4:00 PM - BAARC Board Meeting Minutes

Brainerd Public Library Meeting Room

President: Charles Lane, W5CCL

Vice President: Steve Mott, NØCRM

Secretary: Ron Finger, KØGOP

E-Communications Director: John Luce, WØWY

Director at Large: Lyle Amundson, KØLFV

Past President: Al Doree, WØRC

Special Events Co-Director: Dave Fournier, KCØTGT

The President opened the meeting at 4:10 PM with 7 board members and 1 member in attendance. The October minutes were approved as printed in the BAARCor, with the correction of the Hamfest date to April 14th. The Treasurer's report was postponed until the Membership Meeting

Digital & Emergency Communications: John WØWY discussed the recent test of the EAS (Emergency Activation System). Performance varied greatly across the US, with some areas receiving no notice of the test at all. Locally John was able to connect with several Club members on the 147.225 repeater at the 1 PM test time. John also talked about the need to complete several MOU's (Memorandums of Understanding) for the various departments and agencies that our Club would be working with during a communications emergency. Al WØRC has been experimenting with different courtesy beep frequencies for the new repeater site to find one that is audible, but not obnoxious. As to PL access tones, it was decided that the use of CTCSS is not needed at this time.

Upcoming Events: It was decided that the Secretary will revise the Club Hamfest flyer for review and mailing to local radio clubs. John and Al decided to definitely do an amateur radio licensing class this winter with the dates to be arranged to coincide with VE testing at the April 14th Hamfest. The December Club Meeting and Christmas Party will be held at 7PM Thursday, Dec. 15, at the Brainerd Fire Station.

New Business: The ballots for 2012 Club Officers will be counted during the 7 PM Membership Meeting.

The Board Meeting was adjourned at 4:44 PM.

Thursday, November 17, 2011 - 7:00 PM - BAARC Membership Meeting Minutes

Brainerd Public Library Meeting Room

The President opened the meeting at 7:00 PM with 18 members and guests present. A motion to accept the published minutes for October was approved with the correction of the Hamfest date to April 14th. The Treasurer's Report was then presented by Doug KDØERE, and approved.

Digital & Emergency Communications: John WØWY discussed the recent test of the EAS (Emergency Activation System) and the need to complete MOU's (Memorandums of Understanding) for the various agencies that our club would be working with during a communications emergency. He also gave an update on the ARMER system switchover and his new APRS digipeater: WØWY-1. Al WØRC reported on the courtesy tone testing for the new repeater, and solicited coverage reports for the site's higher antenna.

Upcoming Events: Discussed were dates for the upcoming Club events: **2012 Jaycee Ice Fishing Extravaganza** on January 21, **Mid-MN 150 Dog Sled Race** on February 11, and **Jaycee's Spring Marathon** on April 27-28.

New Business: Members were invited to submit their ballots for 2012 BAARC officers. Following a count of 17 ballots, a motion was made and passed for the Secretary to cast a unanimous ballot for the listed candidates. Elected officers were then presented to the membership.

The Membership Meeting was adjourned at 7:20 PM.

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

DX and the Paper Chase

Happy Thanksgiving (belatedly by the time you read this). We have so much to be thankful for that it overshadows the negatives we're faced with. There is so much to talk about that I hardly know where to start. Cycle 24 has kicked into high gear with all of the amateur bands blooming and booming. I cannot remember 10 meters being this good, not even at the peak of Cycle 23. First off, I've received my QSL confirmations from Benin (TY) and Southern Sudan (STØ) in the mail on Saturday. Also, those of you who follow the fascinating world of DX know that there is a DXpedition on Tuvalu Island (T2T) with yours truly doing his very best to make this important contact. I chased them for 5 days from band to band waiting for good propagation, and finally last Sunday I made the contact on 12 meters. This is a DXCC credit entity that I needed and now have in my log. A short note about the 10-meter opening. This is a band that can provide the best opportunities when it's open. It has a huge bandwidth, so crowding is not an issue. Also, it is possible with these present conditions to get that first 100 DX credits toward DXCC. I spoke with one station in Europe who informed me that he had 76 countries on 10 meters. This operator is going to have his DXCC 100 as the year closes. Going back two weeks...I worked the CQWW contest on 40 meters, getting a total of 42 DX contacts between 4:00AM and 6:00AM using a ground-mounted vertical antenna that is strictly used for 40-meters. Most of the contacts were made operating barefoot (100 watts) with a few made with the linear in line. This is the time to be on HF radio working stations worldwide with ease, and the timing is just right as our winter is setting in soon. If you're a new licensee within the past 6-7 years and you have not experienced a new sunspot cycle, so the time is now to hop on board. Cycle 24 will be my last and I intend to work it to the hilt. Come join me in the wonderful world of DX, sit down at your station, and call CQ. With these good conditions, surely someone out there is going to answer you on your first call. Don't disappoint any caller. So long from Huntersville—73 from Bob/WØZPE.

Ham Radio Classes Coming Up Soon

Ham Radio Classes will be held Feb. 7, 14, 21, 28, Mar. 6, 13, 20, 27, and April 3 with testing on April 14th at the Hamfest at the Armory. The classes will be held at the Fire Station in Brainerd from 6-10 p.m. The **Technician** class will be conducted from 6:30-7:30; the **General** from 8:00 to 9:00, and the **Extra** (tentatively) 8-9:30. Again, the lead instructor is **Al Doree, WØRC (l)** Co-instructing again is **John Luce, WØWY (r)**. These two gentlemen have had very successful classes in the past with high pass rates. Information about cost and updates will come later. For now, if you need a contact : <w0rc@arrl.net> or <w0wy@arrl.net>



FCC Changes 60 Mtr. Rules Effective Later after Publishing in the Federal Register

On November 18, the FCC released a *Report and Order* ([R&O](#)), defining new rules for the 60 meter (5 MHz) band. These rules are in response to a *Petition for Rulemaking* ([PRM](#)) filed by the ARRL more than five years ago and a June 2010 *Notice of Proposed Rulemaking* ([NPRM](#)). In the *R&O*, the FCC replaced one of the channels in the band, increased the maximum authorized power amateur stations may transmit in this band and authorized amateur stations to transmit three additional emission designators in the five channels in the 5330.6-5406.4 kHz band (60 meters).

The Amateur Radio Service in the United States has a secondary allocation on 60 meters. Only those amateurs who hold General, Advanced or Amateur Extra class licenses may operate on this band. Amateur stations must not cause harmful interference to -- and must accept interference from -- stations authorized by any administration in the fixed service, as well as mobile (except aeronautical mobile) stations authorized by the administrations of other countries.

Here is a summary of the changes. Please note that these changes have not yet taken effect. These new rules will take effect **30 days after they are published in the *Federal Register***. The ARRL will announce on its website when the rules are published.

- The frequency 5368.0 kHz (carrier frequency 5366.5 kHz) is withdrawn and a new frequency of 5358.5 kHz (carrier frequency 5357.0 kHz) is authorized.
- The effective radiated power limit in the 60 meter band is raised by 3 dB, from 50 W PEP to 100 W PEP, relative to a half-wave dipole. If another type of antenna is used, the station licensee must maintain a record of either the antenna manufacturer's data on the antenna gain or calculations of the antenna gain.

Three additional emission types are authorized. **Data** (emission designator 2K80J2D, for example, PACTOR-III), **RTTY** (emission designator 60H0J2B, for example, PSK31) and **CW** (150HA1A, i.e. Morse telegraphy by means of on-off keying). For CW, the carrier frequency must be set to the center frequency. For data and RTTY the requirement to transmit "only on the five center frequencies specified" may be met by using the same practice as on USB, i.e. by setting the suppressed carrier frequency of the USB transmitter used to generate the J2D or J2B emission to the carrier frequency that is 1.5 kHz below the center frequency.

Automatic control on data and RTTY is not permitted; a control operator must be in a position to exercise either local or remote control over the transmitter. The FCC noted that "amateur operators must exercise care to limit the length of transmissions so as to avoid causing harmful interference to Federal stations." This is a very important caveat: If a Federal station requires amateurs to cease using a frequency, the amateur station must be able to do so without delay.

A reasonable person might wonder what the difference is between data and RTTY. According to former ARRL Chief Technology Officer Paul Rinaldo, W4RI, there used to be a difference, but there's not much of one today. "Years ago, a B designator (telegraphy for automatic reception [i.e. narrow-band direct-printing telegraphy emissions]) meant decoding and display on a teletypewriter (TTY) or other mechanical machine," he explained. "A D designator signified transmission of data, telemetry or telecommand intended for data processing or just storage for possible future use. When computers or computer-like devices were introduced to emulate RTTY transmission and/or reception, the line between telegraphy and data transmission blurred to the point of little or no practical distinction."

PACTOR-III and PSK31 are cited in the new rules as examples of data and RTTY emissions, respectively, that will be authorized; however, in paragraph 28 of the *R&O*, the Commission states that amateur stations will be permitted to use "any unspecified digital code, subject to the requirements of Section 97.309(b)." Therefore, as a practical matter it appears that any J2D data emission is to be permitted up to a bandwidth of 2.8 kHz, provided that care is exercised to limit the length of transmissions.

Amateur Radio and the 60-Meter Band

The 60 meter band is part of the larger 5.060-5.450 MHz band, which is a federal/non-federal shared band that is allocated to the fixed service on a primary basis and to the mobile (except aeronautical mobile service) on a secondary basis. The 5.060-5.450 MHz band is primarily used by federal agencies for ship-to-shore and fixed point-to-point communications. Non-federal use of the 5060-5450 kHz band includes state government licensees and licensees in the Industrial/Business Pool that operate standby and/or backup communication circuits for use during emergency and/or disaster situations, entities prospecting for petroleum and natural gas or distributing electric power, coast stations and aeronautical fixed stations.

Text from the ARRL 11-21-11

Amateur Radio's Secret Service: The ARRL has many low-profile services that shouldn't be such a secret.—by Charles Miller, Jr., KD4NGA

Now that title may raise some eyebrows but the fact is that there is a “secret service” within Amateur Radio. Not a law enforcement secret service, rather a secret service of specialized Amateur Radio volunteers. These volunteers are among us in our day-to-day Amateur Radio activities. They go the extra mile to provide services to Amateur Radio operators and the hobby itself. I call them “secret” because their roles, and who they are, are not well publicized.

Ham Radio Backup

While the ARRL sponsors many different services, there are some at the section and local level that are not well known. In fact, section members are often not even aware these services exist. This can happen because the section leadership is overwhelmed with other duties. Also, they may not fully understand or appreciate the benefits these various services provide to the hobby.

You may have heard of “Elmers,” now sometimes referred to as “mentors.” Elmers help the newcomer to the hobby and sometimes the older more experienced ham who wants to learn a new facet of ham radio, such as data modes or satellites. I, for one, sincerely appreciate those who serve as Elmers.

Now the “secret service” I refer to consists of other, less known roles that some hams donate their time to. While there are many different roles supporting ham radio, my focus is on the positions that give the mentor role a deeper, more specialize function. Have you ever heard of a Technical Advisor (TA), Technical Specialist (TS), Technical Coordinator (TC) or Volunteer Consulting Engineer (VCE)? These positions are just a few that help ham radio. Those volunteers help others who have a unique problem or provide support for those experimenting in a current or new mode of radio communications.

Your Technical Teammates

So who are these volunteers? The TA serves as the technical expert in a specific area and is appointed by ARRL HQ for a 1 year renewable term. A TS is a section appointment with no set term. While the TS has some expertise in some area or areas, they are not normally a wizard in all things electronic. That is why it is not uncommon to have several TSs in each section. The TS’s primary responsibilities are to provide general technical information and help in resolving RFI issues to hams in his section. The TC coordinates the types of expertise each TS has. If there is a need for a specific skill, the TC locates a TS with the needed experience and coordinates connecting the TS with the hams requiring assistance. The TC also recruits individuals to serve in various TS positions and remains in contact with individual hams and clubs in his section to help improve the overall technical base. Often sections either fail to fill the TC position, the TC fails to function or, as in most cases, the service is not well publicized and thus the “secret.” For those sections that have a compliment of TSs and a TC, they should make it a point at least annually to make a presentation at club meetings, hamfests and other gatherings about the technical services that are available to hams in the section. The Volunteer Consulting Engineer (VCE) program helps Amateur Radio operators who want to put up a tower and must meet structural requirements set forth by local zoning authorities. Again this is a program that does not get much press. A VCE will meet with a ham who wants to put up a tower and be his engineering representative to the ham’s zoning board. The VCE acts as an expert witness on behalf of the ham answering the questions of the zoning board and insuring that the tower meets all requirements. For those Amateur Radio operators who are registered professional structural, civil or mechanical engineers they can, if they wish, become a VCE. If you need the assistance of a VCE, you can find one at the [VCE](#) Web page. Now, at least part of the “secret” is out! To find more information visit the [Technical Specialist](#) Web page.

A BAARC Member's Station of the Month: WØKO

Fritz was first licensed in 1957 with KØMAH---actually with KNØMAH. That "N" in the call signified novice Class. As soon as the novices upgraded, the FCC took out the "N." Over the years through many sunspot cycles and even AM mode, lots of different equipment was used. Some was built from kits—Heathkit, for example. Fritz has also owned some MN-made E.F. Johnson gear. Other manufacturers of good ham gear he also had but never collected were Hallicrafter, Hammarlund, Central Electronics, Collins, Henry Radio, Yaesu, Elecraft, various Kenwoods, and recently mostly Icom for the main HF transceivers. As most of the newer hams already know, you never have enough gear. In this view of the station you see some of the equipment and the current IC-756 Pro II, with power supply on the left. A Palstar tuner is in line also. He uses an outboard electronic keyer and likes his prized (custom-made) N3ZN paddle, a gift from his YL (KØMAH). The amplifier is an Ameritron AL 82—shown in the bottom shot.

The antenna is the best and most important part of any station: A KO's it is a 2-element, 5-band cubical quad by Lightningbolt on a custom-built, crankover tower at about 55 ft. above ground. The lot elevation is actually 1300 ft above AMSL. Mounted on the same mast as the quad is an Arrow 2m/70cm vertical antenna. For 80 and 40 meters he uses a homebrew G5RV wire antenna on a pulley-hoisted system anchored in nearby trees. Of course, his favorite mode is CW.



Can we feature your station here another month?

Send a short write-up and pix to Fritz.



Brainerd Area Amateur Radio Club

MEMBERSHIP APPLICATION FORM

Dues Year January 1, 2012, to December 31, 2012
(One Application for Each Person)



Name (First, MI, Last) _____ Call Sign: _____

Address: _____ License Class: _____

City _____ State _____ ZIP _____

Phone: (____) _____ - _____ Additional Phone: (____) _____ - _____

Date of Application: _____ Circle One: New / Renewal

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

I would like to receive the BAARCer via the Internet / US Mail (Circle One). (Internet saves Club money)

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

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, our treasurer: <baarctreasurer@charter.net>

Membership Dues \$ _____

Make checks payable to BAARC. The Club is a 501C3 non-profit organization. Contributions are tax deductible. **Mail to Treasurer.**

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

Voluntary Contribution \$ _____

Total Enclosed \$ _____

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

Signature: _____ Date: _____

Disclosure: This information will not be sold or given to another organization without express permission of the BAARC members.

Please mail one form, along with dues (check/money order), for each person who wants to be a member.

Check our Club's Website for other Information and Newsletters.

Regular Updates on the Sunday Night Nets on 147.225

www.brainerdham.org

SUNDAY NIGHT NET OPERATORS

12/04/11 Terry KIØFW

12/11/11 Dylan KDØLFE

12/18/11 Doug KDØERE

12/25/11 Charles W5CCL

01/01/12 Fritz WØKO

01/08/12 Doug KDØERE

01/15/12 OPEN

01/22/12 Steve WØTNT

01/29/12 OPEN

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

Running the Simplex Net is Optional.

Thanks to all NC Stations for this weekly service. Please let Fritz know if

Merry Christmas and Happy New Year to all of our Members and their

Families: We pray that this Christmas and Holiday season will be a blessed one and that the year 2012 will see our country and the rest of the world in a better economic and peaceful condition.

Congratulations to Ron Finger, KØGOP : He did the art work in the recently published book The Oranges are Sweet by Paul Sailer. According to the Brainerd Dispatch, the heavily researched book is an interesting read about an ace MN WWII pilot. Plus—it is selling well.

Lyle KØLFV using WØUJ and KØLR—remotely: On his recent stay in Texas visiting family he worked through the Web and operated HF making many contacts. Clearly—he was applying the info gleaned from last month's program on remote operation with only a computer and access to the Web.

Cycle 24 Improving: One indication is the increased activity level on the HF bands. For instance, Fritz WØKO had an interesting CW QSO on 10 with a guy in CT who was QRP with 2 watts into a converted mobile CB antenna on the kitchen table. At that power level and with that indoor antenna, the guy was 559 with some QSB. Also see Bob's DX Report on page 3.

Our sincere thanks to the Team of 2011 Officers: W5CCL, NØCRM, KØGOP, KDØERE, and KØLFV. The members present at the November meeting gave that team a hearty round of applause for their beyond-duty service to the Club.

YES, IT IS OK TO SEND YOUR DUES IN NOW. LET'S MAKE THE JOB OF OUR TREASURER EASIER THIS YEAR.

Hamfest 2012—April 14—We need lots of help—also, especially, to organize future hamfests. Al and Shirley want to retire from those roles.

United We Stand



Address Correction Requested

F I R S T C I A S S M a i l

Braainerd, MN 56401
16167 Ahrens Hill Road
c/o M.L. Fritz Berrett WØKO
Braainerd Amateur Radio Club