



The BAARCer



April 2015

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 rpt)
 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

Pres. + Web Editor:

Steve Mott **NØCRM**

Vice President:

Lyle Amundson **KØLFV**

Secretary:

Ron Finger **KØGOP**

Treasurer:

Doug Bergsnev **KDØERE**

Director-at-Large:

Al Doree **WØRC**

Trustee + BAARCer

Editor:

Fritz Bertelt **WØKO**

As its Manager, Steve Weber, WØTNT, gave a presentation on the many facets of the Cuyuna Country State Recreation Area—its Parks and Trails, etc.



Below left is a photo taken from his slide show—it is a Yurt, a Mongolian-styled domed structure that visitors can rent. It has a wood burning stove, table, benches, and beds, etc.—camping at its not-so-primitive stage. Minnesotans love the activities available and flock to the area near Cuyuna to partake in them all seasons: i.e., mountain biking is an activity that is growing fast and the area merchants appreciate the added business brought in by the thousands of tourists. To get more information, go to this website: <mndnr.gov/state_parks/cuyuna_country> It appears, according to Weber, that the State made a great investment here, as did the federal government earlier. Land was reclaimed from the original mining operations. Now the lakes attract canoeists, kayakers, birders, fishermen/women, hikers, photographers, and clear-water divers. Many varieties of vegetation and trees can be enjoyed—in addition to the wildlife abundant in the area. Below is a photo of the three layers of insulation used on the Yurts. TNX, Steve—great program!!



**Index
of the BAARCer**

Mtg Minutes-	2
WØZPE—DX	3
—etc.	
CAP & ARRL	4
from Ron KØGOP	
Popov also invented	5
Radio?	
Ham Radio and CAP	6
—more ARRL news	
May 28 DINNER	7
Info—\$15/ea.	
Last Word—Updates	8
Sunday Night Net	

— Events Calendar —

Sat., April 4, Club Brkfst. @ 9 @ Northwind Grille in Brainerd
Sat., April 11, Club Event—More details on the Net as they develop
Wed., April 15, SKYWARN spotter training, new and refresher @ 6:30 p.m. @
Crow Wing County Land Services Bldg. on Laurel St.—Brainerd
Sat., April 18, HAMFEST @ ARMORY—Help needed Fri. 17th at noon with
the set-up and Sat. with the hamfest itself and take down afterwards.
Sat., April 25, Brainerd Jaycess Marathon—operators needed
Thurs., April 30 @ 4— Monthly BAARC Board and Membership Mtg. @ 7
both meet @ Brainerd Fire Hall.
Sat., May 2, from 9-2 —Duluth Area Hamfest (Arrowhead Amateur Radio
Club) held in Superior at the Fairgrounds—same as before.

Paid your 2015 Dues Yet?—Please get your check in to Doug

Thursday-MARCH 26, 2015 - 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, Lyle KØLFV, Doug KDØERE, Ron KØGOP, John WØWY, Al WØRC, Shirley KØDCW, Roger WØWUG, and Dave KØISZ.

Secretary's Report: February Meeting Minutes were published in the March 2015 BAARcer; no corrections were noted. The website and Google Calendar were updated for March. Membership roster shows 66 members, with 50 paid for 2015. Two new Club ID badges were made and distributed. **Motion to accept:** Lyle KØLFV, **Second** Al WØRC, **Passed.**

Treasurer's Report: Treasurer's Report submitted showing all month's account transactions and balances to date. The Club has received over \$400 in recent equipment sales through Lyle KØLFV's efforts.

Motion to accept: Al WØRC, **Second** John WØWY, **Passed.**

Membership Meeting Program: Steve NØCRM reviewed recent and future Club programs and events. Future Club programs are: **April 30**, A group presentation regarding new digital repeaters, Field Day 2015, June Bike Tour and the remote Club HF station. **May 28 Spring Banquet**, Ralph Fedor KØIR on Navassa Island K1N DXpedition.

Upcoming Events: The next Club events will be the **Brainerd Hamfest** on Saturday April 18th and the **8th Annual Run For The Lakes Marathon** on Saturday, April 25th in Nisswa. John will request use of the CWC communications trailer. Free **BAARC Tailgate Hamfest** to be held Saturday, August 29, at CWC Fairgrounds.

Digital & Emergency Communications: The **SKYWARN Spotter Training** class is scheduled for 6:30 PM Wednesday, April 15, at CWC Land Services Bldg, 322 Laurel St., Brainerd, behind the Historic Courthouse. The **BAARC SKYWARN WX Net Test** will be activated at 1:15 PM on the 147.225 repeater. **NWS Mock Tornado Warning** will follow at 1:45 PM, expiring at 2 PM. Al reported problems found during tests of one of the three new digital repeaters and interface. They are being returned to Yaesu for testing and repair. In regard to the BAARC VHF station at the soon-to-be-relocated EOC: John reported that he will draft 2 letters in support of the relocation of the Club's VHF antennas and future **remote VHF radio to the HRA High Rise location**. The first will be sent to the HRA from the Club; the second will be a model letter to be sent to the HRA by the CWC EOC in support of the BAARC equipment relocation. Al reported the Club has received permission to add an HF inverted-V antenna on the Mast at the **Brainerd Fire Station** site. Both sites are used monthly for the Mid-MN Hospital Net.

New Business: The 145.130 digital, Echolink repeater is now at the High Rise site. The 147.225 digital repeater is now located at Crosby, while the 147.030 repeater remains at Crosslake. The 146.700 repeater is awaiting installation at the Crow Wing Power site. Remaining equipment has been removed from the old South Brainerd tower site. A new Commander 220-2N (antenna) is on order for the High Rise site. Lyle will get a quote for two 500' spools of LMR-400 coax for Club use and resale.

The **BAARC Technology Group** held its third meeting following the Club Breakfast Meeting on Saturday, March 21 at 10:30 AM at the Brainerd Public Library, Lyle KØLFV, Chairman, with several attendees. Presentations were given on the **Remote Base HF station** now in operation-testing (Lyle KØLFV, Mitch ADØHJ), **Field Day mesh network** for logging software (Ron KØGOP), and **Beaglebone Black** micro computer and SD Radio (Michael KEØAFZ). **The next meeting of the Technology Group will be announced at a later date.** Ron requested permission for possible use of the small Club comm. trailer for Civil Air Patrol, Crow Wing Squadron over the April 17-19 weekend in Fergus Falls. **Motion to approve:** John WØWY, **Second** Lyle KØLFV, **Passed.**

The board meeting was adjourned at 5:07 PM.

Thursday-MARCH 26, 2015 - 7:00 PM - BAARC Membership Meeting Minutes

Brainerd Public Library Large Meeting Room

Attendees: The President opened the Club membership business meeting at 7:00 PM with 32 members and guests present.

Information supplemental to Board Meeting Minutes: John WØWY presented information regarding 2015 **SKYWARN training and exercises**. Steve NØCRM distributed and reviewed updated 2015 **SKYWARN Spotter reporting protocols**.

Volunteers are sought for the **BAARC Hamfest setup, operation, and teardown** at the Brainerd Armory on April 18 as well as operators for the April 25th **Jaycees Marathon** in Nisswa. John has asked Rick NØSEH to take over duties as the **new Club VE Coordinator**. Al gave updates on the new repeater locations. Fritz gave information regarding the May 28 Spring Dinner, featuring **Ralph Fedor KØIR and the Navassa Island K1N DXpedition**. Tickets remain at the low price of \$15.

An interesting program on **Cuyuna Country Recreational Area Bike Trails** was given by Steve WØTNT.

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

DX and the Paper Chase

Imagine this scenario: you turn on your HF radio and there's no sound other than some light white noise. You change bands, same thing. I wondered if my receiver went south. The spectrum scope was flat lined and I've never had seen this happen. Well, welcome to Saint Patties Day, when the earth was hit by a huge solar storm that created a total HF radio blackout. The following day the bands began a slow return to activity. There was plenty of good DX for the past 30 days, mostly Europe and some nice contacts into the Middle East. The very active HF station on Gitmo gave a lot of Hams ATNO (all time new one). This station hit a triple over the past 30 days that included Navassa (K1N), Cocos Island (TI9), and Eritrea (E3Ø) all of which were DXpeditions. We're so very fortunate to have these dedicated radio operators giving us the opportunity to add these rare ones to our quest for DXCC. I had problems getting a phone contact with Cocos, so it was off to the CW mode— and I made it with a big smile on my face. Now the paper chase begins. I opted for the OQRS (on line QSL response service) system which is simple and inexpensive. Without this system, QSLing can be expensive and tedious. Even with the radio blackout, the past 30 days were fun for DXing. That's a wrap, folks. So long from Huntersville for now, best 73 es gud DX and remember— no one can hear you listening. Sit at your station and call CQ because there is someone out there listening for your call. **Bob WØZPE**~~~~~

Editor's Note about Bob: WØZPE was recently diagnosed with Non-Hodgkin's Lymphoma. It is a serious cancer. Nevertheless, he is positive and thinks he will be treated with radiation in Brainerd; before treatment, however, he is now getting a second opinion from Mayo to test tissue samples. On behalf of the Club, we have sent him a cheerful card for which he wanted me to thank the Club members. Bob, BAARC's Mr. DX, appreciated the thoughtfulness. Please continue to keep him and Marcia in your thoughts and prayers.

ARRL Partners: The Civil Air Patrol <<http://www.arrl.org/ares-el?issue=2015-03-18#toc09#toc09>>

The nation-wide CAP communication system has 840 HF radio stations, 5,000 fixed-land radio stations and 10,000 mobile radios, deployed in CAP units in every state, the District of Columbia and Puerto Rico. Using volunteer operators trained to professional standards, the CAP communications network is a ready force for homeland security and the protection of life and property.

The system operates in support of all CAP missions, including Emergency Services, Aerospace Education and the CAP Cadet Program. The focus of the CAP system is tactical communications, including air to ground, ground team to ground team, and communication with mission base. Interoperability with other agencies is stressed. In most cases, a Memorandum of Understanding (MOU) is signed with each agency before operation on each other's frequencies.

The Civil Air Patrol operates primarily on frequencies assigned by the United States Air Force. As a result, all CAP radios must comply with NTIA standards for transmitting and receiving. This requirement also applies to all radios used by other agencies that are permitted by MOU to operate on CAP frequencies.

Advance planning is a priority of the communications program. Communication managers at all levels develop mission communication plans and manage resources to ensure sufficient assets are available to accomplish the missions of CAP. Because "emergency communication is our business," CAP communicators are obligated to have standard procedures developed and trained for communication under demanding conditions.

ARRL and CAP

The Civil Air Patrol (CAP) and ARRL has had a revised agreement since 2005, to provide a "broad framework for cooperation between the two organizations during emergencies and disasters, for education of members regarding the capabilities and regulatory environments of CAP and the Amateur Radio Service, to promote interest in public service especially among the nation's youth, as well as other activities in which cooperation may be mutually beneficial."

CAP MN Wing contains 21 squadrons including our own Crow Wing Composite Squadron based here at the Brainerd Lakes Regional Airport (BRD). Currently at a strength of 30 Seniors and 30 Cadets, Communications is one of the technology areas that Cadets can explore with Senior guidance and encouragement. CWCS uses EF Johnson VHF narrowband/digital mobile and portable radios for their Search and Rescue exercises (SAREX) and missions. As with our amateur VHF radios, they are supported by a system of 15 Motorola Quantar repeaters located throughout the state. Extending the coverage into the field are several tactical repeaters which can be placed aboard CAP aircraft at 10W, or used on the ground at 25W. The channel plan for all CAP VHF radios allows for easy access to a variety of communication systems, as well as liaison frequencies for many public and government agencies.

Fox-hunting skills are also part of the ES training for a CAP Cadet. Using a variety of handheld DF-ers, Cadets become expert at locating practice ELT's (Emergency Location Transmitter) in preparation for finding the real thing following an aircraft hard-landing or crash. Guided by similar DF equipment in the air, they become expert hunters employing map and compass triangulation and finally body-blocking as they home in at the end.

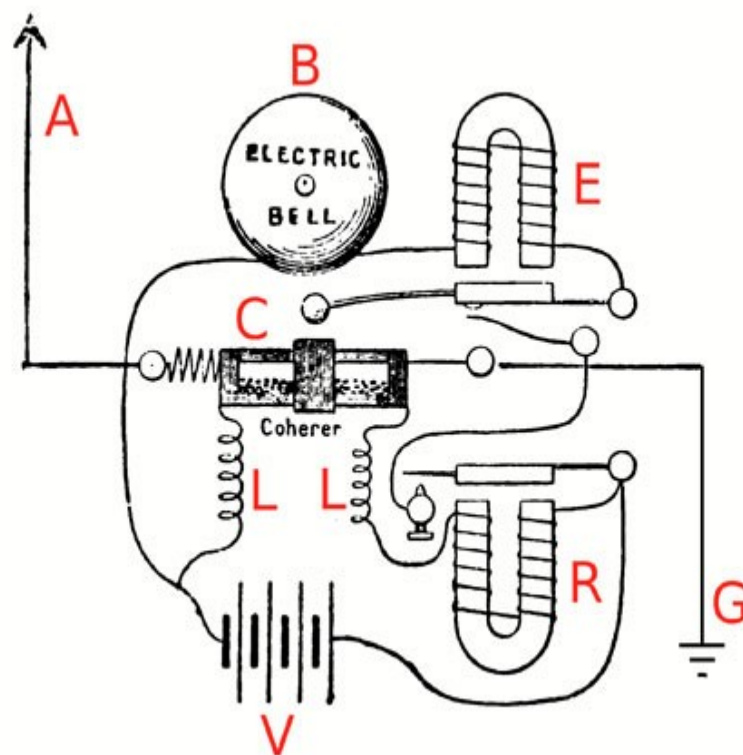
Over the last 10 years, CAP HF communications has grown into a mission ready network of stations throughout all 50 states, DC and Puerto Rico. The use of Motorola Micom ALE (Automatic Link Establishment) radios, allows specific point to point contact to any station, including AMD messaging for stations independent of operator presence. All CAP HF communications is infra-structure independent, as part of their "Train as we fight, Fight as we train" approach. Recent "customers" of the CAP HF network are HSEMS, FEMA, and the ANG's MAFFS unit, fighting wildfires far from their northern base of operations. CAP Comms Cadets host VHF and HF nets, use proper prowords and phonetics, and regularly pass and receive formal message traffic. It is quite likely that this hands-on training and experience is growing a crop of future amateur operators long after their cadet days are behind them.

The above is based on information from the ARRL and provided by Ron Finger, KØGOP, BAARC Secretary
Editor's Note: Ron is very active with the local CAP.

Popov Makes Early Radio Transmission, March 24, 1896 by Jessica MacNeil

Alexander Popov's place in radio history is often overlooked. While working with the Russian Navy School in Kronstadt, Popov continued the work of James Maxwell and Heinrich Hertz. Hertz proved Maxwell's theory that electromagnetic waves could be transmitted through the air in 1888, and soon after the coherer was devised to detect the waves.

Popov improved the coherer tube by allowing it to reset itself and used the primitive radio receiver to experiment with it as a tool to predict thunderstorms, which he **demonstrated on May 7, 1895**. See a circuit diagram of his coherer receiver below.



In an article in the Russian Physical Chemical Society Journal later that year, he wrote about his hope to use the device for "signaling on great distances by electric vibrations of high frequency" once a more powerful generator of vibrations was invented. Popov set out to achieve that goal, and on March 24, 1896, he claimed to transmit the words "Heinrich Hertz" between buildings on the St Petersburg University campus. However, reports of his achievement weren't published until years later as he was working for the Navy and his research was not intended for public knowledge.

The Russians tested his radio system communicating with a ship that had run aground in 1900 and began adopting it for naval use. A radio station was established on Hogland Island to provide two-way communication between the Russian naval base and the battleship General Admiral Graf Apraksin. Guglielmo Marconi is often credited with the invention of the radio, which he patented in 1896, and **Tesla demonstrated the fundamentals of radio in 1893**, but the Soviet government made May 7 "Radio Day" and named Popov a national hero for his contributions to the field.—**Information relayed from the ARRL**

Weapons, Safety and Personal Responsibility

Recently, I've seen questions on carrying weapons on ARES deployments. Here is the statement of Chief Executive Officer **David Sumner, K1ZZ**, released March 31, 2014 and supersedes any prior communication on the subject.

"Anyone seeking permission to carry weapons during an ARES deployment is to be advised that the ARRL **cannot** give such permission. Neither does the ARRL prohibit legal weapons, but the ARRL accepts **no responsibility or liability** for injury or damages to anyone as the result of possession of a weapon by an ARES volunteer. The responsibility or liability for injury or damages to anyone as a result of an individual's possession of a weapon remains with the individual. ARES volunteers must obey all federal, state, and local laws while on deployment. When supporting a served agency, ARES volunteers must also adhere to the policies of the served agency. **The ARRL does not expect volunteers to participate in a dangerous activity or to place themselves in what they perceive to be a dangerous or unsafe environment. Volunteers should avoid or cease participating in any ARRL activity or deployment under circumstances which make them uncomfortable.**"

News item above is from the March 18, 2015, *ARRL Letter* —Editor's Note: Bold emphasis added by *BAARCer* Editor.

Lyle Amundson, KØLFV, with Skip Jackson, KSØJ, the MN section Manager of the ARRL. As you can see, this is photographic evidence of Lyle's promoting the BAARC activities wherever/whenever he attends hamfests in the greater area. This photo was taken at the Buffalo, MN, Hamfest on March 28th. TNX, Lyle.



BAARC Annual Spring Dinner **YOU AND YOUR GUESTS ARE INVITED**

Where and When? **Thurs., May 28, in Nisswa at the Nisswa American Legion** with socialization starting at **5:00**, dinner at **6:00**, the program at **7:00** , and ending at **9 p.m.**

PROGRAM: **DXer Extraordinaire Ralph Fedor, KØIR,** of the recent **2015 Navassa Island DXpedition—K1N**

COST: The total cost is only **\$15** (which includes tax and tip—same price as last year—great food!!!)

Buffet Meal: BBQ Ribs or Baked Chicken (you choose one entrée when reserving) ,Yukon Gold Potatoes, Mixed Vegetables, Ranch Salad, Dinner Rolls, Coffee and Dessert. However, **BAARC must commit to a final count by Friday, May 22nd. When you commit, you must pay BAARC, for the number of meals ordered. Doug prefers checks.**

HOW: Checks must be payable to **BAARC**. No Refunds. **To reserve, contact Doug Bergsnev, BAARC Treasurer, 15912 Olsen Lane, Brainerd, MN 56401. Ideally, payment must be received by him by mail on or before May 22nd.**

QUESTIONS?: Doug’s phone # 218 820 6675 and his e-mail <djbdesk@gmail.com>

~~~~~

**P.S. Our thanks again to Jim Shubert, WØJDS, for arranging it with the Nisswa Legion.**

**SUNDAY NIGHT NCS OPS**

|          |       |        |
|----------|-------|--------|
| 04-05-15 | Rick  | NØBJN  |
| 04-12-15 | Dave  | KCØTGT |
| 04-19-15 | Tim   | KDØYLO |
| 04-26-15 | Tim   | KDØYLO |
| 05-03-15 | Rick  | NØBJN  |
| 05-10-15 | Dave  | KCØTGT |
| 05-17-15 | Fritz | WØKO   |
| 05-24-15 | Tim   | KDØYLO |
| 05-31-15 | 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

**Would you like to take a turn at NCS?**

**Rob Neumann, KDØVJM**, spotted this note from 80 years ago in a recent Brainerd Dispatch-- "Duluth and Superior were cut off from the outside world after a storm of wind-driven sleet froze on utility poles, knocking out all telephone, telegraph and power. But the Dispatch made contact by using young amateur wireless operators Roger Nelson and Milton Anderson." *Thanks, Rob, for sending it in.*

**Welcome Back:** Jerry Morse of Staples rejoined the BAARC. He and his wife Pat recently stopped by at the Northwind Grille where we had our Club breakfast. Jerry holds the General Class license and is **KBØNKH**.

**Greetings from the Duits:** Jim **KØTXT** recently chatted with Fritz. He relayed that Sharon **KBØSQX** is now president of the ARC in Hot Springs Village, AR.

**Treasurer Doug KDØERE is recovering.** As you may have heard, he recently had back surgery. On behalf of the BAARC Fritz sent a cheery get-well card. Recuperating takes time, but he is ahead of the norm.

~~~~~

If you know of a Club member needing a card sent for whatever reason, please let Fritz know.

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