Anchorage Amateur Radio Club

Next Meeting April 4th, 2008, 7:00 PM

APRIL PROGRAM:

John Lynn (KL7CY) will be the Speaker demonstrating Packet radio communications. How to set up a packet station and some of the benefits of packet digital mode stations and how they can be used in contesting and emergency operations.

Ground Resistance Testing & Ohms Law

By: John Howard
Part 1 of 3

Over the years we have found that in the eyes of many there is much mystery and "art", surrounding ground systems, their resistance, the operation of ground test meters and their testing. This is the first in a series of three short articles explaining the concepts of ground system resistance and the two methods of testing illustrated with simple one-line diagrams. The purpose of these articles is to demystify the "art" and explain the science of each of the three topics mentioned.

This first article will explain ground system resistance, the physical factors of the earth and the grounding system that determines their resistance value.

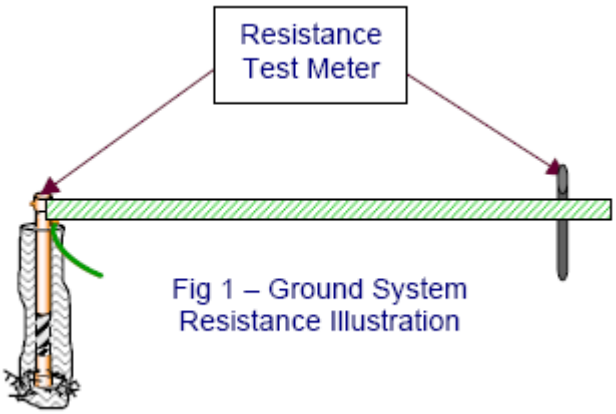


Fig 1 – Ground System Resistance Illustration

Ground System Resistance is not a vague concept; it is a finite, measurable number. The resistance of a ground system is the resistance between the ground and a point in the earth distant from the system. Figure 1 illustrates a simple meter to test this resistance. The test meter is connected between the ground system and to a probe located some distance away.

We will see that the probe distance is outside what is referred to as the Sphere of Influence (SOI) of the grounding system. Unfortunately, a simple ohmmeter cannot be used for the test as you will see in subsequent articles.

The resistance of the ground system is defined by the formula "$R = \rho (L/A)$". Okay, it is a little more complicated than Ohm's law. All but one of the elements in the formula are easy to explain and understand. The easy ones are "R", the resistance of the ground system, "ρ" the resistivity of the earth and "L" the length of the "conducting path". "A" is the cross sectional area of the grounding system and the difficult one to explain, visualize and understand. You will see why soon. The next few paragraphs will explain each element in the formula.

The first is "R", or the resistance of the grounding system. We will not review basic physics/electrical theory, but it is simply the resistance to electrical current flow through a material. In this case, the material is the earth. This is the performance test and measurement of the grounding system and what we are always trying to get as low as possible.

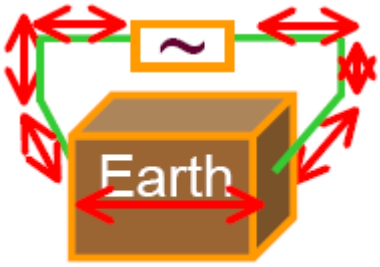


Figure 2. Resistivity

The second is "ρ", the resistivity of the earth at the location of the grounding system. The units of measure are in Ohms-Meter. It is the resistance to electrical current flow through a cubic meter of earth as illustrated in Figure 2. In our formula "$R = \rho (L/A)$" you can see that the result of (L/A) is multiplied by "ρ". With all else being equal, the higher the resistivity ("ρ"), the higher the resistance of the grounding system.

The third element "L" is the "conducting path". It is covered in the Soares Book on Grounding published by the International Association of Electrical Inspectors. The Spheres of Influence (SOI) of the ground system are the same as the "Conducting Path" and are what we will use for our explanation.

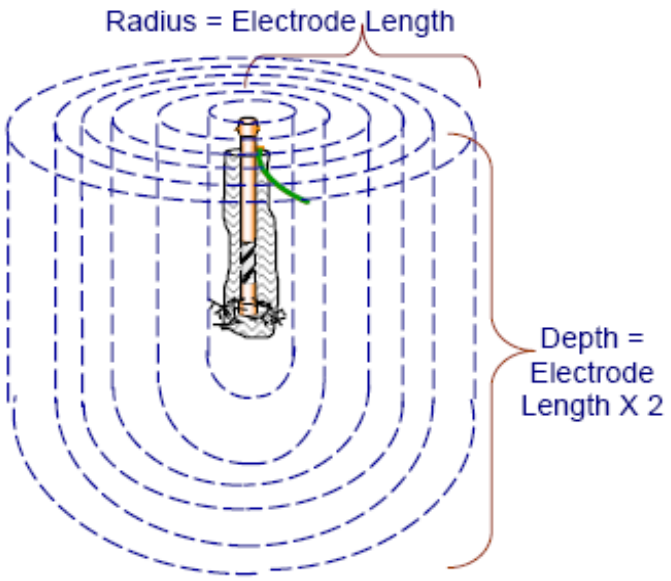


Fig 3. Spheres of Influence

As illustrated in Fig 3. The SOI is defined as a series of shells having a radius equal to the length of the grounding electrode and depth equal to two times the length of the electrode. For a 10 foot long ground rod, the radius of the SOI is 10 feet and the depth is 20 feet.

Since the SOI is equivalent to the "conducting path", that would mean "L" in our formula is 10 feet and is also directly related to the ground resistance "R". When "L" increases, ground resistance increases.

Before we discuss "A" let's spend more time on the SOI. What the SOI means in real life is that this volume of earth effectively represents/contains the total resistance of the ground system as measured from the ground to a point distant from and outside the SOI.

The first shell illustrated will have a finite resistance. The second shell will have a finite resistance that is somewhat less than the previous because the shell has a larger cross sectional area. Each succeeding shell will have less resistance than the previous. Finally, the last shell will add an insignificant amount to the total resistance of the grounding system.

So….., measuring the resistance from the grounding system to a point distant from and outside the SOI will yield the resistance of the grounding system. The earth outside the last shell has increasingly larger cross sectional areas and although they add resistance, it is a small insignificant amount.

The fourth and final element is "A". It represents the effective cross sectional area of the grounding system. Remember we said that "A" is the one element difficult to explain/illustrate/understand.

The only factor that determines the size of "A" is the size of the grounding system. The larger the ground system, the larger "A" will be. The grounding system can be made larger by increasing the electrode length or adding additional electrodes. You can easily see that increasing the length of a 10 foot electrode to 20 feet would basically double "A". However, when adding electrodes to a ground system it is more difficult or impossible to understand the change in "A". Obviously, "A" would get larger but the amount could not be easily determined.

Determining "A" is difficult under the best conditions and quite impossible for anything but the simplest of grounding systems. Sophisticated computer software programs perform this function as they model a grounding system's performance.

Finally, we can see from "A"s position in the formula that the ground system resistance is inversely proportional to it. The larger "A" is, the smaller (and better) the resistance of the grounding system. Also, the smaller "A", the higher the ground system resistance will be.

We have now covered all the elements that affect the resistance of a grounding system. All are pretty understandable at least in concept. We should also understand how each element affects the resistance of the grounding system.

Grounding is a science (though not a precise one), and we hope with this series of articles you will have a better understanding of grounding and ground system testing.❐

WORKED ALL STATES contacts needed:

To All:

A childhood friend I grew up with is now a Ham in Houston TX. He only needs 13 counties to complete getting them all. Of course he needs the 2nd district. If you can help him, his name is **Ron Clift, N5MLP** and his email is n5mlp@comcast.net. If you cannot help him hopefully you can find someone that can set a sked with him. If not I'll cut your coax when I get up there in July for the Convention!☺

73, Jim Moody, AARC Life Member

A TECHNICAL TIDBIT

By R. Tell, K5UJU

Understanding Inductance

Do you know what inductance is? If you passed your amateur radio license exam, you should already understand what inductance is so this might be just a review.

Inductance is something that is associated with conductors, like wires. It is a measure of the ratio of magnetic flux (think magnetic field strength for now) to current flowing in a conductor. So, whenever a current flows in a wire, a magnetic field is produced that surrounds the wire. This magnetic field is associated with a magnetic flux. The greater the current flowing, the greater the magnetic flux that will exist around the wire. Also, when a conductor is formed into a coil, this "inductor" now has an ability to develop a greater magnetic flux surrounding it when current flows in it. However, even a simple straight wire has some inductance, albeit very little.

A very interesting but very basic concept in physics is described by Lenz's Law which states that induced electromotive force (think voltage) and the change in magnetic flux have opposite signs. In other words, when a magnetic field begins to increase or decrease, an induced voltage will be developed that is opposite in polarity. This means that Lenz's Law describes a phenomenon whereby changes in magnetic field will be opposed by the generation of an oppositely directed voltage and current.

What does this mean in practical terms? In a simple resistor, the voltage developed across the resistor is directly related to the current through the resistor. In a conductor that exhibits significant inductance, such as a coil of wire, any change in current through the wire will be opposed, i.e., reduced. Note that the operational terms here are "any change". The more rapid the current changes in polarity (we're talking alternating voltage, currents, signals here), the greater the opposition and, hence, the greater the reactance exhibited by the inductor. The term reactance is used to describe current flow opposition for AC (alternating current) signals similar to how we use the term resistance to describe current flow opposition to DC (direct current) voltages and currents. Sometimes, reactance is referred to as "AC resistance."

When you coil up a length of coax cable to make a "choke balun", for example, you have made an inductor that will exhibit a certain amount of inductance to radio frequency currents flowing on the outside surface of the coax shield. This can be useful for reducing the magnitude of RF current flowing back toward your radio transceiver caused by feeding a balanced antenna with the unbalanced coax.

Fig. 1. The symbol for an inductor.

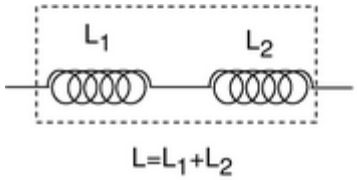
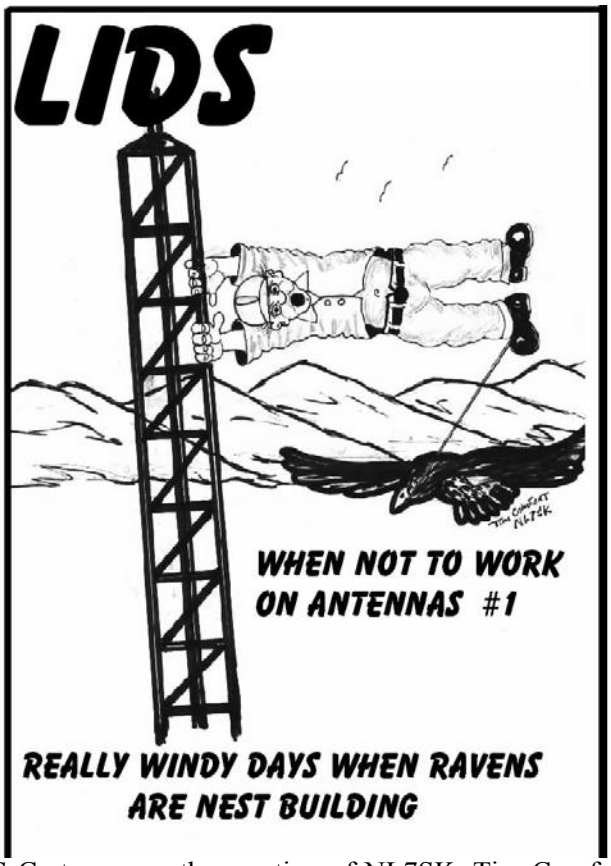


Fig. 2. Inductances in Series

Fig. 3. Photo of some inductors.

Inductance is measured in henries (H). If we know the inductance of a coil, and the rate of change in current flowing through the inductor, we can calculate the AC voltage drop across the inductor.❒



LIDS Cartoons are the creation of NL7SK, Tim Comfort and are available for purchase on CD. All sale proceeds go to support the Matanuska Amateur Radio Association.
www.kl7jfu.com.

AARC BADGES

KL7AA BADGES are AVAILABLE!

When is the last time you saw a member of the AARC wearing an original badge? Well with some due diligence on the part of a few ham operators, Frank Pratt, KL7RX and myself, KL7SP; we have tracked down the original design and store where the badges were made.

The badge comes with your Name and Callsign engraved, the club logo on an arch 3 inch dome as well as the option of purchasing individual name plates for each position you have served for AARC. If you are interested in purchasing an AARC badge, the costs is $20.00 per member for each badge and $2.00 per customized name plate. Badges have the option of a pin or magnet attachment.

For more information about this project or to order your badge today in time for the convention and outdoor public activities, please contact Michael O'Keefe, Kl7MD at 907-351-4038 or via email at: mok@gci.net.

When ordering, please indicate your name, Callsign and if you wish to have any additional name plates added.

Orders take approximately 10 days for printing and our made locally in Anchorage. Thanks to Frank Pratt, KL7RX for helping us track these down. Also thanks to Kl7MD for picking up this project.

AMATEUR RADIO

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News Letter Submissions, Information or corrections: Submissions must be received 2 weeks before meeting Email: editor@kl7aa.net
Mail: PO BOX 101987, Anchorage, AK 99510-1987

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NEWSLETTER ARTICLES: All articles from members and interested persons are very welcome. If you wish to submit any articles, jokes, cartoons, please have it typed or neatly handwritten. It can be submitted by mail, computer disk or E-mail to the newsletter editor at the address listed above. Submissions must be in the hands of the editor **no later than the 10 days prior** to the meeting or it may not be included.

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OPINIONS expressed in The Modulation Times are not necessarily those of the Anchorage Amateur Radio Club. **MEMBERS** and **non-members** are invited to submit articles of interest. AARC assumes no responsibility for contributed items or their return without a self addressed stamped envelope. Sources of the items must be provided and ALL material is subject to editing required to conform to space limitations.

CLUB COATS

With a removable liner, lots of pockets, and waterproof, the coat gives the radio club great publicity with a full back, club logo and a Name and Call-Sign Personalization on the left chest. For those of you interested in purchasing a coat, the costs are **$50 per club member**. This is a great price for a coat than can be used during summer amateur activities or as a winter coat during Sled Dog races or November Sweepstakes. Must have a current club membership.

If you are interested in ordering a coat, a sign up sheet will be available at the club meeting or feel free to contact Craig Severson, KL2FN; chipman at clearwire.net

ANCHORAGE AMATEUR RADIO CLUB
MEMBERSHIP MEETING
March 7, 2008
Carr Gottstein Building – APU Campus
Anchorage, AK

Call to Order

The meeting was called to order at 7:00 PM by President Kathleen O'Keefe (KL7KO). Members and guests introduced themselves.

Business

Kathleen O'Keefe noted the need to vote on a funding request of $15,000 requested by T.J. Sheffield and approved by the AARC Board at the February meeting for the purpose of purchasing equipment to equip the AARC CCV with club assets to be fully equipped and ready to mobilize for events and emergencies without having to borrow equipment to operate. The vote was called for and passed with no opposition.

Announcements

Michael O'Keefe (KL7MD) spoke as the ARRL District Emergency Coordinator regarding the lack of participation at the Fur Rondy and Iditarod events. Mike noted that members are critical to the survival of the radio club. Organizations develop a faith in our abilities which we need to maintain. Michael encouraged operators to get involved when a request for volunteers is announced.

Michael O'Keefe noted that the March 15th ARES training will be held at the APU campus at 0930 and the topic will be Message Traffic Handling.

Kathleen O'Keefe noted Fred Erickson (KL7FE) was available for the payment of dues.

Kathleen O'Keefe noted the AARC is continuing to seek volunteers for the position of Treasurer of the club. Kathleen noted that a postcard has been mailed to members to solicit volunteers for the position.

Presentations

David Stevens (KL7EB), ARRL Affiliated Club Coordinator, gave a presentation and video regarding the ARRL. David spoke of the benefits, services, training and informational books and videos available as well as a brief history of the ARRL. David mentioned some benefits available to members such as legal advice, QSL bureau, Grants, Web access, Insurance, training and education, tours. David noted the ARRL Section Manager had secured some funds for books to be made available for use at the CCV garage. A video tour of the ARRL Headquarters was shown to the members.

Heather Hasper (KL7SP) reported on the 2008 State Convention/Hamfest planning to date. Planning meetings are held on the first Tuesday of the month at 5:30pm at the Denny's on Denali in Anchorage and on the third Sunday of the month at Noon at the Red Cross office in the Westside Center in Wasilla. Heather noted that AARC Life members are promoting our event in the lower 48. Twenty national vendors have confirmed attendance. Latest guests include ARRL President Joel Harrison (W5ZN), ARRL Northwestern Division Director Jim Fenstermaker (K9JF), AMSAT Vice President of Operations, Andrew Glasbrenner, Chief Army MARS Stuart Carter. The availability of Alaska congressional members is still in question as Congress may still be in session during the time of our event.

The Governor of Alaska has been asked to be the opening speaker for the event. Mr. Whitekeys has been secured as the dinner entertainment. Registration fees were explained.

Heather explained the planned Arctic Circle Special Event Station. A special event special call of W1AW/KL7 has been applied for and details are being worked with David Sumner, Secretary and Trustee of the ARRL. The Fairbanks ARC is interested in assisting in this event.
Addition vehicles on display at the Hamfest include the Kenai Borough emergency response vehicle, FAA trailer, and the Polar Wire solar trailer.

The Friday, August 1st, Barbeque arrangements are complete, food has been selected, grill has been donated by Carlisle for the event. MARA has done a great job in coordinating this event.

Heather reminded all that for the HAARP tour, attendees must be a US citizen and pass a background check prior to attending.

The Wouff Hong ceremony planning is continuing. The Master of Ceremonies has been confirmed. This event will take place at Midnight, Saturday August 2nd and is open to all amateur radio operators.
Advertising for the 2008 Hamfest has been in QST, World Radio, the German CQDL Verlag, Australia and Great Britain publications.

Door Prize Drawing

Billy MacLaments, KL2CO, N5XZ, WL7CPX, KB8JXX, NL7TZ, KL1IL, KL7EB and Chelsea.

The meeting adjourned at 9:15pm
Respectfully submitted as recorded on March 7, 2008 by:
Richard Tweet, KL2AZ, Secretary,

ANCHORAGE AMATEUR RADIO CLUB BOARD MEETING

March 18, 2008

540 WEST INTERNATIONAL ROAD
Anchorage, AK

(*UNAPPROVED* at Printing)

The meeting was called to order at 7:00 PM by Vice President Jim Larsen. A quorum was established: (2 Officers, 7 Board members needed)

BOARD MEMBERS PRESENT:

Vice President Jim Larsen AL7FS, Treasurer Heather Hasper KL7SP, Secretary Richard Tweet KL2AZ, Activities Director Richard Kotsch WL7CPX, Paul Spatzek WL7BF, Tom Rutigliano NL7TZ, Diane Olson KL1MY, Michael O'Keefe KL7MD, Craig Severson KL2FN, John Orella KL7LL, Richard Block KL7RLB, Mike Romanello KL7BK, Susan Woods NL7NN, T.J. Sheffield KL7TS.

NON-VOTING MEMBERS PRESENT

Keith Clark KL7MM

EXCUSED

President Kathleen O'Keefe KL7KO, Frank Pratt KL7RX.

UNEXCUSED

None

REQUEST FOR AGENDA ITEMS

Tom Rutigliano requested to add MARA grant update, T. J. Sheffield requested to add Title 21/Tower ordinance, Bruce McCormick requested to add CCV Garage alarm system and Roger Gollub requested to add CW equipment to the agenda.

GUESTS

Jeanette Morton KL0HQ, Roger Gollub WB0CMZ, Bruce McCormick KL7BM.

Roger Gollub spoke on an idea and suggestion to improve the AARC's CW Field Day station and the hardware required to do so. Roger briefly explained his background and advantages to the AARC if the suggestion was moved on. Roger explained the hardware and cabling required for the improvement to be approximately $600.00. Motion made Michael O'Keefe KL7MD, seconded Diane Olson, KL1MY to allocate up to $650.00 for the purpose of purchasing a Microham Keyer II and associated cabling. Discussion included the use of this equipment in the CCV and Ham Shack as well as Field Day and Special Events. The motion carried unanimously. T.J. Sheffield identified this project as 2008-02 and requested Roger to be the project manager to which Roger agreed.

Jeanette Morton reported on 2008 Hamfest/Convention registrations.

SECRETARY REPORT

Previous Board meeting minutes for February and General Membership meeting minutes for March were presented. It was noted that the March membership meeting minutes contained an error of meeting month and date. Motion made Diane Olson KL1MY, seconded Heather Hasper KL7SP to accept the minutes as corrected. The motion carried unanimously. Jim Larsen requested the minutes to be emailed to the Board Members prior to each meeting for review,

There was no Club correspondence for the month.

TREASURER'S REPORT

Heather Hasper presented the Treasurers report for month ending February 2008. Heather reported that the Alaska State Fair fees for 2008 have been paid. Heather presented a detailed report of the 2008 Hamfest/ Convention expenses and activities to date as requested by the Vice President. Heather reported on raffle tickets and sales, registration, services, shipping, entertainment, logistics and support equipment and donated coach services, sponsorship, ACVB involvement, and the importance of Board Members involvement in the Hamfest . Discussion was held on CPA fees, listing of Hamfest expenses, and Special Events. Motion made Diane Olson, KL1MY, seconded Richard Block KL7RLB to accept the Treasurers report as given. The motion carried unanimously.

VE REPORT

There was no report as Jim Wiley was not in attendance.

TRUSTEE REPORT

Keith Clark reported that the Logbook of the World is current. Keith noted that an operator's sign up sheet is posted at the CCV and that he is to be notified each time the station is used. A list of approved control operators has been started and operators will be added to the list upon completion of proper training on the equipment prior to operating the Club equipment. Keith reminded that per the FCC regulations, a control operator must be designated when the station is in operation. Keith noted that the Club Station is licensed to KL7AA and the club

Details regarding Club station operation will be worked out at the Project Committee meeting on March 19th. Michael O'Keefe noted that the controller part on order is coming from Bulgaria and expressed his dissatisfaction with the time this is taking with a letter to the company.

MEMBERSHIP REPORT

There was no report as Fred Erickson was not in attendance.

ARES TRAINING

Michael O'Keefe KL7MD reported that the next ARES training would be on set up of the StepIR yagi antenna. Training will be at the CCV garage on Rowan St. on April 19th. Michael reported on the last ARES training on message handling. Turnout for the class was noted to be good and more classes will be made available.

OLD BUSINESS

Replacement Treasurer

Jim Larsen provided copies of the Bylaws as pertaining to the Treasurer position, an estimate of bookkeeping services from a local firm, and Article II of the Articles of Incorporation. Discussion was held on bookkeeping services available, duties of a Treasurer vs. bookkeeper, CPA recommendation of a bookkeeping service for the AARC, difficulties in filling the Treasurers position, current duties of the Treasurers position, working relationship between the Treasurers position and a bookkeeper, expected monthly time for bookkeeper services. Michael O'Keefe proposed a hiring committee consisting of the Vice President, Treasurer and Richard Block to interview potential firms with a two week timeline. The members concurred and Jim Larsen noted that a special meeting would be called to discuss the findings.

Capital Projects

T.J. Sheffield reported that the Capital Projects committee is made up of Michael O'Keefe, Bruce McCormick and himself. T.J. provided a status report of open projects and requested any available updates. T.J. noted projects need a determined scope and a defined benefit to the radio club, amateurs or served agencies. A project completion must also include training and documentation for the project. Some listed projects are on hold pending scope review. Club membership approved projects are listed in order with assigned Project numbers. Heather Hasper reported on the status of the Remote Testing project after discussion with Jim Wiley KL7CC, VEC coordinator. This project is in need of a champion as the APU student who started this project is no longer with APU.

Real Estate

Keith Clark reported that he is still looking into available properties and gathering information for presentation to the Board.

Title 21 report

T.J. reported on the status of the Title 21 rewrite by the Municipality. To date, language remains favorable to the Amateur Radio community, but is not a blanket exception. Discussion was held on AL0U recent permitting experience, PRB-1, wind loading requirements, engineering stamp requirements, AARC involvement before the Municipal Assembly, and possible request of clarification on issues from the Municipality.

Ham Shack Alarm System

Bruce McCormick reported on keys made available to members, current club roster was provided to allow for key disbursement upon completion of training. Bruce returned unissued keys to Jim Larsen and requested to be made aware when keys are issued to allow for programming and that Guardian Security is to be notified of access granted. Michael O'Keefe reported on false alarm charges and how the club will forward the charges to repeat offenders.

MARA Grant Update

Tom Rutigliano (NL7TZ) reported that the generator has been received along with the tower, steel, axles and fenders. Assembly of the trailer will begin on Saturday. Tom thanked Keith Clark with his assistance in tower shipping.

New Business

Program for April Membership Meeting

Richard Kotsch reported that John Lynn (KL7CY) will be the April Speaker on the topic of Packet. T.J. Sheffield will present on NVIS antennas and the upcoming Field Day at the May meeting. John Mears (AL7LA) will present at the June meeting and Richard Block (KL7RLB) is scheduled for the September meeting to speak on the Anchorage Police Department Search Team.

Worldwide use of 147.27 via IRLP during morning net

Discussion was held regarding the Worldwide use of 147.27 during the morning net for the purpose of promoting and attracting participants for the 2008 Hamfest/Convention. The Board agreed to allow this to take effect until the event. Jim Larsen will contact the lead net controller, AL2B to let him know the decision.

AARC Mission Statement

Discussion was held regarding the AARC Mission Statement, ***"Our club is dedicated to public service, emergency communications, and the advancement of amateur radio through education and technical excellence"*** as published on the KL7AA.net website. General consensus is that the mission statement is fine but a solution must be defined to address issues such as lack of participation, lack of volunteers, community Emergency Response involvement. Discussion noted that amateur radio is being promoted in municipal emergency planning as the primary method of communication should infrastructure fail. A volunteer coordinator was discussed as well as methods to attract membership into the club from the 60-75 new hams joining the hobby every year. The AARC Mission Statement will be promoted in the newsletter. It was also noted that every board member and the trustee has an obligation to promote the KL7AA mission by example. The use of the KL7AA mail reflector as a method of notifying the membership of meetings was discussed.

Club Credit Card

Jim Larsen requested the Treasurer report on the status and reasoning for obtaining a debit card. Heather Hasper reported that the debit card was obtained on the recommendation of the AARC CPA. Heather reported on, and gave examples of controls in place for use of the card. Heather noted that this card is to be only used for purchases where the vendor will not accept a check or purchase order.

Other Business

Motion made Mike Romanello KL7BK, seconded T.J. Sheffield KL7TS to donate $1500.00 to the ARRL Alaska Section Manager for the purpose of promoting amateur radio throughout the State of Alaska and that any monies left over at the end of 2008 be donated to the ARRL Headquarters.. Discussion included the ARRL headquarters budgeted amount to the Section Manager, lack of request for this funding, number of ARRL members in Alaska, and ARRL calculations of District budgets. Richard Block KL7RLB moved the motion be tabled and by general consensus, the meeting adjourned at 9:50pm

Respectfully submitted as recorded on 3/18/08 by:
Richard Tweet, KL2AZ
Secretary ❒

Are you a member of ARRL?

ARRL is the American Radio Relay League. This is the national organization that advocates on behalf of amateur radio operators to the FCC and the communications industry. KL7AA has been an ARRL affiliated club for more than 50 years. Consider becoming a member of ARRL today. www.arrl.org

ATTNETION: Alaska QRPers,

I have been thinking about this for a few months and I think it is time to suspend the Alaska QRP Club meetings for now. I was out of state for January and February and I heard attendance was minimal or zero. This month I was the only one there. That means we need a break at least until later this winter.

Effective immediately there will be no Alaska QRP Club meetings until further notice. Thank you for your participation these past five to six years; we started in 2002. Time flies.

I think QRP will be a bit more fun after the bands come back. It has been a very long dry spell for quality QRP conditions.

Take care.
73, Jim Larsen, AL7FS
Anchorage, Alaska
907-345-3190

How do you support your community through the use of amateur radio?

Mark Hill, KL2HL demonstrated Amateur Radio with a display table at a Community Emergency Preparedness Fair in Anchorage, Alaska.

Sean, KL2CO with Iditarod Champion, Lance Mackey at the Safety Roadhouse Checkpoint, the final checkpoint before the Finish Line.

Sean Jensen, KL2CO spent 10 days at the Safety Checkpoint supporting the Iditarod Trial Communications.

IARU Celebrates World Amateur Radio Day

Each year on the anniversary of its founding, 18 April, the International Amateur Radio Union (IARU) marks World Amateur Radio Day. On this, the 78th anniversary of its inaugural meeting in Paris, the IARU dedicates World Amateur Radio Day to the radio amateurs, educators, and administrators who use Amateur Radio to support technology education in the classroom.

Such programs are not confined to the developed countries. They are even more valuable in countries where telecommunications technology is not yet commonplace, and where natural disasters and other disruptions can cause the overloading or even the loss of regular communications circuits.

Radio technology offers a wide array of tools for teachers to use as they integrate technology into the curriculum. In schools without an Internet connection, Amateur Radio can fill that void through interactive communications and shortwave reception. Elementary school teachers, using AM radios, can interject fun while helping students learn basic electricity and regional geography. Social Studies teachers can use Amateur Radio and shortwave receivers to teach about different cultures the world over, as well as advancing deeper into geopolitics and geography. Earth science and physics teachers can use radio to teach electricity and electronics, radio wave propagation, weather and atmospheric science. Language arts teachers may use radio to supplement writing, speaking and listening skills while providing access to numerous foreign languages from the lips of native speakers.

With almost three million licensees in nearly every country on Earth, the amateur service provides an ample reservoir of expertise for use in classrooms throughout the world.

The IARU is the worldwide federation of national Amateur Radio organizations representing radio amateurs in 158 countries. It is a Sector Member of the International Telecommunication Union and is the recognized representative of the Amateur and Amateur-Satellite Services at the ITU.

ARES - Section 7, District 7 (Anchorage, ALASKA)

Mission statement:
Dedicated to amateur radio as it pertains to disaster services. The history of amateur radio operators' involvement in sending life-saving information in and out of disaster areas [and] providing help during and after earthquakes, floods, hurricanes and tornadoes. "HAM's have been there to assist local, state, and federal agencies and relief organizations such as the American Red Cross and Salvation Army." When All Else Fails, Amateur Radio.

The **ARRL Certification and Continuing Education** Program, was approved by the ARRL Board in January 2000. Volunteers from all over the country assisted in pulling together information for the course. Because the topic of emergency communications is so diversified and so much information is available, the material is broken into three levels: Introductory, Intermediate and Advanced **Emergency Communications (Levels I, II and III)**.
Each on-line course has been developed in segments -- learning units with objectives, informative text, student activities, and quizzes. Courses are interactive and include direct communications with a Mentor/Instructor and other students.
Check out: http://www.arrl.org/cce/ for more information.

ARES District 7 Contact Information
Michael O'Keefe, KL7MD
DEC7 at kl7aa.net

ARES DISTRICT 7 & 5
KL7AA & KL7JFU

April 2008

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 *2008 HAMFEST Planning MTG 5:30 PM*	2	3 	4 *AARC Meeting 7PM*	5
6	7	8	9 *MARA Board Meeting 7PM*	10 	11	12 *PARKA Meeting 11 AM*
13	14	15 *AARC Board Meeting 7PM*	16	17 American Red Cross	18	19 *ARES Training 0930* EARS: 3PM
20 *2008 HAMFEST Planning MTG 12 PM*	21	22	23	24 	25 *MARA meeting 7PM*	26
27	28	29	30			

Anchorage Amateur Radio Club
PO BOX 101987
Anchorage, AK 99510-1987
www.KL7AA.net

ARES NETS:

1st Thursday: HT / Portable
2nd Thursday: Mobile Madness
3rd Thursday: RED CROSS
4th Thursday: Emergency Power

ARES Training: 4/19/2008

SteppIR Antenna

We will be learning about the SteppIR antenna and practice setting up the SteppIR in preparation for Field Day as well as emergency events where this equipment might be needed on an ARES deployment. If you have ever wondered about purchasing a SteppIR or have any questions about the design come and this is your opportunity to come and learn more about this unique antenna.

To add to the Calendar please contact: John Lynn at Johnlynn@gci.net

ARES NET: Thursday Nights 8:00 PM 147.27+ PL: 103.5 or 443.30+ PL 103.5

Internet Links, the favorites from our readers:
AARC http://www.KL7AA.net/
SCRC http://www.KL7G.org
EARS http://www.kl7air.us
MARA http://www.kl7jfu.com
Moose Horn ARC http://www.moosehornarc.com
ARES http://www.qsl.net/aresalaska
Practice Exams : http://www.AA9PW.com
Fairbanks AARC: http://www.kl7kc.com/
ALASKA MARS: http://www.akmars.org
Alaska VHF-Up Group: http://www.kl7uw.com/avg.htm
Bethel Amateur Radio Klub: http://www.al7yk.org/
Yukon Amateur Radio Association:
http://www.klondike.com/yara/index.html
Links for Propagation
http://www.haarp.alaska.edu/
http://www.amqrp.org/misc/links.html
QRP and Homebrew Links http://www.AL7FS.us
Solar Terrestrial Activity http://209.130.27.95/solar/
ARRL http://www.arrl.org/
Propagation Report Recording 566-1819
Please let us know if there are other clubs pages or good starting points that should appear here**.**
Report dead links or bad info to editor@kl7aa.net

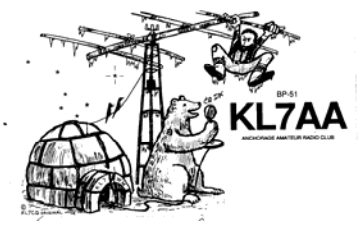
Regular HAM Gatherings:

Tuesday Lunch, 11:30 AM: Denny's on Denali behind Sears. Several old timers show for this and have lots of stories to share about amateur radio in Alaska.

Saturdays Breakfast, 7:30 AM: Here is a good way to get started on the weekend. Come and meet with some of the locals and have a great breakfast at American Diner, at the Northeast corner of Arctic and International. Great Fun.

Who Do I Contact to Join AARC

Fred Erickson KL7FE
12531 Alpine Dr
Anchorage, AK 99516-3121
E-mail: membership (at) kl7aa.net
Phone number: 345-2181
Annual Dues are $12 (prorated as appropriate)
Additional Member in same household is $6.
Full Time Student is no charge.
Ask about Life Memberships



MONTHLY EVENTS

1st Friday each month: AARC general meeting - 7:00 PM in the Carr-Gottstein Building, on the APU Campus. Talk in will be on 147.27+ repeater.

1st Tuesday each month (except for holidays):
VE License Exam 6:30 PM, at the Hope Cottage offices, 540 W International. Bring photo ID, copy of license (if any) and any certificates of completion. Contact: Jim Wiley, KL7CC 338-0662.

2nd Saturday each month: PARKA Meeting at 11:00 AM. Polar Amateur Radio Klub is the only YL club in Alaska. All amateurs welcome. Peggy's, across from Merrill Field. Talk in on 147.30+.

2nd Saturday each month (except for holidays):
VE License Exams at 2:00 PM. at Hope Cottage 540 W. International. Be sure to bring photo ID, copy of license (if any) and any certificates of completion. Contact: Jim Wiley, KL7CC 338-0662.

3rd Saturday of each Quarter month: EARS general meeting at 3:00 PM. EARS meetings are held formally each Quarter during the first month: Jan, April, July, and October. Meetings are held informally each month at R1 North. Contact info - PO Box 6079, Elmendorf AFB 99506 or email Ron Keech, KL7YK for information. EARS: 552-2664 (recording); Talk in on 146.67-. Email: KL7AIR@arrl.net or KL7YK@arrl.net

3rd Tuesday each month: AARC Board meeting at 7:00 PM at Hope Cottage 540 W. International. All hams are invited and encouraged to attend.

3rd Saturday each month: ARES General meeting 9:30AM to 12:00 PM. Call Michael O'Keefe, ANC DEC: dec@kl7aa.net HM: 243-4675 for additional information. Also check for ARES Info at: http://www.qsl.net/aresalaska/

4th Saturday of each month:Valley VE Testing at 7PM. sessions will be held at the Wasilla Red Cross at 7 pm on the fourth Saturday of each month unless it is a major holiday weekend. Wasilla Red Cross is in the Westside Mall, next to Speedy Glass…it's just a click up from AIH hardware.

The last Friday each month: MARA meeting at 7PM Fire Station 61, located two blocks up Lucille Drive, from the Parks hwy. Talk-in help for the meeting can be acquired on either the 146.640 or 146.850 repeaters. Further details can be found by contacting Tim Comfort, NL7SK, NL7SK at arrl.net.

Data You Can Use:

2007 Board of Directors

President: Kathleen O'Keefe, KL7KO president at kl7aa.net
Vice Pres: Jim Larsen, AL7FS vicepresident at kl7aa.net
Secretary: Richard Tweet, KL2AZ secretary at kl7aa.net
Treasurer: Heather Hasper, KL7SP treasurer at kl7aa.net
Activities Chairman:
Richard Kotsch, WL7CPX activities at kl7aa.net
Trustee: Keith Clark, KL7MM trustee at kl7aa.net
Membership Chairman:
Fred Erickson, KL7FE membership at kl7aa.net
News Letter Editor:
Heather Hasper, KL7SP editor at kl7aa.net

Three Year Board Members

Frank Pratt, KL7RX kl7rx at arrl.net (3rd year)
Paul Spatzek, WL7BF Paul.Spatzek at acsalaska.net (2nd Year)
Michael O'Keefe, KL7MD mok at gci.net (1st Year)

One Year Board Members

Diane Olson, KL1MY, oldwoman_69 at hotmail.com
TJ Sheffield - KL7TS, kl7ts at arrl.net
Craig Severson - KL2FN, chipman at clearwire.net
John Orella: KL7LL, kl7ll at arrl.net
Susan Woods: NL7NN, NL7NN4606 at yahoo.com
Richard Block: KL7RLB, kl7rlb at clearwire.net
Tom Rutigliano, NL7TZ, tomr at alaska.net
Mike Romanello, KL7BK, kl7bk at mtaonline.net

AARC web page & Email contact addresses:
Homepage: http://www.KL7AA.net/
Webmaster: webmaster at kl7aa.net
Membership: membership at kl7aa.net
Newsletter: editor at kl7aa.net

News Letter Submissions, Information or corrections:
Submissions must be received 2 weeks before meeting
Email: editor at kl7aa.net

Any AARC sponsored repeater, with or without an auto-patch, will always be open to all licensed amateur radio operators in the area who are authorized to operate on those frequencies.

Anchorage & Mat Valley Area Repeaters-a/o Feb 28, 2007

KL7AA: Flattop Mountain 2,200 ft
146.94/34 MHz, 80 watts, auto-patch, 141.3 Hz PL
224.94/223.34, 25 watts, no patch, no PL
444.70/449.70, 25 watts, auto-patch, 103.5 PL

WL7CVG: Mount Susitna 4,396 ft
VHF: WL7CVG/R1 147.270/147.870 PL 103.5, no auto-patch
UHF: WL7CVG/R3 443.300/448.300 PL 103.5, no auto-patch

WL7CVF: Grubstake: Hatcher Pass 4,536 ft
VHF: WL7CVF/R1 147.330 / 147.930 PL 103.5 Hz (no patch)
UHF: WL7CVF/R3 443.900 / 448.900 PL 103.5 Hz (no patch)

KL7ION at Mt. Gordon Lyon: PARKA 3,940 ft
147.30 / 147.90, MHz - 80 watts, no patch, 141.3 Hz PL

KL7AIR Elmendorf AFB: EARS: 146.67/146.07, 107.2 Hz PL

WL7CWE: Cliffside Amateur Radio Association

KL7CC, Anchorage Hillside, SCRC & QCWA
146.97/.37 MHz, 30 watts, auto-patch, 103.5 Hz PL

KL7M Anchorage Hillside
147.21 / 147.81 MHz, on IRLP, 97.4 Hz PL

KL5E Chugiak: 147.15/147.75, 123.0 Hz PL, auto-patch

KL7JFU, KGB road, MARA: 146.85/146.25, auto-patch, no PL

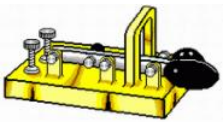
Palmer IRLP: 146.64/.04, simplex patch, no PL
Mile 58.3 Parks Highway IRLP: 147.09/.69 MHz, 97.4 Hz PL

KL3K, Girdwood - IRLP
146.76 / 146.16 MHz, 25 watts, no patch, 97.4 Hz PL

KL7AX: South Anchorage IRLP - 146.79/ 146.19 MHz, 100 Hz PL

WL7CWE Anchorage IRLP
2 Meter: 146.82/146.22MHz PL 103.5
6 Meter: 51.65 output / 51.15 input, PL 103.5Hz
70 cm: 444.85/449.850 MHz PL: 103.5 Hz (Node 3400)

South Central Area Simplex Frequencies
146.52 MHz Calling and Emergency frequency
147.57 MHz National DX Calling / Coordinating frequency
146.49 MHz Anchorage area simplex chat
146.43 MHz Mat-Su Valley simplex chat
147.42 MHz Peninsula simplex chat



Nets in Alaska:

The following nets are active in South-Central Alaska:

HF

Alaska Sniper's Net 3.920 MHz 6:00 PM daily
Alaska Bush Net: 7.093 MHz 8:00 PM daily
Alaska Motley Net: 3.933 MHz 9:00 PM daily
ACWN (Alaska CW Net) 3534, 7042 Daily @ 0700 –1000,
Net Purpose: Formal NTS traffic via CW.
Alaska Pacific Net: 14.292 MHz 8:00 AM M-F
ERC HF Net: 3.880 MHz – Sunday 8:30PM local

VHF

ARES Net: 147.27/87 103.5Hz - Thursdays at 8:00 PM local
PARKA Net 147.30/.90, 141.3 HZ Thursdays at 7:00 PM local
No Name Net: 146.85/.25 repeater Sundays 8:00 PM
and 1900 - 2400 Alaska Time - AL7N or KL5T monitoring.
Alaska VHF Up Net: 144.200 USB Saturdays 9:00 AM local
Big City Simplex Net: 146.520, 446.0, & 52.525 FM
Grandson of SSB Net: 144.20 USB Mondays 8:00 PM local
Statewide LINK ARES Net:
147.27/87 103.5Hz Sunday 8:00 PM local

2008 ALASKA ARRL Convention

HAMFEST 2008 Update

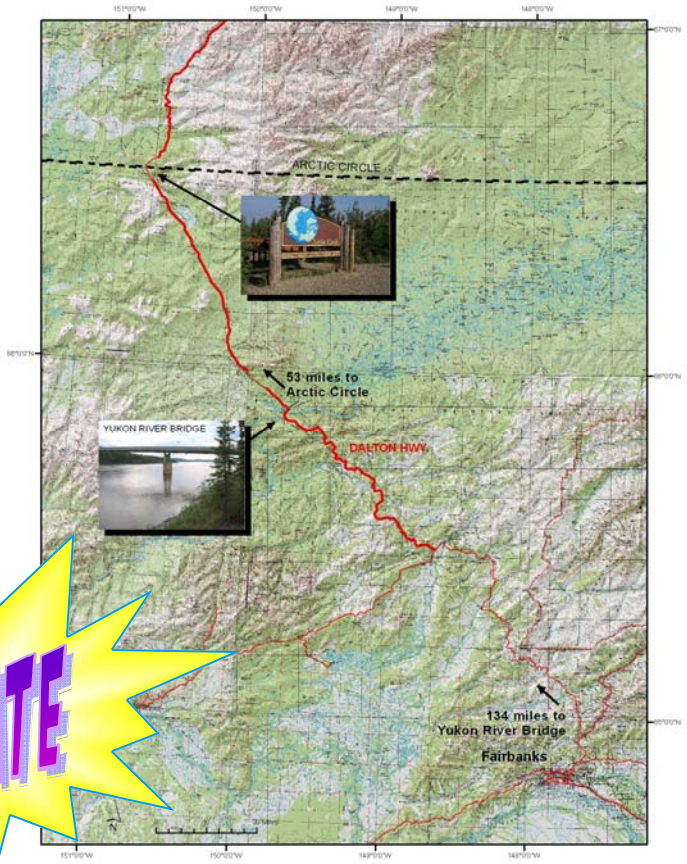
We are getting inquiries about our event daily.

- Arctic Circle Special Event Station

Thinking of doing something fun and unusual this Summer that involves ham radio? Want to become part of a once-in-a-life-time experience that YOU can participate in and enjoy the magic of amateur radio? Join fellow ham radio operators from all over the world in activating Special Events Station W1AW/KL7 on the legendary Arctic Circle 66°33'N in northern Alaska's Land of the Midnight Sun!

All amateurs, regardless of license class, are cordially invited to help make this special amateur radio event a success and a memory that will not soon be forgotten. The Special Event will operate from the Arctic Circle during the week preceding the upcoming

2008 ARRL Alaska State Convention and then during August 1st through 4th at the hamfest site in Anchorage. Operations from the Arctic Circle will begin on Friday, July 25th through July 29, with at least four stations including two all-band HF stations, a two-meter FM station and a Satellite setup. Six-meter operations may also be available. Visitors can sign up to operate any of these stations or, if you prefer, you are encouraged to bring your own radio equipment to Alaska and set up a temporary operation on the Arctic Circle adjacent to the Special Event station with your own call sign. (Grid Square BP-56)



UPDATE

For More information, Feel free to contact:
Heather Hasper, at KL7SP@arrl.net, 907-275-7474
Mike Romanello,KL7BK, KL7BK@mtaonline.net
Richard Tweet, at KL2AZ@arrl.net, 907-244-4335

NATIONAL VENDORS coming to ALASKA!

Anchorage Amateur Radio Club
Membership Application / Renewal

Membership Chairman: Fred Erickson, KL7FE
Email: membership@kl7aa.net
Phone Number: 345-2181

Mail - In Membership Application

NAME: _____ **CALL SIGN:** _____

ADDRESS: _____

CITY:_____ **STATE**:_____ **ZIP CODE**: _____

PHONE: **E-MAIL**:

_____ HOME _____

_____ WORK

_____ MOBILE

Are you a member of ARRL?

YES _____

NO _____

DUES:
Dues for the calendar year are as follows:

- Individual Membership $12.00 ($6.00 for each additional member at the same address)
- Student No Charge[1]
- Life Time Membership $250.00[2]

I am enclosing payment for:

Subscription / Renewal for _____ year(s).

Total US Dollars Enclosed: $_____.

Please mail your payment and completed application to:

Anchorage Amateur Radio Club
c/o: Fred Erickson, KL7FE
12531 Alpine Drive
Anchorage, AK 99516-3121

1. **STUDENT** is defined as any individual enrolled Full-Time at any educational institution, using the criteria of Full Time enrollment for that institution
2. If Over 65, please contact Membership Chairman for pro-rated rates.

Anchorage Amateur Radio Club, Inc
Post Office Box 101987
Anchorage, Alaska 99510-1987
www.kl7aa.net

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