Cross Band Repeating

By Ken Larson KJ6RZ

Cross band repeating is a relatively inexpensive means for extending the range of handheld radios.

The purpose of a cross band repeater is the same as any radio repeater. It allows stations to communicate that ordinarily would not be able to do so because of the distance or terrain between them. In Figure 1, for example, the people with handheld radios on the left side of the hill are able to talk to net control by communicating through the cross band repeater located in the vehicle parked on top of the hill. If the cross band repeater were not present, the folks with the handhelds could not talk to net control because the hill would block their signals.

A cross band repeater is similar in function to a standard repeater in that it contains a receiver and a transmitter that are linked together, but which operate on different frequencies. Voice signals that the repeater receives on its input frequency are automatically retransmitted on its output frequency. A repeater is a relay station.

A cross band repeater is implemented using a dual band 2 meter - 70 cm radio. The repeater receives signals on one amateur radio band (for example 70 cm) and retransmits those signals on a second amateur band (2 meters). Thus the name cross band repeater.

A cross band repeater is far less expensive than a conventional repeater. A conventional repeater can cost several thousand dollars. It is expensive because it operates on a single frequency band, 2 meters for example. As a result, its transmit and receive frequencies are only separated by a few hundred KHz. (600 KHz. on 2 meters). This close frequency spacing requires the receive section of the repeater to have extremely narrow filters that are quite expensive. The narrow filters are needed so that the repeater can continue to receive on its input frequency (for example 147.285 MHz) while transmitting on its output frequency (147.885 MHz). If it were not for these expensive filters, the repeater's receive section would be immediately overloaded by its own transmitter, as soon as it began to transmit. Once overloading occurs, the repeater can no longer receive input signals and thus ceases to operate as a relay station.

The cost of a repeater drops significantly if its input and output frequencies are separated by several hundred MHz instead of a few hundred KHz. With a wide spacing between the input and output frequencies, expensive input filters are no longer required. The frequency spacing between the 2 meter (147 MHz) amateur radio band and the 70 cm (447 MHz) band is 300 MHz. With this wide spacing, the standard low cost input filters on a 70 cm radio will prevent the receive section of the radio from being overloaded by a close 2 meter transmitter and visa versa. Manufacturers of dual band 2 meter - 70 cm mobile transceivers quickly picked up on this fact and added cross band repeating functions to their radios. When in the cross band repeating mode, a signal received on 70 cm is retransmitted on 2 meters. Likewise, a signal received on 2 meters is retransmitted on 70 cm.
Generally, however, a transceiver can only transmit on one frequency at a time. Thus if signals are received on both 2 meters and 70 cm, the signal heard first is the only one retransmitted.

As mentioned, a cross band repeater is an effective way to expand the range of a handheld radio. The following example illustrates this point. The radio club provided radio communications support during a recent CROP Walk sponsored by Thousand Oaks area churches. The base station for the radio net was located at Nygreen Hall on the California Lutheran University (CLU) campus, the start and finish point for the walk. Two rest stops with water for the walkers were set up along the course. A radio operator was placed at each rest stop to provide communications from the rest stop back to Nygreen Hall. In addition, two mobile radio units drove along the course looking for people who needed help and also providing the rest stops with additional supplies (water and cups) as needed. Two meter simplex radio communications was used to avoid tying up the local Thousand Oaks repeaters. A handheld radio was used at Rest Stop 1 on the corner of Moorpark and Janss roads since there was not room on this street corner to set up a portable radio station and antenna. The hills between Rest Stop 1 and Nygreen Hall, combined with the handheld’s low power and inefficient antenna, made radio communications between the two locations impossible. To overcome this problem, a car with a dual band radio configured for cross band repeating was parked across the street from Rest Stop 1 in the McDonalds parking lot. By using the cross band repeater, Rest Stop 1 could easily communicate with Nygreen Hall, Rest Stop 2, and the two radio equipped mobile units. The handheld at Rest Stop 1 communicated with the car on 70 cm and from the car to the 2 meter simplex net via cross band repeating.

In the more general case, shown in Figure 1, the vehicle containing the cross band repeater is parked on a hill to provide communications between net control and handheld units that can not reach net control because of distance, terrain, or both. One important observation is that people with handhelds can not only talk with net control via the cross band repeater, they can also communicate with each other. This capability is particularly usefully for Boy Scout troops, hikers, and search and rescue missions. People with dual band 2 meter - 70 cm handheld radios, capable of receiving on both bands simultaneously, can hear everyone on the net. Anyone anywhere on the net transmitting on 2 meters will be picked up by the cross band repeater and retransmitted on 70 cm. A person with a dual band handheld will receive the transmission on either 2 meters, or 70 cm, or both. Likewise, someone anywhere on the net transmitting on 70 cm will be picked up by the cross band repeater and retransmitted on 2 meters. A person with a dual band handheld will receive the transmission on either 70 cm, or 2 meters, or both. People with single band 2 meter or 70 cm radios will not have quite as good coverage. Those with single band 70 cm radios can hear everyone who is transmitting on 2 meters since everything that the cross band repeater hears on 2 meters will be retransmitted on 70 cm. However, if a handheld person transmits on 70 cm, the cross band repeater will retransmit on 2 meters. Others with only 70 cm capability of course can not hear the 2 meter transmission. They will hear the 70 cm transmission only if they are in line of site with the person transmitting on 70 cm. A similar situation occurs if single band 2 meter handheld radios are used. In this case, the 2 meter handheld people can hear, via the cross band repeater, everything that is transmitted on 70 cm and those 2 meter transmissions which are in their line of sight. Obviously, the best situation is to use dual band handheld radios since people with these radios can hear everything that is transmitted on the net.
Cross band repeating works best in simplex networks. Cross band repeating can be using on a standard repeater network, as shown in Figure 2, however, if this is done, more discipline is required by those operating on the net. The problem is that the cross band repeater will not switch into the 70 cm receive mode until after the carrier of the main 2 meter repeater has dropped. This makes the turn around times on the net (the time between the last person speaking and the next person beginning) abnormally long. If people on the main 2 meter net begin talking before the repeater carrier has dropped, the people with 70 cm handheld radios will rarely get a chance to speak. To provide for fairness on the net, anyone wishing to speak must wait until the repeater carrier has dropped before beginning to talk.

There is a mode of cross band repeating that can allow people with dual band handhelds to avoid the long turn around delay. This mode is called (by Kenwood) locked-band repeating. This mode can be used when those with handhelds can hear the primary repeater (on 2 meters for example), but the low power and inefficient antennas of their handhelds prevent them from reaching the primary repeater directly. I experienced this situation at the Moorpark rest stop during last year’s Cruisin Conejo Bike ride. The Bozo 2 meter repeater was used for communications supporting the bike ride. I could hear the Bozo repeater on my handheld, but the transmit power of my handheld was not adequate to reach Bozo. In the locked-band mode, the cross band repeater receives only on 70 cm and transmits only on 2 meters (or visa versa). Thus anything that a handheld transmits on 70 cm is immediately retransmitted by the locked-band repeater on 2 meters. The result is that the handheld sounds to everyone as if it were actually operating on 2 meters. There is no usual turn around delay with locked-band repeating. However, nothing is free. The problem with this mode occurs at the handheld. As the person with the handheld speaks, he hears his voice, slightly delayed, being transmitted by the 2 meter repeater. This is very annoying. I solved this problem by using a hand mic/speaker unit plugged into my handheld.

Whenever I push the mic push to talk key, the speaker is cut off so that I do not hear my voice repeated by the 2 meter repeater. This arrangement works very well.

One final note. As with standard repeaters, cross band repeaters should be set up with a receive CTCSS tone on the frequency used by the handhelds. This should be done so that other stations on nearby frequencies do not inadvertently trigger the cross band repeater. This is important when the cross band repeater is working into a larger standard repeater net, particularly if it is a controlled net. Most dual band radios with cross band repeater capability support the standard CTCSS tones on the receive side of the radio as well as on transmit.
Do YOU want a Christmas Party or a Christmas Meeting?

Each year AARC debates about hosting a Christmas party. This year the board is considering not having a meeting or Party due to lack of volunteers.

It is your radio club!!!

+++++++++++++++++++++++

MISSING CLUB ASSETS

Several Radios and club assets are missing from the CCV Garage and KL7AA Hamshack. Club members who have radio club property in their possession who acquired it by permission or who borrowed club property without notice are asked to return the equipment to the hamshack by November 15, 2008.

If you have questions please contact KL7MD Michael O’Keefe or Jim Larsen, AL7FS. Equipment that is not returned by 11/18/08 will be reported as stolen equipment and formal Police Report will be filed.

The KL7AA Hamshack is available for all club members to use. Our current facility lease expires in June of 2009. The club will need to renew the lease agreement or consider moving to another location or purchasing property if a club station is to continue.
ANCHORAGE AMATEUR RADIO CLUB MEMBERSHIP AND NOMINATION MEETING
October 3, 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). The meeting began with an introduction of new hams, members and guests.

Presentations
Will Johnson, KL7KT, gave a presentation detailing his involvement with the Navy/Marine Corp. MARS operation during the Vietnam War and a brief discussion on HughesNet satellite service in Alaska. Will is a member of the Fairbanks AARC club, was a founding member of the Bethel BARC club and is a previous member of the Anchorage AARC club.

Will was stationed at Camp Pendleton in California from 1968 to 1970 and was assigned to the MARS station after brief duty in the Motor Pool. This station relayed traffic to Washington DC from stations in Okinawa, Hawaii and several in Vietnam. The station was located in the Generals Quarters and had 5 Collins S-Line stations, which usually worked 2 phone patches, 2 teletype and had 1 as standby. For amplifiers the station used Henry 2 KW amps and a 6 KW Collins amp. Antennas used were log-periodic, beams and Rhombic. Propagation was good as operation was during the peak of the 11 year cycle. The popular frequency was 14.350, which at the time was just above the ham band. Teletype traffic ran 60 words per minute at Mod 15 and at 100 words per minute at Mod28.

Will remembered a brush fire took out the antennas at the station and the rebuilding, satisfaction of passing soldiers traffic, full duplex operation to provide better phone patch communication, and long distance telecom operator participation with MARS.

Will spoke briefly on his involvement with HughesNet satellite service in Alaska, which began with his dissatisfaction with the cable system in Bethel. The system uses the Horizons 1 satellite at 127 degrees, which provides good coverage for all of Alaska. HughesNet will be providing a Certified Installer Class in Anchorage at the end of October or the beginning of November.

The class costs $100 and assumes the attendee has a basic computer background, electronics troubleshooting experience and some satellite experience. Please contact Secretary@KL7AA.net or Will@hughes.net if you are interested in attending this class. Will then spoke on the equipment required for service, levels of service, pricing plans, and fair access policy limits.

Jim Larsen AL7FS, ARRL Section Manager, spoke on ARRL membership renewal.

Heather Hasper, KL7SP, spoke on the upcoming Simulated Emergency Test (SET) to be held on October 4th. This is a joint exercise with the Anchorage School District, Red Cross and the Municipality Emergency Operations Center and will also involve the MatSu Emergency Services, Matanuska Amateur Radio Club and the Elmendorf Amateur Radio KL7AIR station. The exercise runs from 10am-2pm and will utilize the Mt. Susitna, Grubstake and Mt. Gordon Lyon repeaters. As with all simulated emergencies, operators are reminded to preface the message with “This is a test, this is a drill” and end the exchange with “This is a test”.

Heather also noted the ISC100 training to be held on October 11th from 9am-2pm.

T.J. Tombleson, KB8JXX, spoke regarding the WL7CWE/Cliffside Amateur Radio Club statewide radio linking project partnership with AT&T. The equipment will be installed in 3 phases. Phase one will include the major towns and cities, Phase 2 will be the Alaska road system and Phase 3 will be Rural Alaska. The sites will be maintained by AT&T Technicians. AT&T will provide leased 2 pair to each site to provide the interconnection. AT&T’s donation includes the $320/mo cost for sites without power and $390 for those with power. The installation and maintenance cost is estimated to be $5400 per site.

T.J. noted this will be an open network which would allow repeaters to be pulled off the statewide network for local use and can be used to accommodate use by the Dept. of Homeland Security, Red Cross, and ARES for emergencies.

Discussion included linking, AT&T’s involvement, Spoke & Hub network design, leased lines, linking equipment, tone remotes, control operators.
T.J. noted that after funding has been arranged, the installation period will approximately 2 years. T.J. can be contacted at 854-1777 for more information.

**OTHER**

John Orella asked that anyone with photos of WX7P, Wilse Morgan, from the 2008 Alaska Hamfest please email them to KL7LL@arrl.net for him to forward to Wilse.

**Door Prize Drawing**

KL7UU, NL7W, KE7RVE, KL2HC

The meeting adjourned at 8:07pm.

Submitted as recorded on October 3, 2008 by:

Richard Tweet, KL2AZ
Secretary

**REQUEST FOR AGENDA ITEMS**

Susan Woods, NL7NN – CCV Ham shack restroom

Michael O’Keefe, KL7MD – Missing AARC equipment

Gordon Hartlieb, AL1W – Iditarod Communications

**GUESTS**

Rich Gillin KL2RG, Bruce McCormick KL7BM and Gordon Hartlieb AL1W

Gordon Hartlieb (AL1W) requested to discuss the AARC’s position on Iditarod involvement for 2009. A general discussion was held regarding the ITC’s (Iditarod Trail Committee) misunderstanding regarding ham radio involvement with the race, the role of a communicator with the ITC, previous discussions with the ITC, Matanuska Amateur Radio Association’s treatment by the ITC, recruitment results for this and like activities, lack of ITC’s request for assistance to the radio clubs. There are no current Memorandums of Understanding in place between the ITC and area radio clubs. The general consensus of the MARA board is to not volunteer radio communication services for a year to the ITC and see if the need for amateur radio assistance by the ITC is realized. However, MARA will continue to support the Junior Iditarod.

Heather Hasper (KL7SP), noted the availability of the AARC Survey Monkey account to survey the membership and better address the volunteer issues and better recruit volunteers for this and other like events. Kathleen O’Keefe (KL7KO) requested a copy of the letter drafted, but not sent, addressing these issues to the ITC last year.

Richard Kotsch (WL7CPX) requested Gordon to return to the November AARC Board meeting to redress these issues with any follow up information.

Bruce McCormick (KL7BM) requested to discuss the CCV ham shack security alarm system. In response to items being reported missing from the CCV facility (i.e. APRS kit radio and TNC, CCV Kenwood microphone, and CCV TNC cable), Bruce noted the ability to better secure the facility by adding additional security zones to separate the ham shack, CCV garage and club working areas. Guardian Security also allows for tracking each activation/deactivation of the service for a $15/mo charge.
Bruce suggests utilizing this service as well as the addition of additional keypads, motion detectors and door contacts. Bruce noted the cost of materials to accomplish this task would be $425.00. Discussion noted the need for more secure trim to the working room, loaner equipment documentation, and video system cost. Motion made Michael O’Keefe KL7MD, seconded Susan Woods NL7NN that the AARC purchase the noted equipment and trim at a cost not to exceed $500.00 and that the AARC budget for the $15/mo Guardian Security opening/closing service. The motion carried unanimously.

SECRETARY REPORT
Previous Board meeting minutes for the September Board meeting were presented as well as the membership meeting minutes from the October membership meeting. Motion made John Orella KL7LL, seconded Michael O’Keefe KL7MD to accept the minutes as presented. The motion carried unanimously.

CORRESPONDENCE REPORT
Challenger Learning Center correspondence, Hope Community Resources grant request and the ARRL $2500.00 scholarship thank you letter were presented.

TREASURER’S REPORT
Heather Hasper KL7SP presented the financial report for month ending September 2008. Heather reported on gaming income, 2008 Alaska Hamfest, AARC connex sale, 2 grant requests (Alaska Mountain Rescue Group and Hope Community Resources), Challenger Learning Center, Professional liability insurance policy, financial adjustments to reflect net worth, attorney to contact Remote Testing software designer for AARC program, discussion regarding AARC fuel reimbursement was held. Motion made Michael O’Keefe, seconded Richard Kotsch WL7CPX that the AARC reimburse fuel charges for individuals who tow and or transport equipment on behalf of the AARC if the individual requests reimbursement. The miles traveled shall be documented and accompany the reimbursement request. Discussion noted existing reimbursement procedures, Economic Policy document implemented in November of 2007. The question was called and the motion failed by a vote of 1 to 5. Prior to the vote, the AARC President and one 3 year Board member vacated the meeting. The remaining Board members satisfied the quorum requirement and after review of Article 4.4.7 of the AARC Bylaws, the Treasurer chaired the remainder of the meeting.

VE REPORT
Eric McIntosh, KL2FM reported that a high pass rate continues at the testing sessions. Eric noted the upcoming Technician Class course sponsored by the Municipality of Anchorage Emergency Operations Center.

TRUSTEE REPORT
Keith Clark reported on logs provided by KL2RG, November Sweepstakes and CQ Worldwide events

MEMBERSHIP REPORT
Fred Erickson reported there are currently 305 on the active roster of which 215 have Alaskan addresses and are eligible to vote in AARC elections. 36 are new members. Fred noted that the Iditarod Trail Committee is a Life Member of the AARC

ARES TRAINING
November Sweepstakes (November 15 and 16) will utilize both the AARC Ham shack at Rowan Street and the CCV at Kincaid Park. No additional ARES training is planned for November.

OLD BUSINESS

CAPITAL PROJECTS
T.J. Sheffield reported 16 projects are on the active list. Two projects which will be closed are the Rabbit Creek VHF project and the AARC Computer upgrade project. Two additional projects may be able to be closed by the end of the year.

Richard Tweet, KL2AZ reported on findings by the HughesNet Satellite subcommittee. Richard reported on Annual service subscription costs, mounting options considered, Satellite tracking software and aiming tools, computer requirements, networking options, Project Manager (KL2AZ). A recommended material package for implementation of the service and deployment of the equipment was presented. Estimated cost of service and equipment is $4095.28, and Richard recommended a not to exceed budget of $4500. Motion made Tom Rutigliano KL7TZ, seconded Eric McIntosh KL2FM that the HughesNet package as presented be approved at a cost not to exceed $4500.00. The motion carried unanimously.
REAL ESTATE
Keith Clark reported the Car Care Center facility at 332 Muldoon Road is available for the Board and interested members to view on Thursday, October 23rd at 5:30pm. The AARC secretary will notify the Board via email of the viewing time and date.

TITLE 21
T.J. Sheffield KL7TS reported that Chapter 5 of Title 21, which contains language favorable to amateur radio towers, was adopted on August 16th. Chapter 14, which contains definitions of amateur radio, is still being discussed by Planning and Zoning.

NEW BUSINESS

GRANT REQUESTS
Heather Hasper reported on Grants and Contributions as approved in the 2008 Budget. Heather noted she attended the APU Recognition Dinner on behalf of the AARC and presented them with a check for $10,000.00. Heather noted the AARC historically donates $10,000 to Hope Community Resources, which is budgeted for November 2008.

The Alaska Mountain Rescue Group grant request for $10,500.00 was presented. This request is to upgrade from the current Motorola and King radios and acquire an ALMR to replace their Base station which is no longer compatible with the State of Alaska radio system. Discussion noted this is the 3rd grant application in 10 years for this group. Previous grants were approved in 1999 and 2004. Motion made Susan Woods NL7NN, seconded Eric McIntosh to approve the AMRG grant as submitted for $10,500.00 and to be brought before the membership for approval. The motion carried unanimously.

The Hope Community Resources grant request for $10,900.00 was presented. This request is to assist with the flooring project in the Northwind Assisted Living Home. Motion made T.J. Sheffield KL7TS, seconded Richard Kotsch WL7CPX that AARC approve the $10,900.00 grant request as presented. The motion carried unanimously.

John Orella KL7LL asked about a grant request submitted by MARA for equipment upgrades and replacement. Heather noted the Grant Committee deemed the request was outside the scope of grant policies and guidelines and that the amount requested was too high for 2008. John noted MARA requests a formal letter from the AARC Grant Committee detailing their findings.

CCV HAM SHACK RESTROOM
Susan Woods, NL7NN requested the AARC to install a Toilevator device at the Ham Shack restroom. Susan noted the device is available locally. Discussion noted landlord’s approval is required, Susan will obtain pricing, Bruce McCormick KL7BM will donate a safety rail for installation.

MISSING EQUIPMENT
This item was discussed by Bruce McCormick KL7BM under the Guests report.

PROGRAM FOR NOVEMBER MEETING
Eric McIntosh reported that AWWU (Anchorage Water and Wastewater Utility) will present their emergency plan at the November meeting.

BUDGET 2009/2010
Heather Hasper KL7SP provided a detailed draft budget for review. Each line item was explained and discussed as necessary. Minor adds/subtracts were noted along with an anticipated rent increase for the CCV facility. Motion made John Orella KL7LL, seconded Paul Spatzek WL7BF to accept the report as presented with adjustments discussed and noted and to present to the AARC membership for approval at the November membership meeting. The motion carried unanimously.

APPROVALS, KL7AA IN THE NEXT MONTH
November Sweepstakes

ADJOURNMENT
Motion made John Orella KL7LL, seconded Paul Spatzek WL7BF to adjourn. Motion carried. The meeting adjourned at 10:17pm.

Respectfully submitted as recorded on 10/21/08 by Richard Tweet, KL2AZ
Secretary
AARC Election of Officers and Directors

ARTICLE VI
PROCEDURE FOR THE ELECTION OF OFFICERS AND DIRECTORS

The Voting Members shall elect the officers and directors of the corporation by majority vote by submitting written ballots designating their choice of officers and directors prior to October 31st of each year. The procedure for election of the officers and directors shall be as follows:

Nominations. The Election Committee shall nominate individuals for the open officer and director positions at the regular meeting of the members in September. Members of the corporation may also nominate individuals to run for election as officers and/or directors at the September meeting. Such nominations must be seconded by two members and have the nominee’s consent.

Eligibility. A member may not hold two elected offices concurrently.

Distribution of Ballots. The Secretary shall prepare and distribute one ballot to elect officers and directors to each Voting Member whose address of record is within the state of Alaska on or before October 1st. Voting Members shall not be permitted to vote by proxy.

Return of Ballots. Completed ballots must be returned to the Secretary on or before October 31st to be counted.

Tabulation. The Secretary shall present the sealed ballots to the Election Committee to open and tabulate.

Results. The Election Committee shall determine the results of the election and announce the new officers and directors at the November regular meeting of the members. In the event of a tie, resolution shall be decided by a coin toss.

Timetable
Anchorage Amateur Radio Club
Rules of Procedure

Paragraph III: Elections

Section A: Election of Corporation officers and Directors shall be by written secret ballot.
Section B: Nominations, election procedures, and timing of the elections shall be as follows:

KL7AA ELECTION:

July 15, 2008 - AARC Board Meeting. The election committee of Heather Hasper KL7SP, Craig Severson KL2FN, Eric McIntosh KL2FM, Paul Spatzek WL7BF, Calex Gonzalez KL2BT, Diane Olson and Richard Tweet KL2AZ was established with Richard Tweet as Chair.

August 1, 2008 – The election committee will be announced to the membership. Committee Chairman will address members on the procedures and timetable. This will be done via the AARC newsletter as approved by AARC Board of Directors as there will not be a membership meeting in August.

September 5, 2008 - Membership meeting. Election committee presents slate of candidates to the members. Additional nominations will be accepted from the floor. After receipt of additional nominations, if any, nominations will be closed.

October - The Secretary shall prepare and distribute, by mail or otherwise, one ballot to elect officers and directors to each eligible member, as defined in the Bylaws, on or before October 1st. Ballots must be returned to arrive by October 31st.

November 7, 2008 – Membership meeting. Prior to the meeting, the Election Committee shall count ballots and determine the result of the election. In the event of a tie, the winner shall be determined by a coin toss. At the meeting, the Chairman of the Election Committee shall announce the new Officers and Directors.

November and December 2008. The newly elected Officers and Directors attend Board meetings as non-voting participants.

January 20, 2008. Newly elected Officers and Directors assume duties as of January 1
Silent Key

Jason Karella, KL1DX

On October 9, 2008 Jason Karella died while serving in Operation Enduring Freedom with the U.S. Marine Corps in Afghanistan. Jason was a graduate of Alaska Military Youth Academy and acquired his ham radio license in 2001 at the age of 14. Karella was part of a battalion helping to train Afghan national security forces when he died. His family hopes that others will honor his memory by living life to the fullest and remember why his service to our country means that all of us must live fulfilling lives.

The members of the Amateur Radio community of Alaska send our condolences to his family and friends. He will be greatly missed.

Silent Key

Cynthia Sadler, KL2HB
(1950-2008)

Kasilof resident Cynthia Sadler, KL2HB died at Providence Hospital of Liver Disease on September 23, 2008. She acquired her ham license in 2007 after seeing her sister Mary, KL7JEF enjoy the hobby. Cynthia is survived by her daughter Tina and her three sisters Mary, Patty and Michelle. The amateur radio community wishes their family our condolences.

Silent Key Plaque

Thanks to the hard work of Susan Woods, NL7NN we know have a beautiful Silent Key Plaque in our KL7AA Hamshack. The plaque recognizes the charter members of the Anchorage Amateur Radio Club and the many long time members of AARC.

If you have any historical records for AARC in your home locations we encourage you to submit these records for archive to the club historical files at the CCV garage to ensure we remember Amateur Radio in Alaska and our club heri-
NOVEMBER SWEEPSTAKES

ARRL Phone Sweepstakes
Nov 15-16, 2008

More than a wish but still less than a final plan.

by Roger Gollub, WB0CMZ

This article is a work in progress that began with the Wednesday 7 PM meeting at the KL7AA shack. Once a month there is a formal Capital Projects Meeting to discuss the status and progress of current AARC expenditures for equipment and services. The remaining weeks are “working Wednesdays” for hands on projects, brainstorming, and sometimes talk. One subject of discussion on Oct 15 was the upcoming ARRL Phone Sweepstakes. The group last Wednesday night included Keith Clark (KL7MM), Richard Tweet (KL2AZ), TJ Sheffield (KL7TS), Mike O’Keefe (KL7MD), and me (WB0CMZ).

For the uninitiated, Sweepstakes is a blowout affair for US hams to shout at one another for 24 out of 30 hours to demonstrate prowess and supremacy at radio operation. The goal is to complete a full sweep of all 80 ARRL + RAC (Radio Amateurs of Canada) sections, and to contact as many other participants as possible. The contest exchange has its roots in Traffic Handling and is more complex than Field Day or DX contests, so that some skill in communication, listening, speaking, and recording, can carry the day. Each additional section adds a multiplier. The scores are astronomical. For many years the contest was dominated by a few legendary operators with big signals and tape loops. Now modern digital voice keying and computerized contest logging are widely available. But you still have to have an exquisite set of ears and a set of pipes. And it takes some grit. You also have to have a good station to play competitively. Our own TJ Sheffield, KL7TS calls routine operating high school for operating practice, Field Day college prep, but Sweepstakes is graduate school.

Since 2002 the AARC has used November Sweepstakes as a winter training exercise. KL7AA operated from the CCV in Kincaid Park. It was fun but not terribly competitive. The last successful sweep of all ARRL / RAC sections was our very first year.

Our discussion on Wednesday night was whether we should once again put a training exercise into the field, or perhaps try to put KL7AA on the map for the 75th anniversary of the contest. After tasting a little on-air celebrity with W1AW/KL7 we all have just a bit more ambition and some confidence in our station and our abilities.

As I have seen happen before, it was Mike O’Keefe that came up with what he called a compromise, but actually it was a creative idea that brought consensus: run two operations, one at the KL7AA shack and one from the CCV deployed in Kincaid Park.

KL7AA shack: mentored contest operation for beginners and all levels of interest and experience.

⇒ This will require pre-scheduled control operators to act as teacher, trainer, and coach for all comers.
⇒ Traditional training operation will include operator, logger, coach, and observers.
⇒ Currently the club station is set up for 10, 15, and 20 meters on high power with the tri-band yagi antenna.
⇒ The group discussed plans to get the new loop with SAMS tuner operational in order to make 40 and 80 meters available in time for the contest.

CCV Kincaid Park: contest operation is going for a clean sweep.

⇒ Setup by everyone, including those who will be operating from the club station.
⇒ Use the SteppIR yagi and one of the 80-10 meter SteppIR vertical antennas.
⇒ Scheduled operating shifts.
⇒ Operator will log for him or herself using the N1MM contest logger.

We are asking club members at home in the community to act as spotters to give information on stations operating from needed sections, and to give some feedback on signal quality and on-air technique. In the future we would like to develop the capacity to run traffic and data from the field (Kincaid) station to the club station. This may be folded into a long range ARES development plan to run traffic from field deployments into a communications gateway station.
November Sweepstakes 2007 cont.
The sweepstakes team hopes that we may ask the South Central ARC for permission to use the KL7G call at the training station at the club shack, and KL7AA at the Kincaid Park deployment. We anticipate that the clean sweepers in the park will generate a big score with demand for QSLs.

Once again, this is a work in progress. Stay tuned to the ARES 2 meter nets for announcements. Club members may contact me by e-mail with questions and suggestions. Team captains for the KL7AA shack and Kincaid Park sweepstakes operations will be established after a bit more discussion, and maybe some arm wrestling.

Roger Gollub, WBØCMZ
(rgollub@alaska.com)

This year marks the 75th running of the premier domestic contest, the ARRL CW Sweepstakes. According to ARRL Contest Branch Manager Sean Kutzko, KX9X, the event started back in 1929 as a competition for handling formal traffic messages and is one of the oldest traditions in Amateur Radio. "The contest exchange contains more elements than usual, an homage to the traffic-handling days of yore," he said. "If you have never participated in Sweepstakes, you are really missing out on some serious fun! A complete primer by ARRL Contributing Editor H. Ward Silver, N0AX, on how to participate in Sweepstakes can be found in the Radiosport supplement in the October 2008 issue of QST."

Kutzko said that since 2008 is the 75th running of Sweepstakes, ARRL is anticipating record levels of participation and many prizes will be available for those who participate: "We'll have a special magnet that will be sent free to all stations that submit a log with 75 of the 80 ARRL and RAC Sections worked. As in previous years, those who submit logs with at least 100 contacts will be able to purchase Participation Pins."

The major challenge in Sweepstakes is to work all 80 ARRL/RAC Sections; this is known as a "Clean Sweep." "This year, we will be awarding a Clean Sweep whisk broom to all stations that make a Clean Sweep," Kutzko said. "Brooms were last available in 1983, the 50th running of Sweepstakes. In addition to the free brooms, Clean Sweep coffee mugs will also be available for purchase. This year's mug will be fine etched glass and will truly be a collector's item."

Thanks to ICOM America, the Principal Award Sponsor of the November Sweepstakes, certificates will be awarded for first place in each of the 80 ARRL/RAC Sections for all six entry categories; plaques will be available to the overall winners in each entry category, as well as the winners in each Division. "ICOM has provided plaques and certificates for Sweepstakes winners since 2005, and we are grateful for their support over the years," Kutzko said.

"Certain Sections are always rare for Sweepstakes, especially on CW," Kutzko pointed out. "VY0/VY1/VE8 (Northern Territories), VE1-VE9-VY2 (Maritimes), VE2 (Quebec), VE4 (Manitoba), VE5 (Saskatchewan), VO1-VO2 (Newfoundland-Labrador), Nebraska, North Dakota, South Dakota and Wyoming always seem to be highly sought after. If you live in one of these places (or want to travel there), this is a golden opportunity for you to be the 'rare DX.' Stations in these Sections get to hear 'Thanks for the Sweep!' more than once during the weekend. Even if your CW is rusty or your station is modest, your effort to put a rare Section on the air during CW Sweepstakes will be appreciated by every single station that works you."

Whether you want to go for a Top 10 finish, or simply get on the air to hand out a few QSOs or work on your Worked All States Award (WAS), Kutzko said the November CW Sweepstakes is guaranteed fun and excitement. Be sure to check out the complete rules and entry forms. Come be a part of one of Amateur Radio's finest traditions.
Congratulations to the following new amateur radio operators.

<table>
<thead>
<tr>
<th>Name</th>
<th>Call Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen Katkus</td>
<td>KL2NS</td>
</tr>
<tr>
<td>Rudy Brueggemann</td>
<td>KL2NT</td>
</tr>
<tr>
<td>Vicki McLaughlin</td>
<td>KL2NU</td>
</tr>
<tr>
<td>Kevin Opalka</td>
<td>KL2NV</td>
</tr>
<tr>
<td>Eric Reimer</td>
<td>KL2NW</td>
</tr>
<tr>
<td>Leanna Rein</td>
<td>KL2NX</td>
</tr>
<tr>
<td>John Walker</td>
<td>KL2NY</td>
</tr>
<tr>
<td>Greg Wilkie</td>
<td>KL2NZ</td>
</tr>
<tr>
<td>Gary Wallan</td>
<td>KL2OA</td>
</tr>
<tr>
<td>Cindy Welbourne</td>
<td>KL2OB</td>
</tr>
<tr>
<td>Kirk Foster</td>
<td>KL2OC</td>
</tr>
<tr>
<td>Maurice Hendrickson</td>
<td>KL2OD</td>
</tr>
<tr>
<td>Clark Garlock</td>
<td>KL2OE</td>
</tr>
<tr>
<td>Mitchell Wyatt</td>
<td>KL2OF</td>
</tr>
<tr>
<td>Lisa Reimer</td>
<td>KL2OH</td>
</tr>
<tr>
<td>Clarence Davis</td>
<td>KL2OI</td>
</tr>
<tr>
<td>Orville Wiley</td>
<td>KL2OJ</td>
</tr>
<tr>
<td>Doris Vogt</td>
<td>KL2OK</td>
</tr>
</tbody>
</table>

Due to popular demand and as a request by the Anchorage Emergency Operations Center, KL7AA will be hosting a second fall amateur radio course in November.

**WHEN:** November 6 - November 25, 2008

Tuesday & Thursday nights; 6PM - 10PM

This course is normally taught over a 4 week period however due to the holiday we will add one hour to each session so it can be completed in a 3 week time period.

**WHERE:** The OEM has arrnaged to use the First Baptist Church at the corner of 10th & L Street for this course.

The Alaska DX Club (KL7DX and KL7CQ) has been granted a third call sign which we will be using for a yearlong special event (2009) in honor of the 50th Anniversary of Alaska's Statehood. The call sign is KL5O.

Attached a picture of what the QSL card will look like.

---

**ALL VEC ACTIVITY**

<table>
<thead>
<tr>
<th>License Type</th>
<th>2006</th>
<th>2007*</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTRA</td>
<td>2,362</td>
<td>5,013</td>
<td>5,080</td>
</tr>
<tr>
<td>GENERAL</td>
<td>3,037</td>
<td>18,322</td>
<td>9,513</td>
</tr>
<tr>
<td>TECHNICIAN</td>
<td>15,264</td>
<td>18,696</td>
<td>19,659</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20,663</td>
<td>42,031</td>
<td>34,252</td>
</tr>
</tbody>
</table>

*Feb 2007 the FCC eliminated the Morse Code Requirement
ARRL HOST NEW SECTION MANAGERS Training

New Section Manager workshop October 10-12 afforded 14 new Section Managers a chance not only to visit ARRL Headquarters and gain some perspective on their new leadership positions. During the weekend gathering, participants not only got to meet many HQ staffers but learned some of the ins and outs of how to become effective section leaders and administrators.

The workshop also provided an opportunity for those taking part to chat among themselves or within the group, sharing their own views on various issues and exchanging ideas. Through training and orientation sessions conducted by ARRL staff members and by meeting with other Section Managers, participants were able to explore what works as well as what does not and to bring home some fresh ideas, plus some encouragement.

On Friday, October 12, Field Organization Supervisor Steve Ewald, WV1X, led the Section Managers on a tour of Headquarters where they met staff and visited W1AW, the Hiram Percy Maxim Memorial Station. The visiting Section Managers enjoyed the chance to operate from W1AW in their spare time during the weekend.

ARRL Membership and Volunteer Services Department hosted the event. Several HQ staff members led training sessions during the weekend workshop, giving the new Section Managers an opportunity to learn more about the League's Field Organization, as well as discuss the variety of ARRL programs and support available from Headquarters with staff experts.

Those providing workshop presentations included Ewald, ARRL Emergency and Preparedness Manager Dennis Dura, K2DCD; ARRL Marketing and Sales Manager Bob Inderbitzen, NQ1R; ARRL Chief Development Officer Mary Hobart, K1MMH; ARRL Contest Branch Manager Sean Kutzko, KX9X; ARRL Media and Public Relations Manager Allen Pitts, W1AGP; ARRL Education Services Manager Debra Johnson, K1DMJ; ARRL Lab Manager Ed Hare, W1RFI. ARRL Field and Regulatory Correspondent Chuck Skolaut, K0BOG, spoke about the Amateur Auxiliary and issues concerning regulatory matters. ARRL News Editor Khrystyne Keane, K1SFA, discussed writing and editing for the ARRL Web site, *QST* and other League publications.

Workshop attendees were Jay Isbell, KA4KUN, Alabama; Jim Larsen, AL7FS, Alaska; Jim Latham, AF6AQ, East Bay; Ed Stuckey, AI7H, Idaho; Gary Stratton, K5GLS, Louisiana; Don Wood, W5FHA, New Mexico; Joe Giraudo, N7JEH, Nevada; Lynn Nelson, W0CQ, North Dakota; Paul Eakin, KJ4G, Northern Florida; Rich Krohn, N2SMV, Northern Jersey; Steve Early, AD6VI, San Diego; Glen Clayton, W4BDB, Tennessee; Jim Pace, K7CEX, Western Washington, and LeeAnne Allen, WY7DTW, Wyoming.

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
## Calendar for November 2008

**EARS: R1 North, Contact:** Ron Keech: KL7YK@arrl.net  
**Parka,** meets at Denny’s on Denali Street at 11AM; **Contact:** Lil Marvin NL7DL, 277-6741

### Happy Thanksgiving

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>HAM RADIO CLASS</strong></td>
<td><strong>AARC Meeting 7PM</strong></td>
<td><strong>PRAKA Meeting 11AM</strong></td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>HAM RADIO CLASS</strong></td>
<td></td>
<td><strong>HAM RADIO CLASS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td><strong>SWEETSTAKES</strong></td>
<td><strong>SWEETSTAKES</strong></td>
<td><strong>AARC Board Meeting 7PM</strong></td>
<td><strong>MARA Board Meeting 7PM</strong></td>
<td><strong>HAM RADIO CLASS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td><strong>HAM RADIO CLASS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>MARA meeting 7PM</strong></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td><strong>ARES NET: Thursday Nights 8:00 PM 147.27+ PL: 103.5 or 443.30+ PL 103.5</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**11/15 - 11/16 NOVEMBER SWEETSTAKES**

2 Stations will be operating; One at the KL7AA Hamshack will be open to all operators who want to learn about HF; The Second station will be for Contesters and CW operators and will be operated from Kincaid Park. For more information contact Roger Gollub, WB0CMZ at rgollub@alaska.com

**11/6 – 11/25 HAM RADIO CLASS**

Tuesday and Thursday Evenings  
6PM - 10PM  
First Baptist Church (11th & L)

**11/20 Hughes Net Satellite Network Training**
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 443.900/448.900 PL 103.5, no auto-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
- 146.21 / 147.81 MHz, on IRLP, 97.4 Hz PL
- KL5E Chugach: 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
- 2 Meter: 146.82/146.22 MHz PL 103.5
- 6 Meter: 51.65 output / 51.15 input, PL 103.5 Hz
- 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
- 146.58 MHz Simplex IRLP - Wasilla Lake

**AARC web page & Email contact addresses:**
- Homepage: [http://www.KL7AA.net/](http://www.KL7AA.net/)
- Webmaster: [webmaster at kl7aa.net](mailto:webmaster@kl7aa.net)
- Membership: [membership at kl7aa.net](mailto:membership@kl7aa.net)
- Newsletter: [editor at kl7aa.net](mailto:editor@kl7aa.net)

**News Letter Submissions, Information or corrections:**
Submissions must be received 2 weeks before meeting

**Email:** [editor at kl7aa.net](mailto:editor@kl7aa.net)
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
PARKA  http://www.parka-kl7ion.com
Practice Exams:  http://www.AA9PW.com
Fairbanks AARC:  http://www.kl7kc.com/
ALASKA MARS:  http://www.akmars.org
Bethel Amateur Radio Klub:  http://www.al7vk.org/
Yukon Amateur Radio Association:  http://www.yara.ca/

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

---

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 of Alaska.
All amateurs welcome. Denny’s on Denali Street in
Anchorage. 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 com-
pletion. Contact: Jim Wiley, KL7CC 338-0662.

3rd Saturday of each Quarter month: EARS gen-
eral meeting at 3:00 PM. EARS meetings are held
formally each Quarter during the first month: Jan,
April, July, and October. Meetings are held informa-
lessly 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 meet-
ing 9:30AM to 12:00 PM. Call Michael O’Keefe,
ANC DEC:  dec@kl7aa.net HM:  243-4675 for ad-
ditional 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.
AARC BADGES

KL7AA BADGES are AVAILABLE!
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@geci.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.

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

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

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.

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 $75 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

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
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 (Jan through Dec) are as follows:

Individual Membership $12.00 ($6.00 for each additional member at the same address)
Full Time Student No Charge

Dues for New Members, joining the club for the first time will have their dues pro-rated from the month they first join to the end of the year at a rate of $1 per month. For example, if you join in the beginning of August, your dues for the remainder of the year are $5

Life Time Membership $250.00 (if over 65, inquire about reduced rates)

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

All annual memberships expire on December 31st.
THE MODULATION TIMES

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

ARRL Affiliated
Club for more
than 50 years

NOVEMBER 2008
Volume 37, No 11

HAPPY THANKSGIVING

LIDS Cartoons are the creation of NL7SK, Tim Comfort and are available for purchase on CD for only $15. All sale proceeds go to support the Matanuska Amateur Radio Association.
www.kl7jfu.com

THE LIDS GANG’S LATEST PROJECT IS AN INFLATABLE YAGI ANTENNA TO BE USED FOR THE THANKSGIVING DAY PARADE! USING THE FORMULA FOR FAT ELEMENT BEAMS AND TAKING ADVANTAGE OF SKIN EFFECT, AN “ALL BAND, ALL MODE, ARRAY” WAS CONSTRUCTED. THE SECRET WAS THE RATIO OF ALUMINUM POWDER AND HELIUM USED TO FILL IT. THE TETHERS ALLOWED FOR CHANGES IN POLARITY AND MADE IT EASY TO MANEUVER IN THE OLD NARROW CITY STREETS JUST BY PUTTING IT INTO A VERTICAL POSITION. THE EXACT FORMULA AND PROPORTIONS WILL NOT BE DISCLOSED UNTIL PATENT RIGHTS ARE SECURED.

HAPPY THANKSGIVING FROM THE GANG AT LIDS

ALUMA-BALLOON ANTEENA

www.kl7jfu.com