Anchorage Amateur Radio Club

Next Meeting February 6th
Dr. Julius Brecht presents "The Size of the Universe."

AARC February Program

Friday evening, February 6th. This will be an excellent presentation by Dr. Julius Brecht entitled "The Size of the Universe". It will have special emphasis on the recent Martian lander scientific results with the latest photographs, as well as radio astronomy technology that relates to our ham radio heritage. Dr. Brecht will bring his PowerPoint presentation including a pre-meeting slide presentation that we can all watch until his talk starts. **He encourages everyone to bring friends and family members of all ages to his presentation**. I have seen this at Rotary last year, and it really is excellent.

Craig Bledsoe, KL4E, Activities Chairman

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Local Ham links via Echolink to PA Students

Edward Moses, KL1KL, has set up a link for the Web based Echolink system that is available 24 hours a day. Through this system, amateur radio licensees can talk to others around the world through their computers or with a radio accessed through node numbers. Ed has made contact with other licensees from around the United States and from many countries through this link.

During the Christmas holiday, a young man from Pennsylvania made contact with Ed in his quest to make 30 contacts for his high school Physics class. It seems that the instructor, Sean Barnes N3JQ, had renewed his own interest in amateur radio and decided to teach it as a subject to his Physics students. Once they had their technician license, they were to make 30 contacts. KL1KL was requested to email the instructor to confirm the contact. Later that week, I, Thalia Wood, KL1KM, was at Ed's home and spoke with another student who was accessing the KL1KL link. The student's call sign is KB3KNH. She asked a set of questions following the contact protocol the instructor had set up. Mr. Barnes had 53 students that had received their licenses so was in the midst of a large amount of bookkeeping for his classes. He did send along the class curriculum as well as a letter of thanks that explained the project. I happened to mention these contacts on the No Name Net the following Sunday and also mentioned how it would be great to get more Alaska students involved in amateur radio. A young woman in Wasilla responded that at Wasilla High School they were receiving assistance from the ARRL program to encourage young people to get involved with amateur radio. ARRL has "The Big Project" that promotes education in amateur radio at secondary schools around the country. It would be wonderful to see this effort spread to high schools around the state.

Echolink has provided a medium for people of all ages to make amateur radio contacts. Older licensees who may be limited by housing restrictions (i.e. retirement homes or apartments) can remain active. Young students, who may be limited by parental constraints for installing antennas, can become active. The KL1KL link (Anchorage) is registered on the Echolink map. It is believed that some students are using this Echolink map to locate their contacts

(http://www.echolinkmap.org).

The Echolink map provides registered repeaters and links (dedicated to Echolink) that allow amateur radio licensees to make radio contact on a global scale. The map provides frequencies and node numbers that can be used by mobile or home-based

Thalia Wood, KL1KM

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EME – Moon Bounce
Presentation to the LEO Society
January 10, 2004
By Ed Cole – AL7EB

I am a Ham from the Kenai Peninsula and have had an interest in Moon Bounce from the beginning of my Ham career 45 years ago. After a year as a Novice, upgrading to Tech. Class meant I was stuck up on the VHF bands. Fortunately, some local hams in Michigan introduced me to 2-meters…in those days that meant either CW or AM.

A little history on EME (as we Moon Bouncer's refer to it: Earth-Moon-Earth).

The first successful attempt for trying to receive a signal reflected off the Moon's surface was done by the military in 1946. It was called "Project Diana" and approached as a RADAR study. They had a 3.0 kW radar on 111.5 MHz and combined two of their radar arrays of 64-dipoles arrayed in front of a screen. This achieved 24 dBi of antenna gain. To read more go to: www.nitehawk.com/rasmit/

The first ham radio moon-bounce contact was done in 1960 on 1296 MHz. This might surprise many as you would assume

two meters would be easier. As we will see latter in the talk this is not exactly true.

The first EME QSO on 2m was done by Mike Stahl, K6MYC, and VK3ATN, Ray Naughton in June, 1964. Read about at: www.nitehawk.com/rasmit/

I'm not going to dwell on those events, since I suspect you wish to know about EME today and for the future.

EME in Alaska:

Here are the current EMEers in Alaska as I know of: KL7X - Mike Turner, KL6M (ex AL7OB) – Mike Mellum, KL7HFQ – Roger Hansen, and myself. KL7HFQ and KL6M are on 432, and KL7X and I are on 144. KL6M did operate for a week on 1296 with his new 28-foot dish. In the past KL7FB – Chris Haslett, KL7WE – Tim Pettis (sk), and WA0LPK – Jim Larsen (AL7FS) have been active. I know I have skipped over a couple others but as you can see there have not been very many active in Alaska.

Here are some photos of KL6M (see: www.qsl.net/kl6m/) and AL7EB's EME antennas

Mike and his wife and the "big dish"!
9.2 meter Kennedy Dish.

Shack of KL6M.

My first experience hearing EME at my own station was during the 1997 ARRL EME Contest where I copied the cw signal of K5GW (owner of Texas Towers) using my 10-element Cushcraft satellite antenna with 2m preamp, transvertor and my Tentec Scout on the 28 MHz IF. It was tough copy but I definitely heard him.

1999 saw my first QSO, also during the fall contest, this time using my new FT-847, four M2 cross-yagis, and a 120w VHF brick! It took the monster array of 48-yagis of W5UN to hear me.

AL7EB array of
four 10-by-10 element M2-XP20 yagis on 2m.

Currently I have six CW contacts and 8 JT-44 contacts (more later on what this is).

Equipment for EME:

Let's talk about some of the equipment needs for Moon Bounce. Most will agree that it takes a huge antenna array and full-legal power to do EME.

On two meters probably the standard is for four long yagis (3.0 Wave length) and 1000 watts using cw. One needs a very good preamp and a cw/ssb radio. Traditionally, this involved a converter to typically 28 MHz and use of one's HF transceiver. More recently all-mode VHF radios have become available and now dc-to-light HF-to-UHF radios like the FT-847 are available.

Things are changing. In the last four years has seen the first 2-yagi and then 1-yagi EME contacts. Moon Bounce has been possible using as little as 50w and a single yagi when operating with super-stations such as W5UN (48-yagis) and KB8RQ.

The minimum for contacting regular stations has dropped to 600w for cw when using four yagis, and there are stations now using only one or two yagis with maximum power that are making regular contacts.

For someone thinking of making his first venture into EME, two-meters is probably the easiest as far as coming up with equipment. Much of what you need is readily available off the shelf. If you want a "standard" station it will take some cash though.

Take a look at the spread sheet I made, that analyzes EME needs from 6m to microwave. (Not included: Contact Ed at al7eb@acsalaska.net for a copy via email)

As an attachment to this paper I have reference the very well written article by Bob Koscisko – K6PF titled: "Getting Started on Two Meter EME to Work Lots of DX". It was published in the winter issue of CQ-VHF, pages 16-23! Bob has graciously published it on his website: http://www.braeside.plus.com/gm4jjj/K6PF/k6pf.pdf

I will discuss some of the points he makes about some of the things one must consider for EME.

One of the most exciting developments in EME is the creation of the new digital mode called **JT-44**. This was produced by **Joe Taylor – W1JT.** At first he wrote WSJT for the high-speed meteor scatter crowd but then realized its value for EME with some adjustments.

JT-44 (and now the improved version called JT-65) makes use of multiple tones on very narrow bandwidth FSK (about 5 Hz). The two stations synchronize to the others signal to realize detection of signals down to -28 dB below the noise floor.

Very good CW operators can hear down to -12 dB. This results in at least a 10 dB improvement in hearing and means that no longer does a station need to have High-power or big antenna arrays.

Single yagi stations (say 10-element) and 600w are making lots of JT-44 contacts. Some stations even to 100w are making contacts with larger stations (8-yagi and more).

I have made eight contacts with my four-yagi array and using only about 120w at the feed point.

If you have a satellite station with 2m cw/ssb capability, a 10-element or larger yagi, and 100-180w. You can now be doing Moon Bounce.

Your antenna need not even elevate. A very nice improvement in gain results when the Moon is near the horizon. This is called ground-gain and can be as much as 6-dB. So small stations are able to make contacts on the Moon for the one-hour after Moon-rise and before Moon-set.

My best contact was with a single yagi station running 1000w. His signal was about the same strength as mine running 120w.

JT-44/JT-65 are opening up EME to a whole new group of hams! If you have a basic cw/ssb 2m station, why not try it!

see: http://pulsar.princeton.edu/~joe/K1JT/

Ed Cole, AL7EB

If you have any questions about EME please email to Ed at al7eb@acsalaska.net .

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Alaska QRP Club meets the Third Friday of every month – 7:00 PM (Some show for dinner at 6PM): Hams with QRP (low power under 5 watts) and Homebrewing interests meet for a social meeting monthly. Meet at Dennys (in the back room) on DeBarr near Bragaw. Contact is Jim Larsen, AL7FS, JimLarsen2002@alaska.net or 345-3190.

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Anchorage Amateur Radio Club Board Meeting

(Unapproved)
January 20, 2004

The AARC Board met Tuesday, January 20, 2004 at Hope Community Resources Administrative Building, 540 West International Airport Road. In attendance were President Jim Larsen, AL7FS, Vice President Randy Vallee, KL7Z, Secretary Philip Mannie, KL0QW, Treasurer Steve Jensen, KL0VZ and Past President John Lynn, KL7CY. Also in attendance were Directors Richard Block, KL7RLB, Lil Marvin, NL7DL, Jim Wiley, KL7CC, Kyle Sandel, AL7J, Mike O'Keefe, KL7MD, and Jim Tvrdy, KL7CDG. Portable Equipment Coordinator Heather Hasper, KL7SP was also present.

A quorum being present, President Jim Larsen called the meeting to order at 7:01 PM.

Reports

Secretary
Minutes from the December 16, 2003 Board meeting were approved.

Treasurer
Steve Jensen reported that the Epilepsy grant had been funded and that $56,000 had been moved from the Gaming Account to the Operations Account. John Lynn requested a report on gaming income versus outlay. Dick Block suggested that a transfer of funds report was needed. Steve Jensen asked for comments on how to revise financial reports to be more meaningful to the Board and Membership. Dick Block commented that the Board must receive detailed financial reports.

Gaming
John Lynn reported that the annual report was due and that we have received the 2004 Gaming Permit, which is on file with the Secretary.

Club House
Mike O'Keefe reported on a 2186 sq. ft. location and presented photographs.

ARES
Philip Mannie reported on the Eagle River Classic and mentioned upcoming Fur Rendezvous events for February.

VEC
Jim Wiley reported that VEC operations were normal.

Membership
There was no formal report. Jim Larsen mentioned that Club roster addresses had been updated.

VHF
Jim Larsen reported for Committee Chair Doug Dickenson, KL7IKX, that all systems were working and that access to some repeaters was limited by snow.

CCV
Mike O'Keefe reported that he was producing checklists and operational procedures for CCV operators. He requested that copies of repair orders be placed in CCV logbook.

Old Business
Handbook
Jim Larsen commented on A Legal Handbook for Nonprofit Corporation Volunteers, by James D. DeWitt. He went on to say that this would be required reading for Board members.

PayPal
Jim Larsen reported no action on this item.

Credit Cards
Steve Jensen has credit card applications but has not yet submitted them.

Remote Testing Software
Jim Wiley reported that the $4,000 initial payment to the software developer was in the mail. Randy Vallee suggested that non-gaming funds be used to for the payment. Dick Block noted that current software would not differentiate gaming and non-gaming accounts, but he did not believe that this would present a problem. A motion to acquire new software passed.

KL7AA.org Server
Jim Larsen reported no action on this item. The plan is to move the domain to a commercial web host.

501C3
Jim Larsen reported that an attorney bill for work on the revised Bylaws had been submitted and that the Board could expect an additional bill.

ARES Kits
Jim Wiley reported no new progress on this item.

Bingo Hall Update
John Lynn will investigate and report on vacant space at the Bingo Hall.

Mt. Susitna Repeater
Jim Wiley reported that we will wait for free transportation to complete additional work at the repeater site.

Repeater Training Classes
Jim Wiley reported that he would soon be ordering parts. When they arrive a list of interested members can be compiled and classes planned.

Feaster Equipment Proposal
The proposal will be submitted for review to a committee chaired by Randy Vallee.

Mission Statement
Mike O'Keefe reported that he is still trying to get in touch with a facilitator.

Long Term Spending Plan
Steve Jensen reported that a long term spending plan would be desirable to make best use of our resources and inquired as to the process that should be used to formulate such a plan. He went on to suggest that such a plan should be tied to our mission statement as the goals and objectives should be established first. Dick Block mentioned that a statement of mission has several parts; a mission statement, which defines an organization's purpose and does not change, as well as a vision statement, which outlines the organization’s current goals and plans to fulfill its purpose and does change over time. He went on to say that a capital budget is the plan of expenditures required to accomplish the organization's goals. Jim Wiley suggested a committee to formulate these plans.

Grubstake Repeater
Jim Wiley reported that parts will be ordered soon and that the Club will need to formalize site agreements on Grubstake. John Lynn requested to be added to the Frigid North account. After some discussion of the way the Frigid North account is

handled, Dick Block suggested that the Club formalize its relationship with Frigid North. Jim Larsen and Steve Jensen will undertake this.

Volunteer Coordinator
Jim Larsen reported that he is moving forward with this idea and suggested a volunteer email reflector.

ALMR Radios
John Lynn is working on this.

Membership
Jim Larsen reported that there has been an initiative to provide new amateur licensees with a free one-year Club membership. He has a report of new and upgraded licenses going back several years and inquired of the Board how far in the past the offer should be extended. Richard Block suggested that everyone on the list residing in the Greater Anchorage Borough be included. After some discussion it was decided that a card would be sent to Greater Anchorage Borough residents on the list that would entitle them to a free one-year membership upon its return. John Lynn went on to suggest that cards be given the VEs that could be returned to entitle new licensees to a free membership.

Committees
Jim Larsen reported that he plans to re-appoint committee chairs. Heather Hasper asked how often committees should report. A suggestion to appoint a technical committee was tabled.

AARC Patches
Heather Hasper reported that the patches had been ordered and should arrive next month.

State Fair
The Club will be able to find out which State Fair booth locations are available after February.

Financial Audit
Jim Larsen reported on the expense of an audit. He suggested that a full audit be done only when necessary.

Girl Scout Code Kits
Jim Wiley reported that he has requested detailed information about the reported code kit fire, but no information has yet been reported.

Alternate Gaming Coordinator
John Lynn reported that a Club member who is not a Club officer is needed as an alternate gaming coordinator. Jim Larsen suggested asking Judi Ramage.

Trustee
Jim Larsen reported that Jim Feaster, Club Trustee, has requested to be relieved. A volunteer for this position is needed.

New Business
Grants
Jim Larsen reported that the grant check has been given to the Police Auxiliary Search Team. A motion to grant the Epilepsy group additional funds totaling $1,751, rather than the $1,100 they were originally granted passed.

New Projects
John Lynn suggested a repeater at Tolsona Ridge linked to 147.27 and securing MoUs for existing repeater sites. Heather Hasper suggested repeater coverage for South Central Alaska roads. Jim Wiley suggested reviewing existing repeater sites for upgrades and a second communications vehicle. Richard Block reminded the Board that there are still incomplete projects, which should be finished before new ones are funded. He went on to suggest that the costs of maintenance should be considered and built into project proposals.

Field Day and HAMfest
Jim Larsen suggested that ARES coordinate Field Day activities this year. Philip Mannie requested time to consult with ARES staff prior to making a commitment. A HAMfest chair and co-chair are also being sought.

Club Phone
The Club phone is working again. An answering machine will be moved to the line and Jim Wiley has agreed to field calls.

First Aid Classes
A motion that the Club will sponsor, but not pay for, First Aid and CPR classes for interested AARC and ARES members passed. The training requires two evenings or one Saturday. Dates for the classes are under review.

Red Cross Radio Club
Heather Hasper reported that the Alaska Red Cross Radio Club has received the KL7ARC call sign.

Elmer Coordinator
Jim Larsen reported that he is seeking someone to coordinate a Club Elmer project.

Membership Committee Chair Assistant and Treasurer in Training
Jim Larsen reported that he is seeking a Membership chair assistant and someone willing to undertake training for the Treasurer position. Dick Block suggested an ad in the Newsletter.

Enstar
Reports from Enstar indicate that they were pleased with the ARES November Sweeps event. They have expressed interest in hosting other amateur radio events.

APU Annual Report
The Club has received the APU Annual Report. Dick Block suggested that the report be filed with grant records.

ACVB
A motion to renew our $375 membership in the Anchorage Convention and Visitors' Bureau passed.

Calendar and Club Mail Box
Heather Hasper suggested that the calendar of events be posted on the Club web site and that a Club post office box at the International Airport facility be acquired for $81 per year.

Jim Wiley suggested that a private mailbox be acquired, as they will forward mail.

KL7ION Link
Lil Marvin reported that the KL7ION repeater was linked to Echolink without permission. She went on to mention that any linking of the KL7ION repeater would require permission in advance.

There being no further business the meeting was adjourned at 9:40 PM.

Respectfully submitted by Philip Mannie, Secretary.

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ARES January Field Exercise: the Eagle River Classic Sled Dog Race

'When all normal means of communication fail' is the unofficial ARES motto. In Anchorage, there's a rough three in five chance that this 'when' will occur on a day normal temperatures will dip below freezing at some point, and a rough one in three chance the normal daily high won't make it above 0C (32F). No complaints; others have even more severe climates to deal with, but just how ready are we to deliver on the promise of that motto when it's chilly in Anchorage? This year's Eagle River Classic Sled Dog Race gave us a chance to find out.

The Classic, sponsored by the Chugiak Dog Mushers' Association, is an annual event (when there's snow) and for the past several years, ARES District 7 has provided communication support for the race. The 22.5km (14 mile) race takes place on the Beach Lake Trail system in Chugiak. The trail system winds through hilly and heavily forested terrain that's quite pretty to look at, but deep snow this year made much of the trail more or less inaccessible save by dog sled or snowmachine. This year's race, January 17 and 18, was conducted in patchy fog with temperatures between -31C (-24F) and -23C (-9F) as measured at the Birchwood airport NWS reporting station. Race officials called it -33C (-28F) on the trail.

As race day approached it became clear that we were going to be dealing with the weather as well as the planned training objectives for this event. Minus 25 Celsius (-15F) is sufficiently cold to whip the marginally prepared, so personal preparation played an important role in the event. A number of the check points in the Classic are not within easy walking distance of somewhere warm, and the problem with cold weather operation is that one often does not realize (or admit) that there is a problem until things snowball beyond the point of good safety practice.

The training objectives for the event went off pretty smoothly. The drill in deploying the CCV, generator and tower were accomplished inside of an hour of arriving on site. ARES Incident Commander TJ Sheffield, KL7TS, elected to use the KL7G portable UHF repeater for event communications, so we also got the chance to get familiar with its deployment and operation. The CCV was in good form, thanks to a lot of work by ARES Logistics Chief George Wilkinson, KL1JJ, and Mike O'Keefe, KL7MD. Even Saturday night, when temperatures at Birchwood dropped to -31C (-24F), the CCV was warm and generally well lit; we do need to make provision for some work lights, however, as the general CCV lighting is not quite sufficient for myopics such as myself doing detail work.

As for lessons learned, let me first point out that I am not an outdoorsy kind of guy. This being the case, my lessons learned may be trivial, well-known secrets to those who are, so laugh if you will at my ignorance, just don't emulate it. First, the matter of gloves. I've never had a pair that would allow me to work in them, so they come off, with predictable consequences. Those little lanyards that keep your gloves, mittens, etc., attached to your coat-sleeves (you may remember them from elementary school) might be rather useful. I noted that these come in a variety of styles that may be better than the elementary school type. Also, I observed that a lot of folks seemed to be sporting tight, light-weight knit gloves, of a sort that one might actually be able to work in, beneath their heavy gloves, mittens, etc. Finally on this topic, since a wrench that's been cooled for several hours to -26C (-15F) has a nice little bite to it when you pick it up with bare hands, if we could standardize nut sizes on our gear one could keep a 7/16th or 1/2 inch combination wrench inside one's clothing... yes, an adjustable wrench will also work, but a six-point combination wrench of the proper size will never damage an nut, at least when you use the box end side, and will provide the best chance of working with a nut that has been damaged by adjustable wrenches, leatherman pliers, etc.

Secondly, we all know that chilled batteries are substantially less capable of providing current than batteries at inside temperatures. It may (or may not) surprise you to learn how quickly batteries can chill at -26C (-15F). Since much of our current emergency communications strategy depends upon working batteries we need to come up with ways to keep those batteries (relatively) warm, even when they are exposed to unusually cold temperatures for long periods of time.

So there you have the short version of the 2004 Eagle River Classic. I realize that -30C (-22F) temperatures are unusual in Anchorage, but remembering the winter of 1989 I know that sub -30C (-22F) temperatures are not only possible, but can last for days. Since ARES is in the emergency communication business, a certain amount of what might be considered over engineering is quite appropriate to our mission; you really can't be over prepared for extraordinary circumstances, and extraordinary circumstances are our job.

Finally, I'd like to thank ARES volunteers TJ Sheffield, KL7TS, Keith Clark, WL7CSR, Mike and Kathy O'Keefe, KL7MD and KL7KO, and Steve Jensen, KL0VZ for making the event successful. Phil Mannie, KLØQW

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MARA Christmas Dinner

Jim Larsen, AL7FS

This year I decided to head up to the Matenuska Amateur Radio Association Christmas Dinner. I had been hearing what an active and vibrant group of hams were in MARA and wanted to meet a few of them.

I drop up to the home of Teresa Nunes, KL0WW, and gave her a ride to the meeting. Thankfully she knew where the firehouse was located and we got there with no problems. I was please to see what a large crowd showed up for the MARA event. I would say there were double what AARC had for their dinner so perhaps AARC should adopt some of the same approaches to the Christmas Dinner in the future.

I had a great time talking to everyone and in the gift exchange I ended up with a very nice LED headlamp.

As the editor of the MARA newsletter and I share files, here are Tim Comfort's words on the party.

From the MARA newsletter – used with permission

THE KEYBIRD KRONICLES

MARA held it's end of the year meeting at firehouse #61 on December 26th. It was an Eating Meeting, meaning no club business was accomplished. I for one was like a fly on the wall and enjoyed myself watching the members browse the food tables and perform the year's end ritual known as the Chinese Auction. We had about 60 adults and a dozen or so rug rats at the meeting. There was a great selection of food stuffs available and I'm sure no one went home hungry. Thanks for all the pot luck offerings guys, you made a lot of your fellow members happy. The auction was more subdued this year. The absence of boat anchors was a plus. As usual, someone brought a blanket and it seemed to get most of the bidding attention. I think it went home with Bob NL7ZG and Connie KLOKS. If so their dog " Scooter" more than likely put dibs on it. At the end of the shindig every one pitched in to clean up the meeting room. It was a fitting way to put the ribbons on a very productive year for the club.

Tim, NL7SK,
THE KEYBIRD KRONICLES

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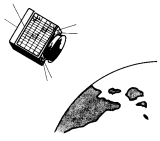
Low Earth Orbit (LEO) Net Announcement

Due to the lack of coverage, interference and other issues on the 147.30/90 KL7ION repeater, the **9 AM LEO Road and Weather Group** has moved to the **147.27/87 WL7CVG Mt. Susitna repeater** with a + split and **103.5 Hz tone**. Remember to check your tone encode and make sure it is set to 103.5 Hz as that is the only tone the 147.27 WL7CVG repeater will now accept.

If you hear someone on the 90/30 machine, on weekdays between 9 and 10am, looking for the ole gang that likes to solve all your problems, (It's a MAN thing) kindly inform them the 9 AM LEO Road and Weather Group is now hanging out on the 147.27.



Thank you,
The Gahleo Group Moderator
Dan O'Barr, KL7DR
Wasilla, AK
KL7DR@ARRL.net

Taken from the AARC newsletter
December 1983

A Ham By Any Other Name
(another version)

Canadian Amateur Radio Teletype Group
85 Fifeshire Road Willowdale, Ontario
Canada, M2L 2G9

The word "HAM" as applied to Amateur Radio dates back to 1908, and was the call letters of the first Amateur Wireless station, operated by some members of the Harvard Wireless Club. They were Albert S. Hyman, Bob Almy and Reggy Murray. At first they called their station Hyman-Almy-Murray, but tapping out such a long name in code soon called for a revision. They thus changed their sign to HY-AL-MU, using the first two letters of each name. Early in 1909 some confusion resulted between signals from Amateur Wireless HY/AL/MU and a Mexican ship named the "Hyalmo." It was then the boys decided to use only the first letters of each name... and the call became "HAM."

In the very early days of radio, Amateur operators picked their own frequency and their own call letters. Then, as now, some Amateurs had better signals than some commercial stations. The resulting confusion and interference finally came to the attention of congressional committees, and they in turn gave much attention to proposed legislation designed to critically limit Amateur activity.

In 1911 Albert Hyman chose the controversial wireless legislation bill as his thesis at Harvard. His instructor insisted that a copy be sent to Senator Davis A. Walsh, a member of one of the committees hearing the bill. The Senator was so impressed that he sent for Hyman to appear before his committee. He was put on the stand and described how the little Amateur station was built.

He almost cried when he told the crowded committee room that if the bill went through they would have to close the station, because they could not afford the license fees and all other requirements that were set up in the bill. The debate started, and the little "HAM" became the symbol of all the little Amateur stations in the country, crying out to be saved from the menace and greed of the big commercial stations that didn't want them around.

Finally, the bill got to the floor of Congress and every member talked about the poor little station "HAM", and that's how it all started. You can find the whole story in the Congressional Record. Nation-wide publicity associated radio station "HAM" with Amateurs. From that day to this...and probably to the end of time, in radio language an AMATEUR is a HAM!

From Sept./Oct. "RTTY News", published by the Canadian Amateur Radio Teletype Group.

The editor also wishes to thank Harold Hitchen KL7PG, who not only sent us this article, but also took the time to get permission to republish it from the newsletter where he found it. People like him make this job much easier.

Reprinted from the December 1983 Anchorage Amateur Radio Club Newsletter.

REPEATER TIPS

1. **Do Keep Transmissions Short.** Emergencies don't wait for monologues to be finished. If you talk to hear your own voice, what you want is a tape recorder, not an FM radio.

2. **Do Think Before You Transmit.** When you can't think of anything worth saying, STOP.

3. **Do Pause Between Exchanges.** Someone with a high-priority need for the repeater may need to break in. Also, some repeaters are configured so that a pause in transmission is necessary to reset the timer.

4. **Do Identify Properly.** ID with your call at ten minute intervals. Don't "over ID". You must give the call of a station with whom you are in contact only at the end of the contact.

5. **Do Be Courteous.** A repeater is like a telephone party line and requires the same kind of cooperation in its use.

6. **Do Use Simplex When Possible.** Leave the repeaters available for those who can't communicate simplex.

7. **Do Use The Minimum Power Necessary** to maintain communications.

8. **Do Support Your Repeater.** Maintaining a good machine is an expensive undertaking and continual "Deadbeats" are stealers of other's investment in the repeater.

9. **Don't Abuse Autopatch Privileges.** Business messages are never permitted. Don't force the control operator to terminate your call. IF IN DOUBT, DON'T!

10. **Don't Break Into A Contact** unless you have something tot add to the conversation. Interrupting is no more polite on the air than it is in person.

11. **Do Listen Before Transmitting.** We have a tendency to turn on the radio, change the frequency and start transmitting. You may be breaking into an ongoing conversation which has paused for a moment. Listen for a short period and then ask if the frequency is being used before starting your conversation.

12. **Don't Forget: Amateur Radio Exists Because It Is A Service,** not just a hobby. Contribute to public service aspects of VHF FM communications, such as accident reporting, emergency preparedness, etc.

13. **Don't Try To Prove What A Great Operator You Are** by criticizing the operating techniques of others on the air. Instead, set the example for others to follow.

14. **Don't Monopolize A Repeater.** The competent repeater users are the ones who do a lot of listening and limited transmitting.

15. **Don't Forget That What You Say Over A Repeater Can Be Heard Over Hundreds Of Square Miles** by anyone with an inexpensive "public service band"' monitor. Some are potential hams; if they like what they hear, they will want to get licenses and join in. Don't leave a bad impression by making thoughtless or off-color remarks on-the-air.

16. **Don't Give Specific Locations** when leaving your mobile gear unattended at shopping centers and such. "Hamburglars" may be listening. The same goes for vacation trips, etc.

17. **Don't Encourage Deliberate Repeater DX'ing:** It is contrary to the FCC concept for amateur repeater operation. It often destroys communications on two or more repeaters and can "Time-out" a repeater just when you may urgently need it.

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Corliss and Frank's Wedding
AL1G and KL7FH – January 4, 2004

Frank Hurlbut and Corliss Kimmel, two very active ham operators in the Anchorage area were married in a ceremony on January 4th. A number of the AARC members attended the wedding.

As many of you may know, Corliss is a fairly new ham operator and she has become a serious contester in the last few years. Someone handed her a micro-phone during a contest and there is a rumor she has not set it down since. She is now active on CW and her speed just keeps going up. Here is a picture of the happy couple.

KL7FH and AL1G

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QRP Notes by Lynn Hammond, KL7IKV

QRP On the Road

The original reason I bought an FT817 was that its small size seemed to make it ideal to take on the road. My experiences so far seem to confirm that opinion.

At this point in time, I carry the rig and some accessories in a small laptop bag that I got at Fred Meyer. It has ample room for the 817 and a small MFJ 902 travel tuner. Of course I add the mike, a book and some magazines and other odds and ends as well. The antenna, a few connecting cables, a mini paddle and a small power supply fit in a zip lock bag and a very small Rubbermaid container; these go in the suitcase, but could go in the laptop bag as well.

Antennas on a road trip with QRP will almost always be a compromise.

- One year I fashioned a multi band dipole with insulators and alligator clips. This antenna was strung between two corner posts on a second floor deck, and the ends were allowed to drape down at a 90 degree angle. It seemed to work well, and the tuner was obviously unnecessary. I worked about a dozen countries on three continents in about 6 hours of operating. I ran the 817 on batteries at 2.5 watts.

- In the Summer of 2003, I joined my extended family at the beach in South Carolina. I used a 30 foot long wire about 10 feet up strung out to a palmetto tree, a counterpoise and tuner. This antenna has the advantage of being easier to install than a dipole. Running 2.5 watts I only worked about 2 hours total, and conditions stank, but still logged 4 countries. I will continue to experiment, but this last antenna seemed to be a pretty good compromise, especially because it was so easy to just run it out of a window. Surely the nearby salt water provided a superb ground plane and boosted my results, but I did work the

Ukraine which was "on the wrong side" of our cabin. Who knows.

- My next trip provided another test of the wire and counterpoise. I operated from my parents house in Virginia's Shenandoah Valley. I ran the wire across the bedroom, and only about 10 feet hung out of the window; the counterpoise lay on the floor almost parallel to the wire.. Running the 817 at **one** watt I was able to work PJ2/K8MFO in the Netherlands Antilles on 14.026 after about 15 minutes of trying in a small pile up. Once he heard me, it did take three tries before he got my call, but that was no surprise; the QSO was "in the log". Later I heard W7ZOI (Mr. Solid State!) but did not make contact. One for two did not seem at all bad for one watt and a very suboptimal set up! I did not operate again on this trip due to other commitments, but I am convinced that this very compromised antenna works ok for casual operating on the road.

Conclusions? As always, a full size resonant skywire mounted in the clear is always better. Failing that, get as much metal as you can, as high and in the clear as possible, and you can do OK.

A side note and off topic: yes, band conditions have been very poor. But since completing my K2 in late March of last year, I have logged 35 countries and all continents with it. As I write this on January 11th, I just worked a T20 on 20 meters with my K1 and dipole. He was weak and a KH6 was the only other signal on the band. To be sure, and being a six meter operator at heart, I am used to listening to dead bands. But it pays to keep an ear on things..

American Red Cross Update

Amateur Radio at the American Red Cross is progressing nicely. A new amateur radio club was formed at the American Red Cross a few weeks ago. We partitioned the FCC for a amateur radio call sign. John Ramsey was listed as the facilitator and I was listed as the president. The FCC granted us the call sign of WL7CVW. Heather Hasper put in for a vanity call sign of **KL7ARC** and we received that call sign on the 17th of January. Work is still progressing on the installation of the rotor control for the 3 element beam antenna. Bruce McCormick and myself are slowly getting all the materials together so that we can do the installation of the cable and coax between the radio room and the antenna. John Ramsey is actively looking for more radio equipment to install throughout the state in support of the American Red Cross mission. His goal is to setup HF, VHF, and satellite stations at each of the major American Red Cross facilities in the State of Alaska. John Ramsey is currently working with the AARC board to get a Memorandum of Understanding (MOU) accomplished. The American Red Cross is also actively recruiting Amateur Radio Operators to fulfill their communications needs.

If you are interested in helping out the American Red Cross in regards to communications please contact John Ramsey at 646-5407. There are a lot of benefits to belonging to the American Red Cross and John would be happy to explain them to you.

Michael O'Keefe
KL7MD

N2CQ QRP CONTEST CALENDAR
February 2004

North American Sprint (CW) ... QRP Category
Feb 1, 0000z to 0400z
Rules: http://www.ncjweb.com/sprintrules.php
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Adventure Radio Society - Spartan Sprint (CW) ... QRP Contest! Feb 3, 0200z to 0400z (Monday Evening US/Canada)
Rules: http://www.arsqrp.com/
~~~~~~
10-10 Int. Winter QSO Party (SSB - Ten Meters) ... QRP Category
Feb 7, 0001z to Feb 8, 2400z
Rules: http://www.ten-ten.org/
~~~~~~
North American Sprint (Phone) ... QRP Category
Feb 8, 0000z to 0400z
Rules: http://www.ncjweb.com/sprintrules.php
~~~~~~QRP ARCI
Fireside Sprint (SSB) ...QRP Contest!
Feb 8, 2000z to 2400z
Rules: http://2hams.net/ARCI/firesid.htm
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FISTS Winter Sprint (CW of course) ...QRP Category
Feb 14, 1700z to 2100z
Rules: http://www.fists.org/sprints.html
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Run For The Bacon (CW) *** QRP Contest ***
Feb 16, 0100z to 0300z
Rules: http://fpqrp.com

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ARRL International DX Contest (CW) ... QRP Category
Feb 21, 0000z to Feb 22, 2400z
Rules: http://www.arrl.org/contests/

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Colorado QRP Club Winter QSO Party (CW/SSB) ... QRP Contest!
Feb 22, 2200z to Feb 23, 0359z
Rules: http://www.cqc.org/contests

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FBYO Winter QRP Field Day (CW/SSB) ... QRP Contest!
Feb 28, 1600z to 2400z
Rules: http://www.extremezone.com/~nk7m/

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High Speed CW Club Contest ... QRP Category
Feb 29, 0900z to 1100z
Rules: http://www.morsecode.dutch.nl/hscindex.html

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Ken Newman - N2CQ
N2CQ@ARRL.NET

http://www.amqrp.org/contesting/contesting.html
http://www.n3epa.org/Pages/Contest/contest.htm

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THEFT OF SERVICE
and Other Heavy subjects

Notes from Doug Dickinson, KL7IKX
ARRL OOC (Official Observer Coordinator)

Someone picks up your cell phone, and uses it without your permission...no problem, right ? Someone takes your car from your driveway and runs off with it...no problem, right ? Someone taps into your cable service...no problem, right ? Someone taps into your telephone line, and use's it...no problem, right ? Someone is picking up the morning paper before you get up...no problem, right ?

A group of people using their own money developed a Internet linking system with certain security safeguards build in to prevent illegal operation, you as a individual find away around those safeguards and uses the linking system for your own use...no problem, right ?

A individual or group spends long hours and a lot of money to build a repeater and you take it away for your own use...no problem, right ?

In every case above, the common thread is THEFT OF SERVICE you are taking something that is not yours and using it as if was.

In the Amateur Radio world EVERY TRANSMITTER HAS A TRUSTEE, this is the person responsible to the Government for the proper operation of that transmitter. In most cases it's the individual licensee, your callsign, your responsible for what goes through any transmitter under your callsign, if there are questions to the proper operation the FCC can and will come to you for an explanation.

In the case of a radio repeater, such as used in amateur service, the repeater may be under the license of the owner of the equipment, or the club. If it's a club there may be a 'TRUSTEE'. This person and his license are directly responsible for the proper use of the repeater(s) transmitter(s).

When an individual, group, or club operate a repeater, they get to decide how and when that repeater will be used. They can for example restrict that repeater to only their group's access, the FCC has deemed this legal in amateur service just like it would be in commercial service.

Most clubs that operate repeaters have few restrictions, mostly the restrictions deal with telephone interface (Phone Patch), hours of operation or quiet time, and linking into and out of the repeater.

If you have a project that requires the use of a repeater that you don't own, contact the club or trustee of the equipment BEFORE you begin your operations. Most of the time your parade, race or whatever will be allowed to use the system, however, remember that there may also be others who want the repeater for their particular activity at the same time, so pre-scheduling is important. And get the permission if you can in writing, that way there won't be any confusion. Unscheduled events, emergencies etc of course preclude prior contact, but contact the trustee or control operator as you begin your activity and explain to them who will be in charge and a contact number.

ANY operation you propose that requires the use of someone else's equipment requires prior contact and coordination. If a club or individual has guidelines to follow for the use of their equipment, you'd better plan on following those guidelines. If you don't then you're guilty of THEFT OF SERVICE.
If the person or group has decided for example that there will be no phone patches using the repeater, or there will be no linking into or out of the repeater, or there will be no Internet tie to or from the repeater then those are the conditions you must abide by if you plan on using the repeater, otherwise you're guilty of THEFT OF SERVICE!

If you're not happy with the restrictions against phone patches, or linking or hours of operation, or whatever is posed by a club, group or individual for the use of their equipment, contact another group, club or individual and make see if their repeater is open for your project.

Or you can build, coordinate, install, license and operate your own equipment, then you will be the one the FCC can contact when there's a question about the operation of the transmitter and the material transmitted through it.

If you decide that hacking a network so you can bypass firewalls and other protection so that you can use an IP to radio system, then I'd suggest at the very least don't brag

about it on the air. You never know who may be listening! In addition, remember that you put in danger not only your own license, but also the license of the IP link operators, and the local trustee of the transmitter(s). You may be willing to take a chance, but are the others willing to let you use their license in an illegal manner ?

The second subject that needs to be thought about is the subject of linking or cross-banding.

There is little the FCC has to say about cross-banding or linking in general. There are certain requirements related to this type of operation and they detail ID, remote control, bands to be used for remote control, and prevention of unwanted signals from keying up the link.

One requirement that holds true to the use of ANY AMATEUR TRANSMITTER is the Identification of the individual transmitter. The first is ID of the transmitter, if you're cross-banding (VHF to UHF, or 6 meters to VHF or whatever) your transmitter MUST ID at least every 10 minutes. This doesn't mean the transmitter you're using to get to the link or cross-band. This means the transmitter that is part of the cross-band or link system. And yes, manual ID is allowed. This means you can ID with voice through the link, or you can have automatic CW ID your choice. CW ID's are limited to 20 wpm by FCC law.

If for example you are running an Internet to amateur service gateway, you MUST ID your local VHF, UHF or whatever band transmitter at least every 10 minutes. In addition linked or cross-banded equipment must be controlled, so that the transmitter can be locally turned off if required. IF the operator of the cross-band, or linking equipment is not right at the transmitter point then the control must either be telephone, or if on radio must occur in the 222 Mhz amateur band, or above.

Turning on your internet linking system, and then leaving it running, without local ID, and no local method of control is ILLEGAL!

If that equipment jams emergency communications on the frequency it operates you can be held liable.

IF the equipment is operated on a coordinated frequency then it will have less chance of interrupting scheduled or emergency activities. In addition if you use a coordinated frequency then users will know where to find your system.

IF you choose to just dial a frequency and operate then you could be held liable for blocking coordinated operations, emergency communications, or other coordinated operations depending on what frequency you select. IF you decide to pick a nationally recognized simplex calling frequency for your IP link, be prepared to handle a lot of flack. In addition you are afforded no protection to your system or who uses it. IF you interrupt prior activity on the frequency then you are breaking the law. IF you just happen to choose an uplink or downlink to a satellite operation, or get into the CW only portion, or the EME portion of the band you can expect visitors who will help you understand why there's a band plan, and why your transmitter needs to find somewhere else to operate. Of course if you just plugged in the frequency then ran down to the club, you may find the visitors have adjusted the radiating element of your link to non-radiating status.

All it takes is a little bit of cooperation with the others who share the bands in order for everyone to get along without stepping all over each other in a manner where no one can communicate.

Doug Dickinson KL7IKX
ARRL OO Program
OOC (Official Observer Coordinator)

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ARES Contact Information

District Emergency Coordinator:
Phil Mannie, KL0QW
Contact via Pager: 268-7609
Email via kl0qw@alaska.net

Additional information on ARES can be found at the following URL:

http://www.qsl.net/aresalaska/

Notes from the Editor:

Something exciting happened this month that I wanted to share with the members. I received more submissions of articles for the newsletter than I had room to print. Articles came from folks that had not submitted in the past and who had not even been asked. I find that very exciting.

All of you have stories to tell. You have unique and interesting things that you have done both technical and non-technical in nature. Many of you have digital cameras these days. If you have a good time at a hamming event or even had a special time just operating your radio, feel free to share your story.

George Wilkenson, KL1JJ, offered, out of the blue, to do a column on how hams became interested in ham radio. You could contact George and tell your story to him. I am sure he would help you put the story on paper. You don't have to be an old timer to talk about what excited you about ham radio

I guess I just want to say **thank you** to all who are submitting articles. It makes the editor job so much easier. And may I offer an up-front thank you to each of you thinking of writing an article…I am sure there are other members who will enjoy reading what you have to say.

73, Jim Larsen, AL7FS
Newsletter editor.

Officers

President	Jim Larsen, AL7FS
Vice President	Randy Vallee, KL7Z
Secretary	Phil Mannie, KLØQW
Treasurer	Steve Jensen, KLØVZ
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News Letter Editor	Jim Larsen, AL7FS
Membership Chairman	Fred Erickson KL7FE
Past-President	-

Three Year Board Members

Jim Wiley, KL7CC
Richard Block, KL7RLB
Lil Marvin, NL7DL

One Year Board Members

Pat Wilke, WL7JA
Jimmy Tvrdy, KL7CDG
Judi Ramage, WL7DX
Kyle Sandel, AL7J
George Wilkinson, KL1JJ
Mike O'Keefe, KL7MD

AARC web page & Email contact addresses:

Homepage:	**http://www.KL7AA.org/**
Email Reflector:	KL7AA@QTH.NET
Webmaster:	AL1G_ak@yahoo.com
President:	JimLarsen2002@alaska.net
Membership:	frederickson@iname.com
Newsletter:	JimLarsen2002@alaska.net

News Letter Submissions, Information or corrections:
Submissions must be received 2 weeks before meeting
Email: JimLarsen2002@alaska.net
Mail: 3445 Spinnaker Drive, Anchorage 99516

KL7G CODE PRACTICE SCHEDULE

Schedule: 7:00am, 10:00am, 4:00pm, 7:00pm, 10:00pm AK time, every day on 145.35 MHz @ 7 wpm

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Nets in Alaska:

The following nets are active in South-central Alaska:
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
Alaska Pacific Net 14.292 MHz 8:00 AM M-F
ACWN (Alaska CW Net) 3534, 7042 Daily @ 0700 – 1000, and 1900 - 2400 Alaska Time - AL7N or KL5T monitoring.
Net Purpose: Formal NTS traffic via CW.
No Name Net 146.85/.25 repeater Sundays 8:00 PM
Grandson of SSB Net 144.20 USB Mondays 8:00 PM local
Big City Simplex Net 146.520, 446.0, & 52.525 FM
With Packet 145.01 Tuesdays 8:00 PM local
ARES net 147.27/87 103.5Hz - Thursdays at 8:00 PM local
PARKA net 147.30/.90 Thursdays at 7:00 PM local

Anchorage & Mat Valley Area Repeaters

KL7AA systems at Flattop Mt., 2,200 ft
146.94/34 MHz, 80 watts, autopatch, 141.3 Hz PL
224.94/223.34, 25 watts, no patch, no PL
444.70/449.70, 25 watts, autopatch, 141.3 PL
****147.27/87 MHz, no patch, Mount Susitna 103.5 Hz**
KL7CC, Anchorage Hillside, SCRC & QCWA
146.97/.37 MHz, 30 watts, autopatch, 103.5 Hz PL
KL7M Anchorage Hillside
147.21/.81 MHz, on IRLP, 97.4 Hz PL
KL7ION at Mt. Gordon Lyon, PARKA 3,940 ft
147.30/90, MHz - 80 watts, no patch, 141.3 Hz PL
KL7AIR Elmendorf AFB, EARS
146.67/.07, 107.2 Hz PL
KL7JFU, KGB road, MARA club
146.85/.25, autopatch, no PL
KL7DOB, Alcantra (Wasilla Armory)
146.64/.04, simplex patch, no PL
KL7DJE at Grubstake Peak, 4,500 ft. <down >
147.09/.69 MHz, 25 watts, no patch, 100 Hz PL
444.925/449.925, 10 watts, no patch, 141.3 Hz PL
KL3K, Girdwood
146.76/16 MHz, 25 watts, no patch, 97.4 Hz PL
South Central Area Simplex Frequencies
146.52 MHz Calling and Emergency frequency
147.57 / 447.57 (crossband linked) HF spotters & chat, 103.5 HZ PL
146.49 MHz Anchorage area simplex chat
146.43 MHz Mat Valley simplex chat
147.42MHz Peninsula simplex chat

Internet Links, the favorites from our readers:

QRP and Hombrew Links

http://www.qsl.net/al7fs
AARC http://www.KL7AA.org/
SCRC http://www.KL7G.org
EARS http://www.qsl.net/kl7air
MARA http://www.kl7jfu.com/
Moose Horn ARC http://www.alaksa.net/~kl7fg
ARES http://www.qsl.net/aresalaska
KL7J http://www.alaska.net/~buchholz
Fairbanks AARC: http://www.kl7kc.com/
Yukon Amateur Radio Association:
http://www.klondike.com/yara/index.html
HAARP Project:
Amateur Radio Reference Library

http://www.area-ham.org/library/libindex.html
Hamradio: http://www.hamrad.com/
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 JimLarsen2002@alaska.net.

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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 14 days prior** to the meeting or it may not be included. If you want articles other than QRP, please submit them. If no submissions, I use what I am interested in, naturally.

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Regular HAM Gatherings:

Alaska QRP Club, Third Friday - 7:00 PM: Hams with QRP (low power under 5 watts) and Homebrewing interests meet for a social meeting monthly. Meet at Denny's on DeBarr & Bragaw in the back room. Hungry QRPers start showing up about 6PM. Info contact Jim Larsen, AL7FS, JimLarsen2002@alaska.net or 345-3190.

Tuesdays Lunch, 11:30 AM: Join the gang for lunch and an eyeball QSO at the Royal Fork, "South, on Old Seward Highway. Attendance varies from 8 to 24 each week.

Thursdays Brunch, 10:30 AM: Brunch at Lily's on Tudor Road just East of Tony Romas. A great bunch of folks attend this one.

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 Phillips Restaurant, at the corner of Arctic and International. Great Fun.

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THIS MONTH'S 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 147.30+ repeater. **NO general meeting in Dec.**

1st Tuesday each month: 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.

1st Tuesday each month: EARS general meeting - 6:30PM in the club house/shack in the basement of Denali Hall (building 31-270) on Elmendorf AFB. Talk in on 147.67- repeater.

2nd Friday each month: SCRC general meeting at 7:00 PM at Denny's on Debarr & Bragaw. Talk in on 147.57 simplex.

2nd Saturday each month: 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.

2nd Saturday each month: PARKA Meeting at 11:00 AM. at Peggy's, across from Merrill Field.

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

3rd Friday each month: Alaska QRP Club. 7:00PM at Denny's on DeBarr in the back room. Info: Jim Larsen, 345-3190. Bring projects to share with the group. Some show up at 6:00PM to eat.

3rd Saturday each month: ARES General meeting 9:30AM to 12:00 PM. Call Phil Mannie (kl0qw@alaska.net) at 762-9590 for additional information. Also check for ARES Info at: http://www.qsl.net/aresalaska/

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 Len Betts, KL7LB, lelbak@yahoo.com .

The last Saturday each month at 11:00 AM: Quarter Century Wireless Assoc - QCWA at the Royal Fork, South of Dimond on Old Seward Highway. You need not be a QCWA member to attend.

Who Do I Contact to Join AARC?

Fred Erickson KL7FE -
frederickson@iname.com

Phone number: 345-2181

Anchorage Amateur Radio Club
Membership Application/Renewal

Membership Chairman: Fred Erickson KL7FE
email: frederickson@iname.com
Phone number: 345-2181

Please, check your mailing label for your expiration date.

Mail-in Membership Application

___ New ___Renewal

Name: _____ **Callsign:** _____

Address 1: _____

Address 2: _____

City _____ **State:** _____

Zip Code: _____

Home Phone: _____

eMail address: _____

Dues for a calendar year are as follows: • Individual membership $20.00 • Individual and Spouse $25.00 • Student $10.00* • Life $250.00 *"Student" is defined as any individual who is enrolled full-time at any educational institution, using the criteria for full-time enrollment of that institution.

I am enclosing payment for:

Subscription/Renewal for_____ year(s).

Total USD Enclosed:_____

Please Mail your Payment and this Completed Application to:

Anchorage Amateur Radio Club
c/o Fred Erickson, Membership Chairman
12531 Alpine Dr
Anchorage, AK 99516-3121

Anchorage Amateur Radio Club, Inc
Post Office Box 101987
Anchorage, Alaska 99510-1987

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Return Service Requested

KL7GO, Gretchen and KL7DR, Dan O'barr (MARA President)