

January 2006

KL7KC

Fairbanks, Alaska



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## The Demise of the Knob

**By Eric Nichols KL7AJ**

If there is one thing missing in modern American life, it is the knob. Things used to have knobs on them. The knob was the universal interface between man and machine; the device by which we exercised our dominion over technology. When you turned a knob, something PHYSICAL happened within the device in question. You may not have known exactly what transpired within the bowels of the machine when you turned the knob, but you had the assurance that whatever happened was because of something you DID. There was a blessed, reassuring, connection between cause and effect when the knob reigned supreme.

Back in the 1930s manufacturers and designers began to pay a great deal of attention to knobs. It was finally realized that technology was not going to go away, so we'd might as well get used to it, and embrace it. Knobs became beautiful, elaborate, and elegant devices, adorning everything from radios to washing machines. Materials ranging from pearl, to wood, to jade, to chrome, to that newfangled material, PLASTIC, were used in the crafting of the almighty knob.

With some notably rare exceptions, a knob did only one thing. There was none of this annoying multifunction menu business we have now. When you turned a knob, it did the same thing every time. And,

generally, when you turned it farther or faster, it did MORE of the same thing, or did it faster. Nowadays, when you push a multifunction keypad, you don't really control anything. Instead, you start a roulette wheel somewhere inside the device, which then decides if it wants to obey your command or not. More often than not, it returns a snide response such as, "Do you really want to do this?" There was none of this insolence from a knob. A knob obeyed your command, quietly, unquestioningly, and immediately. A knob never second-guessed your desires.

People who made things with knobs assumed that their users had a certain degree of intelligence, or at least knew what they wanted. Even in the early years of the twentieth century, when people were still a tad leery of technology, they still considered the knob their friend. When one sees a knob, one intuitively knows what to do with it. (We have two only moderately intelligent cats who regularly attempt to turn the doorknob on our front door to let themselves out...their only hindrance to success being their lack of opposable thumbs.)

Among my other avocations, I collect Boat Anchors. My favorite boat anchor is a Hammarlund SP600J. This beaut has a knob from Knobland on it...actually two of them. The main tuning knob on this puppy has a flywheel on it which weighs close to two

pounds. When you turn this thing, you know you've turned a knob. With one quick and mighty spin, I can send the tuning dial clear from one end of the shortwave spectrum to the other; no modern day equivalent can come close to this.

The modern day replacement for the knob in its numerous perversions, such as the mouse, the keypad, the menu that you poke with a plastic stick thingamabob because it's too small for your fingers...even the voice-activated interface to some android-like appliance...is to serve one nefarious purpose. That is to give you the impression that you actually have control of the device, when in reality, you don't. We end up with such absurdities as the Windows "operating system" where you have to go through START in order to shut the thing down.

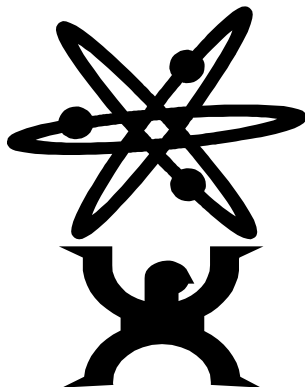
The demise of the knob is symptomatic of our society. We are presented with a vast array of "choices," none of which remotely resemble what we want. "None of the above," is the only reasonable choice in almost every situation in which we might find ourselves, whether it's voting for a president, buying a cup of coffee, or getting married. And yet, because of the multifunction, non-knob paradigm, we are given the impression that our options are countless. Whatever happened to ON and OFF? Those both seem like good choices to me. ☺

### Yukon Quest is Here

- Junior Yukon Quest begins at 10 AM on Saturday, Feb 4th.
- Main Yukon Quest starts Saturday, Feb 11th.
- Rule and procedural changes impact both races.
- Help if you can. Please contact Linda Mullen AD4BL or Mary Beth Groves KCOCWG.

## *AL7OC with a D-STAR Update*

**By Pierre Loncle AL7OC**



*“Those who want to learn about digital voice and data radios and digital radio networks will not be disappointed..”*

Since acquiring our D-STAR radios in September, we have learned a lot about the new technology. The new digital technologies like D-STAR and APCO P25 are going to change the way that we think about using radios to communicate. Current generation digital voice technology is exciting in that radio communications can be routed from peer to peer radios through intelligent repeaters. The ability to transmit data with the voice stream also increases the capabilities of these radios.

Digital radio is not the answer for everything. Someone jokingly referred to D-STAR as the “next disruptive technology” which may be true. As radio migrates from analog to digital technology, it will change the way we use radios to communicate. The migration is inevitable, and it is happening rapidly in the non-amateur services. The question for radio amateurs is at which point they should adopt digital radio technology. The earlier that you enter, the more input you will have into how the technology evolves; however, you will incur greater costs. What the tipping point will be for mass migration to digital technology has yet to be determined.

The RF portion of the D-STAR system is fully functional but software radio applications are still in their infancy. If you are looking for instant plug-n-play radio technology, you might want to wait to purchase a digital radio. However,

if you like to try new things and experiment, then dive in. Emerging technologies offer the technical ham a place to investigate and advance the state of radio art. Those who want to learn about digital voice and data radios and digital radio networks will not be disappointed. The beauty of digital radio technology is that once you have the basic RF hardware, you can develop and experiment with software applications to meet your own operating needs. For instance, you could have a club HTML server attached to a D-STAR repeater where users can download and upload information from mobile data terminals (laptop, PDA, GPS) during public service exercises or actual emergencies. Think about the possibilities – they are only limited by your imagination and your willingness to experiment and try new applications.

IRLP technology allows the linking of repeater systems, but D-STAR takes one step further in that you can route voice and data information to specific users on a D-STAR network. What this means is that in a wide area repeater system, it is not necessary to activate all repeaters in a system to communicate with a specific user. When you key your radio on a D-STAR network, your radio is registered on the network in its current location. If someone wants to talk to you, they don't need to know which node to talk through or need to key up all repeaters in a system. The D-STAR controller will track

the locations of users and only activate repeaters where the end users are, freeing the rest of the system for other users. Each radio user can have a “home” default location where they are registered on the network. The operation is similar to a cell phone network in the way that you place a call. You don't have to worry about the location of the other user; the network locates that user and routes the call for you.

D-STAR repeaters can be linked over the Internet or by 1296 MHz or 10 GHz radio links. Of course, a big advantage of a digital radio network is the ease of interfacing the system to the Internet.

There are several different operating modes for D-STAR. For those interested in high speed data (128k) transfer to support Web browsing and image transfer, the 1296 MHz D-STAR radios and repeater are the way to go. These radios support high speed data and digital voice. The disadvantage is the cost of 1296 MHz radios (\$1400) and repeaters (\$4000). Icom has a deal where if you buy 5 1296 MHz ID-1 radios; they will throw in the repeater for free. Without a repeater, 1296 MHz operation would be difficult and your range quite limited. I see the 1296 MHz system best suited for urban or point-to-point applications. To provide wide area coverage on 1296 MHz will require substantial investment in hardware. Initially, I would see a group buying the 1296 MHz compo-

*(Continued on page 3)*

***“IRLP technology allows the linking of repeater systems, but D-STAR takes one step further...”***

*(D-STAR Continued from page 2)*

nents and deploying them for special events and emergencies as high speed mobile data system. Once the initial infrastructure is in place, it would be more attractive for individual users to purchase their own gear.

For those who are looking for a less expensive way to get their feet wet in digital radio technology, I would suggest the low speed data and digital voice 2 meter and 67 cm radios. (Repeaters are not available yet, but are due out soon, pending FCC type acceptance. Successful beta testing has been completed in the Dallas – Ft. Worth area by Icom engineers and the local radio club.) The VHF/UHF D-STAR radios such as the Icom ID-800H and the IC-V82, IC-U82 and IC-2200 with D-STAR UT-118 modules are all full featured analog FM radios with D-STAR capability. These radios only support 1200 baud data without a TNC or 9600

baud with a TNC, but they support all digital voice routing capabilities. These radios are ideal for those who want to try digital voice technology and have conventional FM radio technology in one package. Text messaging and small binary file transfer are good applications for the low speed data capability of these radios. Upgrading an IC-2200, V-8, or U-82 with a UT-118 D-STAR module costs only an additional \$200 over the price of the basic analog radio, so you can buy the radio now and upgrade later as your finances permit.

Whether to purchase high speed or low speed digital technology depends on your interests in radio and your budget. The high speed and low speed systems should be linked together at a common node so that all users have the ability to communicate by voice and perform basic text file transfer capability.

By now, you have noticed that

I have only mentioned Icom radios. D-STAR is not an Icom protocol, but an open protocol developed by the JARL and the Japanese government to address the crowded ham bands in Japan and the need for enhanced emergency communications capability such as live image transfer and high speed transfer of crucial information from field locations to officials. Kenwood is supposed to have D-STAR radios for sale in the US market soon, and it is hoped that all ham radio manufacturers will adopt the D-STAR standard to ensure intercommunications capability between all digital radio users.

In closing, I would encourage discussion and debates on how to move forward with digital radio technology. The question that I have at this point is how to get hams interested and engaged in the new modes available and how to maximize the return on investment in the technology for the individual and the community. #

***“D-STAR is not an Icom protocol, but an open protocol developed by the JARL and the Japanese government...”***

## *Elmer Central: Questions & Answers*

**Q.** What’s all this “D-STAR Repeater” stuff, anyhow?

An important concept is that D-STAR repeaters are not the same functionally as analog FM repeaters. A D-STAR repeater will function as a mobile relay for local stations, but more importantly, it is a “router” or “gateway” as well that routes voice and data between peers (radio users) on the network.

According to Jim McClellan N5MIJ, “The D-Star network is call-sign routed. That means, first, that you cannot

have a mobile/portable and a repeater with the same call. This is exactly the same thing as having two computers on a network with the same IP address - it just won't work.

“Remember that D-Star links users, not repeater sites. It does this in a manner that allows registered users to roam anywhere in the network, cleanly. This flexibility imposes some new guidelines in setup on us, and it's really not hard, once you think about it. We simply have to use unique callsigns for each user in the

system, and use club calls on the repeaters.”

Incidentally, Jim says of the ID-1 1200 MHz radio, “I've had a 1292.6 MHz repeater up for over 10 years now. I've been through dedicated 1.2 mobiles, HT's, and multi-band units. The Icom ID-1 is one of the most exciting units to come along yet. It is a multi-purpose radio 1.2 GHz mobile radio, and takes a little effort to really utilize.” Prices have dropped on the unit. AES asks \$979 with \$20 rebate. ICOM offers club/group promos. #



*Remember that D-Star links users, not repeater sites.*

## Saturday Scouts Learn Radio Over Oatmeal

*By Shelley Levine KL1SE*

At the October AARC board meeting, an exciting idea surfaced: A group project for kids. How many of us were inspired by a simple electronic experiment or a cat-whisker radio? Having explored the possibility of building a crystal set with an oatmeal box and basic parts with my grandkids, the idea quickly took shape.

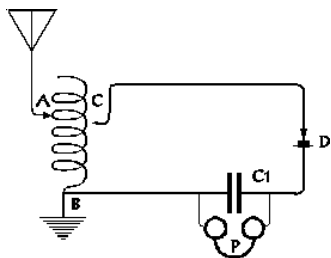
On Sat. December 10, five members of AARC, Kevin NL7WO, John KL1AZ, Marybeth KC0CWG, Weiyuan KL1WI and I met in Fairbanks at the Boy Scouts building to

do the oatmeal box radio project with ten scouts.

All the scouts had a great time making the radios as well as learning about what makes them work. They were very serious and diligent in their work and all the radios were able to pick up several local stations. Several scouts were interested in how to get started in ham radio. Our project would be used for credit towards their radio badge and to finish the requirements for the badge, the scouts that took part in this project were invited to participate as on look-

ers at the cabin during the Yukon Quest. Everyone had a blast of a time and the boy scout leaders said they would enjoy having us back for another radio project soon.

I asked members of our club to save all their oatmeal box's for this project, several members came to the rescue and I want to say thank you for your support. I also want to say thank you to the members who gave their time and effort, without all of your help this project would not have been possible. The photos below show our wonderful results!



*Uh-Oh! Schematic panic!*



*Complex detector assembly.*



*Weiyuan Wang KL1WI inspects this scout's detector in the final stages of radio assembly. The entire kit consists of 100 feet of fine gauge insulated wire, a coil form, a crystal beadset, and a handful of small components. Patience and a steady hand are beneficial, but almost anyone can build!*

Photos by Mary Beth Groves KC0CWG

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*Shelley Levine KL1SE looks on while the Scouts “wrap up” their re-cycled oatmeal containers with 52 feet of black insulated wire. Innovators will like that designs may vary widely. For the junk-box-challenged, full kits are available for less than \$30.*



*Kevin Abnett NL7WO looks for stray RF to round up while other participants focus more on their handiwork. The Xtal Set Society (<http://www.midnightscience.com/>) is a great resource for anyone interested in exploring “old fashioned” technology with a focus on learning electronics by building and experimentation. Check out their bookstore!*

## A DXing Primer

**By Mike Sambuco AL7KC**

What is DXing? Contacting hams in other countries. HF DX can be a fun, challenging pastime, or a frustrating annoyance. With this being a hobby, I'm in it for enjoyment. I'm still amazed I can talk to the far end of the planet with about the same amount of power that is providing me overhead light right now.

Where to start...? Chasing DX, operating pileups, contests, propagation, etc? What's your interest? Pass me some feedback and we can focus better according to interest. If DX isn't your bag, that's fine. Maybe you like to chat with friends regularly outside of Alaska. Most of the same information applies.

### 147.57: Local DX Freq

(How to win friends and influence DXCC.) First off, I'm trying to encourage more cohesiveness between DXers in the area. If you enjoy talking about DXing and radio, or want to learn more, drop me an e-mail or listen on 147.57. This freq is now being used as a gathering place for DX spotting and talking about such things as in this article. Having a support network helps when you're involved in large endeavors. Trying to find the rare African while taking care of business (full-time job, raising a family, living life) definitely has it's challenges. (If KL7X knows that KL7Y needs the rare one he's hearing, a quick phone call or 2M announcement can be a real wel-

come interruption! I've got a few people I try to tip off whenever I hear the good stuff. I have a list from one friend of everything he needs.) (Friends don't let friends miss rare DX.)

### Rules to play by....

You can either be competitive, or play by your own self-imposed rules. Some people like QRP, barefoot 100W, mobile, RTTY, phone, cw, etc. Personally, I think a three-element beam is the minimum for someone to be serious and not have to be frustrated. With that said, I know of people that have gotten 5-band DXCC on cw with a good vertical. Another, did DXCC mobile. Depends on your personal goals, motivation, drive, time investment, and patience. I have a friend who won't last ten minutes trying to work a new one. He's impatient and gives up in a pileup after a couple calls. I'll hang in for a couple hours, on a couple different days if need be, and eventually work 'em when I'm "on the hunt" for a rare one.

Bear in mind that if you get on the race track with the big boys and aren't prepared, you may get "run off the track" or be run over. Don't get me wrong — this isn't meant to be a discouragement, just to make sure you're not ill-prepared. The 20 meter band can be like a race track at times. There's an expectation by other operators that if you're there, you know what's going on. Go there with 100W or QRP, or for a casual ragchew, and it

might not be the most pleasant experience for you, if you get on when all the DXers are on, and the band is open to another continent. That was the scenerio for the beginning of my adventures. I show up, in the late 80's, with a self-imposed "license to ragchew" beaming Europe with the band wide-open, and found myself in the center of some messy pileups, because I had no clue. (No pileup management topic in the license study manual.) Made a few folks happy, but caused lots more hate and discontent because I didn't know how to play the game. (European ops are not known for the best etiquette, and bad things happen when there's a poor operator at the helm. Things degrade pretty quickly as the impatient callers start making comments, the frustrated, malicious jammers kick in, and the self-appointed police try to intervene and stop the others.) Spend any time on HF, and you've probably already heard it...if not, you will. It's unfortunate, and sad. Definitely not our finest example of public relations. Usually, when it gets to that point, it's due to the operator failing to take care of business properly.

"I try to get a conversation going, but the DX stations only want to trade signal reports and seem to give me the brush-off." Don't take it personally, they're focused on trying to find and work a "new one," and you've just fulfilled



*"I know of people that have gotten 5-band DXCC on cw with a good vertical. Another, did DXCC mobile."*



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the minimum requirements for a good qso. (“Send card via bureau.” All done: Next!) Or, they realize, that you, as the rare DX, need to move along efficiently as a courtesy to all the others on frequency (to prevent the unfortunate circumstances mentioned above.)

### It's All About Signal Strength

You may wonder why you're not being heard (“I can hear them fine, but why don't they answer me when I call?”) Things are not reciprocal, when they're running a kilowatt and you're not. With 100W, you'll have about two S-unit lower signal strength. If you're calling a European, he may have qrm and noise that you're not hearing, in addition, causing your signal to be lost.

The antenna is one of the most important keys to success. Poor antenna = poor performance. Little work = little signal. You get what you work for....spend some time and put up something appropriate. To typically work DX with horizontally polarized antennas such as dipoles and yagis, you need to have them up at least a half wavelength for the band you're using. Verticals will work also, if you make them efficient by getting them up in the air and putting lots of wire under them. Beware the “no-radial” verts unless they are 1/2 wavelength design. Just because it'll take power with a good swr doesn't mean it'll perform. Some of the best, broad-banded antennas have huge losses and waste a lot of

your power output. If 75% of your transmitter output power is wasted by the antenna system and turned into heat, that's not very efficient, and won't work well. (You would get 25W effective radiation.) You'll still make some contacts - I did. With that said, sometimes band conditions are such that you can use your “wet noodle,” bedspring, garage door track, aluminum gutter, random wire in the attic, mobile whip in the window, etc, and still make contacts. (I've made qsos on a dummy load. However, I'd never be able to break a pileup under typical circumstances with any of them.) Now with the solar cycle declining, excellent band condition opportunities will be rare for a few years. You can't depend on it. While it may happen, it'll be the exception, not the rule. For good performance, we want reliability and consistency, available whenever we get on, not the rare occasion where we get lucky. The name of the game is consistent, *good* performance to maximize potential contacts and create the strongest signals possible under all conditions. If you're a casual, once in a while operator, you may not care about all this, and may not be motivated to put in the time, money, and effort necessary to build a good system. That's fine, just don't fuss when your buddy works a rare one that can't hear you!

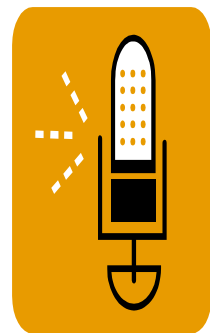
If you're serious, start planning for an amp. As signals decline, it'll be a bigger need. Doesn't have to be a huge one, a +/- 700W gives you enough to do quite well. There's good, used

amps around for less than \$500. (I found mine for \$350 and \$400, one in Anchorage, one here.) Do a little research on amp features and tube costs before buying, never buy just because seems to be a good deal.) I like the 811A, 572B, 3-500Z tubes because they're more common and tubes hold up well. I'm using four 811As (least expensive) in one amp and have replaced the tubes only once, last year, after a full decade of use. They take a licking, keep on ticking, and also runs on normal wall socket power (110/120.) Right now I can retube for less than \$70. An 811A quad amp will give about 700W output, which will be almost 9 dB signal boost (about 1.5 S-units.) Recently, I picked up another SB-220 amp with 3-500Z tubes off the web site “For Sale” section. They are significantly more expensive tubes, but will put out nearly legal limit (1300W) which will give an additional 3 dB signal boost (1/2 S-unit.) There's a lot of different tubes out there, but some will cost the price of the amp to retube when there's a failure. I don't think that's a very good risk. I would stay away from cheap amps that use television sweep tubes (6LQ6,6KG6,6LF6, or similar designator.) Back in the days when TVs all had them, they were cheap and plentiful, but no longer. (Tune up too long or wrong a couple times and you have to replace the tubes.) Features you want: 1.) Tuned input (solid state rigs need to work into 50 ohm load, and tubes don't provide that most of the time.) If you buy an amp

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*“Do a little research on amp features and tube costs before buying, never buy just because seems to be a good deal.”*



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(DX — Continued from page 7)

without tuned input, it will present different loads to transceiver depending on band...if using a rig with built-in tuner, no problem; otherwise, you'll need a transmatch between the rig and amp to get full output because rig output will decrease due to load mismatch.) 2.) Compatible keying for your rig (some old amps have high-voltage keying that can kill newer rigs (must add conversion circuit or first time you use, you'll put all the electrons to sleep.) 3.) AC power to suit you (120V or 240V,) and 4.) all the bands you want to operate (usually only need to worry about getting 160 and 10M. Lots of amps lack one or both, depending upon their vintage. Rules were different during their production: 160M was allocated for low-power, non-interference basis with other services, and FCC made it harder for Cbers to buy ham amps for use on CB.)

### DX and Fishing

To work DX, you need to know when it's in season...when hunting season is, like moose and caribou. DXing is very much like fishing. For instance, on 20M, here in the winter, we usually get good propagation to the Pacific islands and Australia, NZ. That goes away in the summer. So, the summertime isn't the best time to try to work lots of stations down under. The sun has an 11-year cycle that directly impacts atmospheric ionization, which causes radio wave propagation. Right now, we're almost at the bottom (poorest) of the cycle, and seeing more bad condi-

tions all the time. So, this isn't the best time to be trying to fill in your 10 meter DXCC score card. Compression occurs as the higher freqs stop working; folks move lower, so more opportunities are available. Just like the salmon running. It's now becoming a bit grim on the higher bands, but that's the nature of the beast. It occurs gradually, but if you don't get on for a couple years, you can certainly wonder where all your DX went. I worked over a 100 countries on 20M in 3 months in 2000. It would take much longer to do it now on 20. Did half of that on 15 in fall of 2001. Would probably be impossible to do it on 15 now in the next several years. Now, there'll be more low band activity, so you can work more of that... plan on getting up some good antennas for 40 and 80 and you can work DX there, too. It's pretty cool to work Europe on 40M (Call CQ before or after the Bush Net!) I've yet to do it on 80...I need a better antenna system.

### Listen and Learn

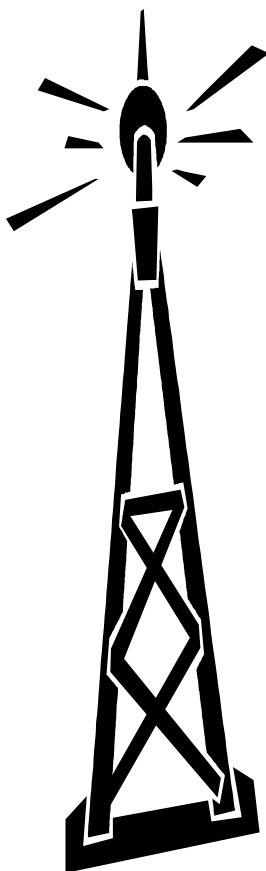
There's no substitute for listening. It does pay to tune around and listen, to get to know the bands, their conditions, their flavor, etc. Listen, learn from others, read, and study. You'll get out what you put in. There's techniques you need to know about, such as "tail-ending." Do you recognize the operating pattern the DX station is using while calling in the pileup you're trying to break? Or are you calling blind, hoping to be heard? Got enough "punch" in your transmit audio? Read books such as "The Complete DXer" by Bob Locher, W9KNI, or

"DX Power" by Eugene Tilton, K5RSG.

Subscribe to DX bulletins to know when the rare ones are going to be activated (here's a couple good ones: <http://www.papays.com/opdx.html> as well as <http://cpcug.org/user/wfeidt/Misc/adxo.html>) Then you know when to be on listening. It's a great feeling to be on and hear the very first CQ, or help the DX station adjust their equipment and be one of the first in their log.

Let others help to be your ears, too. While not a substitute for listening, it does help, especially when you're busy, to let others help you know about the rare ones. Watch a DX cluster, like "DX Summit" for DX spots when possible (see <http://oh2aq.kolumbus.com/dxs/>). There, people give frequencies and callsigns of DX heard. That way, you don't always have to be everywhere, listening. (When that spot goes out, hundreds of others also see it, usually causing a quick pileup.) Especially if you're operating from a less-than modest station, it's best to find the rare one calling CQ *before* it gets spotted (beat the rush/crowd.)

Consider calling CQ when you know (or predict) you have propagation to areas with countries you need. Some rare DX ops aren't up to handling pileups, and refrain from calling CQ, are out there listening for something but they will answer an Alaskan calling CQ. We have a pretty good DX location that really helps, sometimes! ☺



## USEFUL EMERGENCY FREQUENCIES

## Arctic Amateur Radio Club

Membership \$20 individual, \$25 family. Send checks to  
AARC  
PO Box 81804  
Fairbanks, AK 99708  
Phone: 907-479-5203  
E-mail: [bennie@qci.net](mailto:bennie@qci.net)

### Fairbanks area:

**Police:** 154.680 154.725 155.010 155.370 155.505  
155.790 156.030 158.910

**Fire:** 154.010 154.190 154.235 154.295 154.430

**Miscellaneous:** 153.980 154.040 154.100 154.965  
154.995 155.010 155.100 155.820 453.325 453.700  
453.900

**Forests:** 151.160 154.755 154.815 154.830 159.255  
159.285 159.315 159.345 159.375 159.450 164.525  
453.100

### Anchorage area:

**Police:** 154.740 155.010 155.430 155.505 155.520  
155.640 453.050 460.025 460.075 460.125 460.175  
460.275 Also borough on 800 MHz Trunked Systems

**Fire:** 154.130 154.175 154.250 154.445

**Miscellaneous:** 154.040 154.100 154.965 154.980  
154.995 155.100 155.775 155.820 155.925 156.000  
453.575

Visit [www.kl7kc.com](http://www.kl7kc.com) for the  
latest club news and events!

Service to Interior Alaska: We can, we will, we do.



**NEWS FLASH!** Monthly AARC board meetings are now held at Denny's on Airport Way. Board meetings take place at 7 PM on the Thursday following the regular club meeting. Occasionally the venue will change for special events, so please check the KL7KC web site for updates or contact any officer or board member. All are welcome to attend. Your participation in club business is very much needed. We hope to see you there! ☺



## Reach Out!

If you know of a newly licensed ham, take the time to get to know them and make sure they get started on the right path. Not all contacts result in friendships, but a helping hand extended early on can go a long way to shaping a healthy amateur community. People who talk can grow together.

## Calendar of Events

### 2006

- Jan 21-22: North American QSO Party, SSB 1800Z, Jan 21 to 0600Z, Jan 22.
- Jan 21-23: ARRL January VHF Sweepstakes 1900Z, Jan 21 to 0400Z, Jan 23
- Jan 28-29: CQ 160-Meter Contest, CW 0000Z, Jan 28 to 2359Z, Jan 29
- Jan 28-29: BARTG RTTY Sprint 1200Z, Jan 28 to 1200Z, Jan 29
- Feb 3: Club meeting UAF
- IARC @ 7 PM. Pre-meeting starts at 6 PM. This is MANDATORY Yukon Quest Training for volunteers.
- Feb 4-5: Junior Yukon Quest. Contact Linda Mullen AD4BL or MaryBeth Groves KC0CWG.
- Feb 4: License exams Noel Wein Library @ 1 PM. Contact NL7XH.
- Feb 11-12: CQ WW RTTY WPX Contest 0000Z, Feb 11 to 2400Z, Feb 12
- Feb 11: Asia-Pacific Spring Sprint, CW 1100Z-1300Z, Feb 11
- Feb 11-13: YLRL YL-OM Contest, SSB 1400Z, Feb 11 to 0200Z, Feb 13
- Feb 11: FISTS Winter Sprint 1700Z-2100Z, Feb 11
- Feb 11-12: British Columbia QSO Challenge 1800Z, Feb 11 to 1800Z, Feb 12
- Feb 12: North American Sprint, CW 0000Z-0400Z, Feb 12