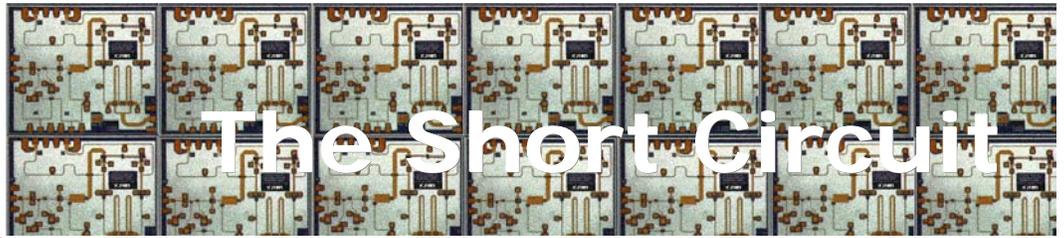


March 2007

KL7KC  
Fairbanks, Alaska

## Arctic Amateur Radio Club



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**ASSISTANT  
EDITOR AND  
CONTRIBUTORS  
URGENTLY  
NEEDED FOR  
NEWSLETTER.  
CONTACT  
N1TX@AMSAT.ORG**

## *Local VE Activities Ramp Up*

Hello all, I am Bill Brookins, KC8MVW and have taken over the Volunteer Examiner, VE, coordination responsibilities for Benny, NL7HX. I have been a VE under the ARRL since I obtained my General Class License in 2000. I do enjoy the ability to help get others into the hobby as my Elmer had done for me.

As many know, February 23rd is yet another historic moment in Ham Radio History, as CW is no longer required for ANY class radio license. Those that have tested and received a General or Extra Class CSCE without passing the Morse Code examination can bring it in to any test session before the CSCE expiration to automatically receive those privileges without taking another test.

For our current VE's, there have been a few changes through the Anchorage Volunteer Examiner Coordinator, VEC. Mailing addresses have been updated recently for all communications with the VEC, but the phone numbers have stayed the same. One of the major changes that will affect local VE's is that any Anchorage certified VE that does not have an Extra Class license by the end of the 2007 calendar year will be dropped from the Anchorage VE program. They feel that an Extra only

VE program will allow for less confusion at test sessions under new FCC regulations.

VE's from other VEC's, ARRL or W5YI, cannot give exams for Anchorage unless they have been certified to do such by each VEC program and vice versa. Both the ARRL and W5YI groups allow General Class and higher licenses to be VE's in their organization. Both have different requirements, which can be located at <http://www.arrl.org/arrlvec/> and <http://www.w5yi-vec.org/> respectively. I personally would recommend that each of our current VE's and prospective VE's at least join the ARRL VE program so that if we need to use the ARRL testing as a backup; we will be guaranteed to have the necessary VE's. There may also be a time where you are at an outside ham event and they need an additional VE; if you are not accredited for the VEC of the session, you will not be able to give the test, many of which use ARRL. I am looking into the feasibility of using the ARRL VEC as a backup testing coordinator in our local area as there have been some issues in the past getting testing materials. As of the release time, this has yet to be confirmed through the ARRL; but we would need more ARRL VE's locally to hold those sessions.

I do recommend that any interested party that wishes to become a VE contact me, or one of the VEC's directly for the paperwork necessary to help bring others into the hobby. It is a worthwhile experience and I look forward to assisting others get into the hobby.

The next test session will be March 3rd at 1pm at the Noel Wein Library. Please remember to bring a current original license and CSCE, if applicable; plus a copy of each to the test session. Should we have to use the ARRL VEC test's, there



will be a \$14 dollar charge incurred for the first test and any retest. Currently there has been no charge through the Anchorage VEC program.

73 for now

*Bill, KC8MVW*

*kc8mvw@arrl.net*



## *DX Cluster Meets Google Earth*

*By Larry Ledlow, Jr. N1TX*

I was "tooling" around looking for a bit of software to map contacts made in contests, and I came across DX Monitor by VE3SUN. It's primarily for DX spot monitoring from the clusters. New DX spots are displayed in the main window with user selectable bands, fonts, colors, and highlighting of alerts and local spotters. A band map tracks the current stations on the air by frequency. Maps show the openings with buttons to select bands and times.

DX Monitor builds a database of DX spots, announcements, and WWV information, which can be used by DXers to im-

prove their chances of catching a new country.

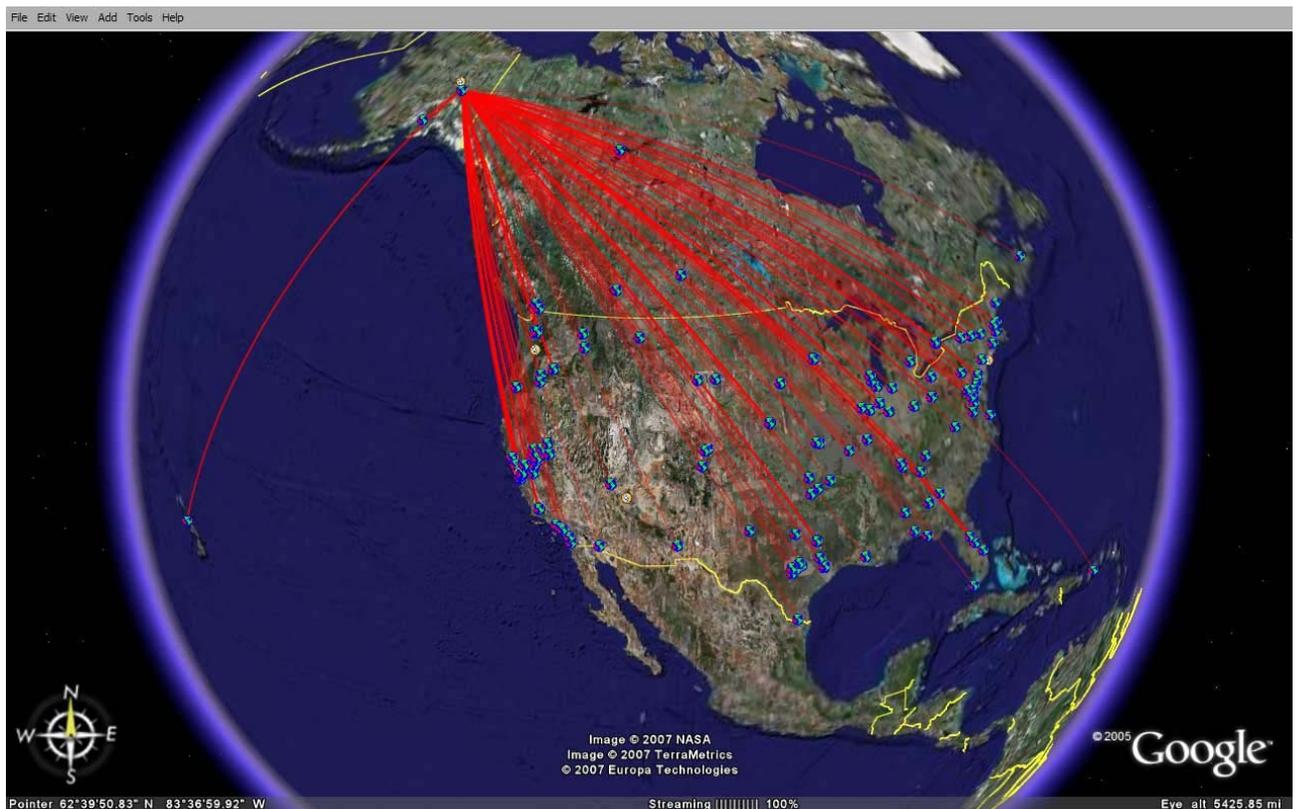
The ability to map who's hearing whom and also do various analyses on the histories makes this an extremely powerful tool for the casual and serious DXer. The included world map is somewhat crude, but you get a very clear idea of where propagation seems to be good. You can collect considerable information, and you can even generate a little animation showing spots' histories over time.

A very cool feature is the ability to import text, Cabrillo, and ADIF log files and map the results. You can also plot the results on Google Earth!

That's a nice interface, and you can see the results below using a log from the recent ARRL Sweepstakes CW contest.

DX Monitor is shareware, but the unregistered version appears fully functional, except you can't change your location. It seems to assign a nearby lat/lon for your QTH; e.g., in my case, my location was locked near Anchorage until I registered the package. A mere \$29.95 by Paypal gets you an instant registration code via email. I think that's an excellent value for DXers and contesters alike..

Get the demo at <http://www.benlo.com/dxmon.html> #



## Elmer Central: SWR and Resonance

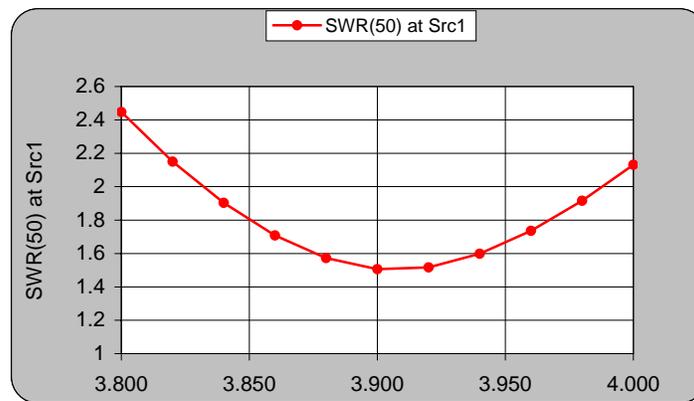
**Q:** *I'm a new General and just put up my first HF antenna. No matter how carefully I calculate, measure, and cut my wire, I have a hard time getting even close to a 1:1 VSWR at the frequency of resonance for my 80m dipole. I feed it with RG-58 coax. What gives?*

**A:** You're assuming the dipole has an impedance of 50 ohms at resonance, which is the impedance of RG-58. A dipole has approximately 70 ohms impedance at the resonant frequency, which means the mismatch will give you at best a VSWR around 1.5:1. Say you have a dipole designed for 3900 kHz. The accompanying graph shows how VSWR

changes with frequency when fed directly with 50-ohm cable.

While HF radios have 50-ohm outputs, very few antennas actually have a 50-ohm impedance at the feed points. This is why various impedance matching techniques have been de-

veloped. These provide the necessary transition between antenna and feedline impedances. I recommend taking the Antenna Modeling Course (EC-004) available from the ARRL. A good reference is W4RNL's accompanying text available for \$39.95. #



## Fun Is Where You Find It

**By Larry Ledlow, Jr. N1TX**

On a Saturday not long ago I was sitting in the ham shack, frustrated and a bit bored with the project at hand. The recent cold snap had me anchored indoors, there were no major contests brewing, and HF propagation was so-so anyway.

Almost absent-mindedly, I was turning the knob on the radio while I pondered what to do next, when I heard a weak CW station calling, "CQ OKQP". Huh? I had stumbled across the Oklahoma QSO Party on 20m. I sent my call a few times just for grins, and the operator finally responded. He was very happy to work Alaska, since the score multipliers increase with each state the OK hams work. Hams in

other states get multipliers for working OK counties, of which there are 77.

A little while later the band opened a bit, and I tuned around on SSB when I heard another OKQP caller, this time a special 1x1 call. Again, another happy "customer". I listened to him for a while, and I overheard him explain to another station that there were a number of 1x1 calls operating in the contest. Any ham working enough of them to spell OKLAHOMA with the last letter of each call would receive a special certificate and, even better, a coffee cup!

Suddenly I had a purpose for my hamming that day, a personal challenge that I wasn't really sure I could do, but I figured I could at least try,

right? I alternated between CW and SSB, and within an hour I had collected O, K, L, H, and M. I needed another O and two As, but the band faded badly again. Dang! Just as it was getting exciting...

I pouted a bit, ate some lunch, then resolved with renewed vigor to stalk the elusive pieces of the alphabet. When I walked in the shack I could hear signals again. I tuned back and forth and changed modes. I had worked them already. Then BANG, I heard an A, then a new O, and finally 30 minutes later the last A.

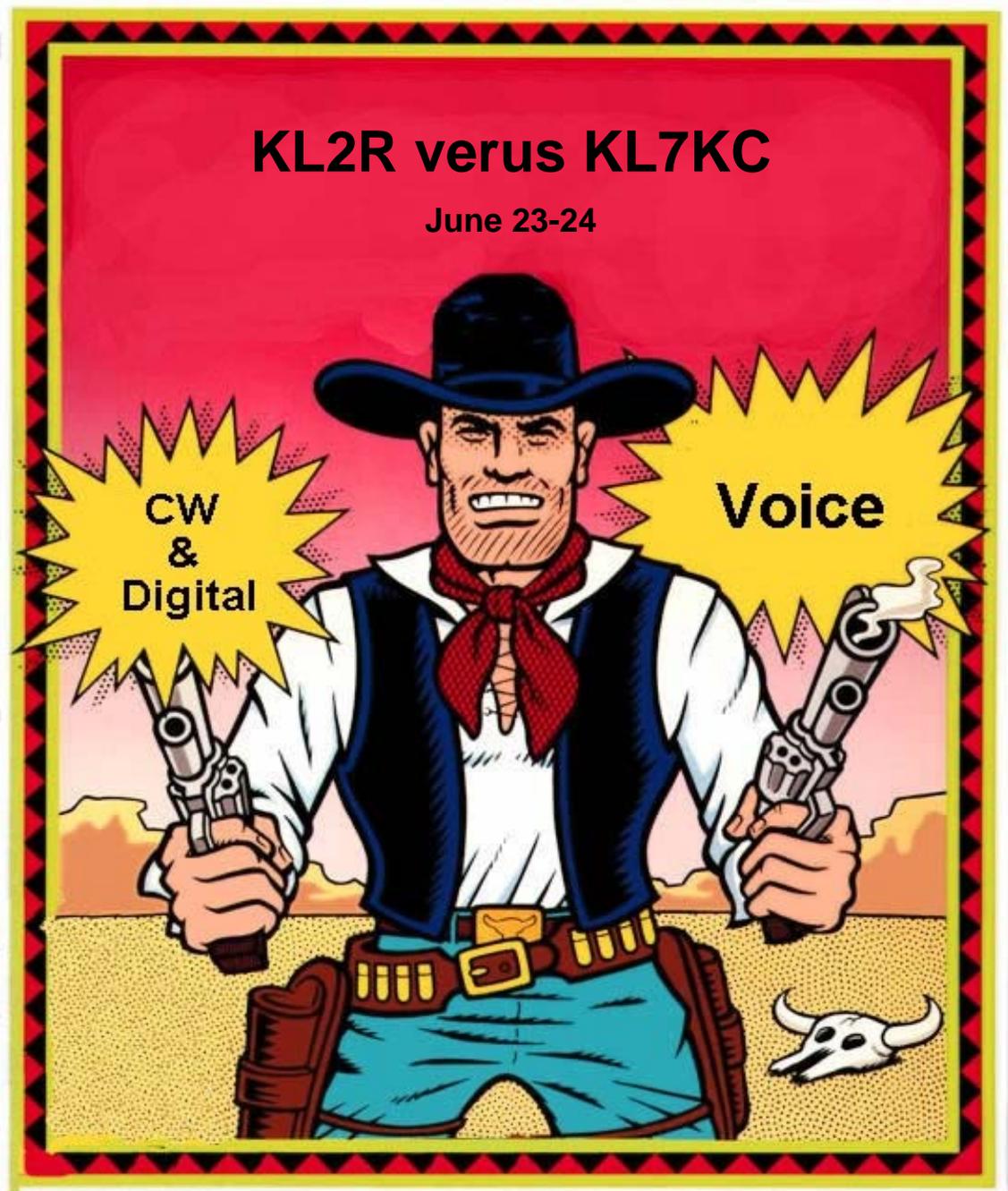
So you see? You can have a lot of fun by picking something out of the ordinary at the last minute and trying to accomplish it. Success is soooo sweet. And that first cuppa joe in my new mug is going to taste

more than O-K! #



### Announcing the East-West Field Day Shootout!

The Two Rivers Contest Club KL2R challenges the AARC Field Day Team to an on-air shootout: Make the most HF contacts to win. It's an east-side versus west-side sort of thing. The losing team cooks the winners a pancake breakfast. Proposed terms are as follows: KL2R will use emergency power, one transmitter, and no more than 200 watts. We will limit our modes to CW and digital. KL7KC can operate unlimited power, any mode, and up to two transmitters. Only HF contacts count. *Let's just see what you can pull off!*



## *If It Don't Glow, It's Ain't Radio*

**By Eric Nichols KL7AJ**

If you were to ask twenty different people why they got into Amateur Radio, you would get twenty different answers. For some of us, however, there is only one correct answer.

We like the smell of ozone.

This is difficult for many newcomers to the hobby to understand. Most modern hams are under the mistaken impression that ham radio has something to do with communications, that ham radio is what it is because of what it allows you to do. Although this may be true at times, it is really missing the point entirely.

Amateur radio is primarily an olfactory experience.

You see, for years now, we've struggled with the issue of how to create a meaningful ham radio exam; something to really separate the men from the boys, so to speak. We've debated Code vs. No-Code ad nauseum (which is now a moot point, of course); we've added all kinds of digital technology questions to the question pool, we've added focus to emergency operations, specialized communications, and every other kind of high tech gadgetry. All of which amounts to straining at gnats.

If we really wanted to devise a test that gets to the core of Amateur Radio knowledge, it would be simple. Blindfold the candidate, and present him with a palate of various fried components: a modulation transformer, a carbon resistor, an electrolytic capacitor, and perhaps an overheated cabinet from a Johnson Ranger. If the candidate can correctly identify

the components by smell alone, he is well on his way to becoming a Genuine Radio Amateur.

The fact of the matter is, the modern ham shack just doesn't smell right. In fact, it doesn't smell at all...which isn't right. We have deprived a generation of radio amateurs of the very soul of Amateur Radio. We have reduced the ingredients of radio to essentially two components, silicon and plastic, neither of which is interesting in the least, as far as the nose is concerned.

Let's look at just a partial list of ingredients from radio in the Golden Age of Hamdom.

First, we had iron...lots of it. Hot iron has a sweet fragrance that is totally absent in the modern shack; our nostrils have been deadened by stale, sterile styrene. Some of that iron was marinated in varnish loaded with aromatic hydrocarbons, which would gently simmer under the gentle glow of a 6146 or an 807, filling the room with an aroma that would rival the finest Indian incense.

We had cotton insulation on many components. Many golden age shacks had a vague burnt-marshmallow aura about them. This was caused by cotton insulation on the verge of spontaneous combustion. We also had waxed lacing cord...the predecessor to those abominable Ty-Raps...which emitted a closely related fragrance while the rig was in operation. Sometimes a dash of burnt rubber was added to the mix.

And, of course, we *did* have

ozone. The problem is that most modern rigs don't have anywhere near enough voltage to create ozone; in fact, sadly enough, very few recently-licensed hams have ever seen or heard a decent sized electrical arc!

Occasionally, of course, we also had the smell of burning flesh. This could result in two ways, either by coming in direct contact with the envelope of a very hot tube, or sometimes a wirewound resistor, or, more indirectly, by obtaining a healthy R.F. burn. R.F. burnt flesh has a much different fragrance than "normal" burnt flesh...again, any ham worthy of the name could, once upon a time, tell the difference instantly.

Smoldering rosin flux fumes always permeated the air of any real amateur radio station. It was unthinkable to operate a station without a hot, beefy soldering iron standing by, to be pressed into service at a moment's notice. Removing power from a rig before soldering on its innards was always considered a pointless and often counterproductive precaution. Brain surgeons always do their work while the patient is conscious, so they know right away if they happen to poke the wrong nerve. Real hams knew the wisdom of this as well, it was always best to work on a "conscious" rig, so you knew right away if you shorted something out that ought not to have been shorted out.

RTTY stations had a fragrance all their own, as well. A Model

**The fact of the matter is, the modern ham shack just doesn't smell right.**



*(Continued on page 6)*

(Continued from page 5)

28 Teletype Printer, affectionately known as a “locomotive” always smelled like hot engine oil, which was not surprising, since it would go through the stuff faster than McDonald’s went through French fry grease.

Alas, very few hams these days recognize the heavenly scent of Carbon Tetrachloride, the main ingredient in many contact cleaning solutions; many Golden Age ham shacks were permanently redolent of the stuff. The absence of Carbon Tet is quite a shame, because it really was a delightfully fragrant substance, (despite being highly suspected as a carcinogen.) Many of us practically took baths in the stuff, but most of us turned out okay, anyway. I haven’t grown a third elbow nor had my kneecaps fall off.

Many ham shacks also had the smell of hot fur. This is because cats (and sometimes larger animals) had a penchant for curling up on top of hot transmitter or linear amplifier cabinets. These “dumb animals” understood much more about the hobby than most present-day amateurs. (On more than one occasion, I’ve had to extinguish a cat’s flaming tail, resulting from inadvertent contact with the aforementioned perpetually toasty soldering iron.)

Now, I am happy to report that all is not lost. In fact, things are looking better all the time. Hams are discovering Real Radio in unprecedented numbers. For the past year or so, every issue of QST has had some feature about vintage radios or boat anchors. Classic amateur radio equipment is fetching unheard of prices on E-Bay and other ham sites. People are rediscovering the soul of Amateur Radio, something that can’t be contained in monolithic little black boxes. They are discovering the joy of REAL RADIOS with REAL knobs and switches.

This renaissance is not just a national phenomenon “out there” someplace. We have a thriving vintage radio presence right here in Fairbanks...in fact, we always have! There is no excuse for any member of the Arctic Amateur Radio Club to not experience the vibes, the sounds, or the *fragrance* of genuine amateur radio.

Vintage Radio is the perfect way to dive into the guts of radio; it’s a painless way to learn some real electronics. The components are large, easy to see, and very forgiving. Boat Anchors BEG you to lift the hood and take a peek inside....or sometimes CRAWL inside. Take advantage of a vintage radio shack near YOU! You’ll never know what you’ve been missing. ❖

## AMSAT NEWS

**PCSat-1 update from WB4APR:** WINTER 2007 OPERATING WINDOW: This PCSAT-1 full-sun recovery period lasted from 1 to 19 Jan 07 and saw one of the highest activity periods in years (over 100 users per day). This was heightened by the deployment of ANDE and RAFT on 21 Dec 06 to join PCSAT-1 as a constellation of three APRS digipeating satellites on 145.825. PCSAT-1 continued to operate back into eclipses up to 28 minutes long (out of a max of 35) before it was lost again on the 19th. Although the next sun period begins 3 June, we have only been able to recover PCSAT during the Fall and Winter season, so next time will be in the fall.

**Japan’s HITSat (HO-59)** is alive and well. Amateurs can utilize the 1200 bps FM packet link with 145. uplink and downlink on 437.425 MHz. CW telemetry is broadcast on 437.275 MHz.

**CubeSat (CO-58)** is another Japanese packet satellite with a CW telemetry transmitter. Its primary purposes are: Gathering the satellite health information via beacon signal; Command uplink & data downlink; Telemetry data broadcasting service; and On-orbit verification of the commercial-off-the-shell (COTS) components. Tune in on 437.4650 MHz for the CW telemetry and 437.345 MHz for the 1200 bps packet downlink.. ❖



At the request of the ALMASAT team AO-51 will switch to V/S 38k4 digital operation from about 0100Z on 15 Mar 2007 to 0200Z 16 Mar 2007. The frequencies will be as follows:

Downlink 2401.200 MHz, FM digital, 38k4 bps  
Uplink 145.86 MHz, FM digital, 9600 bps

# AARC Interest Survey

I don't know when we last did something like this, if ever, but I believe it will be informative, and possibly entertaining. It's always a good idea to find out where one stands as a club, and, perhaps, make some adjustments to our focus, as necessary.

Anyone who's been in ham radio for very long knows that it is actually many many hobbies in one. Some hams try to do them all, some are very focused on one particular activity. Personally, I have "rolled" through many specialties in my 35-year ham career. I have been, in succession, a CW rag-chewer, a homebrewer, a boat anchor restorer, a high speed CW operator, a weird QSL card collector, Alaska State Air Force Mars Director, ionospheric researcher, QST, QEX, Ham Radio, Radio World, and Antenna Compendium author, an A.M. aficionado, a 160 meter man, and a few others I've forgotten....ahh yes, I've been in RACES and ARES since the early 70s...(that's the 1970s!) Despite my varied "career path" I always come back to the scarred-up experimenter's bench. I find the insides of radios much more interesting than the outsides. Operating takes a distant second place to understanding. I am lost without a soldering iron in my hands. I love the smell of smoldering rosin flux. The day I can no longer build radios is the day I will hang up my license for good.

Probably the only thing I've never been is a 2-meter FM operator. I keyed up a repeater once in 1974, I believe. I said to myself, "that's nice," handed the radio back to its rightful owner, and went back to my H.F. rig. I find 2 meter FM about as exciting as flossing. But that's just me.

With that background, I'd like to conduct this informal survey of our membership, and get a feel for who we are and where we want to expend our energies, (and funds). I've made this as simple as humanly possible. Just circle the number of the activity that MOST interests you. (I have circled #14, myself). There is also an "other" category, feel free to write in anything I've forgotten. Later on, we'll do a "on a scale of one to ten" sort of survey, to get a "finer grain" on this matter. Thanks immensely! —  
*Eric Nichols KL7AJ, AARC President*

## Survey Question:

The single most important activity of the Arctic Amateur Radio Club is:

- 1) Maintaining a repeater system
- 2) Doing the Yukon Quest
- 3) Emergency communications and preparedness
- 4) General Public service operations
- 5) Field Day
- 6) Licensing new hams
- 7) Education, i.e. getting ham radio into the schools
- 8) Homebrewing
- 9) Improving general technical competence
- 10) Career training (electronics, broadcasting, 2-way radio maintenance, etc.)
- 11) Specialized Communications (Moonbounce, RC, UHF, ELF, AM, Vintage)
- 12) Contesting
- 13) DXing
- 14) Radio Science and Experimentation
- 15) Ragchewing and Social activities
- 16) P.R.
- 17) Writing for the Newsletter/Website
- 18) Paper Chasing
- 19) "Para-Amateur Radio activities, such as SWLing, Crystal Radio Building, "Natural Radio," etc.
- 20) Other (Write in)

**If you cannot bring your survey form to the April meeting, you can email your responses to [KL7AJ@gci.net](mailto:KL7AJ@gci.net) or send to PO Box 56235, North Pole, AK 99705**



## 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@aci.net](mailto:bennie@aci.net)

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.



### FROM THE BOARD:

**The AARC seeks a public information officer to promote community awareness of amateur radio and, specifically, club activities. Duties include writing and distribution of press releases, liaison with local media, and ensuring club events are posted in public forums and community calendars. Contact KL7AJ.**

## Newsletter Needs Your Help

I revived the newsletter a couple of years ago in a new format and, thanks to a handful of regular contributors, it has gained significant popularity among AARC members as well as an international following. It remains one of the most downloaded items from the AARC web site.

Unfortunately, personal and professional obligations mean that I can no longer meet the regular production deadlines alone. Also, contributions have dropped off significantly, from which I can infer few really give a hoot about sharing their ham radio activities now. This isn't intended to be "The N1TX Show." **Unless several volunteers can help edit and write regular columns, May 2007 will be the last issue of this generation of newsletter.** Please help if you can. *73 de N1TX*

## Calendar of Events

Mar 2: General meeting, UAF IARC Room 401. 7 PM. Pre-meeting activities start 6 PM.

Mar 3: License exams. Noel Wein Library. 1 PM. Help wanted. Contact KC8MVW.

Mar 3-4: ARRL International DX Contest, SSB.

Mar 3-4: 1500Z-2200Z, Milan, OH. Thomas Edison Memorial Radio Club, NI8G. 21.370 14.270 7.270 3.770

Mar 8: AARC Board. KL7AJ QTH: 3763 Lyle Ave., N. Pole

Mar 17-18: Russian DX Contest -- CW/SSB, from 1200Z Mar 17-1200Z Mar 18. Frequencies: 160-10 meters.

Mar 17-19: BARTG Spring RTTY Contest -- sponsored by the British Amateur Radio

Teledata Group from 0200Z Mar 17-0200Z Mar 19. Frequencies: 80-10 meters.

Mar 31, 1400Z-2300Z: Saint Joseph, MO. Missouri Valley Amateur Radio Club, WØP. Commemorating the First Run of the Pony Express. 21.305 18.145 14.255 7.245.

Mar 24-25: WPX Contest SSB. See [www.cqwp.com](http://www.cqwp.com).

Apr 1: License exams. Noel Wein Library. 1 PM. Help wanted. Contact KC8MVW.

Apr 6: General meeting, UAF IARC Room 401. 7 PM. Pre-meeting activities start 6 PM.

Apr 12: AARC Board Meeting. Location TBD. Contact any board member for latest info.



*Hrane, YT1AD with team: K1LZ, K3LP, N6TQS, RA3AUU, UR0MC, RK3AD, UA4HOX, RU4SU, SV2BFN, K6SRZ, YZ7AA, YU7NU, YZ1BX, YU1AU, JT1CO, Z3ZM and potential members of team: YU1DX and YZ1EW, will be head of DX Expedition to Swains Island, Tokelau Island and Samoa between March 29 to April 30, 2007. Team will stay on Swains Island 10 days and will operate with 6 station same time. Callsigns:*

**N8S, 4-15.04.2007  
5W5AA, 17-24.04.2007**

*<http://www.yt1ad.info/n8s/index.html>*