

The Short Circuit

Inside this issue:

<i>Shootout Wrap-Up</i>	3
<i>August Specials!</i>	4
<i>MicroKeyer Review</i>	5
<i>DirecTV Offers BPL</i>	7
<i>Manley Alive Again</i>	8
<i>10-10 Promotion</i>	9

Packet Radio Revisited — Part II

By Jerry Curry KL7EDK

Last month we talked a little bit about the history of packet radio in the Interior. This month we'll discuss what's required to play with packet radio and different approaches. When I hear new hams talk about packet I hear all kinds of remarks about it being heavily computer related and difficult to do. No so! It can be as easy or as hard as you want to make it. "But it's for keyboard to keyboard chatting only ! " Not so either!

Before we get mired down in the swamp with the alligators Let's outline a very simple packet station and the software needed to get involved. (I said simple so bare with me a bit here)

You need a TNC or radio modem. Lots to choose from and plenty of them on eBay dirt-cheap. (We're just talking plain VHF Packet Radio TNC...no other modes)

The list includes MFJ, Kantronics, PacComm, AEA, and a couple less known manufacturers. For those of you who have the EmComm Emergency Kits you already have what you need...a plain Kantronics KPC-3. (This is an excellent choice since it can be used for other activities as well.) I prefer the KPC-3 and

the MFJ 1270C myself.

What about a radio?? Again the EmComm kit users have it covered already but for the rest of us just a plain handheld (using outside antenna) or mobile radio will work fine. I tend to like radios in the 25w range. Again, you can find them used on eBay for anywhere between \$80 and \$140....single band (2 meter only). If you are looking to use the radio for other things then a dual-bander might be what you need to look at but then the price goes up as well.

Well that's it for the expensive hardware...but we need to make them talk to each other.

In some cases you can buy a ready-made cable to go between your TNC and Radio. BuxComm sells cables that cover about 90% of current radios so if you tend not to want to fabricate your own cable then check his web site. They run about \$19-\$30 in most cases. Only 3 functions need to be connected between the RADIO and TNC --- RCV Audio, TX Audio, and PTT. Since those signals are all referenced to GROUND you will also need to have a ground connection. So we've defined 4 wires needed between them. That was almost too easy. Well again, the Em-

(Continued on page 2)



The Short Circuit Signs Off — For Now

I announced last spring the need for assistance to produce the AARC newsletter. In response, several members made some contributions of articles and photos, but no one has yet stepped up to take over as lead editor. Unfortunately, my time for the newsletter has simply run out to a trickle, and this will be the last issue for which I am responsible.

The "new" newsletter has been a labor of love over the last two years, and it has been wildly popular with many downloads from all corners of the globe. I thank all of those who supported the endeavor with insight and wit, as well as a willingness to share knowledge and your opinions. I have learned so much from you.

Sadly, this moment comes on the heels of KL1AZ's commentary in June entitled "What Happened to Ham Radio?!" Yet, since everything waxes and wanes, some day I hope to see another reincarnation of *The Short Circuit* when the spirit strikes. Thanks and 73 — Larry N1TX

(Packet Radio—Continued from page 1)

Comm group has an advantage since their Radio and TNC are wired together already. (I believe Kody KL0RN built the cables....Thanks Kody.) The rest of us will have to either buy one or make up a simple

4-conductor cable to use.

What about software? The playing ground here is pretty level...no advantage to the EmComm user group on this one. The easiest software to get started with is HYPER-TERM which is included with

the Windows operating systems. Windows 98, 2000, XP...and I would guess Vista as well. This makes it real easy to at least get into Packet Radio and play a bit. I use HYPER-TERM all the time and it

(Continued on page 3)



TNCs....Top to bottom: KPC-3, Paccomm Tiny2 MK2-Node, PacComm Micropower-2, Kantronics All Mode, Kantronics KAM Plus, AEA PK-80, MFJ 1270. There are some good and bad points about each one but all will work fine for VHF Packet Radio.

(Packet Radio — Cont. from page 2)

works just fine with ALL the TNCs that are out there.

What about the connection between the COMPUTER and the TNC ? Well 99% of the TNCs being used are Serial Interface. Some use a 9 pin (DB-9) and some use a 25 pin (DB-25) but it's a standard RS-232 Serial Port connection. Those using the newer computers will need to step backwards in time and get a USB to Serial converter. (About \$24 at Walmart or Office Max or your favorite computer store.)

All dressed up and no place to go....well you've got your TNC, Radio, and Computer all talking to each other but who do you talk to?? It kind of works like being on an HF or 2 meter radio....someone else has to be on at the same time for a chat. This is seen as one of the downfalls of packet radio but in reality it's only a slight inconvenience. In an area like the Interior of Alaska you won't see a lot of packet activity at any given time. Not many people sit in front of their computer waiting from someone to connect to them for a QSO unless it's a pre-arranged schedule.

So how do you connect or contact other hams on packet radio? Remember back in part one we talked about the BBS. (Bulletin Board System) ?? You can log into the BBS and 'leave' a msg for your ham friend. Some TNCs have their own built-in mailboxes but they would have to leave their

radio and TNC turned on all the time to really take advantage of that situation.

So what else can you do....?? The very nature of keyboard to keyboard activity lends itself well to some uses. Point to point communications during emergencies, relaying boat or dog traffic information, or even sending text files etc. if the need arises. The key is having someone available to man the keyboard at each end. Some of you are already thinking..."we have 2 meter voice".....true, and packet will not replace that as long as we have good repeater coverage, events and emergencies take place within range or unsecure communications are acceptable. Packet Radio traffic is somewhat secure from the general public...much more so than voice.

A nice feature of packet radio is that EACH station is also a 'repeater'...since the mode is digital it's called a Digipeater. All that's needed to make a digipeater is a radio and TNC...no computer or terminal. This means you can build a 'portable' digipeater into an ammo can, wooden box, or what have you and simply drop it some where with an antenna and a battery connected. Much less complicated than a standard voice repeater or crossband repeater.

Again...packet has a place and is NOT a "be all" or "do all" for every communications need. It's a tool in our box of capabilities!!! ☺

Field Day Results: KL7KC vs. KL2R

Everyone had reason to grumble a bit at the outcome of Field Day 2007. The HF bands were rough for all, especially Interior hams fighting a high Kp and aurora activity, which made propagation to the Lower 49 sporadic at best.

Under the leadership of Bob Kreiser WL7GK, the KL7KC team made an heroic effort to put up a tribander and wire antennas at the Ken Kunkle community center in Goldstream. KL2R, which was manned by KL1JP and N1TX, used nearly identical antennas. However, the contact counts were vastly different: 35 versus 311 HF QSOs for the 24-hour operating period. Why?

In a victory pancake breakfast hosted by Justin Burket KL1RL the following Saturday, members from both teams shared insight. The lessons learned boiled down to three T's of contesting: Technology, Technique, and Tenacity.

In terms of radio technology, little differentiated the two stations. Both ran 100-200 watts into Force 12 C3 tribanders. KL2R may have had a slight advantage in antenna height (55 feet versus the lower crank-up tower at KL7KC). On the low bands, loops and a G5RV were in play. Modes were somewhat different, however, with SSB and PSK31 primarily used at KL7KC, while the opponets restricted themselves to CW,

(Continued on page 4)





Special Events to Work in August

Aug 15-Aug 26, 0000 UTC-0400 UTC, Columbus, Ohio. John D. Kraus Memorial Amateur Radio Club, W8JK/W0W. 30th anniversary of the "W0W Signal." While W0W has been approved for use during this period, it will mainly be in use during the Ohio QSO Party, August 25. 7.045 14.045 7.200 14.250. QSL: Bruce Lerner, KC8VEB, 734 Suntree Dr, Westerville, OH 43081. www.w8jk.org

Aug 17-Aug 19, 0000 UTC-

2359 UTC, Cheboygan, Michigan. Oakland County ARPSC, K8S. Celebration of International Lighthouse/Lightship Weekend. 7.270 14.270 21.270 28.370. Certificate: Gary Sklar, 7296 Green Farm Rd, West Bloomfield, MI 48322. k8ikw@aol.com

Aug 17-Sep 13, 1700 UTC-1700 UTC, Illinois River, Illinois. USS LST325 Radio Club, WW2LST. USS LST325 Summer Cruise Up Through the Illinois Heartland. 14.300

14.040 7.040 3.540. QSL: USS LST325 Memorial Ship, 840 LST Dr, Evansville, IN 47713. www.lstmemorial.org

Aug 27-Sep 1, 1600 UTC-2359 UTC, Woodstock, Connecticut. Eastern Connecticut Amateur Radio Association, K1MUJ. 50th anniversary of the founding of Eastern Connecticut ARA. 3.825 7.175 14.125 21.215. QSL: ECARA, PO Box 63, Dayville, CT 06241. www.ql.net/K1MUJ

(Field Day — Continued from page 3)

PSK31, and RTTY on HF.

As hams, we generally accept that CW will outperform any other mode in poor or crowded band conditions. On 20 meters, KL2R was able to chip away slowly but steadily until the band folded late Saturday evening. It was the time to try 40m, which is known to be a difficult band at KL2R in any mode. After a great deal of frustration trying to work very strong CW signals on 40m, the operators decided to try PSK31. Lo and behold, nearly 20 contacts quickly followed, much to their surprise. Conventional wisdom was proven incorrect, at least for these circumstances!

Technique and tenacity were huge differentiators. Most of us believe in being kind and courteous on the bands, and we are careful not to cause interference to the other users. Contesting, however, requires a

certain assertiveness, and timidity is a sure-fire recipe to be uncompetitive. That is not to say you should jam other stations, but at some point you have to jump into the fray. If you're thirsty after a hard day's work, and the wall at the bar is six people deep, you eventually have to find an opening and figure a way to work your way forward, perhaps even stepping on a few toes you didn't see in the darkness.

The basic techniques are to call CQ or to chase other stations. The question a contester should ask themselves is what the other stations are doing. In FD, Lower 49 and Canadian hams are mostly trying to work each other, not those few Alaskans on the air up here. They are mostly set up with temporary lash-ups in the field, and poor conditions on HF are not conducive to busting pileups.

N1TX suggests calling CQ in such circumstances. Those

that want Alaska will hear you, and their calls will attract others.

The band openings may be very brief these days, sometimes only minutes long. That's where tenacity comes in. Calling CQ on an apparently dead or seemingly poor band can pay off when those brief openings occur. Serious operators would not be discouraged by a few frustrating moments of hollering CQ into the ether. Good operators do it for hours and are there to catch the burst of ten or so before the band fades again.

Tenacity pays off, too, when the inevitable failures of technology occur. KL2R suffered a nearly catastrophic PC failure, which left them without digital modes or previous QSOs. They failed back to a CW-only position and were back on the air in less than 30 minutes. Field Day prepares us to respond quickly. ☺



Microham MicroKeyer Reviewed

By Larry Ledlow, Jr. N1TX

When it comes to run-of-the-mill soundcard interfaces for digital modes, one's choices run the gamut from homebrew to low-cost commercial units like the Rascal. Add to the requirements rig control, CW keyer, FSK outputs, and more through a single USB connection to the PC, one starts to enter a more expensive stratum. The idea to throw cash down for an all-in-one solution may be intuitively attractive, but money doesn't solve every problem.

Microham's MicroKeyer is apparently a very capable appliance for ham radio automation, but it is far, far from a 100% simple, plug-and-play solution. Buyers need to be prepared for a lot of work integrating the unit into shack operations. One needs to be relatively knowledgeable in PC configuration and customization as well as have a thorough understanding of the software applications and radio equipment with which the MicroKeyer will interact. To those who have found adopting the MicroKeyer simple and straightforward, I say congratulations. To the rest, I say don't give up easily. I believe it really can be a bonus to just about any operating position, particularly for contesting and the busy, multimode DXer.

Having previously struggled through assisting a fellow ham with his installation on and off over two weeks, I thought I

would have fewer difficulties when I decided to buy a MicroKeyer a couple of months later. This was not the case, however, and I now fully understand now why the paperwork arriving with the unit emphasizes no returns or refunds. Frustration level can rapidly exceed red-line and cause one to abandon all hope.

I should also point out these difficulties apparently are not limited to the MicroKeyer. Another friend recently purchased the DigiKeyer, which is similar but with integrated sound card. After several days, he reported he was ready to "drop-kick it" due to problems getting the unit to permit his software applications to communicate with his Yaesu FT-2000. He also reported intolerable RF interference when the USB Router software was activated.

He spent considerable time investigating the possibility of bad hardware/cable and finally emailed Microham for assistance. They responded very quickly with some useful advice. Microham also suggested that he attach his laptop to the station ground to reduce RFI. In the end, conflicting drivers previously installed on the laptop were found to cause some major problems, but not all issues have been resolved as of this writing.

Oddly enough, I had absolutely no setup problems -- or RFI -- when I tried the Digikeyer in my installation. The exercise

demonstrated just how unique each installation can be.

As soon as possible after purchasing a MicroKeyer, I strongly urge the buyer to update the firmware and "USB Router" software as well as to download the latest manual. Even though I received my unit in early June 2007, the accompanying CD did not contain software or a manual from the last updates in late 2006. I have found each revision of the manual somewhat better than the previous in describing initial setup. All revisions tend to have some confusing bits, so thorough reading and re-reading will be required. There is also a useful application note on audio routing settings available at the microham-usa.com web site that is required reading.

Although many have reported excellent support via email from Microham, I have not tried this path, nor have I felt the need to do so just yet. More extensive support for particular configurations of software/hardware is essentially "community-based" through internet groups. My basic problem with that paradigm stems from the many available opinions and few definitive answers on a mailing list or in a forum. Finding the one golden nugget can be time-consuming if not impossible. Joining a mailing list also means receiving many additional emails irrelevant to my problems. Moreover, there is

I had absolutely no setup problems — or RFI — when I tried the Digikeyer in my installation.



(Continued on page 6)



(MicroKeyer — Continued from page 5)

no substantive help available if one doesn't have the luxury of reliable (or any) internet access.

I think many of us learn best by example. Having some detailed tutorials in the manual describing some common configurations would go a long way to easing the newcomer into MicroKeyer installation. Due to the many variables -- radios, PC configurations, and software applications -- covering all possible combinations in tutorial form would be impossible. However, I still think some detailed examples could be very useful.

I believe the careful thought and quality engineering going into the MicroKeyer are apparent. It is truly a "universal" interface box, which is no small feat of design work. One USB and three audio cables connect the MicroKeyer to a PC, and an "octopus" cable connect the device to the radio inputs and outputs. All mechanical and electrical construction seems to be top-notch, including the supplied radio interface cable.

Many of my issues seem to arise during the integration with the chosen software. In my case, I have experimented with several applications on three different PCs with three different soundcards using one radio, a Yaesu FT1000MP Mark V. I can report at least

partial success in all cases. The first desktop PC with Windows 2000 did not meet the minimum performance specifications as recommended by the MicroKeyer documentation, so I expected some issues if not abject failure. My main objective was to permit the desktop to communicate with and key the transceiver for everyday logging with DXLab Suite. I had this functionality before the MicroKeyer, but certainly cleaning off a few cables from the bench and freeing up some serial ports on the PC was a

correctly even though it checked out using the MicroKeyer as a standalone FSK generator. The glitch was minor, and AFSK is perfectly adequate. The desktop's native soundcard was a Crystal Audio WDM. I found some noise problems and an "open mic" issue I could not resolve until I switched to a Diamond soundcard. Win-Test also worked fine in CW mode with the MicroKeyer's integrated WinKey, but voice keyer functions for SSB operation did not function at all. I believe this was caused

by the sub-par PC performance. Transmitting with a sound card consumes quite a few PC resources and can quickly max-out a slow CPU.



I also tried the MicroKeyer using a Windows XP laptop with 1.4 GHz Celeron M, 1 GB RAM, and AC97 integrated audio. Ham Radio Deluxe, PSK31 Deluxe, MMTTY, DXLab Suite's WinWarbler, and N1MM logger (with MMTTY integrated) all worked fairly well in CW and digital modes. The operation was fine for Field Day use. More experimentation will be required to settle on a diverse single-transmitter contest configuration.

In the several weeks since Field Day, I have gained considerably more experience with the MicroKeyer on yet another PC, a 1 GHZ Intel box with Win2k

(Continued on page 7)



benefit. A small success here went a long way to gaining confidence.

I pressed on with RTTY functionality, since I wanted to move my existing KAM-XL TNC to another operating position. Again, success, although not without some moderate irritation. Once one treads into the murky waters of sound card configuration, level setting, and audio switching, the potential for problems explodes exponentially. Even so, after several evenings I got MMTTY to operate as a standalone RTTY program for sending, receiving, and logging very well. I was never able to get the rig's FSK function to work

(MicroKeyer—Continued from page 6)

and 640 MB RAM. I now fully understand the utility of using the USB Router presets, buttons which recall specific configurations. Each installation and each application using the device will require various tweaks, which can then be saved under the presets. I still lack FSK functionality. I resolved another "open mic" problem, and tried the voice keyer function using Win-Test. A new problem cropped up with the new PC, however. Now I have AC hum on any audio routed from the radio mic through the soundcard and back to the radio. It sounds like a ground loop. Basic attempts to fix it have failed to eliminate the buzz altogether, but it has improved somewhat.

I have to say that after a couple of months experience, I am generally satisfied. In terms of bang for the buck, overall I would rate the MicroKeyer as 3.5 to 4 out of 5. I don't think it deserves a 5 in large part because there is no clear, simple path to get from zero to fully functional, and it is a fairly pricey (\$349) accessory for many hams' budgets. Better delivered documentation, including a quick-start guide and tutorials, could really boost the unit's value in my book. It is not for the faint-of-heart, but I can certainly see the potential. I will study the MicroKeyer very carefully and hopefully become somewhat proficient in its use before committing to a similar -- but likely more expensive -- purchase for my planned SO2R contest operation. ☺

DirecTV & BPL

From ARRL...According to the August 15 edition of The Wall Street Journal, "Satellite-television provider DirecTV announced a wholesale agreement today with Current Group to provide high-speed Internet service over electric-power lines," otherwise known as broadband over powerlines (BPL). "Broadband over power



line is a new technology that allows customers to plug a modem device the size of a cell phone into an electric outlet and connect a cable from their computer for Internet access that is capable of speeds that are faster than some popular Internet plans from cable and phone companies. Current is building out broadband networks in Cincinnati and Dallas-Fort Worth and is in talks with a number of utilities around the world about a commercial rollout," the Journal said.

ARRL CEO David Sumner, K1ZZ, said "There is no reason to panic [over this decision]. ARRL's only concern about BPL is the interference potential. In that regard, the

approach that Current has taken to date -- limiting its use of the medium-voltage lines to 30-50 MHz and using the HomePlug standard to avoid the HF ham bands on the low-voltage drop -- has been satisfactory. If the FCC mandated what Current has been doing, we would be quite happy."

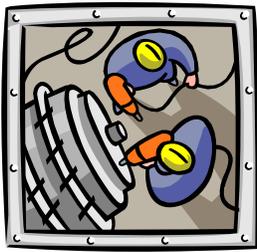
Sumner continued: "We can be glad that DirecTV chose to align itself with a BPL company that has taken the interference problem seriously and has a good track record of avoiding interference in the amateur bands."

ARRL Laboratory Manager Ed Hare, W1RFI, commented, "ARRL and Current have communicated regularly over the past few years. Current has been an early leader in carefully choosing its design to avoid interference to Amateur Radio. They don't operate below 30 MHz on overhead lines at all, and use HomePlug technology, which doesn't use the ham bands, in customers' premises.

To date, ARRL has no Amateur Radio interference reports involving Current or HomePlug equipment."



For more news on this major development at <http://www.intern etnews.com/infra /article.php/3694 521>



Manley Repeater Repaired

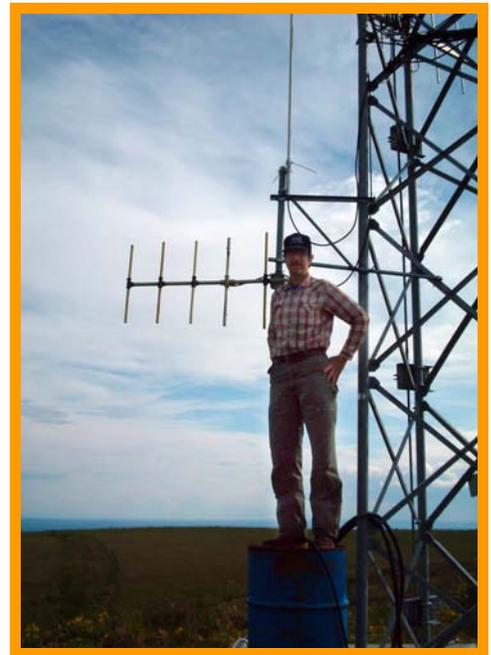
By Myles Thomas KL1NU

The Manley repeater is up and running and fully functional. Glenn Walston KL1TH and I flew out Saturday, June 16, 2007. Glenn got the radio from Jerry Curry KL7EDK after Jerry checked it out. We hooked it up and got it running. We also noticed that the yagi antenna that links it with

the rest of the repeater system didn't seem to be pointing in the right direction. We took a couple of compass bearings and decided to move it about 50 degrees. It now points directly at Ester Dome.

Jerry and Linda Mullen AD4BL said it's a very strong signal. We also took some measurements of certain parts

of the tower and antenna mount that Jerry wanted. He is going to design a different mount for the antenna so it doesn't get knocked out of place by falling ice. There are two other yagi antennas mounted directly above ours. I've included the pictures. I took of Glenn working on the antenna.



10 Meter DX Around the Bend

With the coming of increased sunspots, openings on ten meters will become more frequent and good for DX. At its peak in a few years, we may find the band open to Europe 24 hours on some summer days. The Ten-Ten International Net is a good way to make friends and work new ones when ten meters is hot. Much of the following is a brief history of the organization provided by Jim Michaels (SK), W6PGM #10. You will also find contact information following.

Ten-Ten International Net, or 10-10 for short, is an organization of amateur radio operators dedicated to maintaining high levels of amateur radio communications on the 10-meter amateur band (28.0-29.7 MHz). Established in 1962, 10-10 has grown continuously since that day, with some ups and downs according to the numbers of sunspots and the openness of the band. As you read this, the number of 10-10 numbers issued to members is over 70,000. 10-10 would welcome your membership in the organization if you have an amateur radio license with 10-meter privileges.

Ten meters had been roaring during the fifties. Then came the sixties and with it a bad case of the doldrums. Lack of good propagation, and the resulting lack of interest, caused many amateurs to abandon ten meters for greener pastures. This mass exodus from the band was cause for concern on the part of a lot of ten meter

enthusiasts, for fear that this lack of activity might cause the FCC to consider reassigning this portion of the radio frequency spectrum to some other service. Sometime in 1961, Irv Hunter, K6PWO, started talking about forming an amateur radio organization to promote activity and every day use of the ten meter band. In March of 1962 word got around that a meeting would take place at the San Dimas Canyon Park, near Irv's home in Glendora, for the purpose of forming such an organization. A picnic lunch was held on a Saturday and several hams from that local area attended....and thus the seed was planted.

It was decided by this small group of stalwarts that the net would meet every day of the week except Sunday at "10:00 am local time...or 1800 UTC. (Aha, 'see you on Ten at Ten'....a natural)". So the name quickly became "10-10 Net". The frequency of 28.800 MHz was chosen as the primary daytime net frequency.

Certificates were ordered for members and the caption read Ten-Ten Net of Southern California. Although "10-10" appears on the latest corporation papers, no one seems to know just where the often used "10-X" originated. The original certificate included crossed flags at the top, USA and California, and with the exception of the crossed flags, caption and later the world map, the certificate has remained essentially the

same for all these years.

As with most organizations, we experienced our share of growing pains. Originally the 10-10 Net was organized for the purpose of activating ten meters. The By-laws and preamble stated that we were a "traffic net". The 10-10 net was far from satisfying the ARRL standards for a traffic net, so a major decision was made by the officers and members. We became more of a social net with the prime purpose of maintaining activity on the 10 meter band.

Each sun spot cycle brought both high level activity and low level activity depending upon the period of each cycle. During the good part of each cycle, 10-10 continued to grow and soon became International. "Southern California~ was dropped from the name and the official name became The 10-10 International Net, Inc. and was incorporated in the State of California.

Membership and participation not only promotes the use of 10m. Each member enjoys the camaraderie of kindred spirits, whether the activity is informal rag chewing or numbers chasing or a more formal 10-10 QSO party. The dues are \$15.00 per year for members with a US zip code. Forms and more detailed information is available at the organization's web site: <http://www.ten-ten.org/>. Lost or forgotten 10-10 numbers can be had from w6p0z@arrl.net. Have fun!



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@gci.net

VISIT WWW.KL7KC.COM FOR THE
LATEST CLUB NEWS AND EVENTS!

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



Wanna Become a Licensed Ham?

New Ham Hotline: 1-800-326-3942

The ARRL Ham Radio License Course
Course No. EC-010

Only \$69

Registration includes *The ARRL Ham Radio License Manual*, a one year ARRL membership, and graduate support. 100% guaranteed.

Courses begin on the first Friday of each month.

For more information, email cce@arrl.org or via regular mail to ARRL CCE, 225 Main Street, Newington, CT 06111.

FROM THE BOARD:

The board has no current announcements.

Ford ARC 50th Celebration!

The Ford Amateur Radio Club, the "Tin Lizzy Club", will be celebrating our 50+ anniversary during the weekend of September 7-9th, 2007.

The Special Event weekend will consist of the following:

All Ford Amateur Radio League members and retirees will be invited to work from their home stations from Friday, Sept 7th through Sunday, September 9th as part of the Special Event festivities. Anyone contacting a total of three or more members will receive a special Tin Lizzy Award. All member stations will identify themselves as Ford Amateur Radio League club members. They may be found on any of the HF bands.

The club will set up a portable Special Event station at Ford Field in Dearborn on Saturday, September 8th from 9am until 5pm under the callsign K8UTT. Listen for us around the following frequencies: 7.200 14.310 21.315 MHz

<http://www.geocities.com/CapeCanaveral/Hall/2183/>

Calendar of Events

Aug 3: General meeting, UAF IARC Room 401. 7 PM. Pre-meeting activities start 6 PM.

Aug 4: License exams. Noel Wein Library. 1 PM. Help wanted. Contact KC8MVW@arrl.net.

Sep 1: License exams. Noel Wein Library. 1 PM. Help wanted. Contact KC8MVW@arrl.net.

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

