

December 2006

(www.k7id.com)

P.O. Box 5222 Coeur d'Alene, ID 83816

REGULAR CLUB MEETINGS:

January 8

Sheprock Building
7:00 to 9:00 P.M.
Program: ARES/RACES:
Past, Present and Future
Speaker: Jim Linden, N7JIL
Refreshments: Bob/Bonnie
(K7CGA/KE7FPA) Kesson

February 12

Sheprock Building
7:00 to 9:00 P.M.
Program: "DXpedition on a Sail
Boat" building, operating and
testing a 20 Meter HF station
for -mail and keeping contact
with local hams (us) on the high
seas to the South Pacific.
Speaker: Mike Alfonso,
N7MCA
Refreshments: Chris (N7ZUJ)
Monroe

March 12

Sheprock Building
7:00 to 9:00 P.M.
Program: Using the simplex
IRLP node "3111" in CdA.
Speaker: Ron Hardin, K7BRH
Refreshments: Steven (K7ALS)
Armstrong.



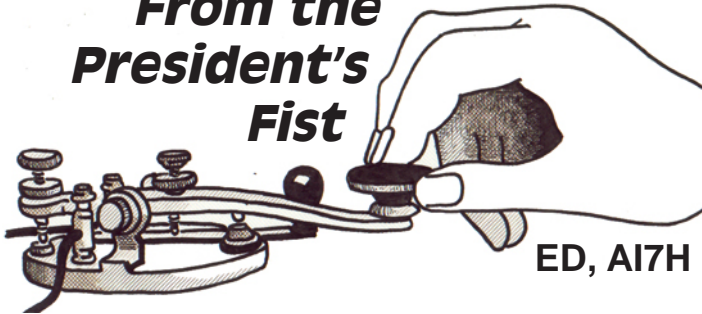
KARS CHRISTMAS PARTY POTLUCK DINNER DECEMBER 11, 2006 MEETING NIGHT

FOOD SETUP BEGINS AT 6 P.M.
DINNER AT 6:30 P.M.

EVERYONE BRINGS A DISH OF FOOD OR DESSERT

ARES/RACES...
OUR GUESTS AGAIN THIS YEAR!

From the President's Fist



New Years Resolutions for Hams?

Greetings to all KARS members and friends! In just a few days, KARS will host the Kootenai County ARES/RACES group to a potluck dinner, to promote fellowship and good will between Club members and other local hams. Then, Christmas and New Years holidays, a somewhat intense time!

But (whew!), what about the New Year, and resolutions? Is it possible to get the words "New Years Resolution" and "Ham Radio" into the same sentence? You bet!

What about polishing the "personal" and "inter-personal" Amateur Radio skills by making a resolution to do one (or more) of the following (in no special order):

- Get on the air. (and/or more often).
- Get the rig to work better.
- Try a new operating mode.
- Organize the Ham Shack.
- Build something.
- Attend more KARS Club meetings.
- Attain a higher class Amateur license.
- Attend a Ham-Fest (to find parts for the construction project).
- Join an on-the-air "net" and participate regularly.
- Invite and bring non-members to KARS club meetings.
- Drop suggestions into the KARS Suggestion Box.
- Help a friend or neighbor get started in Ham Radio.
- Loan or give book, parts, or a rig- to someone who needs it.
- Volunteer to assist on a KARS working committee.
- Volunteer to serve as a KARS officer.



Readers may feel that the list is too long and corny. But, if we want to "move forward" individually and as a Club, it's necessary to set some goals and then achieve them. Hopefully the list above will aid you in choosing one or more goals (resolutions) for the coming year. Good luck, and let me know how you did about this time next year.

Seasons Greetings and 73 to all!
Ed Stuckey, AI7H, Club President



Subject: November ARES/RACES Update

The bands were not cooperating for the Idaho HF net last week. Randy/KB6YAV said he heard them off a couple Khz because of other traffic on 3990 Khz. Since Allen was out at the airport to see the VP, I did the local 2 meter net the best I could from the mobile. We had 11 check ins.

The finish out of the new Mobile Command trailer is moving right along. Sandy and Bob Kesson are going to do a mid-construction visit at the EME factory in Salt Lake City this Friday. They promise to take lots of pictures. The generator is installed, most of the new access doors have been added and a lot of wire has been pulled.

I've been editing the rosters and phone trees. If you get dropped off a list, it's not that we don't need you. It's because I don't remember you attending an A/R meeting this year. We need our roster to show active members. It's easy to get back on the active member roster, come to at least some of our meetings. That way, we know each other and we will be on the same page when we get called out.

As we were making contingency plans for the Air Force 2 visit, I thought of a couple things that I would like to re-address. One item is packet radio. I really like the idea of us being able to communicate sensitive traffic without all the public being able to monitor easily. So I'm blowing the dust off my old TNC and hopefully you folks that are active in packet will see me on soon. During an emergency is not the time to remember how it all works.

The other item is Echolink. I'm glad KARS has done another EL presentation last month. I did an Echolink demo at a KARS meeting several years ago, and I operated an EL Simplex Link when we were in Kalispell last year. There are a lot of EOC's that have EL going, and I see a potential for it's application in EMCOMM here too. I have an interface card, so I'm going to make some cables up, so we will be ready to set up a EL simplex link if needed. I've already got a node number validated for KC7ODP in the MCC laptops for "user" mode. Let

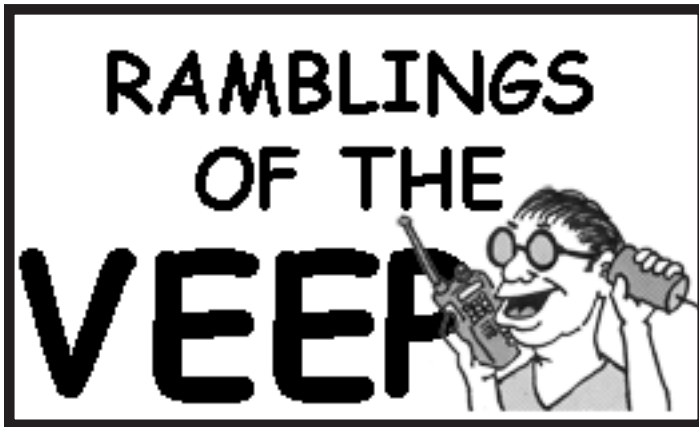
me know if any of you would like to have help getting it set up on your computer. We'll also demo and discuss these modes in future A/R meetings.

Since the scheduled meeting nights fall so close to Thanksgiving and Christmas Days, I decided to cancel November and December regular A/R meetings again this year.

Please check your e-mail address book and make sure you have my alias n7jil@arrl.net I plan to disconnect verizon home phone and their e-mail service soon.

73, Jim Linden,
Kootenai County OEM Comm Coordinator

(208) 755-5076 cell (208) 769-3533 pager
953 N. 5th. St, CDA, ID, 83814
N7JIL@arrl.net



In 2007

Try a New Mode MB!

For the past several months we have been discussing the many different **modes** of operation we amateurs can take advantage of on our bands. Bob Kesson, K7CGA is well on the way to establishing some really cool **digital radio capabilities**, FM, and PSK-31 are truly fun modes. *Echolink* works very well and can be *linked* to simplex and duplex VHF repeaters for worldwide communication. *Who needs sunspots?* But then, there is *Packet*.

My long time issues over packet radio are pretty well known by my *Packeteer* friends in KARS. When I first moved to Coeur D'Alene, the first thing I did was to get a packet station up and running. Six months passed with beacons going out every 20 minutes until Jack, K7JMC finally loaded a message in my mail-box (*thanks Jack, hello to you too*).



After Avista made its third electricity rate increase, I took my packet (racket) station of the air. Well, that may have

been premature. In spite of the many new features to resurrect packet, emergency traffic handling, APRS, and the great presentation given by past president Randy Carlson, KB6YAV, (*it actually worked!!!*) there is yet another really cool application for packet.

In 1995 Stan, WA1LOU, proposed using a 2 meter FM AFSK 1200 baud (I hope I'm not loosing you) packet beacon to explore **Meteor Scatter Communications**, a.k.a. **MB** for meteor burst. This is a mode popular when the HF bands are dead. It bounces a brief radio transmission off of an ionized meteor trail as it enters the atmosphere and eventually burns up. About this time of year we have some particularly interesting meteor showers we can look at (the Leonids and others).



But bouncing a **short** packet radio signal off of a meteor trail is a different kettle of fish. In the old days we called MB operators "ping-jockeys," scatter brains, or other some such derogatory names. Skip forward a few decades and packet might have just been what we needed for reliable MB communication all along. However proving that MB communications is practical with digital modes, i.e. high speed cw etc., took some serious experimenting by the likes of Ralph, W0RPK, and Vern, K0LVS who consistently got contacts over 900 miles on 2-meters, day-in and day-out. The only problem is that it might take a **day or two** for an unattended complete exchange of QSO information (i.e. name, QTH and signal report). But that is enough for a QSL card and a valid contact.

So how do you *SWL* (listen into) MB, and what kind of equipment do you need to operate? A cool Kilowatt is nice especially if attached to eight movable stacked 11-element yagis. But, we'll all have to delay that system until **PowerBall** comes in. In the mean time, put a packet TNC in the monitor mode and park it on a common MB simplex frequency. Come back in a few days to see what is happening.

It is impractical to detail a complete station for MB in these few words but there is plenty of help in the form of QST articles (specifically, Sept 2003); Internet websites; books and materials covering specialized MB modes. Those of you reading our (new) newsletter in PDF form (by e-mail) will also note that color has been added, and that active **hyperlinks** have been included to make web browsing the following sites as easy as a *click*.

PACKET SETUP
28.128 USB
56.20 & 147.585 FM

One web site: <http://www.spaceweather.com/> has so much stuff on it, it will blow your mind. Another: <http://www.pingjockey.net/> is the coolest group of folks on the MB air and what frequencies are being used. Yet another is: http://www.roswellastronomyclub.com/radio_meteors.htm if you like mixing your MB with *ET*. A site that has been around for a while is <http://www.rochesterny.org/beaconet/propnet/> Finally, the granddaddy of all MB communication can be found on <http://www/vhfdx.de/wsjt/> if you are into weak-signal cw (that's Morse code guys).

A long time ago and in another life I placed an *Ameco 6n2* AM (old stuff) beacon on the air running 10 watts into a three element 6-meter yagi. It ran for a few months and I got over 23 signal reports from hams out to about 1300 miles (*and one guy down the street with a Muntz TV*). Perhaps not all propagation was MB, some could have been *ducting* or other goofy propagation phenomenon, but it **worked** and it got my attention. Most impressive was the fact there are even hams out there today bouncing signals off of a returning space shuttle as it passes through the atmosphere. So give it a try in 2007, you just might earn a MB WAS. – **N7JU**

COFFEE & DONUTS
EVERY WEDNESDAY MORNING



8:00 A.M.
TIL
10:00 A.M.

RATHDRUM
SUPER 1 FOODS

Bring a writing instrument. Super 1 supplies napkins for our breakfast table engineering!



LEAGUE
BULLETINS
FROM
NEWINGTON

NOVEMBER 2006

QST de W1AW
ARRL Bulletin 27 ARLB027
>From ARRL Headquarters
Newington CT November 22, 2006
To all radio amateurs

ARRLB027 "Omnibus" Amateur Radio Report and Order Takes Effect December 15

With publication in the Federal Register November 15, the long-awaited changes to the amateur rules are set to take effect 30 days later, at 12:01 AM EST December 15. The so-called "Omnibus" Amateur Radio proceeding, WT Docket 04-140, includes a significant expansion of the 75 meter phone band and a variety of other changes.

The highlights:

- * For Amateur Extra class licensees, the 75 meter phone band will start at 3600 kHz, while Advanced class licensees start at 3700 kHz and Generals at 3800 kHz. The high end of the CW/RTTY/Digital band is now 3600 kHz (although CW is allowed on the entire band).

- * On 40 meters, Amateur Extra and Advanced licensees will be able to operate phone beginning at 7125 kHz, while Generals start at 7175 kHz. The top end of the CW/RTTY/Digital band will be 7125 kHz (although CW is allowed on the entire band).

- * There are no changes to the 20 meter band.

- * On 15 meters, the General class phone band now starts at 21275 kHz.

- * On 10 meters, Novice and Technician Plus licensees can now operate CW/RTTY/Digital from 28000 kHz to 28300 kHz.

* In addition, Novices and Tech Plus licensees can use CW only on the same frequencies as General and Advanced licensees on the 80, 40 and 15 meter bands: 3525 kHz-3600 kHz; 7025 kHz-7125 kHz and 21025 kHz-21200 kHz.

The Report&Order as published in the Federal Register clarified two items that had raised some concerns when it was first released October 10: That the 80/75 meter band split applies to all three IARU Regions, and that FCC licensees in Region 2, which includes North America, can continue to use RTTY/data emissions in the 7075-7100 kHz band.

Several controversial aspects of the proceeding are still to be resolved, although the FCC is working on an erratum for the inadvertent elimination of J2D emissions of more than 500 Hz bandwidth. The Commission intends to release the erratum by the December 15 effective date.

The FCC also took several other miscellaneous actions. /EX

FCC Corrects J2D Error in “Omnibus” *Report and Order*

NEWINGTON, CT, Nov 28, 2006 — The FCC today released an *Erratum* that corrects one error in the recent *Report and Order (R&O)* in WT Docket 04-140 — the so-called “omnibus” Amateur Radio proceeding — that inadvertently limited J2D emissions to an occupied bandwidth of 500 Hz. J2D emissions are data sent by modulating an SSB transmitter. Had it been left to stand, the error would have rendered illegal below 30 MHz PACTOR III at full capability as well as Olivia and MT63 when operated at bandwidths greater than 500 Hz bandwidth, 1200 baud packet, Q15X25 and Clover 2000.

The FCC *Erratum* revises §97.3(c)(2) of the Amateur Service rules going into effect December 15 to read:

Data. Telemetry, telecommand and computer communications emissions having (i) designators with A, C, D, F, G, H, J or R as the first symbol, 1 as the second symbol, and D as the third symbol; (ii) emission J2D; and (iii) emissions A1C, F1C, F2C, J2C, and J3C having an occupied bandwidth of 500 Hz or less when transmitted on an amateur service frequency below 30 MHz. Only a digital code of a type specifically authorized in this part may be transmitted.

In its comments on the proceeding, the ARRL argued that a 500-Hz bandwidth limitation in the definition of data emissions would have unintended consequences because the limitation would also apply to Amateur Radio bands where a higher bandwidth is allowed. In its *R&O*, the FCC said relaxing the bandwidth limitation “would *de facto* eliminate the separation of narrow bandwidth and wide bandwidth

emissions,” which it called an “reasonable means to minimize interference on shared frequencies and bands.”

The Commission said in the running text of the *R&O* that it would address the League’s concern by revising the Part 97 rules “to clarify that the 500 Hz limitation applies only to the emission types we are adding to the definition of data when transmitted on Amateur Service frequencies below 30 MHz.”

Unfortunately, the language of the intended revision that appeared in the original version of the *R&O* inadvertently included J2D emissions among those to which the 500-Hz bandwidth limitation would apply.

The FCC incorporated some unrelated editorial revisions in the version of the *R&O* that appeared November 15 in the *Federal Register*. The “omnibus” rule changes — including those accounted for in the *Federal Register* and the *Erratum* — take effect Friday, December 15, at 12:01 AM EST.

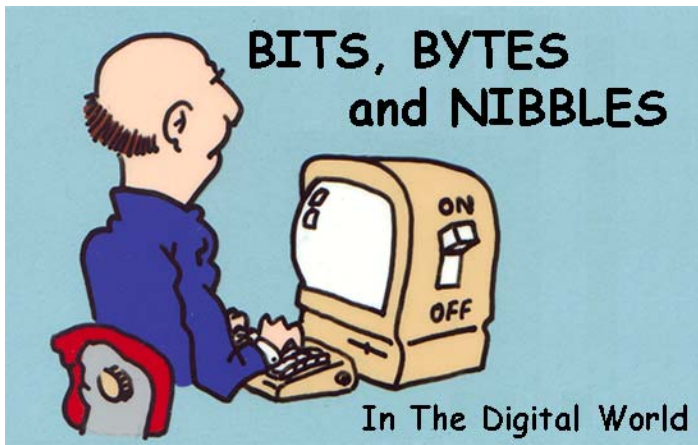
Amateur Radio Exam Question Pools Altered to Agree with New Rules

NEWINGTON, CT, Nov 28, 2006 — With numerous new FCC Part 97 rules soon going into effect, the National Conference of Volunteer Examiner Coordinators’ (NCVEC) Question Pool Committee (QPC) has dropped two dozen questions from the three Amateur Radio examination question pools. The deletions will bring ham radio license exams offered starting December 15 into line with rule changes spelled out in the recent FCC “omnibus” *Report and Order (R&O)* in WT Docket 04-140. ARRL VEC Manager Maria Somma, AB1FM, says ARRL VEC-sponsored examination sessions will go forward without interruption.

“ARRL VEC will not be replacing any of our exam booklets affected by the WT 04-140 rule changes,” Somma said. “We will, instead, be using stickers to substitute alternate questions. The stickers will contain valid questions to place in the exam booklets to cover up the deleted questions.” The stickers will go out by December 15 to ARRL VEC volunteer examiner teams that have been formally field stocked.

ARRL volunteer examiner teams using *ExamWin* software just have to update the “LOCKED.OUT” file to include the deleted questions, Somma added.

The QPC cut just one question from the Technician question pool, 13 from the General pool and 10 from the Amateur Extra pool. Changes in rules governing frequency privileges and external RF power amplifier standards accounted for the lion’s share of the questions cut from the General and Amateur Extra pools.



How to Reinstall Windows XP Without Having to Reactivate With Microsoft

Nearly all of the people who are reading this article have at one time or another had to call Microsoft to get Windows XP activated. Some might feel that it's an invasion of privacy or that Microsoft is acting as "Big Brother" and monitoring their actions. Other may just dislike Microsoft. No matter the reason, there are plenty of users who would rather never go through the product activation process again. Unfortunately for those users, they may very well run into a situation where they do.

Users who reformat their hard drive and perform a clean installation of the operating system will find that they need to reactivate the product. But, as long as the new installation is on the same system and there won't be any hardware changes it is possible to transfer the existing product activation and skip having to go through the product activation process again. Follow the steps below to save the activation status information and restore it once your system is rebuilt:

1. Double-click My Computer
2. Double-click on the "C" drive
3. Go to the C:\Windows\System32 folder (you may have to click on the link that says "Show The contents of this folder")
4. Find the files "wpa.dbl" and "wpa.bak" and copy them to a safe location. You can copy them on a floppy drive or burn it onto a CD or DVD.
5. After you have reinstalled Windows XP on your reformatted hard drive, click "No" when asked if you want to go ahead and go through the activation process

6. Reboot your computer into SafeMode (you can either press F8 as Windows is booting up to see the Windows Advanced Options menu and select SAFEBOOT_OPTION=Minimal or follow the instructions in Starting Windows XP in SafeMode)
7. Double-click My Computer
8. Double-click on the "C" drive
9. Go to the C:\Windows\System32 folder (you may have to click on the link that says "Show The contents of this folder")
10. Find the file "wpa.dbl" and "wpa.bak" (if it exists) and rename them to "wpadbl.new" and "wpabak.new"
11. Copy your original "wpa.dbl" and "wpa.bak" files from your floppy disk, CD or DVD into the C:\Windows\System32 folder
12. Restart your system (if you followed the directions in Starting Windows XP in SafeMode you may need to go back into MSCONFIG to turn off booting into SafeMode)

Voila! Your Windows XP operating system is now reinstalled on your reformatted hard drive and you are all activated without having to actually go through the product activation process!

Remember though. This won't work for transferring activation information from one computer (motherboard) to another or if you alter the hardware because the information contained in your "wpa.dbl" file will not match the configuration of the computer. This trick is only for reinstalling Windows XP on the exact same computer after formatting the hard drive.

Keep Your Eyes Open, Please!

— Original Message —

From: Arthur Wright <mailto:arthur.wright@gmail.com>
Sent: Monday, November 20, 2006 11:45 PM

Subject: Stolen Ham Radios

Hi All,

Last night Annie AA7AG's car was broken into in front of the house. They took her mobile radio, mag mount antenna and 2 HT's from her go kit (it was still in the car from the floods).

If someone offers you a really good deal on

Yaesu VX-7R HT Ser #21033553

Yaesu FT-8900R Quad Band Mobile Ser #3H160390

Yaesu VX-1 HT

Please arrange to meet them later, take down a license number, get a good description, then call the Sheriff.

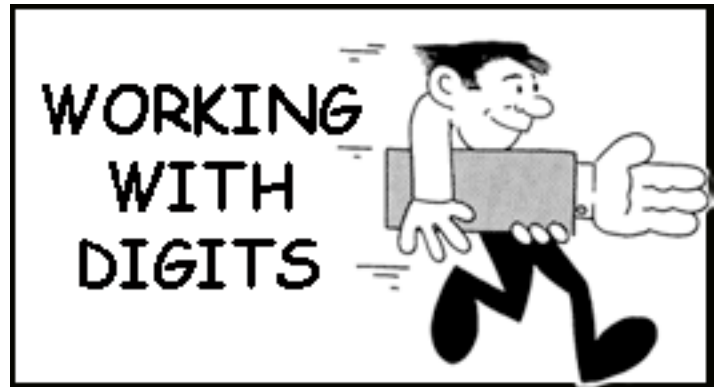
If you see one of these radios for sale, please send a note to Annie at AA7AG@arrl.net or to me at KD7VMK@arrl.net

Thank You,

Arthur KD7VMK

KD7VMK@arrl.net

425 742-6176



Now that winter is here, why not try a digital mode. If you have (or can get) a TNC then some of the software necessary is free. Those who have a sound card in their computer need only purchase Mixwin for \$50 and get 16 other modes in that software.

If you would like to learn more about 2 Meter Packet, contact Randy, KB6YAV.

PSK31 requires a sound card and digipan (free) and a General or higher class license.

If you would like to learn more about PSK31, contact Lee, AA7AF.

Echolink is also for Generals and above. Download the free software, configure your equipment, connect a microphone and headset.

If you would like to learn more about Echolink, contact John, N7JU.

Check out some of these websites:

Packet Radio (FNpack) <http://www.w1fn.org/fnpack/>

WinPack <http://www.apritch.myby.co.uk/uiv32.htm>

MixWin (17 modes) <http://www.mixw.net/>

PSK31 (Digipan) <http://www.digipan.net/>

Echolink (software) <http://www.echolink.org/>

Winlink (software) <http://winlink.org/>

IRLP <http://www.irlp.net/>

The 2007 Rascal <http://buxcomm.com>

Any site I have left out?

Take Echolink One Step Further!

At the last meeting Jerry, KA7RNX gave a talk on Echolink. The downloadable computer software is free. You will need a sound card, headset, and a microphone.

Since a lot of headsets and microphones don't work well in today's computers, Larry, K6SPP has ordered ten headsets and 10 microphones from AllElectronics.

The headset is a lightweight stereo type which contains a 3.5 mm plug. The price \$1.50 each. The microphone is an Electret Desk Mic that sits on a stand or attaches to a mount on the side of your monitor. It also has a 3.5 mm plug and is \$2.50. Larry will sell the set of headset and microphone for \$5.00, which includes some for shipping. He hopes to have them by the December 11th meeting.

Follow The White Line. . .OOPS!



Thanks, Ed.

EDITORIAL

Don't know what you want for Christmas yet? How about asking for a gift that keeps on giving for twelve months of the year. A gift that can help you, and at the same time help others. I am talking about a one-year subscription to QST Magazine. Well, why should you belong to that organization? The first reason that comes to mind is support in the form of representation.

The ARRL representative sits around the table at the World Radiocommunication Conference each year and represents all of the hams in the United States. All of the countries sitting around that table have one vote. Well, they seem to be doing okay without me, so why do they need me? Answer, they need money to continue the work. Do they always do what your want? No, but they are all we have got!

After World War II the principal occupant of 160 meter band was the LORAN navigation system. Amateurs were severely restricted, and any DX was either rare or non-existent. Thanks to the phasing out of LORAN and improvements in receiving antennas, 160-meter DX is commonplace today. Not only that, some amateurs are exploring long-distance propagation at 136 kHz using sophisticated signal detection techniques and others will be trying 505 kHz under an experimental license just granted to the ARRL.

Think about the HF bands, 80 through 10 meters. Again, after World War II there were just four of them: 80, 40, 20 and 10 meters. Then 15 meters was added in the 1950s and 30, 17, and 12 meters were added as a result of the 1979 World Administrative Radio Conference. More recently we've gained some access to 60 meters (just above 5 MHz) on a domestic, not-to-interfere basis. Our predecessors could only dream of having such flexibility to choose operating frequencies to suit propagation conditions.

At the 2003 World Radiocommunication Conference we gained hard-earned improvements to the 40-meter band through the relocation of broadcasting stations out of the 7100-7200 kHz segment. This process is supposed to be completed in March 2009, but progress is already evident.

You can put your ARRL membership card in your wallet right next to your NRA card. Basically they do the same thing - represent you and worked very hard for! Think about it. . .

If KARS has 51% of the membership members of the ARRL, we then are an affiliated club. A side benefit from joining, the club gets free QST advertising, and our members get a discount on their yearly dues. It sounds like a win-win situation to me, and it lasts all year. How about it!!!

LOGBOOK

VE Examinations:

KARS

December 6th. 2006 in Bonners Ferry - Technician Class Course Students and all other exams as (by appointment due to seating and amount of paperwork) Call N7JU. John for details and location 208-765-5470.

December 11, 2006 The annual KARS EOC Party is also shaping up to have some folks who really want to test before the Holiday Season sgets underway so we are setting up a testing session starting at 5:30 by appointment at the CAP Building. Call N7JU, John 208-765-5470 to reserve your test date.

SPOKANE, WA

There will be no testing for my group in Spokane for the month of December. Mary AA7RT

SAGLE, ID

I will not be testing in December. Russ AA7XM

DIRECTIONS TO KARS MEETING:

Take U.S. Highway 95 to Miles Avenue (Miles is about 1 mile North of Hayden Avenue). Go West on Miles to airport gate. Gate requires access code (call Ed, KARS President at area code 208 457-0354. Once past gate bear left to the Shep Rock Building.

2007 DUES ARE DUE NOW!

1. You can bring a check made out to: KARS for \$12.00 (single membership) or \$18 for family membership to the December club meeting.

2. You can mail a personal check made ut to: KARS and send it to P.O. Box 5222, Coeur d'Alene, ID 83816

Dues will be deliquent in February, 2007. The treasurers job can be made a lot easier if you pay as soon as possible.

AUGUST THROUGH NOVEMBER CLUB PROGRAMS IN PICTURES



John, N7JU, presented a Power Point Presentation at the August meeting on “The Digital Modes.”



October continued the digital mode. Bob K7CGA gave the members a glance into the new “Digital Communications equipment in Kootenai County.” He gave examples of the 700 Mhz equipment, procedures, and concepts involved.



N7JU had the members at the meeting on the edge of their seats. Left to right: Bob W7GSV, Lee AA7AF, Brad KE5PER, and Jack K7JMC.



Jerry, KA7RNX, presented “Echolink 101,” at our November meeting. His PowerPoint presentation took the audience from the description of Echolink through the free software download, installation, configuration, and operation.



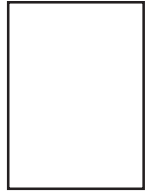
In September, LaMar Ray, WA7LT conducted an hour long program on “How High Should Your Antenna Be!” Many questions were asked that evening. If you have a beam, the answer is 70 feet.

DO YOU KNOW OF A SPEAKER WE SHOULD HAVE FOR AN UPCOMING CLUB MEETING?

IS THERE AN AMATEUR RADIO SUBJECT THAT YOU THINK WE HAVE OVERLOOKED?

If the answer is “yes” to either question, contact our 1st Vice-President, John, N7JU.

KOOTENAI AMATEUR RADIO SOCIETY
P.O. Box 5222
Coeur d'Alene, ID 83816



(Courtesy of an IBM historian): All parts should go together without forcing. You must remember that the parts you are reassembling were disassembled by you. Therefore, if you can't get them together again, there must be a reason. By all means, do not use a hammer. (1925 IBM Maintenance Manual). Thanks, Ed.

2006 CLUB OFFICERS

President: Ed Stuckey, AI7H
208 457-0354 ai7h@arrl.net

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208 765-5470 n7ju@arrl.net

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Secretary: Linda Chamberlain, N7UTK
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208 687-2251 ckay@my180.net

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Propagation is published monthly by the Kootenai Amateur Radio Society (KARS). The club is located in Coeur d'Alene, Idaho and serves the North Idaho and the Spokane, Washington areas.

All opinions expressed in this newsletter are those of the individual contributors and not the radio club as a whole.

KARS operates a voice repeater on 146.98 and a packet repeater on 145.510 Mhz.

Anyone interested in Amateur Radio is welcome to join. Dues are \$12.00 (individual) and \$18.00 for a family membership. Contact the Treasurer if you wish to join.

If you know of anyone interested in joining KARS, you can notify the newsletter editor as to that parties email address. A copy of this newsletter will be send with no obligation to join.

Material can be submitted for publication in Propagation. The deadline for articles, etc., is the 25th of each month for the following month's issue.