Volume 27 No. 2 February 1998

Anchorage Amateur Radio Club

General Meeting Friday February 6, 1998

IN THIS ISSUE:

Featured This Month
This Month's Calendar
Don't Touch That Iron
FCC's new Form 610 available
International Space Station
FCC's Universal Licensing
The Dick Van Dyke Show
FCC Issues FR Safety Supplement
And Much More

Officers

President	Peter Bailey WL7BW
Vice President	Paul Spatzek WL7BF
Secretary	Susan Woods NL7NN
Treasurer	John Lawson NL7NC
Trustee	John Wolfe AA0NN
Activities Chairman	John Lynn KL0CY
News Letter Editor	Edythe Lynn KL0EO

Three Year Board Members

Bruce McCormick WL7YR
Mel Saunders AL7PB
Harvey Rookus NL7DK

One Year Board Members

Dianne Hammer NL7KN
Fred Erickson KL7VC
John Orella KL7LL
Corny Eastman KL0FK
Jack Crowell W6BUS
Dave Filley WL7CDJ

WEB PAGES:

AARC http://kl7aa.akconnect.com
Email to kl7aa@akconnect.com
SCRC http://servcom.com/worcester/scrc.htm
EARS http://ww2.customcpu.com/kl7air/default.htm
KL7J http://www.alaska.net/~buchholz

Propagation Report Recording 566-1819

please let us know if there are other club pages or good starting points that should appear here

News Letter Submissions, Information or corrections:

Edythe Lynn, KL0EO
Email: jelynnjr@customcpu.com
Facsimile: 907-338-4791
Mail: 7013 Trafford Ave. Anchorage 99504

KL7G CODE PRACTICE SCHEDULE

Schedule: 7:00am, 10:00am, 4:00pm, 7:00pm, 10:00pm
AK time, every day
Frequencies: 3575 KHz and 145.35 MHz
Sending Speeds: 22 wpm, 15 wpm, 7 wpm

Nets in Alaska:

The following nets are active in South-central Alaska:
Alaska Sniper's Net 3.920 MHz 0300 UTC daily
Alaska Bush Net 7.087 MHz 0500 UTC daily
Alaska Motley Net 3.933 MHz 0600 UTC daily
Alaska Pacific Traffic Net 14.292 MHz 1900 UTC daily
QCWA net 146.97/.37 repeater Sundays 9:00 PM local
No Name Net 146.85/.25 repeater Sundays 9:00 PM local
Son of Sideband Net 144.20 USB Mondays 9:00 PM local
Big City Sideband Net 144.20 USB Tuesdays 8:30 PM local
ARES net 147.30/.90 Mhz Thursdays at 8:00 PM local
PARKA net 147.30/.90 Mhz Thursdays at 9:00 PM local

Anchorage Area Repeaters

KL7AA systems at Flattop Mt., 2,200 ft
146.34/94 Mhz, 80 watts, autopatch, 100/141.3 Hz PL
223.34/224.94, 25 watts, no patch, no PL
444.70/449.70, 25 watts, autopatch, 100/141.3 PL
KL7ION at Mt. Gordon Lyon 4,700 ft
147.30/90 Mhz - 80 watts, no patch, no PL
KL7AA, Mt. Alyeska, 2,400 ft.
146.46/76 Mhz, 25 watts, no patch, no PL
KL7CC, Anchorage Hillside, SCRC club
146.97/.37 Mhz, autopatch, 103.5 Hz PL
KL7DJE at Grubstake Peak, 4,500 ft.
147.09/.69 Mhz, 25 watts, no patch, 100 Hz PL
444.925/449.925, 10 watts, no patch, 141.3 Hz PL
KL7JFU, Palmer, MARA club
146.85/.25, autopatch, no PL
coming soon KL7AIR Elmendorf

February 1998

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 8:00PM-8:30PM QCWA net 8:00PM-9:00PM No Name net	2 9:00PM-11:00PM Son of SSB net	3 11:30AM-1:00PM HAM lunch Royal Fork 7:00PM-9:00PM EARS meeting 8:30PM-9:30PM Big City SSB net	4 6:30PM-8:30PM VE exam @APU	5 8:00PM-9:00PM ARES net 9:00PM-10:00PM PARKA net	6 7:00PM-9:00PM AARC meeting	7 7:30AM-9:00AM HAM breakfast
8 8:00PM-8:30PM QCWA net 8:00PM-9:00PM No Name net	9 9:00PM-10:00PM Great AK SSB Roundup	10 11:30AM-1:00PM HAM lunch Royal Fork 8:30PM-9:30PM Big City SSB net	11	12 8:00PM-9:00PM ARES net 9:00PM-10:00PM PARKA net	13 7:00PM-9:00PM SCRC meeting	14 7:30AM-9:00AM HAM breakfast 11:00AM-1:00PM PARKA meeting 2:00PM-4:00PM VE exam Hope Cottage
15 8:00PM-8:30PM QCWA net 8:00PM-9:00PM No Name net	16 9:00PM-11:00PM Son of SSB net	17 11:30AM-1:00PM HAM lunch Royal Fork 8:30PM-9:30PM Big City SSB net	7:00PM-9:00PM VE Exam @VFW	18 8:00PM-9:00PM ARES net 9:00PM-10:00PM PARKA net	19 1:00PM-5:00PM Fur Rondi Dog Race	20 7:30AM-9:00AM HAM breakfast 9:00AM-3:00PM EARS swap meet 1:00PM-5:00PM Fur Rondi Dog Race
22 1:00PM-5:00PM Fur Rondi Dog Race 8:00PM-8:30PM QCWA net 8:00PM-9:00PM No Name net	23 9:00PM-11:00PM Son of SSB net	24 11:30AM-1:00PM HAM lunch Royal Fork 8:30PM-9:30PM Big City SSB net	25	26 8:00PM-9:00PM ARES net 9:00PM-10:00PM PARKA net	27 7:00PM-9:00PM MARA meeting	28 7:30AM-9:00AM HAM breakfast

FEATURED THIS MONTH

VK3OT, Steve Griffith will be the featured speaker at the Friday General Meeting. He will give a presentation on his many years of experience of 6 Meter operations in Australia. Steve operates several beacons in Australia and is a recognized authority on 6M operations. He has worked over the south pole and now plans to try out the north pole.

+=+=+=+=+=+=+=+=+

NON-MEMBERS WELCOME: You don't need to a member of the club to attend the meetings or any other AARC events, although we do encourage any non-member to join our group. See the front cover of this newsletter for the details of meetings.

+=+=+=+=+=+=+=+=+

GREAT ALASKA SIDEBAND ROUNDUP

On February 9, 1998 the Son of Sideband Net will be sponsoring the Great Alaska Sideband Roundup. SoSB will start at the regular time of 9:00 PM local on 144.200 Mhz USB. The 6 Meter extension will be on 50.125 Mhz USB as usual with VK3OT participating. This is a chance for everyone to fire up the VHF sideband gear and see how many check ins we can collect in South-Central. Be there or be square!

+=+=+=+=+=+=+=+=+

NEWSLETTER ARTICLES; All articles from members and interested persons are very welcomed. If you wish to submit any articles, jokes, cartoons please have it typed or neatly handwritten, it can be submitted on computer disk, faxed, or via Email.

+=+=+=+=+=+=+=+=+

Regular HAM Gatherings:

* **Tuesdays, 11:30am to 1:00pm:** Join the gang for lunch and an eyeball QSO at the Royal Fork, Old Seward Hwy. (South of Dimond Center)

* **Saturdays, 7:30am:** Here is a great way to get started on the week-end come and meet with some of the locals and have a great breakfast at Phillips Restaurant, at the corner of Arctic and International. Great Fun.

UPCOMING EVENTS

Feb. 6: AARC general meeting at 7pm Carr-Gottstein Building APU Campus.

Feb. 11: License Exams. 6:30pm Carr-Gottstein Building, APU Campus. Bring photo ID, copy of license (if any) and any certificates of completion.

Feb. 13: SCRC general meeting at 7pm RM 220, Business Ed. Bldg., UAA campus.

Feb. 14: License Exams, Hope Cottage Offices, 540 W. International in the Board Room. At 2pm. Be sure to bring photocopy of your license, photo ID, and any certificates of completed elements.

+=+=+=+=+=+=+=+=+

ELMENDORF AMATEUR RADIO SOCIETY'S
2nd Annual SWAP MEET

Elmendorf Amateur Radio Society is putting on a Swap Meet and Craft Fair Sat 21 Feb. at 0900 to 1500, at the Tudor Road Bingo Center 3411 E. Tudor Road (the strip mall across from Tozier Dog Track). Admission is $2.00 at the door. Tables are $15.00 for Amateurs, $20.00 for commercial ventures ($5.00 for extra tables).

Our Swap Meet last year was a great success, plus it was a good chance to meet up with other local hams. Now you are probably reading this and wondering why are those guys having a Craft Fair at a Ham Fest????? This is a good question, the last time you went to a Ham Fest what did the XYL say? If she is anything like mine, it was probably something to the effect of "you go, I gotta wash my hair" or "here's five dollars don't spend it in one place!" Are you getting the picture? This is a good opportunity to get the family out of the house and have some fun.

Auctioneer Tall Ken Louder (aka NL7UW) will be available for anyone wanting to move that prime hunk of equipment. There have been a group of new licensees recently. These folks are looking for gear, and we all know how difficult it is to find. By holding a swap meet not only will these folks have an avenue to find gear, you get a chance to clean out the shack, Remember that King 2 meter HT you're using for a door stop? It looks like a hard winter coming, so this may be a great chance to get out and socialize with other hams. The Bingo Center has a fairly good size "cantina" with a great cup of coffee.

If you are interested in setting up a table or know someone who is, please call Dan, NL7UW @ 337-0079 or E-mail at <dspears@customcpu.com>. Tina, KB5ZLV can also field your questions at 333-0659 or e-mail her at <leetina@alaska.net.>

73 and Hope to see you there! Dan NL7UW

+=+=+=+=+=+=+=+=+

AARC Club Jackets

from John Wolfe AA0NN

KL7AA Club Members! The board approved the two styles of club jackets for sale at a price of $50.00 each. One style is similar to the one worn currently, long, covering the hips, but with a fleece lining and zippered inside pocket for keeping the HT battery warm on those cold days. The second style is shorter, similar to a baseball jacket since it has a waistband, but thicker. It too has the anti-pilling fleece lining and the inside zippered pocket. The design is a full back embroidered club logo which everyone seeing it approved of, and two lines of text on the front left hand side (the members name and callsign) in Red brushed script letters. It looks great against the royal blue jacket. So, I'm open for orders. Sizes are S-XXL, with the long style jacket running a bit large in their sizing. John Wolfe will take jacket orders. AARC will foot the bill and you'll pay the money to the AARC at the next club meeting, upon receipt. Orders will be taken during the January, February & March meetings, so no need to worry about missing out. One last thing. If you see someone missing from the mailing list, please get the word out to them, and let me know so I can update my list. 73 de AA0NN

+=+=+=+=+=+=+=+=+

Don't touch that iron!

To any and all do-it-yourselfers, beware of the Dual Heat Soldering Iron sold by Radio Shack, model number 64-2187. I purchased my first one from them in September. It shorted out and started smoking the second time I used it. I promptly took it back for a replacement. The new one didn't make it past the first coax solder before it, too, shorted out, and the barrel fell off, throwing solder on me, my computer keyboard and burned my new computer desk.

On investigation I discovered the barrels that come out of the gun are themselves only soldered to the inside coil. DANGER!!! This manufacturing technique is highly hazardous. When I talked to the Radio Shack representative, he said, "The product is being taken off the market." Later, when I called the area representatives and local stores, they had not received any such notification. If this is an example of the current quality of workmanship from them, I would suggest caution in using any product purchased from them or certified from "United Laboratories (UL)."

Henry, KB2SRU, & Lenaya Deitchman
Niceville, FL

+=+=+=+=+=+=+=+=+

SPECIAL NOTICE:

The American Red Cross has a new address 235 E. 8th Ave., PO Box 10-1139, Anchorage, AK 99510-1139

+=+=+=+=+=+=+=+=+

FCC's new Form 610 available

With just days to spare, the new FCC Form 610 becam available from the FCC's forms contractor. The FCC ha ordered the destruction of all previous versions of the form. As of 01 January the FCC will accept only the new Form 610 for all filings. Forms 610A and 610B also have been amended. The major change in the new Form 610 is a certification that says the applicant has read and will comply with the new RF radiation safety rules that begin phasing in 01 January 1998.

The FCC Forms Distribution Center accepts orders at 800/418-3676. That's not to say the new Form 610 simply has not been available until now. ARRL VEC Manager Bart Jahnke, W9JJ, says the ARRL/VEC sent out 43,000 copies of the revised 610 last week to VE teams across the country. The ARRL had copies printed earlier this fall and has been supplying the new forms to those who have requested them for the last six weeks. In addition, the ARRL now supplies a new handout, Additional Information for Amateurs Completing the New FCC Form 610, that contains a condensed version of how to comply with the new RF safety regulations.

The new Forms 610 also have been available from the FCC's Web site at http://www.fcc.govformpage.html, at ftp://ftp.fcc.gov/pub/Forms, or by fax at 202/418-0177 (request index).

To order a new Form 610 from the ARRL, send an SASE ro ARRL/VEC, 225 Main St., Newington, CT 06111. Inclu one unit of first-class postage for each form you order.

+=+=+=+=+=+=+=+=+

FCC's Universal Licensing

As a first step in implementing its new Universal Licensing System (ULS). the FCC's Wireless Telecommunications Bureau is attempting to "populate" the ULS by getting licensees to register. Ultimately, the ULS will give hams and other licensees on-line access to make license updates and renewals, eliminating the need for hardcopy forms like the venerable Form 610. An FCC Public Notice this week said the ULS is aimed at combining the 11 different licensing systems the Bureau now uses--Including Amateur Radio--into a single system.

ULS registration requires supplying a Taxpayer Identification Number (for individuals, this is typically your Social Security Number) and "associated call signs." These could include your individual call sign plus any club station call signs for which you are the trustee.

The Public Notice said that in conjunction with the ULS, the FCC "must collect TIN information to correlate its licensees with any outstanding Federal debt that they might have incurred in other dealings with the Federal Government." All vanity call sign applicants must now supply a TIN as part of Form 159.

On-line registration via the Internet is available. In addition to providing basic name and address information, registration

requires you to establish a password that you must use along with your TIN to reenter the system to make future changes. The ULS also lets you check the status of a pending application. A spokesperson in the FCC's Technical Support Group said the FCC will verify all data supplied at the time of registration to ensure that it is valid before the data are entered into the FCC licensee database.

Using the TIN and the associated call sign(s), the ULS assigns a unique sequential number to each licensee. The WTB says that once it has registration information and has implemented the ULS, it will streamline and simplify the FCC's ability to handle future administrative changes (name and address changes, for example).

Licensees are invited to register electronically at http://www.fcc.gov/wtb/uls. Select ULS Registration. Licensees without access to the Internet may file a TIN registration form, FCC Form 60, from the FCC's fax-on-demand service at 202/418-0177 or by calling the FCC Forms Distribution Center, 800/418-3676.--*FCC, ARRL Letter*

+=+=+=+=+=+=+=+=+

The Dick Van Dyke Show

Byron Paul, WA6BRG, claims that the Emmy Award-winning show got on the air because of Amateur Radio.

When I was just out of the army in 1945, I was walking in New York City and passed CBS. I wanted a job, so I asked the doorman to which floor I should go. I must have misunderstood, as I got off the elevator at the wrong floor.

"There, I almost bumped into a gentleman who asked what I wanted.

"I told him, 'A job.' He talked to me and I mentioned I was an Amateur Radio operator. It turned out he was the renowned Dr. Peter Goldmark, head of CBS Labs. He said, 'Ah, I like you hams. I have several here. You report for work tomorrow morning.'

"Well, eventually I became a cameraman, then a director and finally a producer. One day we needed a certain talent for a new program and I happened to think of a tall, talented fellow I'd been with in the Army. We sent for him.

"Of course, Dick was excellent and an immediate hit. We became partners and the Dick Van Dyke series was born.

"Dick later returned the favor by recording a flock of radio and TV announcements inviting people to join Amateur Radio, via the American Radio Relay League."

Lenore Jensen, W6NAZ

+=+=+=+=+=+=+=+=+

International Space Station crew will include hams

Hams will be among the first crew members to live and work aboard the International Space Station. The first crew will consist of U.S. astronaut William M. Shepherd, as the expedition commander. Shepherd is studying for his ticket. He'll be accompanied by Russian cosmonauts Yuri Gizdenko and Sergei Krikalev, U5MIR.

The second crew will be headed by Russian cosmonaut Yuri Usachev, R3MIR, and will include U.S. astronaut Susan Helms, KC7NHZ. U.S. astronaut Carl Walz, KC5TIE, will be a member of the fourth crew to head to ISS.

Initially, the crews will inhabit the service module, which will include an Amateur Radio antenna. Ham gear will be delivered aboard STS-96 late next year. NASA says it will not have the International Space Station fully assembled and operational until the year 2003. --ARRL

+=+=+=+=+=+=+=+=+

Solar Cycle 23 How is it Really Doing

Last January, the prospects for Solar Cycle 23 were very bright indeed. Mind you, they still are very bright-we just have to be a little more patient! A year ago, scientists pegged the start of Cycle 23 as May 1996 \, when Cycle 22 seemed to have slid to it lowest point. They forecast that propagation conditions would begin to ramp up rapidly in 1997 and by late 1998 worldwide DX on 10 meters would become commonplace. Avid DXers and HF contesters started looking forward to far better propagation than we've had in the last three or four years.

Unfortunately, one of the main characteristics of any forecast is that it will usually prove to be incorrect! After issuing their summary report in September 1996, the Solar Cycle Prediction Panel, consisting of a dozen scientists from government agencies around the world, met again a year later to review the latest data. They published their revised report in early October 1997. This stated: "However, based on additional factors including the number of spotless days and the dominance of the new cycle active regions, the Solar Cycle 23 Panel recommends that October, 1996, be used as the *effective onset* of Cycle 23.

The good news is that the panel is still predicting that the level of solar activity will be strong, comparable to that of Cycle 22, the third largest cycle in the almost two hundred fifty years that sunspot numbers have been systematically recorded. The bad news in the revised report is that the good times will delayed by about five months: "The month of smoothed maximum should lie between June 1999 and January 2001, with March 2000 as a likely mid-range estimate." Oh well, we'll have some more time to refine our antenna systems before letting the good times roll.....

So, When Will Propagation Rally Get Hot????

The tables in *The ARRL Antenna Book* define a "Medium" level of solar activity as when the Smoothed Solar Flux rises about 100, corresponding to a Smoothed Sunspot Number higher than about 40. At that modest level of solar activity, 15 meters is expected to be open to Europe for between 6 to 13 hours a day, and 10 meters between 1 to 5 hours, during the fall and winter months.

If the forecasters are correct, a Medium level of solar activity means there will be some nice activity on 10 meters during the winter of 1997-1998, at least for those fortunate enough to have big antennas, full legal power levels and advantageous

locations. For you folks with 10 W and an indoor dipole, I'm afraid that you'll have to wait bit longer-sometime in the fall of 1998 you too should be able to rally start enjoying the worldwide feast of DX on the upper HF bands!

+=+=+=+=+=+=+=+=+

Solar Update

Tad Cook, K7VVV

The disturbed conditions forecast for last weekend hit quite hard. Dec. 27th and 28th. A coronal mass ejection a few days earlier caused the planetary A index to hit 25 last Friday, 19 on Saturday and 14 on Sunday. This caused HF havoc during the CQ Worldwide DX Contest.

Last week we saw the average solar flux drop a few points and the average sunspot number decline by 10. At the same time the average flux for the previous 90 days went up by one point from 86 to 87, and the solar flux was below this average for six out of the seven days.

This weekend is the ARRL CW Sweepstakes, and conditions for this domestic contest should be quite a bit better. Conditions are expected to be quiet to unsettled, with solar flux climbing from 90 to 95. Northwest Research Associates has an interesting web site devoted to space weather, including charts of 10.7 cm solar flux, effective sunspot numbers and geomagnetic indices. Check it out at:

http://www.nwra.com.nwra.spawx/

+=+=+=+=+=+=+=+=+

WRC-97 Wraps Up In Geneva

by Rick Lindquist, N1RL

The 1997 World Radio communication Conference concluded its talks in the early morning hours of November 21 in Geneva, Switzerland. Amateur Radio survived WRC-97 largely unscathed, but the stage has been set for renewed spectrum battles at WRC-99.

The Little LEOs (non-voice, non-geostationary mobile satellite interests)-which put a huge scare into the ham radio community in 1996 with their proposals to share ham radio VHF and UHF bands- were unable to muster must support for new allocations at WRC-97. However, they came away with up to 3 MHz of additional spectrum on a regional basis, in the bands between 454 and 460 Mhz. The Little LEOs also got a resolution calling for urgent studies in preparation for WRC-99-what some at the conference called "a hunting license" for additional VHF/UHF spectrum. A second issue that will recur at WRC-99 is finding a place in the 420-470 Mhz frequency range for the Earth Exploration Satellite Service (EESS). Synthetic aperture radars (SARs) using frequencies in this range said to be capable of penetrating the rain forest for mapping purposes.

Two significant ham radio-related issues failed to made the cut for consideration at WRC-99. For budgetary reasons, the WRC-97 delegates had to limit the WRC-99 agenda only to the most urgent issues. Pushed back to the tentative agenda for WRC-2001 were the possible realignment of the 40 meter band to resolve a conflict between hams and broadcasters in part of the band (along with possible expansion of broadcasting bands between 4 and 10 Mhz), and Article S25 of the international radio regulations. Article S25 contains the international regulations specific to the Amateur and Amateur-Satellite Services, including the Morse code requirement for operation below 30 Mhz.

WRC-97 delegates approved a resolution encouraging administrations to facilitate the use of Amateur Radio and other "decentralized means of communications" for disaster mitigation and relief operations. This resolution eliminated the need for Resolution 640, which defined how certain ham bands could be used for international disaster communications by non-amateur stations, so Resolution 640 was suppressed.

WRC-97 delegates did agree to upgrade the Earth Exploration Satellite Service from secondary to primary at 1215 to 1300 Mhz, which should have only minimal impact on amateur use of 1240-1300 Mhz. The presence of EESS there also reduces the possibility that other, less-compatible services might later be introduced into this band.

In other allocations decisions, amateur satellites segments ere not included among allocations for wind profiler radars. Except for a worldwide primary allocation at 1270-1295 Mhz, the only specific allocations for wind profiler radars are in Region 1, and those are on a secondary basis. Region 2 administrations were urged to implement wind profilers in radiolocation bands at 440 to 450 Mhz, 904 to 928 Mhz (protecting the lower weak-signal segment), 1270 to 12[illegible] Mhz (protecting amateur satellite and weak-signal), and 13[illegible] to 1375 Mhz. The delegates agreed that the bands 420 to 435 Mhz or 438 to 440 Mhz could be considered for use in situations where there was incompatibility between wind profiler radars and other radio applications at 440 to 450 Mhz or 470 to 494 Mhz (only in some Region 1 countries). In this case too, the amateur-satellite segment is protected.

Several Region 1 (primarily European) countries deleted footnoted exceptions to the international table of allocations in the 1810 to 1830 KHz range, expanding the usability of 160 meters for ham radio. North Korea was persuaded to drop its bid for footnoted exceptions to the allocations table that could have affected some ham radio bands in that part of the world.

Amateur Radio was represented at WRC-97 by a multinational team of International Amateur Radio Union officials, including Secretary Larry Price, W4RA, Vice President Michael Owen, VK3KI, and Region 1 Vice Chairman Wojciech Nietyksza, SP5FM. They were assisted for a time by Tafa Diop, 6W1KI, and Eduardo Estrada, HC2EE, who are members of their respective regional executive committees. Numerous radio amateurs attended the conference in official capacities on behalf of their national administrations, including ARRL Technical Relations Manager Paul Rinaldo, W4RI, who served on the US delegation.

In all 1801 delegates from 142 countries registered at the conference. Another 141 observers from regional and international organizations also attended.

+=+=+=+=+=+=+=+=+

FCC ISSUES FR SAFETY *SUPPLEMENT B* TO OET BULLETIN 65

Hams now have basic guidelines and tools to evaluate their stations for compliance with the FCC's RF exposure guidelines that go into effect January 1, 1998. The FCC's Office of Engineering and Technology issued the lone-anticipated Amateur Radio *Supplement B* on November 18. The FCC worked closely with the Amateur Radio community (including the ARRL) in developing the new supplement. The supplement runs approximately 70 pages. Among its noteworthy highlights are numerous easy-to-use tables based on various frequencies, power levels and antenna configurations to help hams determine whether their stations comply with the FCC's published RF exposure guidelines. Most tables show compliance distance--the distance that an antenna needs to be located from areas of exposure to be in compliance. (For a closer look, see "FCC RF-Exposure Regulations--the Station Evaluation," by Ed Hare, W1RFI, which will appear in the January issue of QST.)

The FCC requires all amateur radio stations to be in compliance with new RF safety guidelines and will require many stations to perform a routine evaluation to ensure compliance. There are three ways an evaluations may be done. 1) Take actual measurements with equipment not found in most ham shacks; 2) Make mathematical calculations or 3) Estimate using table that will be made available soon.

The FCC went along in part with an ARRL request and established a sliding scale for threshold levels dependent upon frequency. The revised thresholds are 500 W for 160 through 40 meters, 425 W on 30 meters (the maximum legal power is 200 W), 125 W on 17 meters, 100 W on 15 meters, 75 W on 12 meters and 50 W on 10 meters. The threshold for all VHF bands is 50 W. On UHF, the threshold level is 70 W on 70 cm, 150 W on 33 cm, 200 W on 23 cm, and 250 W on 13 cm and higher frequencies.

The threshold for amateur repeaters is 500 W effective radiated power (ERP) if the repeater antenna is located on a building or is less than 10 meters above ground. Stations operating at or below these respective power levels are categorically excluded from having to conduct a routine RF radiation evaluation. Mobile and portable (hand-held) devices using push-to-talk operation generally are also exempt from evaluation. But, all stations--regardless of power level-still must comply with the RF exposure limits that become effective New Year's Day

OET Bulletin 65 and the new supplement B are available at:
http://www.fcc.gov/oet/info/documents/bulletins/#65

+=+=+=+=+=+=+=+=+

Twelve Jugs

Benjamin, KC7MMI

I had twelve jugs of hard cider in my cellar and was told by my wife to empty the contents down the sink or else; so I said I would.

I pulled the cork from the first jug and pored the contents down the sink with the exception of one glass which I drank, I pulled the cork from the second jug and did likewise with exception of one glass which I drank, I then pulled the cork from the third jug and poured the cider down the sink with the exception of one glass which I drank. I pulled the cork from the fourth sink and poured the jug down the glass which I drank. I pulled the cork from the next jug and drank and drank all but on sink of it, and threw the rest down the glass. I pulled the sink from the next glass and purred the cork form the jug. Then I corked the sink with the glass, jugged the drink and drank the pour. When I had everything emptied, I steadied the house with one hand and counted the jugs, corks, glasses, and drinks which were 29. And as the houses come by I counted them again, and finally had all the houses in the jugs, which I drank. I am not under the affluence of incahol as some tinkle peep I am. I fool so feelish, I don't know who is me; and the drunker I stand here, the longer I get.

+=+=+=+=+=+=+=+=+

Antenna Talk By *KL7J*

Email: KL7J@usa.net
http://www.alaska.net/~buchholz

Center the Mast in your rotator.

Did you know that most popular rotators are set up for a 2" OD mast? Check your rotator spec's and see what size OD masts they are made for. Think about it, you tighten the clamp on the rotator by moving one side of that clamp only. If you do like many of us, you have used water pipe which has an OD less than 2". So...you are turning that mast in an oblong orbit and certainly not in alignment with a thrust bearing. The fix is to shim the mast to put it in the center of rotation.

Ground and Antenna's

The quality of ground at varying distances from an antenna is only one factor among many with which terrain evaluation is concerned. Slope and interfering objects are samples of other factors that go into terrain evaluation for determining the ultimate elevation pattern for a given antenna and site.

Self-contained vertically polarized antennas, such as the vertical dipole exhibit the same far radiation properties with respect to ground as do dipoles and other horizontally polarized antennas at HF. The surface wave of an HF antenna is small, relative to the sky wave.

Quarter wave vertical antennas are generally analyzed as having their missing pole (relative to a dipole) within the ground. It is the surface volume of the ground that provides the completion of the antenna. Signals penetrate the ground

to depths that vary directly with wavelength and inversely with frequency.

The general radius of this surface is about 1/4 wl. Since even the best soil is lossy compared to conductors, we lay screens and radials under the soil to improve its conductivity. Somewhere between 60 and 120 radials approaches the conductor saturation point of most soils. This is the "ground plane" antenna.

Considering ground lossy, even a few feet of elevation with some radials can improve the performance of a 1/4 wave vertical over that obtainable with a few buried radials. It's interesting to note in ARRL antenna literature that rooftop 1/4 wave vertical antennas do not seem to benefit from littering the roof with 60 to 120 radials. Eight radials seems to be enough with the base of the vertical 1/4 wavelength of the ground [234 Mhz = 1/4 wavelength] and decreasing to four radials if the base is 1/2 wave above the RF ground [where ever RF ground is... remember RF ground is not exactly at the surface].

+=+=+=+=+=+=+=+=+

Phase 3D Status Report

HR AMSAT NEWS SERVICE BULLETIN 341.02
FROM AMSAT HQ SILVER SPRING, MD,
DECEMBER 07, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-341.02

Phase 3D Project Leader Karl Meinzer, DJ4ZC, recently visited the Phase 3D Integration Lab in Orlando for a top-to-bottom review of Phase 3D's status. The Phase 3D satellite was to have been aboard the Araine 502 flight October 30, but ESA's revision of launch environments, and the consequent structural modifications to the satellite's spaceframe made it impossible for Phase 3D to meet the 502 flight schedule.

According to AMSAT-NA President Bill Tynan, W3XO, the structural work is now essentially complete and the crew at the Orlando Lab are beginning to re-install electronic modules and other equipment which had to be removed so that the structural work could proceed. Following this tests will be conducted to confirm satisfactory interoperablility of all of the Satellite's various sub-systems and then environmental testing will take place.

Tynan further stated that he doesn't expect any new information concerning a launch date and vehicle for Phase 3D until well after European space authorities determine the root cause of the early engine shutdown that took place on the recent Ariane 502 flight.

Keith Baker, KB1SF, AMSAT-NA's Executive Vice President noted that according to the original schedule, the next Ariane 5 vehicle (503) is due to lift off in May 1998, for the final qualifications flight of the Ariane 5 program. The first Arraign 5 commercial launch (L504) is currently planned for the second half of 1998.

[ARRC thanks Karl Meinzer, DJ4ZC, Keith Baker, KB1SF, and Bill Tynan, W3XO, for this information]

+=+=+=+=+=+=+=+=+

Buzzline

Michael C. Martin, N3RWF

What does the buzz in my radio and the dots across my TV screen mean? Statistics from Utilities all over the country show that 90% of their radio and television interference (RFI/TVI) complaints are caused by ARCS. Those arcs are caused by a gap at a poor or broken connections These arcs created heat and heat has the potential to become a fire hazard. Each one of those tiny little dots and lines on your TV and the snap crackle and pop on your radio (unless you're listening to a Rice Krispies commercial) is the result of an arc and it may be in your home.

For over 18 years I have been investigating about 500 Radio and TV interference complaints a year for Power Companies and other utilities all over the country. Most symptoms that people complain about: bussing in their AM/FM radio and/or dots and lines on their television picture.

I have found over the years that over 90% of these symptoms are caused by an arc! That's right, arcs. Many times when I find the source it's hot enough to cause a fire and several times has burst into flames at the time I located it.

I thought it would be interesting to find out just how many fires might have been avoided if people knew the symptoms to look out for. If people knew what caused these interference problems maybe we could find the source and prevent the arcs from causing a fire.

Though various resources I compiled a list of many people who were victims of house fires that were determined to be caused by electrical problems. Next I put together a list of questions, some irrelevant to my research but lead to the point. Some of the conversations were very interesting and lengthy, not to mention costly.

I interviewed 100 people whose homes were destroyed by fire and the cause was determined to be an electrical problem. The following questions were used to confirm my theory:

~Did you have TVI and/or RFI before the fire?

86 YES 10 NO 4 DON'T KNOW

~Have you had the TVI/RFI since the fire damage was repaired?

0 YES 100 NO 0 DON'T KNOW

Also, 5o neighbors of the house fires were contacted. These neighbors were either next door or directly across the street from the house fires (close enough to receive the arcing on their TV and/or Radio). Following are questions we asked.

~Did you have TVI/RFI before the neighbors fire?

45 YES 0 NO 5 DON'T KNOW

~Have you had the interference since the neighbors fire?

0 YES 50 NO 0 DON'T KNOW

I think those statistics speak for themselves. Should you ignore these early warning signs? NO!!! Should you try to filter the symptoms? NO, that only helps the symptoms not the problem. How do you find these problem sources and what can you do to correct them? Your first step is to call

your local power company. They should have someone qualified to locate the source of your problem. If that doesn't get you the results you want give then a copy of this article. You can contact me at RFI SERVICES for a free instruction manual. This manual will take you step-by-step to the source. I can be contacted by: phone & Fax (410)741-5153 Email rfiservices@erols.com S.A.S.E. RFI Services, 8812 Lafayette Dr., Owings, MD 20736-9509

These sources should be found and removed. Remember, the interference you have may be the early symptoms of an electrical hazard and the early symptoms of an electrical fire. It may also be causing problems for someone else.

+=+=+=+=+=+=+=+

Tauzin says "We hear you" to Amateurs, Scanner Fans

Hams, scanner enthusiasts and others are breathing a tentative sigh of relief this week. Their efforts apparently have paid off to convince House Telecommunications Sub committee Chairman W.J. "Billy" Tauzin (R-La) that HR 2369, the Wireless Privacy Enhancement Act of 1997, was flawed legislation. Tauzin's so-called "scanner bill" has been rewritten to reflect the concerns of hams, volunteer firefighters, scanner enthusiasts and others. Many meetings, phone calls and letters with Tauzin's staff followed the introduction of the original bill. At Tauzin's request, the League submitted recommendations to narrow its scope From Washington, ARRL Legislative and Public Affairs Manager Steve Mansfield, N1MZA, reports that most of those recommendations found their way into a committee markup of the bill, released Wednesday, October 29. While the original version of HR 2369 covered the entire Commercial Mobile Radio Service (CMRS), the current version restricts its scope to just cellular telephone and the Personal Communications Service (PCS). Mansfield tempered his optimism with caution, "It is still too early to say whether the bill in its modified form, or in any other form, will ever become law." he said. In introducing the substitute bill, Tauzin praised hams for their constructive cooperation. "The bill was never intended to prohibit the scanning of public safety frequencies or other non-commercial frequencies in which users have no expectation of privacy," he said. It was designed solely "to protect users of wireless services that pay for such services." Mansfield said the League worked with a coalition of other organizations to make sure members' voices were heard on The Hill. Changes also were recommended by scanner interests including Uniden and Tandy. Unless Congress cuts corners, the bill still has a long way to go. It must be passed by the full Commerce Committee before it goes to the floor of the House. "The ARRL will continue to work with committee staff to fine tune one of the bill's provisions that could have unintended consequences with regard to unrelated modification of equipment," Mansfield said.

In its original form, the bill had generated a good deal of controversy that boiled over into emotional letters and e-mail messages to Members of Congress. Some critics interpreted the bill as outlawing equipment that receives law enforcement, fire, EMS and other non-broadcast services, and felt it could even prohibit listening to these transmissions. The ARRL believed it could also impede the ability of manufacturers to include expanded VHF and UHF receiving capability, something most hand-held and mobile transceivers now offer. While the League did not object to the original bill's efforts to curb cellular and PCS eavesdropping--something that's already illegal--its primary objection was that it could adversely affect the efforts of ham radio emergency volunteers, volunteer fire departments and other agencies that monitor public service frequencies using scanners. Among other things, the League pointed out to House members this month that the Electronic Communications Privacy Act (ECPA) of 1986, makes it illegal to intercept cellular, PCS< and other telephone-type communication.

One provision of the latest version calls on the FCC to consider defining the expression "capable of readily being altered" to require scanning receivers to be made in a way that effectively precludes alteration as necessary to prevent illegal use. Another calls on the FCC to consider requiring warning labels for scanning receivers that alert users to the prohibitions in federal law.

Mansfield praised Tauzin and his staff for paying attention to Amateur Radio concerns on the proposed legislation. In the whole, it looks like Congress has listened," he said.

+=+=+=+=+=+=+=+

Stranded part 2

by Bruce McCormick, WL7YR

Well now what? Well now that you have checked to see what you have in your pockets. What have you got? A lighter, A space blanket, A small pocket knife, candy bar. Check your leg, is it bleeding? Is it swelling? YES.. Turning Blue, NO (GOOD SIGN, NO INTERNAL BLEEDING). First you need to realize that help is several hours away. You will have to help yourself for a while. If you can crawl, gather up lots of wood and start a small fire. Keep it small as it use's less wood. Use the space blanked you had in your coat pocket to wrap up in. Use the knife to make fuzz sticks and start a small fire. MAKE YOUR SELF COMFORTABLE ITS GOING TO BE A LONG NIGHT. If you have a candy bar eat only part of it and save the rest for later.

+=+=+=+=+=+=+=+

HAM GEAR & TOOLS FOR SALE

- Kenwood 940S/AT, with all filters installed, remote speaker, MC-60 microphone, 2000 SWR meter and complete manuals $1400.00 OBO
- 55 foot Tri-Ex model WT-51 crank-up tower with manuals, with CDE Ham IV rotor, controller $1200.00 OBO
- 2 each 100 watt 3-30 MHz linear amps, mobile mounting. $150.00 ea./OBO (1 Palomar, 1 Tri-Electric).

- ◊ Dremel drill kit, with case, bits, manuals, new/never used. $65.00 OBO
- ◊ Butternut 10-160 meter antenna. $100.00 OBO
- ◊ Cushcraft A-4 antenna never used $350.00 OBO
- ◊ UHF-VHF glass mount mobile antenna, never used in box $100.00 OBO
- ◊ 2 each CB radios, with microphones and assorted antennas. CB $40.00 ea., Ant $25.00 ea. OBO
- ◊ Alliance 100 rotor with controller. $250.00 OBO
- ◊ Large face 24 hr quartz clock. $2500 OBO
- ◊ Craftsman's best mitre saw $75.00 OBO
- ◊ New electronics tools suitcase, with inserts and leather covering $300.00 OBO (orig price $600.00)
- ◊ Heath electronic keyer $100.00 OBO
- ◊ Iambic keyer $80,00 OBO
- ◊ Telephone butt set, signal generator with many accessories. $250.00 OBO (NEW)
- ◊ ARRL hand books, ant guide, operating guide, US directory $40.00 ea. OBO
- ◊ Rolodex electrodex, with manuals, VHS tape instructions, ac supply. $130.00 OBO
- ◊ flip phone and pager. $40.00 ea. OBO
- ◊ Craftsman two tier tool chest with roll cart. Like new, orig $699.00. $450.00 OBO
- ◊ Xerox fax machine $100.00 OBO
- ◊ 1971 Chevy model 45 van, runs good, has box set up with shelves. Make a good service van, food wagon or camper. $1800.00 OBO

Michael R. Sitbon WL7BKV
6311 Switzerland Dr.
Anchorage, AK 99516
(907)345-9344 home
(907)267-9066 digital pager

+=+=+=+=+=+=+=+=+

WHAT IF DR. SEUSS WROTE COMPUTER TECH MANUALS?

If a packet hits a pocket on a socket on a port,
And the but is interrupted as a very last resort,
And the address of the memory makes your floppy disk abort,
The socket packet pocket has an error to report!

If your cursor finds a menu item followed by a dash,
And the double-clicking icons put your window in the trash,
And your data is corrupted 'cause the index doesn't hash,
Then your situation's hopeless, and your system's gonna crash!

If the label on your cable on the gable at your house,
Says the network is connected to the button on your mouse,
But your packets want to tunnel to another protocol,
That's repeatedly rejected by the printer down the hall

And your screen is all distorted by the side effects of gauss,
So your icons in the window are as wavy as a souse,
Then you may as well reboot and go out with a bang,
Cause as sure as I'm a poet, the sucker's gonna hang!

When the copy of your floppy's getting sloppy on the disk,
And the microcode instructions cause unnecessary RISC,
Then you have to flash your memory and you'll want to RAM your ROM
Quickly turn off your computer and be sure to tell your mom.

author unknown
From : WB0TUE@k0pqr.#ene.ne.usa.noam

+=+=+=+=+=+=+=+=+

Today's scientific question is: What in the world is electricity? And where does it go after it leaves the toaster?

Here is a simple experiment that will teach you an electrical lesson:
On a cool, dry day, scuff your feet along a carpet, then reach your hand into a friend's mouth and touch one of his dental fillings. Did you notice how your friend twitched violently and cried out in pain? This teaches us that electricity can be a very powerful force, but we must never use it to hurt others unless we need to learn an important electrical lesson. It also teaches us how an electrical circuit works. When you scuffed your feet, you picked up batches of "electrons," which are very small objects that carpet manufacturers weave into carpet so that they will attract dirt. The electrons travel through your bloodstream and collect in your finger, where they form a spark that leaps to your friend's filling, then travel down to his feet and back into the carpet, thus completing the circuit.

AMAZING ELECTRONIC FACT:

If you scuffed your feet long enough without touching anything, you would build up so many electrons that your finger would explode! But this is nothing to worry about unless you have carpeting. Although we modern persons tend to take our electric lights, radios, mixers, etc. for granted, hundreds of years ago people did not have any of these things, which is just as well because there was no place to plug them in. Then along came the first Electrical Pioneer, Benjamin Franklin, who flew a kite in a lightning storm and received a serious electrical shock. This proved that lightning was powered by the same force as carpets, but it also damaged Franklin's brain so severely that he started speaking only in incomprehensible maxims, such as, "A penny saved is a penny earned." Eventually he had to be given a job running the post office. After Franklin came a herd of Electrical Pioneers whose names have become part of our electrical terminology: Milli Volt, Micro Amp, Meg A. Watt, Auto Transformer, etc. These pioneers conducted many important electrical experiments. Among them, Galvani discovered (this

is the truth) that when he attached two different kinds of metal to the leg of a frog, an electrical current developed and the frog's leg kicked, even though it was no longer attached to the frog, which was dead anyway. Galvani's discovery led to enormous advances in the field of amphibian medicine. Today, skilled veterinary surgeons can take a frog that has been seriously injured or killed, implant pieces of metal in its muscles, and watch it hop back into the pond-almost. But the greatest Electrical Pioneer of them all was Thomas Edison, who was a brilliant inventor despite the fact that he had little formal education and lived in New Jersey. Edison's first major invention in 1877 was the phonograph, which could soon be found in thousands of American homes, where it basically sat until 1923, when the record was invented. But Edison's greatest achievement came in 1879 when he invented the electric company. Edison's design was a brilliant adaptation of the simple electrical circuit: the electric company sends electricity through a wire to a customer, then immediately gets the electricity back through another wire, then (this is the brilliant part) sends it right back to the customer again. This means that an electric company can sell a customer the same batch of electricity thousands of times a day and never get caught, since very few customers take the time to examine their electricity closely. In fact, the last year any new electricity was generated was 1937. Today, thanks to men like Edison and Franklin, and frogs like Galvani's, we receive almost unlimited benefits from electricity. For example, in the past decade scientists have developed the laser, an electronic appliance so powerful that it can vaporize a bulldozer 2000 yards away, yet so precise that doctors can use it to perform delicate operations to the human eyeball, provided they remember to change the power setting from "Bulldozer" to "Eyeball."

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

Bulk Rate
U.S. Postage
PAID
Anchorage, AK
Permit No. 223

Roger Hansen KL7HFQ L036
POB 520343
Big Lake AK 99652-0343

A Cold Day in Hell

An explosion killed a Navy boiler man and he wound up in hell. Being used to stoking fires and extremely hot temperatures, he found hell actually quite comfortable. When Satan went to check out the new arrival, he found him sitting in his room smiling.

"You like this?", Satan asked.

"Yes, sir", said the sailor, "this feels like a spring day to me."

Not wanting the new guy to be too comfortable, Satan turned up the heat a lot. When he went back to see how his new arrival was doing, the sailor was still happy. He hadn't even broken a sweat.

"I like this kind of weather", he told Satan.

Satan decided to try something different. Rather than turn up the heat, he turned it off. He made the sailor's room so cold icicles formed. When he checked on the guy, the room was icy and he was shivering, but he had a grin from ear to ear.

"Why are you still so happy?", Satan demanded, "It's freezing in here!"

"I'm from Denver," said the sailor, "and this must mean the Broncos have won the Superbowl!"