

RCA AMATEUR RADIO CLUB

JANUARY, 2007 MONTHLY NEWSLETTER INDIANAPOLIS, IN

Wishing you a great 2007!

THE NEXT MEETING OF THE **RCA AMATEUR RADIO CLUB** WILL BE
TUESDAY, JANUARY 2nd, AT 6:30 PM AT DOOKZ SPORTS GRILL,
3800 E. 96th STREET, INDIANAPOLIS, IN

RCA ARC NEWS

SUMMARY OF THE DECEMBER MEETING – We covered the progress on the shirts. Thanks, Jon Powell, for all the work you put in to get it done. It would not have happened without him.

We continue to work on the repeater and to get Echo Link back on the air. Jim Keeth, AF9A, and Jim Rinehart, K9RU, have run the CAT 5e cable between the repeater building and the Comm-Center. We still need to put connectors on the cable. Bud, W9EEJ, will get together with Trevor, N9YM, and try the EchoLink computer on the Comm-Center's network connection. Once we are through the holidays we can look at getting this done. We are also looking for a faster and newer computer to use on Echo Link.

Members present voted to cosponsor the "USS Indianapolis" again this year in the Museum Ships on the Air event which takes place in July. Details are just starting to be worked out. The call will be W9IND and it will be from IUPUI campus, near the memorial, similar to the operation two years ago. The other sponsors are the Indianapolis Radio Club and the Indiana Radio League.

The Club will continue to meet at "DOOKZ" for 2007 and arrangements were made after the meeting.

We will have a January 2nd meeting evening though, the President will be out of town at CES. --K9RU

PRESIDENT RAMBLINGS: As many of you already know or will read below, Paul Bohrer, W9DUU, past away just before Christmas. I first met Paul around 1970 when I got on 2 meter FM. He was always modifying his radios, adding RF gain controls, scanners or synthesizers.

I will always remember the transmitter hunts. The RCA club lead by Lyle, K9FIK and Dave, WB9ERE, actually put together an effort (that lasted several years) to compete against Paul in the two meter transmitter hunts, Paul was in the individual class and we were in the Multi Class. We spent a lot of time developing antennas and tactics trying to beat Paul. It was a lot fun.

When the RCA Club decided to put on a repeater, it was Paul who helped us out with advice and took us to meetings with other repeater operators in the state. This was before the days of the repeater council and formal coordination. Paul was one of technical hams you could talk to in Indianapolis area and get a good and sound technical answer.

We also lost another ham recently. Jerry Ayers, W9ET, was a member of the RCA ARC and worked for RCA Broadcast. Jerry was active in the club in the early days at Sherman Drive and although he has attended meetings since we moved to Carmel. Jerry was one of the operators at W87PAX station. I got to work with Jerry during the early HDTV days at NAB for Thomson Broadcast.

2007 looks like it will be an exciting year for ham radio with all the rule changes. We have new expanded bands and no code requirements (at all) for an amateur radio license. Now, there is no excuse not to upgrade. --K9RU

RCA ARC SHIRTS ARE DONE! The RCA ARC shirts have arrived. The shirts are \$20 each, but club members who ordered shirts will receive a \$5 discount on the first shirt.

Please make a check payable to THOMSON Amateur Radio Club (not the RCA ARC).

Jim Keeth, AF9A, has the shirts in his office at Thomson. If you are in the Indianapolis area you can make arrangements by phone or e-mail to pick up your shirt order from Jim at Thomson on North Meridian Street between 7:30 AM and 4:30 PM.

If you're out of the area, we will ship your shirts.

Jim will bring the shirts to the January meeting for those who could not arrange to pick them up earlier.

INDIANA AMATEUR RADIO COMMUNITY HAS LOST A GREAT CONTRIBUTOR: The Amateur Radio Community has lost a Great Contributor", as Indianapolis Radio Club president Tom Chance, K9XV, put it. We have learned that Paul Bohrer, W9DUU, passed away on the evening of December 21st. As Tom put it, "He will be remembered as one of the most progressive people to introduce VHF and UHF repeater systems, VHF & UHF transmitter hunts and ATV in the Indianapolis area. From the first 34/76 to the many repeater systems today, he linked the community." Tom Weber, KC9GMJ, of the WISH-TV engineering department, wrote: "Most all of you know that Paul had been a pre-eminent engineer here in Indy for about 45 years, most of them with WTTV-4 (and later WTTK-29 as well), and the last 15 years or so with WISH-8. He was also a fixture in the Ham Radio Community for even longer than that. We've all lost a tremendous resource, and a plain old good person."

JERRY AYERS, W9ET SK: Jerry Ayers W9ET, passed away Sunday, Dec. 3 at his home at the age of 64. Jerry was a member of the RCA Amateur Radio Club. He worked for RCA Broadcast, later Thomson Broadcast Systems. Jerry was active in amateur radio for over 50 years. He and Larry Vehorn, W9AJ arranged the tours of Channel 40 back in the 70's show us the latest RCA equipment.

Jerry along with his daughters were very active with the special event operation "W87PAX" for the 1987 Pan-Am games. Jerry was also a county hunter working all the USA counties.

AUDIOVOX TO ACQUIRE THOMSON ELECTRONICS ACCESSORY BUSINESS: Audiovox Corporation announced that it has entered into a definitive agreement with Thomson to acquire its Americas consumer electronics accessory business, which includes approximately 115 employees (including 3 licensed ham radio operators) in locations in the United States, Canada, China (including Hong Kong) and Malaysia. The Company anticipates this transaction will close in early 2007.

As a result of the acquisition, Audiovox will acquire the rights to the RCA brand for consumer electronics accessories. The acquisition also includes the Recoton, Spikemaster, Ambico and Discwasher brands for use on any products and the Jensen, Advent, Acoustic Research and Road Gear brands for accessory products. Audiovox already owns Jensen, Advent, Acoustic Research and Road Gear brands for electronics products as part of prior acquisitions.

HAMFESTS; EVENTS

24 Feb "Cabin Fever Hamfest" LaPorte, IN
10 Mar Wabash Valley, Terre Haute, IN
15 Apr Miami County 4-H Fairgrounds, Peru, IN

FCC ELIMINATES MORSE CODE AS EXAM REQUIREMENT

Early next year, the US will join the growing list of countries that no longer require Amateur Radio applicants to pass a Morse code test as the entry ticket to HF. Announcement of the pending historic rule change arrived with no fanfare December 15 in an FCC public notice. A full-blown Report and Order (R&O) in the proceeding, WT Docket 05-235, followed December 19. The best estimate of when the Morse code requirement will go away officially is sometime in February -- 30 days after the R&O appears in the Federal Register.

"We . . . believe that the public interest is not served by requiring facility in Morse code when the trend in amateur communications is to use voice and digital technologies for exchanging messages," the FCC said in its R&O. "Rather, we believe that because the international requirement for telegraphy proficiency has been eliminated, we should treat Morse code telegraphy no differently from other Amateur Service communications techniques."

The FCC says it deems the current regime of written examinations "sufficient to determine whether a person is qualified to be issued an Amateur Radio operator license."

The FCC cast aside arguments that Morse ability is advantageous in emergencies, concluding that most emergency communication is handled using voice, data, or video techniques. The Commission also turned away assertions that retaining a Morse requirement would help keep out the bad apples.

"The record is devoid of a demonstrated nexus between Morse code proficiency and on-the-air conduct," the FCC observed. It concurred with one commenter's observation that "maintaining the code requirement does not purge Amateur Radio of bad operators. Education and self-policing does."

The FCC also ordered that all Technician licensees present and future -- whether or not they've passed a Morse code test, will get privileges on 80, 40, 15 and 10 meters identical to those of Novice licensees. "In eliminating this disparity between Technician and Technician Plus licenses, we are simplifying the Amateur Service licensing structure and promoting regulatory parity," the FCC said.

The FCC took advantage of the occasion to act on the League's Petition for Partial Reconsideration in the "omnibus" proceeding, WT Docket 04-140, calling on the Commission to retain 3620 to 3635 kHz for automatically controlled digital stations by moving the Extra class phone band edge to 3635 kHz. The FCC decided instead to authorize 3585 to 3600 kHz for such operations, and leave the newly expanded phone band intact.

The Commission further amended Part 97 "to authorize Amateur Extra class privileges to all individuals who have been issued a CEPT radio-amateur license by their country of citizenship, and who satisfy other requirements in the Commission's rules."

Although the FCC's Morse code decision came as no surprise, it nonetheless revived debate on the issue. The FCC had proposed more than a year ago to drop the

Morse code requirement for all license classes. The record in the proceeding, the FCC said, "reflects a division of views in the Amateur Radio community." After reviewing the more than 3500 comments and counter-proposals radio amateurs had filed, the Commission stuck with its initial proposal.

ARRL President Joel Harrison, W5ZN, had this reaction: "While the Commission's decision to delete the Morse code requirement for an Amateur Extra Class license departs from the ARRL's recommendation, it is helpful to have the matter resolved so we can move forward."

ARRL CEO David Sumner, K1ZZ, expressed a similar viewpoint. "Now that the debate is over, we can focus on learning Morse code simply for its own sake," he said. Sumner pledged that the League would maintain its traditional support of Morse code as an operating mode and would continue to offer Morse training materials as well as such incentives as bonus credit for CW contacts in ARRL-sponsored operating events. ARRL's Hiram Percy Maxim Memorial Station W1AW will keep its schedule of Morse code practice and bulletin transmissions.

Since World Radiocommunication Conference 2003, the UK, Canada, Germany and other countries have dropped their Morse requirements. Sumner said other countries have successfully made the transition to a codeless testing regime, and he doesn't anticipate problems in the US.

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The ARRL has posted information relevant to the FCC action in WT Docket 05-235, including an FAQ, on its Web site <<http://www.arrl.org/fcc/morse/>>. --ARRL Letter

ARRL CHALLENGES FCC DISMISSAL OF VIRGINIA BPL INTERFERENCE COMPLAINTS

The FCC has told five Manassas, Virginia, radio amateurs that its testing showed the city's BPL system complies with FCC Part 15 rules, and it dismissed their interference complaints. The League is questioning the Commission's conclusions, however. Six Manassas radio amateurs earlier this year complained of BPL interference to their mobile operations. FCC engineers took measurements at several locations in Manassas on October 25 and 26. Spectrum Enforcement Division Chief Kathryn S. Berthot reported the results December 14.

"These measurements demonstrate that the Manassas BPL system is in compliance with the radiated emission limits specified in Section 15.611(b) of the Commission's rules at the two sites in areas we tested where emissions appear to be the highest," Berthot wrote, adding that the measurements showed the system is notching at 20 dB or greater to protect the 40-meter band. "Accordingly, based on the results of our investigation, we conclude that the Manassas BPL system is in compliance with the FCC's requirements, and the complaints are hereby dismissed." BPL proponent The United Power Line Council called the letter "complete and total

vindication" of the Manassas BPL system.

Not so fast, says ARRL General Counsel Chris Imlay, W3KD, who responded December 21 on behalf of the League and the complainants <<http://www.arrl.org/tis/info/HTML/plc/BPL-Manassas-2006-12-21.pdf>>. Imlay maintained that Berthot's letter raises more questions than it answers. Because the "alleged testing" took place in the presence of BPL operator COMTek and equipment maker Main.net but without the complainants, Imlay said, there's no independent means to evaluate the FCC's conclusions.

"In ARRL's view, the Commission owes the complainants a far more comprehensive response to their two-year-old complaints than what is set forth in the terse and uninformative dismissal letter," Imlay wrote. Copies of his letter went to the five FCC commissioners and to the complainants. One complainant, George Tarnovsky, K4GVT, says neither he nor the other five complainants was alerted to the planned FCC testing. The others are Donald "Butch" Blasdel, W4HJL; William South, N3OH; Arthur Whittum, W1CRO; Jack Cochran, WC4J, and Dwight Agnew, AI4II.

Imlay says Berthot's December 14 letter overlooks Whittum's May 2006 interference complaint, and, because of that, Whittum's complaint "remains pending and unadjudicated." Beyond that, Imlay contended, the Amateur Radio complainants, as FCC licensees, deserve better treatment and protection from the FCC.

Because the Commission -- and especially OET -- has exhibited "an overwhelming and obvious bias in favor of BPL" and "done everything possible to deny or obfuscate the substantial interference potential of BPL" on HF, Imlay wrote, the League is unwilling to accept what he called "the unsupported conclusions" in Berthot's letter. Those conclusions, he noted, vary substantially with the complainants' own observations and measurements, verified by the ARRL Laboratory staff.

Among other things, the League wants to know if any of the complainants were notified prior to the FCC's October testing, whether the OET is "routinely involved" in enforcement-related field measurements, when COMTek and Main.net learned of the planned testing, precisely where the FCC tested and how it determined the sites and the system's status during the tests -- including system loading. In addition, the League requested technical details of the testing, including measured emission levels.

Imlay says the Amateur Radio complainants "have been stonewalled by the City and COMTek, and now they have been stonewalled by the Commission, after waiting patiently for two years for some action." If the FCC seriously intends to claim that the Manassas system complies with the rules, he continued, it "must be willing to provide the information necessary to support its dismissal order with documentation that is objectively verifiable." --ARRL Letter

SOLAR UPDATE

Propagation prognosticator Tad "Who Let the Spots Out?" Cook, K7RA, Seattle, Washington, reports: More stormy space weather showed up last week! At the same time, sunspot activity was lower. Average daily sunspot numbers dropped 17 points to 10.4 for December 14-20, but on December 15, the planetary A index -- an indicator of global geomagnetic activity from magnetometers around the globe -- rose to 104. That's a very high number and indicates a severe geomagnetic storm.

The cause was a large coronal mass ejection (CME) that happened to be Earth-directed. It arrived on December 14, and aurora borealis -- the northern lights - - were visible as far south as Arizona. During the hours of darkness in North America December 14 and 15, the planetary K index rose to eight for three successive three-hour periods. That's very big.

A paper, "Geomagnetic activity indicates a large amplitude for sunspot cycle 24" <http://tinyurl.com/yewboz> presented at the fall meeting of the American Geophysical Union, proposes that the next sunspot cycle could be one of the most intense ever seen. Also, see "The World Above 50 MHz" in December 2006 and January 2007 QST. --ARRL Letter

SCIENTISTS PREDICT BIG SOLAR CYCLE

Evidence is mounting: The next solar cycle is going to be a big one. Solar cycle 24, due to peak in 2010 or 2011 "looks like its going to be one of the most intense cycles since record-keeping began almost 400 years ago," says solar physicist David Hathaway of the Marshall Space Flight Center. He and colleague Robert Wilson presented this conclusion last week at the American Geophysical Union meeting in San Francisco.

Their forecast is based on historical records of geomagnetic storms.

Hathaway explains: "When a gust of solar wind hits Earth's magnetic field, the impact causes the magnetic field to shake. If it shakes hard enough, we call it a geomagnetic storm." In the extreme, these storms cause power outages and make compass needles swing in the wrong direction. Auroras are a beautiful side-effect.

Hathaway and Wilson looked at records of geomagnetic activity stretching back almost 150 years and noticed something useful: "The amount of geomagnetic activity now tells us what the solar cycle is going to be like 6 to 8 years in the future," says Hathaway.

Cross correlating sunspot number vs. IHV, they found that the IHV predicts the amplitude of the solar cycle 6-plus years in advance with a 94% correlation coefficient.

"We don't know why this works," says Hathaway. The underlying physics is a mystery. "But it does work."

According to their analysis, the next Solar Maximum should peak around 2010 with a sunspot number of 160 plus or minus 25. This would make it one of the strongest solar cycles of the past fifty years-which is to say, one of the strongest in recorded history.

Astronomers have been counting sunspots since the days of Galileo, watching solar activity rise and fall every 11 years. Curiously, four of the five biggest cycles on record have come in the past 50 years. "Cycle 24 should fit right into that pattern," says Hathaway.

**DAYTON HAMVENTION® INVITES 2007 AWARD
NOMINATIONS**

Dayton Hamvention <<http://www.hamvention.org/>> is accepting nominations for its 2007 Amateur of the Year, Special Achievement, and Technical Excellence awards. The deadline to submit nominations is February 19, 2007. All Amateur Radio operators are eligible. Dayton Hamvention will recognize the winners at the 2007 Hamvention, May 18-20.

The Amateur of the Year Award goes to an individual who has made a long-term, outstanding commitment to the advancement of Amateur Radio. The Technical Excellence Award is for the person who has made an outstanding technical advancement in the field of Amateur Radio. The Special Achievement Award honors someone who has made an outstanding contribution to the advancement of Amateur Radio, usually by spearheading a significant project.

The Hamvention Awards Committee makes its decisions on all awards based in part upon the information it receives and not on the number of nominations submitted. Documentation to inform the Awards Committee of a candidate's accomplishments may include magazine articles, newsletters, newspaper clippings and even videos. All materials submitted become the property of Hamvention and will not be returned.

Additional details and a nomination form are available on the Dayton Hamvention Web site <http://www.hamvention.org/nomination07.htm>. Nominations also are accepted via US mail to Dayton Hamvention Awards, PO Box 964, Dayton, OH 45401. --ARRL Letter

CANADA'S 7.335 MHZ CHU TIME SIGNAL COULD GO SILENT, SHIFT FREQUENCY

Changes in international frequency allocations could force Canada's CHU time-standard signal on 7.335 MHz to go off the air, change frequency or get another license by next spring. The International Telecommunication Union (ITU) has reallocated the 7300-7350 kHz band from "fixed service" to "broadcasting," effective April 2007. CHU now operates there as a fixed service facility. CHU's other frequencies -- 3.330 and 14.670 MHz -- are not affected. The station has been including messages in English and French in its 7.335 MHz transmissions to solicit information from CHU listeners and to help shape recommendations regarding which direction to go.

"On April 1, 2007, CHU needs to stop operating, change frequencies, or re-license. Contact radio.chu@nrc.gc.ca or mail CHU Canada K1A 0R6," the English version says.

The Institute for National Measurement Standards at the National Research Council of Canada operates CHU. The Institute's Raymond Pelletier explains on the INMS CHU Web page http://inms-ienm.nrc-cnrc.gc.ca/time_services/shortwave_broadcasts_e.html that while shutting down the 7.335 MHz facility -- "the most useful of the three we use" - - is the easiest solution, that option "could create problems for some clients who are counting on this particular signal."

The other possibilities are that CHU relicense as a broadcasting facility, change frequency to a nearby fixed service channel, which would require an investment in hardware and manpower, or shut down operations completely, Pelletier says.

"To be seriously considered, any of the above alternatives will need to have a zero-based budgeting justification prepared, comparing it against the least expensive alternative of closing CHU entirely," he goes on to say. "CHU is entering a phase where major investment in new transmitters will be required if it is to be kept operating."

Pelletier says that lacking input from CHU's user community citing the importance of the service's contribution, shutting down CHU altogether "is an inescapable recommendation."

The CHU code is also used as a radio clock, which can be used as a reference clock for an NTP time server. Software drivers have been written that can obtain the date and time from the code and that tune a digitally tuned radio to one of CHU's three frequencies to get the best signal.

"Be assured that we will try our best to maintain the CHU service as it is, keeping the three frequencies as they are," Pelletier's plea concludes.

Canadian time transmissions using the CHU call letters commenced in 1938 on the current frequency, but the service itself dates back to the early 1920s. The facility changed to cesium atomic clocks in 1967. In 1970 the responsibility of operating CHU shifted from Dominion Observatory to the National Research Council.

CHU invites reception report and will respond with a QSL card. Send reception reports to Radio Station CHU, National Research Council of Canada, 1200 Montreal Rd –ARRL Letter

SHORTS

ARRL KIDS DAY IS SUNDAY, JANUARY 7: The next chance to provide youngsters with a fun, hands-on radio experience is Sunday, January 7, when the first ARRL Kids Day of the new year takes place <<http://www.arrl.org/FandES/ead/kd-rules.html>>. ARRL Education and Technology Program Coordinator Mark Spencer, WA8SME, offers some Kids Day 2007 thoughts and suggestions on p 45 of December QST. Kids Day begins at 1800 UTC and continues until 2400 UTC. There's no limit on operating time. Suggested exchanges are first name, age, location and favorite color. Suggested frequencies are 14.270 to 14.300 MHz, 21.380 to 21.400 MHz and 28.350 to 28.400 MHz, plus local VHF repeaters with the sponsor's permission. Licensees should observe third-party traffic restrictions when making DX contacts <<http://www.arrl.org/FandES/field/regulations/io/3rdparty.html>>. These apply when unlicensed individuals communicate via ham radio. --ARRL Letter

NEW DX RECORD CLAIMED FOR 300+ GHZ "TRADITIONAL RF" OPERATION: Microwave enthusiasts Brian Justin, WA1ZMS, and Pete Lascell, W4WWQ, in Virginia are claiming a new DX record for "traditional RF operation above 300 GHz." The December 10 QSO on 322 GHz spanned 7.3 km (4.53 miles) and was accomplished using slow-speed FSK CW and Spectran software. "This latest QSO exceeds our former DX of 1.4 km (0.87 mile) as well as makes a claim for best DX on any amateur frequency above 300 GHz, except for visible light," said Justin, who also welcomes competition on the millimeter wavelengths. "I hope other hams come to know that the bands above 47 GHz are ripe for the picking when it comes to DX and other firsts." --ARR Letter

NEW 2-METER EME WORLD RECORD CLAIMED: Moonbounce enthusiasts in New Zealand and Portugal are claiming a new EME (Earth-Moon-Earth) distance record on 2 meters. The December 6 contact, using digital JT65B mode, was between Nick Wallace, ZL1IU, in New Zealand (RF64vr) and Joe Kraft, CT1HZE/DL8HCZ, (IM57nh) in Portugal. Wallace was running 500 W to 4-by-12 Yagis, while Kraft was putting 1.5 kW into 4-by-11 Yagis. The EME contact spanned a terrestrial distance of 19,685 km (12,204 mi). --ARRL Letter