

RCA AMATEUR RADIO CLUB

DECEMBER, 2006 MONTHLY NEWSLETTER INDIANAPOLIS, IN

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE
TUESDAY, DECEMBER 5th, AT 6:30 PM AT DOOKZ SPORTS GRILL,
3800 E. 96th STREET, INDIANAPOLIS, IN

RCA ARC NEWS

*Wishing you Merry Christmas
and a great holiday season!*

SUMMARY OF THE NOVEMBER MEETING – At the 7th Nov. meeting, a few more orders for shirts were received. The shirts will go for embroidery right after Thanksgiving and should be ready in December. We have to thank Jon Powel for all his work organizing the shirt project. The Ft. Wayne Hamfest was discussed. Barry George will drive his van and has room for several passengers. The PC which Bob Begeman acquired for the Club is successfully running the repeater. Thanks Bob! The Cat 5e cable to allow connection of repeater shack to Mike Koss' communications center has been received and will be installed in the next few weeks. The Club's TH-53 antenna which has been the HF antenna for the Club station for the last 10 years had been sold and delivered. Bob Altmanshofer, W9HZD, demonstrated a frequency counter he made using a PIC microprocessor and one of the LCD displays the Club received from Thomson. Anyone interested in using the LCD displays for a project can contact Bob (altmanshofer @ highstream.net) to get a copy of the information sheets he passed out at the meeting.

A BIT OF RADIO-TV HISTORY: For those of us who have an interest in the history of radio and television, the most recent internet published newsletter called *Tech-Notes* edited by Larry Bloomfield, has several articles of interest. Starting on page 6, the article titled "**Born a century ago, Philo Farnsworth changed your life**" Now, in the centennial year of his birth 1906, his invention plays an increasingly powerful role in our lives - with less chance than ever of his being recognized.

Also see "**100 Years of Voice**" reprinted from the ARRL's www.helloradio.org/ website.

Tech-Notes can be downloaded from http://www.Tech-Notes.tv/tech_notes_135.pdf This is a 1.3 meg .pdf file.

D-STAR REPEATER IS ON IN INDIANAPOLIS: The ICE group (Indianapolis – Carmel Experimenters) has an ICOM D-Star repeater in operation on 443.900 MHz. ICOM has a .pdf file detailing the technical details of the digital transmission scheme which may be downloaded at:

<http://www.w9rca.org/D_STAR_SYSTEM.pdf>

Also, a Power Point presentation of the system may be downloaded at:

<http://www.w9rca.org/D_STAR_RADIOS.ppt>

FT WAYNE HAMFEST -- You could have not asked for a nicer day for the hamfest! There was a good crowd with many RCA hams seen during the day. K3BG, Barry George acted chuffer for a group from RCA including: K9RU, K9RTT, N9KZJ and W9KVK. We stopped at Bob Evans on the way up for breakfast. One hamfest rule is if you find something you need, it is a great hamfest. We all ended up buying something we needed (or we thought we needed). -K9RU

ARRL SPECTRUM DEFENSE FUND -- As many of you know, the FCC has approved changes to Part 15 allowing the operation of BPL that will allow harmful interference to ham radio. BLP systems have been demonstrated that can operate without interfering with ham radio so we know it can be done, but the rules need changed to require BPL operators to use these systems.

The ARRL has decided to appeal in Federal court and this will cost money to carry it through.

Remember this is the first case were the FCC has given preference for an unlicensed, emitter over a licensed station. Over the last few years we've more sharing of the bands with low power Part 15 devices, but on a noninterference basis. But, that is not the case this time.

Many people think BPL will fail because it is not that technically sound and there are other technologies supplying the same type of service. Based on experience with projects I have worked on, it only takes money and someone willing to promote even a bad idea to make it go.

ARRL has done a mailing requesting a donation to support the Federal Appeal and Legal cost. Take a little time and consider making a donation. -K9RU

USS INDIANAPOLIS SPECIAL EVENT OPERATION PLANNED FOR NEXT SUMMER -- Planning has started for the USS Indianapolis Special Event operation this summer in conjunction with the Ships on the Air event.

In 2005 the Indianapolis Radio Club, the RCA ARC and the Indianapolis Radio League did the first USS Indianapolis Special Event Operation that coincided with the anniversary of picking up of the atomic bomb in San Francisco delivering it to Tinian. The Indianapolis was sunk on the return trip. The operation was part of the Ships on the Air event with ham radio operation from these war ships or memorial sites.

The operation will use the call "W9IND" again this year. -K9RU

REPEATER UPDATE -- We continue to work on the W9RCA repeater. We did purchased the CAT5e cable and installed a conduit under the drive at Mike's. Like most jobs, it took longer then we expected, the ground was hard with gravel packed in, making digging rough.

We hope we can get the cable between the buildings before Christmas if the weather cooperates.

The Echo Link computer still needs to be tested at the repeater site. We are looking for a better computer to use with the Echo Link, something like a 600 MHz or better Pentium II with XP on it. This will allow Bud, W9EEJ, to be control the system remotely over the Internet.

We have been doing the work on a Saturday or Sunday afternoon and we could use some help with the cable run if anyone has spare time and would like to help. It is getting harder to schedule this as the weather gets to be more winter-like. Check with Jim Keeth, AF9A, to see what we are planning for the weekend. -K9RU

JIM MEYER'S FATHER HONORED: Not ham radio related, but of interest to those of us who worked at Thomson.

Retired Rear Adm. Wayne E. Meyer, widely hailed as the "Father of Aegis," the Navy's weapons system, was accorded an honor rarely bestowed upon the living: having a fighting ship named after him. Meyer managed the development of the system at what was then the RCA Advanced Technology Laboratories in Moorestown during the 1970s.

Like the original Aegis, the mythical shield of Zeus, Meyer enjoys near-mythical status in the Navy.

His name already adorns the Naval Postgraduate School's Wayne E. Meyer Institute of Systems Engineering in Monterey, Calif.

The DDG-108 will forever be known as United States Ship Wayne E. Meyer.

The ship is scheduled to be christened next summer and put into service in 2009.

Wayne's son, Jim Meyer, held a number of senior management positions at Thomson including Chief Operating Officer for the Americas and Senior Vice President of Product Management as well as other senior management positions at Thomson, General Electric and RCA during his 25 years in consumer electronics. -- Philadelphia Inquirer

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

RULES CHANGES TO GO INTO EFFECT DECEMBER 15

A little over a month after the Federal Communications Commission released the Report and Order (R&O) in the so-called "Omnibus" Amateur Radio proceeding, WT Docket 04-140 (FCC 06-149) to the public, a revised version appeared November 15 in the Federal Register <<http://a257.g.akamaitech.net/7/257/2422/01jan20061800/edocket.access.gpo.gov/2006/pdf/E6-19189.pdf>>. The changes in the R&O will take effect Friday, December 15, at 12:01 AM EST, 30 days after its publication.

As expected, the Report & Order clarified two items that had raised some concerns when it was first released last month: 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 7.075-7.100 MHz band.

Still to be resolved are three controversial aspects of the Proceeding:

* Expansion of the 75 meter phone band all the way down to 3600 kHz (thus reducing the privileges of General, Advanced and Amateur Extra class licensees, who had RTTY/data privileges in the 80 meter band, and CW privileges of General and Advanced class licensees)

* The elimination of J2D emissions, data sent by modulating an SSB transmitter, of more than 500 Hz bandwidth. This will make PACTOR III at full capability illegal. Other digital modes effectively rendered illegal below 30 MHz include Olivia and MT63 (when operated at bandwidths greater than 500 Hz), 1200-baud packet, Q15X25 and Clover 2000.

* The elimination of access to the automatic control RTTY/data subband at 3620-3635 kHz.

The ARRL Board is discussing the possibility of a petition to reconsider several items in the R&O.

ARRL Regulatory Information Specialist Dan Henderson, N1ND, commented: "The release of the R&O in the Federal Register has started the countdown clock. We are all looking forward to being able to use the refarmed frequencies starting on December 15. We are still anxiously awaiting the release of the Report and Order for 05-235, the Morse Code Proceeding. We are hopeful that the Commission will be able to move on that petition and address the outstanding issues in the Omnibus R&O soon."

For more information, see the band chart <http://www2.arrl.org/announce/regulatory/wt04-140/Hambands3_color.pdf> and the Frequently Asked Questions on WT Docket No. 04-140 <<http://www2.arrl.org/announce/regulatory/wt04-140/faq.html>>. Both have been updated to reflect the R&O as it was published in the Federal Register. --ARRL Letter

[The FCC, on Nov. 28, released an *Erratum* that corrects one error in the recent Report and Order (*R&O*) in WT Docket 04-140 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.]

BROADCASTERS INTERVENE TO SUPPORT ARRL IN BPL COURT APPEAL

The Association for Maximum Service Television (MSTV) and the National Association of Broadcasters (NAB) have filed a joint motion for leave to intervene in support of the ARRL in its court appeal of the Federal Communications Commission's Broadband over Power Line (BPL) rules.

The motion to the US Court of Appeals for the District of Columbia Circuit is dated November 9 and states: "MSTV and NAB believe that the regulations under review are arbitrary, capricious, and contrary to law, and will adversely impact their members by, among other things, permitting unlicensed users of radio spectrum to interfere with licensed uses of the spectrum."

MSTV and NAB are entitled to intervene as a matter of right, so the Court is expected to grant the motion. As expected, some BPL proponents are seeking to intervene on the side of the FCC.

ARRL Chief Executive Officer David Sumner, K1ZZ, welcomed the support of MSTV and NAB. "It is gratifying that these two prestigious broadcasting organizations recognize the danger posed to all FCC licensees by the FCC's flawed BPL rules. It's good to have them on our side." --ARRL Letter

SKYWARN RECOGNITION DAY IS DECEMBER 2

The 8th annual SKYWARN Recognition Day (SRD) special event will take place Saturday, December 2, 2006. SKYWARN Recognition Day is an event co-sponsored by the National Weather Service and the American Radio Relay League, and it is the National Weather Service's way of saying "thank you" to Amateur Radio operators for their commitment to helping keep their communities safe. During the 24-hour special event, amateur radio operators will visit their local National Weather Service (NWS) office, set up Amateur Radio stations, and work as a team to contact other hams across the world.

"Ham radio operators volunteering as storm spotters are an extremely valuable asset to National Weather Service operations since they are cross-trained in both communications and severe storm recognition", says Scott Mentzer, organizer of the event and Meteorologist-In-Charge at the NWS office in Goodland, Kansas.

In typical warning operations, it is the direct communication between mobile spotters and the local NWS office which provides vital ground truth information. Spotter reports of hail size, wind damage and surface-based rotation in real time greatly assists the radar warning operator since that information can be correlated with Doppler radar displays. The result can range anywhere from a more strongly-worded statement to convey a greater sense of urgency, or the issuance of a tornado warning a few minutes earlier than would otherwise have been possible.

While National Weather Service offices utilize the real-time reporting of severe weather events to assist in warning operations, hurricanes and tropical storms have shown us that ham radio operators are equally important during the recovery phase of natural disasters. There are countless stories where ham radio worked in tandem with more conventional technology to relay emergency traffic.

SKYWARN Recognition Day will be held on December 2, 2006, from 0000 UTC to 2400 UTC.

The object is for all radio amateur stations to exchange QSO information with as many National Weather Service Stations as possible on 80, 40, 20, 15, 10, 6, and 2 meter bands plus the 70 centimeter band. Contacts via repeaters are permitted.

The exchange should include call sign, signal report, location, and a one or two word description of the weather occurring at your site ("sunny", "partly cloudy", "windy", etc.). NWS stations will work various modes including SSB, FM, AM, RTTY, CW, and PSK31. While working digital modes, special event stations will append "NWS" to their call sign (e.g., N***A/NWS). --ARRL Letter

ARRL 500 kHz EXPERIMENT KICKING INTO HIGH GEAR

The group of Amateur Radio operators researching the radio spectrum in the vicinity of 500 kHz already have recorded a few successes. The 500 KC Experimental Group for Amateur Radio <<http://www.500kc.com/>> is operating under Part 5 experimental license WD2XSH, which the FCC Office of Engineering and Technology granted September 13 to the ARRL. Project manager Fritz Raab, W1FR, says WD2XSH participants have been heard across both the Atlantic and the Pacific as well as all around the US.

"Things took off much faster than I had ever imagined," Raab told ARRL early this month. "Eleven stations are on the air now." Others in the 21-station group included on the Experimental license continue efforts to cobble together the transmitting and antenna systems

necessary to put out a signal on what group members call "the 600 meter band."

Raab says the 600-meter signal of well-known low-frequency enthusiast "Dex" McIntyre, W4DEX, in North Carolina -- operating as WD2XSH/10 -- was copied October 10 in Germany using very slow-speed CW (QRSS). Other stations have since duplicated that feat. Rudy Severns, N6LF, operating as WD2XSH/20 from Oregon, not only is heard regularly throughout the western half of the US but has been copied in Hawaii and, possibly, in New Zealand, Raab says, noting that the New Zealand reception was "not sufficiently clear" to make a claim.

While not a part of the experimental group, Ralph Wallio, W0RPK, has assumed the role of official record keeper and has noted more than two dozen one-way reception reports of more than 1000 miles. The list included "by ear" CW reception from Colorado to Massachusetts, nearly 1800 miles. The best distance as of earlier this week: 4515 miles from Conard Murray, WS4S, operating as WD2XSH/11 in Tennessee to Germany using QRSS (reception using computer software).

The two-year WD2XSH authorization permits experimentation and research between 505 and 510 kHz using narrowband modes at power levels of up to 20 W effective radiated power (ERP). The Midwest stations are limited to 505 to 508 kHz for the time being, Raab notes. The first QSO took place September 21 between the stations in Tennessee and North Carolina — a distance of some 300 miles.

To get on the air, WD2XSH participants have repurposed some older gear and even some text equipment. Paul Signorelli, W0RW, operating as WD2XSH/21 from Colorado, has modified a vintage Heath DX-100 transmitter for LF CW operation. "I match the DX-100 output to a 5-turn link of #10 wire," he reported in a detailed description of how he was able to get the old rig to transmit just below the AM broadcast band. Getting "down there" points up the need to increase physical component size by several orders of magnitude.

While Raab notes that while the current license cannot accommodate more participants, he plans to re-evaluate the situation in a year. "At that time, we may request a revision to the license that makes substitutions for stations that have not gotten on the air and possibly add some new stations," he says on the group's Web site. "Substitutes and additions will be selected based upon their potential to contribute to the experiment." He cautions, "This is an experimental license, not just ham radio on a new frequency!"

The experimental group does invite reception reports <<http://w5jgv.com/500kcreportform.htm>> of transmissions made by group members. You do not have to be a member of the experimental team to send a reception report. --ARRL Letter

LOADED FOR BEAR: FCC ISSUES WARNINGS FOR UNLICENSED USE OF HAM BANDS

Special Counsel in the FCC Spectrum Enforcement Division Riley Hollingsworth has warned seven Michigan residents that unlicensed use of Amateur Radio transmitting equipment on 2 meters to facilitate their bear hunting activities is illegal and may result in substantial fines. Warning notices went out October 19.

"While many hunters use Citizens Band radio or Family Radio Service equipment, the use of Amateur Radio equipment requires a license," Hollingsworth advised. He also sent an Advisory Notice to the Michigan Bear Hunters Association, suggesting the association post it on its Web site.

In a similar situation, the Commission attempted to enlist the aid of Quest Air Soaring Center in

Groveland, Florida, in spreading the word that glider pilots using the facility also need to avoid unlicensed operation on 2 meters. Hollingsworth said unlicensed use of airborne radio equipment not only violates federal law but causes widespread interference to licensed stations. He suggested the soaring center post the Advisory Notice on its Web site as well.

The FCC also warned yet another trucking firm of apparent unlicensed operation on 10 meters by two of its drivers this past summer. Hollingsworth wrote Sysco Corporation of Houston, Texas, October 10, citing reports that the transmissions were spotted August 11 and 18 on 28.115 MHz while the drivers were on the road in Michigan.

In all instances of alleged unlicensed operation, Hollingsworth pointed out that violators face fines of up to \$10,000 and possible imprisonment as well as seizure of any transmitting equipment they may have been using illegally.

In other recent actions, the FCC alerted two radio amateurs that the Wireless Telecommunications Bureau (WTB) has referred their Amateur Radio license renewal applications to the Enforcement Bureau for review. Hollingsworth notified each licensee to expect a Hearing Designation Order from the Commission.

Hollingsworth told David O. Castle, WA9KJI, of Evansville, Indiana, October 11 that the WTB referral was the result of "longstanding complaints against the operation of your station" involving interference on HF and 2 meters. In another case, Hollingsworth wrote William F. Crowell, W6WBJ (ex-N6AYJ), of Diamond Springs, California, that his license renewal application has been designated for hearing after a review of "numerous complaints filed against the operation of your station" alleging deliberate interference.

Hearings are held in Washington, DC, before an administrative law judge, and the applicants will have the burden of proof in showing they're still qualified to be Amateur Radio licensees. Over the past several years, the FCC has asked both licensees to respond to allegations of deliberate interference on the amateur bands. --ARRL Letter

HAMS HEADED FOR SPACE

NASA and the Russian Federal Space Agency have named two astronauts and two cosmonauts to make up the next International Space Station crew, Expedition 15. While their duty tours will not coincide, if the current schedule holds, there will always be at least one US and one Russian radio amateur aboard the ISS for the next year.

Astronauts Clayton Anderson, KD5PLA, and Daniel Tani, KD5TXE, will travel to the station next year as flight engineers. Anderson will ride to the ISS aboard shuttle Endeavour on mission STS-118, targeted for next June, and he'll return to Earth on shuttle Atlantis on mission STS-120, which will carry his replacement, Tani, to the station. Tani will return via the shuttle in October 2007. Cosmonauts Fyodor Yurchikhin, RN3FI, and Oleg Kotov will fly to the ISS next March on a Russian Soyuz spacecraft and will spend six months aboard the orbiting laboratory.

Yurchikhin will command Expedition 15, and Kotov will serve as station flight engineer and Soyuz commander.

Until Anderson arrives, astronaut Sunita Williams, KD5PLB, will serve as Expedition 15's third crew member and flight engineer. She's scheduled to fly to the ISS on shuttle Mission STS-116 in December. Williams is reported to be eager to do ARISS school group contacts from NA1SS.

The same shuttle flight will carry European Space Agency astronaut Christer Fuglesang, KE5CGR/SA0AFS, Sweden's first astronaut. He will serve as a mission specialist on his first journey into space, an 11-day ISS construction mission. --ARRL Letter

SHORTS

FCC CLASSIFIES BPL-ENABLED INTERNET ACCESS AS "INFORMATION SERVICE": The FCC has declared Broadband over Power Line (BPL)-enabled Internet access service to be an information service. The November 3 Memorandum Opinion and Order (MO&O)

<http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-165A1.pdf> in WC Docket 06-10 places BPL-enabled Internet access service on an equal regulatory footing with other broadband services, such as cable modem and DSL. BPL proponent the United Power Line Council had asked the Commission last December to issue a declaratory ruling in the matter. The FCC said competition among broadband services providers will provide consumers with more and better services at lower prices. "The Commission's broadband statistics show that subscribers to BPL Internet access services, although few in number overall, increased by nearly 200% in 2005," FCC Chairman Kevin Martin said in a statement. Specifically, the MO&O finds that the transmission component underlying BPL-enabled Internet access service is "telecommunications," and that the approach it's adopted with respect to BPL is consistent with the framework established for cable modem and wireline broadband Internet service. --ARRL Letter

UK AUTHORITIES TO PERMIT EXPERIMENTAL INTERNET/HF SPEECH GATEWAY: The Radio Society of Great Britain (RSGB) <<http://www.rsgb.org/>> says UK telecoms regulator Ofcom <<http://www.ofcom.org.uk/>> has granted a unique Notice of Variation (NoV) to Steve Richards, G4HPE, to operate an experimental Internet/HF speech gateway. The NoV would allow two-way communication between the Internet and the Amateur Radio HF bands. The RSGB assisted Richards in obtaining the authorization. "The purpose of the research is to explore the many technical and operational challenges that such a system poses for emergency communications," the RSGB said. "It is also hoped that the project will shed light on how Internet-based networks can aid Amateur Radio emergency communications." The NoV is a first in the UK because it allows full frequency agility over the lower HF bands and the use of significant power levels, the RSGB said. According to the Society, the gateway is not intended as a permanent Amateur Radio Service facility and will likely only be operated on a predetermined test schedule. Only Amateur Radio licenses will have access the gateway, which will be fully attended at all times. The International Radio Emergency Support Coalition (IRESC) <<http://www.iresc.org/>> -- a worldwide group of radio amateurs who use voice over Internet protocol (VoIP) facilities to connect disaster areas to points of support -- also is involved in this project. --ARRL Letter

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