RCA AMATEUR RADIO CLUB

JANUARY, 2013 MONTHLY NEWSLETTER INDIANAPOLIS, IN

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE
TUESDAY, JANUARY 8th, 6:30 PM AT G.T. SOUTH'S,
5711 E. 71st STREET, INDIANAPOLIS, IN

RCA ARC NEWS

SUMMARY OF THE DECEMBER MEETING – At the 11-Dec. meeting, Greg, KC9TNR and Jim, K9RU reported that they had not yet been successful in establishing a new checking account for the Club. We will check with the Credit Union to see if are required to be a corporation to setup the account. We have checked with other clubs in the area and they have setup checking accounts without being incorporated. We are continuing to work with the Credit Union. The Club's liability insurance is due and will be paid. A few minor updates where made and approved to the Club constitution. The repeater is still operating well. We need to get access to the receive site on the now Ivy Tech building at 2800 N Meridian. K9RU will work on this, but IVY Tech is shut down for the holidays and so we will have to wait till after the first of the year. The network connection to allow Echolink on the repeater has not been accomplished. AF9A gave a summary on status of that project. Dave, N9KZJ, gave a report on the Dec. 7 activity at the USS Indianapolis radio room exhibit. K9RU discussed the possibility of a joint permanent station with the Indianapolis Radio Club and RCA Club. Our club needs to decide if we want to pursue this. Also, a joint proposed project with other area clubs and the IRCC called "Hands on Ham Radio" was discussed. This to be a hands on ham radio demonstration of the different operating modes (SSB, FM, PSK 31, ATV & etc) and different types of radios (SDR, etc.). This along with mentors to help with operation will give both new and old hams a chance to make a QSO, get experience and advice on operating. This is still in the idea mode and the goal is to put something together for this spring. We see a lot of people get ham licenses, but never get on the air and we hope this would help give them a chance to experience and get more involved with the hobby.

NEXT TEST SESSION: January 12th - Saturday starting at noon
Location: Public Safety Commission, Communications Training Center,
8468 E 21st St, Indianapolis, IN 46219
Contact: Rhonda Curtis
Email: w9sh@comcast.net

INDIANAPOLIS AMATEUR RADIO ASSOC. ANNOUNCES SCHOLARSHIP – The Indianapolis Hamfest is proud to provide a scholarship managed by the ARRL Foundation. The Indianapolis Hamfest is managed by the Indianapolis Amateur Radio Association. Visit this web site for more information: http://www.arrl.org/scholarship-descriptions

The Indianapolis Amateur Radio Association Scholarship Fund:

- Award Amount: $1,000
- Number of Awards: 1 per year
- License Requirement: Amateur Radio License
- Region: Residence in Indiana or ARRL Central Division
- Field of Study: Electrical or Electronics Engineering, Computer Science, or related fields.
- Institution: Any

Applications are due by February 1. Time is short! Transcripts and the FAFSA document, if required, are due March 1 and must be sent electronically to foundation@arrl.org. Awards are usually announced to the winners by letter in mid-May. Please pass this information on to anyone who might be interested.

CLASSES COMING UP IN HENDRICKS COUNTY – Classes in Hendricks County will be on Tuesday evenings this year, beginning on January 29, 2013. Instruction for all classes of license will be offered. Classes will run approximately 2 hours, beginning at 7:00 pm. The classes will run 8 or 9 weeks. Classes will be held at the Hendricks County Senior Center, just north of Hendricks Regional Health in Danville. Contact Jay Wright, KK9L, for more information.

ONE DAY TECHNICIAN CLASS COMING IN JOHNSON COUNTY – This note from Jack Parker, W8ISH: This may be a bit early but I wanted to bring everyone up to speed on our plans to sponsor a one-day Technician License Class on Saturday February 9, 2013. If you know of someone who is interested in taking the class refer them to secretary@midstatehams.org .

Seating will be limited to 25 students so they should register early to insure a spot. We require all students to purchase the Technician Class License Manual, Second Edition. http://www.arrl.org/shop/Ham-Radio-License-Manual-Revised-2nd-Edition/?page=1
The class will be nine hours of instruction with testing to follow. The class begins promptly at 8AM in our meeting room at the Johnson County EOC.

Thanks for your help in passing the word. – Jack W8ISH, Class coordinator

SECOND ANNUAL BROWNSBURG HAMFEST COMING – The second annual Brownsburg Indiana Hamfest, ham radio, computer, electronics flea market is Saturday, February 16, 2013, 6:00 am until 2:30 pm. Set up available on Friday, the 15th from 2:30 pm until 8:30 pm. American Legion Post 331, 636 E Main St, Brownsburg, IN 46112. Admission is $5.00. Plenty of free parking. Vendors: $10 per table, $15 with power. Bring your own power strips and cables. Table sales at the door, if available, both days. Sponsored by Hendricks County Amateur Radio Society http://www.hcars.org/ Talk-in on 147.015 +

HAMFESTS, OPERATING EVENTS & TESTING

Jan 5 - 6	ARRL RTTY contest
Jan 12	Test session, 8468 E. 21st St., Indianapolis, 12 noon.
Jan 19 -21	ARRL VHF Sweepstakes Contest
Feb 16	Brownsburg Hamfest, 636 E. Main St., Brownsburg, IN

All dates, unless otherwise stated, are UTC.
http://www.arrl.org/contest-update-issues Contests updates
http://www.hornucopia.com/contestcal/ WA7BNM Contest Calendar
http://www.arrl.org/special-event-stations ARRL Special Event Stations page
http://www.arrl.org/exam_sessions/search ARRL training page for test sessions
http://indyhams.org/events/ Indiana events and public service opportunities.

ARRL FILES PETITION FOR RULEMAKING WITH FCC TO CREATE NEW MF BAND AT 472-479 KHZ

At the 2012 World Radiocommunication Conference (WRC-12), delegates approved Agenda Item 1.23: a 7-kilohertz-wide secondary allocation between 472-479 kHz for the Amateur Radio

Service, with a power limit of 5 W EIRP (or 1 W EIRP, depending on location). Before this portion of spectrum is made available to radio amateurs in the US, the FCC must first approve its use and amend its rules to reflect the change. As such, the ARRL filed a Petition for Rulemaking on November 29, asking the FCC to amend Sections 2 and 97 of its rules and create a domestic Amateur Radio allocation at 472-479 kHz, conforming to the allocation status and limitations set forth in the international Radio Regulations.

"The subject of a low-frequency (LF) allocation, and/or a medium-frequency (MF) allocation in the lower portion of that range for the Amateur Radio Service has a long history at the Commission," the ARRL pointed out in its *Petition*. "As yet, however, the Commission has not created either one." Presently, the lowest domestic frequency allocation for the Amateur Service -- and the only MF allocation -- is at 1800-2000 kHz.

The ARRL also pointed out that there is an Amateur Radio allocation in all other areas of the radio spectrum, providing for experimentation in virtually all types of radio frequency communications. "Technical self-training and furtherance of radiocommunications development in the Amateur Service (which is in essence an experimental radio service) would be greatly enhanced by an LF allocation and an allocation in the lower portion of the medium-frequency (MF) range," the ARRL maintained. "It is now timely, in response to actions taken at the 2012 World Radiocommunication Conference (WRC) to create a new, domestic MF allocation at 472-479 kHz for the Amateur Radio Service." The ARRL pointed out that while it is also desirable and timely to have an allocation in the LF portion of the spectrum, that matter was addressed in the *Notice of Proposed Rulemaking and Order*, just released in ET Docket 12-338 on November 20.

Background

The issue of a domestic LF and/or low MF allocation for the Amateur Radio Service first formally arose in connection with the FCC's preparation for the 1979 World Administrative Radio Conference (WARC-79). To prepare for that WARC, the FCC issued a series of *Notices of Inquiry* in Docket 20271. It used the comments received in response to these as the basis for the United States' WARC-79 proposal. Prior to that docket proceeding, the Commission had established an Advisory Committee for Amateur Radio, relative to WARC-79 preparations. The Advisory Committee stated, in a report issued May 18, 1976 at Page 50, as follows:

*There exists among some amateurs a keen desire to conduct experimentation and communication at low frequencies, as well as at vhf and uhf (*sic*). The FCC authorizes the operation of low power communication devices in the band 160-190 kHz under Part 15, Subpart D, of its rules. Despite the severe restrictions of one watt power input and a total length not to exceed 15 meters, experimenters have been successful in transmitting over paths of several hundred miles under favorable conditions. An amateur allocation with less severe restrictions in this band, which is now allocated to the fixed service in Region II but is little used outside of Alaska, would permit amateurs to resume experimentation in a portion of the spectrum which has not been available to them for more than 50 years.*

472-479 kHz and WRC-12

The ARRL pointed out in its current *Petition for Rulemaking* that "[n]one of the Commission's past concerns with Amateur Radio interaction with PLC systems operating at 160-190 kHz or 135.7-137.8 kHz -- however valid those concerns might have been at the time -- applies or has applied to the band 450-490 kHz." An international allocation to the Amateur Radio Service at 472-479 kHz was adopted at WRC-12 with of 5 W EIRP for most of the world. The Final Acts of WRC-12 become effective on January 1, 2013.

"The allocation was made in fulfillment of WRC-12 Agenda Item 1.23, considering a secondary allocation to the Amateur Radio Service in the range 415-526.5 kHz," the ARRL stated. "Studies conducted in support of the Agenda Item considered present and future uses by incumbent services (mobile, including maritime mobile and aeronautical radiolocation). Several frequency ranges for the allocation were considered. Ultimately, WRC-12 concluded that the range 472-479 kHz offered maximum protection to existing and future applications in these services, consisting primarily of broadcast data transmissions in the maritime mobile service and aeronautical non-directional beacons in the aeronautical radiolocation service. Several administrations -- including Germany, Sweden, the Netherlands, New Zealand and Monaco -- have already authorized Amateur Radio Service operation on the 472-479 kHz band beginning on or in advance of the January 1, 2013 implementation date of the WRC-12 Final Acts."

In the United States, the 472-479 kHz band is part of the larger segment 435-495 kHz that is allocated on a primary basis to the Maritime Mobile Service (federal and non-federal users), and on a secondary basis for federal government aeronautical radionavigation. The ARRL stated in its Petition that it is not aware of any domestic assignments that would conflict with the allocation of the band 472-479 kHz to the Amateur Radio Service, and there is almost no power line carrier (PLC) operation in this band segment.

According to a 2002 article in *IEEE Transactions on Power Delivery* entitled "Evaluation of the Potential for Power Line Carrier (PLC) to Interfere With Use of the Nationwide Differential GPS Network" (Silva, Michael, Senior Member, IEEE and Whitney, Bruce, Member, IEEE), of the 28,816 PLC transmitters that existed in the United States in 1999, *only 20 operated anywhere in the band 450-490 kHz*. Of the 40 kilohertz-wide segment referred to in the article, only 7 kilohertz is proposed to be allocated to the Amateur Radio Service in the US.

"Therefore, even if any of those 20 PLC transmitters that operated *somewhere* in the 450-490 kHz in 1999 are still operational," the ARRL said, "and even if any of those which were operating in 1999 and which are still operational are presently operating in the small segment 472-479 kHz, it would surely be a simple matter indeed to retune those very few PLC transmitters less than 4 kilohertz, which is less than 1 percent of the available operating frequencies for PLC systems at LF and MF. So, very little adjustment would be required, if any would be called for at all, and it would be a simple matter indeed to do so."

The ARRL maintained that the 5 W EIRP maximum power specification recommended at WRC-12 for this band will not affect the utility of the allocation for radio amateurs: "Given typical antenna efficiencies in this frequency range, Amateur Radio stations operating in this band are likely to fall well within this limit. International footnote 5.80A (Geneva 2012) would impose a 1 W EIRP limit on US radio amateurs only when operating within close proximity to certain countries, including the Russian Federation. As a practical matter, only stations in the western part of Alaska, or certain maritime mobile amateur stations, could be affected by this limit."

As such, the ARRL, in its *Petition*, proposes to implement these power limits. "The utilization of narrow bandwidth emissions has proved satisfactory in extensive experimental operation in the vicinity of 500 kHz in the United States," it said. "With respect to this band, no reports of harmful interference to the primary services (or to PLC systems) from experimental amateur operation have been received. Any likelihood of interaction between amateur stations and PLC systems in this band will be exceptionally low."

The ARRL has sponsored an extensive course of experimentation in the MF spectrum near 500 kHz since 2006. In September 2006, a group of 23 amateur stations -- using call sign WD2XSH -- scattered throughout the US were permitted to operate in the band 505-510 kHz for a course of experimentation

with propagation and interference testing. During the course of this experiment, the number of participating amateur stations increased to 42, and includes all geographic areas of the US, including Alaska and Hawaii. The frequency bands utilized were modified to include the entirety of 461-478 kHz and 495-510 kHz. Emissions, at power levels up to 20 W ERP, include 150 HA1A, 62H0J2B, 62H0F1B and 62H0G1D. This experiment is scheduled to continue through the end of the current license term, August 1, 2015. No reports of interference have been received. This is a disciplined program of experimentation with regular reports and analyses of interference potential to other services (including PLC systems) and experimentation with equipment and antennas.

The ARRL, in its *Petition*, offered a proposed change to Section 97.305(c) to permit use of RTTY and data emissions in this new secondary allocation (please see the appendix, located on pages 14-15 of the *Petition for Rulemaking*); as per the existing Section 97.305(a), radio amateurs would also be permitted to utilize CW emissions in the band. The appendix also proposes to permit General and Amateur Extra Class licensees access to the band. Technician class licensees would not be permitted to utilize the band. The maximum permitted power level for this band proposed in the appendix would be either 1 or 5 W EIRP maximum power, consistent with the international allocation made at WRC-12. --ARRL Letter

FCC REDUCES NEW JERSEY HAM'S FORFEITURE FROM $20,000 TO $16,000

After unsuccessfully appealing to the FCC to cancel his $20,000 forfeiture, Joaquim Barbosa, N2KBJ, of Elizabeth, New Jersey must pay $16,000 for "willfully and repeatedly violating Section 301 of the Communications Act of 1934, as amended by operating a radio transmitting equipment on the frequency 296.550 MHz without Commission authorization."The FCC noted in the *Forfeiture Order* that based on the examination process involved in pursuing an amateur license, "amateur licensees are expected to have an understanding of radio operations and pertinent FCC regulations, including Part 97 of the FCC's rules governing the Amateur Radio Service. Licensed amateur operators know that they are authorized to operate only on the frequencies listed in Section 97.301 of the rules, as designated by their operator class and license. Pursuant to the Table of Allocations, the 267-322 MHz band -- the band that Barbosa was operating in -- is allocated solely for federal government use, which we continue to believe Barbosa knew (or should have known) was not authorized for non-government use." Read more here. --ARRL Letter

LOGBOOK OF THE WORLD WEB PAGE NOW FEATURES DAILY AND HOURLY STATUS UPDATES

The ARRL has created a new informational page to issue daily status updates and information of interest to the Logbook of The World (LoTW) user community. These updates will include planned downtime and changes that will impact LoTW operations. In addition, LoTW's processing queue is now updated hourly, telling how many logs and QSOs have been uploaded to the LoTW system and are awaiting processing. New hardware that will improve LoTW's throughput is on order and is expected to be running in six to eight weeks.

Rick Murphy, K1MU, and Dave Bernstein, AA6YQ, have been charged with rebooting the Trusted QSL open source project. If you have demonstrably strong *C++* development skills that you're interested in applying toward improving LoTW's usability and efficiency, please contact Bernstein via e-mail **aa6yq(**at**)ambersoft(**dot**)com**.

We appreciate the user community's patience while we work to bring LoTW's performance to an acceptable level. --ARRL Letter

THE YASME FOUNDATION ANNOUNCES 2012 YASME EXCELLENCE AWARD RECIPIENTS AND SUPPORTING GRANTS

The Yasme Excellence Awards are given to individuals who through their own service, creativity, effort and dedication, have made a significant contribution to Amateur Radio. Their contribution may be in recognition of technical, operating or organizational achievement. The Yasme Excellence Award is in the form of a cash grant and an engraved crystal globe.

The Yasme Foundation has recognized the following individuals "in order to inspire them and others on behalf of Amateur Radio now and in the future."

George Fremin, K5TR; Tree Tyree, N6TR; Trey Garlough, N5KO, and Scott Neader, KA9FOX, for their contributions to many infrastructure projects that benefit the ham community at large.

ARRL Education and Technology Program Director Mark Spencer, WA8SME, for his instrumental work in the ARRL Teachers Institute on Wireless Technology and other training efforts, development of PIC microcontroller projects and books for amateurs, as well as working with leaders in student and scientific teams in applying Amateur Radio to scientific projects and experiments.

Champ Muangamphun, E21EIC, and Pornchai Semjang, HS2JFW, for leadership in Thailand's amateur community, especially during the recent flooding which helped open the door to the new Thai HF licensing and the enhanced stature of Amateur Radio with the Thai government.

Former NCJ Editor Carl Luetzelschwab, K9LA, and Tomas Hood, NW7US, for their sustained education of the amateur community regarding propagation, solar and geomagnetic physics.

David Freese, W1HKJ, for creating and maintaining the freeware software package Fldigi, probably the most widely used digital communication software in ham radio and a frequent gateway for new hams who are more familiar with computer-based communications.

Former ARRL Assistant Technical Editor Dean Straw, N6BV, for his contributions to amateur antenna system design and the development of software tools, such as *HFTA* to optimize system design.

Peter Martinez, G3PLX, and Pawel Jalocha, SP9VRC, for the development of PSK31, a widely used digital mode entirely invented by amateurs that is enabling many amateurs to successfully use HF with very modest stations.

Arie Kleingeld, PA3A; Ad Van Ginneken, PA8AD, and Arie Noordzij, PA3AN, for their sustained contributions to the Mercy Ships Project.

The Board of Directors also announces supporting grants to the following projects: WRTC 2014, the World Wide Radio Operators Foundation (WWROF), Club Log, the NCDXF Beacon Project, Yasme scholarships (administered by the ARRL) and the Amateur Radio Association of Kosovo (SHARK).

The Yasme Foundation is a not-for-profit corporation organized to conduct scientific and educational projects related to Amateur Radio, including DXing and the introduction and promotion of Amateur Radio in developing countries. --ARRL Letter

SHORTS

CHECK OUT 6 METERS – We had several openings over the Christmas Holidays,. This is common for December, but usually does not last long into January. By the January VHF contest we are over the December peak. K9RU, W9ZB and N9KZJ can be found on 6 and 2 meters for the VHF contest.

SWITZERLAND AND THE UK HAMS GAIN ACCESS TO 472 TO 479 KHZ - A New Year's present from telecommunications regulator BAKOM to the ham radio community of Switzerland. As of January 1, Swiss hams will have access to the low frequency spectrum from 472 to 479 kHz.

As in most other nations that have granted access to this band, the Effective Radiated Power level is 5 watts making it more suitable for low noise digital narrowband modes than either analog voice or CW.

And a New Years gift from United Kingdom telecommunications regulator Ofcom to that nation's hams. This with the announcement that the previously adopted additional block of frequencies at 5 MHz are now available on a Notice of Variation Basis.

As of January 1, UK hams holding Full Advanced class U-K licenses can apply for the Notices of Variation to gain access to the new frequency slots. Information for U-K hams on how to apply for these as well as a Notice of Variation for operation in the Low Frequency 472 to 479 kHz bands are on line at tinyurl.com/new-UK-nov – Amateur Radio Newsline

AE5DW TO GUEST ON THE DODROPIN ECHOLINK NER OM JANUARY 5 - at 2100 hours Eastern Standard Time, Amateur Radio Newsline's Don Wilbanks, AE5DW, will be the guest on the Amateur Radio Newsline Net held on the DoDropIn Echolink conference server. You are invited to – well -- drop in and catch Don talking about his career in broadcasting as well as amateur radio after which the latest Amateur Radio Newsline newscast will be aired. Again that's the Amateur Radio Newsline Net on Saturday January 5th 2100 ours Eastern Standard Time to meet Don Wilbanks, AE5DW, on the DoDropIn Echolink conference server node number 355800. Hope to see you there. (W8WFO – Amateur Radio Newsline

THREE NEW HAMS JOIN ISS CREW - Three new astro-hams are now on-board the Internationl Space Station. They are American Tom Marshburn, KE5HOC; Russian Roman Romanenko, UT5ERP and Canada's Chris Hadfield, KC5RNJ. All were launched from the Bikenour Cosmodrome in Kazakhestan on board a Soyuz booster on Wednesday, December 19th . The trio traveled for two days in the capsule, before docking with the space station where three other astronauts are already on board. – ANS

6 METER PROPAGATION TO BE ACTIVATED IN ANTARCTICA- On the air, listen out in February for Craig Hayhow VK6JJJ, who will be signing VK0JJJ from the coast of MacRobertson Land and Australia's base at Mawson in Antarctica. He arrives on February the 10th and while there he is also planning to install a 6 meter beacon to test the propagation on that band. The beacon will operate using the call VK0RTM running 400 watts out into a 5 element yagi. For contacts on the high frequency bands he will be running a Flex 5000A and an amplifier to a triangle antenna. QSL via VK3ZAZ. (VK3PC) – Amateur Radio Newsline

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