



RCA AMATEUR RADIO CLUB

DECEMBER, 2011 MONTHLY NEWSLETTER INDIANAPOLIS, IN

Merry Christmas and Happy Holidays

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE
TUESDAY, DECEMBER 13th, 6:30 PM AT G.T. SOUTH'S,
5711 E. 71st STREET, INDIANAPOLIS, IN

RCA ARC NEWS

SUMMARY OF THE NOVEMBER MEETING -- Field Day results are out and W9JP/W9RCA was 12th in the 3A class and number one in the Indiana section. This year's score is up from last years. To everyone who helped out, GREAT JOB! Planning for next years Field Day has already started and it look like we will have a similar setup.

We may still have the option to put the repeater at IVY Tech, but we won't know till next summer when they complete the remodeling of the building. We did send a letter to the Indiana Repeater Council telling them our repeater is off the air and we are looking at plans to put it at IVY Tech.

K9RU pointed out that the Club's antenna rotor from the club station is still on the antenna mast at Technicolor and needs to be removed.

With the sun spot activity band conditions have been really great. Ten meters is open well into the evening many days. We've had a couple of 6 meter F2 openings. The conditions during the CQ WW contest were the best in years and we compared notes on who worked what and when.

IRC Amateur Radio license testing will be on Saturdays for December, January, February and March instead of alternating between Saturdays and Monday evening. With the possibility of snow and traffic, it would make it hard to get to the test site on the west side of town. On a Saturday traffic is not bad even with the snow. Check the ARRL web site for details on test dates and times or contact K9RU or WS9H.

The ARRL 10 Meter contest is December 10 – 11, this should be a great contest with the band condition we are having. It is both CW and Phone and you can work the same stations on both modes. It is a simple 59 IN report.

RHONDA CURTIS, WS9H, RECEIVES THE IRCC HAM OF THE YEAR AWARD -- The Indiana Radio Club Council awarded Rhonda Curtis, WS9H, the "IRCC Ham of the Year Award" at the Ft. Wayne Hamfest. Rhonda is very active in ham radio. She has taken over both the Indianapolis Radio Club VE and Mid State Radio Club VE testing programs. She is also the net control operator for the ARES net on the 10/70 repeater. Rhonda is active with the W9IMS club, and is a mentor for new hams. --K9RU

FT. WAYNE HAMFEST -- If you did not go, you missed a good hamfest. Barry George, K3BG acted as chauffeur for five RCA Club members, driving his van to Ft Wayne. The hamfest had a good turn out and a good flea market. Major dealers and manufacturers included: MFJ, ICOM, Flex Radio and R & L Electronics.

CHECK 6 METERS !- Now through January, six meters can have some nice openings. There was a good six meter opening last weekend. The ARRL VHF SS contest is coming up in January, check the December QST for details. -K9RU

HAMFESTS, OPERATING EVENTS & TESTING

- Dec 10 RCA/IRC Test session, 12pm-2:m, EDS Training Facility, 4020 Georgetown Rd., Indy.
Contact Ronda Curtis, ws9h@arrl.net
- Dec 10 -11 ARRL 10 meter contest
- Dec 10 R&L Electronics customer appreciation day. Hamilton, OH
<http://store.rlham.com/shop/catalog/>
- Feb 25 LaPorte Hamfest, LaPorte, IN <http://k9jsi.org/hamfest>
- Mar 24 Columbus Hamfest, Columbus, IN
- Apr 21 North Central Indiana Hamfest, Kokomo, IN <http://www.nci-hamfest.net/>
- May 18-20 Dayton Hamvention, Hara Arena, Dayton, OH <http://www.hamvention.org>
- July 14 Indy Hamfest, Camp Sertoma, Indianapolis <http://www.indyhamfest.com/>

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.

GET ON WHILE THE BANDS ARE HOT! THE ARRL 10 METER CONTEST

Ten meters -- in case you haven't heard, it's **alive in a big way!** That means that the **ARRL 10 Meter Contest** -- coming up the weekend of December 10-11 -- is going to be the one of the best we've seen in years! During this event, many propagation modes will be available: Sporadic-E will help you work stateside stations, a touch of meteor scatter in the morning will give you split-second chances to work stations -- you'd better be quick, though! -- and DX stations will be plentiful, thanks to the return of F2 propagation.

Yes, 10 meters is back. During the CQ World Wide DX CW Contest this past Thanksgiving weekend, many stations worked more than 100 DXCC entities on 10 meters. ARRL Contest Branch Manager Sean Kutzko, KX9X, said that he keeps hearing from numerous hams who have been licensed only three or four years, telling him that they've never experienced a 10 meter opening before because they weren't licensed during the last solar cycle peak: "A common phrase I'm hearing is, 'Now I understand what all the Old-Timers in my club were talking about -- 10 meters is great!' With a concentration of activity for the contest, there will be an opportunity for the first time in several years to experience the beauty of a wide-open 10 meter band. With so much excitement worldwide over the great conditions, the 2011 ARRL 10 Meter Contest could see the highest level of participation in a very long time!"

Single Operator entrants can use CW only, SSB only -- or a mixture of both. They can choose between High Power, Low Power (150 W or less) or QRP (5 W or less). Want to share the fun with your friends? Invite them over and enter in the Multioperator category. US Novice and Technician class operators can get in on the fun, too. Both classes are permitted SSB operation between 28.3-28.5 MHz with 150 W. You don't have an antenna for 10 meters? Why not build one yourself! A dipole for 28.4 MHz is about 16.5 feet long -- build it and get it up in the air as high as you possibly can. According to Kutzko, it's an easy construction project and you *will* work stations, especially with band conditions like this! Quite simply, this is a weekend not to miss!

In 2010, the ARRL added the 32 Mexican states as multipliers to the 10 Meter Contest. “Activity from our friends in XE spiked in 2010 as a result of the inclusion of Mexican states, and there’s every indication there will be even more activity from the XE’s in 2011, providing even more stations to work and increase your score,” Kutzko said. For a list of the Mexican states, download a [free map](#), provided by Grupo DXXE.

The [ARRL 10 Meter Contest](#) runs from 0000 UTC Saturday, December 10 through 2359 UTC Sunday, December 11. Logs must be [e-mailed](#) or postmarked no later than 0000 UTC Wednesday, January 11, 2012. Paper logs should be sent to ARRL 10 Meter Contest, 225 Main St, Newington, CT 06111. --ARRL

RILEY HOLLINGSWORTH ADDRESSES PA. RADIO CLUBS

[The following, by Gerald Wagner, KB3SSZ, is reprinted from *QRZ News*, a publication of the Southern Pennsylvania ARC in Lancaster, PA.]

The combined radio clubs of Harrisburg invited the hams of the area to a special presentation they sponsored at the Holiday Inn in New Cumberland to hear the recently retired Special Counsel for the Spectrum Enforcement Division of the FCC, Mr. Riley Hollingsworth, K4ZDH. Riley spoke for almost an hour to assembled hams including myself and two others, WA3FFK and N3XPD, from Lancaster's SPARC club.

After the talk, Shelby (K3EMT) ask me to share my notes from the lecture with those not present via the various newsletters. Following are some of the points Riley gave us in his talk. The full lecture is available as an MP3 file for any wanting to listen to all the material presented.

Riley compared the negative comments received when the rules were relaxed to allow a non-code proficiency license with the older but as boisterous clamor on the allowance of single side band (SSB) transmissions. Ham radio has survived and will survive despite the opinions of some old timers who object to its modernization. Don't get hung up in the 'good- old-days' syndrome.

Riley credited his early introduction to the ham hobby to his Uncle LB who acted as his Elmer and encouraged him to get involved. He told the story of Mrs. Bagley, his uncle's cantankerous next door neighbor and how they mischievously pranked her with a home made interference device that had her jumping up predictively to slap her TV when they activated it. Shame on them – hams never do anything like that today, at least not on purpose.

Riley related his amazement at the technical improvements in our hobby. Vendors report sales are brisk in all the new items, even those related to morse code. He credits a lot of this to the efforts of the ham community and in his belief that passion in a pursuit, such as the ham radio hobby, is a much better motivator than a monetary advantage. He quoted the advice that one of your worst days when doing something you love and enjoy is better than any of your best days doing something you hate. He urges us to instill in the new crop of hams the idea of trying new things and not being afraid to make a mistake.

Unlike 10 years ago, our hobby is growing he said. We are approaching 700,000 hams in the US. Much of the recent increase is spurred by the Homeland Security and EMS emphasis. Riley is afraid that if the old ham core does not introduce these emergency types to the many other parts of the hobby, that we will lose them when their licenses expire. We all have the responsibility to the next generation that the previous passed on to us. He reminded us of the saying that: “Teachers are immortal - there is no way to estimate when their influence dies as it travels from one generation to the next and on.”

The lecture inevitably came around to the enforcement arena. In any hobby, there is always 1% that won't follow the rules and cause problems for everyone. Ham radio is no exception. Riley shared a few

interesting infraction stories. He found that one of his more valuable tools in enforcement was to talk to the wife or girl friend of the infringer. He quoted one Georgian XYL after explaining the reason for the call: "My husband returns home from work at 6 o'clock and I can guarantee you will not have this problem after 6:15!" He ventured that a large proportion of the problems would disappear should California ever secede from the USA. Hi.

Riley shared his belief in the valuable backup nature of our hobby. He said, "Hurricane Katrina showed just how delicate our cell phone systems are." 1800 calls were handled by the ham community during its first week. Natural disasters are increasing in frequency. We have observed 10 weather related disasters in the last year with costs of more than one billion dollars each. Ham radio is a distributed fall back that is hard to put out of commission by any localized occurrence.

Riley took a few questions. One dealt with why the FCC does not mandate repeater frequencies. He said it never had the staff or the desire to do so. California has a particular problem in this area. Hams and the ARRL need to organize their equipment and for the most part this technique is working. There was concern as to the future band allocation for ham radio use. Riley thinks this will not be an overall problem but reminded everyone of the hackneyed expression that applies to many disciplines: "Use it or Lose it". Another concern from the floor dealt with the use of power lines to carry digital signals and the resulting BPL Interference. It can be bad and is obvious when present. He said notching is a technique to alleviate this and is being used. Plus it does not seem that power line distribution will be a prominent and viable technology in the future.

Mr. Hollingsworth's low key and humorous presentation was appreciated by all in attendance. If you missed it, get the audio track and listen to it or buttonhole one of your members who were there and ask him or her to share remembrances. Riley called our attention to a ham program on the Internet at <http://live.twit.tv>. Go to the home page and search for HAM. You can watch it on line or download a podcast. Some 20+ Ham Nation Videos with Bob Heil (K9EID) exist so far.

And thanks to the Harrisburg clubs for sponsoring this event and inviting all of us to share it with them. Audio recordings can be found at:
http://www.k3ir.org/Hollingsworth_past_FCC_Code_Infraction_+12dB.mp3
http://www.k3ir.org/Hollingsworth_past_FCC_Code_Infraction_Q&A+12dB.mp3 -- QRZ News

U.S. CONGRESS PROPOSES EASING OF ITAR RESTRICTIONS

In the United States the International Traffic in Arms Regulations (ITAR) law has threatened amateur radio satellite developers with jail terms and heavy fines if they collaborate with overseas amateur satellite projects on projects deemed to be "dual use". The dual use designation is applied to technology for which the Department of Defense and Department of State determines may have military applications even if it is developed for civilian research or application.

This ITAR dual use designation has made AMSAT-NA a "munitions supplier" as defined by the law. It almost completely eliminated AMSAT-NA cooperation and assistance with amateur radio satellite projects in any other country than the USA.

A proposed change in the ITAR law by Congressional bill H.R. 3288 may help ease the Federal Government restrictions on US Hams engaging in collaborative projects with Radio Amateurs in rest of the world.

H.R. 3288: Safeguarding United States Satellite Leadership and Security Act of 2011 sponsored by Rep. Howard Berman is at the first step of the legislative process in Congress. It proposes to reduce ITAR restrictions on commercial satellite development.

Additional information, including a link to the text of the bill, list of the co-sponsors, and a progress-tracking overview is at: <http://www.govtrack.us/congress/bill.xpd?bill=h112-3288>

The UniverseToday.com article 'Could We Soon See the End of ITAR's Choke hold on Space Exploration?' provides a good overview of this vital bill, read it at <http://tinyurl.com/6r3nb4m>
--AMSAT News Service, UniverseToday.com and govtrack.us

FCC GRANTS SECONDARY SERVICE ALLOCATION TO WIRELESS BROADBAND MEDICAL MICROWAVE NETWORKS

In their regular meeting on Wednesday, November 30, the four FCC Commissioners unanimously agreed to allocate spectrum and adopt service and technical rules for the utilization of new implanted medical devices that operate on 413-457 MHz (70 cm). These devices will be used on a secondary basis as part of the Medical Data Radiocommunication Service in Part 95 of the FCC rules. The Amateur Radio Service also has a secondary allocation on the 70 cm band. These new rules are the result of a *Notice of Proposed Rule Making* that the FCC released in March 2009. A *Report & Order* that will define these new rules is expected soon.

According to the FCC, these devices would greatly expand the use of functional electric stimulation to restore sensation, mobility and function to those persons with paralyzed limbs and organs; they would be implanted in a patient and function as wireless broadband medical micropower networks (MMNs).

Calling the new rules an "advance[ment of] its mobile broadband agenda," the FCC said this will create "a new generation of wireless medical devices that could be used to restore functions to paralyzed limbs. Medical Micropower Networks (MMNs) are ultra-low power wideband networks consisting of multiple transmitters implanted in the body that use electric currents to activate and monitor nerves and muscles." The Commission also noted that its *National Broadband Plan* -- released in 2010 -- observed "that the use of spectrum-agile radios and other techniques can significantly increase the efficient use of radio spectrum to meet growing demand for this valuable resource. MMNs illustrate how advanced technology can enable the more efficient use of spectrum to deliver innovative new services." Read more:

<http://www.arrl.org/news/fcc-grants-secondary-service-allocation-to-wireless-broadband-medical-micropower-networks> --ARRL Letter

AMSAT-DL RECEIVES MARS SCIENCE LABORATORY

Radio Amateurs have received signals from the NASA Mars Science Laboratory using the AMSAT-DL amateur radio facility at Bochum in Germany.

Just over 7 hours after launch at 21:45 UTC the X-band telemetry signal from the MSL was received using the Bochum amateur radio facility. The signal, received at a distance of 112,000 km, had a spin-modulation of ± 3.5 Hz, 2 revolutions / minute.

This is believed to be the first reception of the MSL outside the official NASA Deep Space Network (DSN).

For reception of MSL James Miller, G3RUH remotely reconfigured the Bochum tracking and receiving system. The MSL X-Band telemetry signal was received automatically in Bochum, no-one had to be physically on-site. This shows how flexible and reliable the system at Bochum is, ready for the planned AMSAT-DL P5-A mission to Mars.

James says the Bochum Antenna is used to receive lots of the NASA spacecraft all the time. Stereo-A/B is heard every day, and when they have gone LOS, he checks Grail-A and Grail-B and also Juno.

Reception of MSL required adding its trajectory data to the spacecraft database, and the frequency to the radio control computer. Provided the given frequency is with ± 40 kHz of the actual frequency, Bochum can lock onto it in 1 sec via an FFT acquisition process. As it happens, the actual frequency was within 8 kHz of the DSN channel center, so finding it was immediate.

Congratulations to the AMSAT-DL team on a remarkable achievement. Control Software for the Bochum Radio Telescope by James Miller G3RUH:

<http://www.amsat.org/amsat/articles/g3ruh/126.html>

Stereo A/B Spacecraft Telemetry Reception at Bochum by James Miller, G3RUH

<http://www.amsat.org/amsat/articles/g3ruh/127.html>

AMSAT-DL in Google English <http://tinyurl.com/AMSAT-DL> --AMSAT NewsService, James Miller, G3RUH, AMSAT-DL, and AMSAT-UK

SHORTS

FCC RELEASES NEW RULES FOR 60 METERS -- On November 18, the FCC released a *Report and Order (R&O)*, defining new rules for the 60 meter (5 MHz) band. **The new rules will not go into effect until 30 days after being published in the *Federal Register*, which has not yet happened.**

These rules are in response to a *Petition for Rulemaking* filed by the ARRL filed more than five years ago, and a June 2010 *Notice of Proposed Rulemaking*. In the *R&O*, the FCC replaced one of the channels, increased the maximum authorized power amateur stations may transmit and authorized amateur stations to use three additional emission designators. Read more [here](#).

THIS WEEK 50 YEARS AGO: OSCAR 1 -- Oscar 1 was launched on an Agena B rocket from Vandenberg AFB in California along with a Discoverer series satellite. KC4USA in Antarctica first reported signals as it passed over there after being launched. Oscar 1 was battery powered. Its signals lasted for about two weeks. The batteries were not rechargeable. The transmissions were on 145.00 MHz. The CW signal repeatedly sent HI in morse code. The number of HIs per minute, or the "HI Rate" was the only telemetry sent. The HI Rate gave the internal package temperature. Amateurs were asked to report the HI rate.

The AMSAT News Service is re-running the Project OSCAR Newsletters to commemorate the 50th anniversary of OSCAR 1. During the November/ December 2011 time frame you will be able to share the excitement of the launch campaign that started it all 50 years ago. <http://www.youtube.com/watch?v=aGy2rHiHKDQ>

The Newsletters were hand-typed back in 1961. Thanks to Don Ferguson, KD6IRE for scanning the original documents announcing OSCAR 1. --AMSAT NewsService

AMATEUR RADIO IN SPACE: AMSAT ANNOUNCES END OF OSCAR 51 MISSION -- [AMSAT-OSCAR 51](#), the popular FM repeater satellite, has likely reached the end of its operational lifespan. AMSAT-NA Vice President of Operations Drew Glasbrenner, KO4MA, issued the following statement on November 29: "It is with a heavy heart I report that AO-51 has ceased transmission and is not responding to commands. The last telemetry data indicated that the third of six batteries was approaching failure to short, and observations indicate the voltage from three cells is insufficient to power the UHF transmitters. The IHU [internal housekeeping unit] may continue to be operative. Initial tests with the S band transmitter were also not positive, although more attempts are in order. We

have tried leaving the satellite in an expected state where if voltages climb high enough, the 435.150 transmitter may possibly be heard. The command team will regularly attempt communications with the satellite over the coming months (and years). There is always the possibility that a cell will open and we could once again talk to our friend while illuminated. Thanks to all who helped fund, design, build, launch, command, and operate AO-51. Its 7 year mission has been extraordinary." –ARRL Letter

ON THE AIR: 2012 MALPELO DXPEDITION TO BE EXTENDED -- The HK0NA DXpedition to Malpelo -- an island located approximately 235 miles from Colombia's Pacific coast -- is scheduled for early 2012. Organized by the DX Radio Amateur Club out of Colombia, the DXpedition boasts an international team of 16 operators from eight countries. According to DXpedition leader Jorge Prieto, HK1R it is highly unlikely that the various Colombian authorities will permit another DXpedition to Malpelo anytime soon. With this in mind, he said that the dates of the DXpedition will be extended by two to three days from the previous 12-14 day plan. The approximate dates of operations will be January 21-February 5/6, 2012. Operations are planned on 160-6 meters on CW, SSB and Digital modes, including EME. Malpelo is currently #12 on *DX Magazine's* 100 Most Needed Countries Survey. Read more [here](#). –ARRL Letter

THE NIGHT BEFORE CHRISTMAS, FROM A HAM'S PERSPECTIVE -- Just in time for the Holidays, Gary Pearce, KN4AQ, has created a video version of Clement Clark Moore's poem *A Visit from St Nicholas* -- more commonly known as *The Night Before Christmas* -- but Pearce's version has a decidedly Amateur Radio twist. With a guitar accompaniment by Don Merz, WA3AYR, *A Ham's Night Before Christmas* features *QST* magazine covers, Gil cartoons and Christmas-themed *QST* advertisements from days gone by. Click [here](#) to watch the video on the ARRL YouTube channel. -- ARRL Letter

“Man will never reach the moon regardless of all future scientific advances.”

-- Dr. Lee DeForest, "Father of Radio & Grandfather of Television."

THE *RCA ARC MONTHLY NEWSLETTER* IS COMPILED AND EDITED BY JIM RINEHART, AND JIM KEETH. ALL MATERIAL CONTAINED HEREIN IS OBTAINED FROM THE SOURCES CREDITED AND EDITED FOR THIS NEWSLETTER. EMAIL TO <mailto:WebMaster@w9rca.org>. Check our web site at <http://www.w9rca.org/>