

RCA AMATEUR RADIO CLUB

NOVEMBER, 2011

MONTHLY NEWSLETTER

INDIANAPOLIS, IN

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

RCA ARC NEWS

SUMMARY OF THE OCTOBER MEETING -- At the 11-October meeting the lack of any progress on getting the repeater back on the air was discussed. There have been a few questions/comments from previous users asking about plans to get it back in operation. Right now, there doesn't seem to be much enthusiasm to try and get a new site. The antennas are still up at the old location. K9RU reported on the IRCC (Indiana Radio Club Council) meeting. K9RU reported on planned test sessions scheduled for January, February, and March of 2012. Greg Holbrook showed off the new 75 meter QRP transceiver he is constructing. Don't forget the Fr. Wayne hamfest on 19-November.

HAMFESTS, OPERATING EVENTS & TESTING

Nov 19 FortWayne Hamfest, <http://www.fortwaynehamfest.com>
Nov 26 Evansville Hamfest, <http://w9ear.org/hamfest.htm>
Nov 26-27 CQ WW DX Contest CW

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.

US AMATEURS NOW 700,000 STRONG!

As the third quarter of 2011 came to a close, ARRL VEC Manager Maria Somma, AB1FM, began calculating the number of licensed Amateur Radio operators in the US, as well as the number of new licensees. "At the end of September, I saw that the number of hams in the US was high," she said. "When I started comparing that number with other years, I found that it was an all-time high." For the first time, there are more than 700,000 radio amateurs in the US.

"When looking at the three current license classes -- Technician, General and Amateur Extra -- these numbers are impressive," Somma explained. "The number of Technicians peaked in March 2011 at 342,572, while in September 2011, we saw both Generals and Extras peak at 159,861 and 125,661, respectively. As new Technicians earn their Amateur Radio licenses, and current Technician licensees move on to General and Generals upgrade to Extra, this can cause up-and-down fluctuations for these totals."

Somma said these high numbers mean that hams are upgrading and renewing in larger numbers and staying interested in hobby: “These are compelling statistics and I am thrilled to see the highest number of amateur radio licensees ever! When I began working at the ARRL back in the mid 1980s, there were approximately 450,000 amateurs in the US. Our VEC program conducted an average of 55 sessions a week. Today, we administer approximately 150 exam sessions each week, and our total number of licensees across all three license classes continues to grow each year.”

In the past 40 years, the number of Amateur Radio operators in the US has grown at a remarkable rate:

December 1971: 285,000
December 1981: 433,000
December 1991: 494,000
December 2001: 683,000
September 2011: 700,221

*Source: 1971, 1981, 1991: print editions of [Radio Amateur Callbook](#). 2001, 2011: www.ah0a.org/FCC/Graphs.html. **Please note:** While the number of licensees has grown considerably over the years, we realize that these numbers include some who are no longer active in Amateur Radio. A recent survey of ARRL members, however, indicates that more than 80 percent of those responding are active.*

“As technology changes and advances, it is especially vital to keep up or be at the forefront,” Somma said. “I believe that Amateur Radio has done just that! The measurable results are our indisputable license numbers. It amazes me after all these years how important and relevant Amateur Radio remains. I am proud to be one of the 700,221 licensees and to see this historic and important milestone.” –ARRL Letter

FCC TIGHTENS BPL INTERFERENCE RULES -- BUT NOT BY ENOUGH

On October 24, 2011, the FCC released the *Second Report and Order* in its proceeding -- now in its 9th year -- to adopt rules for Access Broadband over Power Line (BPL) systems. The *Second Report and Order* is the final step in the Commission’s effort to comply with the directives of the United States Court of Appeals for the District of Columbia Circuit, which in April 2008 ordered the FCC to correct errors it had committed in the course of adopting rules in 2004. The Court acted in response to a *Petition for Review* filed by the ARRL.

In July 2009, the FCC issued a *Request for Further Comment and Further Notice of Proposed Rule Making* in which it proposed slight modification of measurement standards for determining whether a BPL system is in compliance with the maximum allowable levels of radiated emissions. In response, the ARRL argued that coupled with a scientifically valid extrapolation factor for determining those levels, mandatory notching of the amateur bands to a level 35 dB below the general emission limit would reduce the likelihood of harmful interference to amateur stations to a level that would permit any remaining harmful interference to be remedied on a case-by-case basis (*see below*). The ARRL noted that its request for mandatory notching simply reflected the best practices of the BPL industry.

In the *Second Report and Order*, the Commission decided not to adopt its own proposal and also declined to adopt the ARRL’s request for mandatory notching. Instead, the Commission has increased the requirement for BPL systems to be able to notch frequency bands to at least 25 dB, an increase of 5 dB from the existing requirement of 20 dB. The Commission also made technical adjustments to its rules for determining the distance between a power line and a measurement antenna and for determining site-specific extrapolation factors.

“We were prepared to be disappointed, and we were,” commented ARRL Chief Executive Officer David Sumner, K1ZZ, after reviewing the 76 page *Second Report and Order*. “The increase in notch depth is a step in the right direction, but the value of the change is greatly diminished by the notches not being mandatory. The FCC acknowledges that a compliant BPL system will increase the noise floor below 30 MHz at distances of up to 400 meters from a power line, but characterizes that as ‘a relatively short distance.’ How many amateur stations are located more than a quarter-mile from the nearest power line?”

More than 17 pages of the *Second Report and Order* are devoted to defending the Commission’s choice of a 40 dB/decade extrapolation factor for measuring emissions at distances other than 30 meters from the power line. “It was particularly disappointing to read that ‘...ARRL asserts that there is only one scientifically correct and valid answer of an extrapolation factor of 20 dB...,’ Sumner said. “That is a gross mischaracterization of our position. Our argument was that the 40 dB/decade value chosen by the Commission was demonstrably inappropriate for BPL, which the FCC acknowledges does not behave as a point-source emitter. Lacking an unambiguous scientific basis for a single value that would be equally valid across the entire frequency range from 1.7 to 30 MHz, the Commission fell back on the single value that defies physics -- while at the same time acknowledging that ‘...ARRL is correct with regard to the physics of this issue.’”

One FCC statement with which the ARRL is in strong agreement occurs toward the end of the extrapolation factor discussion: “Whether the extrapolation factor is 20 dB or 40 dB or somewhere in between is far less important than the fact that harmful interference must be corrected under any circumstances.” Unfortunately, Sumner observed, the FCC’s deeds do not back up these words: “The Commission notes that there are not many interference complaints about BPL systems that are currently in operation, but inaccurately attributes that to the adequacy of its rules. In fact, it is the marketplace failure of Access BPL -- coupled with voluntary steps taken by the few system providers - - that are still in business that is responsible for this fortunate result.” The one interference complaint that the FCC acknowledges receiving was filed by the ARRL on December 29, 2010, and which the Commission says was “...submitted *recently* [emphasis added] and is under investigation at this time.” “A well documented interference complaint languishing for months is a perfect illustration of why mandatory notching is needed,” Sumner said.

The *Second Report and Order* states that “...the BPL system database shows that BPL systems are currently operating in 125 ZIP codes across the United States.” In fact, once non-existent ZIP codes are eliminated, there are 200 ZIP codes listed in the BPL system database. The FCC offers no explanation for why it has discounted this figure to 125, but neither figure reflects reality. “The BPL system database is filled with listings for ‘paper’ systems that were never deployed, systems that have been taken out of service and systems that are at some planning stage or are only offering service to customers within a small pilot area,” Sumner said. “The FCC’s own report on the status of Internet access services as of December 31, 2010 shows no more than 6000 customers nationwide receiving service via ‘power line and other’ connections, and about half of those appear to be ‘other.’ There is no reasonable explanation for why the Commission cites a flawed industry source for data when it possesses better data itself.

“One of the most puzzling sections of the *Second Report and Order* is that devoted to a discussion of the noise floor,” Sumner concluded. “The thrust of the Commission’s argument is that while natural and manmade radio noise is extremely variable, there is no point in regulating BPL emissions down to a reasonable level because in some locations and at certain times, it will be obscured by other noise sources. Imagine if that sort of logic were applied to air and water pollution -- and make no mistake, BPL emissions pollute an irreplaceable natural resource, the radio spectrum.”

While a thorough technical analysis of the FCC’s latest BPL document will take some time, Sumner predicted that the ARRL will file a *Petition for Reconsideration*. “While BPL has failed in the marketplace as a medium for delivering broadband connectivity to consumers, the technology is perceived to have some ‘smart grid’ applications,” he said. “Now is the time to fix the rules, principally by mandatory notching, so that any new entrants will be competing on a level playing field

with the existing BPL firms that have recognized the need for notching of the amateur bands.” –ARRL Letter

FCC, FEMA, NOAA TO CONDUCT FIRST NATIONWIDE TEST OF EMERGENCY ALERT SYSTEM

The FCC, in coordination with the Federal Emergency Management Agency (**FEMA**) and the National Oceanic and Atmospheric Administration (**NOAA**), will conduct the **first nationwide test** of the Emergency Alert System (**EAS**) at 2 PM EST (1900 UTC) Wednesday, November 9. According to FEMA, EAS participants -- broadcasters, satellite and digital radio and television providers, and cable and wireline video providers -- “provide a critical public service to the nation as the resilient backbone of alert and warning when all other means of communication are unavailable.”

During the test -- which should last approximately three minutes -- listeners will hear a message indicating that “This is a test.” Although the EAS test may resemble the periodic monthly EAS tests that most Americans are already familiar with, there will be some differences in what viewers will see and hear. The audio message will be the same for all EAS participants.

“Due to limitations in the EAS, the video test message scroll may not be the same or indicate that ‘This is a test,’ FEMA advised on its **website**. “This is due to the use of the live EAN code -- the same code that would be used in an actual emergency. The text at the top of the television screen may indicate that an ‘Emergency Action Notification has been issued.’ This notification is used to disseminate a national alert and in this case, the test. In addition, the background image that appears on video screens during an alert may indicate that ‘This is a test,’ but in some instances there might not be an image at all.”

According to the FCC, the Commission and FEMA plan to reach out to organizations representing people with hearing disabilities to prepare that community for the national test. In addition, FEMA and the FCC will work with EAS participants to explore whether there are solutions to address this limitation.

The test will last for approximately three minutes; however this may vary across the country. “While state and local EAS messages are limited to two minutes, there is no time limit for national EAS alerts,” FEMA said. “To evaluate whether the system properly interprets the national message code in the national EAS test, the message duration must be longer than two minutes.”

Although local and state components of the EAS are tested on a weekly and monthly basis, there has never been an end-to-end nationwide test of the system. We need to know that the system will work as intended should public safety officials ever need to send an alert or warning to a large region of the United States. Only a complete, top-down test of the EAS can provide an appropriate diagnosis of the system’s performance.

The FCC explained that in order to minimize disruption and confusion during the EAS test, it is being conducted on November 9 “because this date is near the end of hurricane season and before the severe winter weather season begins. The 2 PM EST broadcast will minimize disruption during rush hours while ensuring that the test occurs during working hours across the country.” --ARRL Letter
AMSAT-UK Telemetry App to Fly on STRaND-1 SmartPhone Satellite

FCC TERMINATES PROCEEDINGS AFFECTING THE AMATEUR RADIO SERVICE

The FCC issued an *Order* on November 1 that terminated hundreds of proceedings, including six proceedings that members of the public, including the ARRL, had asked not to be terminated. Two of these six proceedings involved the Amateur Radio Service. This follows a June 2011 *Public Notice* that sought comments on whether or not it should terminate approximately 800 docketed proceedings. On July 20, 2011, the ARRL filed comments with the FCC on this matter, explaining that it had no objection to the termination of the proceedings in the *Public Notice*, save for one item: The ARRL's *Petition for Rulemaking (RM-10165) Amendment of Parts 2 and 97 of the Commission's Rules Regarding the 2300-2305 MHz Band*. In this *Petition*, the ARRL requested that the FCC change the Amateur Radio Service's allocation in that band from Secondary to Primary. This *Petition* was one of the six items to be terminated. More information here: <http://www.arrl.org/news/fcc-terminates-proceedings-affecting-the-amateur-radio-service> –ARRL Letter

THE WORLD'S FIRST SMARTPHONE NANOSATELLITE

STRaND-1, the World's first SmartPhone Nanosatellite, under development by researchers at the University of Surrey and United Kingdom's SSTL is being built in engineer's free time and using advanced commercial off-the-shelf components is planned for launch into orbit around the Earth in early 2012.

The team plans to fly an Android-based smart phone using its installed accelerometers and GPS receivers as the heart of its guidance system. They will also use the phone's camera, speaker, mic and touch screen display to run some interesting orbital apps.

The apps that have been selected to run on the SmartPhone were announced this week. They include:

- + Scream In Space, from a UK student ensemble, called Cambridge University Spaceflight, will run videos of people screaming on the phone's display, and these will be recorded by a minicam pointing at the phone. They will then check if the vibration from the phone's loudspeaker is picked up through its chassis by the mic effectively making the scream in space audible, despite the vacuum in the unpressurised spacecraft.
- + 'Postcards from Space' and '360' will both take pictures of the earth using the phone's camera to work out exactly where the satellite is. Hopefully, says SSTL, schoolchildren will be able to order a satellite picture of the Earth that the Nexus One's 5-megapixel camera will shoot for them.
- + iTesa is an app that will use the satellite's onboard magnetometer to measure variations of the Earth's magnetic field.
- + Telemetry data on the satellite's progress through space will be visible on the phone's screen thanks to an app called Strand Data, developed by the people behind the educational Funcube satellite.

Details of the STRaND-1 satellite can be found on-line at: <http://tinyurl.com/3nbhw76> (sstl.co.uk)

The New Scientist web site article about the orbital apps can be found on-line at: <http://tinyurl.com/6hub9o6> (newscientist.com) -- SSTL and NewScientist.com

MARK YOUR CALENDARS: IT'S TIME FOR THE NOVEMBER FMT

The Frequency Measuring Test (FMT) returns to the airwaves on Wednesday, November 9, 10:15 PM EST. As in April, the format will simulate a roundtable QSO in which all of the stations are close to the same frequency, but not exactly on the same frequency. This time, there will be more time -- about five minutes -- between the transmissions from each station. There will be three test signal stations: Connie Marshall, K5CM, in Oklahoma, Charles Collins, W6OQI, in California, and members of the Midwest VHF/UHF Society, W8KSE, in Ohio. If you have not participated in an FMT before, it doesn't take a room full of test equipment to have fun and make surprisingly accurate measurements. You can read all of the *QST* articles about the exercises on the ARRL FMT web page. Read more: <http://www.arrl.org/news/mark-your-calendars-it-s-time-for-the-november-fmt>. --ARRL Letter

SHORTS

PRESIDENT OBAMA NAMES TWO NOMINEES FOR FCC COMMISSIONER -- President Barack Obama has nominated two new FCC Commissioners: Jessica Rosenworcel and Ajit Varadaraj Pai. Rosenworcel has been nominated to replace retiring Commissioner Michael Copps. President Obama selected Pai to fill the seat vacated by Meredith Attwell Baker, who left the FCC in June 2010. If Rosenworcel and Pai are confirmed by the Senate, the FCC would be at its full complement of five Commissioners.

The FCC has been down one commissioner since Baker's departure, and Copps' departure at the end of the year would leave the agency with only three commissioners: two Democrats and one Republican. Only three sitting Commissioners may be members of the same political party. At present, Chairman Julius Genachowski, Copps and Mignon Clyburn are Democrats. If confirmed, Pai will join Commissioner Robert McDowell as one of the two Republicans on the Commission. Read more: <http://www.arrl.org/news/president-obama-names-two-nominees-for-fcc-commissioner> --ARRL Letter

NEW MEXICO HOSTS SUCCESSFUL FOXHUNTING CHAMPIONSHIPS -- Results of the USA's 11th national championships of Amateur Radio Direction Finding (ARDF) are in the record books. Members of Albuquerque Amateur Radio Club went all out to provide a top-notch experience for fans of on-foot transmitter hunting, also called radio-orienteeing and foxtailing. They came from 10 states and four other nations to see who would win medals by finding transmitters in the forests of central and northern New Mexico. From September 14-18, competitors took to the woods with directional antennas and receivers. They navigated not with GPS sets, but with maps and compasses. Their goal was to find all of their required transmitters and to get to the finish line in the shortest elapsed time. For fairness, the organizers didn't disclose the exact sites of the competition in advance. That kept anyone from doing advance reconnaissance in person or via *Google Earth*. Competitors boarded buses on Saturday and Sunday mornings, not knowing where there were going. Read more: <http://www.arrl.org/news/ardf-update-new-mexico-hosts-successful-foxhunting-championships>

CALIFORNIA HAM KILLED IN SHOOTING SPREE -- A gunman, apparently enraged over a custody dispute with his ex-wife, walked into a hair salon in Seal Beach, California on October 12. Scott Evans Dekraai allegedly opened fire in the salon, killing eight people, including his ex-wife. David Caouette, N6DAC -- who was waiting outside the salon in his car -- was killed in the rampage. He was 64. Ed Testa, KI6OJV, a longtime friend of Caouette's, told *The Orange County Register* that Caouette "was in the wrong place at the wrong time and had no way to defend himself. We are just in disbelief that he could have been involved in this tragedy." Testa said that he had heard that Caouette was visiting one of the restaurants next to the salon where the shooting occurred. Read more: <http://www.arrl.org/news/california-ham-killed-in-shooting-spree> --ARRL Letter

NOMINATE THEM FOR THE ARRL'S LEONARD AWARD -- Television, radio, magazines, newspapers, blogs, Webcasts -- Amateur Radio has been featured in all of them in 2011. Now it is time to return the favor and thank the professional media people who made it happen by nominating them for the Bill Leonard, W2SKE, Professional Media Award. This national level annual award is sponsored by the ARRL and honors three professional journalists whose outstanding coverage in audio, video and print formats best reflect the enjoyment, importance and public service value of the Amateur Radio Service. The deadline for nominations is December 9. Read more:

<http://www.arrl.org/news/honor-a-professional-journalist-nominate-them-for-the-arrl-s-leonard-award>

--ARRL letter

POSTAGE RATES TO INCREASE IN JANUARY -- The US Postal Service has announced that as of January 22, 2012, the cost to mail first class letters, postcards and packages within the US will go up. The cost to mail a first class letter will be 45 cents, an increase of 1 cent. According to the USPS, this is the first increase since May 2009. The cost of mailing a postcard will be 32 cents, an increase of 3 cents. This is the second increase for postcard postage in less than a year; in April 2011, the USPS boosted the postcard stamp price from 28 cents to 29 cents. You will also pay more to send letters to Canada, Mexico and other international destinations. For more information on all the postal increases:

http://about.usps.com/news/national-releases/2011/pr11_factsht_pricechng_1018.pdf

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