

# RCA AMATEUR RADIO CLUB

MAY, 2010    MONTHLY NEWSLETTER    INDIANAPOLIS, IN

---

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE  
TUESDAY, MAY 11th, 6:30 PM AT [G.T. SOUTH'S](#),  
5711 E. 71<sup>st</sup> STREET, INDIANAPOLIS, IN

---

## RCA ARC NEWS

**SUMMARY OF THE APRIL MEETING** – We had a good turnout at the 13-April meeting. Thanks to all who attended! The Indiana QSO party is May 1, from noon to midnight EDT. The N1MM logging program will log it. It was pointed out how great the 40m band is now without the shortwave broadcast stations. Field Day was discussed (as usual). Dave, N9KZJ, reported the FD location within the Marion County Fair Grounds will be different this year. It was still undecided whether or not we'd be in the 3A class. It was pointed out that operators from our Club contribute over half of the QSOs. Again this year, FD will be a joint operation with the Indianapolis Radio Club. The Club 2m simplex frequency at the Dayton Hamvention will again be 144.43. We will again have the lunch-time get together in the usual place as well as dinner Friday night at the Old Hickory. IRC dues were paid. The W9IMS special event station will be operational mid-May until race day. Jon Reeves, WB9CNE, and his son, were visitors. Jon wanted to remind us that the Greenfield Ham Club meets the fourth Wednesday of the month at 7 PM.

**RCA AMATEUR RADIO CLUB PLANS FOR THE DAYTON HAMVENTION** -- The plans for this year are the same as what we have done in the past. We will use 144.43 MHz simplex. We will meet in the northwest corner of the arena with the permanent seats behind where the Cushcraft display was in previous years. At noon EDT on Friday and Saturday grab something to eat for lunch and join us. We plan to eat at Old Hickory, 4029 North Main Street, (Rte 48) after the hamfest Friday and Saturday evening. We have not heard if Les and Bob are going to be set up in the flea market or from Jon Powell.

**INDIANAPOLIS RADIO CLUB BUS TO THE DAYTON HAMVENTION** – You may want to consider taking the IRC Bus to the Hamvention. There is no parking problem and the bus will drop you at the front door of the Hara Arena and will park near the flea market so you can drop off your purchases at noon. The bus will be locked when not attended. The bus trip is Saturday, May 16<sup>th</sup>, pick up points are at Southern Plaza at 6:30 AM and at Peddler Mall East Washington Plaza at 7:00 AM. The bus will stop in Richmond for a quick breakfast and stop on the way back for dinner. The bus will leave the Hamvention at 4 PM. The \$30 round trip ticket is still the best bargain for getting there and back.

For additional information, point your browser to <http://www.indyradioclub.org> or to sign up; contact IRC Treasurer: JAY Willever, e-mail [K9LJW](mailto:K9LJW) or at the May IRC meeting.

**W9IMS WILL BEGIN OPERATION FOR THE INDY 500 RACE ON MAY 14<sup>TH</sup>** -- Friday, May 14<sup>th</sup> is the start of the Indy 500 Special Event Operation for W9IMS. Everyone is welcome to stop by and visit or operate from the station. Contact K9RU for more information.

**W9IMS VOLUNTEERS WORK ON RESTOTATION OF THE USS INDIANAPOLIS MEMORIAL** -- The W9IMS group has adopted the restoration of the USS Indianapolis Memorial as a club project. The restoration was presented by Mike Koss a couple of years ago and got the go ahead earlier this year. Work started in April and will continue through the

summer weather and time permitting. RCA ARC member's that are volunteers on the project: NE9O, K9RU and N9KZJ. For more information and schedules on dates contact Mike Koss, W9SU.

**WW2IND USS INDIANAPOLIS MEMORIAL STATION OPERATIONS** -- There are up coming operating events from the WW2IND USS Indianapolis Memorial station. The first is Memorial Day, Monday, May 31<sup>st</sup> Noon to 9PM and the second is the Museum Ships Event, starting at 6PM on Friday, June 4<sup>th</sup> through 8 PM on Sunday June 6<sup>th</sup>. Check out the WW2IND site for information on parking and operating schedule: <http://www.ussindyradio.org/splevnts-2010.htm>

**W9JP / W9RCA FIELD DAY PLANS** – Planning is under way for joint W9JP and W9RCA ARRL Field Day Operation. It will be at the Marion County Fair Grounds like last year, but we will be operating out of the Sheriff's building. This should get the operation further away from the power lines where noise has been a problem for the pasts two years. Plans are for either a 2A or 3A operation. The third station can be used for more CW operating.

**INDIANAPOLIS HAMFEST** -- We are going to set up in the flea market tent as we have done in the past. We will need help moving the stuff Mike's to the hamfest. We only have 2 or 3 three pickup truck loads of stuff and the plan is to use members vehicles to transport it to the hamfest.

**432 MHZ EME FROM ARECIBO** -- On the weekend of April 16 -18, the worlds largest radio telescope was used for EME contacts on the 432 MHz band. KP4AO operated about three hours each day, Friday, Saturday, and Sunday.

As near as I can tell, Dick, W9ZB and myself (AF9A) were the only ones in our Club who attempted the EME contact. First of all, neither of us were able to make a contact. Malcolm, WA9BVS, helped on my end with the effort and we ended up using his J-Beam because it received better then my crossed Yagi which was left over from the AO-13 satellite days. W9ZB was at a disadvantage in that although he has a good VHF/UHF terrestrial setup, he cannot tilt his antennas up. The moon was nearly overhead for this event.

I'd not planned to participate in this event because we'd planned on being out of that weekend, but plans changed. I had a week to get ready. Since I already had a 1.2m dish with az-el rotators on it, it was decided the easiest thing to do would be to attach a 432 antenna to the dish and use the dish rotors to aim the antenna .

Well, since I hadn't used this setup for several years, nothing worked. Eventually, we got the rotors to turn, position readouts to work, fixed a few connectors, connected a 432 MHz receive preamp and a 432 MHz 100 W power amp within about 10 of the antenna and everything was pretty much ready. See photo below.

Thanks to the internet, we knew a lot more about the Arecibo operation than we might otherwise would have. Fortunately, they had a web cam in the control room so we could see and hear what was going on. It was by this means on the first day, Friday, we found out they had an amplifier problem and would start out running barefoot, about 35 watts from the exciter rather than the expected 350 watts. Also, the 25 meter radio telescope near Dwingeloo, The Netherlands, was on line receiving 432 MHz with the WebSDR software (<http://websdr.camras.nl:8901/>). This allowed us to hear very well in real time what Arecibo was transmitting.

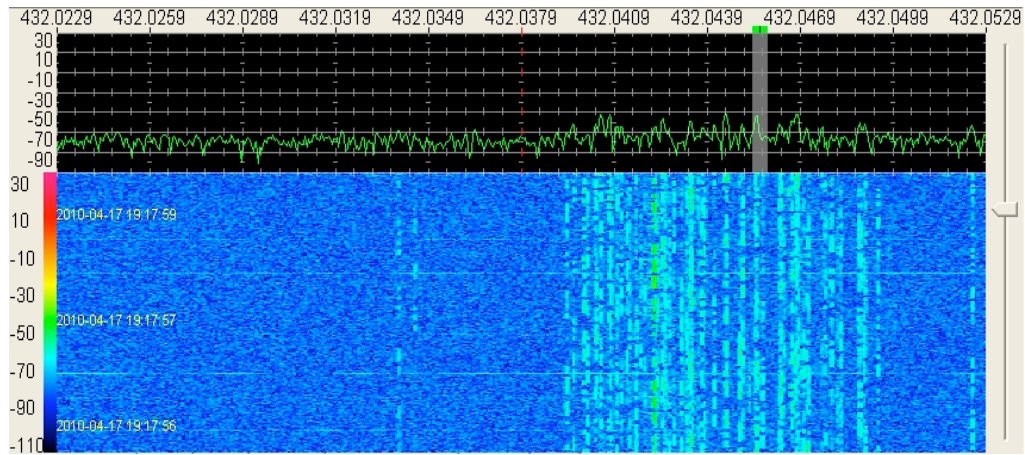


AF9A's antenna setup. The dish isn't used except to hold the 432 MHz antenna (left).

On Friday afternoon, at the start, we heard nothing. After we switched to WA9BVS's antenna, we could faintly hear KP4AO's CW signal. The moon, being so rough, is a very poor reflector. Reflected signals have a good deal of QSB which makes it difficult to copy. As it was, we could hear enough to get only a couple of CW characters at a time. As mentioned, KP4AO, had an amplifier problem was running only about 30 - 35 watts. They estimated only about 25 watts into the antenna! This leads one to wonder... They're using a dish which has a reflector 1000 ft. in diameter. The feed point is at the prime focus which is about 500 ft above the center of the dish. What kind of transmission line is used from the "shack" to the dish feed with only about 1 dB of loss at 432 MHz? I have more loss than that in the 9913 coax from my shack to the back yard! Answer: They're using waveguide running the approximately 1500 ft to the line feed "stinger" feed antenna that brings the line image formed by the main circular reflector surface to a point source. The "stinger" line array feed is about 100 ft long from base to tip. Pictures of the 432 MHz waveguide and feed are here: <http://cid2eb5c45df634a712.skydrive.live.com/browse.aspx/ARECIBO%20432%20FEED>

Saturday and Sunday they had the amp running. Signals were much better. We were able to copy about 75% on SSB and nearly 100% on CW. Unfortunately, still no contact. The KP4AO crew, after the event, estimated they worked something like 20% of the stations which were potentially workable on SSB and 10% of those workable on CW. This is understandable when you look at the pile up on the recordings made during the event. Several hours were recorded. Below is a waterfall display, recorded by KP4AO, Saturday afternoon during the CW time period showing the stations calling in the 5 kHz to 15 kHz window above the KP4AO transmit frequency.

All in all, KP4AO worked 240 QSOs with 57 DXCC countries in eight hours of operation. SSB and CW were used except for about one hour Sunday when JT65B was used. JT65 is a weak signal mode with several features which make it able to receive very weak signals below the noise level. A technical paper is here: <http://www.arrl.org/files/file/18JT65.pdf>



Waterfall display of CW signals recorded at Arecibo Saturday afternoon.

Arecibo Video Tours: <http://www.youtube.com/watch?v=vicxDnn6LEY>  
<http://www.youtube.com/watch?v=7rFeXsVz8hE&NR=1> --AF9A

## HAMFESTS, OPERATING EVENTS & TESTING

- |                   |   |
|-------------------|---|
| <b>May 10</b>     | License Testing, Sponsor: W9IMS, 6:30PM @ 3321 N Gale St., Indianapolis. Walk-ins allowed Contact: Jim Rinehart, <a href="mailto:k9ru@arrl.net">k9ru@arrl.net</a> or (317) 218-7304   |
| <b>May 14-16</b>  | Dayton Hamvention, Hara Arena, Trotwood, OH   |
| <b>June 5</b>     | License Testing, Sponsor: IRC, 9 AM, Indianapolis Training Center, 2820 N Meridian Street, Walk-ins allowed, Contact: Gale A. Wuollet, <a href="mailto:indy33windy@comcast.net">indy33windy@comcast.net</a> or (317) 849-8449 |
| <b>June 5-6</b>   | Museum Ships Weekend. <a href="http://www.nj2bb.org/museum/">http://www.nj2bb.org/museum/</a>   |
| <b>June 26-27</b> | Field Day   |
| <b>July 10</b>    | Indianapolis Hamfest, Camp Sertoma, Indianapolis  |

See the [ARRL Contest Branch page](#), the [ARRL Contest Update](#) and the [WA7BNM Contest Calendar](#) and the [ARRL Special Event Station Web page](#) for more info.

## FCC LOOKS TO LOWER FEES FOR VANITY CALL SIGNS

The FCC released a *Notice of Proposed Rulemaking and Order (NPRM)* on April 13 seeking to lower the fee for Amateur Radio vanity call signs. Currently, a vanity call sign costs \$13.40 and is good for 10 years; the new fee, if the FCC plan goes through, will go down to \$13.30 for 10 years, an decrease of 10 cents. The FCC is authorized by the *Communications Act of 1934 (as amended)* to collect vanity call sign fees to recover the costs associated with that program. The vanity call sign regulatory fee is payable not only when applying for a new vanity call sign, but also upon renewing a vanity call sign for a new term. Instructions on [how to comment](#) on this *NPRM* are available on the FCC Web site.

The vanity call sign fee has fluctuated over the 13 years of the current program -- from a low of \$11.70 in 2007 to a high of \$70 (as first proposed in the FCC's 1994 *Report and Order*). In 2007, the Commission lowered the fee from \$20.80 to \$11.70. The FCC said it anticipates some 14,800 Amateur Radio vanity call sign "payment units" or applications during the next fiscal year, collecting \$196,840 in fees from the program.

The vanity call sign regulatory fee is payable not only when applying for a new vanity call sign, but also upon renewing a vanity call sign for a new term. The first vanity call sign licenses issued under the current Amateur Radio vanity call sign program that began in 1996 came up for renewal four years ago.

Those holding vanity call signs issued prior to 1996 are exempt from having to pay the vanity call sign regulatory fee at renewal, however. That's because Congress did not authorize the FCC to collect regulatory fees until 1993. Such "heritage" vanity call sign holders do not appear as vanity licensees in the FCC Amateur Radio database.

Amateur Radio licensees may file for renewal only within 90 days of their license expiration date. All radio amateurs must have an FCC Registration Number (FRN) before filing any application with the Commission. Applicants can obtain an FRN by going to the [ULS](#) and clicking on the "New Users Register" link. You must supply your Social Security Number to obtain an FRN. -ARRL Letter

## **COMMENT DATE SET IN WT DOCKET 10-72 ON USE OF EMPLOYEE HAMS IN DRILLS**

The FCC's Notice of Proposed Rule Making on providing communications on behalf of an employer during a government-sponsored emergency or disaster drill has finally been published in the Federal Register. Its now time for you to voice your opinion.

On April 22, a summary of the Notice of Proposed Rule Making in WT Docket 10 - 72 was published in the Federal Register and starting the clock on the 30 day commentary period and 15 additional day Reply Comment period. Comments are due on or before May 24th with reply comments due by June 7th.

By way of background, back on March 24th, the FCC released the Notice of Proposed Rulemaking. It suggests amending the Part 97 rules to permit, under certain limited conditions for hams to transmit messages during emergency and disaster preparedness drills, regardless of whether the operators are employees of entities participating in the drill.

Current rules provide for amateur radio use during emergencies. At the same time, the rules -- specifically section 97.113 (a)(3) -- prohibits communications in which the station licensee or control operator has a pecuniary interest. This includes any communications on behalf of an employer, whether direct or indirect. Translated it means that even if a ham employee is off the clock he or she cannot take part in emergency training exercises.

The FCC says that while there are some exceptions to this prohibition, there is currently none that would permit amateur station control operators who are employees of public safety agencies and other entities, such as hospitals, to participate in drills and tests in preparation for emergency situations. Nor may they transmit messages on behalf of their employers during such drills and tests.

The FCC notes that public safety land mobile radio systems are the primary means of radio-based communications for emergency responders. But it goes on to add that experience has shown that amateur radio has played an important role in preparation for, during, and in the aftermath of natural and man-made emergencies and disasters.

Based on what it terms as a public need, the FCC is proposing to amend Section 97.113 of the Amateur Service rules to provide that, under certain limited conditions, amateur radio operators may transmit messages during emergency and disaster preparedness drills. This,

regardless of whether the operators are employees of government entities participating in the drill. It also seeks comments on whether certain other drills that are not sponsored by government agencies -- such as those conducted by hospitals -- should be included in the proposed exemption as well. –ARRL Letter

## **IARU INTRUDER MONITOR SYSTEMS CLEARS RADIO KUWAIT FROM 40 METERS**

A phone call has ended Radio Kuwait broadcasting in the Amateur Radio 7 MHz allocation. From April 12th to the 19th, the broadcaster had been transmitting programs in the Arabic language with up to S9+30dB signals. Its signal blocked almost 20 kHz of the 40 meter band from 7150 and 7190 kHz.

Soon reports began to surface of the Radio Kuwait broadcasts in the exclusive amateur spectrum and the matter was reported to the IARU Intruder Watch Monitoring System. Soon, many national coordinators had requested their telecommunications authorities to send International Complaints to the State of Kuwait. But it was 9K2RR, the IARU Monitoring System Intruder Watch Coordinator in Kuwait who solved the problem. He made a call to Radio Kuwait, explained the situation and asked for a frequency change. And with additional support by DJ9KR, the broadcaster quickly complied. (IARU Region 1) –ARRL Letter

## **NATIONAL PUBLIC RADIO SAYS HAM RADIO IS ALIVE AND WELL**

National Public Radio says that ham radio is alive and well, and it even produced a segment of its All Things Considered program to prove it. Amateur Radio Newslines Norm Seeley, KI7UP, has more:

Ham radio is far from the dying hobby that the nay sayers claim it to be. One that only a few years ago was being touted by techno blogs alongside 35 mm film and home videotape as technologies slated to quickly disappear.

Well, National Public Radio says that the bloggers were wrong because there are now nearly 700,000 U-S citizens who have ham radio licenses. NPR says that number is up by some 60 percent since 1981. And Says NPR, that number is growing.

The NPR story quotes Allen Weiner. He is an analyst at the technology research firm Gartner and Associates. Weiner says that while ham radio will never have the sex appeal of the iPhone, it does have a certain level of what he terms as nerd appeal.

Weiner also explains growth in our specialized communications interest in this way. He says that if it creates its own experience, that's really what's key here. Conversely, if it just emulates an experience that you can get online, it's not going to grow.

The report concludes by noting that even the most die-hard hams admit that amateur radio will never be a mainstream hobby. But says National Public Radio, people are still discovering the joy of communicating with the technology of amateur radio. A technology that has existed for nearly a century.

Still enjoying ham radio from Scottsdale Arizona, I'm Norm Seeley, KI7UP, reporting for the Amateur Radio Newslines. You can hear the NPR story on ham radios growth at the URL

found at <http://www.npr.org/templates/story/s...ryId=125586086> (Adapted from NPR web post)

## SHORTS

**ONE DAY TECH CLASS TO BE TAUGHT AT HAMVENTION 2010** -- A one-day Technician class will be held at Hamvention® 2010. Slated for Saturday, May 15th, the class will be taught by Mitch Stern, W1SJ, from 8 AM to 4 PM behind the Luso Tower in the East Hall. Exams will be conducted at the conclusion of class and a new Technician class license should be issued by the next day just in time to do some last minute radio shopping. Pre-enrollment for this course is required via the Internet [tinyurl.com/2dska2l](http://tinyurl.com/2dska2l) (Hamvention® Reflector)

**2010 DAYTON HAMVENTION RECEIVES D-STAR LINK APPROVAL** -- The Dayton Hamvention has received approval from the D-Star reflector owners to link its W8BI system to the 30-B reflector over the Hamvention® weekend. If you would like to follow the D-Star activity in Dayton over Hamvention® weekend, please use a linked repeater or link your DV Dongle to the 30-B reflector. Please do not link directly to the W8BI gateway. This is the second year such a D-Star link will be in place. All questions and comments on what is happening go to Mark Erbaugh via r-mail to [microenh \(at\) hughes \(dot\) net](mailto:microenh@hughes.net). (D-Star Reflector, WB9QZB)

**DON JOHNSON, W6AAQ, INVENTOR OF THE SCREWDRIVER ANTENNA - S.K.** - Don Johnson, W6AAQ, inventor of the screwdriver mobile antenna died Wednesday, April 14th. He had been ill for several months and was 91 at the time of his passing. According to Al Melcher, W6ARM, when the FCC first authorized H-F mobile, a group of hams in the San Francisco Bay area decided to go mobile on 75 meters and W6AAQ who came up with the idea of using a metal tube with a whip on top of a coil that fit inside the tube. By raising and lowering the coil a resonant point could be found. Johnson was searching for a method of tuning the antenna remotely when W6MHP suggested using the motor from a cordless screwdriver. Thus the "screwdriver mobile antenna" was born. Johnson received a patent on the device and built and sold thousands. (QRZ.com, others)

**TECHNICAL ARTICLES** -- In the current issue of the TAPR Packet Status Register (#111) there are a couple of good technical articles on D-Star and Digital ATV using DVB-S. <http://www.tapr.org/psr/psr111.pdf>

**THE FIRST MOTOTRBO HAM REPEATER IN NEW YORK CITY** - Frank Dinaro KC2CQR and freinds put up the first MotoTrbo Ham Repeater in the New York City metropolitan area. Coverage Includes Parts of NJ, Connecticut & Long Island. It is also connected via internet the possibilities are unlimited. This MOTOTRBO Group is dedicated to the Amateur Radio Community, not the commercial sector. Mototrbo utilizes TDMA (Time Division Multiple Access) digital voice, messaging, and GPS radio technologies, in addition to analog. Our system is open to all Amateur Radio Operators who have MotoTrbo compatible radios.

**CONTESTING 101 WEBINAR MAY 7TH** - Kirk Pickering, K4RO, the National Contest Journal's Contesting 101 column editor will shares tips and tricks for the beginning contest operator. This during an on-line Web Seminar or Webinar slated for Friday, May 7th at 9 PM Eastern Daylight Time. All you need is your PC, speakers, and a high speed Internet connection. To take part you must register in advance on line at [tinyurl.com/2685ld9](http://tinyurl.com/2685ld9)

**HAM RADIO IN SPACE: DARA TO MATCH DONATIONS TO AMSAT** - The Dayton Amateur Radio Association says that it will match one-for-one any donations made to AMSAT-NA between now and June 30th of 2010. This, up to a maximum of \$5,000.

The matching funds will be earmarked in support of the "Getting AMSAT Back into Space" campaign and help us raise the funds needed for the next satellite project which is a cubesat that will provide a 2 meter-70 Centimeter FM transponder that will match the ground performance of AO-51. More on this matching fund is on line at [www.amsat.org](http://www.amsat.org). (ANS)

**NEW 70 MHZ BEACON ON THE AIR** - In January, Brian Justin, WA1ZMS, of Forest, Virginia, filed an application with the FCC for an experimental license to operate a propagation beacon on 70.005 MHz. It was approved, and on Monday May 3, a 70 MHz beacon -- WE9XFT -- went live at 1200 UTC. The beacon is located in Bedford, Virginia, atop Apple Orchard Mountain (4200 feet above sea level), a peak along the Blue Ridge Parkway in Maidenhead grid square FM07fm. The beacon operates 24 hours a day on a non-amateur experimental license to operate a propagation beacon on 70.005 MHz. It was approved, and on Monday May 3, a 70 MHz beacon -- WE9XFT -- went live at 1200 UTC. The beacon is located in Bedford, Virginia, atop Apple Orchard Mountain (4200 feet above sea level), a peak along the Blue Ridge Parkway in Maidenhead grid square FM07fm. The beacon operates 24 hours a day on a non-amateur experimental license, as there is no 70 MHz amateur band in the United States; the experimental license expires September 1. WE9XFT is running 3kW ERP on 70.005 MHz, beaming toward Europe.

**NEW 75 METER AM TRANSCEIVER KIT** - Here's something you do not see very often. A new full carrier amplitude modulated transceiver for the 75 Meter band. Recently launched by Dave Benson K1SWL of Small Wonder Labs, lovers of AM can now get on the 75 with a 2.5 watt AM transceiver kit that costs less than \$70. The transmitter is crystal-controlled with 3885 kHz supplied. The receiver is varicap tunable over a 50 kHz, selectable range and comes with a 4 kHz crystal filter for ample selectivity. Full details on this kit are on line at [smallwonderlabs.com/Retro-75.htm](http://smallwonderlabs.com/Retro-75.htm) or by regular mail to Small Wonder Labs, P.O. Box 187, Newport New Hampshire, 03773. (Press release)

**WORKEDGRIDS SOFTWARE** - is a freeware Windows application that displays a map showing Amateur Radio grid squares contacted and logged using a third-party logging program. It was developed by **Bertrand Zauhar, VE2ZAZ**, and uses colors to display information on a per-band basis and up to four bands can be displayed concurrently. For its input, the program reads the plain-text (ASCII) log files generated by most logging programs. The file is read at a set interval and the worked grid squares on the map are updated in a dynamic way as the contest progresses and the log file is periodically saved. WorkedGrids can be downloaded from <http://www.ve2zaz.net/WorkedGrids/WorkedGrids.htm>

---

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/>