

RCA AMATEUR RADIO CLUB

APRIL, 2012

MONTHLY NEWSLETTER

INDIANAPOLIS, IN

THE NEXT MEETING OF THE **RCA AMATEUR RADIO CLUB** WILL BE
TUESDAY, APRIL 10th, 6:30 PM AT G.T. SOUTH'S,
5711 E. 71st STREET, INDIANAPOLIS, IN

RCA ARC NEWS

SUMMARY OF THE MARCH MEETING -- At the 13-March meeting the Indy Hamfest (July 14th) was discussed. The Club will again purchase tables as we still have a lot of small parts to be sold at \$1 per bag. We will again provide a \$50 prize for the "home brew contest" at the Hamfest. Field Day is still up in the air as a site has not yet been acquired. If you're interested in going to New Mexico to operate field day, contact K9RU. Jim Rinehart relayed a story about a recent test session which was held at the Lafayette Square Mall. The Mini Marathon, May 5th, still needs volunteer operators. Contact Mike Palmer, N9FEB, or go to <http://www.indyhams.org/event/500-festival-mini-marathon>. The W9IMS special event station(s) will operate again with a split sight arrangement, same as last year. If you'd like to operate, contact K9RU.

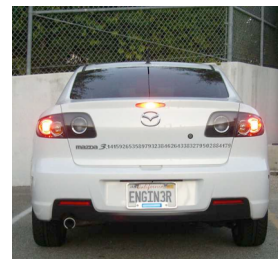
INDIANAPOLIS RADIO CLUB WILL CHARTER A BUS TO DAYTON -- The Indianapolis Radio club is chartering a bus to go to the Dayton Hamvention again this year. This will be on Saturday, May 19, 2012 and the cost will be \$30 per person for the round trip. Admission to the Hamfest and the food stops are not included in this price. This is a great way to go to the hamfest and avoid any parking problem. It is to the door service and they stop at McDonalds in Richmond on the way over for breakfast and at MCL for dinner on the way back. --K9RU

MARION COUNTY TESTING SESSIONS -- The April and May the Marion County amateur radio license testing sessions will be on a Monday evening. April was the month we had planned to start alternating Monday night test and Saturday afternoon test sessions with the April test session. With the Dayton Hamvention and all the activities in the month of May, it was decided to have that test session on a Monday evening session also. --K9RU

IF YOU THINK YOU MIGHT BE A GEEK... -- The winter edition of the TAPR PSR is available on line at <http://www.tapr.org/psr/psr117.pdf>. Several articles about some of the higher tech amateur radio projects including SDR, time and frequency projects, Doodle Labs OFDM radio, LW and MW DX, etc. There are lots of links to other web sites of interest.

Click this link for a higher resolution of the Mazda pi ->
<http://en.wikipedia.org/wiki/File:Mazda3-pi.jpg>

ARVN Video is making videos of the ARRL/TAPR Digital Communications Conferences for the last several years available on the web at <http://arvideonews.com/>. This is "shareware video." You can watch for free and if you think the video is worthwhile, they ask that you make a donation to help cover the production costs.



OsmocomSDR has a low cost, \$20, SDR on a “USB stick” built around a Realtech DVB-T chip. Check it out at <http://sdr.osmocom.org/trac/wiki/rtl-sdr> Here is a Youtube video done by Balint Seeber, VK2FUNK, showing the operation of the Osmocom device: <https://www.youtube.com/watch?v=Z0hEquzLsWU&feature=relmfu> Balint has done numerous videos on various subjects. Here is a link to a very well done video where he analyzes various signals heard on the HF bands: <https://www.youtube.com/watch?v=ZuRcaxpbYCw> --AF9A

HAMFESTS, OPERATING EVENTS & TESTING

- Apr 9 IRC Amateur Radio License Test Session, 6:30PM, EDS Training Center, 4020 Georgetown Road. Contact: K9RU e-mail: k9ru.indy@gmail.com Ph 317-495-1933
- Apr 13 IRC monthly meeting, Tom Chance, K9XV on antennas
- Apr 21 North Central Indiana Hamfest, Kokomo, IN <http://www.nci-hamfest.net/>
- May 11 IRC monthly meeting, VOIP by Dave Gingrich, K9DC
- May 18-20 Dayton Hamvention, Hara Arena, Dayton, OH <http://www.hamvention.org>
- June 8 IRC monthly meeting, annual auction
- June 23-24 ARRL Field Day
- 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.

NTIA: NO OBJECTION TO ADDITIONAL DATA MODES ON 60 METERS

In response to requests for clarification from the ARRL, the National Telecommunications and Information Administration (NTIA) has confirmed that it has no objection to the use of a broader range of data emissions by amateurs on the five 5 MHz frequencies on 60 meters. ARRL’s original understanding was that the NTIA preferred that the use of 2K80J2D emission be limited to Pactor III. The NTIA now says that that is not the case.

In an e-mail response to ARRL Chief Executive Officer David Sumner, K1ZZ, Karl Nebbia, Associate Administrator of the NTIA Office of Spectrum Management, stated, “NTIA has no interest in limiting the types of emission used by the amateurs as long as the data emission does not exceed the 2.8 kHz bandwidth generated by the upper sideband transmitter.” Nebbia referred all further inquiries to the FCC, which “...sets the conditions for use of the five 5 MHz frequencies by the amateurs.”

The requirement of only one signal per channel remains, as well as the prohibition against automatic operation. The FCC continues to require that all digital transmissions be centered on the channel-center frequencies, which the Report and Order defines as being 1.5 kHz above the suppressed carrier frequency of a transceiver operated in the Upper Sideband (USB) mode. This is typically the frequency shown on the frequency display.

<i>Channel</i>	<i>USB Suppressed Carrier (kHz)</i>	<i>Center (kHz)</i>
1	5330.5	5332.0
2	5346.5	5348.0
3	5357.0	5358.5
4	5371.5	5373.0
5	5403.5	5405.0

The ARRL advises amateurs to operate with care when using digital modes in consideration of the fact that hams are secondary users on these frequencies. See the revised 60-Meter FAQ page on the ARRL Web, as well as the revised ARRL 60-Meter Recommended Practices document. –ARRL Letter

DO YOU LIVE IN A CC&R RESTRICTED COMMUNITY?

Do you live in a CC&R- restricted community or participate in EmCom activities? Have deed restrictions / HOA covenants prevented you from erecting amateur radio antennas? Have these restrictions prevented you from full participation in emergency communications activities during disasters?

If your answer is “Yes”, ARRL needs to hear about your experience.

As you are probably aware, Congress has directed the FCC to conduct a study of the uses and capabilities of Amateur Radio Service communications in emergencies and disaster relief. The FCC was directed to identify “impediments to enhanced Amateur Radio Service communications, such as the effects of unreasonable or unnecessary private land use restrictions on residential antenna installations.” Finally, the study is to make “recommendations regarding the removal of such impediments.”

It is important to remember that CC&Rs are not the same as city and town zoning and building ordinances. The FCC already has extended a limited preemption to city and town ordinances thru PRB-1. This study also does not cover restrictions imposed on leased property, such as lease restrictions for apartment dwellers.

What this study specifically focus on are restrictions imposed on your ability to erect antennas and support structures that are imposed by private groups, such as your neighborhood sub-development Home Owners Association or Architectural Standards Committee.

The FCC has issued a Public Notice – DA 12-523- soliciting input from the public as part of their study. The ARRL is gathering comments from the Amateur Radio community to present as part of its comments on the public notice.

The ARRL is looking specifically for input in two specific areas:

- Recent Amateur Radio involvement in actual emergency communications and disaster relief;
- Specific details about how CC&Rs and other private land use restrictions have impaired licensed Amateurs to participate fully in these disaster relief communications.

If your ability to participate in ARES, RACES, SKYWARN, CERT, or other emergency and disaster relief communications has been limited because the inability to have adequate antennas due to CC&Rs, you are asked to provide that information to the ARRL.

First, we recommend that you prepare a narrative of your exact situation, in as much detail as practical. Some areas for you to consider in writing your story might be:

- Were there alternative properties without CC&Rs in the area you wished to reside?
- What exactly does your CC&R allow / prohibit (please include a copy of the specific wording)

- Have you applied for a waiver of the CC&R with the Home Owner's Association / Architectural Review Committee but were denied? If so, what was the reason?

To assist you in sharing your information with the ARRL, please visit the special ARRL website built to allow you to readily provide the pertinent information at <http://www.arrl.org/CCR-Study-Information> .

This page will present you with an overview of what we are asking and have links to the two forms for you to complete. Please be as factual as you can with the information you provide and please provide only information about events and activities in which you were directly involved.

If you wish to write out the details of your situation in advance, please do so. The, they can be either uploaded from the website or they can be sent as an email attachment to an email sent to CCRinfo@arrl.org

TIME IS OF THE ESSENCE! Congress directed that the FCC provide the report back within 180-days and that clock is already counting. The FCC is only accepting comments for a 45-day period, which will end May 17, 2012. In order for the ARRL to collate your information in a common report, we ask that you send in your information no later than WEDNESDAY APRIL 25. If you need more information, please contact <mailto:reginfo@arrl.org> The time to act is NOW! --IN ARRL

FRED MAIA, W5YI SK

A leading amateur radio journalist, educator and pioneer of volunteer examining, passed away on March 28 after a battle with cancer.

Maia, 76, published "The W5YI Report," dubbed "America's Oldest Ham Radio Newsletter," from 1978 to 2003, and has been a CQ contributing editor since 1985. His regulatory affairs column, first titled "Ticket Talk," then "Washington Readout," offered news and perspective on FCC and ITU (International Telecommunication Union) actions, and helped untold numbers of hams wend their way through often-confusing mazes of the volunteer examining and vanity call sign systems.

"Fred was one of those unusual people who was more focused on doing the job than he was on getting credit for doing it," noted CQ Publisher Dick Ross, K2MGA. "His 'job' was to help this hobby grow, and he succeeded admirably."

Maia was also a driving force in amateur and commercial radio licensing and education materials since late 1970. He was the first Volunteer Examiner Coordinator appointed by the Federal Communications Commission in 1984, and his W5YI-VEC group grew into the nation's second-largest VEC after the ARRL. Fred served as President of the W5YI-VEC until his retirement in October of 2000. In 1986, he founded The W5YI Group to develop, publish and sell amateur and commercial radio license study materials. Fred also formed National Radio Examiners to provide examination services as a Commercial Operator License Examination Manager (COLEM), and co-wrote a commercial radio licensing study manual with Gordon West, WB6NOA.

As a long time member of the National Conference of Volunteer Examiner Coordinators (NCVEC) and its Question Pool Committee (QPC), which develops and maintains the question pools for amateur radio license exams, Fred was deeply involved in many of the changes in amateur radio licensing over the past quarter century. This includes the phased elimination of Morse code requirements for amateur licenses and the current system of three license classes, Technician, General and Amateur Extra.

A resident of Arlington, Texas, Fred was a graduate of the U.S. Air Force Radio Operator's School, and was first licensed as an amateur radio operator as a teenager in Rhode Island, where he grew up. He is survived by his wife, Doris, and two daughters.

Editor's Note: Fred was a friend of the RCA ARC and we had used his license software for our classes and made it available to our members. He was a great guy to talk to and always had enthusiasm for ham radio and getting people into the hobby. -K9RU

COMING SOON: NEW ARRL MEMBERSHIP BENEFITS

The ARRL is excited to announce two new membership benefits that will be introduced in June 2012. In addition to the print copy of *QST*, all members will have access to an online digital edition of *QST* -- at no extra cost. You will be able to access *QST* from anywhere -- on nearly any computer, laptop, mobile device, smartphone and tablet (including Apple iPad, iPhone, iTouch and devices using the Android operating system).

Members will also gain access to archived issues of *QST* from December 1915 to the present; previously, only issues through 2007 have been available to members. If you are familiar with the current periodicals archive, that platform will be expanded to include all of *QST* from December 1915 through December 2011. A second, new archive will be introduced for issues beginning January 2012, featuring enhanced functionality including full-text search.

Members must have a valid ARRL website login to access the current digital edition of *QST* and the archived editions. Please go to <http://www.arrl.org/news/coming-soon-new-arrl-membership-benefits> --ARRL Letter

ONLINE DXCC APPLICATION TO DEBUT APRIL 2

Beginning April 2 at 12:01 AM EDT (0401 UTC), the ARRL's new Online DXCC tool will be ready to accept applications, allowing hams to supply the data from traditional paper QSLs in a digital form to apply for a new **DXCC award or endorsement**. Submitting a DXCC application using Online DXCC is easier than making a paper application, saving both time and money.

Using the Online DXCC Application, the user can select the cards that he or she would like to have checked by a card checker and, at his or her convenience, type that data into a form (which can be saved and retrieved at any time until submitted) and make an application for DXCC. When the application is finished, the participant will be able to print the list of cards and take the list and the cards (in the same order that they are entered into the form) to a card checker who will check the cards, note any changes and send the form to ARRL HQ. The card checker's job is exactly the same as before, except he or she does not need to collect a payment (unless the participant has worked that out with the card checker), as the client can pay online. Once submitted, DXCC staff can access the file submitted by the client, quickly make any changes noted by the card checker and process the application. The Online DXCC Application will have rates that are half those of a traditional paper QSL application that is sent to ARRL HQ.

Advantages of submitting your DXCC application using Online DXCC include:

Cost: The **application fees** are lower when submitting a DXCC application through Online DXCC. In particular, the application fee and the extra QSO fee for Online DXCC are half those of a traditional paper application.

Accuracy: Making a DXCC submission with Online DXCC is more accurate than a paper application that is filled out by hand because typographical errors are eliminated (except for the call sign). There will be no data entry errors at ARRL HQ because the contents of an Online DXCC application are transmitted directly to the DXCC system at HQ.

Speed: Making a DXCC submission using Online DXCC speeds up the processing of an application because the information on the DXCC Award Application and the DXCC Record Sheet do not have to

be manually entered into the DXCC system by ARRL HQ staff. The more applicants who use this system means there is a smaller backlog of applications and a faster turnaround for all DXCC program participants.

Convenience: The Online DXCC system will save the entered QSL card and application information for future access. You may enter information from your QSLs as you receive them and then submit your cards for checking when you are ready to apply for a DXCC award or endorsement. Cards no longer need to be in band or mode order.

Keep in mind that QSL cards will still need to be checked if you use the Online DXCC Application, either by a **DXCC Card Checker** or sent to ARRL HQ for checking.

Any radio amateur in the world -- ARRL member or non-member -- may use the Online DXCC Application. If you are applying for a DXCC award:

With a US call sign -- you must be an ARRL member. If you are not yet a member, you can **create an Online DXCC account**, begin entering your QSL card information right now and then **join the ARRL** when you are ready to submit your application.

With an overseas portable US call sign (like TF/NNIN) -- you must be an ARRL member.

With a non-US call sign -- you do not need to be a member of ARRL. --**ARRL Letter**

THE ARRL HOMEBREW CHALLENGE III -- AND THE WINNER IS...

The previous ARRL Homebrew Challenges have been to build a 5 W PEP 40 meter sideband and CW transceiver (Homebrew Challenge I) and then a 50 W linear amplifier to follow it (Homebrew Challenge II). This third challenge moved up the spectrum into frequencies that might be of interest to Technician class amateurs -- 10 and 6 meters.

There were two separate entry categories for this challenge: single band or multiband. The single band unit could have been for either 10 or 6 meters and had to output 25 W PEP on SSB and CW, with a cost target of \$150. The multiband unit had to put out the same power on both bands and be built for under \$200 of parts. Each entry category had detailed requirements for receiver and transmitter performance. The FCC requirements for transmitter spurious response of -43 dB on 10 meters -- and particularly the -60 dB on 6 meters -- were expected to be tough. The first category had a prize of \$200, while the second offered \$300.

While we heard from others who expected to participate, two entrants brought or sent us working transceivers by the November 1, 2011 deadline.

Jim Veatch, WA2EIJ

Jim Veatch, WA2EIJ, is no stranger to this competition, having been a winner in both the first and second Homebrew Challenge. His current entry is a compact competent transceiver that covers 12 meters, as well as 10 and 6 in a professional looking package that offers features well beyond the requirements. Jim made his DSP-610 for a total parts cost of \$198.30. This remarkable radio is a dual conversion, downconverting superhet design that uses the latest digital signal processing technology from the second IF on. Bandwidth is selectable in eight steps from 0.4 kHz to 2.4 kHz, and tuning is via a DDS synthesizer designed for low phase noise.

Jim elected to make the DSP-610 on a single circuit board. This arguably makes the development more difficult than had he elected to use a modular approach, but for our readers it makes duplicating the project much easier. He was declared the sole winner of the Homebrew Challenge III. Congratulations, Jim! A detailed article describing his transceiver will be in an upcoming issue.

Greg Charvat, N8ZRY

Unlike Jim, Greg was a new face when he arrived on our doorstep with his entry under his arm. Greg made a professional quality transceiver that met all requirements except the parts cost limitation. With his background in military radar systems, Greg took a different approach to his development and construction, building his transceiver from modular elements, which allowed him to easily work on and finalize one section at a time.

Greg's transceiver is a full size unit with the appearance of retro military gear. A look inside provides the tipoff that this is not a radio from a WW II bomber, but a modern HF transceiver built using the latest technology. Greg's design incorporated some design techniques not commonly found in the homebrew community, including current feedback op-amps for RF and IF amplifiers, the Si570 PLL IC for the VFO, high performance audio-derived AGC and a modern LDMOS RF power amplifier transistor. His design is capable of operating on all HF and VHF bands just by adding the appropriate filters. The down side of this technology and flexibility was a total parts cost of \$543.80, putting his transceiver out of contention for an official award. Still, it is a great transceiver and will result in an Honorable Mention certificate and an article in an upcoming issue of *QST*.

More information and photos are here: <http://www.arrl.org/news/the-arrl-homebrew-challenge-iii-and-the-winner-is> --ARRL Letter

SHORTS

NET ON 224.88 IN INDY -- There is a net on 224.80 MHz with a tone of 88.5 in Indy on Tuesday nights at 8:00 PM EDT. If you have a 22\$ MHz FM radio, this would be a great way to check it out and boost the activity on the band in the Indianapolis area. Check in welcome and encouraged. --ND9C

SPECIAL EVENT STATIONS PLANNED FOR LONDON 2012 OLYMPIC AND PARALYMPIC GAMES -- Some special event call signs will be activated to celebrate the London 2012 Olympic and Paralympic Games: 2O12L from London, England and 2O12W from Barry, Wales. The London 2012 Inspire program has granted the Radio Society of Great Britain (RSGB) -- Great Britain's IARU Member-Society -- use of the "Inspire mark" for these stations. Both stations will be on-the-air for the duration of the Games, July 27-August 12. Read more [here](#).

TAPR OPENS "INTEREST LIST" FOR HERMES SDR -- Tucson Amateur Packet Radio (TAPR) announces the opening of the "interest list" for the openHPSDR Hermes single-board Software Defined Radio. The Hermes interest list is used by TAPR to determine the number of Hermes boards to manufacture in the pending initial production run this spring. Hermes is a long-awaited addition to the openHPSDR project lineup, advancing through four prototypes while evolving from a USB-based to an Ethernet-based transceiver in about two years. Hermes is a Direct-Down-Conversion receiver, a Direct-Up-Conversion 500 mW transmitter and a gigabit Ethernet interface all on one board. Also on board is an RF-quiet switch-mode power supply, which allows Hermes to run from a single 13.8 V dc source. Read more [here](#). --ARRL Letter

ARRL WARNS MEMBERS TO BE AWARE OF BOGUS E-MAILS -- Some ARRL members with **arrl.net** e-mail accounts have recently received bogus e-mails, notifying them of a bill that supposedly needs to be paid. The e-mail instructs the reader to click on a link to view the bill; clicking on the link could release a virus that can infect your computer. Please be aware that these e-mails are not coming from the ARRL. "If you receive an e-mail like this and it looks like it originated from ARRL, please do not respond," explained ARRL IT Manager Michael Keane, K1MK. "The best thing you can do when receiving bogus e-mails is to simply add them to the spam list in your computer's e-

mail program and delete it. Please don't forward it to ARRL HQ -- we will have already seen it and are already responding to it." – ARRL Letter

QST AUTHOR SERIOUSLY INJURED -- Commander Richard Paton, USCGR (Ret) -- author of "Radio's Role in the *Titanic* Disaster" in the April 2012 issue of *QST* -- was seriously injured in a motorcycle accident in Tolland, Connecticut on March 22. He is in the Intensive Care Unit at Hartford Hospital.

Commander Paton, 67, was injured when his motorcycle collided with an automobile. At last report the accident was still under investigation.

"While Dick is not a radio amateur, his extensive maritime experience and inquiring mind combine to lead him to be curious about many of the things that intrigue us as hams," said Dave Sumner, K1ZZ, ARRL CEO. "I hope ARRL members who enjoyed his contribution to *QST* will join me in keeping Dick in their thoughts and prayers as he fights to recover." –ARRL Letter

"640K ought to be enough for anybody."

-- Bill Gates, 1981

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