

# RCA AMATEUR RADIO CLUB

OCTOBER, 2010    MONTHLY NEWSLETTER    INDIANAPOLIS, IN

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THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE  
TUESDAY, OCTOBER 12th, 6:30 PM AT [G.T. SOUTH'S](#),  
5711 E. 71<sup>st</sup> STREET, INDIANAPOLIS, IN

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## RCA ARC NEWS

**SUMMARY OF THE SEPTEMBER MEETING** – At the September meeting, K9RU reported that the W9IMS special event station worked in excess of 12 thousand contacts for the three races this summer. Dave, N9KZJ, reported on the USS Indianapolis station. There will be a test session on Oct. 11, at the W9IMS Comm Center. Doing 2011 Field Day with the Indy Radio Club was discussed. Those present were in favor of doing the joint effort again. At the next Indy Radio Club meeting, Oct. 8<sup>th</sup>, K9DUR, will talk about the Flex 1500 SDR. Dick, W9ZB, suggested that the remainder of the Club's "Free Homebrew Parts" be given to Harold, KE6TI, to disperse to homebrewer folks as he sees fit. A motion was made and passed. K9RU, who had just returned from a vacation "out West" showed a few pictures taken at W9INE's QTH, a great ham location in Colorado. Jim will prepare a page for the Club's web site with the pictures.

### **AMATEUR RADIO TESTING OCTOBER 11, 2010**

Sponsor: W9IMS Amateur Radio Club

Time: 6:30 PM (Walk-ins allowed)

Contact: Jim Rinehart, (317) 218-7304 or [k9ru@arrl.net](mailto:k9ru@arrl.net)

Location: W9IMS Comm Center, 3321 N Gale St, Indianapolis IN 46218-2169

Gale is a dead end street south off of 34th Street, about 2 blocks west of Sherman Drive. So look for the dead end sign, it looks more like an alley. The W9IMS Comm Center is at the end of the street in the first building on the east side. Parking is on the west side of the street.

The exam fee is \$15. A check made out to "ARRL VEC" is preferred, but we will accept cash. I picture ID is required. If you are upgrading, bring the original and a copy of your license.

**IRC MEETING FRIDAY, OCT 8** -- To all interested in Amateur Radio and related areas: Don't miss the next meeting of the Indianapolis Radio Club, this coming Friday, October 8.

The meeting will be held at the Indianapolis Training Center, at 2802 N. Meridian Street, Indianapolis, at around 7:00 p.m., with refreshments provided by the club and the Training Center.

Prior to the meeting, at the 6:30, in the parking lot of the ITC, will be the antenna shoot out. The winner of the shoot out will get the "Ultimate Ham President's Award", a Dubuque Royal Buffet three (3) pound ham! The topic at this month's meeting will be an update on the latest in Software Defined Radio. For additional information, point your browser to <http://www.indyradioclub.org>.

**HAM SALE** – Dave Brown, W9CGI is offering a bunch of stuff ( but no hams ) for sale. See the last page of this newsletter for a list.

**NEED AN INSTROGRAPH?** One was donated to the Club. Does anyone ~~need~~ want one? It's similar to the one shown here, <http://www.n4mw.com/cp110.htm>, except someone has modified it to add a transistor amplifier and speaker in the base. Has one reel of tape.

## HAMFESTS, OPERATING EVENTS & TESTING

- Oct. 11** W9IMS license testing, Contact Jim Rinehart 317 218-7304
- Nov. 6-8** Sweepstakes, CW
- Nov. 13** Fort Wayne Hamfest & Computer Expo., <http://www.fortwaynehamfest.com>
- Nov. 20-22** ARRL Sweepstakes, Phone
- Nov. 27** Evansville Hamfest, <http://w9ear.org/hamfest.htm>
- Dec 3-5** ARRL 160 Meter Conest
- Dec 11-12** ARRL 10 Meter Contest
- Dec 19** Rookie Roundup

See the ARRL Contest Branch page, <http://www.arrl.org/contest-update-issues>, the WA7BNM Contest Calendar, <http://www.hornucopia.com/contestcal/> and the ARRL Special Event Stations page, <http://www.arrl.org/special-event-stations> for more info.

## NEW YORK JUDGE DECLARES AMATEUR RADIO IS NOT A CELL PHONE

In many states and localities, it is illegal to talk on a cell phone (without a hands-free device) while behind the wheel -- doing so can result in a ticket and possibly a large fine. But on May 30, 2010, when a New York ham was talking on his mobile rig, he didn't think he was doing anything wrong. Except that the officer who pulled him over and cited him with a \$100 fine didn't quite see it that way.

Steve Bozak, WB2IQU, of Clifton Park, told the ARRL that when he was pulled over while driving to Troy -- about 16 miles away -- he assured the officer that he was not speaking on a cell phone, but on his handheld transceiver. But according to Bozak, the officer said "it was all the same to him." So Bozak decided to fight the ticket in court.

"Honestly, it's not the fine or the ticket, but that all the other hams who use mobile radios have to hide the fact we are mobile in Troy," he told the ARRL just days after he was cited. "I will do my best to settle this politely and correctly, for all of the ham community. So I will follow the course and have my day in court, to 'tell it to the judge.' This matter affects 38,000 hams in New York State."

Unfortunately, when Bozak had his day in court for a pre-trial conference, the prosecutor refused to dismiss the case. But he didn't give up and took his case to City Court where, on September 8, where at the request of Bozak's attorney -- ARRL Volunteer Counsel (VC) Jeremy, Rase, KC2JRD -- the judge dismissed the case in Bozak's favor. Bozak argued that his use "of a handheld Amateur Radio does not fit the definition of a mobile telephone, and as such, the present charge should be dismissed." The prosecutor's office did not submit a response in opposition.

Saying that New York's Vehicle and Traffic Law defines a "Mobile Telephone" as a "device used by subscribers and other users of wireless telephone service to access such service," and that a "Wireless Telephone Service" is defined as "two-way real time voice tele-communications service that is interconnected to a public switched telephone network and is provided by a commercial mobile radio service," the judge decided that Bozak's handheld transceiver did not fit that description.

“A review of 47 C.F.R. §20.3 reveals that Citizens Band Radio Service is defined under private mobile radio service not commercial mobile radio service,” the decision read. “Therefore, the Court finds that the use of an Amateur Radio device does not fit the definition of a mobile telephone as defined under the Vehicle and Traffic Law” As such, the judge dismissed the case in Bozak’s favor.

“While the court cited the Citizens Band Service instead of the Amateur Radio Service, the ruling very is favorable to amateurs on the precise point of law raised,” said ARRL Regulatory Information Manager Dan Henderson, N1ND. “The principle of law is spot on. This is a great ruling in New York and exactly what we had thought would happen.” --ARRL Letter

## **ARRL ASKS FCC TO CLARIFY 2.3 GHZ IMPACT SHARING ON HAM RADIO**

Back in the USA, the ARRL has filed a Petition for Clarification or Partial Reconsideration asking the FCC to clarify, or partially reconsider a single aspect of its Report and Order in WT Docket No 07-293. This involving possible impact on the Amateur Radio Service by a result of the partial implementation of the agency’s National Broadband Plan.

In it, the FCC adopted amendments to the rules for Wireless Communications Services in the 2.3 GHz band. The amendments will permit mobile broadband services, in addition to fixed services, in the bands 2305-2317.5 and 2347.5-2360 MHz.

Specifically, the ARRL requested that the Commission affirm that Section 2.102(f) of the its rules applies to Wireless Communications Service fixed and mobile operations, so that harmful interference that is caused to Amateur Radio Service operations in the 2300-2305 MHz band is to be remedied by Wireless Communications Service licensees. Also that the current out-of-band emission limits for the Wireless Communications Service devices in Section 27.53(a)(3) of the Commissions rules continue to apply to mobile, portable and fixed facilities across the entirety of the 2300-2305 MHz band following the rule changes implemented in this regulatory change. (ARRL)

## **SDR DOMINATES THE 2010 ARRL/TAPR DIGITAL COMMUNICATIONS CONFERENCE**

The turnout was excellent for the ARRL/TAPR Digital Communications Conference September 23-26 at the Heathman Lodge in Vancouver, Washington.

The three day conference included technical presentations on both Friday and Saturday, and an optional tutorial seminar on Sunday morning. Both Yaesu and ICOM attended as commercial vendors. Although not present at the conference, Kenwood contributed door prizes.

Software Defined Radio (SDR) was the dominant technical theme of the conference. Along with independent SDR developers, the Open SDR group gave a status update, George Heron, N2APB, introduced the [SDR Cube](#) project and the conference even featured an “introduction to SDR” forum. Another discussion that attracted a great deal of attention was a project to adapt analog radios to SDR at the IF.

Other conference highlights included a presentation by Rick Muething, KN6KB, on the status of WINMOR, the sound-card-based HF digital protocol recently incorporated into Winlink’s RMS Express software package. [WINMOR](#) promises performance that rivals PACTOR III at a tiny fraction of the cost. Rick also discussed development of this new V4 protocol for keyboard-to-keyboard communication and was at the podium again Sunday morning with his DSP tutorial.

One of the most anticipated talks was given by Bruce Perens, K6BP, on the new Codec2 digital voice codec. This is an open source project that makes significant advances beyond the [AMBE](#) vocoder family without any of the licensing and patent issues that have hindered development of Amateur Radio digital voice systems. Bruce stated that by this time next year, the codec should be ready for late-beta deployment on the HF bands.

The complete list of presenters and topics is available at the [TAPR Web site](#)– ARRL Letter

## UNITED STATES SUPPORTS SECONDARY AMATEUR RADIO ALLOCATION AT 461-469 AND 471-478 KHZ

The Federal Communications Commission and the National Telecommunications and Information Administration ([NTIA](#)) -- the spectrum regulators for United States private sector and government users, respectively -- have agreed to support a secondary MF allocation to the Amateur Radio Service at 461-469 kHz and 471-478 kHz at the 2012 World Radiocommunication Conference ([WRC-12](#)), to be held in Geneva, Switzerland from January 23-February 17, 2012. FCC and NTIA officials formally presented the proposal at a meeting of the Second Permanent Consultative Committee (PCC.II) of the Inter-American Telecommunication Commission ([CITEL](#)), held August 30-September 3 in Fortaleza, Brazil.

According to ARRL Chief Technology Officer Brennan Price, N4QX, the proposal reconciles two widely divergent proposals for WRC-12 Agenda Item 1.23, adopted by consensus of the private sector and government users. Agenda Item 1.23 calls on WRC-12 “to consider an allocation of about 15 kHz in parts of the band 415-526.5 kHz to the amateur service on a secondary basis, taking into account the need to protect existing services.” The FCC’s WRC-12 Advisory Committee ([WAC](#)) had adopted a proposal for a secondary amateur allocation at 495-510 kHz, but the NTIA, acting on the advice of government maritime interests, initially supported no change from the status quo.

“I am pleased that the United States is taking an affirmative position on Agenda Item 1.23,” Price said “While the proposed frequency bands differ from both what the ARRL proposed and the private sector supported by consensus during WAC deliberations, it is gratifying that government interests have backed off a no change position.”

Some maritime interests, both domestically and internationally, have expressed opposition to any amateur allocation in the range 415-526.5 kHz, citing existing narrowband direct printing applications at 490 and 518 kHz, as well as future plans for the band that have yet to be fully characterized, Price explained. To the extent future maritime uses of the band have been discussed, the focus has been on the 495-505 kHz segment. Despite the lack of plans for the remainder of the range under consideration, the International Maritime Organization ([IMO](#)) has adopted a draft position of “no change” and has communicated this position to the ITU. IARU President Tim Ellam, VE6SH, has met with IMO officials in efforts to soften this position.

“The road to a favorable outcome for Agenda Item 1.23 at WRC-12 remains treacherous,” Price said. “The IMO is a respected organization, and their opinion carries weight. It’s up to us to continue to make the case that a secondary allocation can be made while protecting existing services, both to the IMO and to the ITU Member States who will make the decisions at WRC-12.”

Technical Relations Specialist Jon Siverling, WB3ERA, represented the ARRL on the United States delegation to the CITEL PCC.II meeting. From that meeting, he notes other matters of concern to the Amateur Radio Service:

- Regarding Agenda Item 1.14, considering an allocation to the radiolocation service between 30-300 MHz, the United States proposed that no change be made in ITU Region 2 and suggested that changes in other regions should be addressed by country-by-country footnotes to the ITU *Radio Regulations*. Proponents appear to be focusing on 154-156 MHz.
- Regarding Agenda Item 1.19, considering regulatory provisions for software defined radio (SDR) and cognitive radio systems (CRS), sufficient support for a United States proposal of “no change” was garnered to have the proposal deemed a region-wide Inter-American proposal. The status quo reduces the risk of provisions in the *Radio Regulations* that could curtail experimentation in SDR and CRS by the Amateur Service and reduce the portability of equipment across international boundaries. –ARRL Letter

## ARISSAT-1 SATELLITE IN FINAL PREPARATION

Having successfully completed vibration testing this week, the ARISSat-1/RadioSkaf V satellite will soon be on its way to Russia for final preparation and launch to the International Space Station (ISS).

In Russia, the Kursk experiment will be added and the satellite will undergo additional testing. A new Russian Orlan suit battery will be shipped separately to the ISS to be installed into the satellite. ARISSat-1 is scheduled to be sent to the ISS aboard Russian Progress vehicle 41P in January 2011 and deployed during EVA (spacewalk) R-28 in February 2011.

ARISSat-1/RadioSkaf V will have simultaneous 2 meter FM, CW, BPSK and transponder transmissions. These multiple transmissions are created by a new software-defined transponder (SDX) board. The FM transmissions will cycle between a voice ID, select telemetry values and 24 international greeting messages in 15 languages, as well as live SSTV images. The CW transmissions will be call sign ID, select telemetry and call signs of people actively involved with the ARISS program. The BPSK transmissions will feature a new 1kBPSK protocol developed by Phil Karn, KA9Q, to be readable in low signal level conditions. The BPSK data will alternate between telemetry and Kursk experiment data. Free groundstation soundcard demodulator and display software will be available before launch for multiple platforms. There also is a 16 kHz wide Mode U/V (UHF uplink/VHF downlink) transponder between the BPSK and FM signals.

The Kursk experiment will sample the amount of vacuum each day for 90 minutes and send down data to map the vacuum change as the satellite slowly spirals into the atmosphere. Six solar panels supply power to the satellite and recharge the battery. Once the battery is exhausted, the satellite will continue to send data in a low power mode when illuminated.

The spoken telemetry values and greetings are to promote science and math education by encouraging school children to listen to the satellite, track its progress and plot the changes. There are secret words in most of the greetings and awards will be given to those students who correctly identify the secret words. There will also be a contest to see who correctly copies the most CW call signs sent. The telemetry data will also be available live and over the Internet for schools and radio amateurs to study the operation and changes that the satellite experiences during its orbits around the Earth.

Our thanks to Gould Smith, WA4SXM, AMSAT ARISSat Project Manager

## SUMBANDILA OSCAR 67 SATELLITE ACTIVE OVER THE AMERICAS

The FM repeater aboard the South African Sumbandila OSCAR 67 (SO-67) satellite will be activated over North and South America from Monday, October 4 through Sunday, October 10. According to the announcement from AMSAT-NA Vice President of Operations Drew Glasbrenner,

KO4MA, the repeater will be available for 15 minutes beginning at the following times (UTC):

October 4	11:18 14:15 17:20
October 5	12:30 15:29 18:33
October 6	10:40 13:39 16:43
October 7	11:55 14:51 17:57
October 8	13:04 16:06 19:10
October 9	11:18 14:14 17:20
October 10	10:58 13:56 17:02\

(Activity periods calculated by Ed Clayo, N8BBQ.)

The SO-67 repeater receives at 145.875 MHz FM (233.6 CTCSS) and re-transmits at 435.345 MHz FM. Local pass predictions are available from [AMSAT-NA's online calculator](#).

## SHORTS

**GOOGLE MAPS APPLICATION THAT REVEALS WHERE THE HAMS ARE IN YOUR BURG** -- Mark Petrovic, AE6RT, wanted to learn about the Google Maps Application Programming Interface (API). He thought that a good learning vehicle would be plotting where hams live in his hometown, Petaluma, California. He used the FCC ham radio license database and the end result can be seen at the "Where the hams are" Web page. Mark's source code is also available on that Web page so that you can modify it for your hometown. -- Stan Horzepa, WA1LOU ARRL

**DISSOLUTION OF THE NETHERLANDS ANTILLES** - To clarify the administrative process by which the anticipated changes to the two existing Netherlands Antilles DXCC entities will be made, the ARRL Awards Committee has determined that at 0400 UTC (12:00 AM local time in the islands) on October 10, 2010, the two Netherland Antilles DXCC entities will be deleted. Commencing at 0400 UTC (12:00 AM local time) on October 10, 2010, operation from the islands of Curacao, Bonaire, Sint Maarten, Saba and St Eustatius will count for a yet-to-be-determined number of new entities under the DXCC List Criteria and Political Entities, Rule 1 and/or Rule 2 Geographic Separation Entities. When the Awards Committee determines what Rule 1 or Rule 2 actions apply, it will announce the final disposition of the entities on the DXCC list. The DXCC desk will not accept confirmations for these new entities until after January 1, 2011.

**LAWMAKERS CALL FOR SMART GRID ACCESS TO WIRELESS SPECTRUM** - U.S. Representatives Doris Matsui and Anna Eshoo, both California Democrats, called on the FCC to allow so-called smart grid devices -- digital electricity meters for homes and businesses -- to also use white-space spectrum. "As we continue to promote policies to expand broadband services, more and more consumers will expect to use their computer and wireless devices to monitor their energy usage in 'real time' whether they are at home, at work, or on vacation," Matsui and Eshoo wrote in a letter to the FCC.

The lawmakers want the FCC to allow smart grid devices, such as smart meters and home energy management systems, to use the white spaces, a spokeswoman for Matsui said. They aren't advocating that electric utilities use the white spaces as broadband backhaul, she said. Electric utilities would "substantially benefit" from using the white spaces, the lawmakers added. Using the white spaces spectrum, sometimes called super Wi-Fi, utilities could automate meter reading and send outage notifications more efficiently, Matsui and Eshoo wrote. The white spaces will help utilities and customers use energy more efficiently, they wrote.

Television stations, sports leagues and wireless microphone makers have opposed the FCC's push to open up the white spaces to mobile devices. TV stations have raised concerns that the devices would interfere with existing TV signals, while sports leagues and wireless microphone makers have worried

that the devices would interfere with wireless microphones that already operate in the white space spectrum. A representative of the National Association of Broadcasters didn't immediately respond to a request for comments on the proposal to use the white spaces for smart grid devices.

**HF ANTENNA PIONEER A. J. F. (FRANK) CLEMENT, W6KPC**, of Bakersfield, California, died September 23 as a result of a highway accident. He was 93. A former owner of Tri-Ex Tower, Clement designed and built a number of high performance HF arrays over the course of several decades. The June 1980 issue of QST featured his article describing the Collinear Yagi Sextet. As he described it, "[t]he antenna systems at W6KPC and OH8OS are computer controlled. The computer is programmed to search through the eight modes to see which receives the incoming signal best." His other state-of-the-art antenna projects appeared in the September 1951, May 1958 and November 1978 issues. –ARRL Letter

**DAVE BROWN, W9CGI, IS OFFERING THE FOLLOWING ITEMS FOR SALE.** If you're interested, contact Dave at [w9cgi@chilitech.com](mailto:w9cgi@chilitech.com)

Brand	Model	Description	New\$	Asking\$
MFJ	1270	TNC Set to 1200 baud for packet cluster use	\$130.00	\$35.00
MFJ	1270	TNC Set to 9600 baud for packet satellite use	\$130.00	\$45.00
Alinco	DR110	Mobile FM Xcvr - but never run mobile Xmit = 45 Watts	\$289.00	\$100.00
Connect	SMR14A	Monitor Used less than one month - 14.1" screen diag	\$119.00	\$60.00
MFJ	949E	Tuner, Like new - rarely used - 300W	\$180.00	\$100.00
Intel P4 #2	Floor	WiN-XP SP3 PC /KB/mouse/monitor/tons of ham other s/w- ask details	\$480.00	\$100.00
X-10		Wireless/X10 security system. 2 remote cameras with coded x10 to house wiring. 1 remote camera with battery case. All (3) connect to receiver at tv/video monitor by WIFI wireless. Ultrasonic motion det. hand remote/wall reciever (RF) to control whole house X10 system. Instructions plus see <a href="http://www.x10.com">www.x10.com</a> . NEW never installed	\$200.00	\$100.00
YAESU	ATAS-25	Loaded 160M to 450 MHZ portable antenna Brand New	\$210.00	\$150.00
TONNA	F9FT	Yagi for serious user - HI gain -DX antenna In two pcs for easy haul needs new hdwe to join -inst manual -		
Cushcraft		Log Aperiodic - yagi - cover 6M-2M-450 and more		
varied		Mobile antennas sold these under different names and number but	\$20 +	\$10.00
varied		I bought mine as Diamond I believe. The 2/10/15/17 are all mono band	\$20 +	\$10.00
varied		vertical mobile whips I have attached quick twist disconnects to. Since	\$20 +	\$10.00
varied		retiring I no longer run HF mobile. Simple as that.	\$20 +	\$10.00
PlayStn2	Eye Toy	PC cams I bought qty for price - these are spares/excess <b>NEW in pkg</b>	\$35.00	\$10.00
Yaesu	FT-726	Excellent base station radio for Vhf-Uhf-Satellite work ( R&L) With 6M / 2M / 432MHz / and satellite duplex modules - installed	\$750.00	
		2 Meter module - included at purchase with radio		
		6 Meter module - R&L Electronics - not for sale separately	\$175.00	
		432 MHz module - Delaware Elect. - not for sale separately	\$259.00	
		Sat Duplex module - R&L Electronics - not for sale separately	\$105.00	
		with all accessories and original Ops AND Service/Tech manual and all original boxes etc where possible. Total =	<b>\$1,289.00</b>	<b>\$650.00</b>
Mirage	A1015G	Solid state - 100Wout - all mode - 10W input - with rcv preamp	\$390.00	\$200.00
Mirage	B108	Solid state - 80Wout - all mode - 10W input -with rcv preamp	\$289.00	\$150.00
Mirage	D1010	Solid state - 100Wout - all mode - 10W input - no rf rcv preamp	\$419.00	\$200.00

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