



# The Indianapolis Radio Club Newsletter

Founded 1914

*"The oldest continuously operating Amateur Radio Club in the United States"*

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## *November, 2006 Newsletter*

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### **Upcoming Meetings:**

December 8, **6:30** P.M. EST, at *MCL Cafeteria, 86<sup>th</sup> & Township Line Rd.* Scheduled presentation: *"Eagle Creek State Park wildlife"*.

January 12, 2007: Scheduled presentation: Jack Parker, W8ISH, presenting a program on **"TV Transmitter automation"**. Also, the **Chili Tasting Contest, BYOA** (bring your own antacids), along with your entry in suitable container (HAZMAT placards optional).

February, 2007: Tentative Antique Radio program.

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### **Highlights of the October 13, 2006 meeting:**

The general meeting started with self introductions and answering the questions: Date you got your license and preferred bands of operation

It was noted that in order to receive a complimentary dinner at the December meeting, members need to be paid up in membership fees. One dinner for a single membership, or two dinners for a family membership.

Life memberships in the Indianapolis Radio Club are available for 10 times the normal annual membership fee of \$15.00, or \$150.00. Two new lifetime members were recognized: Pauline, KC9IDA, and Richard, KC9CQU.

## **PROGRAM REVIEW: RACING TELEMETRY & COMMUNICATIONS**

**PRESENTED BY MIKE HENNEY KE9YA**

Mike Henney is with GM Power train Racing as lead engineer for telemetry on cars. His main responsibility is the Corvette Racing Team and some with the Cadillac racing team and Pontiac G6 racing. Radio Packaging is different 450 Mhz business radios are shocked mounted and modified. Data on 902-922 MHz. Antennas are helical or ¼ wave whips. Software is Bosch, and Pi Research and some other special equipment. Thus radios that are re-packages to be durable for racing environments.

They try for small 1/3 normal size radios that must stand up to temp and vibration. The frequencies of 380-470 Mhz used in US on upper end, in Europe they use lower end of band. Thus going to Le Mans they will shift down on lower end of band. Typical 25 Khz bandwidth and power is 1 watt up to a max of 5 watts, and uses an RS-232 output for computers.

Max 19,200 bps is throughput for about 100 channels with rate of 5 – 10khz. The 900-928 Mhz band can get data at higher rate with up to 800 channels for engineering analysis. This can show the looseness or tightness of a car before it pits. Pi Research has digital broadcast and radome antennas that put data to a server and integrated network which is most expensive option for data transfer.

The Corvette has helical antenna on back deck of car, other antennas are on top of car and many times there can be up to 4-5 antennas on any car. This is besides the TV radios and cameras which are totally separate from their radio data collection systems. Inside race car the LED dash display shows: rpm, speed, lap time, compares previous lap difference, tire pressure and other data. In the pits they can see tire pressure variations around course also they can see several graphs that show comparison from previous laps. They can see other data for a wide variety of items including: tire wear, brake pad wear, rotator temperature, tire pressure charts, shock potentiometers, steering load (psi measurement on pumps) etc. Engine Control Module data is also received. Tires have special valve stems with pressure sensor and wheels have a weight 180 deg opposite to help balance. The tires use Nitrogen as pressure does not change as much with temperature. Data is direct from car only and if it stops no signals are received or estimated.

Rules of racing prevent a “feedback system” to adjust any of the items on the car, as this would be considered illegal by today’s rules. These are just an overview of the items presented very well by Mike. Thanks a lot for an insight into Telemetry in race cars today.

The TV video is on top of car and a radio remote controls the inside the car TV camera and a control box to adjust what we would see on TV from the race car.

After some questions and answers to Mike the usual prizes drawings was held with Bob Osterhous W9PSE reading the numbers picked. Prize winners were: Dave N9KZJ, and other local hams.

*Thanks to Bob, W9PSE, for supplying the notes from the November meeting. -Ed.*

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## Ham Radio News:

### Marion County 6 meter test held November 6

Marion County ARES EC, Mike Palmer, N9FEB gave a review of his 6 Meter test of Nov 6<sup>th</sup>. About 32 stations called in on FM on 52.525 from 6:00 PM till 6:30. Then at 6:30 they switched to SSB on 51.300 and most of the same and some other stations joined the test. Mike may have a Net on 6 Meters monthly in the future. This should help activity on 6 Meters as well as prove the range and capabilities of this band for pleasure and emergency use. Listen on 52.525 FM or 50.125 SSB Calling freq. on this band. Moving up in frequency for longer SSB QSO's

### FCC "Omnibus" Amateur Radio *R&O* Published in *Federal Register*, Takes Effect December 15

NEWINGTON, CT (November 15, 2006) -- Just a little over a month after the Federal Communications Commission released the *Report and Order* ([R&O](#)) in the so-called "Omnibus" Amateur Radio proceeding, WT Docket 04-140 (FCC 06-149) to the public, a revised version appeared today in the [Federal Register](#). The changes in the *R&O* will take effect Friday, December 15, at 12:01 AM EST, 30 days after its publication.

As expected, the *Report & Order* as published this morning clarified two items that had raised some concerns when it was first released last month: That the 80/75 meter band split applies to all three IARU Regions, and that FCC licensees in Region 2, which includes North America, can continue to use RTTY/data emissions in the 7.075-7.100 MHz band.

Still to be resolved are three controversial aspects of the Proceeding:

- Expansion of the 75 meter phone band all the way down to 3600 kHz (thus reducing the privileges of General, Advanced and Amateur Extra class licensees, who had RTTY/data privileges in the 80 meter band, and CW privileges of General and Advanced class licensees)
- The elimination of J2D emissions, data sent by modulating an SSB transmitter, of more than 500 Hz bandwidth (thus making PACTOR III at full capability illegal), and
- The elimination of access to the automatic control RTTY/data subband at 3620-3635 kHz.

The ARRL Board is discussing the possibility of a petition to reconsider several items in the *R&O*.

ARRL Regulatory Information Specialist Dan Henderson, N1ND, commented: "The release of the *R&O* in the *Federal Register* has started the countdown clock. We are all looking forward to being able to use the refarmed frequencies starting on December 15. We are still anxiously awaiting the release of the *Report and Order* for 05-235, the Morse Code Proceeding. We are hopeful that the Commission will be able to move on that petition and address the outstanding issues in the Omnibus *R&O* soon."

For more information, see the [band chart](#) [917,715 bytes, PDF] and the [Frequently Asked Questions](#) on WT Docket No. 04-140. Both have been updated to reflect the *R&O* as it was published in the *Federal Register*.

## **W9ICE Group adds D-Star repeater**

News is that on Wednesday, November 15, the W9ICE group added a D-Star (digital) repeater on 443.900. Word has it that about 15 hams have ordered their Icom IC-91AD D-Star handhelds.

## **Red Cross to no longer support Disaster Radio Group**

At the November 14 DRG meeting, Chris Gilbert, KB9LTH, as Red Cross chapter rep to the DRG, reported the following:

“Starting January 1, 2007 the chapter will shift disaster technology and communications support to [the] Response Technology Team and will no longer support the Disaster Radio Group. This does not mean that the Disaster Radio Group must end, only that resources the chapter directed to the Disaster Radio Group, such as funding for equipment, will be directed to the Response Technology Team. The Disaster Radio Group will still be offered meeting space and the chapter will continue to support radio classes and license testing.

“.....Members of the Disaster Radio Group that wish to volunteer for the RTT are likewise encouraged to do so but DRG members will not automatically be moved into the Response Technology Team.”

I'm sure there will be more news to follow. At the present time, it appears that this move will not have any impact on current Amateur Radio uses of the Red Cross chapter house, such as classes and testing sessions.

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## Upcoming Area Radio Events:

- December 9: R & L Electronics, Hamilton, Ohio, Customer Appreciation Day, go to <http://www.randl.com/cart/custday.shtml> for more information.
  - **Indy Radio Club "Express Extra" Ham Class**  
6 class meetings, starting Jan. 22.  
Pre-registration Deadline is Jan. 15. Contact Chuck Crist, W9IH at [indytrax@core.com](mailto:indytrax@core.com) to pre-register. Registration fee of \$20, will be refunded after completing the class. Testing will be on Feb. 3. Go to <http://www.indyradioclub.org/indyclasses.htm> for more information.
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## Current IRC Club Officers:

- Vice Pres.: Dave Miller - ..EMAIL [dmiller@ivytech.edu](mailto:dmiller@ivytech.edu)
- Secretary: Mike Henney - ..EMAIL [mhenney1@comcast.net](mailto:mhenney1@comcast.net)
- Treasurer: Judy Gardner - ..EMAIL [aa9gw@juno.com](mailto:aa9gw@juno.com)
- Chief Operator: Ed Conder - ..EMAIL [n9izn@sbcglobal.net](mailto:n9izn@sbcglobal.net)
- Director: Dave Jarvis - .....EMAIL [n9kzj@earthlink.net](mailto:n9kzj@earthlink.net)
- Dir. at Large: Tom Chance - ..EMAIL [k9xv@arrl.net](mailto:k9xv@arrl.net)

## 2007 IRC Club Officers-Elect:

- President: Tom Chance, K9XV - ..EMAIL [k9xv@arrl.net](mailto:k9xv@arrl.net)
- Vice Pres.: Dave Miller, K9RTT - ..EMAIL [dmiller@ivytech.edu](mailto:dmiller@ivytech.edu)
- Secretary: Ken Bandy, KC9GLQ - ..EMAIL [kc9glq@arrl.net](mailto:kc9glq@arrl.net)
- Treasurer: Judy Gardner, AA9GW - ..EMAIL [aa9gw@juno.com](mailto:aa9gw@juno.com)
- Chief Operator: Dave Craig, N9QVO - ..EMAIL [slough@svs.net](mailto:slough@svs.net)
- Dir. at large: Bob Osterhous, W9PSE - EMAIL [rosterhous@iquest.net](mailto:rosterhous@iquest.net)
- Dir. at large: Tom Price, WB9UNG – EMAIL [pricetr@comcast.net](mailto:pricetr@comcast.net)
- Dir. at large: Hank Wolfla, K9LZJ – EMAIL [hwolfla@insightbb.com](mailto:hwolfla@insightbb.com)

**If anyone has any items for the newsletter, please send them to Ken Bandy at [kc9glq@arrl.net](mailto:kc9glq@arrl.net)**