

RCA AMATEUR RADIO CLUB

OCTOBER, 2006 **MONTHLY NEWSLETTER** INDIANAPOLIS, IN

THE NEXT MEETING OF THE **RCA AMATEUR RADIO CLUB** WILL BE
TUESDAY, OCTOBER 3rd, AT 6:30 PM AT DOOKZ SPORTS GRILL,
3800 E. 96th STREET, INDIANAPOLIS, IN

RCA ARC NEWS

SUMMARY OF THE SEPTEMBER MEETING – The Club shirts were discussed in great detail. We may even get them ordered yet this year! The shirts will be tan with a two color logo. The RCA meatball will be used. Cost will be in the neighborhood of \$16 each. Barry George moved that the club pick up \$5 for each shirt ordered by a Club member. The motion passed. Jon Powell will get another quote from his friend in Florida when he visits later this month. The Club will not sell at the Greenfield Hamfest. Bedford is a maybe. Look for W9CGI Nov. 15-30 from the US Virgin Islands. He'll be on AO-27 and AO-51 satellites.

PRESIDENT'S RAMBLINGS – **OK, so I missed the September meeting!** It sounds like you got along without me. I heard Jon Powell, is working on the club shirts and we are going with the old RCA meatball design on a tan golf shirt. There is a rumor that even Treasurer Barry George, K3BG, went along with the club picking up part of the tab for the shirts for club members. What I missed was the tenderloin sandwich with a large slice of onion on it.

I also heard another member "falls" victim of an antenna tower accident. It made a real good story.

We have made some progress on the getting W9RCA Repeater fully functional again. Jim Keeth, AF9A, managed to borrow a computer from his wife to use until we get the club repeater computer repaired. He found a copy of the controller program, loaded on his computer, put the I/O card in, connected it to the repeater, and low and behold the repeater is up and running.

We want to thank Tom Chance, K9XV for reoriented the 440 MHz link antenna on the downtown '28 receiver. John Garino, KF9UH re-aimed the 440 MHz link antenna for west side '28 receiver. The link antenna for the north side '28 receiver still needs to be changed. The 440 link transmit antenna at Koss's was replaced with a 3 element 440 MHz beam now used to receive the other three links.

Jim Keeth, AF9A and Jim Rinehart, K9RU removed the repeater from the roll a round rack used at Thomson and mounted it in the permanent rack in the repeater building.

The repeater is still operating as though it is linked by 1.2 GHz, but they are connected by coax from one rack to the other. The plan is to remove some of the hardware associated with the 1.2 GHz link and simplify the installation somewhat. This will happen as time permits.

We are looking at what it would take to get the EchoLink and the Auto-Patch back on the air. We can connect the repeater building to Mike Koss' Commcenter with two runs of CAT5e cable. One run for the Internet and the other for the phone lines and control lines. It looks like about 1000 ft of cable would do it for both runs. Bud, W9EEJ reports the computer and interface previously used for EchoLink are available and operational. All this is still in the planning stage. —K9RU



RCA AMATEUR RADIO CLUB W 9 R C A

SEND YOUR RCA ARC SHIRT ORDER NOW! To help us place the first shirt order... If you're pretty sure you are going to want one or more shirts, please send an email stating how many of each of the following sizes you want: L, XL, 2XL, 3XL Your cost will be approximately \$16 each.

The shirts will be tan in color with an RCA meatball logo. DO NOT REPLY TO THIS EMAIL as this will send your reply to everyone on the Newsletter distribution list. Send an email to af9a@arrrl.net stating the quantity and size of your shirt(s). Thanks!

HAMFESTS; EVENTS

Oct. 8	Lake County Fairgrounds, Crown Point, IN
Nov. 18-19	Allen County War Memorial Coliseum, Fort Wayne, IN
Nov. 25	Vanderburgh Co. 4-H Auditorium, Evansville, IN

ARRL PLEDGES TO PURSUE BPL INTERFERENCE COMPLAINTS, MULLs APPEAL

The League has vowed to maintain pressure on the FCC to act on complaints of broadband over power line (BPL) interference to Amateur Radio. The FCC's unanimous adoption August

3 of a Memorandum Opinion and Order (MO&O) in response to 15 petitions for reconsideration of the Commission's BPL rules triggered the ARRL response. The MO&O went into effect September 22.

"We will aggressively pursue enforcement in BPL interference cases," promised ARRL Chief Executive Officer David Sumner, K1ZZ. "Those deploying BPL systems that cause harmful interference to Amateur Radio will regret it." An ARRL delegation met with FCC Enforcement Bureau and Office of Engineering and Technology (OET) staffers August 16 to discuss the Commission's response to BPL interference complaints.

The MO&O denied most requests that the FCC reconsider portions of its October 2004 Order adopting rules to govern BPL systems. Several petitions -- including one from ARRL called on the Commission to strengthen rules aimed at protecting licensed radio systems from BPL interference. Instead, in a new rule revealed when the FCC made the MO&O public, the FCC drew a line in the sand regarding how much interference protection mobile operators deserve from BPL systems.

§15.611(c)(1)(iii) provides that BPL operators do not have to reduce emission levels below established FCC permissible limits by any more than 20 dB below 30 MHz and 10 dB above 30 MHz to resolve harmful interference complaints. The FCC called these levels "modestly above the noise level."

ARRL Laboratory Manager Ed Hare, W1RFI, points out these levels would be some 25 dB higher than the median values for man-made noise in residential areas and up to 40 dB higher than the minimum values hams use for reliable communication. The new rule does not apply to fixed stations.

"Egregious" was the word Sumner used to describe the action in his "It Seems to Us" editorial appearing in October QST.

"Simply stated, this new rule is intolerable, and we do not accept it," Sumner wrote. "It is contrary to the FCC's obligations under the international Radio Regulations as well as the Communications Act, to protect radiocommunication services from harmful interference."

The FCC "has no authority to define away these obligations," Sumner stressed in his editorial. "Harmful interference is harmful interference."

The MO&O also turned down a League request that the Commission reconsider tightening the 40 dB per decade extrapolation factor employed for taking emission measurements. The League argued that the 40 dB per decade extrapolation factor, which has been in Part 15 for some time, may apply to single-source emissions, but it underestimates actual field strength from power lines.

Supported by Aeronautical Radio Inc (ARINC), the ARRL had wanted the FCC to apply a 20 dB per decade extrapolation factor to measurements taken at 30 MHz and lower. The Order also turned down requests by licensed users, including Amateur Radio operators, to exclude the use certain frequencies for BPL operations.

The League is weighing the possibility of a judicial appeal of the FCC's action to adopt the MO&O.

The Commission denied a BPL industry request to extend the effective date to meet equipment certification requirements, but it did give BPL systems another year to continue installing or replacing equipment that otherwise meets the Part 15 rules in present coverage areas.

The MO&O also denied the BPL industry's request to drop the 30-day advance notification requirement for the public BPL database. The advance notification rule is aimed at alerting licensed spectrum to new BPL deployments in their areas before operations begin. --ARRL Letter

ARRL GRANTED EXPERIMENTAL LICENSE FOR 500 KHZ RESEARCH BY RADIO AMATEURS

The FCC's Office of Engineering and Technology on September 13 granted Part 5 experimental license WD2XSH to the ARRL on behalf of a group of radio amateurs interested in investigating spectrum in the vicinity of 500 kHz. The two-year authorization permits experimentation and research between 505 and 510 kHz (600 meters) using narrowband modes at power levels of up to 20 W effective radiated power (ERP). ARRL Member Fritz Raab, W1FR, of Vermont, will serve as experimental project manager for "The 500 KC Experimental Group for Amateur Radio" <http://www.500kc.com/>

"I'm kind of excited to see how we can apply modern technology to a 'classic part' of the radio spectrum," Raab told ARRL this week. He pointed out that 500 kHz - the traditional maritime emergency frequency - is roughly geometrically halfway between the 136 kHz experimental band and the 160 meter amateur allocation.

"In contrast to 160 meters, 500 kHz is low enough to offer good groundwave propagation, but in contrast to 137 kHz it is high enough to allow us to engage in real communication with realistic equipment." Raab eventually would like to see at least a secondary 600-meter amateur allocation from 495 to 510 kHz.

"Besides the opportunities for experimenting at low frequencies, that frequency is well suited to regional groundwave communication," Raab said. He envisions eventual use of the spectrum to provide Amateur Radio emergency communication via groundwave, without having to deal with the vagaries of the ionosphere or causing interference to other services.

For about a century, the 500 kHz region was an important band for maritime communication, emergency and otherwise. The band is occasionally used by "heritage" commercial maritime stations, such as the Maritime Radio Historical Society's KPH on the West Coast, on special occasions. 500 kHz remains designated as an official maritime emergency CW frequency, although the vast majority of maritime users have shifted to satellite-based systems.

In addition to experimentation and regional emergency work, Raab says he believes that the 505-510 kHz spectrum could serve as "an historic band" that could support various commemorative special event-type operations. Proposals are under consideration in the UK and Ireland to establish an experimental Amateur Radio allocation in the vicinity of 500 kHz.

The WD2XSH project calls for operation from 21 discrete fixed sites spread throughout the US. Participants all are electrical professionals, many with maritime radio backgrounds, Raab said, adding that operation already has begun. The group eventually will be seeking reports from non-participants, he said.

Raab says the gear participants will use represents "every kind of antenna and equipment you can imagine," including surplus vacuum-tube maritime units. At his Colchester, Vermont, location he's using a 42-foot vertical, but others are employing inverted Ls, loops and Marconis, among others.

Raab was a co-author of the article "A 100-W Class-D Power Amplifier for LF and MF,"

which appeared in the March-April edition of QEX <http://www.arrl.org/qex/2006/03/toc.pdf>. He's using an amplifier of that design for his WD2XSH operations.

The FCC turned down a 1998 petition from the ARRL to create an Amateur Radio "sliver band" in the vicinity of 136 kHz, but some US amateur licensees have obtained FCC Part 5 Experimental licenses to research the possibilities of LF, including transatlantic and transpacific propagation. Amateur Radio licensees in Europe and elsewhere already have access to 135.7 to 137.8 kHz, and several hams in Canada have authorization to operate there using Amateur Radio call signs.

FCC CITES ALLEGED UNLICENSED HAM BAND USERS

The FCC has notified several entities -- including two trucking companies and a balloon festival sponsor -- regarding the alleged use of Amateur Radio frequencies by unlicensed individuals. Special Counsel in the FCC Spectrum Enforcement Division Riley Hollingsworth advised all of the parties that unlicensed use of radio equipment not only can interfere with licensed users but violates federal law and could lead to fines of up to \$10,000.

"Information before the Commission indicates that at the 2005 International Balloon Fiesta held in Albuquerque, there were numerous balloonists using Amateur Radio Service and General Mobile Radio Service (GMRS) radio transmitting equipment without licenses," Hollingsworth wrote Paul Smith, the event's executive director on August 23. "Both services require a license from the Commission."

Hollingsworth told Smith that while the FCC encourages all balloonists to use communication equipment of some kind, he'd like the Balloon Fiesta to advise those participating in this year's event October 6-15 that unlicensed operation is illegal. He invited Smith to post the Advisory Notice on the event's Web site.

The Commission also contacted two trucking firms regarding alleged unlicensed transmissions from tractor-trailer rigs on 10 meters earlier this year. Hollingsworth sent a Warning Notice to Cardinal Express of Concord, North Carolina, on August 28, and Melton Truck Lines of Tulsa, Oklahoma, on August 30. The FCC cited information indicating that a Cardinal Express rig on Interstate 85 in North Carolina was the source of radio transmissions on 28.085 MHz on August 2. Hollingsworth told Melton Truck Lines that the FCC had information that one of its rigs, also on Interstate 85 in North Carolina, transmitted on 28.085 MHz on June 11.

Hollingsworth warned the trucking firms that, in addition to fines and other enforcement sanctions, operating transmitting equipment without a license could land drivers in jail and lead to seizure of radio equipment. He indicated this week that both trucking firms and their drivers have contacted him in response to the warning notices and are cooperating with the FCC.

The FCC sent a third Warning Notice to Parker Contracting of Panama City, Florida, on August 21 citing allegations that the contractor's employees have been operating unlicensed radio transmitting equipment on 145.020 MHz and interfering with licensed users. Hollingsworth said the contractor promptly contacted the Commission to report it had collected the Amateur Radio transceivers and was applying for a business license.

On August 18, the FCC wrote Neva Poovey of Newton, North Carolina, citing information indicating that she or someone in her residence had been operating radio equipment that caused interference on 10 and 12 meters. Hollingsworth noted that FCC records did not indicate a license authorizing transmissions on those bands had been granted to anyone at Poovey's address. Poovey's husband Michael responded to tell Hollingsworth he was testing "a huge mobile linear" with another individual in his driveway. A nearby radio amateur complained to the Commission after hearing the transmissions on the two amateur bands.

A Technician class licensee in Puerto Rico -- Joaquin Diaz Fontanel, WP3BH, of Humaco -- was the target of a Warning Notice sent August 28 regarding alleged operation on 7.080 MHz, a frequency not available to Technician class operators.

"Such operation may reflect adversely on your qualifications to retain and Amateur Radio license," Hollingsworth warned. --ARRL Letter

DIGITAL PIONEER TAPR CELEBRATES 25TH ANNIVERSARY AT DCC

Some 100 communication enthusiasts gathered in Tucson, Arizona, September 15-17 for the TAPR/ARRL Digital Communications Conference (DCC). This conference marked the 25th anniversary of the formation of TAPR <http://www.tapr.org> -- Tucson Amateur Packet Radio.

TAPR was one of the driving forces behind the packet radio revolution that began in the middle 1980s, and it continues to be at the cutting edge of Amateur Radio innovation. In recent years, the organization has moved away from its full name, Tucson Amateur Packet Radio Corporation, and begun to identify itself solely as "TAPR." As its president David Toth, VE3GYQ, explained earlier this year, "We're not just about packet radio anymore, and we haven't been just about packet radio for some time." TAPR has broadened its scope into the entire arena of packet and digital communications. It also offers kits for experimenters.

DCC 2006 topics included progress reports on the status of the Eagle Project <http://www.amsat.org/amsat-new/eagle/index.php>, the next high-altitude satellite planned by AMSAT-NA, as well as developments in software-defined transceivers and APRS <http://www.arrl.org/tis/info/HTML/aprs/>. During the event, Kenwood displayed a new 2 meter/70 cm transceiver, which will come on the market early next year and does not yet have a model number.

TAPR has announced that Eric Ellison, AA4SW, and Scott Cowling, WA2DFI, have been elected as new members of the TAPR Board of Directors. John Koster, W9DDD, was re-elected to a new term on the Board.

QST Editor Steve Ford, WB8IMY, represented ARRL Headquarters at the conference. Other ARRL family members on hand for the 2006 TAPR/ARRL DCC included Southwestern Division Vice Director Ned Stearns, AA7A, Arizona Section Manager Tom Fagan, WB7NXH, and ARRL Honorary Vice President Fried Heyn, WA6WZO. --ARRL Letter

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SUITSAT-1 RE-ENTERS EARTH'S ATMOSPHERE

SuitSat-1 (AO-54) is history. The surplus Russian Orlan spacesuit turned satellite, which became one of the greatest public relations vehicles for Amateur Radio in years, re-entered and burned up in Earth's atmosphere Thursday, September 7, at 1600 UTC some 1400 km south-southwest of Western Australia. The announcement came September 8 from Amateur Radio on the International Space Station (ARISS) International Chairman Frank Bauer, KA3HDO. Bauer expressed thanks to "all who made SuitSat-1 the phenomenal event that it was." Launched February 3 during a spacewalk from the ISS, SuitSat-1's 2-meter signal was heard around the world, although at a much weaker signal strength than anticipated.

After SuitSat-1's VHF ham radio payload stopped transmitting earlier this year, AMSAT initiated a "Chicken Little Contest," for participants to guess when SuitSat-1 would deorbit. Winners and more information are on the AMSAT Web site <http://www.amsat.org/amsat-new/ariss/suitsatContest.ph>.

Bauer said plans for a potential SuitSat-2 will be a discussion topic at the AMSAT/ARISS joint meeting in October <http://www.amsat.org/amsat-new/symposium/>. —ARRL Letter

SHORTS

REMINDER — VANITY FEE NOW \$20.80: The regulatory fee to obtain or renew a post-1995 Amateur Radio vanity call sign is \$20.80 for applications received by the FCC on or after Wednesday, September 6. The new fee covers the 10-year license term. See <http://www.arrl.org/news/stories/2006/08/01/3/> for more information.

HYDRAULIC MALFUNCTION FAULTED IN CUBESAT LAUNCH FAILURE: The commission probing the July 26 Dnepr-1LV rocket launch vehicle failure that resulted in the loss of more than a dozen CubeSats with ham radio payloads believes it knows why the vehicle didn't reach orbit. A brief malfunction of a hydraulic drive in a first-stage propulsion unit caused a deviation in the rocket's trajectory and "the issuance of a command to abort the flight," said a news release from Kosmotras, the company responsible for the rocket's launch. Kosmotras said the cause of the hydraulic malfunction has been determined, and the committee is "working up recommendations for its rectification." Russia, meanwhile, has suspended further Dnepr-1 LV launches. Fourteen of the tiny spacecraft that were lost carried Amateur Radio VHF or UHF beacon or telemetry transmitters. Various accounts indicated that the mission went awry less than two minutes after liftoff. The CubeSat project was a collaboration between California Polytechnic State University-San Luis Obispo and Stanford University's Space Systems Development Laboratory. All of the CubeSats were designed and built by students at various universities around the world.--some information from AMSAT News Service

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