



CAPERS may 2007

Candlewood Amateur Radio Association - Post Office Box 3441 - Danbury, CT

Visit us on the Web at <http://www.danbury.org/cara>

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Vice President – Harlan Ford – KB1ILY – phone- 203-798-8096
Secretary – Martha Babbitt – KB1IES - phone - 860-350-8804
Treasurer – Bill Webb – W1AFX - phone - 203-775-0536



Meeting: Friday, May 11 at 8 p.m.

From the President

By the time you read this* the May 6 New England QSO Party may have passed. I hope that each of you took at least a couple of hours to activate Connecticut for the QSO.Party. The crew operating from W1AW certainly had fun operating the brand new Yaesu FT2000.

The elections for new officers and directors will be in June. Please consider either service to the club or nominate others for the various positions.

Remember the 6m repeater. Beginning later this month and well into July is the Sporadic E-season. You may get opportunities to operation stations out to 1500 miles via single hop sporadic E skip.

Sporadic E skip is common on the 6 and 10 m bands near the summer solstice and doesn't depend on the sunspot cycle.

This month's program will feature a video on the FT5XO DXpedition to Kerguelen Island. Kerguelen is one of the furthest points on Earth from North America. The video is by 9V1YC. Barry, KA1JDD, will have a brief presentation on electronic kit-building and demonstrate a simple CW audio filter.

Next month's meeting will be devoted to field day preparations and elections.

I look forward to seeing each of you at the meeting.

73 de Frank, N8WXQ

***ED. NOTE:** If you read this issue before May 6 and want to participate at W1AW for the NE QSO Party, a group will meet at 8:30 a.m. Sunday at Exit 9, Route 84, to drive to Newington. The event is 9:30 to 4 p.m. Sunday. Bring lunch or buy at Subway nearby.

Join Us at Stony Hill FD!

Club meetings and classes are held at the Stony Hill Fire Department, Route 6, Bethel, across from the Stony Hill Inn.

Directions: I 84 Eastbound, Exit 8 (Route 6), straight through the light at the exit, East on Route 6, past Target, about a half-mile on the right. I 84 Westbound, Exit 8 (Route 6), merge left past the gas stations, reversing direction and heading East on Route 6, past Target, a half-mile on the right. Or take Exit 9 on Route 84 Westbound to Route 6 Westbound and continue several miles. Cross Old Hawleyville Road. The Fire Station will be on your left. CARA meetings are held on the second Friday of the month beginning at 8 p.m., with Informal “rag chewing” beginning at 7:30 p.m.

Thanks to N1MG, N8WXQ for April Program

A special thanks to Mark N1MG and Frank N8WXQ for our April meeting program.

Mark discussed how easy it can be to convert inexpensive old CB radios—both AM and SSB—into useful 10 and 12 meter transceivers. Mark’s presentation included a historical review of CB radio and rundown on what to look for in a “convertible” CB set, as well as the relatively simple electrical rewiring and tuning steps necessary to “move” an old CB into the ham bands.



The bottom line: it can be a fun and inexpensive way to add a 10 or 12 meter transceiver to your collection while at the same time learning a bit more about our craft. Now is also a good time to experiment...while we’re still a “few” years out from decent 10-meter band conditions.

Frank presented a simple but very slickly-designed 100-watt dummy load from Oak Hills Research. The compact unit uses a bank of 20 resistors to deliver a virtually spot-on 50 ohms while efficiently dissipating



100 watts of heat. It was another example of the “hands on” electronics aspect of ham radio that can help enrich our hobby and our



understanding of radio technology and technique. The kit is available for under \$40 (www.ohr.com) and includes all parts, instructions and a well-constructed enclosure.

Scheduled VE Sessions for 2007

- June 9
- September 8
- December 1

All are Saturday sessions, and all will be held at the Stony Hill Fire Station starting at 11:30 a.m. Doors will be open about 11 a.m. For information on what to bring with you and to confirm you plan to attend a session, please contact Frank N1PE at frsileo@att.net

GOT COAX?

Here's a great opportunity to line up some first class coax for your summer antenna projects!



Ken, KD1DD, will be bringing up to 500 feet of Belden 8227 top-of-the-line 50-ohm, 97% braid coverage coax to the May meeting. It's the ruggedized mil-spec version of RG-213. Pricing is just 66-cents a foot. Ken will also have some top-quality PL-259 UHF connectors on hand: teflon coated with gold pins.

This is the combination of top quality coax and connectors you want for installing long-lasting antennas in difficult-to-reach outdoor locations. If Ken runs out of supply he will—like the old Doritos ad used to say—just get more!



Have YOU RENEWED your CARA membership for 2007?

Smart Radio News...

NEWINGTON, CT, May 2, 2007 -- In a recent Memorandum Opinion and Order (<http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-66A1.pdf>MO&O) on cognitive or "smart radio" systems, the FCC has affirmed its favorable policy toward the regulation of amateur software defined radios (SDRs). A cognitive radio system is an SDR that can adapt its operating parameters by interacting with its RF environment. The FCC's April 20 MO&O was in response to petitions seeking clarification of the Commission's March 2005 Report and Order (<http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-57A1.pdf>R&O) in ET Docket 03-108. In that proceeding the agency declined to adopt any new regulations for cognitive Amateur Radio transceivers or for digital-to-analog (D/A) converters. ARRL Chief Technology Officer Paul Rinaldo, W4RI, says the April MO&O indicates that the FCC intends to treat Amateur Radio SDRs the same as any other Amateur Radio equipment.

"This is welcome news from the FCC as it clarifies the matter of certification of amateur equipment," Rinaldo remarked. "It applies not only to terrestrial amateur equipment but also to amateur satellites, which increasingly are using SDR in their designs."

AMSAT-NA has announced it's revamped the design of its <<http://www.amsat.org/amsat-new/eagle/>>Project

Eagle satellite to take maximum advantage of software defined transponder (SDX) technology.

The "cognitive radio" proceeding is emblematic of the FCC's ongoing struggle to address thorny regulatory issues to keep pace with cutting-edge technology. In its 2005 R&O, the FCC concluded that neither software programmable amateur transceivers nor high-speed D/A converters "present any significantly greater risk of interference to authorized radio services" than conventional hardware radios.

Petitions Prompted MO&O

April's MO&O was in response to petitions from Marcus Spectrum Solutions (MSS), owned by Mike Marcus, N3JMM, a former FCC staffer and a member of the ARRL Software Defined Radio Technology Working Group, and from Cisco Systems. While the League was satisfied that the FCC's 2005 R&O had exempted Amateur Radio SDRs from its certification requirement, MSS felt the Order was ambiguous and sought further assurances.

In response, the FCC said it "did not intend to impose any new certification requirements for Amateur Radio equipment" in its 2005 R&O, including SDR equipment that may be modified by someone other than the manufacturer. The Commission noted, however, that external RF amplifiers operating below 144 MHz and marketed for amateur use "will continue to require certification before they can be marketed."

MSS also requested a Further Notice of Proposed Rule Making with respect to digital-to-analog (D/A) devices. Marcus predicted that if high-power, high-speed D/A converters with antenna-like connectors ever became readily available, it could bypass the entire FCC equipment certification program and open the door

to D/A-equipped computers capable of operating on any frequency. The FCC declined to act on Marcus's request.

"MSS does not demonstrate any current need for regulation of D/A converters," the FCC said in its MO&O. "It admits that the types of D/A converters that it is concerned about are not presently on the market, and that it is not aware of any discussions about the possible marketing of these types of D/A converters."

The FCC reiterated that it "may revisit the issue of the certification of amateur equipment with software modifiable features in the future, if misuse of such devices results in significant interference to authorized spectrum users."

ARRL General Counsel Chris Imlay, W3KD, expressed confidence that it would not prove necessary for the FCC to revisit the issue, however, "as no misuse of amateur SDR technology is anticipated." For the FCC to impose any limitations on amateur SDR equipment "would be contrary to the goals enunciated for the Amateur Radio Service in §97.1 of the FCC's rules," he added.

Software and Security Concerns

Cisco had asked the FCC to revise its rules to better specify those classes of devices that do not require SDR certification. It also wanted the FCC to establish a policy that software that supports security measures not be made public if doing so could compromise security or enable illegal operation.

In response, the FCC revised §2.1(c) its rules to state that only radios with software "designed or expected to be modified by a party other than the manufacturer" -- such as downloading from the Internet -- and that would affect frequency range, modulation type, maximum power output or the circumstances under which the transmitter

operates legally, would have to be certified as SDRs.

The FCC said its R&O adopted a rule to automatically make confidential information on SDR security features submitted with a certification application. In its April MO&O, the FCC asserted its policy that manufacturers not intentionally make public "the distinctive elements that implement that manufacturer's particular security measures" in an SDR, if doing so "would increase the risk that these security measures could be defeated or otherwise circumvented" to allow operation that would violate FCC rules. Cisco also noted that open-source software may be subject to licensing agreements that require modifications to become publicly available.

In any case, the FCC said in its MO&O that it anticipates Commission requests for software source code would be extremely rare. "It would not be burdensome for a manufacturer to request confidentiality for software source code in the event we request it," the Commission added.

(With tnx to ARRL and KZ1Z)

Field Day 2007 Recap

We'll be reviewing the details for the June 22-23 Field Day 2007 program at the June CARA meeting, but in the mean time, here's a recap of the highlights:

- Friday June 22- 5 p.m. at Cadigan Park, Brookfield-- Begin setup. Launch lines and 2 loops then break for pizza.
- Saturday 9a.m. - 2.p.m., site setup of food tent, equipment, operating position tents, computers, operating stations
- Saturday 2 p.m. Field Day officially begins 24-hour period of operation
- Sunday: event continues until 2 p.m. followed by breakdown of site and cleanup.



We're operating two complete stations (ICOM 7000's) for this event and will need 1-2 operators for each station 'round-the-clock for both operation and logging. In addition, we need folks for general help and to greet and explain to any public visitors the purpose of Field Day...who we are and what we're doing.

Please mark your calendars now for this important club event!

CARA Hamfest

Sunday, September 16 is the date of the annual CARA Hamfest—the only hamfest in Western Connecticut!

Yes, it sounds like it's a long way off, but it's amazing how quickly time flies. Following our June Field Day (which is just next month) the Hamfest will be a scant two months away. The last page of this month's newsletter is a flyer promoting this major club **fun** and **fun**draising event. Tell your friends on the air, make copies of the flyer and distribute them or post them in prominent places. Please help get the word out --and mark the date on your calendar!



Sponsored by Candlewood Amateur Radio Association

Western CT Hamfest



Sanctioned by ARRL

- **Sunday, Sept. 16, 2007**
(Rain or Shine)
- Edmond Town Hall
45 Main St (Rt. 6)
Newtown, CT
- Set-up 7 a.m.
- Doors open 8:30 a.m. - 12:30 p.m.

**Talk-in on
147.300+
PL 100**

- Admission \$5 (under 10 free)
- Tables \$12.50 (includes 1 admission)
- Tailgating \$8 (includes 1 admission)
- Ham Radio Equipment
- Computer Gear
- Door Prizes
- Refreshments
- Free Parking

Battery Exclusive!
Big batteries at
rock bottom prices!

Commercial Vendors Include

- QuickSilver Radio Products
- Ham Source
- Radio Oasis

Don't Miss the Raffle!
Win a Brand New HT.

Seminars

- Mechanical TV - Those were the days
- Airmail - How it works, incl demo
- Satellite Communications - How to do it
- NVIS Antennas (courtesy of ARRL)

Contact Information

- Joe de Groot - AB1DO: (203) 938-4880
- Jim Ritterbusch - KD1YV: (203) 775-1946
- Email: ab1do@arrl.net
- Web site: www.danbury.org/cara

Directions

Take exit 10 off Rt. 84. Go West onto Rt. 6 (westbound make a right, east bound make a left). Approx. $\frac{3}{4}$ mile at flag pole make a right onto Rt. 25. Edmond Town Hall will be approx. 100 yds on left.

Candlewood Amateur Radio Association (CARA) Hamfest, Sept. 16, 2007
c/o Joe de Groot - AB1DO, 30 Sunnyview Drive, Redding, CT 06896. Phone # (203) 938-4880

Name _____ Daytime Phone # _____

Address _____ Evening Phone # _____

Please reserve _____ indoor tables @ \$12.50 each. Amount Enclosed \$ _____

I need _____ / do not need _____ electricity. Please make checks payable to CARA