



CAPERS

Candlewood Amateur Radio Association - Post Office Box 3441 - Danbury, CT
Visit us on the Web at <http://www.danbury.org/cara>

President – Frank Etzler – N8WXQ - phone - 860-350-3523
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

February Meeting: Friday, Feb 9 at 8 p.m.

From the President

The beginning of this year is full of ham radio events and activities. I hope some had the opportunity to work the beginning of the year RTTY contests. RTTY is a fun mode. While the bands are not very good now, surprises come every so often. I easily worked FR5GS with less than 100 watts.

I hope all have had the chance to pay their dues by this time. Dues are collected in January of each year.

The CARA 6m repeater is now QRV on 53.130- with PL 100. Give it try. You may be surprised to work out of state stations from time to time particularly in the summer months.

All should be aware of the recent changes in the amateur bands that have come with the recent FCC announcements. You may have to adjust some of your operating activities. I am sure that there will be some unintended consequences of the changes. Realignment of the 40m band (broadcasters are being shifted above 7.300 MHz) may cause the loss of CHU the Canadian time signal station. As of February 23 no Morse code examinations will be given to Radio Amateurs. Get ready to upgrade your license at the March VE exam. After February, all Technician licensees will have CW only HF privileges on 40 and 15m. You will now have the opportunity to hone your skills on the air. Give it a try. For further details on the recent changes be sure to see the ARRL web page.

The QSL card sort was performed in record time last month. Thanks for your service to the Amateur Radio community.

This month's program will concern Antique Radio. Marty, K1CVF will bring items from his extensive collection. Also take the opportunity to check out the Antique Wireless Association web site (<http://www.antiquewireless.org/>). Those who have an interest will find much to learn from the folks at AWA.

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

73 de Frank, N8WXQ

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.

PLEASE NOTE: The February meeting will be held in the Stony Hill FD Lounge. The Bethel H.S. Jr. NROTC will be holding a previously-scheduled fundraising dinner in the main meeting room. The lounge entrance is one door down, on the right. Signs will be posted. You may even want to catch dinner at the Jr. NROTC event before the meeting!

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. Fire Department will be on your left. CARA meetings are held on the second Friday of the month beginning at 8 p.m., at Informal "rag chewing" begins at 7:30 p.m.

W1QI/R is QRV on 6m

The new CARA 6m repeater is now operational. Please try it out. Its frequency is:

Input: 52.130 Mhz, pl 100, Output: 53.130 Mhz.

Please give the repeater a try. The more use it gets, the more it can be tested out. If you do, please send a signal report to Joe, either on the air or at ab1do@arrl.net. This new repeater will give CARA extended range and if 6m opens up (sporadic E), it can be really exciting.

The repeater is currently operating from the QTH of Joe AB1DO in Redding, where it sits in his basement to be tested through the Winter. The repeater is a GE Master II Station, modified for the ham bands, which is connected to a set of four 7ft tall cavity resonators (also known as cans) which together act as a duplexer. The duplexer cans have also been modified and retuned to the repeater frequency.

Getting this repeater up and running was not a straight forward process. In the end it required a lot of hard work by several club members. The initial application for coordination was submitted to CSMA by Joe (through John W1JMA) in March 2006. Coordination (and cross-coordination) was

received several months later. Rosty N2FEX then obtained the repeater and duplexer cans for the club and had them modified to our specified frequencies (or so we thought). Bill N1PJG moved the repeater and 7ft cavities from Hamden, where they were modified, to Joe's QTH in December. Ken KD1DD and Joe then tested out everything. The receiver and transmitter frequencies were correct and both worked well. The cans on the other hand were a different matter. Several tests led to the conclusion that they were not tuned correctly.

After consulting with Rosty, Ken drove them back to Hamden to be retuned. In January Ken and Joe picked them up from Hamden again, where the technicians were adamant they were now correctly tuned. Back in Redding, however Ken and Joe's findings were very different. Their measurements indicated they were still not tuned to specification and indeed the transmitter did not like them at all. They then contacted Steve KF6AJ who offered his lab so they could try tuning them themselves.

A date was set and early January Ken and Joe drove the cans over to Steve's plant in Danbury. Ken, Rosty, Steve and Joe then



spent a whole Saturday testing everything and going through the various steps to tune. The duplexer system consists of 4 cans, two on the receive side and two on the transmit side. Each can acts as a very narrow high Q band pass filter as well as a notch filter. On the transmit side the band pass is set to the

transmit frequency and the notch to the receive frequency. On the receive side vice versa. By placing two cans in series, the filtering effect is increased. Together all four cans enable the transmitter and receiver (which are both operating simultaneously in a repeater) to use the same antenna without disturbing each other.

They first measured the various cables and found that the two cables interconnecting the two receive and the two transmit cans



were not $\frac{1}{4}$ wavelength long, as they should be. Furthermore they found that one of the cables connecting to the antenna port had intermittent opens and was therefore useless. That cable was replaced and the group proceeded to tune. Ken had done some homework and found the step by step tuning procedure on the internet. Each set of cans was tuned carefully to the correct frequency. In the process they also found that one of the elements of the notch filters was not cut to length. Luckily Steve also had a lathe and that element was modified. Some other minor mechanical corrections were also made. Finally the cans were tuned correctly. However, a final tuning would be needed with the proper $\frac{1}{4}$ wavelength cables.

Two weeks later Ken had remade new cables and Ken and Joe proceeded to finalize the tuning at Steve's lab, where the cans had remained. That done, they moved them back to Joe's QTH, hopefully for the last time. On Jan 23 Ken and Joe again

checked everything out and it all worked beautifully. The repeater was working on its own internal controller, which does decode and encode PL tones, but which does not have any ID ability. The Repeater was tested with Mark N1MG who happened to be home and the signal reports were great on both sides. Mark's 1W out was full quieting, all of 6 miles away.

The next step was to wire in the interim controller, which does have ID capability. This was no mean feat and both Ken and Joe had spent many hours on the internet and perusing documentation to figure out all the connection points. That day they got as far as connecting several of the various wires. The next day (Jan 24) Ken and Joe continued and spent most of the day hooking



up the rest of the controller, testing and setting its various levels (carrier detect, receive, transmit) and programming it. They had already decided to leave the on-board PL decoder and encoder in place to keep things simple. They would worry about that at a later date, when the repeater needs to be connected to the final, new controller. Some final tests and at 2300 UTC W1QI/R was QRV on 6m!

If you feel you have missed out on some of the fun, don't worry. In Spring the repeater will need to move to the Spruce Mountain site so it can be co-located with CARA's

other repeaters. The Repeater Committee will be looking for some able bodied hams with strong backs and secure footing!

(Special thanks to Joe AB1DO for the above article and for Ken KD1DD for the accompanying photos! –Ed.)

Emergency Radio Site

Last year the ARRL promoted the HELLO Campaign. This year the thrust will be EMERGENCY RADIO. To support these activities a new web site has been created. www.emergency-radio.org

This site is for hams and non-hams. Each group will find the information they need. Here in Florida emergency communications and amateur radio go hand and hand. We know we have a great hobby and public service to offer. Ham radio operators have proven their worth many times over in the past. The issue is getting the word out of our many good deeds. The information and resources available via this page are varied.

Be sure to share this message with your local ECs and DECs. Public Information is an important aspect of any ARES/RACES turnouts. PIOs should be included as part of any activation plans. This will assist in getting a seat at the Joint Information Center, should a JIC be established. PIOs need access to provide the services needed, providing accurate and timely information to the media and the community.

Please share this information with club newsletter editors too. If the club has a web site, (you may want to) add a link about this program. The information may be copied and used in newsletters in whole, or in part as part, with attribution, of another article. Remember ... when all else fails, amateur radio works!
73, Pete, KZ1Z

Elmers and Mentors Needed

We're looking for members who are willing to share their skills and experience in specialized areas of amateur radio with other club members. We'll publish a list in the Capers.

Bill, N1TIW, has offered his help as a crew member for antenna installations or take-downs. Bill is available during the day and can be reached at 744-5138.

Please send your responses, suggestions, and input to the editor, KA1JDD, barry@connollyco.com.

Scholarship Applications Invited

The non-profit Foundation for Amateur Radio (FAR) now is accepting applications for 56 academic year 2007-2008 scholarships to assist radio amateurs pursuing higher education. The deadline to apply is April 30, 2007.

FAR fully funds three of scholarships and administers 42 others without cost on behalf of various club and individual donors; grant income funds the remaining 11 awards. Amateur Radio licensees pursuing a full-time course of study beyond high school and accepted by or enrolled in an accredited university, college or technical school are eligible to apply. Scholarship grants range from \$500 to \$3000, and preference in some cases goes to applicants living in particular geographical areas or pursuing certain studies. Non-US residents are eligible to apply for some of the scholarships.

Request more information and an application form via e-mail <scholarships@farweb.org> or by sending a QSL card by April 30 to FAR Scholarships, PO Box 831, Riverdale, MD 20738.

Minutes of November Meeting

November 10, 2007

The regular meeting of CARA was held at the Stony Hill Firehouse on November 10th at 8 PM. The program was on NVIS and was

presented by John W1JMA. Additional information can be obtained from ARRL.org Web site.

The business meeting began at 9:15 PM. A motion was made, seconded, and so voted to accept the minutes as printed. The Treasurer reported a balance of \$9349.73. A motion was made, seconded, and so voted to accept the Treasurer's report.

Old business:

The November Sweepstakes will be next Saturday at the Firehouse. We will be on phone from 6 to 10 PM for one radio with multiple operators. We are seeking 80 sections. There is a video available. The software has arrived, and the club laptops will need to be activated.

The repeater committee needs information for the directory. 2 cans need to be tuned. There will be done on Monday and ready for pickup on Wednesday. We are setting up a beacon for the 6m machine. Discussion followed.

Three manuals were given out to the Boy Scouts. One older scout is studying on his own, and 2 younger ones are working with Jamie.

We have a new Extra.

New Business:

The holiday party is at the next meeting. Bring a dish to pass and your family members.

Exam is December 2nd at the Firehouse. About 20 people from Ridgefield are coming.

Firehouse. A motion was made to give \$100 and a plaque to the Stony Hill Fire Department. Plans are to have a photo of the presentation put in the newspaper. The motion was seconded and so voted.

For party, Chief and line officers and spouses are to be invited to the Holiday Party for the club. A motion was made, seconded, and so voted to send flowers to

the Secretary of the Fire Department in appreciation.

The meeting adjourned at 9:42 PM

Respectfully,
Martha Babbitt KB1IES

Minutes of January Meeting

January 12, 2007

The regular meeting of CARA was held at the Stony Hill Firehouse on January 12th at 8 PM. The program for the evening was the annual QSL card sort "square dance". A brief business meeting covered the following: Hamfest – can be small, but successful when special programs are offered.

Building things –

Groups which work with tools and materials to teach skills, like putting PL259's on a wire
Kits – building a "dummy load", or QRP radios.

QSL Sorting – Power Point presentation by Frank on how to sort QSL cards.

The card "square dance" began and pizza was consumed.

Respectfully,
Martha Babbitt KB1IES

Nets

CARA Weekly Net: Sunday nights at 7:30 p.m. 147.30+ (PL 100)

Connecticut Phone Net (CPN) Monday through Saturday, 6 p.m., on 3.973 and Sundays at 10 a.m. on 3.965...

CW Connecticut Net, Nightly, at 7 p.m. on 3.640. "Newbie Night" Thursdays.

WestConn Net: Nightly at 8:30 p.m. 147.18+ (PL 114.8)

Tips Net: Tuesday evenings at 7:30 p.m.

on 146.73- (PL77) (linked statewide).

R-Com Weekly Net: 145.47- (PL100)
Thursday Evenings, 8 p.m.

ConnARES Local VHF Net (now part of Area 5) : Second Monday of each month, 8 p.m.
on CARA repeater: 147.30+ (PL 100)

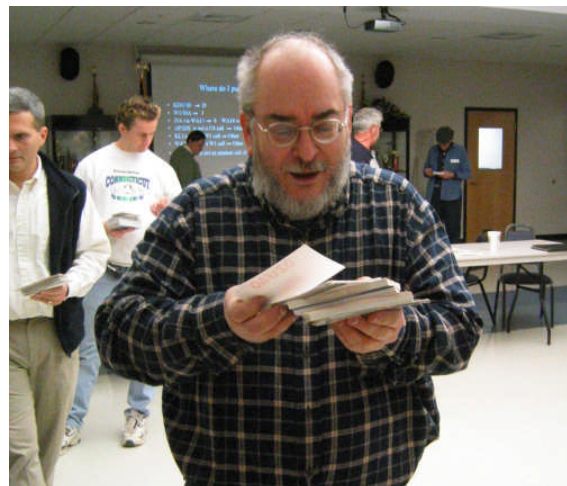
Conn ARES Issues Net: 3.965 mHz +/- on
Thursdays @ approx. 6:15 p.m. (following
CT Phone Net.)

Note: The CT Phone Net has moved to 3.973 to avoid
ongoing early evening interference from a short wave
operator on 3.965. Continue to check 3.965 for the CT
Phone Net and for emergency ARES traffic, but be
prepared to go to 3.973 in the event of interference.)



Cards, Cheese Pizza and Comraderie...

Just a few photos from the January Card Sort "Square Dance" that combines service to our fellow hams--in sorting QSL cards--with good friends and good pizza. The old adage "many hands make light work" was



never more true. Because we had such a good turnout of members we were able to plow through the bundles of cards in record time. Nice job all!

CARA

Candlewood Amateur Radio Association

P.O. Box 3441
Danbury CT 06813

2007 Membership/Dues Application

Name: _____ Call: _____

Address: _____

City: _____ State: _____ ZIP: _____

Class: _____ Phone: _____ VE: _____ ARRL: _____ Email Capers: _____ (default Yes)

e-mail _____

Full Member
\$30 _____

Family (2 members)
\$52.50 _____

Family (3 members)
\$65.00 _____

Family (4 members)
\$75.00* _____
* \$10 each additional member

Senior (65+)/College Student \$23.50 _____

Associate Member (Non-Ham)
\$15 _____

Student (Under 18)
\$5 _____

Send Dues to:

Bill Webb, W1AFX
12 Stage Road
Brookfield CT 06804
w1afx@arrl.net