



# Capers

April 2012

Candlewood Amateur Radio Association - Post Office Box 3441 - Danbury, CT  
Visit us on the Web at [www.CaraRadioClub.org](http://www.CaraRadioClub.org)

President – Roger Mitchell – NG1R – phone- 203-790-9697  
Vice President – John Will – KB1LYP- phone - 203-270-0475  
Secretary – Bill Thoren – N1TIW - Phone – 203-744-5138  
Treasurer – Bill Webb – W1AFX - phone - 203-775-0536



**Friday, April 13, 8 p.m. @ Stony Hill Fire Station**

## March Minutes...

CARA Meeting March 9, 2012

The meeting was called to order at 8 PM by CARA President Roger Mitchell, NG1R, with 20 members and guests present.

The program was a roundtable discussion of installing mobile radio equipment in a motor vehicle.

Roger, NG1R, kicked off the discussion with a PowerPoint presentation of the setup he has in his 2007 Toyota Highlander Hybrid. In consideration of the many complications of an installation in modern cars, especially hybrids, Roger opted to have the wiring from the vehicle battery to the radio operating position(s) inside the car done by a professional car stereo installer. When I was in high school, the battery for my Model A Ford was in a wire bicycle

basket bolted to the running board. Those days are long gone!

With the power taken care of, he could install the radios and antennas. By their very nature, mobile installations have certain problems and the rest of the time was spent talking about how Roger and others in the group solved those problems.

Some of the topics covered were:

- Use the largest possible wiring from the battery and install a fuse in both the positive and negative wires, close to the battery.
- It's not always possible to easily get to the fuel pump wiring but an LC filter can reduce interference from this source.
- Ignition noise suppression

- Antenna grounding
- Bonding the hood (Bonnet, if you happen to be British)
- Bonding the rear hatch or trunk lid
- Since the exhaust system is often mounted on rubber bushings for audible noise reduction, you should consider bonding it electrically also.

For logging stations during mobile operation you can talk into a small audio recorder and then transfer information to paper or electronic logs later.

Information on mobile installations can be found at the ARRL website, K0BG.com and many other places. K0BG is well worth the look, starting with "Alternators and Batteries". Also see the "Yesteryear" section and the Radio Police Car shown on the cover of the January 1924 issue of *Radio News*.

Our thanks to Roger and all who participated in this discussion.

In keeping with our call for members to do short presentations of projects they are currently working on, Dan, W1QK, and Harlan, Q1QH, showed their battery packs and "repurposed" commercial Uninterruptible Power Supply (UPS).

Roger, KB1NYY, showed yet another way to build a J pole antenna, this time using electrical conduit and a junction box. One more illustration of why this type of antenna is so popular.

Our thanks to Roger, Harlan and Dan for their contributions.

You're next. What are you working on?? If it's smaller than a shipping container, bring it in. If it's larger than a shipping container, bring pictures.

Thank you in advance.

After a short break we went on to the business part of the meeting.

The minutes of the last meeting were accepted, as was the Treasurer's report of \$10,318.88.

Club President Roger, NG1R, reminded everyone that the dues are due.

It is important for every organization to have "institutional records" of how things were done in the past, to provide continuity going forward. Floods, fires and "unfortunate circumstances" can lead to the loss of those records. In CARA's case it was the latter of these situations and there is no "Banker's Box" of essential information.

Going forward the club Secretary, currently me, Bill, N1TIW, will be the keeper of this box. If you have anything or know where something is that should be in this box please contact me.

Examples of things that could be included are: Field Day and Hamfest procedures, repeater procedures and equipment lists and photographs of people and events. Limited numbers of old newsletters ("CARA Capers") could be included but I have no place to store them so it would probably be better for members to keep their own file (and perhaps give me a list of what you have). Dan, W1QK, has loaned some of his newsletters to me and I am scanning some of them to be added to the archive on the CARA website.

Again, if you have any records that you think should be in "The Box" please contact me. Thank you.

Steve, W1SMS, reported on the repeaters. Steve will be organizing a work party to the site and will be asking for your help. In order to better control repeater maintenance activity, Roger, NG1R, Steve, W1SMS and John, KB1LYP, will coordinate access to the site with the responsible Danbury town official(s). These three CARA representatives will take care of scheduling all future work at the site.

The meeting was adjourned at 9:40 PM.

Bill Thoren, N1TIW, Secretary

## 2012 VE Schedule

All dates are Saturdays; starting time is 11:30 a.m. Walk-ins are always welcome. Candidates may e-mail or call N1PE for any additional info.

**June 9th**  
**September 15th**  
**December 1st**

73, Frank Sileo N1PE  
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Home: 203-438-0218;  
Cell: 203-731-7735  
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## 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, 7 p.m., 3.533 (note correction to 3.533)

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

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)

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

## The Queen Creek Easy (and Cheap) J-Pole Antenna

by Roger Strong, KB1NYY

A couple of times a year I travel to Mesa, AZ to visit my cousin. Three or four years ago I discovered the morning drive time trivia net sponsored by the Superstition ARC (named for the Superstition Mountains just to the east.) I joined the net and then the club.

On my trip in February, some of the guys on the net were raving about the Queen Creek Easy J-Pole Antenna as described in the club's newsletter. (available at [www.vailrd.net/qcejp.pdf](http://www.vailrd.net/qcejp.pdf)). Queen Creek is a community in the East Valley, southeast of the Phoenix metro area. It is the winter home of Tom Miller, K8PNW, the fabricator of both the antenna and the newsletter article.

I'll avoid duplicating much of the newsletter piece, you can and should read it for yourself. The rest of the newsletter is interesting and the whole thing is well done.



***KB7KWK's modification of his original feed line attachment that is shown in the Superstition ARC newsletter (available at [www.vailrd.net/qcejp.pdf](http://www.vailrd.net/qcejp.pdf)).***

The antenna is made from standard half-inch steel conduit, a metal workbox and two screw-type conduit connectors. The whole lot at Lowes: 10 feet of conduit, one workbox and a bag of three conduit connectors, came to \$4.92 including tax. Back home we cut two pieces of conduit, one 57 inches long and one 19 inches long, and attached them to the work box with two of the conduit connectors. The leftover piece of conduit and the third connector could be used at the center hole on the bottom of the box to create a short mast.

Next it was off to the HRO store for coax, and, since they had no pre-assembled cable with only one connector, an SO239 (I can't bring myself to cut off a perfectly good connector.) (And while we were on that side of town we took in an A 's-Angels spring training game.) I jury-rigged the SO239 onto one tube, soldered a short piece of



***My second Queen Creek Easy J-Pole Antenna (my first lives in Arizona.) temporarily installed on my front porch.***

wire onto the center terminal and attached the other end to the other tube with a hose clamp.

We then drilled a hole up from inside the top of a kitchen cabinet to the attic above.

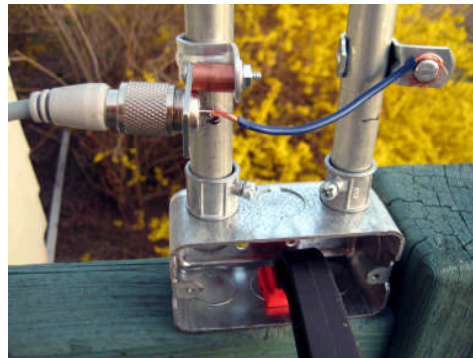
Two quick screws into a joist and a connection to my HT and bob's your uncle. The next morning I answered trivia questions for the last time that trip via my new, easy and cheap antenna. Not having a meter, I had to guess at feed line placement, but according to others on the net, it worked just fine..

Back home in Connecticut, I again spent less than five dollars at Lowes for the makings of another antenna (not that I needed one.) Another five dollars at the Southington hamfest got me a piece of

used coax with one connector. This I attached to the antenna with hose clamps, A little tweaking produced an SWR of 1.8 at the W1QI repeater frequency.



*The feed line attached with hose clamps.*



*My version of the SO239 feed line attachment using one-hole straps and a piece of copper tubing as a spacer.*

Next I replaced the hose-clamp method of feed line attachment with an SO239. I used half-inch straps squeezed close enough to grip the tubes. The SO239 was bolted to one strap and mounted on the shorter tube. A piece of 14-gauge wire connected the center contact to a strap on the other tube. It looks a lot neater, but the best SWR I can get at the CARA frequency is 2.4.

So now I have two 2-meter J-Poles: one copper, relatively expensive and tedious to build, and the other steel, cheap and easy and quick to put together.

\* \* \*

## **Free Circuit Design Tools for Ham Radio**

By Dan Romanchik, KB6NU

About a week ago, I started looking for a schematic capture program so that I could easily generate some simple schematics for my upcoming Extra Class study guide.

Since I use a Mac as my main computer, I first asked on the Ham-Mac mailing list if anyone knew of a good one. I got several recommendations, including:

- Diptrace (<http://www.diptrace.com/>),
- Eagle ([http://www.cadsoftusa.com/downloads/free\\_ware/?language=en](http://www.cadsoftusa.com/downloads/free_ware/?language=en)), and
- McCad (<http://mccad.com/>)

Eagle looked like a good choice, although several people mentioned that the user interface "left much to be desired."

Then, I remembered that I had OmniGraffle, which is a general-purpose diagramming tool. Googling around, I found several sets of electronic symbol libraries that could be used with OmniGraffle. I installed them, and generated a couple of figures for the study guide section that discusses T-network and pi-network filters. It was a reasonably good solution to my problem.

#### A Web solution

A couple of days ago, though, someone on the local Maker mailing list, pointed me towards CircuitLab (<https://www.circuitlab.com/>), an online schematic capture tool and circuit simulator. I haven't tried the circuit simulation yet, but the schematic capture tool is really easy to use. It's much easier to use for drawing circuit diagrams than OmniGraffle.

Another benefit is that it doesn't matter what computer you're using. Because it runs in a Web browser, it doesn't matter whether that browser is running on a Mac or a PC or even a Linux box.

If you set up an account, you can save circuits to your "workbench." To get you started, there are some sample circuits, such as the 555 timer circuit shown in

Figure 1. There's also some decent documentation and a forum where you can discuss circuits and get some help.

Finally, the price is right, too. It looks like using CircuitLab is completely free. I couldn't find any pages that required payment.

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*KB6NU's column is distributed to almost 300 ham radio newsletters around the world.*

*When not searching the Web for circuit design tools, you'll find KB6NU working 30m CW and twittering away about his contacts. His Twitter id is @kb6nu. He would love for you to follow him there. If you don't tweet, you can still read his blog at [www.kb6nu.com](http://www.kb6nu.com).*

### **Tech Class Offered by CARA...**

CARA will be offering a Technician class (entry level) for amateur radio in Newtown, CT (location to be determined).

Sessions will begin on Tuesday, April 10, 2012, and will run for eight weeks. The cost is expected to be \$60 and includes the book.

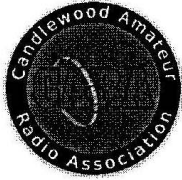
Classes will run from 6 to 9 PM each week, with the test to be administered on Saturday, June 9, 2012.

There will be eight instructors, all licensed hams who are also prior instructors.

Those who complete the course, and successfully pass the test, will earn their ham radio license.

Contact John Will, KB1LYP, class coordinator, at 203-270-8601 to reserve a spot in the class or for more details.





Candlewood Amateur Radio Association  
P.O. Box 3441, Danbury CT 06813

### 2012 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 check payable to  
CARA**

**To:**

**Bill Webb, W1AFX  
12 Stage Road  
Brookfield CT 06804**

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203-775-0536