



SQUELCH TALES



NEWSLETTER FROM THE MERRYMEETING AMATEUR RADIO ASSOCIATION
FOR MARCH 2018



ARRL Maine State Convention and Hamfest on March 30th & 31st.

The Maine State ARRL Convention and Hamfest is on Friday March 30th, from 7 pm to 9 pm and Saturday March 31st, from 8 am to Noon at the Ramada Inn in Lewiston. We will have talks on Friday like past years, anyone interested in giving a talk send Ivan N1OXA, at ilazure@roadrunner.com, with a note of two or three sentences explaining the talk..



On Saturday there will be talks from 9 am to Noon. Plus the Hamfest until noon, There will be a VE testing session at 12:30 pm.

There will be a Door Prize, and other prizes as well, with coffee with Muffin and Donuts all morning as well.

Ramada Inn the single or Double room special \$65 plus tax, per night.



KS1R-1, BRUNS Packet Node has direct link to DX Spotting Cluster & other good stuff

Sys-Op Donnie Dauphin, WD1F has been busy experimenting and enhancing the MARA BRUNS packet node in Phippsburg. In early February he was successful in setting up a direct link via TelNet to the K1EU DX Cluster (k1eu.dynip.com) in Scarborough. Packet users who also like to see what DX activity there is on the ham bands can now get that information

directly from the KS1R-1/BRUNS node. Here is how you do it:

- Connect to the BRUNS in the normal fashion.
- After the connect prompt, just type in the word, "CLUSTER" and the node will connect to the K1EU DX spotting node in Scarborough.
- When the cluster asks you for your call-sign, type in your call sign and you are ready to go.
- You can then type in "SHOW/DX or SH/DX" and the cluster node will show you the last series of DX spots. As other hams post DX spots they will appear on your screen while connected to the cluster.

For a list of other cluster commands go to:

http://www.dxcluster.org/main/usermanual_en-12.html

In addition to the CLUSTER upgrade Donnie has made available weather reports from the National Weather Service (NWS-NOAA).

1. Again after connecting to BRUNS entering the word "WEATHER or just WE.
2. The site will then ask you the three letter city code, The city code is actually the Airport code. (ie: BOS for Boston, PWM for Portland, NHZ for Brunswick, SAN for San Diego, LAX for

Los Angeles, SFO for San Francisco, etc.)

In addition to the CLUSTER and WEATHER features Donnie has activated the Bulletin Board Service (BBS) for all users. The BBS will allow users to post bulletins, notices, ham stuff for sale, etc.. To access the BBS and take a peak, here is how it is done:

- Access BRUNS in the normal fashion.
- When you are connected, type the word "BBS" and you will be taken to the bulletin board.
- The service will then ask you for your city (town) then your Zip Code. And you are logged in user.
- Type HELP to give you the commands to help you navigate through the BBS.

TRUSTEES NOTE: *Please make posts ham radio related ONLY. Do not use the BBS for your political, personal or religious soapbox. If you want to do that, take your opinions to Facebook or other social media online services.*



"Build the Cobra Antenna"

By Raymond A. Cook W4JOH
Taken from and re-edited from a project in
73 Amateur Radio Today June, 1997

The original Cobra antenna designed by W4JOH can be built as an all band hf antenna covering either 160 thru 10 meters or 80 thru 10 meters and is built using standard insulated wire of about 14 gauge and fed with 450 ohm ladder line down to the shack into a tuner. It got it's name from the S shaped configuration of it's multi-conductor elements. It performs on it's primary and harmonic operating frequencies as a standard ladder-line fed doublet.

The close spaced wire elements on each leg introduces two added resonant responses BELOW the antenna's fundamental operating frequency.

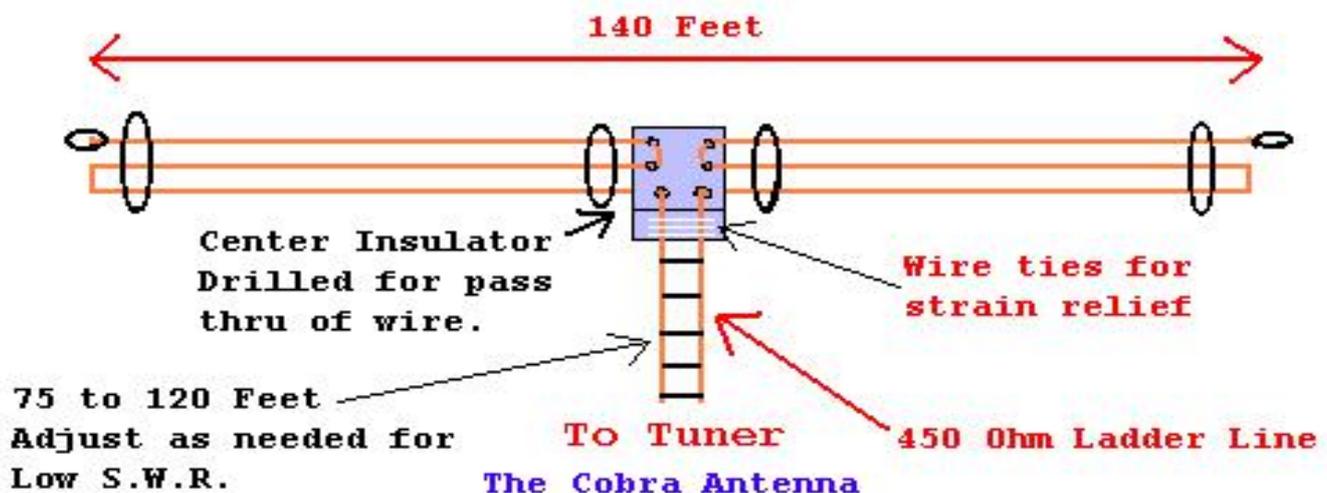
The 140 foot version (80 meters) in picture also resonates at about 2.8mhz and also on 160 meters. A standard dipole at 1.9mhz is about 246 feet total compared to 140 feet in the Cobra!. This fact alone makes this an ideal antenna for restricted space on the TOP BAND!

The half sized version, 73 foot (40 meter) also covers 60 and 75 meters!
All band operation has been reported in the original article to be excellent! (With a tuner of course).

This antenna design extends the coverage compared to a G5RV both in bands and performance. On its primary and harmonic operating frequencies, tests show no discernible difference in signal strength between a Cobra and a regular full-sized doublet or dipole.

On its sub-bands bands where the Cobra is physically "short", efficiency is somewhat lower than for a full-sized dipole.

If you do the math, you will see that there is



160 Thru 10 Meters = 140 Feet
80 Thru 10 Meters = 70 Feet

actually about 420 feet total wire across the top of the antenna on the 80 meter version, (210 feet per side), and about half that on the 40 meter version. **The flattop and lead-in length were strictly determined by the physical limitations of the antenna farm and this project is a result of those limitations and the idea of compressing or folding the wire back on itself to fit the antenna farm.** (No formulas were given in the article), but they seem to be this:

1/2 of total known length / frequency = multiplier for formula below:

210 / 3.750 (band center) = 56 (unknown multiplier)

So 56 X 3.750mhz (band center) = 210 feet per side. Which is exactly what he used per side.

***Editor's note:** "This formula is mathematically correct in solving for the unknown assuming the lowest band center frequency was used, but may not be what was used in the original antenna experimentation if any formulas were used at all! The original author, W4JOH, may have arrived at the lengths strictly by experimentation and found them to work well."N4UJW*

Keep in mind that there are actually 3 conductors connected in series per side and folded back on each other..... or another way of saying this is that there is one continuous length of 210 feet per side in the 80 meter version connected to one side of the ladder line and the same on the other half. Because the Cobra antenna is a balanced load, it is recommended to install a 4:1 current-style balun at the station end of the feedline (many external tuners provide a built-in balun). Ladder-line feed may have to be trimmed for lowest SWR, but using about a 100 foot length seems to make for easier tuning on all bands. Extra feedline should be suspended in loose coils and not in a tight roll.

A 4:1 balan possibly could be installed at the antenna, then fed with 50 ohm coax to the radio, BUT, it is not known if this would upset any characteristics of the original design.

Experiment!

Raymond is quoted from the article,.. *"Some of our more skeptical, and perhaps knowledgeable, friends have expressed concern about impedence, power rating, wave-cancellation, etc. All that we can offer as an answer is the slogan used for many years by the Packard Motorcar Company. Ask the man who owns one."*W4JOH

To read the original article by Raymond Cook, W4JOH go to:

<https://www.nonstopsystems.com/radio/pdf-ant/cobra-1.pdf>



Were you a licensed Ham Radio operator on or before March, 1993?

If so you qualified to join the QUARTER CENTURY WIRELESS ASSOCIATION (QCWA)

If you would like to join, those of us that are members would be honored to have you in the organization and in turn join the Maine Pine Tree Chapter.

If you want more info on the QCWA or a sponsor application, feel free to contact any of the following members:

K1NIT Bill Crawley, K1NIT@ARRL.NET

W1ZE Bruce Randall, W1ZE@ARRL.NET

K1GUP Jerry Burns, k1gup@roadrunner.com

W1KX Bill Mann, W1KX@ARRL.NET

You can also log onto the QCWA website at:

WWW.QCWA.ORG

All hams (QCWA members & non members) are invited to check into the Maine Chapter Pine Cone Net Sunday at 12:30pm EST on 3942 kHz.

