



The Spectrum

Issue 01

January 2007

Words From The President

2006 is winding down to a close and it's been a very interesting year for CARS. I hope everyone had a great holiday season with family and friends and I want to wish everyone all the best in the New Year.

The FCC had a holiday gift to give the amateur community in December by announcing the elimination of the element one, Morse code requirement to gain access to the HF frequency bands. I know this is going to be a contested issue for some time to come, however, the writing has been on the wall that this was going to come down. I was surprised by the fact that the FCC just came out and announced what they were going to do instead of opening up the debate one last time. As I write this the FCC has not entered the change into the Federal Register. After that step, in 30 days, Morse code will not be required for testing purposes.

The first change that will take place is all Technician licenses will be given the HF band privileges of the Tech-Plus license holders.

To upgrade to a General or Extra class license you will have to only pass the written exam. If you have already passed the General or Extra written exam and have a current CSCE showing you passed, you can upgrade by appearing at an exam session and have the VE's send in the necessary paperwork for your upgrade. If you have specific questions about this please contact someone on the board and we can discuss this in more detail or get you in touch with a VE for any clarification.

CARS will have a General Class in January with an exam session in early February. Please contact Leo, KG4PWC, for more information on evenings and times of the class.

Don't forget. If you do not have HF radio equipment at home, or you live where you do not have the ability to get an antenna in the air, you have the QRM room. There are three HF stations and several HF antennas for you to use. If you would like to have access to the room for your communication use, please contact the board so we can set you up with an access code to the shack and go over shack operating procedures.

73's & Happy New Year!
Keith, KG4ZXX

INSIDE THIS ISSUE	
2	A Report from Radio Ridge
3	Local Area Net Listings / Emergency Radio Part III
4	W4CAR Emergency Plan
5	What do you mean You can't make contact?

Links of Interest

[Virginia Beach Amateur Radio Club](#)

[Portsmouth Amateur Radio Club](#)

[Home - KG4ZXX.COM - IRLP and much more!](#)

[South Hampton Roads Sky warn Net](#)

[ARRLWeb: FCC Releases Report and Order in "Morse Code" Proceeding](#)

[ARRLWeb: ARRL Challenges FCC Dismissal of Virginia BPL Interference Complaints](#)

[QRP Amateur Radio Club International - Home](#)

Upcoming Events

CARS Meeting

Monday, January 08, 7PM

QRM Room,

116 Reservation Dr, Chesapeake, VA 23322-5204

General Class License Lessons

Tuesday January 9, 2007, 7pm

Exam 0900 Saturday February 3

QRM Room

116 Reservation Dr, Chesapeake, VA 23322-5204

Polar Plunge

February 3rd 2007

HELP WANTED!

The following W4CAR board positions and, non-board positions are available. Contact any board member if you are interested:

Communications Officer

Treasurer

Newsletter Editor

A report on the WA4BUE, Radio Ridge, 160 - 40 meter Beverage Antenna Project

A Cast of many! ... Help came far and wide:

K4WYS - Layout and trench

K5VIP and AC5ST - Post holes

K5VIP - Stringing wires, ground rods, and guying ends

KC4LEO - Hooking up and supervision

WF4R - Manufacturing Control System, Far (AWAY) Baluns, and Testing

WB2STN - Supervision

Other non Ham friends & "FW" the bull dozier guy

Purpose:

To improve 160 meter (Top Band) reception.

What is a Beverage Antenna?

Designed by Harold Beverage, a Brit, the antenna is designed to decrease band noise and to give the low band operator a directional antenna. Thus, with a full Beverage Antenna System, the receiving station can peak or null out stations in different directions, like rotating a beam, and greatly increase the signal to noise ratio. This can amount to 20 + db of receive gain on noisy low frequencies. In part the low noise is a product of the antenna being low to the ground. A typical Beverage Antenna system is 0 - 12 feet high.

Description of the WA4BUE Beverage Antenna:

The Beverage Antenna System at the Ridge is designed around the DX Engineering reversible system. It consists of a center pole 6 feet high. At this point there are three Beverage 500 foot fields of 480 + feet of 450 ohm twin lead feeding to the box. (To make the beverage more directional, just add wire to the length.) Each Beverage field has a front and back receiving pattern of almost 60 degrees. The Box just happens to be a Beverage cooler. In the Cooler box is a DX Engineering remote reverse, matching unit and three heavy duty relays, and three knife switches to turn the antenna off when not in use,. Control voltage is feed from 277 feet of heavy duty rotor control cable and coax run from the shack. There is an 8 foot ground rode at the center and at the end of each Beverage field.

The 12 volt control voltage for the three field switching relays are selected at the Beverage Control Console in the shack as is the +/- 12 volt reversing voltage. Each far or away end of the Beverage fields has a duel balun that center taps to ground. As the reversing +/- 12 volt changes on the feed line, the end baluns saturates and become directional for receiving. These baluns are secured in small beverage coolers.

Continued on next page

The Control Console in the Shack:

The control console consists of a rotary switch to select the desired Beverage fields, and a reverse switch to change Beverage directions and an off switch. Each time a Beverage field selection is made a console LED indicates the selection. The control box also has a + 12 volt power supply. Also in the shack is the DX Engineering Feed Line Power supply that provides the reversing voltage. Built in this box is a transfer relay, switching the Beverage antenna to ground when the transmitter is keyed.

Results:

Results are amazing. Immediately one notices the decrease in noise and the front to back ratio characteristics of the Beverage receiving antenna. Signals just pop out of the noise, My observations are, on my Full Wave 160 Dipole and Loop DX signals never exceeded a 449 in strength. On the Beverage signals pop out 57/8/9 -9 and interfering stations can be nulled out by as much as 20 dBs. I have been able to work several European station from Belgium,France, and Russia. Most stations that I hear now, I could not hear before. I have also worked QRP stations.I now hear more stations then ever. There is a draw back, I must now increase my transmit power by at least 3 dB to be heard by many of the weak stations that I am hearing.

Thank you for everyone's help and support on the Beverage project at Radio Ridge.

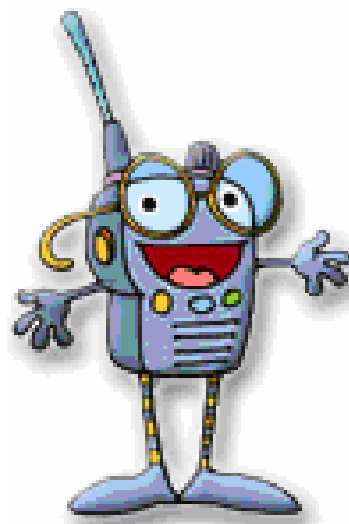
God Bless

Rich WA4BUE

LOCAL NETS

Local Nets

SKYWARN NET Wednesday 2000 Hours.	146.820 MHz
CARS 2M Net Sundays 2030 Hours	146.820 MHz
CARS 10 Meter Net 2000 hours on Mondays CARS doesn't meet	28.400 MHz
Hampton Roads Public Service Net Mon-Sat 2100 hours	146.970 MHz
VBARC 10 Meter Net 2000 hours on Thursdays VBARC doesn't meet	28.400 MHz
Portsmouth "RagChew" Net Monday & Wednesday 1930 hours	146.850 MHz
Southeastern Virginia Traffic Net Sun, Tues, Thurs @ 2000 hours	146.850 MHz
Portsmouth Amateur Radio Emergency Services Net Fridays 2000 hours	146.850 MHz
Tidewater Radio Association WT4RA net Thursday 1930 hours (code drill follows net)	147.195 MHz



Start your New Year Right

[Click here..... for a great
HAM RADIO
music video presented by...](#)

QRP Amateur Radio Club
International

CARS Emergency Plan

(reviewed November 15, 2006 at PS/ARES Meeting)

Introduction

The city views us as one group: Amateur Operators that support the City of Chesapeake. CARS resources are for Intra-city or within the city communications and ARES is for inter-city and regional communications. CARS and ARES operators are volunteers. There is no contractual obligation with each individual.

The Memorandum Of Agreement and the current City of Chesapeake Emergency Plan explicitly refers to by name the Chesapeake Amateur Radio Service as the Amateur Radio emergency communications. It does not mention ARES (American Radio Relay League Amateur Radio Emergency Service). It does not refer to Amateur Radio operators in a generic sense. These two documents define CARS role as the liaison to Amateur Radio operators. Activation of Amateur Radio communications at the request of the city goes through CARS. The City expects that as the scale of the disaster increases that the appropriate resources are called into play and does expect CARS to assist with communication beyond the city if needed.

To review the Memorandum of Agreement, see: <http://www.qsl.net/cars/carsmoa.htm>.

CARS' Roles and Responsibilities

- 1) When CARS is contacted by the City of Chesapeake for assistance in emergency communications, the membership will be notified that voluntary participation is requested by the City. Membership to CARS does not obligate public and emergency communication service nor does it restrict participation in communications outside the city.
- 2) CARS will assist in training skilled operators enabling them to participate in city emergencies.
- 3) Operators who are interested in support of the Emergency Operations Center and regional communications should contact the local ARES representative.
- 4) CARS leadership will coordinate efforts with local ARES organization and/ or regional RACES organization (whichever may apply) for inter-city and regional communications.
- 5) Notification by the City of Chesapeake for Amateur Radio Assistance is a form of Radio Amateur Radio Emergency Service (RACES) activation and the CARS roster provides a list of stations including W4CAR that are allowed to transmit during a RACES event.
- 6) Emergency Radio communications training will include
 - a) Skills related to assembling and operating an emergency station.
 - b) Basic level of knowledge that includes
 - i) Message Traffic
 - ii) Incident Command System
 - iii) Net Procedures and Net Control Station duties
 - iv) Shelter operations

continued on next page

- c) Recommendation that those interested complete ARRL EMCOMM Level I
- d) Recommendation that those interested complete NIMS IS-100
- e) Further training may include:
 - i) NIMS IS-200, 700 and 800
 - ii) ARRL EMCOMM Levels 2 and 3

Appendices

- 1) Training and Qualifications
 - 2) EOC Information Requirements
 - 3) CARS and Shelter Resources
 - 4) CARS and CERT
 - 5) ICS Forms (recommended)
-

What Do You Mean You Can't Make a Contact?

The following is a true story. The location was the QRM Room during National SKYWARN Recognition Day, December 2, 2006. The event was recounted by Jim KG4WOJ and Bill KF4EPI, who were witnesses. Ham operators in the parking lot were milling around like many of the boaters and fisherman at the nearby locks. The weather was pleasant enough and as commonly occurs outside the QRM Room, notes on equipment and contacts were being exchanged like so many fish at the morning market. The nicer the weather, the more animated the discussion becomes. In spite of the weather, low sunspot activity and poor band conditions made conversation a little thin.

One beleaguered operator was somewhat distraught at having purchased a Yaesu FT 817. This is a very nice multi-mode, multi-band QRP transceiver that has a maximum output of 5 watts on all frequencies from 160 meters to 440 MHz using FM to CW and looks like a small paperback book. He was lamenting that he had yet to make a contact with the rig. Another operator who is a long time owner of a FT 817 took this as a challenge to the mystique that surrounds this little radio and a question of sanity of those who would purchase such an ERP challenged device.

Maybe it was the dirt arising from the gravel parking lot, flying in the air that clouded the judgment of the second operator. What happened next is the fodder of bedtime Ham tales that at least keeps the spirit alive just like that one golf shot that makes you shell out another round of green fees. So out popped the second operator's FT 817 along with some spare RG8/X , which was being used to feed a 6-meter dipole serendipitously stashed in his vehicle. "Lets see, 20-meters would be a good band to try since it is late in the day," he said. "That would mean I need 10 meters or about 5 meters for each side of dipole. That would be a little over 15 feet", he continued. So he measured precisely about 2 arm spans for each leg of the dipole. Using a sharp implement that seems to be carried by many Hams, he stripped the outer insulation of the coax, and proceeded to strip the outer shield and make a dipole. That left only a few feet of coax intact to plug into the rig. "At least any signal loss due to high SWR will be minimal", he muttered. Well one leg of the dipole was flung over a low limb and the other was secured to his vehicle's bumper. So much for height, at least it wasn't on the ground.

Continued on next page

Turning on the rig, and tuning around the phone portion of 20-meters, he heard a QSO going on with a station that identified itself as being in Aruba! Well at the end of the QSO, the Aruba station called QRZ and our now excited operator sent out “W4CAR”. Low and behold the Aruba station asked, “Will the America Radio station come again?” Now the first operator, the one who was an FT 817 non-believer realized that “America Radio” was us! “ Try again!” he shouted. “W4CAR, this is Whiskey 4 Charlie Alpha Romeo”, said the 2nd operator. Next thing you know they were exchanging 55 reports and carrying on a QSO with P40Z! After signing off, the 2nd operator checked his settings and realized that he was running not 5 watts but 2.5 watts! Not bad for some 2000 miles of gray line propagation.

As they say, “It is better to be lucky than good!” But preparation and belief in your equipment definitely improves your odds. So the next time, you think your “Little Pistol” against the “Big Guns” has no chance, remember this tale.

73
Leo
KG4PWC



The Spectrum

Monthly newsletter of the Chesapeake
Amateur Radio Service (CARS)

Post Office Box 6867
Chesapeake, VA 23323-6867

<http://www.w4car.org>

Email: w4car@arrl.net

Newsletter Editor: Rich Graham – N5RAG

Webmaster: Leo Kusuda – KG4PWC

CARS : Repeaters

146.610 MHz (PL 100.0)
146.820 (PL 162.2) MHz
444.000 (PL 100.0)MHz

W4CAR Trustee: Bill Runyon WF4R

CARS OFFICERS & CHAIRPERSONS

President: Keith Ainsley KG4ZXX

Vice President: Bill Runyon WF4R

Secretary: Paul Buckwalter K4PRB

Treasurer: Rich Graham N5RAG

Communications Officer

Reggie White W5SSB

Past President:

Ruth Bigio KB4LIF

Public Service Coordinator:

Leo Kusuda KG4PWC

Repeater Committee Chairman:

Bill Runyon WF4R

Spring Fest Coordinator:

Leo Kusuda KG4PWC

Sunday, April 15, 2007

Chesapeake Amateur Radio Service SpringFest 2007



Amateur Radio and Electronic Swapmeet/FleaMarket

Moose Lodge #898 (Same location as last year)

1400 N. George Washington Hwy, Chesapeake, VA 23323

I-64 exit 296 North, approximately 2 miles north on N. George Washington Hwy (US-17)

Approximately 7500 square feet of air conditioned space

Admission includes table.

Talk-In Freq: 146.820 tone=162.2

\$5 Advance or at the door admission donation: \$6.00

Additional Table: \$6.00 each

For more information please visit our web site at
or contact Leo Kusuda at (757) 465-0074 e-mail:

<http://w4car.org>

w4car@yahoo.com

Mail the following information with your ticket request to:

C.A.R.S., PO Box 6867, Chesapeake, VA 23323-0867

Name: _____ Tel: () _____ Fax: () _____

Business Name/Call Sign: _____

Street Address: _____

City: _____ ST: _____ ZIP: _____

____ Advance Tickets @ \$5.00 each *

(Children 12 yrs and under FREE when accompanied by paying adult) \$ _____

S.A.S.E. REQUIRED - MAKE CHECK or MONEY ORDER PAYABLE TO: C.A.R.S. TOTAL : \$ _____