



# The Spectrum



Issue 08 06

August 2006

## From the President

It is a great honor to report to the membership of CARS that the NEW 146.82 repeater is on the air and is providing excellent performance!

We have been working hard behind the scene to reach this milestone in the club's history! I want to thank Bill Runyon, WF4R, Paul Buckwalter, K4PRB, and Reggie White, W5SSB, for all the time and effort that these gentlemen put into giving us good communications equipment. Not only does CARS help foster an understanding of the art of amateur radio but we are now in a better position to support our customer, the city of Chesapeake, if the need for our emergency communications is required. I also wish to thank the City of Chesapeake for hosting us at the Butt's Station tower on Greenbrier Parkway and for all the assistance they have provided to help us reach this point.

Due to the height we are now receiving and transmitting, we have had to turn on the 162.2 Hz PL tone for access to the repeater. The system is also transmitting a 162.2 Hz tone so folks who have tone squelch or CTCSS ability can take advantage of a quiet radio without a lot of interference. If you have trouble setting your radios please let us know and we will help you.

CARS now has an APRS station at the QRM room. If you have a radio such as a Kenwood TMD-700A, you are already able to receive APRS data. If not there are a number of ways

to get involved. Go to [www.findu.com](http://www.findu.com) and put in W4CAR and see what you pull up. We hope to have it operating as a digipeter in the near future. Just another way that amateur radio has incorporated computers in communications.

Hopefully everyone knows we are now in hurricane season. Mother Nature so far is being kind to us. However, things can change and we need to be ready to assist our most important customer, the city. How can you do that? Become involved in public service and look into Chesapeake ARES.

During an emergency event such as a hurricane, Chesapeake ARES, supported by CARS, provides emergency communications assistance to the city through operating stations at the Emergency Operations Center (EOC) as well as manning the various shelters that may be activated throughout the city. Your ability to operate radio equipment and communicate has been proven very important to the city in the past. Please contact Leo, KG4PWC, to find out more information on joining ARES. I am sure he could use as many operators for the EOC as possible.

I hope everyone will get on the air and test out the new repeater. Try your HT, your mobile. Try high and low power. See the difference the new equipment and location make. This evening we had the airwave gods open up some good ducting and we were talking as far away as Boston at one point! Come on our on Friday evenings at 7:00 pm and get involved in the Skywarn nets. Just have fun!

73  
Keith  
KG4ZXX

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## Links of Interest

[Virginia Beach Amateur Radio Club](#)

[Portsmouth Amateur Radio Club](#)

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

[Atlantic Basin Hurricane Tracking Chart](#)

[ARES VA Home Page](#)

[Virginia Beach HamFest](#)

[APRS Find-U](#)

# A Little History

From 54 feet to way up there, the technical committee has reinvented the 82 repeater. The 82 repeater had a very humble beginning on the CARS 54 foot tower. When CARS initiated dialog with the Wakefield weather service and initiated the SKYWARN NET, the school board granted use of the 125 foot level of the WFOS tower. CARS actually coordinated and paid for the move. At a 125 feet our coverage area was extended to an 18 mile radius from a 10 mile radius at 54 feet. Now the new W4CAR at 300/400 feet has about a 28 mile radius of coverage depending on terrain and shadowing. It will be interesting to see the Smith Chart of the new coverage area.

Once all of the W4CAR repeaters are made fully operational CARS will have established several VHF/UHF frequencies with full Chesapeake coverage and a bonus of regional coverage.

Sometime in the near future radios and antennas in the Chesapeake Shelters will be fully operational for public service communications through the repeaters

This is a long time in the making.

In the 60s and 70s when I was EC for Chesapeake and Norfolk, under Civil Defense, all of this was just a dream. Back then we were using the old GE, RCA, and Motorola Tube type equipment and CARS was a dream of a few visionary Chesapeake hams. The first Chesapeake repeater 146.790 was placed on the Laurel Avenue Water Tower. I was trustee in those days. The repeater was owned by the Hampton Roads Radio Association with strong links to Norfolk and Chesapeake EOCs. It was K4IIV and K4QIR working directly with the Chesapeake Civil Defense director Ralph Horne obtaining the site. WB4OSQ was the technical person for the repeater. Back then the primary use of the repeater was the Chesapeake Election Net, for the Chesapeake Registrar, Ray Miller.

The repeater was first licensed as WA4ZAU, and later to WR4ACN. Later the repeater was moved to the Oak Grove Water Tower, and WA4SBC was trustee. The repeater was eventually moved to the Channel 3 tower with N4SD as trustee. In the mean time the Chesapeake Amateur Radio Service was formed and N4GSP purchased a repeater, placed it on 146.610, and coordinated with Ralph Horne to place the new Chesapeake Amateur Radio Service Repeater on the Bowers Hill Tower. At this time the Chesapeake Amateur Radio Service Supported the Election nets and other public service activities.

You may be asking what duties did the hams, of that time, perform for the election net. Well, Chesapeake was a very rural city at that time. At least 15 of the precincts had no telephone communications. So as radio communicators we manned the precincts with out telephones and the registrars office with our radios communicating through the 79 and eventually the 61 repeaters, assuring voters in Chesapeake could cast their ballots, and that all precincts could direct priority traffic to the registrar and the registrars office. It is hard to believe that Battlefield Blvd. had only one car dealership and one 7 - 11 store from I 64 to Great Bridge. And South of Great Bridge was almost entirely Farm Land back then. What was a WalMart? Sam's What? Yes, the city was mostly rural.

There are a lot of fine stories from the election nets. Everything from getting a 100 year old lady to the right prescient to vote, to a mule that wondered into the Oak Grove prescient eating the campaign workers straw hats, and the good foods and times we all had performing public service communications..

So now, the 146.820 repeater and the others to follow will carry on the fine tradition of Amateur Radio Public Service in Chesapeake and the Surrounding Communities.

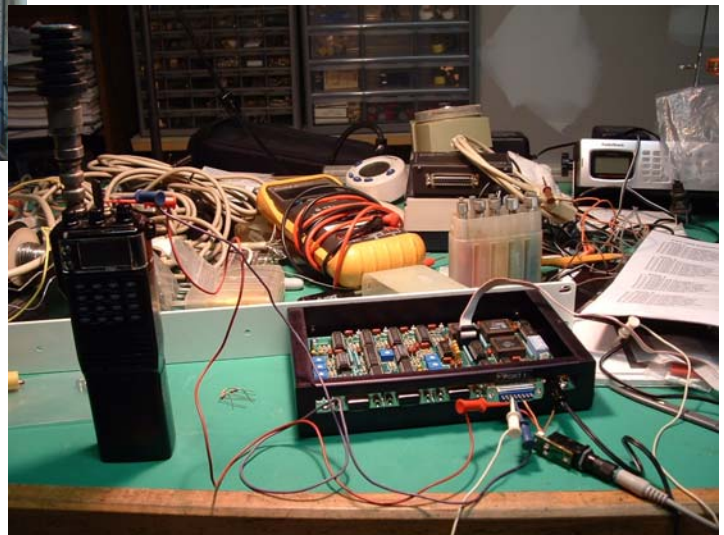
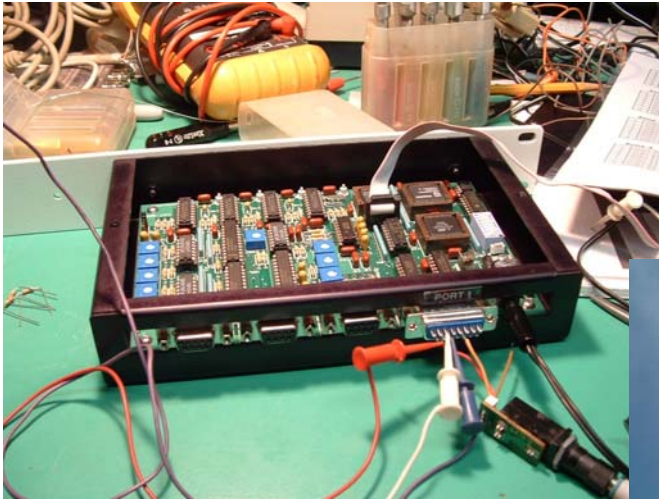
God Bless

R  
WA4BUE

# The New

W 4 C A R

146.820.....PL 162.2



## SD-06 (Special Delivery 2006)

SD-06 was a two-part drill with the City of Chesapeake and the City of Chesapeake Health Department, and numerous volunteers. The first part of the drill was a temporary ECC set up at Indian River High School. Radio communications were manned by KB4LIF Ruth Bigio and KB4LRZ Reverend Bill Hoffman. There were also two buses that had 3 volunteers to deliver packages. Bus one had two radio operators, KI4ORF Dennis Walker and N5RAG Rich Graham, bus two had three radio operators WF4R Bill Runyon, KI4KNZ Bob Crocker AND KI4MYZ John Wilde. All of these radio operators except two are members of the local CERT Communications Team. During this part of the drill, each bus was supposed to deliver one package to each home. Each package had an empty medicine bottle with a note from the Health Department. The message read that this was a drill and when the homeowner received the package, they were to call 328-CITY to let the City know of receipt. This part of the drill went very well, with the exception of the communications. Bus one operators had to go to Simplex and base was able to receive them. When they were not able to get through, we on bus two relayed the information. Bus two radio communications had no problems reaching and receiving the ECC or bus one through the 146.820 repeater. We had a discussion after this part of the drill and the problems that were encountered were going to be worked on and fixed before a real event takes place.

The second part of the drill was in house at Indian River High School. This part of the drill was to teach everyone what it would be like in a real event. All of the CERT Communications Team members remained at the school for this part of the drill and were asked to take different positions in the event. Several of us were security. We used 146.500 MHz Simplex to communicate inside the school. In this part of the drill several of the other volunteers including city council member Rebecca Adams were given laminated cards with scenarios for them to act out, to put everyone to the test. All of them were fantastic at the jobs. They made the drill seem very realistic, and even got a few laughs at what they did.

All in all, from my perspective this drill went exceptionally well. Everyone handle themselves very well and even with a few areas needing work. I personally think the city and all their volunteers could handle a real event.

John R. Wilde KI4MYZ

## Antenna Building 101?

Summer month doldrums are always hard to beat. But on Saturday July 22, 2006, 10 curious Hams converged on the QRM Room. Some came to revisit old times and other to learn something new. However, all left feeling a little visually challenged. As part of the Public Service/ARES training the plan was to build a 300-ohm TV twin lead J-pole antenna and a really cheap 4 element 2-meter Yagi antenna.

The 300-ohm twin lead is a throwback to the TV/FM aeriels that used to be so prevalent prior to cable and satellite TV. Cheap and rugged, they contained two parallel 24 ga. wires. The antenna is about 50 inches long. The bottom end wires are exposed and soldered together. About 1-¼ inches up, the wires are exposed and soldered to the center and shield of a coax cable. About 16 inches from the bottom, a notch is cut in one of the conductors. For more specific directions, go to [www.arrl.org/tis/info/pdf/9409061.pdf](http://www.arrl.org/tis/info/pdf/9409061.pdf). The wires are mighty fine. Exposing them requires a steady hand and a small sharp knife. Barry K5VIP was up to the task and helped make several antennas. Soldering is easy with a good temperature controlled iron as demonstrated by Bob N4RAZ and John KI4MYZ.



The 4-element beam was made from 2x2 pine stock and #12 solid copper wire. The insulation was left on. Plans came from a CQ magazine article. The antenna will function even though it doesn't look pretty. The wires are contorted enough to make one believe one's eyesight suffers from parallax correction problems. That is a good thing, since it is cheap and ugly, no one will steal it and you won't feel bad about abusing it!



It was a fun morning building and swapping antenna stories. Thanks to those who participated: Keith KG4ZXX, Ruth KB4LIF, Rich WA4BUE, Bob N4RAZ, John KI4MYZ, Gavin KD7GJB, Bill WF4R, Bob AC5ST and Chuck WA4HHG.

73  
Leo  
KG4PWC

### Local Nets

<b>SKYWARN NET</b> Fridays 1900 hours.	146.820 MHz
<b>CARS 2M Net</b> Sundays 2030 Hours	146.820 MHz
<b>CARS 10 Meter Net</b> 2000 hours on Mondays CARS doesn't meet	28.400 MHz
<b>Hampton Roads Public Service Net</b> Mon-Sat 2100 hours	146.970 MHz
<b>VBARC 10 Meter Net</b> 2000 hours on Thursdays VBARC doesn't meet	28.400 MHz
<b>Portsmouth "RagChew" Net</b> Monday & Wednesday 1930 hours	146.850 MHz
<b>Southeastern Virginia Traffic Net</b> Sun, Tues, Thurs @ 2000 hours	146.850 MHz
<b>Portsmouth Amateur Radio Emergency Services Net</b> Fridays 2000 hours	146.850 MHz
<b>Tidewater Radio Association WT4RA net</b> Thursday 1930 hours (code drill follows net)	147.195 MHz

### Upcoming Events

#### CARS Meeting

Monday, Aug 7, 7 PM  
[QRM](#) Room  
116 Reservation RD, Chesapeake, VA 23320

#### Public Service/ARES

Wednesday, Aug 16<sup>th</sup>...7:00 PM  
QRM Room

#### VA Beach HAMFEST

Sept 16<sup>th</sup> - 17<sup>th</sup>  
[WWW.VAHAMFEST.COM](http://WWW.VAHAMFEST.COM)



## **SHORT HISTORY of the CHESAPEAKE AMATEUR RADIO SERVICE**

The Chesapeake Amateur Radio Service (CARS - the Club) was formed in the late 1970s or the early 1980s. The Club performed Public Service Communications for the Chesapeake Emergency Operations Center (Civil Defense) and communications for the Chesapeake Registrar's Office during General and Presidential Elections. It is worth noting that in this time frame Chesapeake was a large but very rural city, in the days before cell phones, and the Chesapeake Registrar's Office depended on CARS to provide communications to assure the rights of the citizens to vote and collect the tallies by amateur radio. CARS also sponsored Amateur Radio Classes, Testing Sessions, and Communications Events.

The early club held monthly meetings in various locations, at local churches, the city library's conference room, and in the 1990s moved to the Chesapeake Center for Science and Technology. At this time the club's radio communications shack was moved from City Hall to a trailer that was vacated by Chesapeake Emergency Medical Services and moved to The Chesapeake Center for Science and Technology, CCST.

The Chesapeake Amateur Radio Service, Inc. was certified by the Virginia State Corporation Commission on October 23rd, 1990, as a "not for profit" corporation. The group is generally referred to as "CARS" using the first letters of the official name. The first set of corporate officers was installed in February 1991. As with all corporations, the organization obtained a Federal Tax Identification Number during this period. The organization has pending an application with the IRS to be certified as a 501(c)(3) Tax Exempt corporation.

The Chesapeake School System originally provided maintenance, electric power, HVAC, emergency power, and the security alarm (identified as Civil Defense on the system) for the club. Due to recent reduction in municipal operating budgets, the maintenance of the trailer has been left up to the CARS

CARS installed at its own expense a VHF repeater, FCC call letters W4CAR, on the WFOS transmitter tower located at the the CCST, Chesapeake Center for Science and Technology, for the National Weather Service, SKYWARN, in Wakefield, VA and for back-up communications for the Chesapeake Emergency Operations Center (EOC). The repeater was instrumental during hurricane "Isabel" backing up the city communications system for EOC to shelters and other point-to-point communications. To better serve the citizens of the City of Chesapeake and to live up to our South Hampton Roads SKYWARN net, a new Motorola repeater and antenna system for 146.82 has been installed at Butts Station in Chesapeake in July 2006. This system now allows complete coverage of South Side Hampton Roads, Portions of the peninsula, Eastern Shore and North Eastern North Carolina.

CARS works with other non-profit organizations such as the American Diabetes Association (ADA) in coordinating Bike Runs like the Cure de Cure in Chesapeake.

CARS sponsors the SpringFest, an electronic and Amateur Radio Flea Market for its annual fundraiser to maintain our meeting and storage facilities and the W4CAR repeater systems.

CARS has proven over the decades its' continuous commitment and value to the city of Chesapeake, VA and the surrounding communities by providing public service communications in the spirit of traditional Amateur Radio.



# W4CAR Field Day 2006\Club Summary

## Class 5A

**Location: Deep Creek Locks Park**

### Transmitters

- 3 SSB,
- 1 CW
- 1 PSK31
- 1 6-meter
- 1 solar powered QRP

At one point we had 7 transmitters going with one “extra VHF” (does not count toward transmitter count) and one demonstration station

Rigs: Kenwood TS 850, Icom IC 706mkIIIG and IC 7000, Yaesu FT 897D, FT 847 & FT 817 and Elecraft K2/100

### Antennas

- 4 windoms: 1- 160 meter, 2 – 80 meter, 1 – 40 meter
- 1 tribander on tower
- 1 5-element 6-meter on mast
- 1 vertical

### Participants

24 Hams (If there are any that were left out, please send to [kg4pwc@arrl.net](mailto:kg4pwc@arrl.net), and I will submit an errata)

WF4R, KG4PWC, KG4ZXX, K5VIP, W3AFH, WB3IEC, KI4IRL, KC4RIC, KI4ORF, KI4ODF, KI4MNC, KI4MYZ, K4PRB, K4DKR, WA4BUE, KD7GJB, KS4NO, WB4UVH, KI4HNF, KI4KNY, N5RAG, KF4URV, AC5ST, KC4LEO, KI4NSB

Guests plus Hams – 41

### Invited Officials

Agency representative

Ted Ambrose – CERT  
Assistant Fire Chief Elliot

Elected official

Councilman Rebecca Adams

### 827 QSOs

667 phone	160 meter – 4
87 digital	80 meter – 191
73 CW	40 meter – 125
	20 meter – 410
	15 meter – 18
	10 meter – 15
	6 meter – 64

### 72 sections contacted

Missed:

Alaska, Santa Barbara, Sacramento Valley, North Dakota, Saskatchewan, British Columbia, Northwest Territories and Manitoba

**Total points: 2974**

# Virginia Beach Hamfest

Electronic Flea Market &  
ARRL Roanoke Division Convention



SEPTEMBER 16 & 17  
2006

Virginia Wesleyan College  
1584 Wesleyan Drive  
Virginia Beach, VA 23462



Dealer Load-in

Friday 5:00 P.M. till 10:00 P.M. & Saturday 7:00 A.M. till 9:00 A.M.

Show open to the public from 9:00 A.M. till 5:00 P.M. Sat and till 3:00 P.M. Sun

Directions: I-64 to Exit 282 (US 13) North (Northampton Blvd) to the first traffic signal, turn right onto Wesleyan Drive. Go approximately ¾ mile and turn right into the Virginia Wesleyan Campus. The Guard at the Gate will direct you to the Hamfest location.

*Dealers please contact:*

Lewis Steingold, W4BLO  
1008 Crabbers Cove Lane  
Virginia Beach, VA 23452  
Email: w4blo@arrl.net

Please visit our web page at:

<http://www.vahamfest.com>

Email: [Hamfest@exis.net](mailto:Hamfest@exis.net)

Fax: 757-486-0757

Business Name: \_\_\_\_\_ Fax \_\_\_\_\_  
Contact: \_\_\_\_\_ Tel: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ ST: \_\_\_\_\_ Zip \_\_\_\_\_  
Email: \_\_\_\_\_

\_\_\_\_\_ Tables @ \$25.00 each (while they last) \$ \_\_\_\_\_  
\_\_\_\_\_ Tailgate, single space @ \$15.00 each \$ \_\_\_\_\_  
\_\_\_\_\_ Tickets \$5.00 Each in advance, \$6.00 each at the door \$ \_\_\_\_\_  
Total Enclosed \$ \_\_\_\_\_

**MAKE CHECK or MONEY ORDER PAYABLE TO: TRCI - SASE REQUIRED**  
**EVERYONE MUST HAVE A TICKET**

## The Spectrum

Monthly newsletter of the Chesapeake  
Amateur Radio Service (CARS)

Post Office Box 6867  
Chesapeake, VA 23323-6867

<http://www.qsl.net/cars>  
Email: [w4car@yahoo.com](mailto:w4car@yahoo.com)

**Newsletter Editor:** Rich Graham – N5RAG

**Webmaster:** Leo Kusuda – KG4PWC

### CARS : Repeaters

146.610 MHz (PL 100.0)  
146.820 MHz  
444.000 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