



# The Spectrum

Issue 03

March 2005

## *Words From The President*

Winter is starting to lose it's grasp on our weather patterns and pretty soon we will be looking at enjoyable warm weather. What better way to spend a lazy day then working DX with a distant station on HF.

What's that? You do not have any HF equipment or have the license upgrade to work HF? Don't let that stop you. You are a CARS member.

That HF radio equipment at the QRM room is ready for use. There are still some minor issues to take care of but right now you can work HF and get to communicate with people anywhere in the world. If you are a tech and don't have the upgrade yet, let us know and we can provide someone to be by your side and let you explore the fun side of the hobby: Long distance communications.

Need help with learning Morse Code? Want to learn how to solder? Want to learn what coax is best for your ham shack? We have folks here who can help with those topics as well.

We are going to have the Monitor Merrimac special event station in March, Springfest and the Tour De Cure in April and, of course, FIELD DAY in June.

There is more to amateur radio than repeaters and VHF/UHF. There's whole world for you to explore and make new friends and most of all: HAVE FUN!

The door is just a few miles and maybe a gallon of gas away. At the QRM room. Can't drive? I'm sure someone is more than willing to help you get there.

Let's have some fun with Amateur Radio!

Take care.

73  
Keith KG4ZXX



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## Links of Interest

[Virginia Beach Amateur Radio Club](#)

[Portsmouth Amateur Radio Club](#)

[SERA Repeater Journal - 1st Quarter 2005](#)

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

[America Reaches Out - Radio Clubs to 'Ham it Up' for Troops](#)

## Upcoming Events

### CARS Meeting

Monday, March 7<sup>th</sup>, 6:30 PM  
Dinner Meeting  
Ryan's Steak House  
1508 Sams' Circle  
Chesapeake VA  
(757)547-5502

### VBARC Meeting

St Andrews United Methodist Church, 717 Tucson Rd  
& Princess Anne Rd..March 3<sup>rd</sup>

### **Battle of the Monitor and Merrimac Special Event - Saturday March 5, 2005**

**Virginia QSO Party 2005**  
March 19 at the QRM Room

### **SpringFest 2005**

[SpringFest](#) will be held April 9, 2005 at the Masonic  
Temple off Old Greenbrier Road

### **Tour de Cure 2005**

Saturday April 23, 2005. 0700-1500

Simple, in every direction. The other day on 20 meters, not my most favorite band, I talked with a station in the Cannery Islands, Florida, Nevada, and an hour QSO into California. All signals report were over S-9. Great results also on 17 meters too. Now how about QSOs into Hampton Roads? No problem. Forty meters skip is a little long, but I have talked to Barry - W3AFH, Sonny - K4WYS on AM. and, many stations up and down the coast and out to Arkansas.

On 75 meters the same local suspects plus Bobby - WA4JRC, Frank - K4PRR, even W4CAR at the QRM Room, are solid copy using the K4PRR 80 - 40 Meter Trap Dipole and the OMNI VI, all during the peak "D" layer, no problem. On 160 meters during peak "D" layer K4WYS". During the evenings on 160 meters, I have been working the mid west and up and down the east coast. I have not tried any DX at this point. The rag chews are to much fun right now. Truly, the 160 Meter Loop antenna works as rumored.

## **A REPORT ON THE 160 METER LOOP**

DE WA4BUE

Wow, does it work, you bet!

Actually there is only one band segment 160 - 10 Meters the Loop will not tune, 3500-3700 kHz. But tuning is not the entire story. You can tune a dummy load, and dummy load don't radiate very well. By the way, I have not found anyone on 10 and 12 meters to QSO with, yet. These bands have not produced any QSOs since the Loop has been up.

The proof is long rag chews. I can report that 160 - 15 meters I have had some QSOs lasting up to 2 hours, without missing a word. Now that is goooooood!

The next question is where does the Loop radiate?

The antenna consists of 4 legs currently at 134 feet long (in a square configuration) at about 35 feet in the air. The wire is number twelve 64 strand copper, feed with 450 ohm twin lead, to an DX Engineering Balun, feeding 52 ohm coax, and into the Ten Tec model 238 A tuner.

Thanks to all of my friends at CARS for helping put up the towers and the 160 Meter Loop.

What's next at the country shack? There is still a CUSH CRAFT LPDA in 2 boxes to assembled and install!

See you all at the country shack soon.

Got an idea for a name for the country shack, let me know. Happy Hamming!

God Bless

Rich  
WA4BUE  
SNGH Heart Transplant # 200

## SHACK DAY FEBRUARY 2005

On Saturday mornings, two anxious faces usually greet me while I try to pour my coffee. They belong to my two dogs Aztec and Bela who are two mixed breed dogs of about 60 lbs each who somehow know when I don't need to go into work and make it known that they need to go out for a run! So it was Saturday February 12, 2005. One quick glance at my thermometer showed the outside to be about 24 F! Well after one cup of coffee, it was 27 F. So I begrudgingly went for a 2-½ mile run. When I returned it was 36F and climbing! For those of you in the Portsmouth club, who wonder why I rarely make it to breakfast in the winter, blame the dogs! But the weather looked very promising for another CARS Shack Day. I've been a member since 2001 and I am amazed at the number of good days even in the winter when we have Shack Day.

I knew the plan was to get the second HF antenna up. Not knowing what to bring, I figured I should be prepared so I brought a 4 foot, 8 foot and 24 foot ladder, my tool boxes, a portable gas lighter and gloves. As usually, Sonny, K4WYS had brought just about everything. My only consolation was he needed the lighter! I did win bragging rights for the longest ladder.

By the time I arrived, just before 10 a.m., the temperature was in the 50's with not a cloud in the sky and no wind. Sonny had already attached and sealed the coax to the homebrew inductively loaded 40/80-meter dipole. This antenna used coils made by Frank K4PRR and is modeled after the AlphaDelta Iso-Res™ dipole. The design idea is that a very high inductance coil is placed at a position acting as a trap for 40 meters but allowing the dipole to be resonant on 80 meters (actually 75 meters). The coil is placed near the end of the dipole. Since most of the energy radiation occurs near the middle, high loss from the coil has less effect on the antenna's radiation on the 80-meter band. The coil behavior is more complex than just coiling the additional length of wire to make a full 80-meter dipole. The shortened end radiating wire acts like a capacitor and the coil and the wire end behaves like a series

resonant circuit, which behaves like a bandpass filter and an impedance match.

Traditional trap dipoles have traps composed of a parallel capacitor and inductor circuit that is more effective in acting as a notch filter. The resonant frequency is blocked and all other frequencies are let through. The trap effectively isolates a segment of wire to the resonant length for that frequency. The trap also will shorten the total length of the antenna for the lower bands. Traps are more complicated than a single sealed coil and are more likely to breakdown from the environment. However, you can design a multi-band dipole with multiple traps, while you cannot with inductors alone.

Our 40/80 meter dipole can still be used for the higher bands with a tuner although there will be greater feed line loss. A modification of this dipole could add additional dipoles to the same feedpoint in a fan arrangement for the bands above 40 meters. The dipole that is resonant for the designed frequency will have a better feedpoint match. The non-resonant dipoles would have little current flow. AlphaDelta™ sells a version of this.

For those not familiar, waterproofing a connector usually involves at least wrapping the connector with a layer of electrical tape, then a layer of self-vulcanizing tape (Radioworks, RadioShack or the self sticking thick black tape to seal water pipe leaks) and another layer of electrical tape. There is some controversy whether the connector should be filled with water displacing dielectric paste. You can further weatherproof the connection by spraying a layer of enamel over the outer tape.

*See Shack Day on page 5*

### EINSTEIN ON RADIO

"I am often asked how radio works. Well, you see, wire telegraphy is like a very long cat. You yank his tail in New York and he meows in Los Angeles. Do you understand this? Now, radio is exactly the same, except that there is no cat." .....Albert Einstein

## LOCAL NETS

<b>SKYWARN NET</b> Fridays 1900 hours.	146.820 MHz
<b>Old Dominion IRLP Net</b> Sundays 2000 hours. IRLP Node #4865 (Simplex Frequency)	145.600 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

## SpringFest 2005 Prizes

Item	Number Available
Yaesu VX150 2-Meter HT	1- Early Bird and 1- Grand Prize
Kodak EasyShare CX 7330	1 Grand Prize
64 Mb USB Port Memory	2
Map Light	1
Book Light	10
Clipboard Calculator	4
Tech Vac	1
12 Disc CD/CD Rom Wallet	1
Desk Lamp	1
Desk Lamp Clip On	3
Keychain Screwdriver	20
Calculator Ruler	1
Keychain Databank	2
Business Card Holder	2
Pocket Knife Money Clip	3
AA size Krypton Flashlight	1



*Rockingham County  
Amateur Radio Club Inc.  
N4IV*

Greetings All,

The Rockingham County Amateur Radio Club is pleased to announce their first Annual Rockingham County Hamfest to be held on May 14, 2005. We would like to invite all to make plans to join us. Also we would ask that if possible that you would make this announcement in your local Clubs, Club Newsletters, local Nets, and word of mouth to help us pass the word. We also have a link with more Hamfest information that may be viewed at <http://www.rcarc.com/hamfest2005.html>

Thanks in advance for the help and hope to see you at the Hamfest.

73

Dal Williams, W4YQY

Rockingham County Amateur Radio Club Inc/N4IV <http://www.rcarc.com>

## Shack Day from page 3

The balun was attached to the lanyard attached to the boom at the top of the tower. I had suspected that with Jim, KG4WOJ serving the Army, I would be the designated tree climber. This was immediately confirmed with Sonny's morning salutation of "You are climbing the tree?" Actually I was hoping that I would only have to put an eye screw or anchor point at the top of the ladder I brought for the Inverted Vee configuration. However, Sonny dispelled that notion with his next sentence "It needs to go up 45 feet!"

Well, it has been 25 years since I did any top rope rock climbing and I had not brought any climbing ropes or climbing ascenders (not that I currently own any). So I put on the clubs tower harness and slowly made my way up about 40 feet into the tree. I could have probably gone a little higher, but my visual inspection suggested I was close to the tower's boom height and since I was on the west side of the tower and most of our low band communication would be toward the west, I rationalized it wasn't worth going any higher. Of course "encouragement" from the ground crew ranged from cautionary to throwing caution to the wind.

Ron, KI4FNN our club's designated roof climber anchored the other end. Rich, KI4EUM and Ron negotiated the attic to run the feed line. Also assisting in the stringing of the Antenna were Dave KU4YW, Dee Dee KI4DNN, Reggie W5SSB, George KV4GR, Rick KC4RIC, Dennis K4DKR, Keith KG4ZXXK and Paul K4PRB. The antenna checked out on the MFJ Analyzer and the Ten-Tec Omni VI Plus was fired up. As luck would have it, we made contact with one of the organizers of the FrostFest who gave us additional information on the coming weekend and then we contacted Rich WA4BUE, who

gave us a good report.

So now the QRM room has a 2-Meter/70 cm collinear, a 6-meter beam, 10-20 Meter LPDA and a 40/80-meter dipole. It turns out that we probably had enough real estate to string up a 160-meter window or dipole. But that will be our next project. We are also considering setting up some sort of satellite antenna system. Both a directional and omni directional antennas are being considered. Another great Shack Day is in the books!

73  
Leo  
KG4PWC



### IRLP Contest Trophy

The BASS AMATEUR RADIO IRLP GROUP in Australia Irlp node #6391 designed the trophy. The Chesapeake Amateur Radio Service in Chesapeake, VA is running the contest. Go to [WWW.KG4ZXXK.com](http://WWW.KG4ZXXK.com) for further details.

## Tornado Preparedness Day

Hi Everyone,  
March 15<sup>th</sup> is Tornado Preparedness Day. So the article for the March issue will be on Tornadoes and how to prepare for them. What to report to the national Weather Service should a tornado happen in our area.

### Here are some Tornado facts:

- A tornado is a violently rotating column of air extending from a thunderstorm to the ground.
- They may appear nearly transparent until dust and debris are picked up or a cloud forms within the funnel.
- The average tornado moves from southwest to northeast, but tornadoes have been known to move in any direction.
- The average forward speed is 30 mph, but varies from nearly stationary to 70 mph.
- The strongest tornadoes have winds (rotating) of more than 250 mph.
- They can accompany tropical storms and hurricanes as they move onto land.
- Waterspouts are tornadoes which form over warm water. They can move onshore and cause damage to coastal areas.

### What to report to the NWS in Wakefield:

- What you have seen: tornado, funnel cloud, wall cloud, waterspout, flash flooding, etc.
- Where you saw it: the direction and distance from a known location. This is the location of the event, not your location.
- When you saw it, note the time of your observation.

- What it was doing: describe the storm's direction and speed of travel, size and intensity, and destructiveness. Include any amount of uncertainty as needed, such as funnel cloud: no debris visible at the surface, but too far away to tell if it is not on the ground.
- Identify yourself and your location. Give spotter number if you have one.

73

Dee Dee/KI4DNN

### A Quick Note

Just a note that I'm sure everyone will find boring, but it's something I've brought up many times before and it still bears repeating.

Please make sure you have at least 1 regular telephone that is 'line powered'. In other words any cordless 'phones, answering machines or other fancy devices most likely depend on power from sources other than the telephone line. Take a moment to check and see that you have at least one telephone that can operate when the regular electrical power is off- it can be a lifesaver.

Reggie White  
W5SSB

### SELL...SELL...SELL

**By now, each of you should have received your tickets for Springfest. This is our one and only fundraiser for the year! If you have not received your tickets please contact Leo KG4PWC. If you have sold all your tickets please contact Leo for more!**

## Minutes for the February 7<sup>th</sup> General Meeting of the Chesapeake Amateur Radio Service, Inc.

**Meeting Called to Order** At 7:33 PM EST by President Keith Ainsley

**Self-Introduction** was made with 4 guests and 19 members present

**Health & Welfare** No members or Amateur Friends were reported as sick

**Program:**“Off The Grid” By Fred Weaver, KG4BKI, was given that covered his QTH without commercial power. It covered wind generator, solar panels and his back up generator; also how he created his 120-volt AC supply from batteries. There was a short break before the Business Meeting

**Secretary** reading of the last club minutes waived because posted in the Spectrum. Minutes from the previous Board meeting were read from information.

**Treasurer’s** Report consisting of current balance and past receipts and expenditures was read by Rich. Several guests paid dues and became members tonight.

**Communication Officer’s** Report – President report vacancy in this staff position and asked for names of members interested in filling this position. Motion made and seconded and amended “To delay the appointment of a Communications Officer until the current ‘General Class’ is completed, however if a qualified member volunteers prior that they can be appointed”. Motion passed. Sonny reports that Shack Day February 12<sup>th</sup> between 9-10 AM, that the 75-40 meter loaded antenna is planned to be installed and hung from the tower at 116 Reservation Drive Shack.

**General Announcements** President reports that Fred Weaver KG4BKI has volunteered to schedule the locations of the March dinner meeting. A trophy has been established for the IRLP Contest and CARS is a co-sponsor with an Australian radio club. The president was requested to notify the area clubs of the contest, which will be via the IRLP nodes.

### Committee Reports:

**Repeater Committee Chairman-** Bill reported on the meeting with the city on the relocation of the 61 repeater, they have the new antenna at the new site.

**Newsletter Editor-** Rich said that the link to Keith’s Internet site is working fine. He requests articles between the 15<sup>th</sup> and the 20<sup>th</sup> for the next issue.

**Public Service Coordinator-** Leo reviewed the planned General class and club events. Due to lack of time and his schedule, the Monitor/Merrimac (Virginia) event will be held at the QRM shacks, on March 5<sup>th</sup>.

**Springfest Chairman-** Leo has the tables for the Frostfest; Bill presented the tickets that he printed. Sonny will set up the table Saturday night before the event, volunteers were requested to man the table.

**Field Day Coordinator-** Ricky Lee recommended the use of the park at Deep Creek Locks Park, motion was made to hold the event at that location and it passed. Ricky is to get the permits as soon as possible.

**Sky Warn Coordinator-** Dee-Dee was not present, but Keith reported the training session scheduled for March 23<sup>rd</sup> at the Central Library in Chesapeake.

### OLD BUSINESS:

The Board is still looking for a new site to place the club’s home page, the budgeted cost for the site is being held for new location; there were no suggestions from the membership.

### NEW BUSINESS:

A copy of the By-laws is to be e-mailed to the membership along with the updated member list. Also there was discussion on the posting of the list on the Internet site. The Board was directed to be responsible for relaying information from the [W4CAR@yahoo.com](mailto:W4CAR@yahoo.com) e-mail address be the Newsletter Editor and in addition to be the PIO for the club to handle NEWS RELEASES and bulletin board notice of club activities. Sonny, requested that \$20 be sent to the Repeater Trustee to reimburse the annual SERA membership fee. There was a short discussion on the duties of the trustee. The Board was directed to proceed without delay in the negotiation for the use of the towers west of the Club shack #2 site.

**50/50 Drawing:** Was won by Paul, K4PRB (this is getting to be a habit, he donated his winnings to the Club)

**Time and Place of the Dinner Meeting for March** 6:30 PM EST at Ryan’s on Sam’s Circle

**Adjournment:** at 9:47 PM EST

## The Spectrum

Monthly newsletter of the Chesapeake  
Amateur Radio Service (CARS)

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<http://www.qsl.net/cars>  
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### Newsletter Editor:

Rich Graham - KI4EUM

### Webmaster:

Leo Kusuda - KG4PWC

### CARS : Repeaters

146.610 MHz  
146.820 MHz  
444.000 MHz

### W4CAR Trustee:

Bill Runyon WF4R

## CARS OFFICERS & CHAIRPERSONS

### President:

Keith Ainsely KG4ZXK

### Vice President:

Reggie White W5SSB

### Secretary:

Sonny Hood K4WYS

### Treasurer:

Rich Graham KI4EUM

### Communications Officer

TBD

### Past President:

Ruth Bigio KB4LIF

### Public Service Coordinator:

Leo Kusuda KG4PWC

### Repeater Committee Chairman:

Bill Runyon WF4R

### Spring Fest Coordinator:

Leo Kusuda KG4PWC

## **The Amateur's Code**

The Radio Amateur is:

**CONSIDERATE** - Never knowingly operates in such a way as to lessen the pleasure of others.

**LOYAL** - Offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through with Amateur Radio in the United States is represented nationally and internationally.

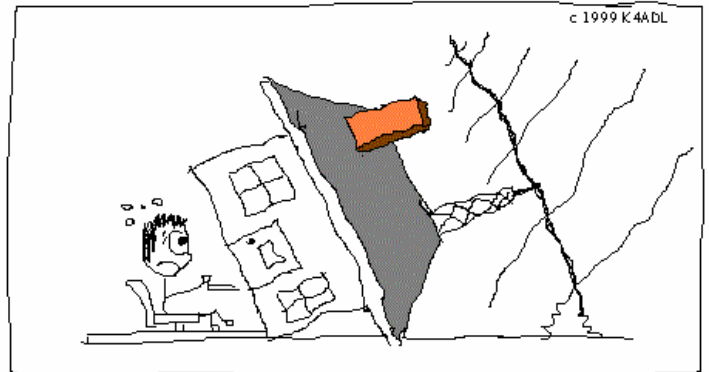
**PROGRESSIVE** - With knowledge abreast of science. A well-built and efficient station, and operation above reproach.

**FRIENDLY** - Slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

**BALANCED** - Radio is an avocation, never interfering with duties owed to family, job, school or community.

**PATRIOTIC** - Station and skills always ready for service to country and community.

The original Amateur's Code was written by Paul M.Segal, W9EEA, in 1928.



DONALD HAD BEEN WARNED TO CENTER THE 40 METER BEAM ON HIS ROOF.  
[www.qsl.net/K4adl](http://www.qsl.net/K4adl)