



The Spectrum

Issue 09

Sept/Oct 2007

Words from the President

This has been the hardest column for me to put together. Trying to find the right words to sum up the past three years is not an easy task. There's been so much going on since November 2004.

Our membership has grown from 35 to over 80, we finished the move into the QRM room, and the new .82 repeater in Greenbrier went on the air in 2006. These are just some of the highlights. Springfest enjoys its new home at the Moose Lodge thanks to a few members working on our behalf after losing the Rutian club in Hickory.

I want to wish the next president of CARS all the success that I can in taking the club to even higher goals!

That person or the board can't do it alone. We need the help of every club member to run the club. No matter what your talents are, you are needed.

I encourage all the tech license holders to take advantage of the shack & get on the air! Its the only way you are going to learn the hobby. Don't be afraid of making mistakes. No one is perfect and were new to the hobby themselves at one time. We are the only club in the area with the ham shack that most of the members take for granted. Remember: it might not always be there. If you don't have a home station this is the next best thing.

I encourage our senior hams to be elmers in the true spirit of that word. Here is your chance to shape the next generation of amateur radio operators. Make it known you are available and remember to be patient.

I want to thank Paul, K4PRB, Bill, WF4R, Rich, N5RAG, Reggie, W5SSB, Jim, KG4WOJ, Leo, KG4PWC, Jim, WB4UVH, and others for all their help and advice these past three years. The experience of being president has taught me lessons that have helped me in other areas of my life.

My goal was to make CARS the best club in Hampton Roads. Not by being arrogant or cocky but by actions I felt would be demonstrated by a top notch group of people. This club has so much potential waiting to explode. We just need to find the right combination to make it happen.

This is my home and you're my ham family. If I move away in the future that will not ever change. Thanks for letting me be your president these past three years. Best wishes to the future of CARS and its members!

73
Keith
KG4ZXX

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: New US Amateur Bands Chart](#)

[ARRLWeb: FCC ULS Modifies Customer Support Hotline Hours](#)

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

[QRZ Ham Radio](#)

INSIDE THIS ISSUE	
2	Upcoming Events / Local Nets/ 40+20= 80-20 = 60 Meters
4	HDTV Follow-On / Letter from the Editor
5	BOD and Club Meeting Minutes

Upcoming Events

Board Meeting

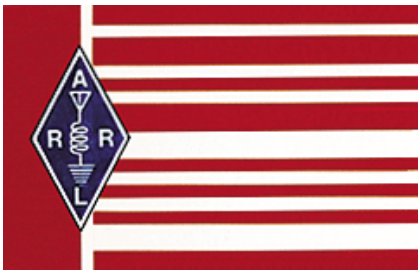
Tuesday, Sep. 25th at 7:30 pm

CARS Public Bus. Meeting

Monday, Oct. 1st, at 7:30 PM
116 Reservation Rd.
Chesapeake, VA 23322

Shack Day

Saturday, Aug. 11th at 9:30 AM



40 + 20 = 80 - 20 = 60 Meters

The 60 meter band may be the opposite of the Chicken Band and have more to offer the radio operator who does not like to spend hours scanning the radio spectrum for some one to have a QSO with. For those who do not know the Chicken Band is the name some Hams call the CB because in their eyes people stay there for fear of taking a test. I know of many reasons to stay or visit it time to time but that is another article all together. The reason I say the sixty meter band may be the opposite is that many amateurs are afraid to try out sixty meters because it is a channel band. This means you are only allowed to operate on certain frequencies. On sixty meters there is five to choose from and upper sideband voice is the only mode with a maximum effective radiated power of 50 watts PEP relative to a half wave dipole. Effective radiate power (ERP) is the effective equivalent power you have going out into free space after your transmission line loss and your antenna gain based on your transmitter output power.

PEP is peak envelope power which is the average power going into your transmission line in one RF cycle under normal conditions at the crest of the modulation envelope from your transmitter. With a watt meter that has peak power as an option this is easy to deal with just keep the peak under the 50 watts maximum. With an oscilloscope you could take the peak envelope voltage (PEV) and use it to calculate PEP. PEV is the peak voltage at the crest of the modulation envelope which is from the zero line to the top of the complex wave form.

The formula is $PEP=(PEV \times 0.707) \times 2/R$. R is the impedance.

The other option is to operate well under the legal limit such as 20 watts and still make many good QSOs on the band.

Continued on Page 3

LOCAL NETS

SKYWARN NET Wednesday 2000 Hours.	146.820 MHz
CARS 2M Net Sundays 2000 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

These little math problems are enough to scare the average ham away from this band but, the math does not stop there unless you have a radio that has the sixty meter channels preloaded into memory so you do not have to manually tune to the channel you wish to operate on. For those who have to manually tune you must set your dial to (-)1.5 kHz of the desired channel frequency. The channels to choose from are 5.332MHz, 5.348MHz, 5.368MHz, 5.373MHz, and 5.405MHz. If you wish to talk on 5.405MHz you would tune to 5.403.5MHz USB so that a 2.5 KHz bandwidth puts you center frequency on 5.405MHz. This is also the only band CW is NOT allowed so tuning your antenna without a tuner is not easy. One could whistle if necessary but just talking works if you are good with manual tuners. The best thing from my point of view is build a 60 meter inverted "V" antenna if space does not allow for a dipole to be stretched all the way out and use an antenna analyzer to adjust the length so that you have no need to whistle or do other things to imitate the 11 meter band's bad side. The first question to come to mind is why go through all this work for just five frequencies and the answer is for the pleasure of having a QSO with some one just fifty or a few hundred miles away on a regular basis without having to compete with the mega watt stations.

I was operating on sixty meters with 5 watts and an end fed wire antenna and had a forty minute QSO with a gentleman name Jim KU4C on 5.348MHz May 21,2007 at 0105 UTC (9:05pm) and what made it so nice was he was my first sixty meter contact. It was just a general rag chew with no rush of a contest style contact. I have made a few other contacts since then before changing my antenna setup in the back yard and found it easy to scan the five channels to find some one to talk with and when there was no one talking calling CQ received a quick reply. The people I talked with on sixty meters were very nice and polite and more than willing to let you join their QSO. The cool thing about sixty meter band in the words of another ham is it combines the best of both the forty and eighty meter bands as far as propagation of the radio waves go. That is why at the time of this writing I am working on an antenna just for 60 meters only. Now before

I forget those who say sixty meters is not true amateur radio because it is channeled need to realize that in the age of store bought radios, tuners, and pre-made antennas that it is closer to real amateur radio than most want to admit to. For one thing you actually have to do math either for ERP PEP or frequency or both. How many hams have done any math with amateur radio since they up graded? Being on the correct frequency is a skill that all radio operators should have. With the CW code requirement gone more and more operators out there will not know what zero beat is and if you do not know yourself please ask a fellow ham and he or she will be glad to help you understand what it is and why it is important to know. With the requirement of center frequency of a 2.5KHz bandwidth to be on a certain frequency for a particular channel on the sixty meter band the operator has to know what they are doing and run a clean signal. As restrictive as the requirements are on the sixty meter band it is still a fun place to rag chew and a great way to learn more about radios and RF theory. After all that is what amateur radio is all about, having fun while you learn.

73' Jim KG4WOJ

HDTV Follow-on

Here is a follow-on to August's outstanding presentation on WHRO. Mr. Heimerl mentioned temporary and permanent frequency allocations for local HDTV stations.

For the Hampton Roads area we'll need an antenna capable of TV channels 7 through 50. (175-688MHz). From the W9WI.COM website here is the list:

Callsign	City	Network	NTSC	Temp DTV	Perm DTV	ERP (kW)
WHRE	Virginia Beach	TBN	21	<i>none**</i>	7	4.86
WSKY-TV	Manteo (NC)	Ind.	4	4	9	21.3
WVEC-TV	Hampton Hampton-	ABC	13	41	13	19.1
WHRO-TV	Norfolk	PBS	15	16	16	950
WUND-TV	Edenton (NC)	PBS	2	20	20	543
WVBT	Virginia Beach	Fox	43	29	29	1000
WAVY-TV	Portsmouth	NBC	10	31	31	1000
WTVZ-TV	Norfolk	MyTV	33	38	33	905
WTKR	Norfolk	CBS	3	40	40	950
WPXV	Norfolk	Ion	49	46	46	1000
WGNT	Portsmouth	CW	27	50	50	800

** As mentioned by John Heimerl , channel 21 will have to perform a "hot cutover."

Of note is the Manteo channel will re-build its "digital" tower locally about one mile from the Virginia border in Currituck County. Right now WSKY's analog antenna is way down near Harbinger NC, right off US158.

Websites of interest that track local TV/radio happenings are "VARTV.COM" and "SBE54.ORG".

K7UO
Chesapeake.

Letter from the Editor

Hello to everyone, just an update I am moved in to my new house in Suffolk. I have been real busy for the past month, still have a few boxes around the house but I'm settled in. I would like to thank everyone for the understanding about combining the newsletters for Sept and Oct. From now on the articles will not be emailed out, but placed on the website only. I will send out an email notifying everyone the article is done and the link. I will still mail out the articles to those who don't have an email address. Please submit articles prior to the 15th of the month. My email address is wrightwon_itt@hotmail.com

Thanks
Gavin KD7GJB

CARS BOD MEETING MINUTES 8 / 29 / 07

Meeting called to order at 7:45 pm. Attendees:

Keith KG4Z XK Paul K4PRB Jim KG4WOJ
Bill WF4R Jim WB4UVH

Paul K4PRB read the minutes of the previous BOD meeting. Jim KG4WOJ moved to approve as read. Seconded and approved.

OLD BUSINESS:

Slate of candidates for October elections, pending further nominations:

President: Paul K4PRB
Vice Pres.: Gavin KD7GJB
Secretary: TBD
Treasurer: Barry K5VIP
Comm. Officer: Sean W5CDR

NEW BUSINESS:

Technician Training class: The BOD discussed starting a Technician class during the week of Oct. 15, Oct. 22, or Nov. 12, with testing NLT Sunday, November 18. Dates will depend upon the format of the course being developed by Sean, W5CDR. It was the consensus of the BOD that we need to shorten the historical four week length of Tech. classes and we appreciate Sean's efforts to develop a new program to do so.

The BOD concurred that Jim WB4UVH should contact Terry Buzzard KA8TNF re: CARS's relationship with ARES; Chesapeake Parks & Rec. Dept. re: 2008 "Swamp Stomp;" and the American Diabetes Assn. re: 2008 Tour de Cure. Keith will provide Jim with contact info from the computer CD Leo Kusuda turned over.

Keith KG4Z XK agreed to handle planning for next year's Springfest for the time being.

Jim KG4WOJ moved (after some preliminary discussion) that there should be a hiatus in the weekly Wednesday Skywarn Training Net until a more successful format can be found. There has been a continued declining lack of participation despite two new attempts to rekindle interest. Jim praised Ricky Lee's (KC4RIC) notable efforts with a new format. CARS' overall Skywarn program with nets conducted during severe weather situations will remain unchanged. Seconded and approved.

Jim WB4UVH moved to change the normally designated schedule for Shack Day to the THIRD CALENDAR Saturday of each month. Seconded and approved.

Keith KG4Z XK moved the BOD recommend the Club approve the membership application of Alex Gonzalez N3GX. Seconded and approved.

Meeting adjourned at 9:45.

CARS CLUB MEETING MINUTES

8 / 6 / 07

Meeting called to order at 7: 30 pm.

Attendance: 22

The meeting consisted of a presentation about Digital Television and FM radio broadcasting and the erection of WHRO's new tower and antenna at Driver, Va. by Mr. John Heimerl, Chief Enterprise Officer of WHRO.

The presentation was very well received and the following technical discussion carried on until 9:30 pm. Accordingly, no club business was conducted.

Meeting adjourned at 9:30 pm.

CARS BOD MEETING

8 / 1 / 07

Attendees:

Keith KG4ZXK

Paul K4PRB

Sean W5CDR

Bill WF4R

Jim KG4WOJ

Meeting called to order at 7:30 pm.

Paul K4PRB read the minutes of the previous BOD meeting. Jim KG4WOJ moved to approve as read. Seconded and approved.

OLD BUSINESS

Bill WF4R will contact City Facilities Management about installing a motion sensor on the parking lot floodlights.

Candidates for the October elections were discussed.

NEW BUSINESS:

Paul K4PRB moved that the club operate a Special Event Station commemorating the Battle of Great Bridge on December 1 and 2, 2007. Seconded and approved.

Sean presented the "Cubbies for Smokies" program to the board, and the BOD agreed to present it to the club membership.

Meeting adjourned at 8:30 pm.

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: Gavin Wright-KD7GJB

Webmaster: Sean Gorman - W5CDR

CARS : Repeaters

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

W4CAR Trustee: Bill Runyon WF4R

CARS OFFICERS & CHAIRPERSONS

President: Keith Ainsley KG4ZXK

Vice President: Bill Runyon WF4R

Secretary: Paul Buckwalter K4PRB

Treasurer: Jim Hardee WB4UVH

Communications Officer

Jim Rogers KG4WOJ

Past President:

Ruth Bigio KB4LIF

Public Service Coordinator:

Jim Hardee WB4UVH

Repeater Committee Chairman:

Bill Runyon WF4R