The OVH ARC Newsletter OLE VIRGINIA HAMS" AMATEUR RADIO CLUB, INC. Post Office Box 1255, Manassas, Va. 20108 OVH FM Repeaters - 146.970- & 224.660- & 442.200+ & 443.500+ OVH D-STAR Repeaters - W4OVH - 146.865- & 442.5125+ (now temporarily out of service)

Web Site at http://w4ovh.net



# April 2015 Next Meeting: Monday, April 20, 2015

## PRESIDENT'S LETTER:

Greetings and, "Where do I begin" as the new president of the OVH? First, thank you to Justin (KJ4LAS) for running with the baton for the past two years; these shoes feel a bit large. Don't stray far from your phone (or radio), I may have a bunch of questions.

A little background is in order for those who know little of me. I became interested in ham radio as a child, but never found an Elmer to mentor me over the "how to really get started" hump. Much later, in 1990 I received at last my Technician license (KB7LTB) while stationed in Germany; interesting in retrospect how the huge Log-Periodic HF antenna above the MARS station at DA1US in Heidelberg pulled in more than just radio signals. Now if I had only



stayed on top of Morse code and improved my code speed... However, with membership in and help from the OVH, I've experienced the fun of Field Day, digital and satellite modes, net control of the OVH net, and DXing. All of this with barely enough knowledge to tell a PL-259 and a BNC connector apart!

Being a slow learner (and if you don't believe it, just wait, you've been warned), it will take a while to pick up all the details of the office. I share many of the same goals and objectives of my predecessors; in short, information presented via the OVH email reflector, the Newsletter, and the web site. Additionally, many of our liaisons with other clubs, county officials, and other groups are informal and performed by one or just a few individuals. From a business continuity standpoint, this presents 'risk' should the coordination not be documented or for whatever reason we lose those critical OVH members or out counterparts change. These concerns will be addressed in some of the upcoming monthly club meetings.

Let me observe that the wide variety of backgrounds, experiences, skills, and knowledge that our OVH members collectively bring to the floor is fascinating and impressive. Because of that, I'd like to hear your ideas, please email me at wayne99@arrl.net or catch me on the air.

#### Ole Virginia Hams Amateur Radio Club, Inc. Post Office Box 1255 Manassas, Virginia 20108

#### OFFICERS

OFFICERS		
President: Wayne Phillips	N7QLK	393-8447
Vice Pres: Clarence Meese	K4CNM	791-6424
Secretary: Byron Dillon	AK4XR	222-2095
Treasurer: Terry Erlacher	KC4DV	571-292-1490
DIRECTORS		
Don (Butch) Blasdell	W4HJL	369-2877
Arthur Whittum	W1CRO	791-4330
Charlie Dale	WA4YGI	361-3091
Bob Zaepfel	K4HJF	282-2451
WEEKLY FM REPEATER N	NET COORDINA	TOR
Thurs - 8:00 PM Local Time	JOHN / KG4NXT	257-3566
HAMFEST 2015 - Chairman	n	
Terry	KC4DV	571-292-1490
FIELD DAY 2015 - Co-Chain	rs	
John	KG4NXT	257-3566
Ken	KM4ABL	753-7863
Byron	AK4XR	222-2095
CLUB ROSTER / DATABAS	SE	
Arthur	W1CRO	791-4330
EDUCATION		
Mark	WA4KFZ	818-8033
CLUB EMERGENCY COOF	PDINATOR	
David Meola	KI4AZX	393-6681
		555 0001
ARES - EMERGENCY COO		
David Lane	KG4GIY	703-628-3868
Prince William County ARES		4GIY@ARRL.NET
6	website meep.,,	preatestory
FINANCE	WICDO	501 4990
Arthur Mark	W1CRO WA4KFZ	791-4330 818-8033
Terry	KC4DV	571-292-1490
GENERATORS	KO4D V	071 202 1400
Steve	N4OGR	361-0008
Keith	KM4AA	909-1512
Al	KB4BHB	368-4794
HISTORIAN		
Theresa	KG4TVM	257-3566
		201 0000
WEBMASTER — W4OVH.N Paul	W4ZB	754-0910
raul	W 4ZB	794-0910

EMAIL REFLECTOR - w4o	vh@googlegro	oups.com	
David Lane	KG4GIY	628-3868	
JOTA			
Scott	KB8NUM	365 - 2642	
LEGAL			
Bob	K4HJF	282-2451	
MEMBERSHIP CHAIRMAN			
Luther	KJ4FDK	361-4885	
NEWSLETTER			
Paul	W4ZB	754-0910	
NEWSLINE FOR THE WEEL	KLY NET		
John H.	KG4NXT	257 - 3566	
PROGRAMS FOR MEETINGS			
Terry	KC4DV	571-292-1490	
	110 12 1	011 202 1100	
QUARTERMASTER	NUCCO		
Steve	N4OGR	361-0008	
REPEATER CONTROLLERS	5		
Keith	KM4AA	909 - 1512	
Arthur	W1CRO	791-4330	
Butch	W4HJL	369 - 2877	
Steve	N4OGR	361-0008	
David	KG4GIY	361-3042	
George	K4GVT	791-5956	
Russ	WB4HHN	368-6435	
W4OVH / W4PVA — TRUSTEE			
Keith	KM4AA	909-1512	
SCHOLARSHIP			
Jim	W4JTP	392-0150	
SUNSHINE			
Theresa (Acting)	KG4TVM	257-3566	
-	110/11/11	_0.0000	
TECHNICAL COMMITTEE			
Keith	KM4AA	909 - 1512	
Arthur	W1CRO	791-4330	
Butch	W4HJL	369-2877	
Bill	N4SV	590.9562	
Bob	K4HJF	335-1939	
David	KG4GIY	628-3868	

All telephone numbers listed above are for Area Code 703 unless otherwise noted. This is the official monthly publication of the Ole Virginia Hams Amateur Radio Club, Inc., a §501(c)(3) organization, dedicated to the promotion and enhancement of Amateur Radio. Copyright © 2015 by the Ole Virginia Hams.

The OVH ARC regular monthly meeting is at 7:30 p.m. every third Monday. In July, 2014, and is held in the Main Conference Room in the Manassas Public Works Building, 8500 Pubic Works Drive, Manassas, Virginia. Members, prospective members and other interested persons are invited to attend without obligation. Local information can also be obtained through the OVH's FM repeaters on 146.970<sup>-</sup>, 224.660<sup>-</sup>, 442.200<sup>+</sup> and 443.500<sup>+</sup> MHz. The OVH's two D-Star repeaters on 146.865<sup>-</sup> and 442.5125<sup>+</sup> MHz are temporarily off the air due to maintenance work beyond the OVH's control. Up to date information about OVH activities and its meetings is also available during the OVH's nets on its FM Repeaters each Thursday night at 8:00 p.m. or on 80 meters (3710 KHz) LSB each Sunday night at 7:00 p.m. (8:00 pm in Summer) or through the OVH's web site at http://w4ovh.net

Articles and quotations in the OVH Times newsletter may be reprinted if credit is given to the OVH ARC and any other noted source. Proposed materials for publication including pictures, articles, letters to the editor, classified ads, notes about specific errors, complaints or the like are solicited from all readers. Forward such items to the OVH Times Newsletter Editor: PAUL@W4ZB.COM as soon as available at any time, but the cutoff deadline for the OVH Times each month (usually the second Monday of the month) may preclude publication/correction until the following month.

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All the best wishes for speedy recoveries to Steve (N4OGR) and Luther (KJ4FDK); the OVH family has you in their prayers and stands ready to help you and your family any way we can.

I hope to see everyone (guests and visitors are welcome too) at our April 20th meeting where John / KG4NXT will present a program on using the Rasberry Pi device to do WSPR, a very low power mode (10mw) invented by Joe Taylor / K1JT which is capable of slow speed, worldwide communications on HF, a very interesting topic involving computers, RF and communications.

The meeting on April 20th will be at the Manassas Public Works Building, Main Conference Room, 8500 Public Works Drive, Manassas, Virginia at 7:30pm.

## 73 Wayne N7QLK

# Sunshine Corner:

Very happy April birthday greetings to Brian / KK4CBS, Ken / KJ4VTP, Robert / KJ4SZJ, Jeff / KB4IWD, Paul / N4PD, Joe / KI4OHR, Steve / KJ4YHA, Chris /KU4FT, Lillian / KK4MXY, David / KI4AZX, Everett / KJ4OLF, Paul / W4ZB and David / KD4DEE.

Spring is here and we are in full planning mode for Hamfest and Field Day, these are two huge club events which both take place in June. Club members participation is what makes the events successful and fun! Save the dates for each - flyers for both of these events appear later in this Newsletter.

Congratulations to our new officers for the 2015 – 2016 year, Wayne / N7QLK, President, Clarence / K4CNM, Vice President, Terry / KC4DV Treasurer and Byron / AK4XR Secretary – all were voted in at the March meeting. Thank you to Justin / KJ4LAS and Ron / N4RDZ for their service as President and Secretary during the previous year.

Please keep Terry / KC4DV in your thoughts and prayers, his sister suffered a stroke and he is with his family in Iowa. His mom and brother were also recently in the hospital.

John / KG4NXT and I attended the Vienna Winterfest in March, helping out at the club table handing out flyers for our hamfest. Clarence / K4CNM, Ron / N4RDZ, Wayne / N7QLK and Alan / WA2GTT also pulled shifts at the table. A very special thank you to Alan WA2GTT for selling some of his equipment at the table, all the proceeds were donated to the club.

Congratulations to Byron / AK4XR's son on completing his PhD in Engineering.

Our condolences to Luther / KJ4FDK on the passing of his father, Luther Miller, Jr. in March. Luther's father was also a ham, WA3FMO.

Best wishes to Ken / KJ4VTP and his wife as she battles some medical issues.

Special thanks to Mark / WA4KFZ for successfully completing the multisession General Class licensing course at the end of last month with all of the attendees who persisted. Those who took and completed the course then took VE Exam.

Congratulations to the VE Team for another very successful VE Exam Cont'd on page 4

Session at the end of March. There were 25 people that came out to take exams; every single person went home with either a new license or an upgrade. The VE Team was led by John / KG4NXT and included, Clarence / K4CNM, Wayne / N7QLK, Al / KB4BHB, Steve / KB4OF, Byron / Ak4XR and Steve / N4OGR. Everyone did a great job!

Now with that being said, it was an amazing site to see Steve / N4OGR attending and working the VE Session, Steve had major heart surgery only two weeks before the VE Session.

John / KG4NXT and I also participated in the Virginia QSO Party in March, we did drive up to Skyline Drive and it was a beautiful day on the drive. We made a bunch of contacts, but unfortunately I forgot to take pictures of hams we met along the way. I did get some nice shots on Skyline Drive though!



Terry / KC4DV also participated in the VA QSO party and provided this short write up of his experience and a posed selfie (to the left) after the contest was over: "I had a blast with the 2015 VAQP and was Red Hot on Saturday, not so much on Sunday as the HF bands were on the lousy side. Spent most of my time on 40 with short excursions on 80, 20, 2 meters and 70 centimeters Ended up with 91 out of 133 Counties/ Independent cities, Had 376 Contacts with 125 multipliers plus the bonus station for a claimed score of 54000." Quite a high score!

The Tri-It Now Mini Tri held their first

event of the year on Sunday, March 29th. Clarence / K4CNM pulled volunteers together and made assignments and we had another great event. Al / KB4BHB, Mary / KK4GOW, Steve / KB4OF, John / KG4NXT, Baofang / KK4JFK, Joe / KI4OHR, Byron / AK4XR and I all turned out to cover locations along the course. It was VERY cold out there but the event was run very efficiently and we were finishing up by 9:30 in the morning.

Congratulations to new ham Nick / KG7SOM who passed his Tech exam earlier this month. Nick is the husband of Elizabeth / KG4NXV and also our son-in-law!

The PWC Broadband Ham Net held class at the end of March and again in early April that were well attended. Thanks to Clarence / K4CNM for he successful efforts in putting this together and bringing the OVH and Woodbridge Wireless together.

Please do check into the Thursday night VHF net, it starts at 8 pm! Well it's been a very busy month; hope to hear you on the air! If you have any news that you want reported in the Sunshine Corner, contact me.

73 Theresa KG4TVM email: kg4tvm@hotmail.com

# Minutes of the Ole Virginia Hams Amateur Radio Club Meeting March 16, 2015:

Justin KJ4LAS called the meeting to order at 7:30 pm and led the club in the Pledge of Allegiance. Meeting was held at the Manassas Public Works Building conference room. It was noted that no meeting was held last month due to inclement weather on February 16th.

All present stated their names and call signs, 22 members and 7 guests.

Minutes from the January meeting were sent out in the newsletter, motion by Bob / K4HJF to accept the amended minutes, and seconded by Carl / KK4ZYX. Approved.

Treasurer's Report – Terry / KC4DV gave the report, motion by Bob / K4HJF to accept the report, and seconded by Allen / WA2GTT. Approved as presented.

Membership – Terry / KC4DV read in Carl / KK4ZYX, William / WB4KLC, Charles / KF5ETJ, Sandy / No Call Yet and Tony / KK4UZB. The Club then voted in Carl / KK4ZYX, William / WB4KLC, Charles / KF5ETJ and Tony / KK4UZB, all of whom should have been read in at February meeting that was canceled due to inclement weather.

Voting – Ballots were handed out to all paid up members present, ballots were counted and new officers announced for the 2015-2016 year as follows: President: Wayne / N7QLK; Vice President: Clarence / K4CNM; Treasurer: Terry / KC4DV; Secretary: Byron / AK4XR.

A 50 – 50 draw was conducted. Carl / KK4ZYX donated a HT to be given to the winner. We collected \$46 and had the drawing. Carl won the \$23 cash and we re-drew for the radio. I don't remember exactly who won the radio but they were in the corner by the American Flag. \$23 went into the club general fund. Thanks to all for participating.

Terry / KC4DV did a presentation on the 2015 budget. Motion by Bob / K4HJF, seconded by Al / KB4BHB to accept the budget as presented. Approved unanimously.

ARES – Clarence said that there will be a meeting March 21st and that the 17.75 run will take place on March 28th.

Repeater – Keith / KM4AA – No news on when the repeaters at Mt. Pone will be back on the air; the rest are up and operational.

Training – Mark / WA4KFZ said that there are 8 students in his General Class Licensing class. VE session will be on March 31st, and as of now, it looks like there will be approximately 15 to test.

Scholarship - No report.

Hamfest – Terry KC4DV reported that he attended the Maker Fair and only saw a couple of vendors. Possible Quad Copter demo at Hamfest. The next Hamfest Planning meeting will be the first Wednesday in April (April 1st no joke). Terry / WA5NTI asked that maybe the Quad Copter person could demo to the club at a meeting? We still need volunteers for security and the club consignment table. Thanks to Clarence / K4CNM the Hamfest has a new Facebook page so LIKE us on Facebook! Hamfest planning committee needs more help so please come to the meetings to

Cont'd on page 6

support the biggest fund raiser for the club. Many positions are only one deep. Look for information about where to meet that will be published on the reflector.

Field Day – Ken / KM4ABL listed off the assignments so far. The list will be published on the reflector. All are welcome. Please contact the planning team if you would like to help.

Sunshine Corner – Theresa / KG4TVM wished the February and March birthdays, Happy Birthday! A card was passed around the room for Steve / N4OGR.

Web Pages - Paul / W4ZB reported that the web pages is up and working well.

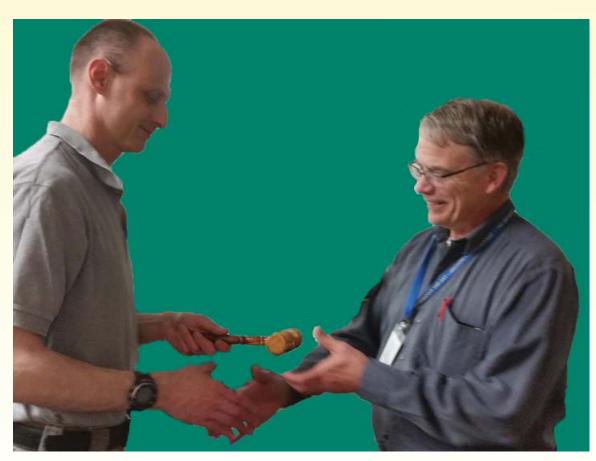
4H – Terry / WA5NTI we are moving forward to participate in the Hamfest. Planning falling into place.

BBHN (BroadBand Ham Network) – Clarence K4CNM said that there will be a workshop March 28th at the Potomac Library Community Room. If needed a follow-on workshop will be April 4th. Watch for details on the reflector. Contact Clarence if you would like to participate.

Old Business - None

New Business: George / K4GVT gave an updated report about the proposed shed for Mt. Pone. A discussion followed. Motion by Terry WA5NTI "Do we want to move forward on Mt Pone project and commit to spend \$6,600"? Seconded by Al KB4BHB. Motion passed with only one no vote.

Motion to adjourn the meeting made by Theresa KG4TVM, seconded by Allen WA2GTT. All voted to approve. Meeting adjourned at 8:26 pm.



Passing Of The Gavel To The New OVH President

From Justin / KJ4LAS (on the left)

To Wayne / N7QLK (on the right)

right after the OVH officer elections on March 16, 2015

## Reminders about some upcoming events / calendar dates:

#### HAMFESTS:

May 15 - 17, 2015 - Friday - Sunday. Dayton Hamvention, Dayton, Ohio. This is the biggest hamfest in the world. More info at http://hamvention.org.

June 14, 2015 - Sunday. The OVH is sponsoring and will again put on the annual Manassas Hamfest for the 41st time in 2015. All active OVH member will, of course, attend; everyone else is invited too and we expect several thousand attendees again this year! See the Flyer later in this Newsletter and check out http://w4ovh.net (Hamfest tab) and http://manassashamfest.org for the latest information and details.

## SPECIAL HAM RADIO SEMINARS, ETC:

Third Thursday evening each month - AMRAD meets in McLean, Virginia - meetings usually consist of high level amateur radio related technical presentations on specific topics. Check the http://amrad.org web site for upcoming topics, and exact dates, times and places.

May 14, 2014, Thursday. The excellent and very well attended Contest University program will again take place in downtown Dayton, Ohio, for a full day one day before the Dayton Hamvention begins. See http://contestuniversity.com for complete details. Sign up now.

#### SPECIAL OPERATING EVENT - FIELD DAY in June, 2015 - SAVE THE DATES:

April 25-26, 2015, Sat. - Sun., The Florida QSO Party in this second most populous state on the East Coast and the state with one of the largest populations of active hams, will be held on April 25 and 26. See http://floridaqsoparty.org for more information. All counties are expected to active on CW and SSB during the contest. Propagation is almost always quite good between Northern Virginia and Florida so this is an opportunity for a lot of operating fun.

June 27 - June 28, 2015 - Saturday & Sunday for the annual OVH and ARRL Field Day event. This is one of the most "fun" events for OVH members who participate as a club in the larger ARRL Field Day over two days during which other clubs and operators throughout the U.S. and Canada endeavor to contact as many other participants as possible from portable or temporary locations using different frequency bands and radio modes. The OVH's Field Day event will be at the pavilion at the Nokesville Park again this year, and will also include food, educational activities and public service activities for all members, family members and the general public, as well as several operating stations. Be sure to save these dates!

#### OTHER LOCAL ITEMS / EVENTS OF INTEREST:

May 2, 2015 - Saturday (Rain day: May 3 - Sunday), 10:00 am - 4:00 pm - Manassas Airport Open House and Airshow. Free. Complete information http://manassasairshow.com for. Approx. 12,000 attendees expected this year. Should OVH have a recruitment / info table at this event next year?

May 8, 2015 - Saturday (noon - 1:00 pm) - VE Day - 70th Anniversary - massive flyovers of WWII era Aircraft - in and near Washington, D.C. Details at http://ww2flyover.org The heavy bombers in the flyovers, including B-17, B-24 and B-29s, will fly from Manassas Airport, the fighters will fly from Culpeper Airport. Check http://www.airpowersquadron.org/#!manassas-virginia/cfjy if your "bucket list" includes flying in a WWII bomber and you have thick stack of spare cash to burn.

#### PUBLIC SERVICE / TRAINING / ARES EVENTS

Always check the online Calendar by David / KG4GIY at http://www.pwcares.org for the latest updates. David maintains a comprehensive calendar for upcoming events at that web site. Complete direct contact information for David appears on page 2 of this Newsletter.

#### SOME POSSIBLY INTERESTING OR USEFUL INFORMATION

1. Pete Varounis / NL7XM from Eastern Pennsylvania, also widely known as the Callsign Historian, with a unique private collection of Amateur Radio Call Books which go back 100 years, and with many other amateur radio accomplishments under his belt, is expected to be a forum presenter at the 41st Manassas Hamfest on June 14, 2015. That will be the Forum to attend to find out about or to trace the history of an "old" callsign.

2. Scott / N3FJP at http://n3fjp.com has long provided a series of excellent logging software which are commonly used for Field Day, various State QSO parties as well as for many other radio contests. The OVH for many years has used a networked version of N3FJP's logging software during its Field Day each June. To encourage new hams to learn and become proficient with Morse Code (which new hams are no longer required to learn) to be able to join in the fun during CW contests and at other times, N3FJP is now making available a free "CW Teacher" software which may be downloaded directly from his web site.

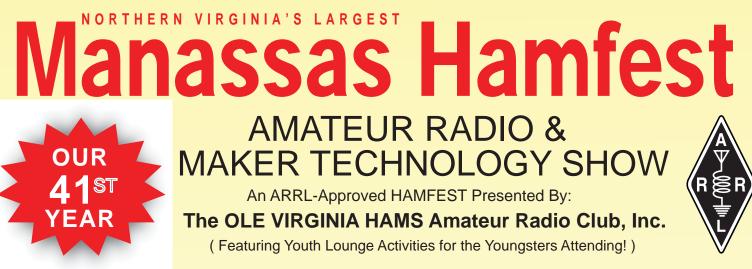
3. Considering attending the one day Contest University program in Dayton next month, the day before the Dayton Hamventon opens, or can't attend? A similar Contest University program is being taught during the Ham Radio hamfest in Friedrichshafen, Germany in June each year. That is the second largest hamfest in the World - after Dayton. A large set of bilingual PDF slides (English and German) from the 2010 CTU program at Friedrichshafen are online for free at http://www.darc.de/uploads/media/friday-final-plus.pdf Enjoy!

4. Antenna and feedline matching continues to be a very important, if not critical topic, to be learned in order to set up an efficient transmitting and receiving ham station. Learning Smith Chart techniques to accomplish good antenna and feedline matching minimizes or eliminates the need to use complicated mathematics. Ed / AE6TY, who was a speaker on this topic at Dayton last May, has continued to improve and enhance his professional quality, graphics based Smith Chart software. Go to http://ae6ty.com to find the latest free download.

# THE BBHN GROUP LEARNING HOW TO "TRICK OUT" CONVENTIONAL, LOW COST, ROUTERS TO OPERATE ON HAM RADIO BANDS TO PROVIDE BROADBAND HAM NETWORK SERVICES



AT WOODBRIDGE, VIRGINIA - MARCH 28, 2015



# Sunday, June 14, 2015 Prince William County Fairgrounds

Large Outdoor and Covered Pavillion flea market areas, two indoor air-conditioned buildings, several covered buildings and ample parking

10624 Dumfries Road - Route 234 - Manassas, Virginia -- Talk-In Repeaters on 146.97- and 442.200+

INDOOR EXHIBITOR SPACE 8-foot tables: \$30<sup>\*</sup>each with chairs & electricity (\$25 if reserved by May 1st) Setup 2–10 PM Saturday GENERAL ADMISSION \$10\*per person at gate (Age 18 and younger: no charge) (\*See web sites for prepayment discounts before 5/31/2015) Gates open at 7 AM TAILGATING (admission is extra) Outdoor Spaces: \$10\*per space Covered Pavillion: \$15 per space (\*See web sites for details about online prepayment discounts before 5/31/2015) Gates open at 6 AM

\* Online ticket sales and vendor registration at http://manassashamfest.org For our Most Current Vendor List and Ticket Sales Visit our Web Pages:

http://manassashamfest.org and

#### PRIZES

- Door prizes hourly 9 AM to 1 PM (be present to win)
- Major & Tailgate prizes awarded at 2 PM

## **INFORMATION**

- ARRL Roanoke Division Officers attending
- Virginia Section Manager Forum & other Forums
- 4th Call Area QSL Bureau Representatives
- DXCC QSL Card Checking will be available
- Virginia QSO Party Awards Ceremony
- Check our web pages (below) for the most up-to-date information

## **ACTIVITIES**

- Flea Market & Vendors all day
- VEC License Exams: 8:00 AM 10:30 AM

http://w4ovh.net

- "Maker" group technology demonstrations
- ARRL style Youth Lounge programs all day for youngsters by the OVHARC and 4-H
- D-STAR Operating and Q&A Forum
- Amateur Radio Satellite Forum
- BroadBand Ham Networks ("BBHN") Forum
- Virginia QSO Party Awards and Forum
- More Forums to be announced, check web sites

## http://manassashamfest.org and http://w4ovh.net

**Dealer Info** from Ron / N4RDZ: **General Info** from Terry / KC4DV: **VE Testing / Exam Information**:

vendors@manassashamfest.org chairman@manassashamfest.org vetesting@manassashamfest.org OVH ARC Newsletter - April 2015 - Page 9 of 10

# THE OLE VIRGINIA HAMS AMATEUR RADIO CLUB

### WELCOMES YOUR ATTENDANCE

#### THIS YEAR AT

#### **NOKESVILLE PARK FOR 24 HOURS**

#### June 27<sup>th</sup> - 28<sup>th</sup>, 2015

## FIRST RADIO CONTACT AT 2 PM SATURDAY

#### GET ON THE AIR!

#### **GOTA STATION**

#### EDUCATION ACTIVITY - ARDUINO FIELD STRENGTH METER

#### POT LUCK DINNER - 5 PM SATURDAY

#### PLEASE BRING A DISH TO SHARE

#### NOKESVILLE PARK – 12560 ADEN ROAD, NOKESVILLE VA AT THE PAVILION, NEAR THE BACK OF THE PARK

#### **ENJOY THE FELLOWSHIP AT THIS FAMILY EVENT!**

Co-Chairs for the event: Ken KM4ABL, Byron AK4XR & John KG4NXT



More information contact John KG4NXT at <u>kg4nxt@arrl.net</u> or 703-789-6449 www.w4oyh.net