



The Beacon

A monthly newsletter of the Albemarle Amateur Radio Club serving Central Virginia
Celebrating our 52nd Year

July

2015

Our July meeting is set for July 14 at 7 p.m. at NRAO.

President's Corner

By Ed Berkowitz – N3US



I hope everyone enjoyed our 2015 Field Day Operations. Many thanks to the Field Day Committee headed by Larry, K4JZQ and each of the AARC members who participated. For my July column, I will discuss often-simple fixes to technical issues with our ham radio equipment.

When I became licensed in 1963, ham equipment consisted of vacuum tubes and discrete components. It was fairly easy to build, operate, and repair both homebrew and commercial equipment. Yes, the equipment was much larger than today, and I had the steady hands and eyesight of a 14 year old!

Today's ham radio gear is so small, complicated, uses lots of small components including surface mount technology, and is built on expensive, easy to damage multi-layer boards. Just a few years ago, I diagnosed a problem with my Kenwood TS-850SAT transceiver (built circa 1988) to a DDS chip. However, I simply did not have the skills and soldering tools to replace the chip.

However, many problems with today's ham radio and related computer equipment are simple to repair and often can be prevented with routine preventative maintenance.

I recently noticed that the output power on my IC-7600 was down by 25%, and I mentioned this to my good friend Pete, W2HP. Pete mentioned that he experienced the identical issue with his IC-7600 and discovered the input

voltage to his rig was about 12 volts versus the original 14 VDC. He quickly determined that the power supply output voltage was still 13.8 but that under full load, there was a 2 VDC drop somewhere. He had previously eliminated his problematic Anderson PowerPoles and quickly found that there was corrosion on the Icom inline fuse holders. I followed Pete's suggestion and "exercised" the fuses in my 7600 fuse holders by removing and reinserting the fuses several times. Now under key-down, the Icom panel meter again read the proper 14 volts, and my output power returned to 100 watts.

Several months ago, my computer dedicated to Ham radio would often freeze up. After ruling out Windows system issues, viruses, etc, I began to suspect the computer was overheating. After removing the case, I found a large amount of dust on the heat sink. Simply removing this dust restored the computer to service.

So while we all do the required preventative maintenance (PM) on our cars, homes, etc, it is easy to overlook performing PM on our complex electronics because we fear its complexity and doing more harm than good. So consider the following:

1. Periodically, exercise the accessible connectors both internally and externally on your computers, ham gear, etc. Simply remove and reinstall one connector at a time. Don't force anything and look carefully for any releases on the connectors.
2. At least annually, open up your electronics and remove dust, dirt, pet hair, etc. Clean external louvers, ventilation holes, fan blades, etc.
3. If you have any vacuum tube amplifiers, respect the high voltage interlocks upon opening up the cabinets, and gently clean out any dust especially in the power supply, fans and blowers, and tube fins. Again, high power amplifiers have lethal voltages so please be careful. All solid state amplifiers run very high currents which can also be dangerous.
4. Inspect all your coax connectors and interconnecting cables both inside your shack and outside your shack. We get plenty of rain here, so remove any corrosion at your antenna feed points and then waterproof all your antenna connections.

So the takeaway is that despite today's electronics, including our ham gear, is often too complicated to repair

ourselves, many problems are very simple and often can be prevented by some simple, preventative maintenance.

Our VP's Report

by Larry - K4JZQ



Larry K4JZQ our Field Day Chair presiding over our Field Day dinner on Saturday which offered a lot of delicious food between showers.

By the time you read this column, Field Day 2015 weekend will have come and gone. Once we have the statistics in, I will share them with all the AARC membership. Thanks to all of you who attended the Field Day activities, and especially to those of you who participated in showing the public how we can operate in and during emergency conditions. We also greatly appreciated those of you who brought chairs, tables, coolers and ice for use at this new site. It's through a team effort that we can convey to the public our dedication to public service while also enjoying the personal benefits and fun of ham radio. Not all of us can travel to far off places and be a part of other cultures but discovering new friends through ham radio in other parts of the world is a great second best thing.

Many thanks to the Field Day Committee members who helped with our Field Day preparations: N3US, Ed Berkowitz; K4DU Bob Pattison; KA4JJD Michael J. Rein; K4JEC Jim Crosby; W4BMW Marty Wangberg; KQ9P Mike McPherson; K4BAV Jim Wilson; WR4I Dennis Terrible, and K4PMC Patsy Crosby. I would also like to thank N0WP Bill Pond and K4CGY Jim Owen as our senior consultants. They help and advice along the way was greatly appreciated as always.

I would be remiss if I didn't point out to AARC members that the key person in this effort has been KQ9P Mike McPherson. Mike has worked tirelessly on this Field Day exercise. It was Mike who first suggested we try another venue this year at the Emergency Communication Center. Mike again captained the Digital mode operation and conducted a special class during Field Day on that activity. Mike also got us wifi connectivity and even put us in contact with the Cavalier Septic Services so we could have facilities at the site, all donated free.

Finally, I want to say a special thank you to Linda Beard

who called me to say she thought she was well enough so she was determined to come to Field Day this year, and to even bring her special equipment in hopes of making a satellite contact. It's folks like this who pitch in to help the Club under adverse circumstances that have a special place in my heart. Thank you Linda for thinking of us and wanting to help.

We would appreciate any feedback from members on your views of Field Day; how it went in your view, how it can be improved in future years; and how you would make it better if you were in charge (the latter can be anonymous if you wish). Even so, please take the time to give us your views.

Larry Eicher, K4JZQ
VP and Field Day Chair 2015

Porta Johns at Field Day Site

By Ed Berkowitz, N3US

Cavalier Septic Service provided us two Porta Johns at no cost whatsoever for our Field Day operation! I estimate that 25% of our members have septic tank systems including myself. We can show our appreciation to the owner, Keith Ford, by considering Cavalier Septic System for any required septic service. Their webpage made me chuckle because it states: "A Royal Flush beats a Full House."

Field Day 2015 Reports & Pictures

Compiled by the Editor

Field Day 2015 for the Albemarle Amateur Radio Club got off to a soaking start amid heavy rain from time-to-time, but the enthusiasm of our Field Day Committee led our worker bees into a frenzy of setup activity that ignored rain and wind to get the job done and on the air by 2 p.m. Saturday. Amid much concern about not setting anything up until Saturday a.m.; crews were resourceful and energetic to disprove the concern.

The response of the members, invited guests and folks interested in amateur radio was overwhelming with the respect to the weather forecast for the event. We had more than 30 hams/members and 15 guests which included some first time politicians.

This year we had some firsts for points. We had a public education video and an amateur radio class conducted by Linda Beard KI5LLB. We made our solar powered contacts to qualify for those extra points, copied the bulletin from W1AW thanks to Mike KQ9P (with germ inhibiting face mask) and really scored the points for CW contacts through the special efforts of Dennis WR4I. As usual, Jim K4CGY made the greatest number of personal contacts due to his tenacity at the radio.

The GOTO station had an opportunity to introduce a number of guests to the air waves with contacts earning them a certificate of performance thanks to Marty W4MBW and

Michael KA4JJD.

We also had an impromptu demonstration of amateurs de-grounding a mobile station.



Lets take a look at the AARC Field Day 2015 via the following pictures:



And the rain came uninvited to challenge our event yet individual resources brought Field Day to a successful conclusion despite the rather unusual costumes and wet feet.



Food, fun and fellowship are the three cornerstones of the AARC Field Day activities.



Bird hunt? No, an antenna shoot that launched a batch of antennas for Field Day.



Who is that masked man lurking in the corner? A virus could not lay down such a stalwart performer for the AARC.



Our honored guest, the Mayor of Charlottesville, Satyendra Singh Huja, got an introduction to Field Day and the AARC



More operators working on contacts for the club.



The operating theatre where making contacts is the goal of the adventure.



Our GOTO station got a guest from the 911 Center on the air.



Vicky and Patsy sat up for the club dinner.



Battery, generator and solar power supplied the energy required to operate Field Day totally off the grid.



The far right monitor offered a continuous public education video for Amateur Radio.



WR4I Dennis' dedication to our CW effort copped a lot of points for the club. Mike KJ4MFN logged for Dennis and helped in so many ways unknown.



A Field Day class on solar and battery powered satellite contact was offered by Linda KI5LLB.



Our Information Station proudly displayed the documents proclaiming AARC Field Day as an official day in the state and local area obtained through the diligence of Michael KA4JJD along with the club and amateur radio pamphlets for public distribution.



While such calamities as heavy rain and a virus could really put a damper on some spirits, what else could one expect during an otherwise perfect Field Day experience under the persevering leadership of Larry K4JZQ? We prevailed!



Charlottesville City Councilor Kristin Szakos visits with Jim K4CGY, Stan W2SSB and Allan K9MBQ.

GOTA Station at Field Day 2015

By Marty W4MBW and Michael KA4JJD



The Get On The Air (GOTA) station for the AARC 2015 Field Day event was coached by Marty W4MBW and Michael KA4JJD. The radio equipment was provided by W4MBW and featured an ICOM 7100. This beautiful rig covers all of the HF bands as well as VHF and UHF. It had

the advantage, as well, of being highly intuitive, so it could be operated by our GOTA attendees. The rig garnered much admiration from AARC members during set up. W4MBW also provided a pop-up tent (that was almost free of leaks) and the operating table. KA4JJD provided a cooler, several pencils, certificates for those making contacts, and some other things made out of paper. The off-center dipole was launched on one side with a potato gun and on the other side with a slingshot. It missed all the nearby power lines.

The GOTA station, using call Sign WA4TFZ, was fully operational for 6 hours on Saturday and 6 hours on Sunday. Coaches were present at all times. We logged a total of 34 contacts among 10 attendees. Of these, eight were unlicensed, and two were brand new Technicians, who had never operated HF. We operated exclusively by hunt and pounce. Two folks made 8 contacts each, two made four contacts each, one made three contacts, two made two contacts, and three made one contact apiece. Each contact was followed by thunderous applause from the coaches and bystanders. It was our informal impression that YL/XYLs obtained more rapid responses, but we have no firm data on this. Our last attendee was The Honorable Creigh Deeds, State Senator representing the 25th District, who very rapidly made a contact with Vermont. Earlier in the day, The Honorable Satyendra Huja, Mayor of Charlottesville, manned the rig and was vastly patient with highly uncooperative bands, which prevented his making a contact.

A really good time was had by all, and several attendees returned later in the day to do further operating. We think that we encouraged several new hams and a couple of upgrades.

Society of Amateur Radio Astronomers Convention

By Jim Wilson K4BAV



Fifty-five amateur radio operators, folks who spend most of their time listening with special receivers, met on June 21-24th at the National Radio Astronomy Observatory in Green Bank, West Virginia. I was one of our AARC members, who attended this four day conference. This was the annual meeting of SARA, the Society of Amateur Radio Astronomers.

Each day was packed with fascinating lectures which included a tour of the ultra cutting edge Karl Jansky Electronics Laboratory and a close up look from the top of the largest steerable radio antenna in the world, the GBT.

For the climb to the top of the 500 foot dish antenna, weather was perfect; one member described it as, "a Chamber of Commerce day." (Two small elevators take you to the top). While at the top of the antenna, the small group of five people spotted a momma black bear with three cubs crossing the nearby airport runway.

The NRAO Green Bank site is like a college campus, with dormitories and a cafeteria and historic antennas on site including a replica of the Karl Jansky rotatable dipole antenna and the original Grote Ruber dish antenna from his backyard in Illinois. Eight cafeteria meals are included with the modest registration fee for this annual convention. This was Jim's third year attending this high tech convention.

A spacious science museum on site and Visitors Center are open seven days a week from 8:30 a.m. to 7:00 p.m. In addition to the famous Green Bank Telescope, about a dozen other historic dish antennas are located on site, including the 140 foot diameter antenna used by SETI in its original search for extraterrestrial life. Today, the Russians rent this telescope to monitor one of their spy satellites.

Amateur radio operators are permitted to use two of the radio antennas on site, but only to listen. Green Bank is a "national quiet zone." No cell phones or digital cameras are permitted close to the super sensitive radio receivers. The GBT steerable antenna chiefly monitors the L band, signals at 1-2 GHz. But it also has receivers for the F, E, X, KU, and KFCA bands up to 24 GHz in frequency. This VIP tour included a look into the actuator control room, and the noisy cryogenic compressor room, the servo room, and the emergency power room with its 600 kilowatt diesel generator.

The Green Bank Amateur Radio Club uses the call sign W9GFZ, which was Grote Ruber's call sign. Inside the fascinating museum behind a glass enclosure is Grote's amateur radio equipment. To old timers, this equipment will look very familiar. Amateur radio enthusiasts invented radio astronomy.

Some of the SARA members erected dipoles and other special antennas in the nearby field. These included projects called "Radio Jove" which monitors natural signals from the planet Jupiter, and "SID" the radio receiver that monitors Sudden Ionospheric Disturbances. Inexpensive kits can be purchased for either of these radio projects. Jim owns a SID receiver.

Dates for the next eastern region SARA conference are set for early July. In the past, AARC club members Mike McPherson KQ9P and Bob Miller W4RBM have considered attending this convention. Jim was a member of this club for several years before venturing to one of their meetings at Green Bank. "Take more chances," Jim now advises.

Oh, a presentation by one of the members, Jay Wilson W0AIR, described current efforts to entice young people into amateur radio. Jay's has been incredibly successful. Jim will monitor Jay's success and may be able to duplicate this process for the Albemarle Amateur radio Club. Stay tuned. .

AARC Meeting Minutes for June 9, 2015

Board Meeting – No board meeting called.

General Membership Meeting -- The meeting was called to order by President Ed Berkowitz at 7 p.m. with 27 members present. He called for introductions of those present.

Secretary's report: Received approval of the June minutes as published in the newsletter. Minutes were approved as published. The secretary requested a vote of approval for the memberships of Warren Crady (N4IQH) and Susanne Zimmerman (KK4EDV). Their memberships were approved by a unanimous vote of the membership.

Treasurer's Report: Beginning balance: \$_7,108.24, debits-\$363.63, credits-\$222.06 with an ending balance-\$6,966.94.

Other Reports: **Bill Pond K0WP** announced that the Yaesu Fusion repeater was ordered to come in July. The Interface has been purchased and is waiting on cables which are expected by mid-July. The 220 repeater is down for repair. The 895 repeater experienced some interference during the Miller School event. (Now determined to be the 176.760 repeater via the link which is down for repairs).

A discussion was opened by **Bob K4DU** regarding Estate Committee sales, etc. After much discussion, Dave K4DND suggested that the handling of estate sales and decisions regarding commissions should be handled by the Estate Committee. It was noted that the board conducts the business affairs of the club and therefore **Jim K4JEC** made a motion that the Estate Committee produce a policies and procedures guide for the sale of items and bring back a report to the Board for approval and implementation. The motion was seconded by **Dave K4DND** and passed without dissent.

To clarify the issue, it was pointed out by **Harry W2HD** that the handling of his estate equipment by **Bob K4DU** was not an Estate Committee issue because he is not deceased and it was a personal agreement between the two of them.

Dave K4DND gave a report on Public Service activities citing the MS 150 Bike Tour scheduled for next weekend and the need for additional volunteers.

It was pointed out that the VE Session set for Saturday at the NRAO has only three VE's and more would be appreciated.

K4CGY reported on his adventures at the Dayton Hamvention

A moment of silence was observed in memory of the passing of **John Gray W6UZ**, a longtime member and past president of the club; and **Ernie Sardi W2EIU**, another longtime member and past officer of the club.

Larry K4JZQ gave a review of Field Day activities and urged those in attendance to sign up for Field Day activities via the website and various email notices. He stated he was concerned by the lack of signups for operations. His full report was circulated to the membership via email.

Having no old business or new business to discuss, the meeting was adjourned for the presentation by Mike WQ9P on digital communications and their use during Field Day.



Following the presentation, the group broke into small session of personal interest.

The meeting was adjourned at 8:40 p.m.

Respectfully submitted,
Patsy S. Crosby, secretary

Our Monthly Photo Album

By Jim Wilson, K4BAV



Our mobile ham shack demonstrated by Mario K4MDX.



Creigh Deeds and Tom Hanson were all smiles visiting our setup on the 911 Center lawn.



Vicky Eicher got on the air with Michael KA4JJD.



State Senator Creigh Deeds even got on the air with Michael KA4JJD and Marty K4MBW at the GOTO Station.

Please Note

(From Your Editor)

The questions I posed in the last issue; "Why do we even have a newsletter? Does anyone read it?" has had an overwhelming response. My email box overflowed with your responses in an almost unanimous "Yes." Yes, there were a couple of naysayers who said they never read it, however I must work for the overwhelming majority and revel in your support.

I was very impressed with your responses and as a result feel the effort we put into the production of *The Beacon* is very much appreciated and worthy of my every effort. It gave me a renewed outlook at a time when I was beginning to feel burned out. Thank you one and all.

This also offers me an opportunity to remind everyone that the newsletter is a group production and without your input, it will become stale and boring. So, please renew your efforts to help me to keep it lively, timely and interesting. Send your ideas, input and suggestions to: k4jec@arrl.net

Buy + Sale + Swap

For the latest list, be sure to check our listing on the club website:

www.albemarleradio.org

NEW ITEMS & MOST RECENT LISTINGS as of 6/28/2015

The following Equipment is for sale by Carter WD4AYS: posted 6/28/2015

Knight R-100A General Coverage Receiver & Speaker - \$150

Icom R-71A General Coverage Receiver - \$200

Hallcrafters SX101-A Mark III - \$125

Dentron MT-3000A Antenna Tuner - \$175

RadioShack 10 Meter Mobile Transceiver - \$100

URM-25F Military Signal Generator - \$40

Sencore TR-139 Transistor Tester - \$30

Philco 1940's Console Radio - \$40

The ham gear and the test instruments worked the last time they were used.

The Philco needs some work.

Contact Carter at 434-979-7383 or by email at celliott14@aol.com

FOR SALE posted 1/27/2015 updated 6/28/2015 Below you will find a list of equipment for sale that belongs to Ernie, W2EIU. Contact Bob, K4DU, 434-960-3344,

rep4@aol.com

Manufacturer Model Type Est Value

Alinco DJ-S41 440 Handheld \$40.00

Kenwood PC-1A Phone Patch Controller \$40.00

FOR LOAN posted 4/8/2015

ICOM IC-730 FOR A LOANER

Ms. Alice Bond, XYL of SK Socky Bond (K4GWL) has asked me (through Denny Avers W3DRY) to offer a nice Icom IC-730 as a "loaner" to a local Ham who wishes to try HF

and perhaps doesn't wish, or is unable, to make an investment in a HF rig at this time.

It is Socky's wish that the radio be used to benefit ham radio and is not to be sold or modified but kept under my control (W4MBW) so that it doesn't get lost or end up on a basement shelf somewhere and not used. I've ordered a name tag with Socky's call sign that will be affixed to the front of the radio so that his memory will be preserved.

If you wish to borrow this nice 80-10 transceiver (100W output on SSB & CW and lower output on AM) under the above understanding, please let me know.

73, de Marty W4MBW 434-547-9642

FOR SALE posted 4/8/2015

Hello,

I've got an radio that I'd like to post on for sale in AARC's swapfest.

Its a Hammarlund SP 600 Radio Receiver. The local craigslist post is here:

<http://richmond.craigslist.org/ele/4948530076.html>

and the eBay page is here:

<http://www.ebay.com/itm/Hammarlund-SP-600-Communications-Shortwave-Radio-Receiver-With-Cabinet-/141616226634>

I know very little about it and would prefer to sell it locally to avoid shipping.

Was asking \$700 but would take \$550 from an AARC member.

Please notify k4rka@juno.com to add new items or when an item has been sold or pulled from availability and can be deleted.



Photo by Jim Wilson, K4BAV

Elected Leadership 2015

Ed Berkowitz – N3US	President	eberkowitz@sbcglobal.net
Larry Eicher – K4JZQ	Vice President	tuzlu@comcast.net
Pat Crosby – K4PMC	Secretary	patcrosby73@gmail.com
Don Eason, Jr. – N4UVA	Treasurer	deason@comcast.net
Dave Damon – K4DND	Director Public Services	2-YR dnd@virginia.edu
Jim Owen – K4CGY	Dir Estate Services	2-YR k4cgy@yahoo.com
Bill Pond – N0WP	Director Technical	2-YR n0wp@arrl.net
Jim Crosby – K4JEC	Director Education	1-YR K4JEC@arrl.net
A. J. Miller– KE4AJM	Director Fundraising	1-YR aj@ke4ajm.us
Jim Wilson – K4BAV	Dir Public Relations	1-YR telegraphjim@gmail.com

Appointed Leadership 2015

Larry Eicher – K4JZQ	Field Day Chairman	tuzlu@comcast.net
Mark Gorlinsky – WA1A	Vol Exam Liaison	mgch@mac.com
Michael McPherson – KQ9P	ARES/RACES	mcperson@acm.org
Jim Owen – K4CGY	Club Stations Trustee	k4cgy@yahoo.com
Ron Richey – K4RKA	Swap Fest Coordinator	k4rka@juno.com
Jim Crosby – K4JEC	Beacon Editor	jamescrosby073@gmail.com
Michael Rein – KA4JJD	Awards Committee	mfr6t@cms.mail.virginia.edu
Dave Damon – K4DND	Public Service	dnd@virginia.edu
Mark Whitis– AK4OL	Webmaster	markwhitis@gmail.com
A.J. Miller– KE4AJ	Director Fundraising	aj@ke4ajm.us
Jim Wilson – K4BAV	Director Public Relations	telegraphjim@gmail.com

-The End -