









God Bless America!

January 2018

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Bluegrass Amateur Radio Society, Inc.

P.O. Box 4411, Lexington, Kentucky 40544-4411 Club Station K4KJQ MARS Station AAV4CAB

Memorial BBS 145.010 and 145.090

Board of Directors' Meeting, November 20, 2017

Looking Back . . . From "Ham News," January 1990

Bluegrass Amateur Radio Society, Inc., December 4, 2017 11

Calendar of Ham Radio Activities for January 2018 Inside Cover

> Glenn E. Welman/KF4NB Web Page: http://www.bluegrassars.org E-mail: k4kjq@bluegrassars.org

K4KJO 146.160/.760 ATV Repeater: KY4ATV Input: 439.250 // Output: 923.250

WA4HBM 147.765/.165

"Ham News" was first published by Bobby Foster, WA4ZSQ, in August, 1972; the parent newsletter, "QUA," was first published in March, 1947

QUICKY NOTES -

Accessing the Club's web page: http://www. BluegrassARS.org>.

Telephone Number for the Shack (basement of the Red Cross Building): (859) 231-0974.

Subscribe to ListServ: Send an eMail to: barsrequest@lsv.uky.edu; in Subject line type Subscribe plus <your call sign>

Post notes to the Club List Serv: <bars@lsv.uky.edu>.

-- THE PROGRAM FOR THE JANUARY MEETING . . .

. . . will be hosted by **David Richardson**, **W9KHZ** . . . (See below)

- IT IS TIME TO PAY DUES FOR 2018 -

It is time to pay your dues for 2018. Memberships in the Bluegrass ARS are for one calendar year, January 1 through December 31. Dues are \$20.00 for regular membership or \$15.00 for associate membership (for those persons who reside farther than 50 miles from Lexington), or \$12.00 per year for Full Student memberships (for those students 21 years of age and under, and no other Club member in their family). Additional memberships of \$1.00 each may be had for family members who reside at the same address as the primary membership holder. Make your check payable to Bluegrass ARS, and mail it to PO Box 4411, Lexington KY 40544-4411, or bring your check to the January meeting and give it to



"To sit back hoping that someday, someway, someone will make things right is to go on feeding the crocodile, hoping he will eat you last - but eat you he will.'

~ Ronald Reagan

John Barnes/KS4GL, Treasurer. OR -- you can pay your dues by using your Pay Pal account. Fernie Williams/KE4MAI has set up the link for paying your dues on the Club's web page. Just go to http://www.BluegrassARS.org... on the home page click on "Membership" and proceed by responding to the option that pertains to your membership type. For example click on 1 year regular membership and a dropdown listing will appear giving you options for paying for one year or multiple years, etc. The same occurs when you click on Associate Member (for persons living more that 50 miles from Lexington), and Full Student Member (this may still read "Student Membership"). Once you click on the type membership you want to renew, click on "Buy Now" and the Pay Pal page will automatically display. Follow the instructions presented to finish paying. There is no added charge ofor paying through Pay Pal.

QUA/HAMnews

January 2018

Meeting Notice

Bill DeVore/N4DIT.

Chair, Newsletter Committee Bluegrass ARS, Lexington, Kentucky

The regular meeting of the Bluegrass Amateur Radio Society, Inc., will be held the second Monday of January (the 8th), 7:30 PM, Meeting Room B, second floor of the Red Cross Building, 1450 Newtown Pike, Lexington. This change was due to the first Monday being New Years day holiday.

We will discuss 2018 plans and activities suggestions with and by the new officers, and David Richardson/W9KHZ will discuss his plans for the Club's participation in Winter Field Day, coming up later this month. This will be our first attempt at setting

up and operating for this challenging activity (challenging because of the weather). We would like to have a large group of brave souls participate so come on out to the Red Cross for the meeting. . .and bring a friend or two!

We welcome your suggestions of how we can make a difference in the Club in 2018 and thank you for your participation and support.

If you have a program you would like to hear or a topic you would like to present,

contact James Schlesser/WA9MED at (757) 402-8208, or email to <wa9med@jschles ser.com>. (see the schedule on page 2). +

Board of Directors' Meeting

Bill DeVore/N4DIT, Chair, Newsletter Committee Bluegrass ARS, Lexington, Kentucky

The Board of Directors of the Bluegrass Amateur Radio Society, Inc., will meet the fourth Monday, January 22, 2018, at 7:30 PM in the Education Center, basement of the Red Cross

Building, 1450 Newtown Pike, Lexington.



Board meetings offer you the members, or anyone having an interest in amateur radio or public service, a forum to present your ideas, requests, congratulations or complaints to the officers and committee chairs of the Club. We always are in need of persons to share their expertise in a special area or to share an experience or activity by presenting a program at the Club's regular monthly meeting, or to make suggestions for program topics. Anyone wishing to present a program or who has suggestions for programs, should talk to **James Schlesser/WA9MED**, during a Club meeting, or contact him at (757) 478-2186, or e-mail to <wa9med@jschlesser.com>.

Note that we still need volunteers to chair the Contest Committee and the Public Relations and Membership Committee. Contact **Andrew Cook/KF4OWP** at <kf4owp@gmail.com> or (859) 396-9930.

To attend the board meeting, enter the Red Cross building through the basement entrance on the left end of the building as you stand facing the front of the building. Follow the stairway down into the basement and into the Education Center adjacent to the Club shack. •

Recommended Reading If You Need Grounding Information

Bill Cotter/N4LG, Member, Bluegrass ARS Lexington, Kentucky <n4lg@QX.NET>

November 4. 2017

A good book on grounding techniques: https://assets.tequipment.net/assets/3/7/ GettingDownToEarth.pdf>. ◆

December Club Meeting

Items Were Displayed and Auctioned, Election Results Were Announced

Everyone in attendance was given time to view the items and consider their worthiness or usefulness. **Bruce Campbell/KM4EHU** reported in his minutes of the meeting: The end-of-year members' auction of excess gear and equipment was held during the vote counting. Proceeds from the auction that were donated to the club amounted to seventy-seven dollars (\$77.00). **Bill Fuqua**, **WA4LAV**, provided descriptions of items and color commentary.

Taking a break during the auction, nominating committee members **Roger Colvin,KJ4YSY**, and **Loretta Colvin**, assisted by **Pete Kragh**, **K2UPD**, tallied the fifty-two(52) ballots received from the ninety-eight(98) members eligible to vote in the officers election. The final count showed our elected club officers for 2018 are:

President - Andrew Cook, KF4OWP;

First Vice President - Bill Fuqua, WA9LAV;

Second Vice President - James Schlesser, WA9MED;

Secretary - Bruce A. Campbell, KM4EHU;

Treasurer – John Barnes, KS4GL;

Directors-at-Large - Tim Kunkel, KF4MPM; and David Richardson,

W9KHZ. +

Puerto Rico Stations Face Obstacles

Mainland Broadcasters Help Devastated Stations and Listeners

By James Careless
December 7, 2017
submitted by Brad James/WA4HBM,

Member, Bluegrass ARS, Lexington, Kentucky

Many weeks after Hurricane Maria devastated Puerto Rico's infrastructure, radio broadcasters there were struggling to get and keep their signals in air.

Most of the AM/FM stations in service were relying on diesel generators for electricity, because the island's storm-ravaged power grid was still in terrible shape.

Program Schedule for 2018

James Schlesser/WA9MED, Chair, Program Committee
Bluegrass ARS, Lexington, Kentucky

The following programs are scheduled for 2018. Your input and suggestions for programs for 2018 are needed. Call **James Schlesser/WA9MED** at (757) 402-8208, or e-mail to <wa9med@jschlesser.com>.

Month	Topic Presenter(s)	Comments
January	"Winter Field Day, January 27-28, 2018" Davi	d Richardson, W9KHZ.
February	James Schlesser/WA9MED What	Programs Would You Like to Hear?
March	Tentative – Severe Weather Identification and Repo	orting tentatively by Joe Sullivan/KC7ITG of the NWS, Louisville
April	Open	
May	Open	
June	"Field Day" (Presennter Pending) Site location	n, preparation, operating stations, etc.
July	Open	
August	Hamfest Dave Richardson/W9KHZ and	Fest Committee Location, preparation, tickets, tables, work crews, etc.
September	r Annual Family Picnic Fun, Food, Conversati	ion Picnic Shelter #2, Shillito Park, Lexington
October	Open	x****
November	Report of Nominating Committee Roger/KJ4	YSY and Loretta Colvin Ballot of Officers for 2019
December	Annual Auction J.B. Young will serve as auc	ctioneer to see if he can get you some cash - Bring your items

In response to this situation – which has not only affected radio station owners and their staff, but also the people of Puerto Rico who rely on radio for information – U.S. broadcasters are providing money, equipment and support to their broadcast brethren in the territory.

"Our members understand what it is like to be slammed by a hurricane, and remember how other broadcasters helped them out in times like these," said **Vance Harrison**, president of the National Alliance of State Broadcasters Associations. "We're stepping up to help our fellow radio stations in Puerto Rico, just as they would if we were in such serious trouble."

The Biggest Need

What do Puerto Rico's radio broadcasters need most? The answer is simple.

"With so many stations relying on diesel and gasoline generators to stay on air, money is needed to pay for the fuel, at a time when advertising is not coming in," Ribas said. "Without that fuel, which has to be purchased constantly, we can't keep broadcasting."

To help pay these fuel costs, the Puerto Rico Radio Broadcasters Association opened a bank account to accept donations on behalf of radio broadcasters there and in the U.S. Virgin Islands, both pummeled by Maria. The PRRBA hopes to raise \$250,000 to help these broadcasters get back in service and stay on air.

"Getting Puerto Rican radio back on its feet is going to be a long-term challenge, due to the fundamental damage they've suffered there," said VAB Executive Director **Jim Condon.** "So we need to be there for our fellow broadcasters, for the long haul."

In early November, donations had come in from NASBA plus individual groups such as the Florida Association of Broadcasters and the Vermont Association of Broadcasters, and the fund had raised \$25,000, said Harrison. "But much more is definitely needed."

Ribas subsequently emailed that the Maine Association of Broadcasters had contributed another \$25,000.

WNYC'S Hands-On Approach

New York City public stations WNYC (AM/FM) understands the experience of having broadcast infrastructure devastated.

"Our FM transmitter was located on the World Trade Center, which came down on 9/11," said **Steve Shultis**, its chief technology officer. "Had we not received help from WKCR (FM), who lent Have you been wanting to get on the air but don't have a rig? How about operating in a HF DX or VHF/UHF contest? The shack is open most Saturday mornings, 9:00 AM until Noon, so come on out! Arrangements can be made for other times. Telephone the shack at 231-0974.

us a studio, and WNYE (FM), who found us a frequency and transmitter, we would have been knocked off air for a long time. So we know what it is like to need help, and to receive it."

When WNYC's staff learned that San Juan public station WIPR had lost its mountaintop transmission/antenna facilities – "When we visited the site, we saw wreckage everywhere," said WNYC Engineering Manager **Dannie Raghunath** – they wanted to help. That's where the nonprofit CoastAlaska media collective came in.

As Shultis recounted it, "They contacted WNYC to tell us that CoastAlaska had built two 'radio-to-go' kits, each of which would let them set up a temporary station after a tsunami. So we asked CoastAlaska to lend us a kit to take to Puerto Rico, and they did."

Equipped with the 300-pound radio-togo kit – filled with microphones and mixer to a 150-Watt transmitter and 30-foot standalone vertical antenna mast – Raghunath and fellow WNYC engineer **Peter Polanco** travelled to Puerto Rico in October to get WIPR back on air. "We had an armed guard escort us and our equipment from the airport to the hotel," Raghunath said. "That's just how the situation there is right now."

In three days' time, the two WNYC engineers had set up the kit at WIPR's San Juan studios, and erected the antenna mast on its roof, held in place by cinder blocks on its tripod legs.

"We are getting a 3 dB gain on the antenna, which is carrying 150 Watts on FM throughout Greater San Juan in a 20-mile radius," said Shultis. "It certainly is no match for WIPR's original 150,000-Watt signal from its mountaintop antenna, but this temporary setup is still a big help."

Radios to the Rescue

The National Association of Broadcasters, NASBA and many unnamed U.S. broadcasters, banded together to send 10,000 portable radios to the people of Puerto Rico.

"Time and again, broadcast radio has served as a lifeline to communities desper-

ate for information and support," stated NAB President and CEO **Gordon Smith** in an NAB news release. "Our fellow Americans in the Caribbean now face a once-in-a-generation humanitarian crisis, and radio is one of the only communications resources available."

The 10,000 radios were cassette tapesized QFX R-9s. Capable of AM, FM and SW (shortwave) signals, each R-9 comes with a telescopic antenna, LED power indicator and a 3.5 mm earphone jack. They retail on-line for \$9.99.

The NAB/NASBA/broadcasters coalition that acquired 10,000 of these for Puerto Rico also supplied two pairs of AA batteries with each radio. "We found the R-9s on the West Coast, and had them shipped to Florida," said FAB President **Pat Roberts.** "Even at their small size, the 10,000 R-9 radios required three pallets to ship them. The 40,000 AA batteries needed six pallets more."

After much legwork, the radios/batteries were flown into Puerto Rico and the U.S. Virgin islands in October.

Suzanne Raven, NAB's senior manager of public service, was on the ground in Puerto Rico with NAB Building Engineer **Louis Abanez** when the radios were distributed with FEMA's help to 25 communities there.

"It was touching to see the faces of Puerto Rican children light up when we handed them a new radio. People literally danced in the streets," said Raven. "Residents flocked to us, particularly after dark when our vehicles provided the only lights for miles.

"Word of mouth was key in making the mayors' offices aware of our initiative," she said. "Some mayors only became aware of our radio distribution upon arriving in San Juan. Without cell service, they could not receive messages about our efforts."

This generosity played out against a backdrop of fearsome destruction. "Most of Puerto Rico remained without power and drinkable water during our visit," said Raven. "Even in the capital of San Juan, power came almost exclusively from generators that had to be refilled with fuel or diesel daily by hand, sometimes every four hours.

"Seeing the devastation drove home the need for reliable communication," Raven said. "Cellphone connections and Internet service are nonexistent in many parts of Puerto Rico. Broadcast radio continues to connect people to critical information."

The Need is Real

It will take months, or even years, for the industry and its island home to recover from Maria's bulldozer-like destruction.

"As Floridians, we know what it is like to be where Puerto Rico finds itself today," said FAB's **Pat Roberts.** "This is why our broadcasters are doing all they can to help our radio colleagues there, and we urge all other broadcasters to join us in doing so." •

W1AW to Begin Scheduled Transmissions on 6 Meters

ARRL Bulletin 24, ARLB024 Newington, Connecticut December 1, 2017

Beginning with the 9;00 AM EST fast code practice on Tuesday, January 2, 2018, W1AW will add 6 meters – specifically 50350 kHz – to its regular CW code practice, and CW, digital and phone bulletin transmission schedule.

Prior to late 1989, W1AW had a presence on 6 meters for all its CW practice, and regular bulletins. Since that time however, the station was absent on 6 meters, with the exception of regular visitor operations and contests.

In addition to providing regularly scheduled transmissions on 6 meters, another goal is to act as a beacon on 6 meters, especially from the Northeast U.S.

Signal reports will be welcome. A web page that will allow listeners to provide signal reports will be made available after the start date. Reports may also be emailed to W1AW at, w1aw@arrl.org. •

Dale's Tales for January 2018

Dale Williams/WA8EFK

Director, ARRL Great Lakes Division wa8efk@arrl.org

Here is the Great Lakes Division recap of 2017 for Kentucky Section. (Due to space limitations only Kentucky is shown here. A copy of the recaps for Ohio and Michigan may be requested from Dale – Editor):

From the **KENTUCKY SECTION**:



Executed a smooth transition between outgoing SM Alan Morgan, KY1O and the incoming Section Manager Steve Morgan W4NHO.

The Kentucky Section had representation by the KY SM at 7 of 12 Hamfests in KY, with plans in place to attend more in 2018.

The Kentucky Section initiated a monthly news column which includes the recognition of the ARRL Affiliated Club of the Month.

KY will continue to build our Winlink network in Region 1 & Region 2.

The expanding DMR Network now covers KY from Owensboro to Paintsville and Northern KY to Bowling Green. We now have 30 to 40 checks-in on our weekly net.

Had excellent representation for the Western KY Eclipse with Frankfort and statewide communications in August.

The KY Section will continue to rebuild our relationship with Frankfort Emergency Management Authority and with the incoming new management of Barry Sanford. Cecil Dennis is serving as liaison for Auxcom.

Working with SEC to refill existing vacancies of selected EC, DEC and ASEC across the Section, while working toward developing a KY State Convention or KY ARES Conference.

My thanks go to all of our Section Managers for the outstanding jobs they have been doing. Sometimes the job can be tough, sometimes difficult decisions must be made, but by and large the hams in the Great Lakes Division have the best interests of Amateur Radio at heart and are very supportive of all of the groups that comprise the ARRL Field Organization. This whole organization works because of our volunteers.

We are all doing this for the love of ham radio, and as we move into 2018, we can expect more opportunities and exciting new ventures to come before us.

Thank you all.

TOM'S COMMENTS: The end of the year can provide an opportunity to look back, as well as forward. Lots of people will be making "New Year's resolutions" to do something or not do something in the coming year. I've never found that very helpful. Instead, I like to focus on the continuity of efforts to reach a goal. So, today, I want to look at 2017 and remember some of the events while also looking ahead.

Hamvention was held in Xenia this past year. Congratulations to the planners who had little to go on and who had to re-invent everything. Yes, there were a few hitches, but overall, Hamvention was as successful as most of the past 50-some iterations. And from the reports of the new building and other changes, it sounds like Hamvention will once again be the place to be in mid-May.

And a promising start was made for the first-ever GL Hamcon in Michigan. There's room for improvement, but the number of pleased "customers" and the large facility should help it become a great venue in the years to come.

Then there are the efforts throughout the US, and within the Division, to educate, train, and motivate new hams. I'm pleased that I've been able to make some contributions through the committees I serve on, but the more important work is being done by every ham who conducts a class, serves as a VE for exams, and in particular, serves as a mentor for new people coming into the hobby. In various forums conducted at hamfests, I've been very happy to see how many of you agree with the ARRL efforts to grow ham radio, both by improving the educational materials, and focusing on potential changes in the licensing system that we might request.

That's where the real work will be for next year. Let's look at our efforts of 2017, and try to move them forward even more in 2018.

73, Tom W8WTD Vice Director, Great Lakes Division

STATE CONVENTIONS: In even numbered years, the Great Lakes Division's three Sections host their individual State Conventions. If your local hamfest is interested in serving as the host for your State Convention in 2018, your club should contact your Section Manager and request to serve as the sponsor. State Conventions normally encompass special

forums, can request guest forum speakers from ARRL and often hold recognition banquets and special programs. Having a convention also means additional attendance beyond that normally expected at a regular hamfest.

Schedule for Volunteer Examinations in 2018

Harry Sparks/KN4S,*

Bluegrass Volunteer Examiners, kn4s@kn4s.com

The exam schedule for 2018 follows nearly the same format as past years. The scheduling is for Lexington/Fayette County and the sessions in Danville, Georgetown, Winchester, and Richmond hamfest. The Bluegrass Amateur Radio Society-sponsored ARRL exams will continue to be held on the second Saturday of the second month of each quarter (except the August Session will be the date of the Central Kentucky ARRL Hamfest in Lexington), and the WCARS sessions remain as they were last year, Tuesday evenings quarterly.

Test Session Locations

Lexington*	Winchester**	Danville	Georgetown	
Red Cross Building	Clark County EOC	Amer Legion Post 46	Georgetown Police Dept	
1450 Newtown Pike	200 Maryland Ave	45 Spears Lane	550 Bourbon Street	
Lexington KY 40509	Winchester KY 40391	Danville KY 40422	Georgetown KY 40324	
* August, Bluegrass ARS Hamfest, Eastland Shopping Center, Lexington, Kentucky				
** September, Richmond Hamfest, Madison County Fairgrounds, Richmond, Kentucky				

Contact Information

ARRL VEC: Lexington and BARS ARRL Hamfest test sessions – Liaison Fernie

Williams/KE4MAI, ke4mai@arrl.net, 859-652-3393

(www.bluegrassars.org)

Danville – Liaison John Wulf/K4FT, johnk4ft@gmail.com, 563-505-

0339, Wilderness Road ARC, http://www.wrarc.com Georgetown – Liaison **Ron Malinowski/WX4GPS**,

wx4gps@arrl.net, 502-542-8252

WCARS VEC: Lexington - Liaison Margueritte Williams/KE4MAJ,

ke4maj@arrl.net, 859-489-6274 (www.bluegrassars.org)

W5YI VEC: Winchester – Liaison **Darrell Epperson/AC4YD**, eppersond@aol.com, 859-771-1834

TEST SESSION FEE: ARRL - \$15; WCARS - \$10; W5YI - \$14

Date and Time	VEC	Location
Saturday, January 13 , 2018 10:00	AM W5YI	Winchester
Saturday, January 27 , 2018 10:00	AM ARRL	Danville
Saturday, February 10, 2018 10:00	AM ARRL	Lexington
Saturday, March 10, 2018 10:00	AM ARRL	Georgetown
Tuesday, March 20, 2018 07:00	PM WCARS	Lexington
Saturday, April 14, 2018 10:00	AM W5YI	Winchester
Saturday, April 28, 2018 10:00	AM ARRL	Danville
Saturday, May 11, 2018 10:00	AM ARRL	Lexington
Saturday, June 9, 2018 10:00 <i>i</i>	AM ARRL	Georgetown
Tuesday, June 12, 2018 07:00	PM WCARS	Lexington
Saturday, July 14, 2018 10:00 <i>i</i>	AM W5YI	Winchester
Saturday, July 28, 2018 10:00 <i>i</i>	AM ARRL	Danville
Saturday August 11, 2018 11:00 .	AM ARRL	BARS Hamfest
Saturday. September 8, 2018 10:00 <i>I</i>	AM ARRL	Georgetown
Saturday, September 15, 2018 12:30	PM W5YI	**Richmond Hamfest
Tuesday, September 18, 2018 07:00	PM WCARS	Lexington
Saturday, October 13, 2018 10:00	AM W5YI	Winchester
Saturday, October 27, 2018 10:00 <i>i</i>	AM ARRL	Danville
Saturday, November 10, 2018 10:00	O AM ARRL	Lexington
Saturday. December 8, 2018 10:00	AM ARRL	Georgetown
Tuesday, December 11 , 2018 7:00	PM WCARS	Lexington
*Additional exam locations, dates, tim	es are listed at we	ebsite kn4s@kn4s.com

Andy Rooney wrote that . . .

... "I'd like to be rich enough so I could throw soap away after the letters are worn off."

HAMFESTING: We have approximately 65 ARRL hamfests each year in the Division. I do encourage each Hamfest Chair to register early for ARRL Sanctioning. Be sure to invite your ARRL Officials as soon as your date is set. Here is the current Great Lakes Division ARRL Sanctioned Hamfest Schedule covering the next couple of months (for shows within driving distance from central Kentucky – Editor]. These swaps have received their sanctioning approval from ARRL HQ at the time of this publication.

Jan 14 SCARF Hamfest Nelsonville, OH

Jan 18 InterCity Hamfest Mansfield, OH

Mar 3 Cave City Hamfest Cave City, KY

Mar 17 MOVARC Hamfest Gallipolis, OH

Mar 18 Toledo Mobile R.A.

Mar 18 Toledo Mobile R.A Perrysburg, OH

Be sure to check your Section's news pages for the latest local happenings, club and net information.

73, Dale Williams WA8EFK Director, ARRL Great Lakes Division

Radio Amateur Receives Patent for "Cloaking" Technology

<www.ARRL.org>, Latest News, December 28, 2017

Nathan "Chip" Cohen, W1YW, of Belmont, Massachusetts, the founder of Fractal Antenna Systems, Inc. and inventor of the fractal antenna, has been granted a patent for deflective electromagnetic shielding — essentially "cloaking" technology to defend against detection by radar and similar technologies.

"Ham radio experimentation can lead to some pretty cool innovations!" Cohen said in response to a recent *QRZ Forum* post about the patent. "Let's keep that spirit alive in 2018."

The patent covers electromagnetic cloaking/deflection of, among other things, satellites, rockets, towers, antennas, vehicles, body coverings, ships,

spacecraft, and even people.

"Much time and effort has been devoted to the quest for so-called invisibility machines," the patent's background information states. "Beyond science fiction, however, there has been little, if any, real progress toward this goal."

According to the detailed description, the technology "provides one or more surfaces that act or function as shielding and/or cloaking surfaces for which at least a portion of the surface includes or is composed of 'fractal cells' (small fractal shapes, functioning as antennas or resonators) placed sufficiently close to one another, so that current present in one fractal cell is replicated or reproduced to an extent in an adjacent fractal cell. Without being limited by any theoretical explanation, surface plasmonic waves are believed to cause such replication in conjunction with evanescent waves." The resulting surface would deflect around an obiect.

In terms of backscatter, upon which radar systems depend, Cohen explained it this way: "The incoming wave reflects off a boundary condition at the object. Its reflection is out of phase and phase-cancels with the incoming wave. Bye-bye, backscatter."

Fractal Antenna Systems first publicly demonstrated "person invisibility" for a Radio Club of America audience an at Hamvention® and at the ARRL New England Division Convention. According to the company's BusinessWire release, "Uses of the newly patented technology extend to commercial needs such as towers, antennas, people, and shielding, but it may also be used in defense and intelligence arenas."

According to the BusinessWire release, the technology "produces the desired effects without any requirements on special orientation, composition, or shape of the object. The cloak/deflector can be very thin, and the effect can happen over a wide bandwidth."

The company noted that "cloaking" applications concentrate on microwave and infrared wavelengths, "although the technology and patents apply to visible light as well." Stated Cohen, "Cloaking at visible light has limited needs. Camouflage and projection methods are easier and cheaper at making something disappear to the eye. But at radio and heat wavelengths, the cloaking technology is an important enabler." \blacklozenge

"Progress is man's ability to complicate simplicity."

~ Thor Heyerdahl

How Self-Healing Electronics Could Change Everything

Robin Mitchell,

All About Circuits, https://www.allaboutcircuits.com/news
November 28, 2016

Current technology and manufacturing techniques make modern consumer life very convenient. When devices break, it is easier for most to throw the old device away and purchase a new one instead of getting it repaired. Innovations like cloud storage remove the need to transfer files to and from devices. Constant development in silicon technology make devices constantly cheaper. And with on-line shopping, most items can be purchased on-line and delivered without ever needing to leave the house.

If, however, someone told you that instead of replacing a broken device you could wait an hour and the device would be back in operation. Would there be a need to replace that broken item?

Engineers at the University of California San Diego, led by **Amay Bandodkar**, have created a special conductive mixture that can repair itself and continue to function when cut. The team's goal was to create a material that is conductive and can self-heal while keeping costs low and complexity to a minimum.

The mixture has a simple composition that consists of a conductive material and a magnetic material. The magnetic material was obtained from common neodymium magnets which are found in many consumer products such as headphones, mobile phones, and telephones.

Once the mixture is printed, it is exposed to a high-intensity electromagnetic field which forces all the magnetic particles to align in the same direction. When the material is snapped, cut, or fractured, the pieces attract each other and repair the original break.

The contact at the fracture point is fully conductive and allows for normal operation. This was demonstrated with an LED and a battery where the LED was on during normal operation and then turns off when the material is fractured. After a few seconds, the LED turns back on as the material repairs the damage.

Possible Applications

Electronics that could self-heal would bring about a revolution in autonomous appli-

cations and environments which are too dangerous for people to be exposed to. One strong candidate would be space flight and probes that are sent to distant celestial bodies.

Some space-faring crafts experience issues post-launch. Some of these crafts have astronauts that can fix problems, in person—see, for example, the Apollo 13 mission. Other crafts are unmanned, like the European probe, Beagle 2. In Beagle 2's case, communication with the lander could not be established and thus the mission was marked as a failure. Evidence in 2015 suggested that some of the solar panels did not open up, which blocked the Beagles communication array.

Any number of issues could have caused Beagle 2's issues, but imagine for a moment that it had been something like a broken PCB trace or faulty wire that resulted in a crucial signal not being detected by the main onboard computer. A self-healing wire or component could have fixed the issue even in the absence of an engineer, potentially saving billions of dollars.

But the application extends to all probes and satellites in space where failures are not uncommon. Instead of needing to rely on shuttle services to fix damaged systems, self-repairing devices could extend working life and increase reliability in a world increasingly dependent on communication.

Self-healing devices would also be advantageous in environments that are harmful to humans. One example would be the Fukushima nuclear disaster that relied on human intervention to clean up and contain the ejected nuclear material.

While drones and robotics could be used to handle the most dangerous materials, you are still risking damage to the devices or tools that are sent in to fix a problem. With self-repairing parts, it could be possible for breaches in devices to mend themselves, reducing the risk to drone and human alike. •

New School Ham Club is Anything But Academic

Amateur Radio Newsline Report 2096, Friday, December 29, 2017

Amateur radio is all about communications, but as one group of students in West Virginia is learning, it can mean so much more. **Neil Rapp WB9VPG** explains.

NEIL: It's always exciting to hear

about a new high school ham radio club getting on the air. But this one had a little twist. In fact, it took me a while to get in touch with this group that has introduced ham radio to Pocahontas County High School in Dunmore, West Virginia, because they have no cellular telephone service. It's not necessarily by choice. The entire county is inside the United States National Quiet Zone near the National Radio Astronomy Observatory in Green Bank, West Virginia. So when students had the chance to talk to the rest of the world on something other than a cable... they were more than interested. I had a chance to speak with Rudy Marrujo, KD8WPG about the visit to the school from the Eight Rivers Ham Club.

RUDY: We want to show these kids, hey... Pocahontas County is not the only place in the world. It's a big world. And, you know, when a child talks to someone in London or Australia, imagine looking at the smile between their ears. It's ear to ear!

NEIL: When the Eight Rivers Ham Club members visit the school, they are teaching not only how to communicate with the outside world, but also how to build the antennas and equipment to do so. And, they have a limited amount of time available.

RUDY: [We have] two times a month that we can do it for an hour, each class. We have to summarize everything that we can give to a student. So we make a "Empathy is deep understanding of another person."

~ Stephen R. Covey

major impact in one hour.

NEIL: An HF rig and some handhelds are already in a classroom at the school, and all the students who pass the license exam will be given a free handheld radio. Best of luck to yet another school sharing the love of ham radio with students, and in this case sharing an entire world that otherwise might not be well-known. Reporting for Amateur Radio Newsline, I'm Neil Rapp, WB9VPG.

PAUL: Meanwhile, in the New York suburb of West Islip, Long Island, another high school group will soon know the same excitement they're feeling in West Virginia. Students at West Islip High School have just been assigned a call sign and are awaiting approval of their requested vanity call WI2HS. Ben Piecora KD2NOU and teacher Brian Buonomo KD2FKP, the club trustee, are working together to help moves things forward. The weeks ahead will be spent setting up logbooks and other details in anticipation of getting the new call sign and, of course, antennas and radios. There's never been a ham club in the school, said Ben, who has promised to keep Newsline updated. We can't wait to hear what comes next in the new year for this new school club. +

Cocker Spaniel Pup Gets to "Park and Bark"

Jeremy Boot/G4NJH for AR Newsline Report 2096, December 29, 2017

What happens when a well-behaved puppy gets introduced to a pretty well-behaved group of hams? Jeremy Boot G4NJH answers that question for us now.

JEREMY'S REPORT: The purpose of the North Cheshire Amateur Radio Club is stated clearly on its website: members gather to talk about all aspects of radio, to experiment with equipment and try new things and of course, to socialize and perhaps even gossip. The club's website notes that visitors are very welcome.

So it should be no surprise when one of its more recent visitors to be welcomed was a cocker spaniel puppy. The 10-week-old pup named Connie was brought to the club's meeting on Sunday the 17th of December as part of her training.

No, she wasn't preparing for a Foundation license exam or even hoping to upgrade an existing license. She was, however, definitely on track for the next stage of her development – to become a Hearing Dog for the deaf.

According to club member **Terry Roeves G3RKF** such service dogs must display good behavior and a calm manner under all circumstances.

Where better to test a dog's promise than in a room full of talkative, enthusiastic amateur radio operators? Any dog that can handle that kind of QRM is sure to enjoy a successful career helping someone who is deaf or hearing-impaired. •



It's the Rule

Vacancy Filled in Critical Monitoring System

John Williams/VK4JJW for **Amateur Radio Newsline Report 2096**, December 29, 2017

An important post has just been filled for a vital monitoring system that identifies intruders on the amateur bands. John Williams VK4JJW has those details.

The ARRL/IARU Monitoring System, which keeps an eye out for inappropriate signals on the bands, has filled a vacancy in IARU Region 2. On January first, **Carlos Beviglia LU1BCE** of Buenos Aires, Argentina, becomes the Monitoring System coordinator for that region. He will be responsible for keeping track of

intruder reports, verifying them and if necessary, enlist the help of other hams and short-wave listeners to investigate further. Typical sources of intrusion on the ham bands include unlicensed operators, over the horizon radar, and shortwave broadcasters.

Carlos has been licensed since the age of 16 and is a third-generation ham in his family. He has been president of the Radio Club of Argentina and in 2016 he was involved in the club's Summer Antarctic Campaign at

LU1ZI in the South Shetland Islands. His preferred mode of operation is CW.

The monitoring system is a global service designed to protect the amateur services on the air. Each of the IARU's regional organizations chooses a local coordinator.

The ARRL invites other radio amateurs or SWLs in IARU Region 2 (the Americas and some eastern Pacific Islands) to become part of the Intruder Watch program. IARU Monitor System volunteers listen on the bands for intruders.

Where's the Rare DX?

"OPDX Bulletin 1341" November 27, 2017 http://www.papays.com/opdx1341.html

BAKER ISLAND DXPEDITION **(KH1)** - The call sign will be KH1/KH7Z. Info on their website, google The Dateline DX Association.

BENIN (TY) - Wim/ON6DX will sign TY1TT from Gran Popo Feb 20-Mar 2 on 30-10m using CW, SSB and RTTY. QSL via ON6DX direct.

DJIBOUTI (J28) - F1TMY will sign J28PJ for 3 years on 160-6m. QSL via F1TMY. FRENCH SOUTH INDIAN OCEAN **TOUR** - Gildas/TU5KG is sailing the Indian Ocean on a boat in the Kerguelen and Crozet Is regions, and will activate if he goes ashore signing FT5XT (Kerguelen) and FT5WQ (Crozet). When at sea he will sign (callsign)/mm. QSL via F4DXW direct only. View QSL card on QRZ.com. GUINEA BISSAU (J5) Livio/IZ3BUR will sign J52EC til Feb 21 on 20/15/10m. QSL via IZ3BUR. http://www.padregian franco.org>

HONG KONG (VR2Ø) (Special Event)

Hong Kong Radio Sports Association (HRSA) members will sign VR2Ø til Jun 30 to commemorate the 20th anniversary of the Hong Kong Special Admin Region of China. https://www.itu.int/dms pub/itu-t/ opb/sp/T-SP-OB.1116-2017-OAS-PDF-E.pdf>.

IRELAND (EI5Ø) (Special Event) -EI5ØAOM Jan-Mar.QSL via EI2KA, direct with 2 USDs and SAE or via the Buro. Log will be uploaded to LoTW. http:// www.qrz.com/db/EI5ØAOM>

ISRAEL (4X) - Larry/K2LS will sign 4X/ K2LS from RamatBet Shemesh (Holyland Grid G18JS) til Feb 6 using CW. QSL via K2LS, direct, Buro or LoTW.

LUZON ISLAND PHILIPPINES (OC-042) - Chris/F4EBK will sign DU3/F4EBK during Feb on 20/15/10m. Listen for QSL

MALAWI (7Q) - The EIDX Group will sign 7Q7EI from Lake Malawi Mar 21-Apr 3 on 160-10m using CW, SSB and RTTY. They will enter the CQWW WPX SSB Contest (Mar 24-25). QSL via MØOXO, direct, or via OQRS (direct or Buro). Log will not be uploaded to LoTW for up to 3 months. http://www.7q7ei.com

MAPUN ISLAND (RARE) (DU8) (OC-105) - Dindo/DU1UD will sign DU1UD/8 during the first or second quarter of 2018 on the IOTA freqs and will make a visit to the Tawi Tawi Group (OC-174). QSL both via MØOXO direct or by his OQRS. https://www.m0oxo.com MOZAMBIQUE (C8) - The Lion DX

Upcoming Contests

Sean Kutzko/KX9X,

QST. http://www.arrl.org/contest-calendar>. scroll down, click on "Contest Corral"

- AGB New Year Snowball Test, 80m, CW/Digi/Phn, www.gsl.net/eu1eu/agb_nysb.htm Jan 1
- SARTG New Year RTTY Contest, 80/40m, Digi, www.sartg.com/contest/nyrules.htm Jan 1
- AGCW Happy New Year Contest, 80-20m, CW, www.agcw.org/index.php/en Jan 1
- AGCW VHF/UHF Contest, 2m/70cm, CW, www.agcw.org/index.php/en Jan 1
- Jan 1 QRP ARCI New Years Day Sprint, 80-10m, CW, www.grparci.org/contests
- Jan 1-7 IQRP Quarterly Marathon, All Bands, CW/Digi/Phn, www.arimontebelluna.it
- Jan 2 ARS Spartan Sprint, 80-10m, CW, www.arsgrp.blogspot.com
- Jan 3 UKEICC 80-Meter Contest, Phn, www.ukeicc.com
- Jan 3-7 AWA Linc Cundall Memorial Contest, 160-40m, CW, www.antiquewireless.org
- Jan 4 NRAU 10-Meter Activity Contest, CW/Digi/Phn, www.nrau.net
- Jan 6 PODXS 070 Club PSKFest, 80-10m, Digi, www.podxs070.com
- Jan 6 Kids Day, 80-10m plus 2m Repeaters, Phn, www.arrl.org/kids-day
- Jan 6-7 WW PMC Contest, 80-10m, CW/Phn, www.s59dcd.si
- Jan 6-7 ARRL RTTY Roundup, 80-10m, Digi, www.arrl.org/rtty-roundup
- Jan 6-7 EUCW 160-Meter Contest, CW, www.eucw.org/eu160.html
- Jan 13 YB DX Contest, 80-10m, Phn, www.ybdxcontest.com
- Old New Year Contest, 80-10m, CW/Phn, www.radio.ru Jan 13
- Jan 13-14 UBA PSK63 Prefix Contest, 80-10m, Digi, www.uba.be/en/hf/contest-rules
- Jan 13-14 SKCC Weekend Sprintathon, 160-6m, CW, www.skccgroup.com
- North American QSO Party, 160-10m, CW, www.ncjweb.com Jan 13-14
- Jan 14 NRAU-Baltic Contest, SSB, 80/40m, www.nrau.net
- Jan 14 DARC 10-Meter Contest, CW/Phn, www.darc.de
- Jan 14 NRAU-Baltic Contest, CW, 80/40m, www.nrau.net
- Jan 18 NAQCC CW Sprint, 80-20m, www.naqcc.info/sprint
- Jan 19 LZ Open Contest, 80-40, CW, www.lzopen.com
- Hungarian DX Contest, 160-10m, CW/Phn, www.ha-dx.com/HADX Jan 20-21
- Jan 20-21 North American QSO Party, SSB, 160-10m, Phn, www.ncjweb.com
- Jan 20-21 WAB 1.8 MHz Phone Contest, www.wab.intermip.net
- Jan 20-22 ARRL January VHF Test, 6m and Up, CW/Digi/Phn, www.arrl.org/january-vhf
- Jan 20-21 Feld Hell Sprint. 160-40m, Digi, www.sites.google.com/site/feldhellclub
- Classic Exchange, 160-2m, CW, www.classicexchange.org Jan 21-24
- Jan 22 Run for the Bacon QRP Contest, 16j0-10m, CW, www.qrpcontest.com/pigrun
- Jan 24 SKCC Sprint, 160-10m, CW, www.skccgroup.com
- Jan 24 NAQCC CW Sprint, 160m, www.nagcc.info/sprint
- Jan 26-28 CQ 160-Meter Contest, CW, www.cq160.com/rules.htm
- Jan 27 Montana QSO Party, 160m-70cm, CW/Digi/Phn, www.fvarc.org
- Jan 27-28 REF Contest, CW, 80-10m, www.concours.r-e-f.org
- Jan 27-28 BARTG RTTY Sprint. 80-10m, Digi, www.bartg.org.uk
- Jan 27-28 UBA DX Contest, 80-10m, SSB www.uba.be/en/hf/contest-rules
- Jan 27-28 Winter Field Day, All Bands, CW/Digi/Phn, www.winterfieldday.com/rules
- UKEICC 80-Meter Contest, CW, www.ukeicc.com + Jan 31

Team (OT8T) will sign C8T May 2-15 on 160-6m using CW, SSB and RTTY (maybe PSK, FT8), 60m and also 2m-EME. QSL Manager has not been named, but they will be using ClubLog. https:// mozambique2018.wordpress.com>

MICRONESIA (V6) - Sumio/JI1MDM will sign V63AKB48 (SSB) and V63AKB (FT8) from Pohnpei Is (OC-010, WW Loc QJ96cx) Jan 15-18 on 20/17/15/12m. QSL via JI1MDM by the Buro.

PALAWAN ISLAND (DU) (OC-128) REVILLAGIGEDO (4B4) - Mark/ XE1B will sign 4B4B from Socorro Is (NA- 030, WW Loc. DK48mr), Mar 1-15 on 160-6m (no 30m) using SSB. QSL via XE1B direct or Club-Log's OQRS. Check out QRZ.com for info.

ROMANIA (YP2018) (Special Event)

 Listen for YP2Ø18HNY thru Jan 15 on all HF bands. QSL via YO3KPA direct or by the Buro or ClubLog.

SOLOMON ISLANDS (H44) - Shane/ VK4KHZ will sign H44DA from Guadalcanal Is (OC-047) til early Jan on 6m, also on 80/40/20/15/10m using SSB, and also on the SO-50 satellite. QSL via his home CBA direct. NO Buro.

SOMALIA (60) - Ken/LA7GIA and Adrian/KOSSCA will sign 6060 Jan 3-16 on 160-10m using CW, SSB, RTTY and FT8. If Internet is available, they will live

 Jacek/SP5APW will sign DU1/SP5APW Mar 13-18 on 40/20/17m using SSB and some RTTY, PSK and FT8. QSL via his home CBA, ClubLog's OQRS or LoTW. ClubLog and LoTW upload all QSOs. QSL cards via MØOXO and his OQRS. **SRI LANKA (4S)** – Takayuki/JI1SHQ is signing 487TNG for the next several years mainly on 30 and 20m using CW. QSL via JI1SHQ by the Buro.

ST. HELENA ISLAND (ZD7) – Bill/GØVDE will sign ZD8VDE operating SSB and some Digi. Online log via ClubLog and QSLs via OQRS. http://www.sthelenadx.com.

TAVEUNI ISLAND (3D2) (OC-016)- Jim/WB2TJO will sign 3D2JS from Fiji

Jan-Mar on 40-15m using CW, SSB and Digi. QSL via his home CBA.

THE GAMBIA (C5) – Call sign C5DX will be used Feb 9-16. Alan will operate CW and 4 students will operate SSB – Jessica/M6LPJ, Polly/M6POG, Morgan/M6MXD, and Stan/M6SQO. QSL via LoTW, direct to G4DJX and possibly ClubLog.

TOGO (5V) – John/N9MDH will sign

TOGO (5V) – John/N9MDH will sign 5V1JE til May 30 on 80-10m (prefers 30m) using SSB and Digi. QSL via eQSL or LoTW.

TRINIDAD/TOBAGO (9Z4) - Tho-

mas/DL9OBQ is signing 924/DL9OBQ from St Augustine (SA-011) til Feb 7 on 30/17/15m using CW. QSL via his home CBA by the Buro.

UK SOV BASE AREAS ON CYPRUS (**ZC4**) – Bob/5B4AGN et al., will sign ZC4A Jan 24-31 on 160-10m using CW, SSB and Digi. Will operate in CQ 160m CW Test Jan 26-28. QSL via MØURX's OQRS system.

VIETNAM (3W) – Megumu/JA6QGF is signing 3W9A from Ho Chi Minh City on 17 and 6m SSB. QSL via his home JA6 CBA. ◆

Meeting Schedules for Area Clubs, Exam Sessions, etc.

Bill DeVore/N4DIT

Volunteer examinations are held in or near Lexington on a schedule that has tests in central Kentucky every month of the year. Schedules for area sessions, plus meetings, etc., are as follows:

The Bluegrass Amateur Radio Society, Inc. (Lexington) – (Fernie Williams/KE4MAI (ARRL – \$15.00) and Margie Williams/KE4MAJ (WCARS- \$10.00)), with Darrell/AC4YD in Winchester and Richmond (W5YI), John/K4FT in Danville (ARRL), and Ron/WX4GPS in Georgetown (ARRL - \$15.00), have a schedule to offer an exam monthly in Lexington/central Kentucky. (See schedules on page 5 of this newsletter). ARRL-sponsored tests are held the second Saturday of the month, 10:00 AM in the Red Cross Building, Meeting Room "B", 1450 Newtown Pike, Lexington (except the August session is the Saturday of the second weekend of the month and is held at the site of the Central Kentucky ARRL Hamfest), and WCARS-sponsored sessions are held the third Tuesday of the scheduled month, 7:00 PM in Meeting Room "A" in the Red Cross Building, 1450 Newtown Pike, Lexington. Contact Margie/KE4MAJ at 859-489-6274 or email to ke4maj@arrl.net. Go to http://www.lexkvwcars.org for information.

Winchester (W5YI VEC) – They are located in the Clark County EOC, 200 Maryland Avenue, Winchester, Kentucky. Their 2017 schedule (10:00 AM): Saturday, January, 9, Saturday, April 9, Saturday, July 9, and Saturday, October 8. Contact Liaison **Darrell Epperson/AC4YD**, eppersond@aol.com, 859-771-1834

Danville (ARRL VEC) – Test sessions are fourth Saturday in January, April, July and October at 10:00 AM. Liaison **John Wulf/K4FT**, johnk4ft@gmail.com, 563-505-0339, Wilderness Road Amateur Radio Club, American Legion Post 46, 45 Spears Lane, Danville, KY 40422 - Repeater 145.310 (100 pl).

Georgetown (ARRL VEC) – Liaison Ron Malinowski/WX4GPS, wx4gps@arrl.net, 502-542-8252, Georgetown Police Dept, 550 Bourbon St., Georgetown (for dates see schedule on page 5 of this newsletter).

Radio Theory and Construction Workshop – Each Saturday 1:00-3:00 PM in the Bluegrass ARS Education Center, basement of the Red Cross Building, 1450 Newtown Pike, Lexington. Contact Bill Fuqua/WA4LAV at (859) 272-9523 or wa4lav@arrl.net.

Versailles/Woodford County – The Woodford County Amateur Radio Club meets the first Wednesday of each month at 7:00 PM in the Versailles Fire Station No. 2 on Big Sink Pike. Anyone interested in amateur radio is cordially invited. Also, visit their web site at http://www.ky4wc.org. You may contact Todd Rose/KE4YAH (atrose@ windstream.net).

Fayette County ARES Net Wednesday, 9:00 PM, 147.120 (Tone 141.3) repeater.

Amateur Television and Specialized Communications Net – An informal meeting is held every Sunday evening at 9:00 PM (local time) on the 146.760 (-600 offset) repeater in Lexington.

Kentucky Six-Shooters Net – Wednesday evenings at 8:00 PM six meters FM on 52.525 MHz (vertically polarized). **David Jordan/KI4AWZ** net control; and, Daily Six-Meter FM Ragchew net 7:00-9:00 PM on 52.525 MHz (vertically polarized). **James Peel/KG4VAR** net control.

KY-QRP – Meetings are the same schedule as Blugrass ARS, first Monday each month, but at 7:00 PM, in Meeting Room "B", second floor of the Red Cross Building, 1450 Newtown Pike, Lexington.

Scott County Amateur Radio and Emergency Service Club (SCARES)

 Meetings are the third Saturday each month, 9:00 AM in the Solarium room at Georgetown Community Hospital, 1140 Lexington Road, Georgetown. Check in to their weekly simplex net Tuesdays at 7:00 PM on 146.685 (PL 141.3).

Central Kentucky ARS (Richmond-Berea) – Meet the Third Thursday each month in the Madison County EOC, Richmond, Kentucky, at 7:00 PM. Talk-in on 146.865 (-600, PL-192.8 Hz) and 145.370 (-600, PL-192.8 Hz) repeater for location, directions to meeting site, or other information.

Pioneer ARC (Winchester) – Fourth Tuesday each month, Golden Corral Restaurant at 7:00 PM (eat at 6:00), except March 24 will meet at City Hall (SkyWarn). Talk-in and info on the 145.430 (T-103.5) repeater.

Jessamine Amateur Wireless Society (Nicholasville) – Second Monday each month at 7:00 PM in the St. Joseph/R.J. Corman Ambulatory Care Center, 1250 Keene Road. (U.S. 27 Bypass south to intersection with 169; turn left at the light.) Talk-in and information on the 145.490 (T-123.0).

The Jessamine County ARES Net – Tuesdays at 7:30 PM, 145.490.

. Byron Smith, Sr./KA3WOD EC, byronllx@aol.com.

The Madison County ARES Net meets Monday at:7:00 PM, 146.865 (pl 192.8). Everyone is invited to check in. . . Wilderness Trail Emergency Net, Wednesdays, 8:30 PM, 146.715 (pl 100.0). . .Glenn/KO4OL.

The Southeast Kentucky ARC – meet at the Laurel County EOC, 168 Substation St, London. Meetings on odd number months (Jan, Mar, etc.) are on the Second Tuesday at 6:00 PM; meetings on even number months (Feb, Apr, etc.) are the Second Saturday at 11:00 AM. Talk-in on 147.180 (PL-74.4) for directions tor other information. District 11 Skywarn Net meets Sundays at 8:00 PM on 146.925 (-PL-79.7) and is linked to 147.180 (PL-74.4) and other repeaters in and close to the area. District 11 ARES Net meets Mondays at 9:00 PM on 146.925 (PL-79.7) and is linked to 147.180 (PL-74.4) and other repeaters in and close to the area.

Please send any changes or corrections to these notices, or notices not listed here, to my attention, **Bill DeVore/N4DIT**, in care of Bluegrass Amateur Radio Society, Inc., PO Box 4411, Lexington, KY 40544-4411, or e-mail to billdit@twc.com.

Minutes of the Bluegrass Amateur Radio Society, Inc., Board of Directors' Meeting, November 20, 2017

Recorded and submitted by **Bruce A. Campbell, KM4EHU**Secretary

The directors' meeting was called to order by President **Smokey Wallace**, **KE6IVK**, at 7:32pm. In attendance were:

First Vice President – Bill Fuqua, WA4LAV; Second Vice President – James Schlesser, WA9MED; Treasurer – John Barnes, KS4GL; Secretary – Bruce Campbell, KM4EHU; Directors-at-Large – David Richardson, W9KHZ and Tim Kunkel, KF4MPM. In addition, Historian and Newsletter Committee Chairman Bill DeVore, N4DIT; Shack/Repeater Trustee Andrew Cook, KF4OWP; MARS representatives Barry Jackson, WB4N, Harvey Frye, AA4HF; plus members David Nash, KM4KPV, and Bob Brown, KI4JWK; were present.

Treasurer **John Barnes**, **KS4GL**, reported that no new membership applications have been received.

Treasurer **John Barnes**, **KS4GL**, submitted the summary treasurer's report of amounts available in deposits as of October 31, 2017 (see table at the right).

David Richardson, W9KHZ, moved, and Andrew Cook, KF4OWP, seconded that the treasurer's report be accepted, which was approved unanimously.

Treasurer **John Barnes**, **KS4GL**, presented the bills totaling \$478.00 for the post office box and the shack equipment insurance. These bills were approved for payment at the previous general membership meeting on November 4, 2017.

Secretary **Bruce Campbell**, **KM4EHU**, reported that on November 16th, ninety-eight (98) ballots were mailed to seventy-eight (78) addresses on the current membership roster of BARS members eligible to vote in the 2018 Officers Election.

A letter of thanks and confirmation was sent to Mrs. **Virginia Rigney** on November 6th, for the radio equipment donated to the club in memory of her husband **Richard**, **KC4EBF** (SK).

Committee Reports:

Education: Bill Fuqua, WA4LAV. There will be no Thursday evening technical session or Saturday afternoon education session during the extended Thanksgiving holiday.

Volunteer Examinations: (Fernie Williams, KE4MAI). License exams were conducted on Saturday, November

Treasurer's Report

Respectfully submitted, **John Barnes/KS4GL**, Treasurer

BLUEGRASS AMATEUR RADIO SOCIETY, INC. INCOME, EXPENSES, AND ACCOUNT BALANCES November 30, 2017

	Checking	Pay Pal	Savings	
	Account	Account	Account	Total
Income:				
ARRL Dues	0.00	0.00	0.00	0.00
BARS Dues	0.00	0.00	0.00	0.00
Coax/Repeater	0.00	0.00	0.00	0.00
Donations	0.00	0.00	0.00	0.00
Education	0.00	0.00	0.00	0.00
Hamfest	0.00	0.00	0.00	0.00
Interest	1.56	0.00	0.03	1.58
Miscellaneous	0.00	0.00	0.00	0.00
Total	1.56	0.00	0.03	1.59
Expenses:				
ARRLDues	0.00			0.00
Coax/Repeaters	0.00			0.00
Donations	146.00			146.00
Education	0.00			0.00
Election	77.39			77.39
Equipment	0.00			0.00
Field Day	0.00			0.00
Hamfest	0.00			0.00
Insurance	358.09			358.09
Miscellaneous	118.41			118.41
Newsletter	0.00			0.00
Picnic	0.00			0.00
P.O. Box/Postage	112.00			112.00
Subscriptions	0.00			0.00
Telephone	0.00			0.00
Total	811.89			811.89

Account Balances

October	31, 2017	November	30, 2017
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Total Balance	\$15436.30	\$14706.00
Savings Balance	\$ 200.43	\$ 200.46
Pay Pal Balance	\$ 2661,84	\$ 2661,84
Checking*	\$12574.03	\$11843.70

*Fund Specific Balances

(Checking)

Total	\$12574.03	\$11843.70
Education	\$ 1909.29	\$ 1909.29
Coax/Repeater	\$ 1164.64	\$ 1164.64
General	\$ 9500.10	\$ 8769.77

*Reference made to "BARS" refers to Bluegrass Amateur Radio Society, Inc., wherever it occurs.

11th. No report was available.

Hamfest: David Richardson, W9KHZ. The Hamfest is scheduled for Saturday, August 11, 2017, at Jackpot Bingo in Eastland Shopping Center. Suggestions for improvements or changes for the 2018 hamfest are welcome.

Contest: The committee's chairman position is currently vacant, and volunteers for the committee will be considered.

Emergency Preparedness: The committee's chairman position is currently vacant, and volunteers for the committee will be considered.

Public Relations and Membership: The committee's chairman position is currently vacant and volunteers for the committee will be considered.

Library: John Barnes, KS4GL. New bookcase rearrangements and construction has been completed by David Richardson, W9KHZ, Bill DeVore, N4DIT, James Schlesser, WA9MED, and Barry Jackson, WB4N. Cataloging of books and publications will proceed subsequently.

Newsletter: Bill DeVore, N4DIT. Member Bill Cotter, N4LG, requested copies of all previous newsletters to save to archive records software.

Program: James Schlesser, WA9MED. The January general membership meeting program will be "Winter Field Day, January 27-28, 2018" presented by **David Richardson, W9KHZ.**

Shack: Smokey Wallace, KE6IVK. (no report).

HF Liaison: David Richardson, W9KHZ. The dipole antenna has become detached from its support on one

end and is out of operation. The possibility of renting a lift-crane for antenna and tower repair and maintenance was discussed. All planned work would have to closely coordinated for a full day in the spring when good weather could be expected.

VHF Liaison: Tim Kunkel, KF4MPM. Limited coverage of the 146.165 repeater was discussed. The possibility of donating one of the VHF repeaters received from the fire department for the hospital use will be considered.

MARS: Harvey Frye, AA4HF, and Barry Jackson, WB4N. Antenna designs are being considered and a new feedline into the building will be required.

Shack/Repeater Trustee: Andrew Cook, KF40WP. (no report).

Bylaws: Andrew Cook, KF4OWP. (no report).

Old Business:

- 1. President, **Smokey Wallace**, **KE6IVK**, reported that two boy scouts, with their adult leader, **Scott Swift**, participated in the Jamboree-on-the-Air on October 21st. Each scout made three contacts on high frequency from the K4KJQ shack station.
- 2. Harvey Frye, AA4HF, reported that Virginia Rigney has a standing tower with a 13-element 2-meter yagi, plus other tower sections, at her house in Lexington that was used by her husband Richard, KC4EBF (SK). This equipment is available to anyone who would disassemble and remove it (at their cost and liability) for amateur radio use.

New Business

1. There will be a members auction for

anyone who cares to participate during the December general meeting while the 2018 Office election ballots are being counted. Proceeds from the auction can be kept by the member, split between the member and the club, or donated completely to the club at the member's discretion.

2. James Schlesser, WA9MED, moved, and Andrew Cook, KF4OWP, seconded, to reschedule the January, 2018, Directors' Meeting from the third Monday, January 15th, to the fourth Monday, January 22nd. The motion was accepted unanimously.

(The January, 2018, General Membership meeting was rescheduled to the second Monday, January 8th, by vote during the November General Membership meeting.)

Upcoming BARS Schedule

December 4th, 7:00pm. KY-QRP Meeting. December 4th, 7:30pm. BARS General Meeting.

Program: Members' Auction during 2018

Officers Election Ballot counting.

January 8th, 7:00pm. KY-QRP Meeting. (second Monday)

January 8th, 7:30pm. BARS General Meeting. (second Monday)

Program: Winter Field Day. January 22nd, 7:30pm. BARS Directors' Meeting. (fourth Monday)

January 27th-28th. Winter Field Day, Kentucky Horse Park.

With no other business at 8:15pm, Andrew Cook, KF4OWP, moved, and Tim Kunkel, KF4MPM, seconded, that the meeting be adjourned, which was approved unanimously. •

Minutes of the General Meeting of the Bluegrass Amateur Radio Society, Inc., December 4, 2017

Recorded and submitted by **Bruce A. Campbell, KM4EHU**Secretary

The December BARS general meeting was called to order by First Vice President **Bill Fuqua**, **WA4LAV**, at 7:36pm.

Self-introductions were made by twenty-four(24) member licensed amateur radio operators plus one(1) non-licensed member in attendance, which consisted a quorum. In addition, one(1) non-member licensed amateur radio operator present.

*Reference made to "BARS" means Bluegrass Amateur Radio Society, Inc., wherever it occurs.

Members' News

The club was recognized in the November issue of **QST** on page 96 for attaining the "Green Box" of Top Accuracies of less than 1-Hz during the April, 2017, Frequency Measuring Test. **Bill Fuqua, WA4LAV**, conducted the test from the club station using a homebrew receiver connected to high-accuracy local oscillators and a laptop computer spectrum analyzer program. Bill submitted the frequency measurement test results under the

club's call sign.

The club's Summer Field Day results were shown in the December issue of **QST** on page 81. **David Richardson**, **W9KHZ**; **James Schlesser**, **WA9MED**; **Smokey Wallace**, **KE6IVK**; **Tim Kunkel**, **KF4MPM**; **Pete Kragh**, **K2UPD**; and **Martin Weaver**, **KF4HPK**; participated in the Field Day weekend event.

Treasurer's Report

Treasurer **John Barnes**, **KS4GL**, reported that one new membership applica-

tions has been received for consideration at the December Directors' Meeting.

Treasurer John Barnes, KS4GL, submitted the summary treasurer's report of amounts available in deposits as of October 31, 2017 (see QUA/HAMnews, November 2017 issue). David Richardson, W9KHZ, moved, and Tim Kunkle, KF4MPM seconded, to accept the treasurer's report, which was approved unanimously.

Committee Announcements

Contest Committee – (open chair position): **David Richardson, W9KHZ**, reported that the Winter Field Day is scheduled for the last weekend in January, 2018. Tentative plans are to setup at the Horse Park.

Hamfest Committee - David Richardson, W9KHZ: Commercial vendor DebCo has tentatively reserved ten(10) tables for the 2018 Hamfest.

Repeater Committee - Andrew Cook, KF40WP: (nothing to report).

Volunteer Examinations – Fernie Williams, KE6MEI: (no results were reported for the November 11 license exams.)

Librarian – John Barnes, KS4GL: (nothing to report).

Bylaws - Andrew Cook, KF4OWP: New bylaws proposals can be expected during the beginning of the new year.

Education Committee – Bill Fuqua, WA4LAV: Thursday evening technical ses-

sions, and Saturday workshops are slowing down during the holiday season.

Shack Committee - (Smokey Wallace, KE6IVK): The tree supporting one half of the station's dipole was removed, and the antenna is currently out of service. Arrangements for a new dipole antenna support will be studied.

Newsletter Committee - Bill DeVore, N4DIT: Bill reported a new newsletter chair and editor will be needed following his retirement later this year.

Old Business

The inventory of the large amount of donated equipment is still in progress.

New Business

Nominating committee members Roger Colvin, KJ4YSY, and Loretta Colvin, assisted by Pete Kragh, K2UPD, tallied the fifty-two(52) ballots received from the ninety-eight(98) members eligible to vote in the officers election. The elected club officers for 2018 are:

President - Andrew Cook, KF4OWP;

First Vice President - **Bill Fuqua**, **WA9LAV**;

Second Vice President - James
Schlesser WA9MFD:

Schlesser, WA9MED; Secretary - Bruce A. Campbell, KM4EHU;

Treasurer – **John Barnes**, **KS4GL**; Directors-at-Large – **Tim Kunkel**,

KF4MPM; and David Richardson, W9KHZ.

Program: The end-of-year members' auction of excess gear and equipment was held during the vote counting. Proceeds from the auction that were donated to the club amounted to seventy-seven dollars (\$77.00).

The next formal BARS scheduled meetings in December, 2017, and January, 2018:

Board of Directors' Meeting: Monday, December 18th, at 7:30pm, in the education center, basement of the Red Cross Bldg.

KY-QRP Meeting: Monday, January 8th (second Monday), at 7:00pm, in meeting room "B" at the Red Cross Building.

General Meeting: Monday, January 8th (second Monday), at 7:30pm, in meeting room "B" at the Red Cross Building. Program: Winter Field Day.

Board of Directors' Meeting: Monday, January 22nd, at 7:30pm, in the education center, basement of Red Cross Building.

Winter Field Day: Saturday, January 27 through Sunday, January 28, at the Kentucky Horse Park Campground.

With no other business at 8:10pm, Andrew Cook, KF40WP, moved, and David Richardson, W9KHZ, seconded that the meeting be adjourned, which was approved unanimously. •

Looking Back. . . From "Ham News," January 1990

Secretary's Report

Respectfully Submitted Jeanette Stevenson/N4SKY, Secretary

MINUTES OF THE BOARD OF DIRECTORS MEETING NOVEMBER 20, 1989

The meeting was called to order by President Glenn Welman/ KF4NB at 7:30 p.m. Other elected officers present were Secretary Jeanette Stevenson/N4SKY, and Rick Turnley/WA4BVJ. Committee chairmen present were Bill De Vore/N4DIT, Bill Woodward/ KC4CHF, and Harry Bradshaw/W4TPB. Also present were Sam Kindred/KC4HWA and John Crutcher/KC4DUU.

The minutes of the September Board of Directors' meeting were approved as published in **HamNews.**

COMMITTEE REPORTS

Education Committee chairman, Glenn Welman/KF4NB, reported that 12 persons had completed the Fall Novice class and were awaiting their tickets.

Newsletter Committee chairman, Bill De Vore/N4DIT, reported

that he was considering the possibility of going to a slightly different format, one that would be less expensive to produce.

Hamfest Committee co-chairman, Bill De Vore/N4DIT reported that our August Hamfest would be announced to the ARRL for publication in their annual hamfest calendar booklet. This booklet is circulated each year to persons who are coordinating hamfests to help them establish a date for their activity that will not coincide with other hamfests in their area.

Program Committee chairman, Harry Bradshaw/W4TPB, reported that Brad James/WA4HBM had asked him to see if the Club would be interested in having representatives attend a meeting to discuss contingency plans for emergency situations. President Welman suggested that the following mem-

bers be asked to participate: Repeater Committee chairman Frank Brumett/WB4ClZ, Richard Rigney/KC4EBF, and Harry Bradshaw/W4TPB.

NEW BUSINESS

Applications for membership were presented for Alberto Mazzoleni/KA4SDJ and Ken Dresser/KK4L. Both applications were approved for submission to the membership.

There being no further business, President Welman adjourned the meeting at 8:45 p.m.

QUA/HAMnews

QUA/HAMnews is published monthly by the Newsletter Committee of the Bluegrass Amateur Radio Society, Inc., and is distributed by e-mail only.

Letters to the editor, technical articles, items of interest to the Ham community and guest editorials are invited and will be published at the discretion of the editor. Items for sale by members of the Society will be advertised without charge for one issue, and may be resubmitted as often as desired. These ads must be noncommercial in nature.

Articles published in QUA/HAMnews do not necessarily represent the views of the Officers, Board of Directors, editor, or Society membership, nor does publication thereof represent concurrence by the Officers, Board of Directors, editor, or Society membership of the contents of the article. No article will be published unless it is accompanied by the name(s) of the person(s) submitting the material.

R. William (Bill) DeVore/N4DIT, 112 Brigadoon Pkwy,

Lexington, Kentucky 40517-1305 (859) 273-8345 billdit@twc.com

Standing Committee Chairs:

Contest Need Chair

Education Bill Fuqua/WA4LAV (859) 272-9523 (wlfuqu00@uky.edu)

Emergency Preparedness (Liaison Bluegrass ARS with LFUCG DEM)

David Richardson/W9KHZ (859) 983/1380) (daveinlex3@gmail.com)
Hamfest......David Richardson/W9KHZ (859) 983/1380) (daveinlex3@gmail.com)
Newsletter......., Bill DeVore/N4DIT (859) 273-8345 (billdit@twc.com)
Program.....James Schlesser/WA9MED (757) 478-2186 (wa9med@jschlesser.com)

Public Relations and Membership Need Chair

Repeater Andrew Cook/KF4OWP (859-396-9930 (kf4owp@gmail.com)

Shack

Volunteer Examinations Fernie Williams/KE4MAI (859-652-3393) (ke4mai@arrl.net)

Trustees, Ex Officio Committee Chairs, and Contacts for Special Activities:

Library, John Barnes/KS4GL (859) 253-1178 (jrbarnes@iglou.com)
ShackTrusteeAndrewCook/KF40WP(kf4owp@gmail.com)

HF Liaison to Shack Committee David Richardson/W9KHZ VHF Liaison to Shack Committee . . . Tim Kunkle/KF4MPM

President:

Andrew Cook/KF4OWP 320 Given Avenue Lexington, Kentucky 40502 859/396-9930

kf4owp@gmail.com

Second Vice-President:

James Schlesser/WA9MED 1492 Elizabeth Street Lexington, Kentucky 40503 757/478-2186 wa9med@jschlesser.com

Treasurer:

asurer: John Barnes/KS4GL 216 Hillsboro Avenue Lexington, Kentucky 40511-2105 859/253-1178 irbarnes@iglou.com

First Vice-President:

Bill Fuqua/WA4LAV 3395 Greentree Drive Lexington, Kentucky 40517 859/272-9523 wlfuqu00@uky.edu

Secretary:

Bruce Campbell/KM4EHU 169 Millwood Drive Winchester, Kentucky 40391 859/744-7608 bruce_campbell@mymail.eku.edu

Directors-at-Large:

Tim Kunkle/KF4MPM 426 Blueberry Lane Lexington, Kentucky 40503 859/279-6307, and David Richardson/W9KHZ 1809 Wayland Drive Lexington, Kentucky 40505 859/983-1380 daveinlex3@gmail.com

Annual Dues (January 1 - December 31)

Payable using Pay Pal – Go to http://www.BluegrassARS.org, click on "Membership," click on the option for your preference as below:

Regular Membership: One year - \$20.00; two years - \$38.00; three years - \$55.00 (Additional family member(s) at the same address \$1.00 each per year)

Associate Membership - \$15.00 (for those who reside farther than 50 miles from Lexington)

Full-Time Student Membership – \$12.00 (for those 21 and under, and no other Club member in the family)

Shack telephone: (859) 231-0974 web page: http://www.BluegrassARS.org/



Calendar of Ham Radio Activities for January 2018



- Mon 1 New Years Day Holiday
- Tue 2 Amateur Swap Net 145.370 (T-192.8) 8:00 PM; "Casual Communicators Net," 9:00 PM Eastern, 443.325+ MHz.
- Wed 3 Six Shooters Net, 8:00 PM on 52.525 MHz FM (vertically polarized); Fayette County ARES Net, 9:00 PM, 146.760 repeater.
- Thu 4 Meeting of Bluegrass ARS Technical Group, 6:30 PM, Education Ctr, basement, Red Cross Building, 1450 Newtown Pike, Lexington; Ragchew Net, 7:30 PM, 146.760 Repeater, Malcolm/KY4MJW net control.
- Sat 6 Shack open 9:00-Noon; Radio Theory and Construction Workshop, 1:00-3:00 PM, basement, Red Cross Bldg, 1450 Newtown Pike. Sun 7 Amateur Television & Specialized Communications Net, 9:00 PM (146,760 Repeater); District 11 Skywarn Net, 8:00 PM, 146.925 (PL-
- 79.7) linked to 147.180 (PL-74.4).

 Mon 8 KY-QRP meeting (Open discussion), 7:00 PM, Meeting Room "B," Red Cross Bldg, 1450 Newtown Pike, Lexington.
- Mon 8 Bluegrass ARS Club meeting, 7:30 PM, Meeting Room "B," Red Cross Bldg, 1450 Newtown Pike; District 11 ARES Net 9:00 PM 146.925 (PL-79.7) linked to 147.180 (PL-74.4) and other repeaters in the area.
- Mon 8 Jessamine Amateur Wireless Society meeting, 7;00 PM, St. Joseph/R.J. Corman Ambulatory Care Center, 1250 Keene Road, Nicholasville;
 District 11 ARES Net 9:00 PM 146.925 (PL-79.7) linked to 147.180 (PL-74.4).
- Tue 9 Amateur Swap Net 145.370 (T-192.8) 8:00 PM; "Casual Communicators Net," 9:00 PM Eastern, 443.325+ MHz.
- Wed 10 Six Shooters Net, 8:00 PM on 52.525 MHz FM (vertically polarized); Fayette County ARES Net, 9:00 PM, 146.760 repeater.
- Thu 11 Meeting of Bluegrass ARS Technical Group, 6:30 PM, Education Ctr, basement, Red Cross Building, 1450 Newtown Pike, Lexington; Ragchew Net, 7:30 PM, 145.490 Repeater, Malcolm/KY4MJW net control.
- Sat 13 Shack open 9:00-Noon; Radio Theory and Construction Workshop, 1:00-3:00 PM, basement, Red Cross Bldg, 1450 Newtown Pike; License Exam Session, 10:00 AM Winchester, Liaison Darrell Epperson/AC4YD, eppersond@aol.com, 859-771-1834.
- Sun 14 Amateur Television & Specialized Communications Net, 9:00 PM (146.760 Repeater); District 11 Skywarn Net, 8:00 PM, 146.925 (PL-79.7 Hz) linked to 147.180 (PL-74.4 Hz).
- Mon 15 District 11 ARES Net 9:00 PM 146.925 (PL-79.7) linked to 147.180 (PL-74.4) and other repeaters in the area.
- Tue 16 Amateur Swap Net 145.370 (T-192.8) 8:00 PM; "Casual Communicators Net," 9:00 PM Eastern, 443.325+ MHz.
- Wed 17 Six Shooters Net, 8:00 PM on 52.525 MHz FM (vertically polarized); Fayette County ARES Net, 9:00 PM, 146.760 repeater.
- Thu 18 Meeting of Bluegrass ARS Technical Group, 6:30 PM, Education Ctr, basement, Red Cross Building, 1450 Newtown Pike, Lexington; Ragchew Net, 7:30 PM, 145.490 Repeater, Malcolm/KY4MJW net control.
- Sat 20 Shack open 9:00-Noon; Radio Theory and Construction Workshop, 1:00-3:00 PM, basement, Red Cross Bldg, 1450 Newtown Pike.
- Sun 21 Amateur Television & Specialized Communications Net, 9:00 PM (146.760 Repeater); District 11 Skywarn Net, 8:00 PM, 146.925 (PL-79.7 Hz) linked to 147.180 (PL-74.4 Hz).
- Mon 22 Bluegrass ARS Board of Directors' Meeting, 7:30 PM, Education Center in basement of Red Cross Building; District 11 ARES Net 9:00 PM 146.925 (PL-79.7) linked to 147.180 (PL-74.4) and other repeaters in the area.
- Tue 23 Amateur Swap Net, 145.370 (T-192.8) 8:00 PM; "Casual Communicators Net," 9:00 PM Eastern, 443.325+ MHz.
- Wed 24 Six Shooters Net, 8:00 PM on 52.525 MHz FM (vertically polarized); Fayette County ARES Net, 9:00 PM, 146.760 repeater.
- Thu 25 Meeting of Bluegrass ARS Technical Group, 6:30 PM, Education Ctr, basement, Red Cross Building, 1450 Newtown Pike, Lexington; Ragchew Net, 7:30 PM, 145.490 Repeater, Malcolm/KY4MJW net control.
- Sat 27 Shack open 9:00-Noon; Radio Theory and Construction Workshop, 1:00-3:00 PM, basement, Red Cross Bldg, 1450 Newtown Pike; License Exam Session, 10:00 AM, Danville, Liaison John Wulf/K4FT, johnk4ft@gmail.com, 563-505-0339,
- Sun 28 Amateur Television & Specialized Communications Net, 9:00 PM (146.760 Repeater); District 11 Skywarn Net, 8:00 PM, 146.925 (PL-79.7 Hz) linked to 147.180 (PL-74.4 Hz).
- Mon 29 District 11 ARES Net 9:00 PM 146.925 (PL-79.7) linked to 147.180 (PL-74.4) and other repeaters in the area.
- Tue 30 Amateur Swap Net 145.370 (T-192.8) 8:00 PM; "Casual Communicators Net," 9:00 PM Eastern, 443.325+ MHz.
- Wed 31 Six Shooters Net, 8:00 PM on 52.525 MHz FM (vertically polarized); Fayette County ARES Net, 9:00 PM, 146.760 repeater.