In Memorium Wilson L. Wells, Jr., N4ZQT

Halloween Trail Ride 2006

October 28, 2006, Kentucky Horse Park. Very chilly and windy, had rained for about three days; water and mud everywhere. Only about 45 riders participated on the extended course through the farm adjacent to the Horse Park.

The picture shows Wilson as he loved to be shown, among friends while they provided health and welfare communications for a fund-raising activity in support of a public service organization.



Left to right standing: John Bradshaw/K4SWX, Tom Mansfield/KG4TND, Michael Hennigan/KI4OQL, Wilson Wells/N4ZQT, Martin Hensley/KF4EBC, Frank Yocum/KQ4ZZ. Kneeling Bill DeVore/N4DIT and Mike Johnson/KD4SN.

Longtime active member, **Wilson Wells/N4ZQT**, became a silent key August 11, 2018. All members of the Bluegrass Amateur Radio Society, Inc., pass along our deepest sympathy to Wilson's widow Betty and his family. We cannot stress how we all will miss his help with our Club administration and his wise council.

Included here is Wilson's obituary as it was published in our local newspaper, *Herald-Leader*, and by the Amateur Radio journal "QST."

WELLS Wilson L., Jr., 93, passed away August 11, 2018, surrounded by members of his family. He was an RN, Red Cross

volunteer, ham radio enthusiast (N4ZQT), American Legionnaire, and Veterans Affairs volunteer. He was retired from the Department of Veterans Affairs.

As a Bluegrass Red Cross volunteer for decades Wilson worked in disaster recovery from fires, floods, tornadoes, and hurricanes in Alabama, Arkansas, California, Illinois, Iowa, Kentucky, Texas, West Virginia, and the Virgin Islands and Guam. He enjoyed the people he met while living under tarps and sharing meals, providing critical health care, food, shelter, and other support to families in crisis. Wilson's parents, Wilson, Sr., and Lois Wells, sister and cousins spent summers at their Minnesota lake place fishing, swimming, clearing land, building cabins, and tapping maple trees to make syrup.

Throughout his lifetime, as his career took him to many towns across the country, he returned to the family cabin as do his family, now six generations. Wilson will be missed by his family: wife, Betty, her children, Joan and Michael; his children, Mary, Stephen, and Tommy; their spouses, children, and grandchildren; and many beloved cousins, nieces, nephews, and friends in Kentucky, Minnesota, and England.

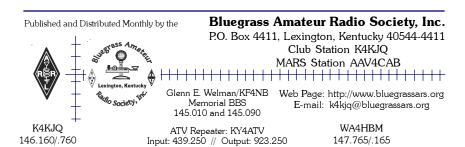
Wilson was buried at Ft. Snelling National Cemetery in Minneapolis, a memorial gathering will be held next summer at the family cabin.





December 2018 December 2018

Contents November Club Meeting - Report by the Nominating Committee 2 Members Participated in ARRL Frequency Measurement Test 4 It's The Rule - Amateur Radio Issues Under Discussion in Geneva Where's the Rare DX? . Upcoming Contests Minutes of the Board of Directors' Meeting, October 15, 2018 10 Minutes of the General Meeting of the Bluegrass Amateur Radio Society, Inc., Looking Back. . . From "QUA/HAMnews," December 2006, page 1 12 Calendar of Ham Radio Activities for December 2018 Inside Cover



"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 DECEMBER MEETING . . .

. . . will be hosted by **J.B. Young/WA4WWH**, as he serves as auctioneer for the Club's annual auction. . .See below

-- SOURCE FOR STUDYING TO FOR A TECHNICIAN CLASS LICENSE - AND MORE --

Bill Weaver <weaverwf@USERMAIL.COM> says "This looks like a decent youtube series for the person studying for the written test. For continuing videos all the way through extra search youtube for the W4EEY channel.

https://youtu.be/4BU0WGP0U5Q

-- NOTE: REPORTS OF THE RECORD OF THE BYLAWS COMMITTEE MEETINGS AFTER THEIR REPORT #3 ARE NOT PUBLISHED IN THE NEWSLETTER DUE TO THE

LENGTH OF THE MANUSCRIPTS. CONTACT SECRETARY CAMPBELL TO OBTAIN

RECENT MEETING RECORDS, OR CONTACT ME FOR A COPY OF THE REPORTS ISSUED BY THE COMMITTEE (billdit@twc.com) --

Since this is my final effort of producing QUA/HAMnews, I'll say farewell and extend my appreciation to Bart Breeding/KB4FEE for volunteering to step in and take on the responsibility. I'll say these past 35 years have passed very rapidly. . . indicative of performing a job I have enjoyed tremendously. I hope Bart does also.

CUL es 73 to all, Bill N4DIT

QUA/HAMnews

December 2018

"Life is one grand sweet song so

~ Ronald Reagan

start the music"

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 Monday, December 3, 2018, 7:30 PM, Meeting Room B, second floor of the Red Cross Building, 1450 Newtown Pike. Lexington.

The program will be the Club's annual auction in which you bring items you no longer use or need and Auctioneer **J.B. Young/WA4WWH** will try to get a good price for your item. The auctions we have held in the past have always been a lot of fun and many folks go home with some extra cash, or an item they have been wanting to buy but couldn't find a good price on, until now.

Also during the meeting the nominating committee will count the ballots for officers for 2019 and will announce the results of their count before the end of the meeting.

Do you have a topic you would like a program on or a program you would like to present? Do you have a homebrewed project you have built? Bring it and show it off! Question? Ask it! Maybe your question isn't one about a Club activity or function, maybe you are having a problem getting some newly acquired equipment set up and operating correctly, or you have an antenna with radiation problems. Regardless of your question, problem, or suggestion, bring it to the meeting, someone present will probably have an answer for you.

If you have a program you would like to hear or a topic you would like to present, contact **James Schlesser/WA9MED**, during a Club meeting, or contact him at (757) 478-2186, or e-mail to <wa9med@jschlesser.com>. +

Board of Directors' Meeting

Bill De Vore/N4DIT, Chair, Newsletter Committee Bluegrass ARS, Lexington, Kentucky

The Board of Directors of the Bluegrass Amateur Radio Society, Inc., will meet Monday, December 17, 2018, at 7:30 PM in the Education Center, basement of the Red Cross Building, 1450 Newtown Pike.

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@ischlesser.com>.

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. \star

Amateur Radio Introduction to Girl Scouts

Pete Kragh/K2UPD, Member,

Bluegrass ARS, Lexington, Kentucky Following is a brief report of the presentation on Amateur

Radio Martin Weaver/KM4HPK and I gave to a group of girl scouts and leaders. When: Saturday, October 27, 2018 Where: Camp Cardinal Girl Scout Camp Lodge, Olive Hill, KY, Carter County Participants: Martin Weaver KM4HPK, Peter Kragh K2UPD, presenters, 20 girl scouts (see picture at right), and 10 adults audience

We presented the features and benefits of amateur radio, focusing on emergency communications and the social aspects of the hobby. We talked about the many activities and modes of operation available. Martin presented the radio merit badge program available to those interested. There were several questions by

both scouts and adults following the presentation.

We also demonstrated HF SSB radio with a portable antenna on 20 meters. . .a major DX contest was underway and we copied many DX stations, portable mobile HF radio on 40m SSB, and 2m repeater op with thanks to Randy NN4G on the Grayson repeater.

We distributed various ARRL flyers and ${\it QST}$

November Club Meeting

Report by the Nominating Committee

The program was presented by the nominating committee appointed by president Andrew Cook/KF4OWP during the October general meeting. President Cook noted the Nominating Committee members (Bart Breeding/KB4FEE, Bill Weaver/WE5P, and Michael Saulsbury/WB0JZO), had successfully obtained candidates for all of the Club's offices for 2019, and had Bart Breeding/KB4FEE, representing the committee, ask for and record the names of members present who would like to have their name placed on the ballot. None were voiced. Bart then read the ballot as of this meeting: President – Andrew Cook/KF4OWP; First Vice President – Bill Fuqua/WA4LAV; Second Vice President – David Richardson/W9KHZ; Secretary – Bruce Campbell/KM4EHU; Treasurer – John Barnes/KS4GL; Director-at-Large – Tim Kunkel/KF4MPM and Mark Elliott/KN4HVX.

Andrew mentioned that due to work requirements he will not be able to attend all meetings during 2019. Those members present accepted Andrew's comment and agreed he should remain a candidate on the ballot.. •



magazines for the scouts to take. Three or four scouts expressed serious interest in amateur Radio. We look forward to one day working them on the air.

73, Pete

Tour of EOC Emergency Operation Center

James (Sandy) Gragg/KM4PJU
Chair, Emergency Preparedness
Committee,
Bluegrass ARS,

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) 478-2186, or e-mail to <wa9med@jschlesser.com>.

Month	Topic Presenter(s) Comments		
√ January	"Winter Field Day, January 27-28, 2018" David Richardson, W9KHZ.		
✓ February	"Software Defined Radio (SDR)" James Schlesser/WA9MED What Programs Would You Like to Hear?		
✓ March	"Severe Weather Identification and Reporting" Joe Sullivan/KC7ITG of the NWS, Louisville		
✓ April	"Design and Construction/Use of an Eggbeater Omnidirectional Antenna" James Schlesser/WA9MED		
√ May	Members' Discussion, "How I Became Interested in Amateur Radio, Getting Licensed"		
√ June	"Field Day" (Presennter Pending) Site location, preparation, operating stations, etc.		
√ July	Open		
✓ August	Hamfest Dave Richardson/W9KHZ and Fest Committee Location, preparation, tickets, tables, work crews, etc.		
✓ September	Annual Family Picnic Fun, Food, Conversation Picnic Shelter #2, Shillito Park, Lexington		
✓ October	"Studying Solar and Lunar Eclipses with Homebrew Optical Projectors and Ham Radio Gear" Dale Covington, K4GSX		
✓ November	Report of Nominating Committee		
December	Annual Auction J.B. Young will serve as auctioneer to see if he can get you some cash - Bring your items		

Lexington, Kentucky <sandygragg@GMAIL.COM>

The Bluegrass ARS has been invited to take a tour of the new Lexington/Fayette County EOC facility on December 2 at 9:00 PM.

This will give you an opportunity to see and become familiar hands-on with a lot of state-of-the-art communication equipment, i.e., Flex 6400,IC-7100,800 MHz trucked, Sat com unit, and web EOC.

The EOC office is located at 115 Cisco Road off Versailles Road. We need to meet at 8:45 and all go in together.

Anyone who plans to attend please let me know (sandygragg@GMAIL.COM).

This will give you the opportunity to see what advancements have been made in emergency communication.

BARS can become an auxiliary communication site, you may want to be involved.

Contact: Sandygragg@gmail.com or 859-699-9934. They want to know how many will attend so they can make appropriate arrangements. •

Proposed RACES in Lexington-Fayette County

Bart Breeding/KB4FEE

Editor, QUA/HAMnews, Bluegrass ARS, Lexington, Kentucky via Bluegrass ARS Facebook Group

On Saturday October 27, 2018, a meeting was held at the Red Cross Building involving the Emergency Communication group of BARS [Emergency Preparedness Committee] and **David Nash** the Lexington-Fayette County EOC Communication's Director. He discussed plans for the formation of R.A.C.E.S. in Lexington-Fayette County. This is an opportunity for Amateur Radio operators to be involved in emergency communications and how BARS can be involved as an auxiliary communication center. Discussion about FEMA and how individual amateur radio operators can be involved.

Plans are being made to tour the new EOC and learn about the new equipment now available. Anyone interested in taking the tour, contact **Sandy Gragg/KM4PJU.**

Additional plans are in the works for classes on building GO Radio Bags and building mobile antennas.

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.

Several exercises are being planned for practicing emergency communications and training on serving as an auxiliary relay in hurricane and severe weather. •

Heard on the ListServ

Question - What is a Good Starter HF Rig?*

Seth Johnson

25 November 2018 <sethjohnson4321@GMAIL.COM>

Hello, I have a question for you all: I'm 14 and currently studying for a general licence. What's a good HF rig to start with?

Dean Davidson/K4ATR

<deandavidson1966@GMAIL.COM>
Sun 11/25/2018 10:26 PM

Depends on funds available. If you want a starter rig the Yaesu FT-891 is a good little rig. Or maybe the FT-450. But if you love radio and you have the funds I would go with a FTDX3000. You will be happy for a long time.

If you're an Icom fan, the Icom 7300 is OK also, but I like the Yaesu 3000 better.

Bill Weaver/W5EP

<weaverwf@USERMAIL.COM>
Sun 11/25/2018, 10:36 PM

A lot depends on your operating plans. At home? Portable? And of course your budget! You really can't go wrong sticking with the Yaesu/Kenwood/Icom brands. Be careful shopping eBay for used rigs, or anywhere on-line for that matter. It's very easy to end up with a rig that is less than promised. It wouldn't be a bad idea to spend some time on the air at the club station [Editor: basement of the Red Cross Building, 1450 Newtown Pike], to get more of an idea of what you would like. Talk to your parents about bringing you by the Bluegrass ARS shack on Saturday morn-

*This discussion is presently ongoing. . Editor ings and get on the air. There is usually someone there after 9:00 AM.

Gregory A. Cross/W8FJK

<gacross@TWC.COM>
Sun 11/25/2018, 10:36 PM

I'm gonna give you a more generalized answer. New or used, if you stick to Yaesu, Kenwood, or Icom, you can't go wrong as far as performance. If you buy used, I suggest getting it from a reputable dealer, not off of e-Bay or other source where you don't know the condition of the radio.

Dave Richardson

<daveinlex3@GMAIL.COM>
Sun 11/25/2018, 10:38 PM

I agree that the Yaesu FT-450 would be a great choice for a very useful HF radio. My first new rig was an Alinco SR8T and I still have it and use it for field day. It is a very robust radio and has been a workhorse for about 10 years.

The only downside to the Alinco, in my experience, is that it's basic and not really setup for digital modes, and I wanted to get into that so I upgraded to a Kenwood TS-2000. But still....for the money, it's very hard to beat the SR8T.

You might find it useful to check user reviews on eHam.com for any radio you're considering.

Gregory A. Cross/W8FJK

<gacross@TWC.COM>
Sun 11/25/2018, 10:56 PM

In addition to my other comment, you can always build your rig! There are many kits out there, and you can even build simple rigs from scratch, even SSB rigs! I suggest listening to the SolderSmoke Podcasts.

If you really want to know how radio works, I highly recommend the book "Experimental Methods in R. F. Design," by Hayward, Campbell and Larkin, available from the ARRL bookstore. (Suggest it to somebody as a Christmas present for you!)

P.S. I was 14 when I got my Novice License -- over 56 years ago! I was about to go into 9th grade. I built my first rig from kits, and loved doing it.

William Fugua/WA4LAV

<wl><wlfuqu00@UKY.EDU>Mon 11/26/2018, 3:22 AM

One learns a lot from his first rig. What

features he likes and dislikes as one example. I recommend that you buy a used radio from a reliable source as your first HF radio. That way later you can sell it for about the same price you purchased it.

It is also best to get one that has had no modifications. Some hams are not very good at soldering and such. Also, some modifications put the equipment outside the FCC specifications and can produce harmful interference to other services.

Chris Gay/KU4A

<ku4a@yahoo.com> Mon 11/26/2018 8:28 AM

There are almost always local people who have radios for sale at any given time. In fact, last I heard, there is a member of JAWS who lives in Salyersville who has a Yaesu FT-450 for sale right now. Buying locally gives you a chance to see the rig and even operate it some before purchasing.

Bill Cotter/N4LG

<n4lg@QX.NET> Monday, 11/26/2018 8:57 AM

Several members of JAWS and BARS may be willing to loan you a HF transceiver for an indefinite amount of time. Think of it as an opportunity to "trybefore-you-buy" and gain experience using a transceiver.

There are also members of both clubs who are available as mentors for new HF operators. They are willing to assist you with constructing antennas, setting up your station, learning CW, operating practices, etc.

Feel free to contact me for more information.

Seth Johnson

<sethjohnson4321@GMAIL.COM>
Mon 11/26/2018, 10:17 AM

I would like one with VHF and UHF in it.

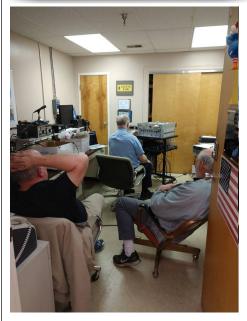
Martin Weaver/KM4HPK

<km4hpk@GMAIL.COM>
Mon 11/26/2018, 10:26 AM

A higher end one with HF, 6m, VHF, and UHF would be the FT991 or FT991A. I love my FT991. •

Andy Rooney wrote that . . .

"It would be a better world if everyone in it knew all the truth about everything."



Participating in the 2018 ARRL Frequency Measurement Test from the Bluegrass ARS Hamshack Bill Fuqua WA4LAV is hard at work whilst the rest of us just sat and watched. (Bill Weaver/W5EP)

Members Participated in ARRL Frequency Measurement Test

Bill Fuqua/WA4LAV,

Member, Bluegrass ARS, Lexington, Kentucky

On Thursday, November 8, 2018, **Bill Fuqua/WA4LAV** and others competed in ARRL Frequency Measurement Test, 2018. The transmission of frequencies began at 02:00 UTC (Thursday evening in North America) on the 40-, and 80-meter bands. The recorded data can be submitted online until November 12th at 02:00 UTC (Sunday evening in North America).

The schedule this years was: Early Run: 40-meters near 7064 kHz

02:00 Call up (9:00 pm local time) 02:03 Key Down

02:05 End 40 meter run

Early Run: 80-meters near 3598 kHz

02:15 Call up

02:18 Key Down

02:20 End 80 meter run

Late Run: 40-meters near 7064 kHz

05:00 Call up (midnight local time)

05:03 Key Down

05:05 End 40 meter run

Late Run: 80-meters near 3598 kHz

05:15 Call up

05:18 Key Down

05:20 End FMT

Forma

The FMT "runs" started with a call up at 0200 and 0500 UTC on November 9. (That is Thursday evening in North America.) In the published rules and instructions, FMT manager, Connie Marshall, K5CM, noted the call up would, if possible, start earlier than the listed times to establish a clear frequency, if necessary, but every effort would be made to start the key down at the published time. A single, unmodulated carrier would be transmitted near (but not exactly on) those FMT frequencies.

Connie/K5CM, in Oklahoma, was the transmitting station, giving the entire continent the opportunity to receive and measure a strong signal. It's OK to make measurements during both the early and late runs, but only one frequency for 40 meters and one frequency for 80 meters should be reported.

It was noted that if the frequency was busy for either run, participants should standby and the FMT would start as soon as practical. The frequencies were the same for both early and late runs so participants were told to be patient and K5CM will start as soon as the frequency was clear enough for measurements.

Instruction for Submission of Data

Measurements are submitted using the data entry website provided by WA7BNM at www.b4h.net/fmt/fmtentry.php. Results will be published immediately following the data entry deadline, 0200 UTC on November 12th. (This is Sunday evening, November 11th in North America). Be sure to describe your setup when you submit your measurements on-line, too. The "green bar" in the results shows stations submitting measurements with an accuracy of 1 Hz or better on both FMT frequencies Bill sat up his receiving and analyzing equipment in the Bluegrass ARS ham shack in the Red Cross Building and collected data there.

In previous years, Bill had experienced a number of issues regarding the actual analyses.

- 1. He would assume considerable ionospheric Doppler shift; typically at that time the signal is shifted to a lower frequency.
- 2. The data recorded would be two channels of audio with a nominal sampling rate of 11025 samples per second. He also assumed the audio adapter would

be slightly off even though it was being precisely clocked by a signal from the WWV atomic clock. This is due to a very slight error in the adapter's internal frequency synthesizer. This can be corrected by measuring a known audio reference frequency and making appropriate corrections in the calculations.

3. He knew there is always noise and QRM. One channel of the audio is dedicated to the test receiver, and has a bandwidth of about 4.5 kHz and should capture the actual test signal without retuning. The last thing you want to be doing is to be tuning around during the 5-minute test looking for the signal.

The other channel would be receiving WWV's signals and (they assumed) its Doppler shift would track that of the test transmission. With some luck and a lot of looking over the data Bill further assumed they should get some answers very close to the actual broadcasted frequencies.

Bill commented, hopefully, our little experiment will not be noticed by Murphy, who has caused problems in the past. •

December is Youngsters on the Air (YOTA) Month

"Kentucky News,"

Steve Morgan/W4NHO,
Kentucky Section Manager,
Owensboro KY 42301,
November 2018

December is Youngsters on the Air Month (YOTA Month). Listen for stations on the air with YOTA as the call sign suffix.

"The idea for this is to show the Amateur Radio hobby to young people and to encourage youngsters to be active on the amateur bands," said **Tomi Varro**, **HA9T** (Hungary). "This is a great moment to show Amateur Radio to the world and to invite newcomers."

YOTA is primarily an International Amateur Radio Union (IARU) Region 1 (Europe and Africa) activity, but youngsters from the US in Region 2 (the Americas) have attended YOTA summer camps, which are held in a different country each year. Varro said both licensed and unlicensed youth will be making contacts. "Be helpful on the bands — maybe these young operators are just making their first ever contacts," he advised.

YOTA stations are, in general, operated by individuals 25 or younger. The

"The only time I ever enjoyed ironing was the day I accidentally got gin in the steam iron.

~ Phyllis Diller

operating event takes place for the entire month of December UTC.

As part of YOTA month, **Bob Johnson**, **W9XY**, and **Ken Claerbout**, **K4ZW**, will travel to Ethiopia to team up with the club at the Addis Ababa University, Institute of Technology and club station ET3AA. For more updates, visit YOTA's Facebook page.

From Amateur Radio News, November 9, 2018 - ARRL

FT8 – Tipping Point for Ham Radio?

Gerald F. Youngblood/K5SDR, CEO, FlexRadio, FT8, News October 16th, 2018

Several years ago I was captivated by a book written by Malcolm Gladwell called, The Tipping Point: How Little Things Can Make a Big Difference. Merriam-Webster defines tipping point as, "the critical point in a situation, process, or system beyond which a significant and often unstoppable effect or change takes place." In his book, Gladwell describes how," The tipping point is that magic moment when an idea, trend, or social behavior crosses a threshold, tips, and spreads like wildfire." He shows us how the phenomenon applies to everything from flu epidemics to the explosion of new technologies.

Does the FT8 mode included in WSJT-X software constitute a tipping point in ham radio for good or for harm? There are many ham radio opinion blogs on the Internet that strongly or sometimes sarcastically take one or the other stance. There is even an Internet poll asking, "Is FT8 damaging amateur radio?" At this moment it is 52% yes, 45% no and 3% undecided. All of the articles and videos I have seen agree on one undeniable fact – FT8 has since its introduction in June of 2017 achieved "killer app" or tipping point status. Some think it will kill ama-

teur radio and others believe that such innovations give the hobby new life.

The FT8 digital mode is the latest in a series of weak signal applications for amateur radio. Conceived originally for enhancing esoteric propagaint modes such as high speed meteor scatter and moonbounce, Joe Taylor K1JT developed a series of applications including FSK144, JT6M, JT65, and JT9. When FT8, jointly developed by Joe Taylor and Steve Franke K9AN, was announced it was described as being designed for. "multi-hop Es where signals may be weak and fading, openings may be short, and you want fast completion of reliable, confirmable QSO's."2 Being a 6-meter fan, that resonates with me.

What happened to take an esoteric mode designed for multi-hop E skip on VHF and overnight turn it into a world-wide phenomenon across all bands from 2200m through 70cm. In other words, what makes FT8 a killer app? Here are a few of my observations:

FT8 counters the current dearth of sunspots

FT8 opens "dead bands"

FT8 is addictive – see em, click em, work em... Boom!

FT8 lets little pistols work DXCC like a big gun

FT8 lets you work the world from small or deed restricted lots

FT8 is a weak signal – not a low power mode (power works the really weak ones)

FT8 lets you work DX on 6m when there would be none

FT8 is suddenly dominating VHF/UHF contesting

FT8 lets you work weak signal DX without proficient CW skills

FT8 decoding to -20 dB SNR is like turning 100W into 10kW

FT8 is like having constant DX beacons on every band

FT8 puts the DX, WAS, WAZ, etc. on the air when they might not be

FT8 let's you work DXCC on 160m without a big station

FT8 let's you call CQ and become the DX

FT8 is amazing literally space age technology

FT8 is probably other things I haven't realized yet but some of you have

So, will FT8 kill ham radio as some have posed? True, it is mostly automated. True, it reduces the skill required to make DX contacts. True, it removes conversation from the QSO the same as is true of

^[1] https://dx-world.net/yes-or-no-a-poll-on-ft8/

^[2] https://en.wikipedia.org/wiki/ WSJT (amateur radio software)

most DX chasing contacts on any mode. True, it removes some of the human factor. But does that make it bad for amateur radio's future?

In my humble opinion, FT8 is at the very heart of what amateur radio has been about from its inception – amateurs who love the art of radio enhancing the art of radio. The FCC in Part 97 of the rules lists the following as second in the list of five tenets that define amateur radio:

"Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art."

In my humble opinion, what will ultimately kill amateur radio is not FT8. To the contrary, FT8 is an example of what will keep it alive and relevant. What will kill amateur radio is if we cease to innovate, become old and grumpy, and no longer bring new blood into the hobby. I

"When things are investigated, then true knowledge is achieved; when true knowledge is achieved, then the will becomes sincere; when the will is sincere, then the heart is set right; when the heart is set right, then the personal life is cultivated; when the personal life is cultivated, then the family life is regulated; when the family life is regulated, then the national life is orderly; and when the national life is orderly, then there is peace in this world."

~ Confucius

received my novice license over 50 years ago (rock bound CW on a 6L6) and still find new and exciting things to peak my interest. Frankly, technical innovation in amateur radio directly led to my career in technology just as for many of you. I hope that continues long after I am gone.

Hope to work you soon on FT8, some other new mode, or maybe a ragchew on SSB when the sunspots come back. •

Amateur radio is alive and well. FT8

is just one element of keeping it that way.

Their Eyes on Bouvet Island

Jim Damron N8TMW,

Amateur Radio Newsline Report Number 2143, November 23, 2018

We begin this week with an update on what is easily one of the most anticipated DXpeditions in the ham radio community: the Bouvet Island DXpedition. While there are no specific dates for when the 3YØI (Three-Y-ZERO-Eye) team becomes an on-air reality, the operators are now assembling in Cape Town, South Africa and making preparations for what is expected to be at least a two-week stay. The team includes Dom/3Z9DX, the group's leader, as well as Jose/CT1DSV, Tack/JE1CKA, Mietek/SP3CMX. Marcin/SP5ES. Stanislaw/SP8S and Branko/YU4DX. It is expected to take 12 days for them to arrive at their destination in the South Atlantic before getting on the air. They will be operating on frequencies from 160 to 6 meters using SSB, CW and FT8. Their preferred QSL is via ClubLog's OQRS but they will accept LoTW or via 3Z9DX. The team estimates the total cost for the trip at about \$225,000 U.S.

As the team continues to work out security measures and logistics, this venture takes on even more importance for all interested hams. It follows the scrapping of the 3YØZ DXpedition in February of this year after one of its ship's engines developed problems, forcing the team to reverse course, even as the coveted island destination was well within their sights. •

YL Sails Toward New World Record

Meanwhile, a YL on another ham radio journey is looking to set the record of a lifetime. She's doing it solo. **Neil Rapp WB9VPG** tells us more.

NEIL: To all appearances, retired math teacher **Jeanne Socrates VEØJS**, is alone aboard her sailing vessel the S/V Nereida as she makes her third attempt at setting a record. Jeanne is already the oldest woman to circumnavigate the globe solo, nonstop, and unassisted -- and is the first woman to do so from North America.

Schedule for Volunteer Examinations in 2018

Harry Sparks/KN4S,*

Bluegrass Volunteer Examiners, kn4s@kn4s.com

Georgetown

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*

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

Danville

* August, Bluegrass ARS Hamfest, Eastland Shopping Center, Lexington, 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)

Winchester**

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. December 8, 2018 10:00 AM Tuesday, December 11, 2018 17:00 PM	ARRL WCARS	Georgetown Lexington
*Additional exam locations dates times are	listed at website	kn4s@kn4s.com

^{**} September, Richmond Hamfest, Madison County Fairgrounds, Richmond, Kentucky

Now 76, the experienced sailor simply wants to be the oldest person to accomplish that feat. Yes, to all appearances she is indeed alone, but *Newsline* got on board with her briefly on 20 meters on Thursday November 15 with the help of a Skype patch from her friend **Jim Millner WB2REM**. She'd left Victoria, Canada, in early October and told us she was, at the time, 80 miles north/northwest of Ducie Island in the Pacific Ocean, at a good pace into her 8-month journey.

JEANNE: I'm pretty pleased with my progress, in fact.

NEIL: When the sun shines brightly, Jeanne has the benefit of solar power. She has a little generator on board too, but for a sailboat like the Nereida, the real power comes, of course, from riding the wind.

Jeanne's days are full. She makes her meals, she writes in her blog, she downloads critical weather information and maintains the boat in operating condition, even keeping barnacles from slowing her sojourn. There is, of course, also the radio to turn to, all 125 Watts of HF signal – and she does that often.

JEANNE: I spend a lot of time actually, it's really great for me to have the radio. I've not been able to make the morning contacts I normally do when I am further north. I get onto various nets. Some of those contacts come up to me in the daytime and that seems to be good. In

"People who are truly effective have the humility and reverence to recognize their own perceptual limitations and to appreciate the rich resources available through interaction with the hearts and minds of other human beings."

~ Stephen Covey

fact, I made contact yesterday with Victoria Canada where I left from. He came up strong on 17 meters which is great. And then other friends from the 7155 group and another group, we make contact from time to time and occasionally I am able to get a hold of my friends up on the west coast. There is a group there around 7147 in the morning around sunrise. I am able to talk to them occasionally. It has been a really, really good thing for me to have the ham radio to make connections like that.

NEIL: So while Jeanne's trip remains a true solo journey with nothing but ocean surrounding her, her crew members and her companions come and go regularly as she sails the world. If you want to join her, set your alarm clock early and your rig for 7.163 MHz between 5 and 6 a.m. (ET). Meanwhile, this globe-circling ham and aspiring record-breaker is on her way.

JEANNE: Good bye for now, 73.

For Amateur Radio Newsline I'm **Neil Rapp WB9VPG**

North Carolina Is Working On A "Distracted Driving" Bill

Discussion in "Amateur Radio News" started by Jerry Oxendine/K4KWH,

May 7, 2018

North Carolina Senator **Jeff Tarte** has sponsored S-393 which, in its present form, would severely restrict the use of a handheld device, *AND* without saying so, the use of a hand mike. I spoke with Senator Tarte's office in Raleigh, and I have been assured by his secretary that there will be revision providing an exemption to licensed two-way radio users! Apparently others have already advised his office that the way it is now written, S-393 could possibly cause lawsuits and actions in Federal Court. So this pending revision, if I am being told truthfully, is good news.

Also in January, I wrote a **Mr. Scott Stone** of the Wireless Licensing Bureau asking for a Declaratory Ruling that would clarify current FCC regulations, and, if necessary, provide a Federal exemption for amateurs, CB operators, and commercial licensees. Perhaps it is so that any exemption would only apply to Part 97, and other users "may" have to apply under their sections and Parts of Title 47. Thus far I haven't received any response from Mr. Stone. I am about to resubmit the letter. •



It's the Rule

Amateur Radio Issues Under Discussion in Geneva in Advance of WRC-19

"The ARRL Letter,"

Rick Lindquist/WW1ME, Editor, November 15, 2018

As part of the run up to World Radiocommunication Conference 2019 (WRC-19), three International Telecommunication Union Radiocommunication Sector (ITU-R) Study Group 5 (SG 5) Working Groups have been meeting in Geneva. ITU-R Study Groups develop the technical bases for decisions taken at WRCs and develop global standards, reports, and handbooks on radiocommunication matters. Working Group 5A-1 is responsible for Amateur Radio issues. Its primary task is to develop a technical report to support the work for WRC-19 Agenda Item 1.1, considering an allocation of 50-54 MHz to the Amateur Service in ITU Region 1 (Europe and Africa) that would be in line with the 6-meter band in

Regions 2 and 3. Other services, including broadcasters, utilize the 50-54 MHz band in Region 1. The work is in response to WRC-15 Resolution 658 to study spectrum needs in Region 1 for the Amateur Service in the 50-54 MHz band, and to study sharing among the Amateur Service and the mobile, fixed, radiolocation, and broadcasting services, in order to ensure protection of these services.

While much of the work of WP 5A, and of Working Group 5A-1 in particular, has been on the working document covering Amateur Service spectrum needs and sharing studies with incumbent services in the 50-54 MHz band, WG 5A-1 also completed a liaison statement to Working Party 1A

(spectrum engineering techniques), and Working Party 3L (ionospheric propagation and radio noise) highlighting Amateur Radio concerns with respect to Wireless Power Transfer (WPT) systems. The primary unease involves spurious and harmonic emissions -- which require additional study, attenuation due to walls and building penetration levels, and separation distance between WPT devices and Amateur Radio antennas. Fears have been expressed that WPT charging for electric vehicles might cause substantial interference on the amateur bands. (Read more at: <http:// www.arrl.org/news/amateur-radio-issuesunder-discussion-in-geneva-in-advance-ofwrc-19>) +

Where's the Rare DX?

"OPDX Bulletin 1391" November 26, 2018 http://www.papays.com/opdx1391.html

ANTARCTICA (IAØ) – Danilo/IZ1KHY will be signing IAØ/IZ1KHY til the end of

Feb 2019.

BIG CORN ISLAND (NA-013) (H7/YN4) - Members of the Russian Robinson Club will sign H7/R4WAA, H7/RC5A, YN4RRC, H7/RM0F and H7/N3QQ til Dec 26 on 160-10m using CW

and SSB. QSL YN4RRC via RZ3FW. All others listen for QSL routes.

BOUVET (3YØ) DXPEDITION NEWS - Departure dates are still not known. They plan to stay on the island for at least 2 weeks, if the weather cooperates. The 3YØI DXpedition's band plan frequencies (160-6m) and modes (CW/SSB/FT8) can be found at https://www.rebeldxgroup.com, https://bouvetoya.org/3yoi-bandplan.

BRAZIL (PY) – Chris/N4CAG will sign PY4/N4CAG til Dec 15 on 40/30/20/17m using FT8 but may try some SSB. QSL to his home CBA.

BURKINA FASO (XT) – Al/F8FUA will sign XT2BR til Dec 11 using CW, SSB, RTTY, and FT8 (DXpedition mode). QSL direct (with SAE and 2 USDs) or via the REF QSL Buro. Will upload log to LoTW.

CAMBODIA (XU7) – Steff/HB9FXL will sign XU7AKB from various locations in Cambodia til Dec 14 on 40/20/17/15/12/10m using SSB. QSL via HB9FXL, by the USKA QSL Buro or direct. Logs will be posted to ClubLog and LoTW.

CHAD (TT8) (Update) - The Italian Dxpedition Team will op from Chad Feb 22-Mar 7 signing TT8RR using SSB/CW/RTTY, and TT8XX on FT8 only. Look for more details to be forthcoming and: http://www.i2ysb.com/idt

EGYPT (SU9) – Nacho/EA1AK/EA7TN is once again signing SU9JG from Gezira Is in the Nile River near Cairo (Zone 34) mainly using FT8 on 80/40/30/20/17/15m. QSL via LoTW or EA5GL. Check QRZ.com for more details, especially for QSOs on FT8.

GREENLAND (OX) – Bo/OZ1DJJ will sign OX3LX from Tasiilaq Is (NA-151, WW Loc. HP15EO) til Dec 4th on various HF bands (Focus on 160/80/60m), limited to his spare time when not working (Best chance is in the morning around lunch and after dinner [local time utc+2], on the weekend also during night/morning"). QSL via OZØJ direct (see QRZ.com).

Upcoming Contests

Sean Kutzko/KX9X,

QST, ,,

- Dec 1 Wake-Up! QRP Sprint, 40/20m, CW, www.qrp.ru/contest/wakeup/333- wakeupeng
- Dec 1-2 TOPS Activity Contest, 80-10m, CW, www.procwclub.ro/TAC%20Rules.html Dec 1-2 EPC Ukraine DX Contest, 80-10m, Digi, www.vinradio.ho.ua/page184.html
- Dec 2 Ten-Meter RTTY Contest, Digi, www.rttycontesting.com
- Dec 4 ARS Spartan Sprint, 80-10m, CW, www.arsqrp.blogspot.com
- Dec 6 QRP ARCI Topband Sprint, 160m, CW/Phn, www.qrparci.org/contests
- Dec 6 NRAU 10-Meter Activity Contest, CW/Digi/Phn, www.nrau.net/activity-contests
- Dec 6 SKCC Sprint Europe, 160-10m, CW, www.skccgroup.com
- Dec 8-9 ARRL 10-Meter Contest, CW/Phn, www.arrl.org/10-meter
- Dec 8-9 SKCC Weekend Sprintathon, 160-6m, CW, www.skccgroup.com
- Dec 8-9 International Naval Contest, 80-10m, CW/Phn, www.marinefunker.de
- Dec 8-10 PODXS 070 Club Triple Play Low Band Sprint, 160-40m, Digi, www.podxs070.com
- Dec 9 QRP ARCI Holiday Spirits Homebrew Sprint, 160-10m, CW, www.qrparci.org
- Dec 9 CQC Great Colorado Snowshoe Run, 20m, CW, www.coloradoqrpclub.org
- Dec 10 4 States QRP Group Second Sunday Sprint, 160 -10m, CW/Phn, www.4sqrp.com
- Dec 12 NAQCC CW Sprint, 80-20m, CW, www.naqcc.info
- Dec 14 UN DIGI Contest, 160-40m, www.kfrr.kz
- Dec 14 Russian 160-Meter Contest, CW/Phn, www.qrz.ru/contest
- Dec 15 Feld Hell Sprint, 160-6m, Digi, www.sites.google.com/site/feldhellclub
- Dec 15 OK DX RTTY Contest, 80-10m, Digi, www.okrtty.crk.cz/index.php?page=english
- Dec 15-16 Croatian CW Contest, 160-10m, CW, www. 9acw.org
- Dec 16 ARRL Rookie Roundup, 80-6m, CW, www.arrl.org/rookie-roundup
- Dec 17 Run for the Bacon QRP Contest, 160-10m, CW, www.qrpcontest.com/pigrun
- Dec 19 NAQCC CW Sprint, 80-20m, CW, www.naqcc.info
- Dec 21 AGB-Party Contest, 80-40m, CW/Digi/Phn, www.ev5agb.com
- Dec 23 RAEM Contest, 80-10m, CW, www.raem.srr.ru/en/main
- Dec 26 SKCC Sprint, 160-10m, CW, www.skccgroup.com
- Dec 26 DARC Christmas Contest, 80-40, CW/Phn, www.darc.de
- Dec 29 RAC Winter Contest, 160-2m, CW/Phn, www.wp.rac.ca/rac-canada-winter-contest-rules
- Dec 29-30 Stew Perry Topband Challenge, 160m, CW, www.kkn.net/stew
- Dec 29-30 Original QRP Contest, 80-20m, CW, www.qrpcc.de
- Dec 31 Bogor Old and New Contest, 80-40m, Phn, www.orari-bogor.org +

Logs get uploaded to LoTW, ClubLog and sometimes eQSL. http://geronne.dk/ index.php/ox3lx/ox3lx-dxped>

INDIA (AU2) - (Special Event) Listen for AU2JCB til Dec 11 on 80-6m using SSB. QSL direct (with 2 IRCs) to VU2DSI. < http://www.qsl.net/vu2msy/JCBOSE.htm>

ADDED NOTE: There will be other VU operators celebrating this anniversary, listen for Jagadev/AU3JCB, and Pramod/AU5JCB. See QRZ.com for QSL info.

ITALY (IY) - Listen for special event station IY1EY Nov 3-Dec 31 to commemorate the experiments conducted by Marconi 1919-1936 on CW and SSB and on all bands, including the WARC bands. A special QSL is available via IK1QBT direct.

ITAPANCA ISLAND (SA-023) – Martin/PT2ZDX/LU9EFO will sign PS6I Dec 1-7 on 80-6m using SSB. QSL via F4BHW

direct only. NO BURO.

LIBYA (5A) – YL Elham, 5AØYL, is on 20m (14280 kHz,1530-1730 UTC). No other details are available, but we suggest you watch QRZ.com.

MARIANA ISLANDS (KHØ) – YL Chie/7L3PFH will sign KHØTG from Tinian Is (OC-086, USI NI002S, WLOTA 1333) Dec 26-Jan 1 on 160-20m using CW and SSB. QSL via JL1UTS.

MARTINIQUE (TO8) - Tom/K8BKM will sign TO8T Feb 13-18 (and in the ARRL Intl DX CW Contest Feb 16-17). QSL via K8BKM direct, LoTW or ClubLoq.

PAPUA NEW GUINEA (P2) - Roly/ZL1BQD will sign P29RR from Wewak til Dece 4 on 40/20m using CW and Digi (FT8, JT65, JT9). QSL via his home CBA direct, LOTW or eQSL.

SINT MAARTEN (PJ7) – Tom/AA9A is once again signing PJ7AA from Simpson

Bay, Sint Maarten (NA-105) til Dec 8 on 80-10m using CW, SSB, RTTY and the Digi modes. QSL via AA9A or LoTW. NO Buro QSLs.

SOMALIA (60) – Ali/EP3CQ will operate when he has installed his station on SSB (15 and 20m 1800-2000 East Africa Time (EAT). More details forthcoming.

SRI LANKA (4S) – Ops Bernd/DK7TF and Jurgen/DH6ICE will sign 4S7DLG til

Dec 6 on all HF bands, mainly on SSB and FT8. QSL via DK8ZZ.

SRI LANKA (4S) – Peter/DCØKK will sign 4S7KKG from Moragalla (AS-003, WLOTA 0762) til Apr 1, 2019 on the digi modes and CW. QSL via his home CBA, direct and by the Buro. All QSOs will be uploaded to LoTW and ClubLog. ST. KITTS AND NEVIS (V4) – Bernie/W3UR and his wife Becky/N3OSH will sign V47UR on 160-6m. More details forth-

coming.

ST. KITTS (TT8) – Divid/K1KA will sign V47KA from V47JA's QTH in Calypso Bay Feb 11-25, 2019, using FT8 (NOT Fox-Hound mode), on 160-10m. QSL via LoTW and direct (see QRZ page).

UEPI ISLAND (OC-149) (H44) – Remo/HB9SHD will sign H44SHD til sometime in Dec on 160-10m using mostly SSB, the Digi modes and a little CW. QSL via his home 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.lexkywcars.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 (38°3'34" N 84°43'11" W). 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.

Greater Mason County ARA meeting, 7:00 PM, second Tuesday each month, Maysville Community College Science Building.

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

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

The Jessamine County ARES Net – Tuesdays at 7:30 PM, 145.490 Repeater, Gary Britten W4GNB net control..

The Madison County ARES Net, 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 to my attention, **Bill DeVore/N4DIT**, in care of Bluegrass ARS, Inc., PO Box 4411, Lexington, KY 40544-4411, or e-mail to billdit@twc.com.

Minutes of the Board of Directors Meeting, October 15, 2018

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

The October, 2018, Directors' Meeting was called to order at 7:30pm by President **Andrew Cook, KF40WP**.

In attendance were: First Vice President – Bill Fuqua, WA4LAV; Treasurer – John Barnes, KS4GL; Secretary – Bruce Campbell, KM4EHU; Directorat- Large – David Richardson, W9KHZ, and Tim Kunkel, KF4MPM. MARS representatives Barry Jackson, WB4N, and Harvey Frye, AA4HF, plus Brad James, WA4HBM, were also present.

Treasurer **John Barnes**, **KS4GL**, reported that no new applications for membership were received for review during the past month.

Treasurer **John Barnes**, **KS4GL**, submitted the summary treasurer's report of amounts available in deposits as of September 30, 2018.

Checking account:

 General fund:
 \$10,244.53

 Coax/repeater:
 \$1,164.64

 Education:
 \$1,909.29

 Checking Total:
 \$13,318.46

PayPal account: \$ 3,029.45 Savings account: \$ 200.75

Total all Accounts: \$16,548.66

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

Secretary **Bruce Campbell**, **KM4EHU**, reported that the Bylaws Committee will not meet on November 5th and November 19th since he will not be able to attend either meeting due previously scheduled cataract eye surgeries on those dates. He asked that arrangements be made to record the minutes of the General Meeting and also the Directors' Meeting.

Committee Reports

Contest: (Pete Kragh, K2UPD). (no report). **David Richardson**, W9KHZ, reminded that 2019 Winter Field Day is scheduled for the fourth weekend in January.

Education: Bill Fuqua, WA4LAV. Thursday technical sessions and Saturday workshops will now resume.

Emergency Preparedness: A candidate for the committee's chair position is being considered for appointment at a subsequent Directors' Meeting. This committee is the club's liaison with the Red Cross

Treasurer's Report

Respectfully submitted, John Barnes/KS4GL, Treasurer

BLUEGRASS AMATEUR RADIO SOCIETY, INC. INCOME, EXPENSES, AND ACCOUNT BALANCES OCTOBER 31, 2018

	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	90.87	0.00	90.87
Education	0.00	0.00	0.00	0.00
Hamfest	0.00	0.00	0.00	0.00
Interest	2.40	0.00	0.03	2.43
Miscellaneous	0.00	0.00	0.00	0.00
Sales Tax	0.00	0.00	0.00	0.00
Total	240	90.87	0.03	93.30
Expenses:				
ARRL Dues	0.00			0.00
Coax/Repeaters	359.66			359.66
Donations	11.59			11.59
Education	0.00			0.00
Election	0.00			0.00
Equipment	0.00			0.00
Field Day	0.00			0.00
Hamfest	0.00			0.00
Insurance	0.00			0.00
Miscellaneous	0.00			0.00
Newsletter	0.00			0.00
Picnic	0.00			0.00
P.O. Box/Postage	0.00			0.00
Sales Tax	188.41			188.41
Subscriptions	0.00			0.00
Telephone	0.00			0.00
Total	559.66			559.66

Account Balances

September 30, 2018 October 30, 2018

Total Balance	\$16548.66	\$16082.30
Savings Balance	\$ 200.75	\$ 200.78
Pay Pal Balance	\$ 3029.45	\$ 3120.32
Checking*	\$13318.46	\$12761.20

*Fund Specific Balances

(Checking)

Total	\$13318.46	\$12761.20
Education	\$ 1909.29	\$ 1909.29
Coax/Repeater	\$ 1164.64	\$ 804.98
General	\$10244.43	\$10046.93

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

and Lexington Fayette County EOC.

Hamfest: David Richardson, W9KHZ. Ideas for next year's Hamfest are welcome.

Newsletter: Bill DeVore, N4DIT, and Bart Breeding, WB4FEE. Work to update the club's webpage is continuing.

Program: James Schlesser, WA9MED. (no report)

Public Relations and Membership: Bart Breeding, KB4FEE. An informational program about Amateur Radio will be conducted for the Lexington Library. David Richardson, W9KHZ, will set up a demonstration ham radio station at the library for the program.

Repeater: Andrew Cook, KF4OWP. Nothing to report.

Shack: David Richardson, W9KHZ.

- 1) The Shack plans to be open and available for the Scout Jamboree-on-the-Air (JOTA) on October 20th.
- 2) A computer monitor has been installed in the shop.

HF Liaison: David Richardson, W9KHZ. Nothing to report VHF Liaison: Tim Kunkel, KF4MPM. Nothing to report.

Volunteer Examinations: (Fernie Williams, KE4MEI). (no report),

Historian: Bill DeVore, N4DIT. Nothing to report.

KYQRP (ad hoc) - (Roger Colvin, KJ4YSY). (no report).

Library: John Barnes, KS4GL. Nothing to report.

MARS: Harvey Frye, AA4HF, and Barry Jackson, WB4N. The new MARS antenna tunes-up and is in operation in 2-MHz and 3-MHz.

Trustee: Andrew Cook, KF4OWP. Nothing to report.

Bylaws: Andrew Cook, KF4OWP. Secretary Bruce Campbell, KM4EHU, is recording the proceedings of the Bylaws committee, which is meeting at 6:00pm before the general club meeting and the Directors' meeting. The current Bylaws are being reviewed article-by-article, and are revised likewise. The revisions as they are made are being submitted to the Directors for review for ultimate approval and to be presented to the club for general acceptance by vote.

A set of BARS Standard Operating Procedures will follow after acceptance of the Revised Bylaws.

The Bylaws committee meeting is open to any interested BARS member.

Old Business

The replacement of the coax antenna feeder cables and new lightning protection devices will be made during the antenna maintenance activities after a review of coax cable types and costs has been completed.

New Business

- 1) Selected items of donated and surplus club equipment will be made available for the members' auction during the December meeting, and can be reviewed at 7:00 before the meeting.
- 2) The club will consider registering in the Hurricane Net for participation during future disasters.

Upcoming BARS Schedule

November 5th, 6:00pm - Bylaws Committee Meeting - CANCELED.

November 5th, 7:00pm - KYQRP.

November 5th, 7:30pm, BARS General Meeting. Program: Nominations for 2019 Officer Elections.

November 19th, 6:00pm – Bylaws Committee Meeting – CANCELED.

November 19th, 7:30pm – Directors' Meeting.

December 3rd, 6:00pm - Bylaws Committee Meeting.

December 3rd, 7:00pm – KYQRP. December 3rd, 7:30pm – BARS General

Meeting. Program: 1) Elections of 2019 Officers. 2) Members' Gear and Equipment Auction.

With no other business at 8:32pm, **John Barnes**, **KS4GL**, moved that the meeting be adjourned, which was approved by general consensus without objection. •

Minutes of the General Meeting of the Bluegrass Amateur Radio Society, Inc., November 5, 2018*

Recorded and submitted by R. William De Vore, N4DIT, Secretary (Retired)

The meeting was called to order by President Andrew Cook/KF4OWP at 7:32 PM. Officers in attendance were the president, First Vice President Bill Fuqua/WA4LAV, Second Vice President James Schlesser/WA9MED, Treasurer John Barnes/KS4GL, and Director-at-Large Tim Kunkel/KF4MPM and David Richrdson/W9KHZ.

The president then had everyone introduce themselves by name and call sign. Following the introductions, the president asked for visitors to introduce themselves (no visitors were present).

Terry Layman/N6OKR reported on the trivia contest he had introduced during the October meeting, questions about the life and amateur radio leadership and inventiveness of **Ross A. Hull** (1902-1938). Terry said **John Barnes/KS4GL** had successfully answered the questions Terry had pre-

sented, and thus was winner of the Contest. He congratulated John.

President Cook noted the Nominating Committee members had successfully obtained candidates for all of the Club's offices for 2019, and had Bart Breeding/ **KB4FEE** ask for and record the names of members present who would like to have their name placed on the ballot. None were voiced. Bart then read the ballot as of this meeting: President - Andrew Cook/ KF40WP; First Vice President - Bill Fuqua/WA4LAV; Second Vice President -David Richardson/W9KHZ; Secretary -Bruce Campbell/KM4EHU; Treasurer -John Barnes/KS4GL; Director-at-Large - Tim Kunkel/KF4MPM and Mark Elliott/KN4HVX. Andrew mentioned that due to work requirements he will not be able to attend all meetings during 2019. Those

members present accepted Andrew's com-

ment and agreed he should remain a candidate on the ballot.

Officer/Committee Chair Reports

Emergency Preparedness Committee: Sandy Gragg/KM4PJU reported that plans are being made to tour the new Lexington/Fayette County EOC facility on Cisco Road, and learn about the new equipment they now have available. Anyone interested in taking the tour may contact Sandy at <sandygragg@gmail.com>. He stress that anyone interested in EmmCom should look into the Community Response Team (CRT).

Sandy also reported that on Saturday October 27, 2018, a meeting was held at the Red Cross Building involving the Emergency Communication group of Bluegrass ARS, along with **David Nash/KM4KPV**, the Lexington-Fayette County EOC Communication's Director. He men-

tioned plans for the formation of RACES in Lexington-Fayette County which would be an opportunity for Amateur Radio operators to be involved in emergency communications, and how Bluegrass ARS can be involved as an auxiliary communication center. Additional plans are being considered for practicing emergency communications and training, and serving as an auxiliary relay during hurricane and serve weather nets [nationwide], and participating in the Club's two Field Day events.

Treasurer: John Barnes/KS4GL read his financial summary. He added that no applications for membership have been received. J.B. Young/WA4WWH moved John's report be accepted as read; a second was voiced by Bill Weaver/WE5P. Motion passed. John reported he has two bills due that are not reported since their due dates are not until next month, and January. David Richardson/W9KHZ moved John go ahead and pay both bills; a second was voiced by J.B, Young/WA4WWH. Motion passed.

Bill Weaver/W5EP reported on his Slow Morse Code Net. He said reports vary from being heard in Richmond to too noisy in south Lexington, to too soft copy in Lawrenceburg. All in all not adequate coverage to achieve what we set out to accomplish. He noted s suggestion has been made that 6 meters might be an

option. He said he has no way of testing that. It will require others involved to pick up the ball and run with it. Please let him know if you would be willing to do so. Any ideas are encouraged, please feel free to chime in.

Shack Committee: David Richardson/W9KHZ reported that if the weather allows, work on the tower/antennas will commence Saturday morning. Andrew listed the items that have been purchased or constructed for installing on the tower either as new items or replacements. Tests will be run as work proceeds.

David said four stations plus the MARS station are available for folks to use – he encouraged anyone to come down and operate. Modes available are CW, voice, digital, so there should be something of interest for every ham, or even those who would like to become a ham.

Bill Fuqua/WA4LAV reported that he will be participating in the nationwide (plus Canada) ARRL Frequency Measurement Tests from the shack (UTC 0200-0500) on 40 and 80 meters. Watch for his announcement emails.

Program Committee: James Schlesser/WA9MED confirmed the December program will be the Club's annual auction conducted by J.B. Young/WA4WWH. The schedule for next year will feature all of the annual programs (January – Winter Field Day; March –

Severe Weather Training; June – Summer Field Day; August – Hamfest; September – Family Picnic; December – Auction).

Public Relations and Membership Committee: Bart Breeding/KB4FEE pointed out that the Club's web address is bluegrassARS.org nor .com. If .com is typed you will open one of Spectrum's pages. . .and you don't want to go there! Bart said we will be giving a presentation to the general public at Lexington's Village Branch (Village Drive) Public Library some time in January. He said the Club is also working with Boy Scout troops to have more scouts visit the shack and possibly be involved in more activities.

Old Business

None reported.

New Business

Sandy Gragg/KM4PJU reminded everyone about the tour of Lexington/Fayette County EOC Saturday afternoon, November 17.

A technical discussion was held about possible damage to transceivers, etc., when there are multiple stations connected to the same antennas.

Being no further business, **J.B. Young/WA4WWH** moved the meeting be adjourned. A second was voiced by **James Schlesser/WA9MED**. Motion passed and the meeting was called adjourned at 8:28 PM. +

Looking Back. . . From "QUA/HAMnews," December 2005, page 1



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.

Bart Breeding/KB4FEE, 3101 Symons Circle,

Lexington, Kentucky 40511, (859) 644-2216 (aratat291@twc.com)

Standing Committee Chairs:

Emergency Preparedness (Liaison Bluegrass ARS with LFUCG DEM)

......Sandy Graff/KM4PJU (859) 699-9934) (sandygragg@gmail.com) Hamfest David Richardson/W9KHZ (859) 983-1380) (daveinlex3@gmail.com) Newsletter, Bart Breeding/KB4FEE (859) 644-2216 (aratat291@twc.com) Program James Schlesser/WA9MED (757) 478-2186 (wa9med@jschlesser.com) Public Relations and Membership . . Bart Breeding/KB4FEE (859) 644-2216 (aratat291 @twc.com) Repeater Andrew Cook/KF4OWP (859) 396-9930 (kf4owp@gmail.com) Shack David Richardson/W9KHZ (859) 983-1380 (daveinlex3@gmail.com) Volunteer Examinations Fernie Williams/KE4MAI (859) 652-3393) (ke4mai@arrl.net)

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

KY-QRP Group.....Roger Colvin/KJ4YSY (859) 494-6268 (KJ4YSY@GMAIL.COM Library John Barnes/KS4GL (859) 253-1178 (jrbarnes@iglou.com) Shack/Repeater Trustee Andrew Cook/KF4OWP (kf4owp@gmail.com

HF Liaison to Shack CommitteeDavid Richardson/W9KHZ

 $VHF\,Liaison\,to\,Shack\,Committee\dots Tim\,Kunkle/KF4MPM$

President:

Andrew Cook/KF4OWP 320 Given Avenue Lexinaton, 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

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

First Vice-President:

Bill Fuqua/WA4LAV 3395 Greentree Drive Lexington, Kentucky 40517 859/272-9523 wlfugu00@ukv.edu

Bruce Campbell/KM4EHU

Secretary:

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: 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 December 2018



- Sat 1 Shack open 9:00-Noon; Radio Theory and Construction Workshop, 1:00-3:00 PM.
- Sun 2 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) linked to 147.180 (PL-74.4) and other repeaters in the area.
- KY-QRP Discussion Group, 7:00 PM, Meeting Room "B," Red Cross Bldg, 1450 Newtown Pike, Lexington. Mon 3
- 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-Mon 3 79.7) linked to 147.180 (PL-74.4).
- Tue 4 Amateur Swap Net, 145.370 (T-192.8) 8:00 PM; "Casual Communicators Net," 9:00 PM Eastern, 443.325+ MHz.
- Wed 5 Six Shooters Net, 8:00 PM on 52.525 MHz FM (vertically polarized); Fayette County ARES Net, 9:00 PM, 146.760 repeater.
- Thu 6 Meeting of Bluegrass ARS Technical Group, 6:30 PM, Education Ctr, basement, Red Cross Building, 1450 Newtown Pike, Lexington; Jessamine Cty ARES Net, 7:30 PM, 145.490 Repeater, Gary Britten W4GNB net control.
- Sat 8 Shack open 9:00-Noon; Radio Theory and Construction Workshop, 1:00-3:00 PM; License exam session 10:00 AM, sponsor ARR: VEC, Georgetown, liaison Ron Malinowski/WX4GPS, wx4gps@arrl.net, 502-542-8252
- Amateur Television & Specialized Communications Net, 9:00 PM (146.760 Repeater); District 11 Skywarn Net, 8:00 PM, 146.925 Sun 9 (PL-79.7 Hz) linked to 147.180 (PL-74.4 Hz) linked to 147.180 (PL-74.4) and other repeaters in the area.
- Mon 10 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 11 License exam session 7:00 PM, sponsor WCARS VEC, Lexington, liaison Margueritte Williams/KE4MAJ, ke4maj@arrl.net, 859-489-6274 (www.bluegrassars.org); Amateur Swap Net 145.370 (T-192.8) 8:00 PM; "Casual Communicators Net," 9:00 PM Eastern, 443.325+ MHz;
- Wed 12 Six Shooters Net, 8:00 PM on 52.525 MHz FM (vertically polarized); Fayette County ARES Net, 9:00 PM, 146.760 repeater.
- Meeting of Bluegrass ARS Technical Group, 6:30 PM, Education Ctr, basement, Red Cross Building, 1450 Newtown Pike, Lexington; Jessamine Cty ARES Net, 7:30 PM, 145.490 Repeater, Gary Britten W4GNB net control.
- Shack open 9:00-Noon; Radio Theory & Construction Workshop, 1:00-3:00 PM, basement, Red Cross Bldg, 1450 Newtown Pike;
- Sun 16 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 17 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 18 Amateur Swap Net 145.370 (T-192.8) 8:00 PM; "Casual Communicators Net." 9:00 PM Eastern, 443.325+ MHz.
- Six Shooters Net, 8:00 PM on 52.525 MHz FM (vertically polarized); Fayette County ARES Net, 9:00 PM, 146.760 repeater.
- Meeting of Bluegrass ARS Technical Group, 6:30 PM, Education Ctr, basement, Red Cross Building, 1450 Newtown Pike, Lexington; Thu 20 Jessamine Cty ARES Net, 7:30 PM, 145.490 Repeater, Gary Britten W4GNB net control.
- Shack open 9:00-Noon; Radio Theory and Construction Workshop, 1:00-3:00 PM, basement, Red Cross Bldg, 1450 Newtown Pike; Sat 22 Sun 23 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 24 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 25 Amateur Swap Net 145.370 (T-192.8) 8:00 PM; "Casual Communicators Net," 9:00 PM Eastern, 443.325+ MHz;
- Wed 26 Six Shooters Net, 8:00 PM on 52.525 MHz FM (vertically polarized); Fayette County ARES Net, 9:00 PM, 146.760 repeater.
- Thu 27 Meeting of Bluegrass ARS Technical Group, 6:30 PM, Education Ctr, basement, Red Cross Building, 1450 Newtown Pike, Lexington; Jessamine Cty ARES Net, 7:30 PM, 145.490 Repeater, Gary Britten W4GNB net control.
- Shack open 9:00-Noon; Radio Theory and Construction Workshop, 1:00-3:00 PM, basement, Red Cross Bldg, 1450 Newtown Pike; Sat 29
- Sun 30 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 31 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.