

Q-FIVER

The Official Newsletter of the OH-KY-IN Amateur Radio Society



President at Large... Fox Hunting!

One of the activities that the OH-KY-IN, Amateur Radio Society offers to its members and anyone wishing to participate in is Fox Hunting. I have to admit that I have been a member of the club for three years and every month of those three years I have been telling everyone that I have to go out and experience this sport! Oh I had many excuses such as it was too cold, it sounds like it would be really tough to do, I would get out there and embarrass myself an Extra Class operator clueless of what they are doing, and finally it conflicted with the Brunch Bunch another opportunity we offer our membership and anyone else who wants to get to know more about our club. But I have always been curious about it and with the latest issues we had with a rouge operator the importance of this sport came to light one evening when I was a Net Control Operator for the Health Department and this operator broke in with profanities!

So on March 12, 2016 Howard Alban, KD8WOY and Marty Newhall, KE8CEI "Team McFly" allowed me to ride along with them and experience what Fox Hunting was all about. I know what you're thinking...everybody in our club knows that the odds on favorites would be Dick Arnett WB4SUV or Brian DeYoung K4BRI as President wouldn't I rather be traveling with one of them? This is an excellent question and one I wish to address and has a simple answer. If I wanted to be a part of this in the future, I wanted to join one of the newest teams to understand what some of the pitfalls that they have overcome are or still trying to overcome to be successful in this sport! At the beginning of this hunt as I walked around to see the setup that Dick and Brian had you could quickly tell that they are innovators and very seasoned in this sports incorporating all the tricks of the sport that make them as good as they are!

So another question you might have is...Why do I call this a sport? Isn't it just another aspect of our hobby? Yes until you get to Mt. Storm Park and talk with all of the hounds getting set up and ready for the hunt and you can feel the competition in the air! Just saying that I heard plenty of smack talk between the hounds and it was exhilarating! It is probably obvious but in case it isn't the hounds are the operators trying to find the fox just for clarification. Some of the smack talk include quotes such as...If you want to get a tour of the

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OH-KY-IN Repeaters

146.670 (-) Clifton

146.625 (-) Edgewood, KY

146.925 (-) Colerain Twp

443.7625 (+5) Clifton

A CTCSS (PL) tone of 123.0 Hz is required for access to all OH-KY-IN repeaters. All repeaters also transmit a CTCSS (PL) tone of 123.0 Hz

APRS on 144.390 mHz

K8SCH-10 Edgewood WIDEn

K8SCH-9 Clifton WIDEn

Packet on 145.010 mHz

K8SCH-7 Digipeater

For membership information, please contact Nathan Ciufo KA3MTT, 6323 Cinnamon Ridge Dr, Burlington KY 41005, (859) 586-2435 or Email membership@ohkyin.org. Renewals of Club Memberships are due by the end of March. Permission is hereby granted to any amateur radio group to quote or reprint from this publication, if proper source credit is given, unless permission is otherwise reserved.

THE Q-FIVER is now mailed & e-mailed, it's hoped, a week before the club meeting.

Normally copy deadline is the weekend before that. Please send your submissions for THE Q-FIVER (including notice of upgrades & callsign changes) to Brian K4BRI

These may be: snail-mailed to or dropped off at 6901 Backus Drive, Alexandria KY 41001 or telephoned to (859) 635-3095 any time



Oh-Ky-In Life Members

John Phelps N8JTP

Kenneth E Wolf N8WYC

John W Hughes AI4DA

Karl W Kaucher KJ4KWR

Howard Hunt NG8P

2016 Committee Chairs and Appointments

Newcomers/Elmers Net..... Robert Gulley AK3Q
Technical CommitteeBrian DeYoung, K4BRI
ARPSC Representative.....Jerry Shipp W1SCR
Volunteer ExaminersBrian DeYoung K4BRI
QCEN Representative Pat Maley KD8PAT
Membership Nathan Ciufo KA3MTT
Fundraising Bruce Vanselow N8BV
Education Robert Gulley AK3Q
Repeater Control Ops Mgr Bruce Vanselow N8BV
PIOTed Morris NC8V
Librarian Howard Alban KD8WOY

Q-Fiver Editor Brian DeYoung, K4BRI
Field Day..... Eric Neiheisel N8YC
Historian Dale Vanselow KC8HQS
Special Publications Jo Haltermon KD4PYS
Fox Hunters Dick Arnett WB4SUV
Equipment Mgr Brian Fulmer KC8FJN
WebMaster Ryan Williamson W1RYN
Silent KeyBruce Vanselow N8BV
Tech Talk Net MgrBruce Vanselow N8BV
K8SCH QSL MgrGerry Weimer KD8ASL
TV/RFI Dick Arnett WB4SUV

The April Mobile Foxhunt has been moved to the fourth Saturday of the month, April 23rd. The May Foxhunt will be back on the second Saturday.

April Calendar

Sun Apr 3	7:00 PM	Newcomers/Elmers Net, 146.67, Topic: Making the Most of Your Tech License Pt. 1 —NCS Robert AK3Q
Tue Apr 5	7:30 PM	Club Meeting at St Bernard Recreation Hall, 120 Washington Avenue.
Wed Apr 6	9:00 PM	Tech Talk, NCS Robert AK3Q
Sat Apr 9	1:00 PM	Brunch Bunch at Steak n Shake - 3835 Race Road
Sun Apr 10	7:00 PM	Newcomers/Elmers Net, 146.67, Topic: Making the Most of Your Tech License Pt. 2 —NCS Robert AK3Q
Wed Apr 13	9:00 PM	Tech Talk, NCS Brian K4BRI
Sun Apr 17	7:00 PM	Newcomers/Elmers Net, 146.67, Topic: Techie Things Your Tech License Didn't Teach You Pt. 1 —NCS Robert AK3Q
Wed Apr 20	9:00 PM	Tech Talk, NCS Kitty, W8TDA
Sat Apr 23	10:00 AM	Mobile Foxhunt, starting at Mt. Storm park in Clifton—talk in on 146.670 NVIS Day, Green Hills Park
Sun Apr 24	7:00 PM	Newcomers/Elmers Net, 146.67, Topic: Techie Things Your Tech License Didn't Teach You Pt. 2 —NCS Robert AK3Q
Tue Apr 26	7:00 PM	Board of Directors meeting
Wed Apr 27	9:00 PM	Tech Talk, NCS George N3VQW

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city ride with this person which the rebuttal was if you want to come in last place ride with this person! It was all fun and in good jest as you could also tell that they sincerely wished everyone the best of luck and anyone of them would help you and answer any questions you might have!

So as it was getting to be time for the five teams to take off after the fox from Mt. Storm Park Brian DeYoung decided he wanted to get a picture of all of the five teams for the newsletter! It was at that time that I heard the best line ever! It was the best "Smack Talk" quote of the day and for this writer it just personified just how much fun this event was going to be! Here is the quote..."**Sure it is all smiles until someone loses!**" this line wasn't delivered by Brian but it truly framed the moment! It also heightened what was evident and that is the competition is on!

Like with any good sporting event that Saturday all of the hounds installed their antennas and tested their equipment and antennas right there in the park to make sure that everything was operational and in good working order. Next it was time to check in with the fox Phil KG8AP who was already at his location ready for the hounds that were going to be on the hunt. After that he turned on the transmitter and called each team to verify that they can copy the signal! This writer thought that this was awesome because that puts all the hounds on equal footing out of the starting gate. Once all teams verified the signal we were off on the hunt.

Team McFly had Howard, KD8WOY driving and Marty, KE8CEI working the antenna and yours truly working the map. Once leaving Storm Park we quickly determined that the signal was almost due north and decide going up Winton Road was our best course of action. Turns out that Team # 3 Bob, WA6EZV and his co-pilot Bob, KE8DIE had the same idea and it was a race to Winton Road and the team of Bob and Bob beat us to the light.

As we went up Winton Road Team McFly and the team of Bob and Bob were neck and neck when all of a sudden the direction of the signal changed and both teams discovered this quite quickly. We lost team 3 as they pulled into a lot at the same time Marty called out turn around the signal changed we had to go back. As we were looking to turn around we saw Dick Arnett for the first time in front of us turning around and going back. We turned around at the same place and were on Dick's 6 o'clock and found that the signal was coming from the direction of Bob Evans at Galbraith and Winton Roads.

So that is how we finished with Dick Janie, and Alisa finishing 1st with 14 minutes, 6.2 miles, Team McFly with Howard, Marty, and Michael finishing 2nd in 15 Minutes 6.1 miles, and team Bob and Bob finishing third in 17 minutes 6.5 miles. Now I have to be honest "the fox" Phil KG8AP let us know that he went extremely easy on us as we had a lot of newcomers to the hunt. He went on to tell me that these hunts get quite challenging and Dick Arnett confirmed that sometimes the fox moves, sometimes he adjusts power levels, and sometimes he changes the direction of the antenna. There is only one thing for sure...and that is he is somewhere inside the 275 loop! The rest is up to you to find him!

So what equipment did the fox use, well I am glad you asked:

- Transmitter: Radio Shack HTX202 (1W) into a Mirage 2M amp at 35 watts out on 146.565 Mhz (simplex).
- TX Controller: Byonics PicCon.
- Antenna: Diamond Monoband 2 M verticle.

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Don't be disillusioned that just because this hunt only took the top placing team 17 minutes that this was an easy hunt. Nothing could be farther from the truth as one missed bearing can send you miles off course. This writer is well aware that we were lucky to have made the right choice when we got our signal bearings otherwise this could have been a very different afternoon for us.

So you ask would I do this again? Absolutely I had a blast! This was so fun and exciting and nothing like what I expected it to be! The comradery, the competition, the smack talk it left you with the feeling that each week is a different adventure! Also I realized that if you are good or lucky however you choose to look at it and you find the fox early, you will still have time to meet the gang for Brunch Bunch and talk smack about what a great job you did in the hunt!

My thanks go out to Brian DeYoung, Dick Arnett and Phil Smith for making all of our fox hunts available not only to our members but to all amateur radio operators interested in learning more and participating in our Fox Hunting events.

So I leave you with another question are you looking for a club that is going out having fun and that offers a lot of events where you can learn or participate in? Our club is involved in so many fun and exciting activities for our members and friends to get involved in. Check out our web-site at www.ohkyin.org and see what we have planned next and come join us! All we need is you! If you are not already a member please consider coming to one of our meetings or events and see what OH-KY-IN is all about and see if our club looks like a club that you would want to join. If you are a member tell a friend about our club and about our hobby and invite them to our meetings, and our classes, and to our events!

73's and until next month!

Michael Sien – KD8SOH



Minutes of the March, 2016 Regular Meeting

CORRECTIONS TO MINUTES OF THE FEBRUARY 2, 2016 REGULAR MEETING: The **Audit Committee's** report was omitted: Committee members Pat Maley KD8PAT, Jim Davitt W1JMD, and Mike Niehaus KD8ZLB, met with Treasurer Brian DeYoung K4BRI on January 16, 2016, and found all materials and records pertaining to the previous year readily available and in good order for the audit. The only exceptions were a +3-cent error on a deposit slip due to transposed numbers, and a bank charge for "Account Analyzation" for -15-cents that had not been previously recorded. These yielded a net -12 cents for October and the Year, which are now in balance. There was also one outstanding check from July that had not been cashed; since it had not been processed it did not affect the audit totals. Summarizing, the Committee found Brian's books in excellent shape, and Brian to be doing an excellent job.

Also, under **QCEN**, Pat Maley's callsign was incorrectly listed as WD8PAT; she is KD8PAT.

The meeting was **Called to order** by President Michael Sien KD8SOH at 7:32 P.M., followed by the Pledge of Allegiance and introductions. Guests included ARRL Ohio Section Manager Scott Yonally N8SY, and ARRL Great Lakes Division Vice-Director Tom Delaney W8WTD.

Brag Session: George Gardei N3VQW upgraded to Extra Class, and Marty Newhall KE8CEI upgraded to General. George's cousin's children have gotten licensed and intend to go all the way to Extra. Kitty Hevener W8TDA is 3/4 of the way to DXCC (confirmed contacts).

Will Schram W8WDS has challenged himself to visit and operate from all Ohio state parks at some point throughout the rest of the year. He will operate from East Fork State Park in the Ohio State Parks On The Air event in July. He is dedicating each activation to honor a diseased veteran, and has invited disabled veterans to participate in operating at five sites. He is looking for volunteers to help out at each site and circulated flyers about his challenge.

Health and Welfare: Ted Morris NC8V reported that his wife Mimi is recovering well after her hip replacement surgery last month and thanked the group for all their well-wishes.

Program: Michael KD8SOH introduced Scott Yonally N8SY, ARRL Ohio Section Manager, who began a series of videos and clips on the theme, "Safety First—Even If It Kills You!" The first video was a comic portrayal of "not-tos" with tools, electricity, and electronics. Another from the Electrical Safety Authority illustrated and demonstrated electrical safety hazards at home. Then, Scott shared a slide show of actual electrical misdeeds he has observed during his career. The last segment was another video, on how to avoid getting electrocuted when a car strikes a power pole and brings down the lines.

He also discussed the need to de-energize lines when working on them, issues of cross-polarity and grounding errors (including GFCI operation), dangers of back-feeding the grid from mis-installed generators, and a handy wiring rule-of-thumb and mnemonic: never wire power to a male connector, or "females have all the power."

The program then moved into a Q&A period. Scott and ARRL Great Lakes Division Vice Director Tom Delaney W8WTD addressed many questions, including an inquiry about the progress of the Amateur Radio Parity Act House bill, They noted its sponsorship roll is increasing, and that the bill's assigned subcommittee has voted it out to the full committee for consideration. There is also a parallel Senate bill to be considered. We need to continue to contact House members in support of the Act, and when it does pass, to call and thank them.

Continuing on League issues, Tom noted that with the recent and impending changeovers in League President and League CEO, the ARRL especially needs member input to assist in developing the League's 5-year plan. The new President is Rick Roderick W5UR, First V.P. is Gregory Widin KØGW, and 2nd V.P. is Brian Milesosky N5ZGT. The incoming CEO is Tom Gallagher NY2RF. In moving up from Division and Section duties, new folks step up to fill those shoes. Tom humorously pointed out that several of these folks are under 40 years old.

Also regarding member input, Scott mentioned the need to report our activities so the League can more effectively lobby based on the valuable volunteer work we perform. For example, the Ohio Section alone did over 13,000 volunteer hours last year just from traffic handling alone. Inclusive Webinars (such as one taking place this very evening) for Emergency Coordinators, ARES and reporting & coordinating volunteers are another way the League can carry the message to served agencies.

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As to the FCC trial balloon about potential rulemaking regarding the reprogramming of consumer electronics (particularly for wireless applications, i.e., Wi-Fi, etc.), Scott noted that has gone back to committee to (in part) preserve our ability to experiment while still preserving the integrity of commercial and consumer networks.

Scott reiterated the importance of working through FEMA's requirements for Incident Command System training for anyone hoping to volunteer at emergency or public safety events. They are pretty insistent about this. For example, When Pope Francis visited to the US recently, agencies responsible for security (e.g., Secret Service, FBI, etc.) decided they needed to restrict volunteer participation to only those with this training. We will see the impact of this requirement again this summer, when the Republican National Committee (RNC) holds its nominating convention in Cleveland, while on that same weekend the National Association for the Advancement of Colored People (NAACP) meets in Cincinnati.

Scott acknowledged the tests can be dry and in parts can be boring, but they are worth going for if you have any serious interest in volunteerism. As a plus, they may help with your advancement outside of ham radio, as each of the four required modules is worth 0.3 Continuing Education Credits (CEUs) in some academic and professional communities. He recommended you print out your completion certificates and making multiple copies: 1 for yourself, 1 for your Go-Bag, 1 or more for your local Emergency Coordinator (EC), 1 for Stan Broadway N8BHL (Ohio Section EC), and even 1 for Scott N8SY himself. This way they will be on file whenever a disaster assistance call-up occurs.

The program ended at 8:42 but there was no formal break before the Business Meeting. In the brief interlude Librarian Howard Alban KD8WOY announced that several items being weeded from the collection were available at the front tables for folks to examine and take home.

Minutes: Omissions and corrections identified for the Minutes of the February 2016 Regular Meeting, as published in the Q-Fiver, are listed at the beginning of this report. The minutes were provisionally approved, pending acceptance of these emendments at the April 2016 Regular Meeting.

Membership: The latest report distributed by Chair Nathan Ciufo KA4MMT shows 102 paid members.

Treasurer: Treasurer Brian DeYoung K4BRI handed out copies of his February 2016 report, noting that we have just received our first *smile.amazon.com* disbursement and that, while it was only \$5.11, every bit still helps.

Silent Keys: Bruce Vanselow N8BV reported all of the recent estate sales he has been coordinating are complete. Another one is coming and he will notify the membership via the Reflector.

Brunch Bunch: Bruce also reported the next second-Saturday event will be March 12th at Pearl's Restaurant in Fairfield.

Technology: Brian K4BRI as chair discussed work done recently. The 440 repeater system is up and sounds good. 146.670 is now running on a Yaesu *System Fusion* repeater. While there, he noticed the duplexer output measures suggested they were underperforming. He has retuned them. The tower climber who was supposed to work February 28th never showed up. We are working with a different climber now. There were no changes to report for the 146.625 and 146.925 systems.

Hamfest: Chair Gary Coffey KB8MYC confirmed this year's Hamfest will be Saturday, September 17th, again at Aiken High School. He will call the first organizational meeting in April. We are already getting vendor inquiries.

Education: Chair Mike Niehaus KD8ZLB announced classes for Technician and General licenses will begin Monday, March 14th, at 7:00 P.M., running through to April 11th, with exams on Saturday, April 16th. All classes and exams will take place in St. Bernard City Hall, Lower Level. This is the next building west of our meeting facility.

Foxhunt: Brian K4BRI reported that a potential date conflict did not arise, so the next Hunt will be as usual on the second Saturday of the month, March 12th, at Mt. Storm Park. Set up begins at 9:30 A.M. and folks are welcome to come out to see the preparations. The vehicles move out promptly at 10:00 A.M. Contact Brian if you would like to borrow equipment or ride along with another group.

On March 5th, an on-foot ARDF (Amateur Radio Direction Finding)-style hunt will take place from McFarland Woods, south of Mt. Airy Forest's Bicentennial Park. Contact Brian for details.

Tech Talk Net: Bruce N8BV announced Robert Gulley AK3Q will be tomorrow's Net Control.

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Newcomers & Elmers Net: Michael KD8SOH noted the Net is doing well.

Website: Ryan Williamson W1RYN as Webmaster acknowledged he is behind on updates but he wants folks to continue sending him material. He has updated the Posts and Committee Heads listing to include Librarian Howard Alban KD8WOY.

Digital Group: Jerry Shipp W1SCR reported that this month they will be working on getting Winlink going on VHF and UHF. Also, Bryan Hoffman KC8EGV has a new gateway set up at the Hamilton County Public Health Department on 145.01 MHz.

QCEN: Pat Maley KD8PAT shared that volunteers for the Flying Pig events can sign up via email to Steve Lewis at n8tfd@arrl.net. More information about events associated with the race appears on the QCEN calendar.

ARES/HCPHD Amateur Radio Group: Bryan Hoffman KC8EGV acknowledged Jerry W1SCR's announcement about his new Winlink setup. He also reported that Delhi Township has agreed to house a repeater system, which will become available when their new building is completed. He reminded the group that the next in-person Core Meeting will be Tuesday March 15th, at 7:30 P.M., at the Health Department on Taft Rd. He also pointed out the next regular first-Monday of the month Net meeting will be April 5th on 146.670 at 7:00 P.M.

Ohio will hold a statewide Tornado Drill on March 23rd at 9:50 A.M. The Emergency Management Agency will activate the Wednesday-Noon sirens during the drill. ARES is promoting another NVIS (Near Vertical Incident Skywave) Antenna test for April 23rd. Volunteers are needed to help plan and organize our participation.

Bryan is hoping to do a program on Go-Kits for our August meeting, including Show & Tell sharing and discussions.

Old Business: Last month Kitty Hevener W8TDA asked if we might be able to use a PA system in our meeting room. Michael KD8SOH reported that we do have a compatible system, but in setting it up this evening he learned we need a cable adapter that was not at hand. The PA system should be available for our April regular Meeting.

New Business: Michael is arranging for us to tour the WLW700 transmitter site. Two dates and times will be planned since space is limited. Dates and times will be announced after member Interest is determined. He will also be asking on the Reflector about interest in the tours.

Other Announcements: The Winter Field Day event logs have been submitted but we have not yet heard how we fared against the competition.

Bryan K4BRI's "Introduction to Electronic CAD" workshop last month went well, the software worked well, and he received many kudos.

Ryan W1RYN announced our April 5th meeting will be a SKYWARN information session, focusing on sharing what the organization does.

Door Prizes: Scott N8SY donated several items for tonight's audience. Howard KD8WOY won a hardback 2016 edition of the ARRL Handbook for Radio Communications. Hats bearing the ARRL Ohio Section insignia went to George Gardei N3VQW and Don Hutchinson KD8YVH.

Split-the-Pot: Eric Simon KC8NMP won \$75.50.

The meeting was **Adjourned** at approximately 9:20 P.M.

Respectfully submitted,

Ted Morris NC8V, Secretary

Foxhunting and ARDF

Michael gave a great account of March's foxhunt. I lost again, and I can still blame my equipment :)

We had 5 teams, and it was great!

April's foxhunt will be held the 4th Saturday due to scheduling. April 23rd, 10AM start, setup about 9:30AM



Brunch Bunch

The next Brunch Bunch will be held Saturday, April 9th at 1pm. The location for April is Steak 'n Shake restaurant in Bridgetown. Steak 'n Shake is located at 3835 Race Road, next to the Walgreens at the corner of Bridgetown Road and Race Road.

Steak n Shake was founded in February, 1934 in Normal, Illinois. Gus Belt, Steak n Shakes founder, pioneered the concept of premium burgers and milk shakes. For over 80 years, the company's name has been symbolic of its heritage. The word steak stood for STEAKBURGER. The term shake stood for hand-dipped MILK SHAKES. Gus was determined to serve his customers the finest burgers and shakes in the business.

For a look at the menu and for directions to the restaurant, go to:

www.steaknshake.com

Remember that the Brunch Bunch always meets the second Saturday of every month at 1pm at a location to be announced each month. If you can't join us this month, maybe you'll be available to join us in the months ahead.

I'm always looking for suggestions on what restaurant you think might be a good place for the Brunch Bunch to visit soon.

73,Bruce, N8BV



The Elmers Corner: Monitoring Military Aviation By Robert Gulley AK3Q

April 2016



In this month's edition of the Elmers Corner I thought I would take a break from strictly amateur radio operations, to cover an interesting area of the radio hobby which can be enjoyed either on HF or on VHF/UHF radios. There are plenty of folks who make a full-time hobby out of military aviation monitoring, and still more who focus just on civilian monitoring. For me aviation monitoring is a pleasant diversion/alternative to amateur radio operation, but it can really make us better operators along the way!

Make no mistake, both civilian and military aviation monitoring takes some getting used to, but by learning to follow aviation transmissions you will be able to hear weak, noisy, or extremely fast transmissions, something which can come in real handy in amateur radio operation. Just try and capture some of those lightning fast call signs on our local nets!

Why Military Aviation Monitoring?

Milcom monitoring is perhaps one of the most extensive and expansive areas of monitoring communication on the airwaves today. Between developing various forms of communication for themselves, the military has also adopted civilian protocols and adapted them for their own use. There are voice, data, CW and SatCom (Satellite Communication) modes, all of which may be found across the entire RF spectrum at one time or another.

While most of the SatCom signals are encrypted, as are a number of other communications, there is a surprising amount of communication which is "in the clear." Even some of the messages which are transmitted in "code" such as the Emergency Action Message (EAM) can be heard – the numbers just will not mean anything to the civilian monitoring these frequencies.

Close-in and Long Distance

Much like civilian aircraft communications, military aircraft communications require local and long distance capabilities, meaning they operate on both VHF/UHF (V/U) and HF frequencies. HF frequencies are shared by many different countries and services, and so there are a good number of fairly established frequencies for various services so as to avoid overlap.

It is not uncommon for military aircraft to also use civil air frequencies both for convenience and for coordinating with local airports. For example, at Lunken airport (LUK) there is a common military tower which uses a military frequency of 257.800 AM for navigation purposes. At CVG there are shared civilian frequencies as well as monitoring of milcom bands, and the local Indianapolis ARTCC (Air Route Traffic Control Center) often handles milcom traffic as part of their normal routing.

Primary V/U frequencies in the U.S. are from 225-399 MHz, but there may be some occasional VHF-low usage between 30-75 MHz. There is also some activity between 138 - 144 MHz., 148 - 150.70 MHz. using mostly AM and some FM modes (for satellite comms).

Like all VHF/UHF communications, local milcom is basically line of sight on these upper bands, but the greater elevation of these planes allows them to be heard many miles away, particularly for pilot to ground communications and air-to-air comms.

VHF/UHF Monitoring

There are a number of places where frequency lists may be found, some of which I will note below. A lot of milcom monitoring involves scanning ranges of frequencies regularly to find patterns of flights or operations. A great place to look for airports both civilian and military is <http://www.worldaerodata.com/>.

Many amateur radios now cover some portions of the aviation bands, but for military monitoring you will want to make sure your radio or scanner includes frequencies in the 200-400 MHz, since this is where a lot of military traffic happens.

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However, scanning the ranges between 225 and 398 MHz can be quite slow just going one frequency at a time. One trick is to use multiple scanner bands to assign smaller ranges of frequencies so the scanning goes more quickly. Another trick is to set the scan frequency interval to 25 kHz since this matches the spacing of the channelized communications, which in turn allows for faster scanning.

HF Monitoring

HF monitoring is in some ways similar to monitoring the upper bands, as many of the same agencies use HF frequencies as well as VHF/UHF. One of the more basic but significant differences however is in the scanning methods—if HF radios are set to quiet the squelch and only open on strong signals, one is likely to miss a lot of traffic. With HF frequencies it is usually better to have frequencies programmed into memory if more than one frequency is to be monitored, as the general noise of the bands makes it almost impossible to scan as effectively as with AM or FM modulation in the higher bands.

Fortunately there are a number of common frequencies which can be programmed in which will ensure hearing a lot of traffic, but keep in mind this is not like scanning for local Police/Fire/Emergency Services close to home from a repeater. HF is used precisely because it does not act like V/U bands, and because there is a need for signals to travel great distances and still be heard. In addition to static and atmospheric noise, propagation shifts will greatly affect what is heard, and fading similar to shortwave broadcast stations will occur to these much weaker aeronautical signals.

Some places to start monitoring include these bands (using 3 kHz spacing)

- 3025.0 – 3155.0 kHz
- 3800.0 – 3950.0 kHz
- 4700.0 – 4750.0 kHz
- 4750.0 – 4850.0 kHz
- 5450.0 – 5480.0 kHz
- 5680.0 – 5730.0 kHz
- 6685.0 – 6765.0 kHz
- 8965.0 – 9040.0 kHz
- 11175.0 – 11275.0 kHz
- 13200.0 – 13260.0 kHz
- 15010.0 – 15100.0 kHz
- 17970.0 – 18030.0 kHz
- 23200.0 – 23350.0 kHz

While strictly not aeronautical monitoring, the Armed forces Network has a lot of interesting programming on HF:

Diego Gar-	Upper	12,759	4,319 KHz
Guam	Upper	13,362	5,765 KHz

USAF GLOBAL COMMAND & CONTROL SYSTEM (GCCS) (EX-GHFS)

The High Frequency Global Communications System is a worldwide network of 13 high-powered, high frequency radio stations providing command and control communications between ground agencies and U.S. military aircraft and ships. HFGCS supports a number of missions including voice and data communications for the president and other senior leaders while in flight.

An HFGCS station consists of 3 sites: Transmitter, Receiver, and Control including station infrastructure of antennas and feedlines, and inter-site communications, as well as other support systems.

FREQUENCIES

4724 Nighttime backup
6739 Nighttime backup
8992 Primary 24 hrs
11175 Primary 24 hrs

13200 Daytime backup
15016 Daytime backup
17976

Digital Modes

The military utilizes numerous digital modes, some of which can be decoded by software available to civilians. One of these digital modes is ALE (Automatic Link Establishment, sometimes written as MIL STD 188-144A) which can easily be decoded with commercial or freeware software. This software is used to test the radio path between two stations, and on occasion, pass simple messages. It is in essence a propagation check for the stations. ALE provides HF radios the ability to automatically link using the best frequency based on reception data given by the results of link testing.

USAF Scope Command ALE frequencies (kHz)

2805.0 3059.0 3137.0 4721.0 5708.0
6715.0 6721.0 7632.0 8965.0 9025.0
9057.0 11226.0 11250.0 13215.0 15043.0
18003.0 20631.0 23337.0 27870.0

There is a wealth of information, including call signs, at:
the MILCOM Monitoring Post

Wrap-up

While this barely scratches the surface of all the military aviation monitoring which can be done on HF and VHF/UHF, I hope this will serve as a good starting point. There are always things to explore day or night, regardless of the propagation!

73, Robert AK3Q

NVIS Day

LOCATION: Greenhills Commons

DATE: April 23

TIME:

Setup 8am

Event Start 10am

Event Ends 6pm (latest)

MODES OF OPERATION:

Mainly HF between our location and other Ohio counties using voice and digital.

Also free to practice Winlink, Packet and other modes with adjacent stations.

The Greenhills Commons is located near the intersection of Winton and Farragut Roads in the Village of Greenhills. Its an open area for plenty of antennas. The village has donated the location for us to use at no cost.

OHKYIN is sponsoring local participation so they are providing lunch for everyone involved.

This is considered a community service event. Considering the location, we should see a lot of the general public. So we'll have a chance to show off some of our capabilities.

We need the following to make this event work:

-Radios and NVIS antennas

-Operators

-Loggers to track our contacts

-Promoters to help share ham radio with visitors (public and officials)

If you bring a station you will need to be power self supportive. This includes generator, batteries, solar, etc. We probably will not have access to AC power. Also, feel free to bring a canopy or small tent for shelter.

The location is an open area.

Please let me know directly if you are bringing a station so we can plan the layout. Email directly to me so we don't tie up the reflectors.

Promote this event to the radio community, emergency services and the general public.

I hope to see everyone there!

73

Bryan

The Music of Radio

Musical Telegraph

The history of electronic music is intimately tied up with the history of radio and telecommunications. Many of the same breakthroughs and devices invented by electrical engineers for communicating in morse code, telephone and radio were adapted for use by musicians. Electricity opened up new worlds of sound beginning in the 19th century. This series on the music of radio will explore the ways telegraphy, telephony and radio have impacted the creation of electronic music from the late 19th century and onwards into the 20th and 21st. It will also explore the ways radios and the signal and sounds they receive and emit have been used by electronic musicians and composers in the creation of new music. Our story begins with the Musical Telegraph.

Elisha Gray, co-founder of the Western Electric Company, is perhaps most well known as a developer of a prototype telephone. Some scholars consider Gray the true inventor of the telephone. Both Alexander Graham Bell and Elisha Gray used liquid transmitters in their experiments with voice transmission over wire. The telephone seems to be one of those ideas that was floating around in the ether at the time, and it is my view that each inventor developed the work independently. In fact Gray arrived at the patent office to file his apparatus "for transmitting vocal sounds telegraphically" just two hours after Bell. After a number of years in the courts, it was Bell's patent that the lawyers held up in a number of decisions.

Though Gray may only be considered a kind of begrudged step-father in terms of telephony, it is clear that the electric synthesizer is the fruit of his seed. In 1874 after Gray had retired from Western Electric to focus on independent research he came up with one of the seventy patents attributed to him. In this case, the Electro-harmonic Telegraph. It was a chance by product of his work on the telephone.

In the course of his work Gray learned he could control sound from a self-vibrating electromagnetic circuit. This led him to the invention of a basic oscillator made of steel rods whose vibrations were created and transmitted over a telegraph line. The instrument consisted of a number of single-tone oscillators that could play over a range of two octaves. Each tone was controlled with a separate telegraph key.

After giving several private demonstrations of the instrument he gave a public performance at the Presbyterian Church of Highland, Illinois on December 29, 1874. A newspaper announcement stated that it transmitted "familiar melodies through telegraph wire". In later models of the instrument he added a simple diaphragm speaker that amplified the tones to a louder volume.

To be fair Bell came at the telephone also through his work as a teacher of the deaf and adjacent studies of music, hearing, sound, and human anatomy. While working for Western Union Telegraph he had been obsessed with solving the problem of creating a "multiple telegraph" -or a way to transmit a number of messages over the same wire. It was this work on the harmonic telegraph that spurred him on to his own invention the telephone.



Sources:

https://en.wikipedia.org/wiki/Electronic_musical_instrument

https://en.wikipedia.org/wiki/Elisha_Gray

<http://120years.net/the-musical-telegraphelisha-greyusa1876/>

Exploding the Phone: The Untold Story of the Teenagers and Outlaws who Hacked Ma Bell by Phil Lapsley, Grove Press, New York 2013.

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Hamilton County ARES

With Spring in full swing and Summer just around the corner Winter planning is coming to an end and public service activities began with full force. ARES and other public service groups have a full calendar this year. With that comes many opportunities for the local ham radio community to volunteer. Please consider helping out and serving your community. It can be challenging, fun and rewarding all at the same time. If you are interested in helping with any of the events below, contact me directly and I'll put you in touch with the volunteer organizer.

2106 Spring & Summer Activities & Events

April 04 - Hamilton Co Emergency Communications Net

April 09 - TMRC Tristate Disaster Volunteer Summit

April 23 - NVIS Exercise in Greenhills, sponsored by OH-KY-IN

April 29/30/May 01 - Flying Pig Marathon Events

May 02 - Hamilton Co Emergency Communications Net

May 20 - MCI Exercise (TBD)

June 06 - Hamilton Co Emergency Communications Net

June 18/25 - GOBA Bike Ride. Butler County is primary organizer (Hamilton Co TBD)

June 24/26 - ARRL Field Day Activities

July 11 - Hamilton Co Emergency Communications Net (Note 2nd Mon due to July 4th)

July 19 - All ARES Membership Meeting

July 21-24 - Pan-Ohio Bike Ride 2016 (Starts in Cincinnati this year - Lots of help needed)

August 01 - Hamilton Co Emergency Communications Net

August 06 - Paddlefest

August 06/07 - Bike MS Ride

August 27 - OH QSO Party

Be Safe!

Bryan Hoffman - KC8EGV

Emergency Coordinator

Hamilton County ARES

kc8egv@arrl.net

April 2016 DX Spots de KA3MTT

Sun	Mon	Tue	Wed	Thu	Fri	Sat
C5WP - Gambia thru 4-2 	FT4JA - Juan de Nova & Europa thru 4-11	8P6DR - Barbados Thru 4-22 	JW - Svalbard thru 4-4	VK0EK - Heard Isl thru 4-10 	1 P5 - North Korea Now thru 2020 (Free QSL's too!) 	2
3	4	5 4W - East Timor thru 4-11 	6	7	8	9 OJ0W - Market Reef Thru 4-10 ----- GP4BRS - Guemsey Thru 4-16
10	11 8R1A - Guyana thru 4-24 	12 XU7AKC - Cambodia Thru 4-19 ----- J88PI 0 St Vincent Thru 4-22	13 T88SM - Palau thru 4-18 ----- A25UK - Botswana Thru 4-19	14 9Y - Trinidad & Tobago Thru 4-26 	15 HB0 - Liechtenstein Thru 4-18 ----- VK9L - Lord Howe I Thru 4-20 ----- EP2A - Iran thru 4-25	16 FH - Mayotte thru 4-21 
17 8Q7 - Maldives thru 4-30 	18	19 5W0XG - Samoa thru 4-25 	20	21 4L9PL - Georgia thru 4-28 	22	23 MJ0KUC - Jersey thru 4-30 ----- VK9NU - Norfolk Isl Thru 5-2
24 V31OK - Belize thru 5-3 ----- E51DLD - S. Cook Isl Thru 5-10	25	26 JD1 - Ogasawara Thru 5-6 	27	28 A91HI - Bahrain thru 5-1 	29	30

The next meeting of the Oh-Ky-In Amateur Radio Society will be Tuesday, April 5th at 7:30 PM

OH-KY-IN Amateur Radio Society

Regular monthly meetings are held the first Tuesday of each month at 7:30PM local time at the St Bernard Recreation Hall, 120 Washington Avenue (corner Washington & Tower Aves) in St Bernard, just east of Vine St. Please come in the doors at street level, facing the high school. Visitors are ALWAYS welcome!

OH-KY-IN Amateur Radio Society

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