



Q-Fiver

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

In The News

Winter Field Day

Another Winter Field day is in the record books! Find out about those intrepid souls who battled cold and yes, freezing fog! More info and photos inside starting on page 2!

In The News

ARISS School Contact

Keep an eye out for updated information about our ARISS School Contact happening near the end of February. Contact Cesi, KD8OOB for more info or to volunteer to help!

In The News

Weather Spotter Training

NWS Weather Spotter Training:
Feb 25th 6:30-8:30
Finneytown H.S.
Performing Arts Center
8916 Fontainebleau
Terrace, Cincinnati,
OH 45231

Calendar of Events for February 2020

Tue	Feb 04	Club Meeting in St. Bernard – Topic: ARISS Contacts
Wed	Feb 05	TechTalk Rob N8RDP
Wed	Feb 12	TechTalk Mike N8MRS
Sat	Feb 08	Brunch Bunch 1PM – Chili Time Restaurant 4727 Vine Street in Saint Bernard, 45217
Tue	Feb 11	Board of Directors meeting Westwood United Methodist Church - 3460 Epworth Ave
Wed	Feb 19	TechTalk Dale KC8HQS
Tue	Feb 25	Digital Group Jerry W1SCR
Tue	Feb 25	Weather Spotter Training Finneytown H.S. Performing Arts Center
Wed	Feb 26	TechTalk George N3VQW

WINTER FIELD DAY 2020 - OUTDOORS!

Winter Field Day is an annual event held by the Winter Field Day Association with the goal of preparing for emergencies in all weather, not just summer weather. This year, the event was held over a 24-hour period on Saturday, January 25th through Sunday, January 26th from 2:00 PM ET/19:00 UTC to 2:00 PM ET/19:00 UTC. In the past, OH-KY-IN has operated this event outdoors, but over the past several years, the club has teamed up with QCEN and operated at their radio room at the American Red Cross. This year, OH-KY-IN has offered both an indoor operation at the QCEN radio room and an outdoor operation.

The outdoor operation was held in the old barn at the Harvest Home Park in Cheviot, OH. The barn was an excellent option as it protected operators from the elements, but did not provide heat, allowing the group to operate in the O - Outdoor category. Several propane heaters were obtained to keep operators and guests warm as the temperatures dropped.



Mike KD8ZLB Operating HF

The group decided to operate in the 3 class, allowing for only three simultaneous transmissions under the K8SCH callsign, including satellite operations and VHF/UHF operations. While rigs were swapped from time to time, the group relied on three main antennas for HF operations, a tripod mounted vertical with adjustable matching box, an end fed reaching into a tall tree and a SOTABeams Band Hopper IV 20m/30m/40m/80m linked dipole mounted high up between two tall trees, and a tree mounted Slim Jim for VHF operations.



Spacious Accommodations with Propane Heat!

In the spirit of emergency operations and in line with the contest rules, all rigs were operated using batteries. While the barn had electricity, it was only allowed for the logging stations, chargers and other non-rig related power needs (the wall of crock pots comes to mind), so long as the batteries being charged were not operating radios at the time. Several batteries were kept in reserve and swapped out for charging from time to time. The team was impressed with the longevity of the batteries over the 24 hours considering how much work they received.



Thanks, Cesi (KD8OOB) - Great job organizing the event!

The contest allowed for three different modes, Phone, CW and Digital. 182 phone contacts were made on the 20m, 40m and 80m HF bands along with a handful of VHF 2m simplex QSOs including a contact with the group at the QCEN radio room operating as W8VVL. A total of 56 contacts were made for digital, all of them using PSK31 (FT8 is not allowed as it does not support the WFD exchange) on the 20m, 40m and 80m HF bands.

Finally, a total of 7 contacts were made using CW on the 20m, 40m and 80m HF bands. Several attempts were made to make a satellite QSO for an addition 1,500 bonus points, but the noise level was bad, the FM birds were crowded and the late-night weather outdoors cold with freezing fog and mist, so no successful contact was made.

Plenty of people helped setup, operate and teardown for the event. A core group of overnights worked until 4:30 AM and then picked back up at 7:00 AM, keeping downtime to a minimum. Several remained throughout the night, sleeping on cots or in a camp chair. The propane heaters made sure no one got too cold.



Dan at the controls with nice headphones!

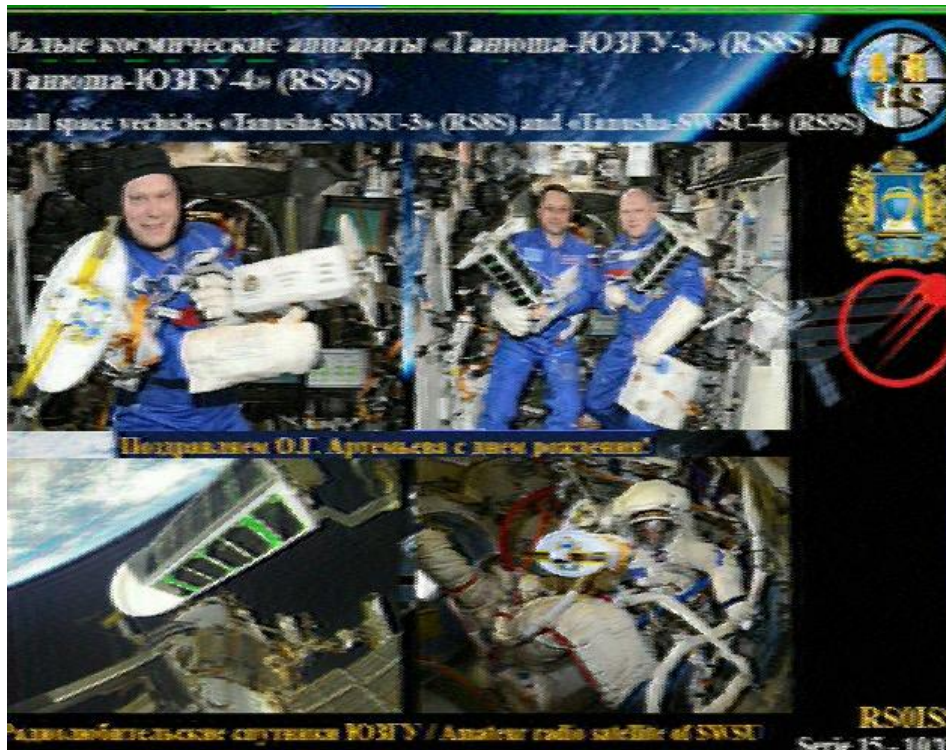
Chef John N8JTP provide cheese conies and Cincinnati-style chili spaghetti to feed and keep the team warm along with a big pot of piping hot coffee to keep them going through the night. Several other dishes were provided, including stew, beef macaroni, late night La Rosa's pizza, doughnuts and a sausage, egg and cheese crockpot casserole.

Overall the response was positive. Everyone seemed to have a good time with plenty of guests stopping by to say hi and operate a bit. The group hopes to get together at again next year to operate Winter Field Day at Harvest Home Park.

Thanks to those who came to setup, operate and teardown: Dan KF4AV, Dennis KD8ILY, Dennis KE8LBY, Drew KE8JTL, George N3VQW, Greg KA8MQD, John N8JTP, Justin KE8COY, Mike KD8ZLB, Mike KG4DSG, Rocky KE8DZS and Ryan AC8UJ. If I forgot anyone, it's not due to you not being appreciated, but due to me only having three hours of sleep!

73! Cesi KD8OOB

ARISS SSTV SPECIAL EVENT IMAGE CAPTURES



KD800B Image from ISS SSTV Event January 2020



AA8SW Image from ISS SSTV Event January 2020

Tips and Tricks

This tip falls under the category of 'something old is something new'

For many years we all knew alkaline batteries could corrode if left too long in a device. I suspect most of us have had this issue at one time or another. Then the major battery companies seemed to have more or less solved the issue, at least it was quite rare to have a battery go bad. Hooray!!

In the last ten years or so I have seen the problem resurface, particularly when devices have a low but steady drain, such as radios with clocks in them, etc. Even in devices without a constant drain, I have had batteries go bad in 6 months or less.

This has led me to turn to rechargeables, particularly Eneloop, because they hold a charge for several years. Your mileage, as they say, may vary. This helps with the typical drain issue of regular rechargeables losing 25-50% per month.

At the very least I recommend removing Alkaline batteries from a device that is unused until you need it – better safe than sorry!

(send in your tips and tricks to my E-mail address – who knows whom you'll help! – Editor)

Where is TechTalk???

For the last few weeks, the *TechTalk* net has been held on the 147.240 (+) PL123 repeater operated by the Queen City Emergency Net. The 442.700 (+) PL123 repeater has been **linked** during the net as well. Even if you don't have any questions for the net, you just might have the answer to someone else's question. And you'll get updated with what is going on in the amateur radio world by listening in to both the Amateur Radio Newsline and Amateur News Weekly amateur radio news reports. The *TechTalk* net is held every Wednesday night at 9pm.

TechTalk will continue to be held on the QCEN repeaters until the controller at the 146.670 repeater is returned to service.

A big **thank you** goes out to the Queen City Emergency Net for allowing us to hold *TechTalk* on their repeaters.

73, Bruce N8BV, *TechTalk* Net Manager

Board of Directors



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Ryan Owens AC8UJ (513) 235-0134 ac8uj@arrl.net

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OH-KY-IN Repeaters

146.670 (-) Clifton 146.625 *(-) Edgewood 146.925 *(-) Delhi

443.7625 *(+5) Clifton [(*) Indicates Fusion Repeater]

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

Packet 145.010 MHz K8SCH-7 Digipeater (offline)– **Looking for a new site – ideas?!**

For membership information, please contact Nathan Ciufu KA3MTT, 6323 Cinnamon Ridge Dr, Burlington KY 41005, (859) 586-2435 or, E-mail membership@ohkyin.org.

Renewals of Club Memberships are due by the end of March. Please remember to indicate any changes to your contact information on your renewal!

2020 Committee Chairs and Appointments

Technical Operations Group
 ARPSC Representative
 Volunteer Examiners
 QCEN Representative
 Membership
 Fundraising
 Education
 Repeater Control Ops Mgr.
 PIO
 Librarian
 Digital Group
 Q-Fiver Editor
 Field Day
 Historian
 Fox Hunters
 Equipment Mgr.
 WebMaster
 Silent Key
 Tech Talk Net Mgr.
 K8SCH QSL Mgr.
 TV/RFI
 HamFest

Gary Coffey KB8MYC
 Jerry Shipp W1SCR
 Brian DeYoung K4BRI
 Pat Maley KD8PAT
 Nathan Ciufu KA3MTT
 Bruce Vanselow N8BV
 Michael Niehaus KD8ZLB
 Bruce Vanselow N8BV
 (Position Open)
 Justin Moore KE8COY
 Jerry Shipp W1SCR
 Robert Gulley K4PKM
 Eric Neiheisel N8YC
 Dale Vanselow KC8HQS
 Dick Arnett WB4SUV
 (position open)
 George Gardei N3VQW
 Bryan Hoffman KC8EGV
 Bruce Vanselow N8BV
 Bob Frey WA6EZV
 Dick Arnett WB4SUV
 Gary Coffey KB8MYC

TechTalk Operators for February 2020

1st Wednesday	Rob N8RDP
2nd Wednesday	Mike N8MRS
3rd Wednesday	Dale KC8HQS
4th Wednesday	George N3VQW



The Radiophonic Laboratory:

Teletouring Across the Time Zones with the Phone Fidelity Device Part 2
(Part 1 published in Jan. 2020 Q-Fiver)

By **Justin Patrick Moore, KE8COY**

How To Build A Phone Fidelity Device by Negativland

The parts listed here have Radio Shack catalog numbers... I'm sure anyone who wants to build this can find their equivalent.

Parts list:

Audio Isolation Transformer with 1:1 turns ratio, 600 ohm impedance
(\$3.99, Radio Shack Cat. # 273-1374)

1/4" Phono jack (\$1.99 for 2, Radio Shack Cat. # 274-155C)

OR

RCA-style phono plugs (\$2.19 for 4, Radio Shack Cat. # 274-384)

Modular Dual Jack Extension Cord (\$6.99, Radio Shack Cat. # 279-363)

OR

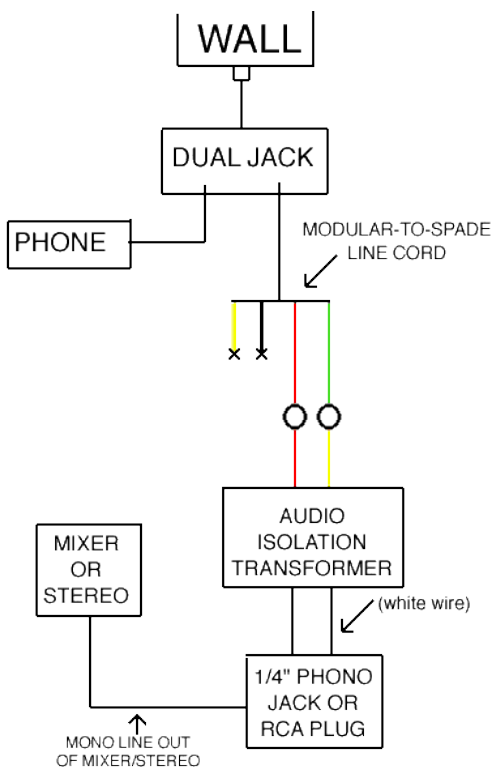
2-outlet Modular Adaptor (\$4.79, Radio Shack Cat. # 279-357)

Modular-to-spade 12" line cord (\$1.99, Radio Shack Cat. # 279-391)

OPTIONAL: Telephone wiring box (\$6.99, Radio Shack Cat. # 279-343)

OR

Wall mounting box (\$1.99, Radio Shack Cat. # 279-341)

**How to build the device:**

Plug the male end of the Dual Jack Extension cord into a wall phone jack. (You can also use a 2-outlet Modular Adaptor.)

Plug a standard phone into one jack on the Dual Jack Extension Cord, and plug the Modular-to-Spade Line cord into the other jack.

The Modular-to-Spade Line Cord should have four wires: yellow, black, red, and green. Put tape on the ends of the yellow and black wires, as these are not needed. Connect the red wire to the red wire from the Audio Isolation Transformer, and connect the green wire to the yellow wire from the Audio Isolation Transformer. (No need to solder, just make sure the wires are attached securely, e.g. with alligator clips if you don't know how to solder.)

Connect the black and white wires from the Audio Isolation Transformer to the terminals on the 1/4"

phono plug (it doesn't matter which wire goes to which terminal.) (You can also use an RCA-style plug, depending on the type of wire coming from the output of the mixer or stereo.) Again, there is no need to solder necessarily.

Now plug a mono output line from the mixer or stereo into the phono jack, and you are ready to go! (You can also use a tape deck or CD player as sound input.)

OPTIONAL: Since your device might be fragile (particularly if you did not solder the connections) you may wish to place the core of the setup inside of a box of some sort. I use a Telephone Wiring Box. This also has little screws and posts inside which I use to secure connections.

How to operate the device:

When you are calling into the radio, the trick is to use the telephone line **ONLY FOR SOUND INPUT**, **NOT** for listening to the radio. Therefore, you should put headphones on which are plugged into the radio to listen to yourself when you are on the air.

Unplug the Modular-to-Spade Line Cord from the Dual Jack, so that only the telephone is plugged into the Dual Jack. You should get a dial tone when you pick up the phone.

Using the telephone plugged into the Dual Jack, dial the number you want to call.

When you hear that the other end's phone is ringing, plug the Modular-to-Spade Line Cord back into the Dual Jack.

Once the device is reconnected, try outputting sound from your mixer. You should be able to hear the sound by listening to the telephone which is connected to the other side of the Dual Jack. If you hear sound, you should hang up the phone, put on your headphones, and wait until you are on the air. (When you hang up the phone, the line will **NOT** be disconnected, as you still have a line running into the other jack which is acting as a phone itself. If you do not hang up the phone, the device will still work, but the signal may not be as strong.) If you do not hear sound through the telephone, your device is probably not connected properly.

When you are done, make sure you unplug the Modular-to-Spade Line Cord from the Dual Jack. Otherwise, the line will remain connected, just as if you left the phone off the hook.

TIPS: Once you get on the air, try adjusting the level and EQ on your sound. You want to be loud enough to be heard, but not so loud that you are distorted or drowning out the ambient sound. You should realize that you are going to lose a lot of the sound at lower frequencies. You can boost the bass on your mixer/stereo, but still be aware that low-frequency sounds are not going to come out very clearly. Mid and high frequency sounds (under about 15 kHz) tend to come out best. **IF YOU WANT TO GO IN STEREO**, you need two phone lines, and two devices as above. Then you need to get both lines on the air at once! I use a computer with automatic-dialing software to make it easier to get through.

Good luck, and have fun!

Net Control Station Needed

There is an opening in the list of Net Control Stations for the TechTalk Net. The opening is for the first Wednesday of every month. The TechTalk Net meets every Wednesday evening at 9pm. The net is currently being held on the 147.240 (+) PL 123 repeater.

If you'd like to become the 1st Wednesday Net Control Station, please contact me at n8bvbruce@gmail.com or 513-251-1555.

If you would like to be put on the substitute Net Control list please contact me as well. Substitute Net Controls are used when the regularly scheduled Net Control Station is unable to take their net. This could be a notification in advance or at the last minute. 73, Bruce N8BV TechTalk Net Manager

OH-KY-IN Life Members

*John Phelps N8JTP * Kenneth E Wolf N8WYC * John W Hughes AI4DA * Karl R Kaucher KK4KRK
Howard Hunt NG8P * Fred Schneider K9OHE * Roger Higley W8CRK * Dan Curtin KF4AV
Steve Weeks AA8SW * Kelly Hoffman K8KAH * Cindy Shipp, KB8WEI * Jerry Shipp, W1SCR
Bob Craig K8RC (new Life Member, welcome!!)*

Health and Welfare

Ted Morris, NC8V, had rotator cuff repair surgery January 8th and is recovering at home, fiddling with his new Sangean ATS-909X shortwave receiver while awaiting clearance to start physical therapy.

He sends thanks to all for your well wishes and hopes to be able to make the March meeting!

VHF Simplex Event (from QCEN Newsletter)

QCEN participated in the ARES VHF Simplex event on Saturday, January 11th. Notable contacts were with the Dayton Red Cross Chapter (almost 50 miles away,) the Anderson Township EOC, and the Regional Operations Center.

Other stations were contacted throughout Hamilton and nearby counties. The remote station was put to good use. Operators included W8MRG, KA2UYB, KD8MMY, KD8SOH, N8TFD, W1SCR, N8JMV and KB8JMD (who brought along a young man who might become interested in ham radio.)

Please Note: Proposed Bylaws Update for Review starting on Page 22

The Digital Group - Join in the Fun!

Join Jerry W1SCR and all the regulars on February 25th for all things digital radio. Did you get a new DMR radio and don't know what to do? Maybe you've heard about WinLink but don't know what software to load or how to set up your account.

These are the folks who can get you up and running! Join in the fun and comradery, 7PM in the Centennial Hall, Saint Bernard (building next to club meeting location)

YOTA Double Multiplier!

"From now until the end of February 2020, every dollar donated to Youth on the Air Camp will be matched by Steve, KM9G, up to a total of \$4000! Your donations in support of this unique opportunity for youth to share ham radio with their peers will count **DOUBLE** until the end of February. You can donate by PayPal, GoFundMe, or check. For links and details, visit YouthOnTheAir.org and click "Donate" in the top right corner.

"Your funds will finish paying for the camp, and to raise the number of campers from 20 to 30 to better meet the demand. Our corporate and foundation sponsors have raised most of the funds, but we need clubs and individuals to finish the job. **DONATE TODAY AND DOUBLE THE IMPACT!**"

If you haven't already done so, now is the time to renew your membership to OH-KY-IN ARS or JOIN the club. We have made it very simple to do so.

You can simply click on the following link - <http://ohkyin.org/wp/about-oh-ky-in/membership/pay-membership-fees/>







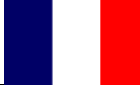




The above link will allow you to join or renew using ANY credit card with a secure website. You can also use a PayPal account if you would prefer using the same website.

If you would prefer to print an application and mail a check, you can use this link - <http://ohkyin.org/wp/about-oh-ky-in/membership/membership-application/>

The website still shows the 2019 application, but it is in the process of being changed over to the 2020 application (which has no changes from the 2019 app).

If anyone has any questions concerning joining the club or renewing your membership, please let me know! Best 73, Nathan Ciufu, KA3MTT OH-KY-IN ARS Membership Chairman

DX Spots - February 2020 (Thanks to Nathan KA3MTT)

S	M	T	W	T	F	S
						1 9G5GS - Ghana Thru 2-16 
2 TI9A - Cocos I Thru 2-8 ----- E51DDG - S Cook Is thru 2-14	3 TO3FM - Martinique thru 2-8  	4 5H - Tanzania thru 3-16 ----- - V31 - Belize thru 2-25	5 C21 - Nauru thru 2-8 ----- -- E44CC - Palestine Thru 2-17	6	7 4K6 - Azerbaijan thru 2-12 	8 PJ4 - Bonaire thru 2-22 
9	10	11 TX4 - Fr Polynesia thru 2-17 	12	13	14 V63DX - Micronesia Thru 2-21 ----- - ZF2AN - Cayman Is Thru 2-23	15 FJ - St Barthelemy Thru 2-22 
16 6W7 - Senegal thru 3-27 	17	18	19 8Q7HK - Maldives thru 2-24 	20 VK9NR - Norfolk I Thru 2-25 ----- - TI5 - Costa Rica thru 3-4 ----- - VP8PJ - S Orkney Is Thru 3-5	21 KP3RE - Puerto Rico Thru 2-23 ----- - V47JA - St Kitts & Nevis thru 3-5	22
23 C6AAN - Bahamas Thru 3-1 	24 TU5PCT - Ivory Coast Thru 2-29 	25	26	27	28	29

THE EXAM CORNER

By Steve Weeks, AA8SW

Last month, I presented my case why every Technician licensee should make a serious effort to upgrade to General, and why I maintain that almost any Tech can upgrade to General with a very reasonable amount of effort – far less than many believe – because the FCC has established rules that are so much in our favor. Most importantly, *they tell us all of the possible questions in advance!*

Having access to the entire question pool in advance creates an amazing opportunity. With only a modest effort, you can review all the possible questions so that when you go to take the real exam, you have already seen every question that will be presented!

In the prior article, I discussed that Robert K4PKM and I have developed materials explaining the answers to the entire question pool for the OHKYIN General upgrade classes that we teach, and have made all of these materials available on the club website. Finally, I gave an example of our instructional material and showed how that one brief passage would show the way to correct answers on several of the questions from the actual question pool.

This month, I will give a few more examples from our instructional materials and provide the related items from the question pool, so you can see once again how easy it is to answer those questions correctly after getting just a little bit of guidance. I hope this will encourage Techs to think seriously about upgrading, and it is also useful review for those of us who already hold General or above licenses.

This explanation appears in the course material, followed by the related question:

The National Electrical Code governs electrical safety (in the shack and everywhere else).

GOB06 Which of the following is covered by the National Electrical Code?

- A. Acceptable bandwidth limits
- B. Acceptable modulation limits
- C. Electrical safety inside the ham shack
- D. RF exposure limits of the human body

The NEC relates to electrical safety, not radio frequency safety, so the answer is (C). FCC regulations, not general electrical safety codes, cover RF exposure.

Now some more examples of course material excerpts followed by the relevant pool questions:

Wires are sized by gauge (AWG). Smaller gauge numbers denote larger wires. Residential wall outlets are usually on 15 amp. circuits which require 14 gauge wire – or 20 amp. circuits which require 12 gauge wiring.

G0B02 According the National Electrical Code, what is the minimum wire size that may be used safely for wiring with a 20 ampere circuit breaker?

- A. AWG number 20
- B. AWG number 16
- C. AWG number 12
- D. AWG number 8

12 gauge, answer (C).

G0B03 Which size of fuse or circuit breaker would be appropriate to use with a circuit that uses AWG number 14 wiring?

- A. 100 amperes
- B. 60 amperes
- C. 30 amperes
- D. 15 amperes

15 amps, answer (D). Note that 12 and 15 are the ONLY POSSIBLE ANSWERS to numeric questions about wire size or capacity, so if you know that, you get these questions right even if you forget which amperage goes with which wire size. We can be sure of that because we have seen all of the possible questions!

In addition to the wires that carry the current, heavy-duty electrical wiring always includes a ground wire. The ground wire must be present at all times for safety, so no fuse is ever placed in a ground wire (if the fuse blew, it would disconnect the ground wire). The ground wire should never carry any current and if any current leaks to the ground wire, it is called a “ground fault” and triggers any GFCI (ground fault circuit interrupter) that is in place.

G0B01 Which wire or wires in a four-conductor connection should be attached to fuses or circuit breakers in a device operated from a 240 VAC single phase source?

- A. Only the two wires carrying voltage
- B. Only the neutral wire
- C. Only the ground wire
- D. All wires

Only the voltage-carrying wires, answer (A). Safety wires must never be interrupted.

G0B05 Which of the following conditions will cause a Ground Fault Circuit Interrupter (GFCI) to disconnect the 120 or 240 Volt AC line power to a device?

- A. Current flowing from one or more of the voltage-carrying wires to the neutral wire
- B. Current flowing from one or more of the voltage-carrying wires directly to ground
- C. Overvoltage on the voltage-carrying wires
- D. All these choices are correct

A GROUND fault is current leaking directly to GROUND. Use of the same terminology in the question and the right answer (B) gives this away, and that is often the case in this question pool.

All ground connections must be tied (“bonded”) together – this includes lightning safety grounds on antenna lines. Also, metal equipment cases often contain “interlocks” which automatically disconnect the power to the equipment when the case is opened, for safety.

G0B11 Which of the following is good practice for lightning protection grounds?

- A. They must be bonded to all buried water and gas lines
- B. Bends in ground wires must be made as close as possible to a right angle
- C. Lightning grounds must be connected to all ungrounded wiring
- D. They must be bonded together with all other grounds

All grounds must be tied together, answer (D).

G0B12 What is the purpose of a power supply interlock?

- A. To prevent unauthorized changes to the circuit that would void the manufacturer's warranty
- B. To shut down the unit if it becomes too hot
- C. To ensure that dangerous voltages are removed if the cabinet is opened
- D. To shut off the power supply if too much voltage is produced

An interlock shuts off the power when the case is opened, answer (C).

Hams often use emergency generators to power their equipment, or even their entire houses. And every year people die from carbon monoxide poisoning due to improper use of generators – which must be in a well-ventilated area. If you use a generator to power your entire house, using your house wiring and not just plugging something directly into the generator, you must disconnect the house wiring from the incoming utility power feed so you don't send power back into the grid and kill a neighbor or utility worker.

G0B04 Which of the following is a primary reason for not placing a gasoline-fueled generator inside an occupied area?

- A. Danger of carbon monoxide poisoning
- B. Danger of engine over torque
- C. Lack of oxygen for adequate combustion
- D. Lack of nitrogen for adequate combustion

Hopefully answer (A) is obvious.

G0B09 Which of the following is true of an emergency generator installation?

- A. The generator should be located in a well-ventilated area
- B. The generator must be insulated from ground
- C. Fuel should be stored near the generator for rapid refueling in case of an emergency
- D. All these choices are correct

Same subject, same comment, answer (A).

G0B13 What must you do when powering your house from an emergency generator?

- A. Disconnect the incoming utility power feed
- B. Ensure that the generator is not grounded
- C. Ensure that all lightning grounds are disconnected
- D. All these choices are correct

Again, answer (A) is the obvious choice. But don't worry if you have not been disconnecting public utility lines when using a small emergency generator at home; this precaution does not apply when you power equipment directly from the generator, it is only necessary if you want to feed the emergency power back into your home wiring. Few of us are lucky enough to have a

large enough generator to do that and if you do have a whole-home generator, the installer will have already included a transfer switch to address this issue.

Soldering is an effective way of permanently joining two wires, but a danger from lead-tin solder is that the lead can contaminate food.

GOB10 Which of the following is a danger from lead-tin solder?

- A. Lead can contaminate food if hands are not washed carefully after handling the solder
- B. High voltages can cause lead-tin solder to disintegrate suddenly
- C. Tin in the solder can “cold flow,” causing shorts in the circuit
- D. RF energy can convert the lead into a poisonous gas

Answer (A), due to the toxicity of lead.

That’s it for this month. **Is this a useful feature that we should continue in future Q-Fivers?** Please contact me at AA8SW@att.net or at a club meeting if you have any comments or questions.

FEBRUARY 2020 BRUNCH BUNCH – HAPPY ANNIVERSARY!!

The next **Brunch Bunch** will be held Saturday, February 8th, at 1pm.

The location for February is **Chili Time Restaurant**, 4727 Vine Street in Saint Bernard, 45217. Chili Time is directly across the street from the intersection of Vine Street and Washington Avenue, and a very short distance from the location of the OH-KY-IN club meetings.

“This is a storied joint, known for its chili, hot dogs, breakfast all day & other casual fare since 1963. The inside of Chili Time looks like a diner, with a J-shaped counter, rows of booths, and a few stand-alone tables. The menu ranges well beyond the Cincy chili parlor staples of 5-ways, coneys, and double-deckers. Chili Time is still owned and operated by the Vidas family. And, yes, Chili Time continues to operate more as the town diner than as a chili-centric restaurant.”

The February 8th visit to Chili Time will mark the 9th anniversary of the **Brunch Bunch**, as this is where the Brunch Bunch got its start back in February of 2011!

Remember the **Brunch Bunch** always meets the second Saturday of every month at 1pm at a location to be announced each month. If you are not available to 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 to visit in the future. 73, Bruce N8BV

SPACE WEATHER AND PROPAGATION

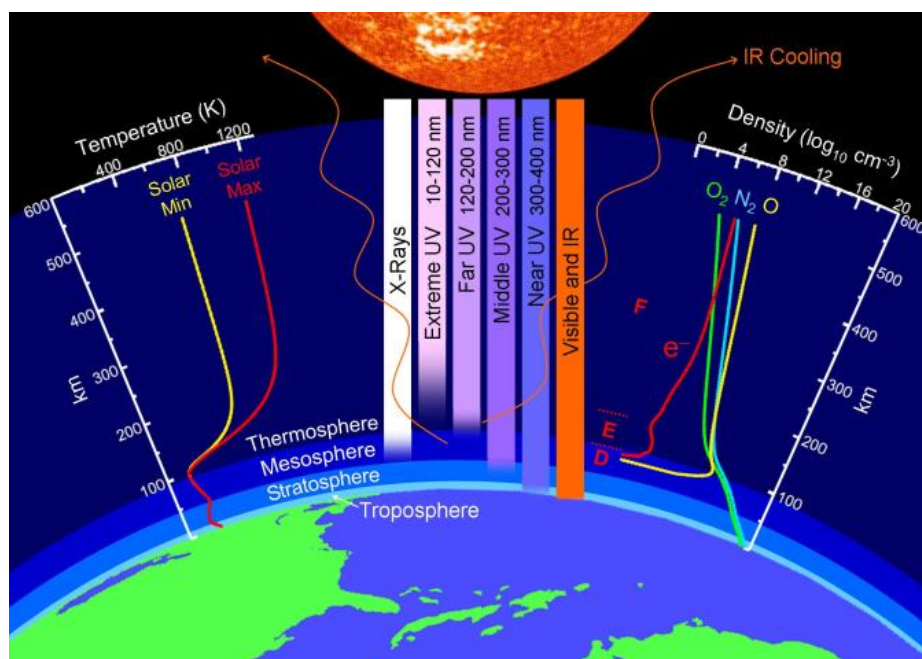
The Chill of Solar Minimum September 27, 2018 / Dr. Tony Phillips

The article referenced in the title, portions of which are noted here, first appeared on Spaceweather.com back in 2018. The article is referencing a new measurement of solar conditions (Thermosphere Climate Index or TCI) which currently indicates a cooling effect on the outer atmosphere (Thermosphere) during solar minimums.

Scientists have long known that as the Solar Cycle is at its peak, the Thermosphere expands, and at minimum it contracts. Using the SABER instrument onboard NASA's TIMED satellite, NASA scientists are able to monitor the wattage of infrared emissions from the top of the atmosphere. These measurements can be used to summarize the state of the thermosphere in a single daily number—the TCI, and is part of the Spaceweather.com daily report.

"We see a cooling trend," says Martin Mlynczak of NASA's Langley Research Center. "High above Earth's surface, near the edge of space, our atmosphere is losing heat energy. If current trends continue, it could soon set a Space Age record for cold."

These results come from the SABER instrument onboard NASA's TIMED satellite. SABER monitors infrared emissions from carbon dioxide (CO₂) and nitric oxide (NO), two substances that play a key role in the energy balance of air 100 to 300 kilometers above our planet's surface. By measuring the infrared glow of these molecules, SABER can assess the thermal state of gas at the very top of the atmosphere—a layer researchers call "the thermosphere."



"The thermosphere always cools off during Solar Minimum. It's one of the most important ways the solar cycle affects our planet," explains Mlynczak, who is the associate principal investigator for SABER.

When the thermosphere cools, it shrinks, literally decreasing the radius of Earth's atmosphere.

To help keep track of what's happening in the thermosphere, Mlynczak and colleagues recently introduced the "Thermosphere Climate Index" (TCI)—a number expressed in Watts that tells how much heat NO molecules are dumping into space. During Solar Maximum, TCI is high ("Hot"); during Solar Minimum, it is low ("Cold").

"Right now, it is very low indeed," says Mlynczak. "SABER is currently measuring 33 billion Watts of infrared power from NO. That's 10 times smaller than we see during more active phases of the solar cycle."

(As an update, Spaceweather.com has been tracking the TCI since late in 2018, and the record low was in Feb. of 2019 so far. And as Shakespeare wrote in Hamlet, "There are more things between Heaven and Earth, Horatio, than are dreamt of in your philosophies!" I never cease to be amazed at the intricacies of nature!)

You may read the full article here:

<https://spaceweatherarchive.com/2018/09/27/the-chill-of-solar-minimum/>

(Thanks to Jim Hicks, WB4CTX for sending me the article link – Ed.)

ANOTHER EASY WAY TO HELP OUT THE CLUB: YOUR KROGER CARD!

Link and use your Kroger Card - Earn money for OH-KY-IN!!

Do you have a Kroger rewards card? If so, the OH-KY-IN Amateur Radio Society has enrolled in the Kroger Community Rewards Program. If you link your card to OH-KY-IN, all eligible purchases you make using your Kroger card will generate income from the rewards program to OH-KY-IN. OH-KY-IN has been assigned a Non-Profit Organization number of **QY352**.

To Use the Kroger Community Rewards Program:

You need to visit <http://www.krogercommunityrewards.com> Once logged into your Kroger account you can search for OH-KY-IN Amateur Radio Society either by name or QY352 and then click **Enroll**.

On the right side of this page is **View by Type**. **Be sure** to change this to **ALL** or to **CIVIC ORGANIZATION** before entering **OH-KY-IN Amateur Radio Society** or **QY352**.

New users will need to create an account which requires some basic information, a valid email address and a rewards card number.

Customers must have a registered Kroger rewards card account to link it to OH-KY-IN.

If you do not yet have a Kroger rewards card, they are available at the customer service desk at any Kroger.

You must swipe your registered Kroger rewards card or use the phone number that is related to your registered Kroger rewards card when shopping for each purchase to count.

REMEMBER, your purchases will not count for your organization until after you register your rewards card.

Tell your friends about this too. Anyone with a Kroger card can link it to OH-KY-IN.

The OH-KY-IN Amateur Radio Society thanks you for taking just a few moments to link your card to your club! 73, Bruce N8BV

Technically Speaking

by Gary Coffey, KB8MYC, Technical Committee

One aspect of FM operation that seems to have quite a lack of understanding with regard to it is CTCSS (aka Private Line, PL, Channel Guard, CG, Quiet Call, QC, etc). Continuous Tone Coded Squelch System has been around for over fifty years, yet is under-utilized or improperly utilized by many FM'ers, to include repeater owners/trustees and end-users. It is my hope that this article will in some way contribute to increased and proper utilization of this convenient and useful tool.

CTCSS is a system whereby a (not really) sub-audible tone is encoded into the transmit audio of a radio and a receiver on another radio on that frequency will only open up (decode) when it picks up that specific tone. While the tones are called "sub-audible", most people can hear them as a hum in their radio's speaker when monitoring a radio or repeater that is encoding such a tone.

Most repeaters, including the OHKYIN repeaters, will transmit a tone (123 for all of our repeaters). By setting this tone in your radio you will only hear signals from the repeater. This will eliminate a lot of noise and interference you may encounter.

If you are seeing the S meter moving on your radio but do not hear any audio, an improper PL tone could be your culprit. Having the wrong tone programmed or a tone entered when the transmitting station does not utilize one will cause this problem.

Our repeaters are one of our club's greatest assets and our largest investments. We encourage you to use them. If you have questions about or repeaters or setting up your radio feel free to reach out to me.

Don't You Wish You Were Here?!!



The Brunch Bunch, January 2020 at Sorrento's in Norwood!

New Zero Sunspot Record

The Solar Minimum is nothing new, but 2019 set a record for the most days with "0" Sunspots. All is not lost fortunately, as Cycle 25 Sunspots have been starting to show up!!

PROPOSED BYLAWS CHANGES/AMENDMENTS

Below are the proposed updates to the club Bylaws, to be voted on by the membership at the April club meeting.

OH-KY-IN AMATEUR RADIO SOCIETY, INC. (the “Society”) CODE OF REGULATIONS (also referred to as BYLAWS)

As amended at the _____, 2020 meeting of members.

ARTICLE I. MEMBERSHIP

A. Any person interested in Amateur Radio and who is in sympathy with the purposes of this Society may become a member upon completing an application for membership and payment of any applicable dues; however, an application for membership may be rejected, or the membership of any individual may be terminated, by the Board of Directors if in the opinion of the Board the prospective or continued membership of that individual is not in the best interests of the Society due to prior or continuing violation of F.C.C. rules, disruptive behavior, or other reasonable cause as determined by the Board, whose decisions shall be final.

B. The dues (which may vary depending on categories set by the Board) shall be determined by the Board of Directors from time to time, and shall be payable to the Treasurer during the month of January or at such other time as the Board of Directors may approve. Dues unpaid three months after the due date shall result in automatic termination of membership.

C. Any members qualifying for free membership under categories that may be established by the Board, shall have no voting rights.

ARTICLE II. BOARD OF DIRECTORS

A. Except where authority is otherwise designated under the law, the Articles of Incorporation or these Bylaws, authority over the affairs of this Society shall be exercised by or under the direction of the Board of Directors, which shall consist of three elected Directors serving staggered three-year terms, with one Director being elected each year; together with the four elected officers specified below and the immediate Past President of the Society who serve ex officio with vote. However, all members of the Board of Directors must be current members of the Society. The annual election of one Director shall be conducted along with the election of officers as provided below.

B. If any Board member dies, resigns, is removed, or becomes unable to serve, the vacancy for the unexpired term shall be filled by appointment of the remaining Board of Directors, even if the number remaining is less than otherwise required for a quorum.

C. Any Board member may be removed from office by majority vote of those members present at a regular or special meeting of the members, provided that notice of the proposed action has been given to the members as provided in Article V.D.

D. The Board shall schedule regular meetings to occur at least bi-monthly. The President, or in the absence of the President the Vice-President, may cancel a meeting if there is no business to conduct. Special meetings may be called by the President or by any three Board members with

notice to the Board as provided in Article II.E. Four Board members shall form a quorum for any regular or special meeting of the Board of Directors, and the majority vote of Board members present shall be the action of the Board unless otherwise required by law or these Bylaws. Board members may not vote by proxy but may attend a meeting by telephone conference call, video call or other electronic means which allow all participating Board members to hear each other. The Board may also act by unanimous written consent, and email or other electronic communications may be accepted for that purpose.

E. Notice of regular or special Board meetings (other than regularly-scheduled meetings as established at the beginning of each year) shall be sent to each Board member not less than five days prior to such meeting either (1) by first class mail to his or her residence or place of business as listed in the Society's records or (2) by electronic mail to his or her e-mail address, if one has been furnished for that purpose to the Society. Such notice shall set forth the time and place of such meeting and shall be valid if sent as stated in the preceding sentence, whether or not actually received. Business to be transacted at any regular meeting of the Board shall not be limited to those matters set forth in the notice of meeting. Notice of any meeting of the Board may be waived by the execution of a written waiver of such notice, either before or after the holding of such meeting by any Board member. The attendance of any Board member at any meeting without protest at the commencement of the meeting shall be deemed to be a waiver of notice of the meeting.

F. Board meetings are open to members, so the date and location of Board meetings (other than confidential meetings as provided below) must be distributed to the membership in advance of each meeting. However, the Board may conduct a confidential special meeting or executive session at a regular meeting to discuss sensitive topics such as actual or potential litigation, contract negotiations, and other legal or personnel matters.

G. Board members (including current and former officers serving ex-officio) shall not receive any compensation for their service but shall be entitled to reimbursement of authorized expenditures made on behalf of the Society. The Society may purchase directors liability insurance or other reasonable and customary coverages for the benefit of the Directors.

ARTICLE III. OFFICERS AND COMMITTEES

A. The elective officers of this Society shall be a President, Vice President, Treasurer, and Secretary. These officers shall be elected annually at the December meeting by majority vote of the members present and voting. All of the elected officers must be Amateur Radio operators licensed by the Federal Communications Commission.

B. Elected officers of the Society shall serve one year terms (calendar year) and until their successors are elected and take office.

C. The President shall appoint a three-member Nominating Committee and the Nominating Committee shall submit, at the November meeting, names of proposed candidates for each of the four officers and one elected Director. Additional nominations may be made by members from the floor at this meeting.

D. Election of officers from the candidates identified at the November meeting (as the list of candidates may be supplemented by write-in vote at the December meeting) shall take place at the December meeting and shall be by majority vote of the members present.

E. The Board may appoint one or more Assistant Vice-Presidents, Assistant Secretaries or Assistant Treasurers or such other officers, having such duties and responsibilities as the Board shall deem advisable. Such non-elected officers need not be Board members and shall serve at the pleasure of the Board.

F. The President may establish or discontinue committees from time to time in his or her discretion, except as specified in this subsection. A financial review committee of three members shall be appointed by the President at the January meeting each year. The records of deposits and expenditures from the Society's bank accounts shall be reviewed, and a report submitted at the March general membership meeting. A three-person property review committee shall be appointed by the President in January of even-numbered years to review the physical property owned by the Society and present a report no later than the November general membership meeting of the same year. It is recognized that the members of these committees are not professional auditors and they shall not be personally liable for any failure to detect any irregularity that may have occurred.

G. The President shall appoint chairpersons for all committees. Terms for the chairpersons of all committees shall be one year and shall run concurrently with the elected officers, but the President may remove and replace any such chairperson at any time.

ARTICLE IV. DUTIES OF OFFICERS

A. The President shall preside at all meetings of the Society, shall be a member ex-officio of all committees, and shall have all other powers and perform all other duties usually pertaining to the office. The President shall make or cause to be made reports concerning the activities of the Society to the members and to any other relevant recipients such as the American Radio Relay League.

B. The Vice President shall preside in the absence of the President and shall act as aide to the President.

C. The Secretary shall keep an accurate record of all meetings of the Society, and keep a roster of members. The Secretary shall conduct the official correspondence of the Society and be responsible for acquiring information, and maintaining records.

D. The Treasurer shall be custodian of all the funds of the Society, and shall be responsible for the proper deposit of such funds in an FDIC-insured bank or other investment authorized by the Board. The Treasurer shall keep an accurate itemized account of all receipts and expenditures and pay bills as authorized by the Board of Directors. The Treasurer shall render a report at each meeting of the Society. The Treasurer shall be responsible for filing all necessary reports to the State of Ohio and the United States Internal Revenue Service. Such reports shall be filed at such time as stipulated by the various agencies of the above so as not to incur any penalties for late filing.

E. Officers shall not receive any compensation for their service but shall be entitled to reimbursement of authorized expenditures made on behalf of the Society. The Society may purchase officers liability insurance or other reasonable and customary coverages for the benefit of the officers.

ARTICLE V. MEMBERSHIP MEETINGS

A. Regular monthly or bi-monthly meetings of the membership shall be held from January through December. The date of regular meetings for the following calendar year shall be selected by the Board of Directors at its November meeting and published in the Society's official publication, but such scheduled meeting dates may be changed subsequently by the Board upon giving further notice to the members as provided in Article V.D. The meetings of this Society shall be open to interested persons, but the privilege of making motions, debating or voting shall be limited to dues-paid members of the Society, and the presiding officer may exclude any person who is disruptive or whose presence is otherwise determined to be not in the best interests of the Society. Business to be transacted at any regular meeting of the membership shall not be limited to those matters set forth in the notice of meeting, but shall not include amendment of these Bylaws or removal of any Board member unless the proposed actions were set forth in the notice. Members may vote by proxy if a proper written proxy is provided to the Secretary at the meeting.

B. A special membership meeting may be called by the President, or by the Vice President in the President's absence, at a reasonable time and place, with notice as provided in Article V.D. The notice must state the business to be conducted at the special meeting, and only that business may be conducted at that special meeting.

C. 20% of the Society's membership may call a special meeting of the membership at a reasonable time and place. The petition calling such a meeting shall be presented to the President, or to the Vice-President in the President's absence. The petition must state the business to be conducted at the special meeting, and only that business may be conducted at that special meeting. Upon receipt of any such proper petition, notice of the special meeting must be given by the Society to the membership as provided in Article V.D.

D. Notice of regular meetings of members is deemed given when published in the Society's official publication at least ten days prior to such meeting (and may be published up to a year in advance). Notice of a special meeting of members shall be deemed given if it is announced at a regular meeting of the members at least ten days prior to such special meeting, is published in the Society's official publication, or is sent by electronic mail to all members who have furnished such an address to the Society (through subscription to the Society's public email reflector or otherwise), in each case at least ten days prior to such special meeting. Such notice of a special meeting shall set forth the time and place of such meeting and shall be valid if given as stated in the preceding sentence, whether or not actually received. The attendance of any member at any meeting without protest at the commencement of the meeting shall be deemed to be a waiver of notice of the meeting.

E. The rules in ROBERT'S RULES OF ORDER, REVISED, shall govern the Society's meetings in all cases to which they are applicable unless inconsistent with other provisions of these Bylaws.

ARTICLE VI. OFFICIAL PUBLICATION

A. The official publication of the Society will be called the Q-FIVER, unless a different name is approved by the Board of Directors. It shall be published monthly (with any exceptions approved by the Board of Directors) and distributed to all members in good standing who have furnished an electronic mail address for that purpose.

The Editor shall be appointed by the President. It is the responsibility of the Editor to maintain the editorial policy of the publication consistent with the policies and practices of the Society.

ARTICLE VII. AMENDMENTS

A. These Bylaws may be amended at any regular or special meeting by a two-thirds (2/3) vote of the members present and voting.

B. No Bylaw amendment shall be put to a vote at a membership meeting unless notice of the meeting has been given as provided in Article V.D together with the text of the proposed changes in these Bylaws.

JANUARY 2020 GENERAL MEETING MINUTES

Guests: Tom Delaney W8WTD

New License and Upgrades: None

Roll: 33 in attendance

Health and Welfare Announcements: none

Brag Session:

- Cesi KD8OOB – received 15wpm code sufficiency certification.
- Bruce KE8KUV - bought his first HF radio.

- Pat K8PAT has Christmas holiday in Florida and watched the Star Lifter launch, didn't make orbit but it landed
- Steve AA8SW made 418 contest contacts, 44 states 31 countries on PSK31, FT4 and FT8

Business Meeting:

George receiving corrections. Motion to Accept as Corrected: Eric, Seconded by Justin (COY)

Membership report: 152 members at end of 2019, 2 more than 2018, have received 11 renewals.

Treasurer's Report:

Brian K4BRI: Passed out the November and December report. Deposits that should have been made last year have not been deposited yet. There will be corrections made. Last month's Split the Pot proceeds were not given to Brian. The report will be filed for audit.

Silent Key: Harold Blocker W4YWH: Very good to ARES. The .79 repeater will remain operational.

Tech Committee: Gary KB8MYC

- .67 holding pattern on cable until contractor release tower (January?), the repeater is working ok
- .625 is back on air, is having de-sense issues.
- APRS is back online, the IBM PS2 computer running it died.

Classes and Exams: Mike KD8ZLB

Tentative start dates: Extra March 2nd, 10 weeks, April 6th for General and Tech. Exam May 9th.

Foxhunting\APRS:

December's foxhunt was cancelled due to rain
January's not on this Saturday due to forecasted rain, following Saturday possible?
Announcement to follow on mailing list.

Library: Justin KE8COY has brought box with books that are up for grabs

Nets: Bruce N8BV: tech talk tomorrow night and looking for question which will be on the QCEN .24 repeater. Newcomers and Elmer's net still on hold.

Winlink: Jerry's repeaters working - W1SCR gateway

Digital Group: Digital group will show you how to hook up Winlink through your computer. Meeting held on the 28th at 7:00 pm in the Centennial Hall.

Website: Current problem with renewing membership, no option to change. No access to setup PayPal.

QCEN: Sat 10-4 Red Cross, VHF simplex contact. Next QCEN meeting at 3:00 during Winter Field Day -

Weather spotter training on Feb 25th 6:30-8:30 at Finneytown High School Performing Arts Center. 8916 Fontainebleau Terrace, Cincinnati, OH 45231

ARRL VHF Contest on January 18th

ARES: Participating in simplex contest\exercise. Meeting, on the 21st. This year focusing on the basics - FM modes: voice capabilities and Winlink, and ignore everything else. Get better at that because they need work there

Brunch Bunch: This Sat at Sorrento's Italian on Montgomery Road, 1:00 this Sat

Events:

- Sat Ohio VHF Exercise.

- Sat 18th, north American QSO party (not an ARRL event), ARRL VHF Contest
- ARISS Satellite school contact. Possibly last week of February. Date to be told to us.
- Region 2 Youth on the Air in June.

New Business:

Form an Audit Committee to audit the books: KE8JTM, KE8JTL, KF4AV Report due at March Meeting

Tom Delaney, ARRL website: the new on the air magazine, is going to be printed and mail to those who want it. Its available to everyone digital. Available Jan 14th.

Break: 8:04

- Today's program - Winter Field Day
- Next month program, ARIS Contact
- Split the pot, \$144, giving away \$73, KB8MYC Gary won
- Brian K4BRIO, motioned to adjourn, seconded by Bob WA8EZV

Adjourned 8:45

-- Submitted by **George N3VQW**

Q-FIVER EDITOR: ROBERT GULLEY (K4PKM) E-MAIL: AK3Q@AK3Q.COM

For questions/comments/suggestions, or article submissions, send me an E-mail!



OH-KY-IN Amateur Radio Society is one of the leading amateur radio organizations in the Cincinnati, Ohio area and has been for most of its 50-plus year history. We are a 501(c)(3) nonprofit organization dedicated to the advancement of all things radio. No matter the amateur radio interest, OH-KY-IN members are *involved*.