President's Corner
The May meetings last year we were still meeting via Zoom due to COVID-19. It has been great to have the face-to-face meetings again.

The NFL Draft WW1USA remote special event stations at the church all functioned great. Thanks to all that helped test the setup during the week and set everything up Friday afternoon.

May is our club's turn for volunteers at Ensor. Please sign up for one or more slots. It is only a few hours on a Saturday or Sunday. Each time you volunteer, your name goes into a drawing for a gift certificate from Associated Radio.

Field Day planning is coming together thanks to Jay. We will be getting with the station captains and reviewing the equipment needed for their stations. The mesh network performed great last year so we will use the same setup this year.

Join us May 12 after the business meeting for a program on "Rockets" presented by Steve, KFØBZX, our PIO. On May 28, we will continue our large programs night with Bill, WAØCBW. The subject being SWR and measuring related subjects.

73,
Bill
KA2FNK

Upcoming Club Events
- Fri. May 12 @ 1900 - Club Meeting - Biz meeting and presentation - Topic: Rockets by Steve, KFØBZX
- Fri. May 26 @ 1900 - Club Meeting - Extended presentation with Q&A - Topic: SWR & Related Measurements by Bill, WAØCBW
- Tue. Jun 6 @ 1900 - Club VE Testing - JoCo Library 9875 W 87th St, OPKS
- Fri. Jun 9 @ 1900 - Club Meeting - Biz meeting and presentation - Topic: Field Day

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Hambone
"Hambone Gets Impeded"

A Hambone story by Jaimie Charlton ADØAB

"You got an 'F'"? The bellow was so loud it reached out through Elmer's basement ham shack door, into his backyard, over the fence and into the yard next door where Hambone's younger brother, Dude, was hanging out.

"Gees, Unck, it's not that bad," offered Hambone as he tried to push the sheet of paper with the blazing red letter circled at the top under his uncle's famed yellow pad. "It was just a little quiz three questions that I thought..."

"You got an 'F'"? The unhearing uncle repeated with a few more decibels than before.

"Well, I think Early is out to get me. His quizzes are usually multiple choice and I can usually guess the answers. But he cheated this time and we had to write the answers..."

"You gon an 'F'!"

"As I said, this wasn't a fair test. The questions were hard and I thought I could sort of wing it as I usually do. You know, because you taught me so good about everything..."

His uncle's shouts and Hambone's blubbering drew Dude to the discussion. Always eager to see his older bro in trouble, Dude helpfully asked, "Did anyone else get an 'F'?

"Um, no, only me. Unck, I need help," whimpered Hambone.

"That's better. the first step to sovling a problem is admitting you have it. Oh, and stop calling Professor Erlenmeyer Flask 'Early.' That's disrespectful. You address hi as 'Professor Flask' or 'Mister Flask' or something like that. Now, let's see why you flunked the quiz so miserably."

Hambone retrieved his paper and Elmer could see that the quiz was on impedance. "Unck, I thought I knew all about impedance. After all, I've got a ham license and have built antennas and stuff like that. These questions are crazy."

Ignoring Hambone's laments, Elmer read the quiz. "It looks to me like these are just general questions. Let's take this first one, 'What's the difference between resistance and impedance?'

"You said - and it's hard to read your writing - 'impedance is for coax and resistance is for resistors.'"

"Yeah, that's true, isn't it?"

"Not exactly. Resistance is the relationship between voltage and current in a circuit. You know that voltage sort of pushes current through a circuit, don't you?"

"Yeah, duh."

"But 'sort of' is not enough. We want to know exactly how much voltage it takes to push a specific amount of current through a particular circuit."

"I think it takes..."

"Don't answer," interrupted Elmer. "It's a rhetorical question. It is the characteristic of a circuit, call impedance, that determines how much current a given voltage can push through it. That's Ohm's Law and it's been around since about 1827.

"So, you could answer that first question by saying something like impedance and resistance both limit the flow of current in a circuit. Impedance includes both resistance and the AC effect called reactance."

"Okay, you're right, that's a better answer," agreed Hambone.
Elmer continued reading the second question out loud, "In the lab exercise, why did your ohmmeter read 50 ohms when you checked a 50-ohm resistor, but read infinity when you checked a piece of 50-ohm coax?"

"There was something wrong with the meter?" asked Hambone.

"No, it read 50 ohms both times. You just didn't read it fast enough when you measured the coax. If you connect your ohmmeter to an infinitely long piece of coax, it will read the 50 ohm characteristic impedance. Your piece of coax was probably shorter, so you saw some other effects, like reflections."

"I don't get it."

Elmer continued, "When you measure resistance, the battery in your ohmmeter applies a voltage which causes a current to flow in the device you're testing. The meter reads that current and calculates and displays the device's resistance. The same thing happens when you connect your ohmmeter to a piece of coax. The battery in the meter causes a current to flow into the cable."

Hambone interrupted, "How can current flow into the cable when there's nothing connected at the far end?"

"The current doesn't know that. It just sees the 50 ohms of the cable as it starts its journey to the far end.

"If you could read the meter fast enough, which you can't, you would see it display 50 ohms and then jump to infinity as the current stopped flowing into the cable. As it was, you only saw the infinity part."

"Why doesn't the length of coax matter? It's always 50 ohms, isn't it?" asked Dude.

"Let's take an example," said Elmer. "You have a 100-volt DC power supply and you attach it to the 50-ohm coax. Because the cable's characteristic impedance is 50 ohms resistive, two amps of current begin to flow. That's just Ohm's Law; current equals voltage divided by resistance."

"As the current travels down the coax, everywhere along the cable's length that you have the two amps, you also have 100 volts. It's just Ohm's Law again. Voltage equals current times resistance. You can think of it as the leading edge of an incident or forward wave - to use ham radio lingo."

"It's like a radio wave going at the speed of light through the coax!" exclaimed Dude.

"Almost," continued Elmer. "Because the coax is filled with dielectric material - that plastic stuff around the center wire - the wave goes somewhat slower than light. For example, RG8x cable has a velocity factor of around 0.86 which means waves go through it at about 86% the speed of light. That's still fast.

"Getting back to our wave going through the coax, all's well until the current reaches the open end. At this point, the characteristic impedance is no longer 50 ohms. It's infinite ohms because nothing's connected there. It's an open circuit. The current can't go any farther.

"According the Ohm's Law, two amps of current encountering an infinite resistance should give rise to an infinite voltage, but it doesn't. Do you know why?"
"That reflected negative current flows back to the beginning of the coax where the power supply is connected. There it meets the positive two amps still coming out of the power supply and the two currents cancel each other out. The result is no current is flowing from the power supply into the coax. Since you still have a voltage applied, but no current flowing, you have an infinite resistance which is exactly what your ohmmeter read.

"So, the answer to the quiz question is, 'The ohmmeter is too slow to measure the impedance of short cables.' Or, 'The cable is too short to give a reading on your ohmmeter.'"

"I'm totally baffled," said Hambone. "Why doesn't my antenna analyzer read infinite resistance when I connect it to 50-ohm coax?"

Elmer, waxing philosophically, "When confronting almost any problem involving changing values such as voltage or current, we have two roads that we may take to reach the solution. One is called the *time domain* and the other the *frequency domain*. One is not better than the other, they are just different. Sort of like two paths up the same mountain."

"That's nice, Unck. But what has that got to do with the analyzer reading differently from the ohmmeter?" challenged Hambone.

"The Ohmmeter is an example of the time domain solution. We speak of the time it takes from the voltage/current wave to travel the length of the cable and, via Ohm's Law, get turned around and reflected back. The returning DC current looks exactly like the out-going current except it has the opposite polarity so they cancel. As a result, the ohmmeter reads an infinite resistance.

"If you say so," murmured Hambone. "Are we done?"

"No," replied Elmer. "There's still more fun to be had."
"The analyzer is operating in the frequency domain. It's applying an AC voltage and a current that's always changing at some high frequency. Since the reflected current takes some time to travel the length of the coax and get reflected, it arrives back at the analyzer out of phase with the input. Therefore, the cancellation of the current is not exact and the analyzer indicates some impedance."

"That's fine, Unck. But I still don't see why the analyzer and ohmmeter don't agree."

"If the cable happens to be an electrical half-wavelength long at the analyzer's frequency, they will agree. The reflected current wave will arrive back at the analyzer looking like the outgoing wave except with the opposite polarity. The analyzer will 'see' the two current cancel each other out and indicate infinite resistance just like the ohmmeter."

"I sort of get that the impedance you see at one end of a coaxial cable depends both on its length and what's connected at the other end. Maybe," moaned Hambone wanting to get out of this nightmare.

"Well, how about the last question?" asked Dude, ever more energized and eager to get in on the action. "If you connect a 50-ohm load (say, an antenna) to the far end of 100 feet of 50-ohm coax, you can be sure of a perfect match and a 1:1 VSWR. True/False?"

"What's the answer?"

"Oh my gosh!" exclaimed Elmer as his new electronic watch buzzed and glowed on his wrist. "Look at the time! I've got to get going. We'll have to leave that discussion for another time. Bye!"

And Uncle Elmer grabbed his hat and left the boys looking perplexed in his shack.

This is Only a Test

Are you new to the hobby? Maybe you recently received your Technician class ticket and what you have learned is still fresh. Or maybe you have held your Extra class ticket for a while and have forgotten some of what you have learned. Regardless, let's keep those mental pencils sharp by reviewing some of the questions from each of the question pools. Only a Tech? Push yourself and try the higher class questions. You might surprise yourself and be encouraged to try your hand at upgrading!

1. T2B11 – Which Q signal indicates that you are changing frequency?
   A. QRU
   B. QSY
   C. QSL
   D. QRZ

Author's note and question to you, the reader:
Do you know the answer to the third question? True or False? The answer is found on Page 6.
Test cont'd

2. T5D04 – What is the resistance of a circuit in which a current of 3 amperes flows when connected to 90 volts?
   A. 3 ohms  
   B. 30 ohms  
   C. 93 ohms  
   D. 270 ohms

3. G3B02 – What factors affect the MUF?
   A. Path distance and location  
   B. Time of day and season  
   C. Solar radiation and ionospheric disturbances  
   D. All these choices are correct

4. G0B06 – 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

5. E3A05 – Tropospheric propagation of microwave signals often occurs in association with what phenomenon?
   A. Grayline  
   B. Lightning discharges  
   C. Warm and cold fronts  
   D.Sprites and jets

6. E7G01 – What is the typical output impedance of an op-amp?
   A. Very low  
   B. Very high  
   C. 100 ohms  
   D. 1000 ohms

How did you do?

If you got them all correct, Congrats! If you hold a Tech or General class license, this may be the sign you need to work on that upgrade. Plenty of resources are available for study. Remember, JCRAC VE Team holds testing sessions on the first Tuesday of every month at 7 PM at the JoCo Library at 87th & Farley in OP.

Hambone Revealed

If you recall, Elmer had to run out on Hambone before he could give Hambone to answer to the last question of the quiz.

If you connect a 50-ohm load (say, an antenna) to the far end of 100 feet of 50-ohm coax, you can be sure of a perfect match and a 1:1 VSWR. True/False?

The correct answer is false. The only antenna impedance that will result in a VSWR of 1:1 is \( Z=50 \pm j0 \). Any other 50-ohm impedance (for example, \( 50 = Z = 30+j40 \)) will result in a non-optimal VSWR > 1:1. There’s an infinite number of non-optimal 50-ohm impedances.

- Jaimie Charlton, ADØAB
Quick & Easy Ground Plane for Portable Ops

For the last several years, more and more Hams seem to have moved into the world of Portable Operations. Programs like Parks on the Air (POTA), Summits on the Air (SOTA), and, of course, the annual Field Day events as well as advancements in battery and solar technologies have really led to this growth. You can experience this explosion of portable ops greatest on the weekends when the HF bands are filled with stations conducting various activations.

And as we know, the biggest single thing that can really make or break an activation, or really any station's ability to communicate effectively, is the antenna. For many, a dipole is an easy and effective antenna. But what if you have a small footprint to work with or a dipole isn't an option because of the lack of trees or other mounting options?

An alternative to the trusty dipole is a vertical antenna. For many, the vertical is the go-to antenna for portable ops. But for a vertical to be effective, a good ground plane is needed. The typical ground plane used is a set of radials, usually around 6 or so (because more radials can lead to higher gain), with each about 17 feet long. But again, if the available footprint for you to operate is small, setting up an antenna that takes up a space 35+ feet wide might not be possible. Is there an alternative?

Okay, sure, you could set up something on a mobile mag mount on the roof of your car. That won't work, however, if you need to get to the peak of a summit or travel a path through some woods do get to a campsite or other remote location. What is an easily portable option in that scenario? What is lightweight with a small footprint?

The answer: a vertical wire antenna with a ground plane system made of wire mesh.

J. Robert Sherwood, WBØJGP, of Colorado-based Sherwood Engineering, Inc. published in the May 1977 issue of Ham Radio Magazine (pages 22-24) that he had been using a permanent installation of wire mesh as a replacement for traditional radials for 15 years with much success. He even discussed some of the difficulties of using traditional ground radials, such as the large footprint needed and how easily they could be damaged by a lawn mower, and how the wire mesh was superior in this regard. He reviewed many setups amongst multiple bands, so his paper is worth a read (easily found via Google). His overall findings are that wire mesh is a good substitute to the traditional wire radial ground plane with an added bonus that it is quick and easy to deploy as well as pack up because it simply rolls up.

Wire mesh screens are also readily available at most area hardware stores and for cheap. Menards has rolls of aluminum wire mesh screens in 7-foot lengths and widths of 3 or 4 feet for less than $12 a roll. So, even if you use two screens, your overall footprint is going to be about 9 feet by 9 feet, or about the size of half a parking spot, which is vastly smaller than the 35-foot radius circle footprint of the traditional wire radials. Added bonuses are the wire mesh screens are still quite lightweight and won't tangle like radial wires might.

As for connecting the wire mesh to the vertical antenna, for me, my vertical is made using speaker wire and a BNC banana jack. I just connect the speaker wire, which is the radiating element, to the red jack, then using some wire connected to alligator clips, I clip the wire mesh screen in the middle of one of the long sides and connect it to the black jack of the BNC banana jack. Quick and easy!
Tech Talk cont'd

So, what do you need in the end for this quick and easy vertical antenna setup? For me, it is speaker wire (16 gauge), a wire mesh screen or two, a BNC banana jack (plus appropriate connectors for coax), a couple short pieces of wire with alligator clips on one end to connect the screen to the jack, a non-conductive mast and a mast holder. The mast I use is a 7 meter collapsible Tenkara fly fish rod being held up from a homemade mast stand I created using some spare PVC I had. I have had great success with the 25-foot (7.6m) Rybakov vertical using an external tuner, but have also used quarter-wave resonant wire lengths on 20, 15, and 10 meters which didn't need a tuner.

So, if you are tired of laying out and winding up half a dozen radials or so for your portable vertical antenna, try a wire mesh screen. They are cheap, quick and easy to deploy and have similar results, if not better in some cases, than traditional radials.

I also want to add a couple of notes about using the wire mesh screens. First, you may need something to help hold the ends of the screen down to prevent it from curling in on itself. You don't need a lot of weight. Look for a nearby rock or larger diameter stick. And place the wire mesh screen with the curl facing down. This way it has to also lift itself up to curl back in on itself making it more difficult. Additionally, as the screen ages and oxidizes, you may hear the popping of the oxidation come through your radio. I haven't noticed it, but others have reported such activity.

73 and happy portable ops!
Tim Wiegman, Jr.
KBØYQN

Intentional QRM

I think my youngest niece might be a ham radio operator, or at least know some CW. My brother found that one of his daughters had used a marker on the wall. He asked both of them who did it and the youngest replied, "I did it dahdah."

How does a ham radio operator send a break-up message?

Remorse code.

I never understood tap dancing until I learned Morse code.

Upcoming Public Service Events

Warmer weather is here and there are lots of opportunities for us, the Amateur Radio community, to serve our community, test our equipment, and meet other Hams. Here is a list of upcoming events requesting our services with contact information should you choose to volunteer and participate:

May 20 - FISH Armed Forces Event, KCK - Herb F. NZØF - hfiddick@gmail.com
June 3 - Hospital Hill Run, Crown Center - Joe R. KDØHQG - olatheradio@yahoo.com
June 11 - Wild West Bike Ride, KCK - Ray E. KØRSE - rerlichman@kc.rr.com
June 24-25 - FIELD DAY!! Your local club!
July 9 - Shawnee Mission Park Marathon - Mike R. KØKCK - wmralls@comcast.net
July 15 - Lenexa Moonlight Bike Ride - Steve R. WDØDPB - wd0dpb@comcast.net
August 6 - Sunflower to Roses Bike Event - OP - Ray E. KØRSE - rerlichman@kc.rr.com
Meeting Minutes 03-10-2023
Johnson County Radio Amateurs Club
These minutes were approved by the membership in attendance at the 04-14-2023 meeting.

Meeting Date: Friday March 10, 2023. The meeting started at 7:00 PM.

Attendance: Self introduction with name and call sign. 44 signed the check in sheet. This was followed be the Pledge of Allegiance.

As per the new By-Laws, the Minutes of the previous meeting from February 10, 2023, were posted on the club website instead of being read. The posted minutes were approved unanimously.

The Treasurer’s report was not available.

Old Business:
- We welcomed all 1st time visitors to the meeting.
- Repeater Update – Bill Brinker, WAØCBW reported all Repeaters were up and repeating.
- Field Day 2023 – June 24 - 25
- The Club’s VE team held a testing session on Tuesday March 7.
- Tim Wiegman Jr., KBØYQN is the New FEEDBACK Editor!

New Business:
- None.

Reports:
- 6 m – NR.
- 10 m SSB Roundtable – 4 participated on March 9 and 2 participated on March 2.
- 40m SSB Roundtable – 4 participated on March 8 and 45 participated on March 3.
- Fusion Digital 440 net – 10 Check-ins on March 8 and 11 Check-ins on March 1.
- 2m Wheat Shocker net – 20 check-ins on March 9 and 20 check-ins on March 2.
- HF Activity – Sudan, Iwo Jima, and Bulgaria.
- Pota Activation – 1.

Announcements:
- Shriners Hambash – April 15th.
- See Larry’s List for any upcoming Public Service Events.

Business meeting adjourned at 7:31 PM.

Program:
The program was “Introducing Johnson County ARES Night Time Search & Rescue Drill” by Brian Short, KCØBS.

Submitted by Ted Knapp, NØTEK Secretary.
Meeting Presentation 04-14-2023

For this club meeting, there was a business session conducted prior to our meeting presentation. The Meeting Minutes from this business session have not been approved by the membership at the time of this publication, but they are available for review on that club website at www.w0erh.org and will be voted on for approval by the membership at the May 12, 2023 meeting. Once approved, they will be published in the following issue of Feedback.

Upon conclusion of the business meeting, Herb Fiddick, NZØF, presented on participating in public service events. Given the time of year, with weather warming and the days becoming longer, more and more community events are taking place where we are able to showcase the value ham radio operators have in the community by supporting the communication needs of these events.

Being the experienced operator that Hern is, and having led multiple events each year for several years, he discussed what was needed to participate. First, he discussed equipment, and surprisingly, it is minimal. A simple analog HT with a spare battery is usually all that is needed for radio gear. Clothing is what is comfortable for you plus an ANSI type II reflective vest, which is available at hardware stores, big box stores, and online, all for a reasonable price. Then, of course, snacks and drinks. Many of these events last hours and you need to be prepared with enough beverage and food to self-sustain throughout the event. And ofr those that take place outdoors during the day, sunscreen is suggested.

After covering the appropriate gear necessary for your deployment at a public service event, Herb covered the skillset required. Before participating, know your radio and how it works. Know how to program new frequencies and change frequencies if it becomes a need during the event. Know how simplex and repeater operation and conversation work. Understand that these events are conducted like directed nets. It is best to participate in a directed net regularly so you know the proper protocols during the event. Keep in mind that you will likely use a tactical call during the event, but remember that you must still identify yourself with your callsign as required by the FCC.

Lastly, Herb talked about how to prepare prior to the event, such as reviewing the communications plan and asking for clarity prior to the event from the organizers. And when event day comes, report on time, have fun, and don't be afraid to let Net Control know if you need help, a clarification, or any other consideration.

Thanks Herb for presenting. For club members both newly licensed and veterans, your presentation provided immediate takeaways for upcoming events.
Meeting Presentation 04-28-2023

Given the new club meeting format and this being the second meeting of the month, this meeting consisted of an extended program. The topic for this program was remote operation of the Special Event for the NFL Draft of WW1USA, the radio station located at the National World War I Museum, and "Ask an Elmer" night.

Starting at 1300hrs local time, club members met at OPCC to remotely operate the special event station. With SSB, CW, and FT8 stations being concurrently operated with members taking turns, several hundred contacts were made and logged on Friday. Throughout the entirety of the three day special event (April 27-29), likely well over 1,000 QSOs were made. It was a fun and successful special event for all, especially for one newly licensed operator (You know who you are!). We should receive total contact numbers at the meeting on May 12.

Then, Elmer night had several members showing off their wares and expertise. Kevin, ADØIM, showed off his portable tripod mast mount and mast while showing how to use a NanoVNA. Bill, WAØCBW, brought various types of coax and spoke to others about the pros and cons of each. Bill, KA2FNK, set up a portable APRS station. And, of course, we had members speaking with other members about their bits of knowledge. Lots of learning happened!

Here are some photos of the day provided by John Raydo, KØIZ, and his wife, Judy.
From the Editor

I cannot believe it is May already. Really? Where did the time go? This morning, I opened up the Ambient Weather app on my phone just to see what the temperature was outside. One of the tiles I have on set shows me the current moon phase, moon rise and set, and sunrise and sunset. I don't know why, but it took my by complete surprise that our days are nearly 14 hours long. When did this happen? What rock have I been living under? It seems like just yesterday we were all complaining about how dark it was as we walked into our meetings. And really, it wasn't that long ago, merely 5 meetings ago, that we were hit with an ice storm, in the dark of night, as we held our February extended presentation meeting.

I'm not complaining, really. I just cannot believe how in the blink of an eye, here we are. May. The weather is warming up nicely, and relatively quiet outside of some small hail and some gusty days. And with the longer days, sitting out on the back deck is quite pleasant. Kids will be getting out of school soon. Families will embark on their summer vacation. Field Day is just over a month away. And, alas, this is my fourth issue of Feedback that I have curated and published for the club. Wow!

To be completely honest, and like many people, to be in front of a large group of people used to terrify me. I fall on the autism spectrum, diagnosed with Asperger's in my teens, which means I look life with a different view. However shortly after ending a relationship of nearly two years, I stumbled across a video snippet from a speaker where a girl, around 13 years old, stood up in front of a crowd and said that if anyone thought she was stupid or didn't like her, that was their problem and not hers. She liked who she was. That flipped a switch in my brain and I have been much less worried about what others think.

So, as you read back in February, I took a nearly 20 year hiatus from this hobby and recently decided to jump back in, including rejoining JCRAC. Hearing the need for a new editor and with Bill, KA2FNK, and I knowing each other fairly well, I decided to step forward. For my past self, let's just say this would have been too bold of a move. Today's version, I really enjoy this.

And you know what really makes a difference? Kevin ADØIM, Dave KØDVP, and several other members, even some non-members who access it online, have talked about how much they enjoy reading this, especially the test questions. To all of you indulge in this and appreciate my efforts, thank you. It definitely encourages me to keep going.

Thank you again and 73!
Tim Wiegman, Jr.
KBØYQN
What's Your Traffic?
Have something you'd like to announce to the club? What about a useful Tech Tip? Is there club member that should be spotlighted? Photos from a presentation?
Your input including ideas, photos, news bits, etc. will help me curate the monthly "Feedback" newsletters. Together, we can create an awesome publication to advance and further the Amateur Radio hobby.
Submit a contribution by emailing me at twiegman+feedback@gmail.com
Thank you to those that submit photos for events and meetings as well as provide tech tips and other information.

Need Club Swag?
If want to show off your JCRAC pride and need some club swag, you may order some by visiting the "Store" tab on the club website where you can purchase hats, patches, name badges and shirts. Also, some items along with other goodies may be available for purchase at club meetings.

Club website: https://www.w0erh.org

Club Nets
The club has weekly next on Wednesday and Thursday. It is a great way to test your equipment. Many public service events conduct their communications in a similar way, so this is also a great way to gain experience applicable to assisting in public service events.
Wednesday @ 1900 - Yaesu System Fusion net via Kansas City Room, also accessible from select local KC repeaters (visit www.kansascityroom.com for list)
Wednesday @ Conclusion of YSF net - 40M Roundtable near 7.273 MHz LSB
Thursday @ 1900 - Wheatshocker analog net on 145.29 MHz club analog repeater (negative offset, PL Tone of 151.4 Hz)
Thursday @ Conclusion of analog net - 10M Afterglow net on 28.475 MHz USB (within Technician Class portion of band)