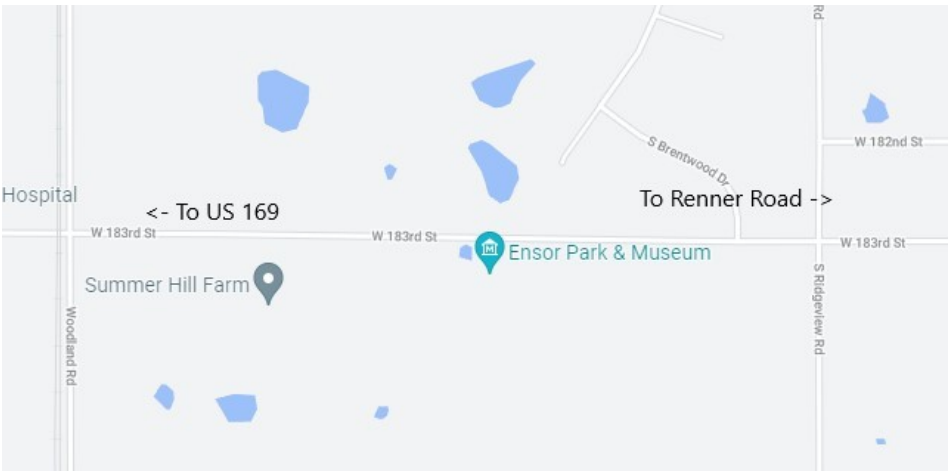
Johnson County Radio Amateurs Club, Inc.
P.O. Box 93
Shawnee Mission, KS 66201

FEEDBACK

October 2021



OCTOBER IS ENSOR MONTH

The JCRAC moves to the Ensor Park and Museum on the fourth weekend each year. Socializing and firebuilding starts at 5:00 pm on Friday, October 22. The cookout (BYO dinner and chair) begins at 6:00. The regular club meeting commences at 7:00. The tales of the DX that got away will run through the evening and, depending upon which people elect to pitch tents and spend the night, well into the wee hours.

On Saturday, the early risers will fend for themselves before the auction set-up people arrive at 8:00. Bidders may register and look over the auction lots beginning at 9:00 ahead of the 11:00 auction.

The auction and raffles ($500 for Associated Radio and $250 for Schulman Auction) run from 11:00 to 2:00. Lunch is available for purchase on-site.

The action winds up at 2:00, at which point auction winners—and owners of unsold consignment items—need to remove their gear.

The JCRAC supplies volunteers to staff the museum on all October weekends. Ted Knapp, NØTEK has posted a sign-up sheet for museum greeters at www.signupgenius.com/go/10C054AABA72BAoFC1-ensor10

SEPTEMBER MEETINGS

***Oct 8** – Using the Morserino to Learn CW – Charlie Van Way, NØCVW*

***Oct 22** – Ensor Museum Campfire*

The Johnson County Radio Amateurs Club normally meets on the 2nd and 4th Fridays of each month at 7:00 PM at the Overland Park Christian Church (north entrance), 7600 West 75th Street (75th and Conser), west of the Fire Station.

Much of the membership travels to the Pizza Shoppe at 8915 Santa Fe Drive for pizza buffet and an informal continuation/criticism/clarification of the topics raised at the meeting ... or anything else.

Leave the church, turn right (west) on 75th. Turn left (south) on Antioch. Turn right (west) on Santa Fe. Pizza Shoppe is just past the Sonic on your left.

IN THIS ISSUE

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A publication of the
Johnson County Radio Amateur Club, Inc.

Bill Gery, KA2FNK, President
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The Ensor auction

PRESIDENT'S CORNER

September 2021 proved to be very busy with public service events. I hope you had the opportunity to volunteer for at least one.

Activities around Ensor for October are heating up. First, October is our Club`s turn for volunteers for the Ensor. Ted, NØTEK has a sign-up posted. Pick a weekend and help with the tours. If you are new, the tours are real easy, and there will always be a knowledgeable person out there to lead the group. Each time you volunteer, your name goes into a hat to win a gift certificate from Associated Radio.

Mark you calendars for Friday, October 22. Our meeting will be at Ensor followed by a camp fire and campout. Search your shack for items for the Ensor auction which will be on the Saturday October 23. Bring your items early that you are donating or selling on consignment. You will be able to check in and get your number. This will give you the ability review the items. As in past years you will be able to purchase food Saturday before and during the auction.

– Bill Gery – KA2FNK

Johnson County Radio Amateurs Club – September 10, 2021

Meeting Date: Friday September 10, 2021. The meeting Started at 7:00 PM.

Attendance: Due to COVID-19 restrictions, this Meeting took place online using Zoom Video Conferencing. 26 were present.

The Minutes from the August 27, 2021 meeting were read and accepted unanimously.

The Treasurer's report was not available.

Old Business:

- We welcomed all 1st time visitors to the meeting.
- The Ensor Auction is on for Saturday, 10/23/21. Donations and consignments are being accepted.
- The Santa Fe Trail Amateur Radio Club is holding a Special Event Station at the Ensor Museum on September 11th. There will be an Antenna construction class and a Trunk Sale. The event is from 10 am to 4 pm.
- October will be the JCRAC's turn to help out at the Ensor, we are looking for signups.

New Business:

- None.

Reports:

- 6 m – NR.
- 10 m SSB Roundtable – 4 participated on September 9 and 3 participated on September 2.
- 40m SSB Roundtable – 5 participated on September 8 and 6 participated on September 1.
- Fusion Digital 440 net – 12 Check-ins on September 8 and 8 for Check-ins on September 1.
- 2m Wheat Shocker net – 11 Check-ins on September 9 and 14 Check-ins on September 2.
- HF Activity – Mongolia, Southern Sudan, Germany, and Alaska POTA.

Announcements:

- JCRAC POTA October 9. See Kevin van der Does, AD0IM
- Santa Fe Trail Amateur Radio Club Lone Elm Park POTA Party October 9.
- Hawk 100 September 11-12. See Bill Gery, KA2FNK for more information.
- Summer Breeze September 12. See Herb Fiddick, NZ0F for more information.
- Bike MS September 25-26. See Herb Fiddick, NZ0F for more information.
- Buffalo Bill Century Ride September 18. See Ray Erlichman, K0RSE for more information.
- See Larry's List for upcoming Events.

Business meeting adjourned at 7:31 PM.

Program:

The Program was a presentation on "An overview of the Ensor Museum" by Marty Peters, KE0PEZ with help from Howard Cripe, N0AZ and Joe Krout, KR0UT.

Submitted by Ted Knapp, N0TEK Secretary.

Johnson County Radio Amateurs Club – September 24, 2021

Meeting Date: Friday September 24, 2021. The meeting Started at 7:00 PM.

Attendance: Due to COVID-19 restrictions, this Meeting took place online using Zoom Video Conferencing. 31 were present.

The Minutes from the September 10, 2021 meeting were read and accepted unanimously.

The Treasurer's report was read and accepted unanimously.

Old Business:

- We welcomed all 1st time visitors to the meeting.
- Repeater Update – Bill Brinker, WA0CBW reported all are working fine.
- The Ensor Auction is on for Saturday, 10/23/21. Donations and consignments are being accepted.
- October will be the JCRAC's turn to help out at the Ensor, we are looking for signups.

New Business:

- 1st Ensor Raffle Drawing – Steve ONeal, KF0BZX was the winner.
- Kevin van der Does, AD0IM inquired about having the Treasurer's Report include Expenses. Bill Gery, KA2FNK responded by saying a re-write of the Club's By-Laws is underway and will address this.

Reports:

- 6 m – NR.
- 10 m SSB Roundtable – 4 participated on September 23 and 5 participated on September 16.
- 40m SSB Roundtable – 4 (including 1 from Ohio and 1 from Michigan) participated on September 22 and 2 participated on September 15.
- Fusion Digital 440 net – 7 Check-ins on September 22 and 13 for Check-ins on September 15.
- 2m Wheat Shocker net – 16 Check-ins on September 23 and 12 Check-ins on September 16.
- HF Activity – Mali Island 15m CW. Conway Reef 17m, 15m, 40m FT4 and FT8.

Announcements:

- Skywarn Recognition Day first weekend in December.
- JCRAC POTA October 9. See Kevin van der Does, AD0IM
- Santa Fe Trail Amateur Radio Club Lone Elm Park POTA Party October 9.
- Hawk 100 September 11-12. See Bill Gery, KA2FNK for more information.
- See Larry's List for upcoming Events.

Business meeting adjourned at 7:31 PM.

Program:
The Program was a presentation on "New Equipment from DX Engineering" by Tim Duffy, K3LR CEO DX Engineering.

Submitted by Ted Knapp, N0TEK Secretary.

Hambone and Too Many Cooks

A Hambone Story by Jaimie Charlton, ADØAB

"C'mon guys, we don't have much time the FieldFest starts in an hour," shouted Hambone to his group of ham frat brothers and friends.

"Hammy," asked Tim, the tall skinny smart one of the group, "What exactly is a 'fieldfest'?"

"It's something new that a couple of the big clubs are trying, a combination of Field Day and a hamfest. They invited us to join them so, here we are."

"I get that," said Tim, swatting an unidentified bug attempting to dine on his arm. "But why are we setting up a transceiver out here in this bug-infested no-man's land? And what is your brother, Dude, doing over there with that pickup full of radio junk, er, stuff?"

"Please, grab that other leg," said Hambone as he and two others struggled with a spindly frame of aluminum rods and slightly-too-small canopy canvas. "We've got to extend all four legs at the same time. Push it up 'till it clicks into place. That's got it! Now we just stretch the canvas over the frame.

This is like a field day and a hamfest all rolled into one." Tim rolls his eyes, but Hambone continues, "Look around, there's lot of guys setting up their POTA or emergency rigs. We're having a contest to see who can make the most contacts operating away from home. Just like the real Field Day."

"Okay, then the guys selling stuff from their cars and trucks is the hamfest part, right?"

"Now you got it!"

"Hey, you guys," shouted Denny who was squatting down at the base of the newly erected 43' vertical antenna, "We need some help here. Anybody know how to hook up this little tuner?"

"What's to hook up?" said Dom sitting some fifty feet away in front of the transceiver. "There's only three connections, one goes to the antenna, one to the ground and the third is the coax connection."

"Got it, did it, wise guy, but I don't hear any clicking sound when you press the 'tune' button," responded Denny.

"It's got a remote power supply over there in the table, is it plugged in?" added Denny.

"It's plugged in. That's the tune button I'm pressing."

"Well, nothin' happening with the tuner."

"At least we know the coax is good," offered Kim, a new guy trying to take part in the unfolding troubleshooting fiasco. "It's brand new."

"Dom, remember, that tuner needs some RF to tune. Be sure the transceiver is putting out a few watts when you press the tune button," shouted Hal who was checking the gas level in the generator. Hal also shouted something about grounding, but those comments were lost in the noise.

"The transmitter won't transmit. It shows high SWR and shuts down. I guess because the tuner isn't working, shouted Dom."
"Are you *sure* the tuner's power supply is on?" shouted the somewhat irritated Denny, still at the base of the antenna.
"I'm sure! I'm looking right at the light on it. Before you ask, I tried it on 80, 40 and 20 meters, but I heard some signals of some kind on 20 meters. So I think the antenna is receiving."
"Maybe there's something wrong with the transceiver so it can receive but not transmit," offered Kim, still trying to be helpful.
"I don't think that's it," said Denny. "We originally started with my old Yaesu FT950 and had this same problem. That's why we switched to this Icom. Has anybody tested the coax?"
"Don't worry, the coax is good," said Kim, again. "It's brand new and I tested it."
Trying to take charge and salvage the situation Hambone said, "If the transceiver is good, the coax is good, the tuner and its power supply are both good, the only thing left is the antenna and its ground radials. Let's look for loose connections there."

see HAMBONE on page 6

from HAMBONE on page 5

"There's no problem with the antenna or the radials," shouted Denny struggling to straighten his legs and stand up after squatting at the base of the antenna for too long. But the herd of hams descended upon the antenna anyway.

After a lot of pushing and pulling on connections, arguing over connection trivia and reminiscing about antenna problems of events past, the group determined that Denny was right. There was no problem with the antenna.

Frustrated and baffled, the group returned to their lawn chairs in the shade of the newly erected canopy, popped the tops of ice-cold bottles of water and sat in silence.

Hearing a cheery, "Hey guys, watching you guys scurry around was like watching a Three Stooges movie. What's happening?" The group collectively turned its heads only to see Dill, one of the more experienced big-club hams approaching.

"We can't seem to get our station on the air," said Tim.

"Why, what's the problem?"

"It's simple, the SWR is so high that the transceiver keeps tripping off. We've checked everything, the antenna, the tuner, even the coax and everything is fine. It seems the transceiver can receive at least some signals, but can't transmit. Here, I'll show you."

Tim turned on the transceiver and tuned to the frequency of the signals previously reported by Dom. "Wait, those signals are gone! I'm not seeing anything anywhere now," exclaimed Tim.

"That's what I was trying to tell you," said Hal who had returned from the generator. "I said there may be some noise because the generator was not properly grounded. I drove in a ground rod and added some RF filters on the extension cord. It should be quiet now."

"I guess I might have been hearing generator noise instead of signals," mumbled Dom.

"That might explain why we thought the rig could receive, but not transmit. But it doesn't explain why we couldn't transmit, said Hambone.

Dill continued, "Did anybody think to check each part in your system separately?"

"We did," responded Hambone. "Denny was at the antenna, Dom worked the transceiver, Hal was at the generator, and I helped with the tuner and other tests."

"Okay," said Dill with a smirk on his face. "But nobody actually traced a signal from the transceiver to the antenna to see where it was being blocked?"

"Well, no," mumbled one of the guys.

"We got started late so different guys did different jobs so we could sort of assemble everything in parallel," added Hambone. "When we found we had problems, each guy checked his own work."

"The transmitter seemed to work," said Dom. "It couldn't show a high SWR if it didn't transmit at least a few watts."

"The coax is new and checked good," Kim repeated.

"The antenna was also fine, no loose connections and forty ground radials all correctly installed,' said Denny.

"Did anybody check the tuner?" asked Dill.

"Not directly," replied Hambone. "I verified that it's power supply was on and that it was connected correctly. But Denny reported that he did not hear any clicking sound when the 'tune' button was pressed. We removed the tuner and connected the coax directly to the antenna to see what happened.

To my surprise, the transceiver reported the same high SWR as with the tuner. I thought at least something should have changed. It hadn't so, we reinstalled the tuner."

"I think the problem is the coax," announced Dill. "How did you test it?"

Kim responded, "I used my new NanoVNA. I connected the nano to one end of the coax and left the other end open. I thought there might be an impedance anomaly, or some sort of velocity factor change that was screwing things up. But the graphs looked good to me."

"What do you mean by 'looked good'?"

"The SWR graph was nice and flat and the Smith Chart was a nice circle. Everything looked fine."

"But you didn't you look at the TDR graph, did you?"

"I don't really know how to read that," confessed Kim. "But I'm sure the coax is good, I just bought it."

Dill frowned at Kim and shook his head. "You all had the right ideas of checking all the parts when you encountered a problem. But a better way to do it would have been to signal trace from the transmitter through to the antenna.

The NanoVNA is a great little tool, and when any of us gets one, we want to use it on everything. When I first got mine, I checked every antenna and dummy load I had. It was fun to see the SWR and impedance sweeps and a Smith Chart I didn't have to draw by hand. I tried to use it for every RF problem in my shack. But in most cases, it was overkill. That may be what happened here.

see HAMBONE on page 7

from HAMBONE on page 6

Do you have an ohmmeter?"

"Yeah, here," said Kim as he handed Dill a multimeter.

"Let's test the coax again using this ohmmeter," said Dill.

"But what can a dumb old ohmmeter test that the nano can't?" asked Kim.

"We'll see. Please go and disconnect the coax from the antenna and bring that end here."

While Kim was retrieving the far end of the coax, Dill tested the ohmmeter and disconnected the coax from the transmitter.

"Now that we have both ends of the cable, let's check it with an ohmmeter. But before we do, what are the possible faults we might encounter?"

Tim responded, "The cable could be broken open."

Hambone added, "It could be shorted."

"Both of you are right," said Dill. "Let's check for those faults."

Dill carefully clipped the test leads from the ohmmeter to the center pins of the PL-259 connectors on the ends of the cable. He twisted and pulled on the cable at the connectors. The ohmmeter reading showed nearly zero ohms and remained steady.

"See, the ohmmeter reads nearly zero ohms. That means the center conductor good."

Dill moved the meter clips to the bodies of the two connectors and repeated the pulling and twisting test. He observed, "The meter remains steady at about zero ohms meaning that the shield is properly connected and good."

"So, that means the cable's good," stated Kim.

"Not quite," said Dill. "We have one more ohmmeter test."

He removed one of the ohmmeter clips and reconnected it to the center pin of its connector while leaving the other lead connected to the body. Again, the meter showed nearly zero ohms.

"That's bad," observed Hambone.

"Yup, that's bad," said Hal.

"Looks bad to me," said Denny.

"That's bad?" asked Kim.

"Yes, that's bad," said Dill. "That shows this coax has a short in it."

"Thank Goodness, that explains everything," said Tim. The short presented nearly zero impedance to the transmitter which caused the high SWR trip-off."

"Yeah, and the short also kept RF from getting to the tuner so it couldn't tune," said Hambone.

"Don't forget that the short also kept the tuner's operating power, which goes along the coax, from getting to the tuner," added Denny.

The boys quickly replaced the shiny new, but shorted coax, with a dirty old piece from Dude's truck and everything came to life. The tuner clicked, the transmitter transmitted and the receiver became alive with contacts. Yes, the sun was shining again.

"But, I don't see why the nano didn't show the same thing," wondered Kim.

Dill explained, "I'm sure it did, you just don't know how to use it.

A lot of hams have bought those nanos, but few actually use them properly. They blame the very limited instructions, but the real problem is the hams don't really understand what the measurements mean. The nano is simple enough, but it does not have a flashing red light or a buzzer announcing that a particular reading is 'bad'.

For example, if your transceiver encounters an antenna with a VSWR of 5:1, it will flash red or something like that. It's warning you that something is wrong.

The nano on the other hand, would give you the same 5:1 VSWR, but no flashing red warning. To the nano, it's just a number on a graph. It is up to you to interpret that number or graph in the context of what you are doing."

"So, you're saying that the reason the nano didn't see the short is not the nano, but it's me?" asked Kim.

"Yup," said Dill.

"But that's not the only problem. The bad coax would have shown up anyway if you guys hadn't made another big mistake. You didn't follow any orderly troubleshooting plan.

Instead of methodically working your way through the signal path, you shot-gunned everything. Everybody worked their own idea and one even seemed to interfere with another. It's a good example of how 'too many cooks spoil the stew'.

Hmm, it looks like you guys are up and running now. You'd better stop fooling around and start making some contacts. The other clubs are already way ahead of you. I'm going back to the welcome tent," said Dill as he waved goodbye."

"Well, I'm never going to let this happen again," said Kim as he took his coil of shiny new, but defective coax, over to Dude's truck and placed it directly under the For Sale sign.

>> JCRAC FEEDBACK <<

JCRAC ENSOR Auction

Campfire & Cookout

18995 W 183rd St Olathe

Friday - October 22th

5:00 PM - 9:00 PM	Campfire Cookout - Bring your own Chair, Food, and Drink (no Alcohol)
6:00 PM	Fire Ready for Cooking
10:00 PM	Overnight Campout

Saturday - October 23th

8:00 AM - 10:00 AM	Auction Set-up (both Consignment and Donated Items)
10:00 AM - 1:00 PM	Lunch available on site
11:00 AM - 2:00 PM	Auction
2:00 PM	Clean-up. ALL Items Removed by the donator

Johnson County Radio Amateurs Club
2021 Ensor Auction & Raffle

3 Drawings - 2 Associated Radio Gift Certificates
1 Schulman Auction $250 Gift certificate
1st - $200 Cert - Last Sept Club Meeting
2nd - Schulman Auction at the Ensor Auction

3rd & Final Drawing - $500 Cert - at the Ensor Auction
Winner need not be present to win.

Tickets are $5.00 each or 5 for $20.00

Purchase tickets on-line at www.w0erh.org

- For More Information see our website www.w0erh.org
- Email Questions or want to Donate or Consign Items to secretary@w0erh.org