



President- Keith Mumaw KI5VNL Vice-President- Sharon McEachern- KK5SM Secretary-Sarah Richardson- KI5PZF

Treasurer- James Hunt- KI5DQ Trustee- Dr.Mike Durbin - K5MJJD

# Fannin County Amateur Radio Club K5FRC

Volume 1 Issue 3- March 2024

## FUN STUFF

### MARCH 2024 K5FRC TREASURER'S REPORT

Currently, the club has a balance of \$4128.23 in its checking account and a balance of \$224.20 in its savings account. Since our last club meeting, the club has had the following deposits and expenditures: A deposit of \$144.25 from \$96.00 dues and \$47.25 from???.

The club has had 0 expenditures since last month's meeting. All 3 checks have cleared.

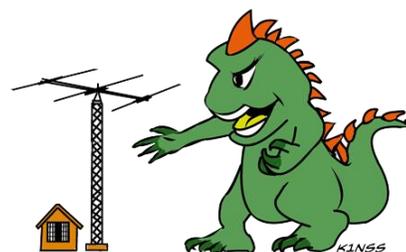
I will also send out an updated roster prior to our next meeting to include our new members.

Reminder: If you need to renew your ARRL membership, you can do so through the club and the club will receive a commission from ARRL. I will have the forms at our next meeting.

73's,  
James  
KI5DQ

### WHAT ARE CAVITIES?

Cavity duplexers are three port devices used in Transceivers (transmitter and receiver) to separate the Transmitter frequency band from the receiver frequency band. They share a common antenna while working simultaneously at different frequencies.



### K5FRC REPEATERS

**145.470 (100Hz tone; -600Khz offset)  
C4FM or Analog; IRLP 3602;  
ECHOLINK 143903**

Tuesday Night Net 8:00 PM  
442.525 (100HZ TONE; +5.0 Mhz offset)  
C4FM or Analog;  
443.750 (100Hz tone; +5.0Mhz offset)  
C4FM or Analog;

FCARC meets every third Saturday at  
9:00 AM at the Bois D'Arc Creek  
Cowboy Church

ZOOM sessions are held every Tuesday  
at 7:00 PM CST before the net on the  
145.470 Mhz repeater. Website:

[www.k5frc.org](http://www.k5frc.org)

Facebook: [www.facebook.com/K5FRC/](https://www.facebook.com/K5FRC/)  
Mark, KF5KUW is the administrator.  
Website: [www.k5frc.org](http://www.k5frc.org)

**President's Report**  
**March President's Report**

As I travel around Fannin County and the surrounding counties, it's hard to believe that March is almost halfway gone. The pastures are all greening up and multiple gardens abound with onions and other early plants, and it's also hard to believe that its meeting time once again.

One of the things that I find particularly interesting in my travels are the number of ham radio antenna towers and can only guess which "Elmers" they belong to.

During our March Solar Eclipse meeting, it was decided that we would stay in our "home" areas to report any emergencies that we might see. It was also decided that Dr. Durbin would bring down the repeater tied to the NCTC network for the day so we can communicate. I for one am looking forward to this "once in a lifetime in the same spot" event as I hope each of you are as well.

March also means St. Patrick's day, and green beer is around the corner along with "March Madness" basketball. So, while we're in the spirit, let's welcome "Spring" and look for ward to warm weather and whatever "ham radio events" we can create.

I'll see everyone at the meeting.

Keith Mumaw Jr (KI5VNL)  
2024 FCARC President

---

---

**SECRETARY REPORT**

Fannin County Amateur Radio Club  
Regular Meeting  
February 17, 2024

President Keith Mumaw (KI5VNL) called the meeting to order, Bob Yakel (KG5KKE) led the invocation and Shawn Dobbels (KJ5DJR) led the pledges.

President's report: Keith shared that Winter Field Day was a success with numerous check-ins from the country as well as Canada and Puerto Rico. Chili Cook-Off was fun with Judge Newt Cunningham (KI5YDF) taking first and Keith taking second. Thank you to all who participated. Vice-President Sharon McEachern (KK5SM) encouraged members to check out the history of FCARC on the website, and that she has eclipse stuff to share.

Treasurer James Hunt (KI5DQ) reports a checking account balance of \$3,947.98 and savings account balance of \$224.20. The full report is in the newsletter. Sarah Richardson (KI5PZF) moved to accept the treasurer's report, Keith Mumaw seconded the motion, motion passed.

Secretary's Report: Sarah asked if any corrections were needed from the minutes presented in the newsletter. No corrections were needed Keith moved to approve, DeeDee Yakel (KI5VFV) seconded the motion, motion carried. Sarah then asked if the club wanted to do the event of the Fannin County Master Gardener EXPO Garden Show as we did last year – table/booth inside and the radio operating outside – and volunteers to do so. EXPO is in April; more details will be available at the March meeting with sign-up sheet. If the club wants to do so, the form will be submitted to the Extension office.

### Old Business

Eclipse Committee Chair – James Yost (KA8FRK) reports that the population of Fannin Co. is expected to triple for that day. He put together some history & what other places are doing, the path through Texas is approximately 480 miles and will affect Emergency Management areas 1, 3, 4, 5, & 6. Fannin Co. probably won't be able to pull resources from the DFW area. Total darkness will be approximately 4 minutes. In the 2017 Eclipse, the issues faced in the affected areas were gridlock, fuel shortages and delivery interruptions. Smaller towns were impacted the most by the disruptions. Local restaurants and food vendors are trying to balance the risk of not having enough if the weather is clear and lots of people with weather being unfavorable and having food spoil. Good idea to come up with a D05 plan. James Hunt (KI5DQ) reminded everyone that cell service may not work at this time, text if possible, APRS on the cellular network will probably not work. James Y recommends hesitating to get very far from home. Jeff Jones (K5JSJ) remarked that there's about 35,000 in Fannin Co., with approximately an additional 100,000 coming in for the event. Mark Hetherington (KF5KUW) remarked that Hunt Co is working with Commerce PD, expects I-30 to shut down from people stopping to observe. Gridlock is an anticipated problem from the visitors trickling in over the weekend and then everyone trying to leave at the same time after the event, as well as those people who stop on the side – or middle – of the road to observe the event. The committee is determined to have a meeting March 2 at 0900 to explore assignments of frequencies to use in alternative to the repeaters. Collin Barnett (W5CTB) remarked that it is a good idea to practice the Simplex net. TMC-Bonham antenna work – Scott Peaco (KE5GJR), James Hunt, and others are going to assist in getting the radio & antenna work done for the hospital's emergency communications the following week.

RACES Update: Mark Hetherington (KF5KUW) shares that the current focus is for the April 8 Eclipse event. He will be using Winlink to communicate with the region (FC in Area 1 now), and with state officials in Austin. Local communications focus is going to be 1-information of general importance, 2-Emergency matters that impact more than one person.

### New Business

Trailer box for supplies – several discussions about what we are going with since price increases across the board since we voted on the matter. Robert Fleckenstein remarked that he could possibly help with the box. We will go ahead with the expectation of a weatherproof box with shelves to stay on the trailer.

Move to adjourn by James Yost, second by James Hunt. Adjourned for test and education sessions.

## VICE PRESIDENTS REPORT

### Vice President's March 2024 Report-Sharon McEachern (KK5SM)

The 2024 spring severe weather season is upon us. The National Weather Service (NWS) Office located in Fort Worth conducted a free, Severe Weather Education class on Monday, March 4, 2024, from 6:00-8:00 p.m. at the Texas A&M AgriLife Extension Services Bldg., 2505 N. Center St., Bonham, TX 75418.

With a packed room, I am proud to say the club made a great showing with several members in attendance. Our very own Jennifer Peaco, KE5OPS, Scott Peaco, KF5GJR, and Jeff Jones, K5JSJ, led the way. Thank you.

It was quite informational and a good/timely reminder of what/what not to report when we encounter severe weather.

The following information is a short refresher for us. You can find this and much more on the National Weather Service website. I urge you to take a look. As we know, preparation is always KEY!

An effective spotter report is timely, accurate, and detailed. In short, report what HAS happened and what IS happening, NOT what you think will happen.

You should use the following guidelines when reporting...

1. Following the specific reporting guidelines
2. Remain calm, speak clearly, and do not exaggerate the facts.
3. If you are unsure of what you are seeing, make your report, but also express your uncertainty.
4. Your report should contain the following information:
  - \* **WHO** you are,
  - \* **WHAT** you have witnessed: the specific weather event,
  - \* **WHEN** the event occurred: NOT when you make your report, and
  
  - \* **WHERE** the event occurred, using well-known roads or landmarks. Immediate, real-time reports, are most helpful for warning operations, but delayed reports are also important, even days after an event. Delayed reports are used for climatological and verification purposes.

I have extra copies of the storm spotter's checklist that were handed out in the class. I will bring them to the meeting on March 16, 2024. I look forward to seeing everyone there.

---

## Trustees' report

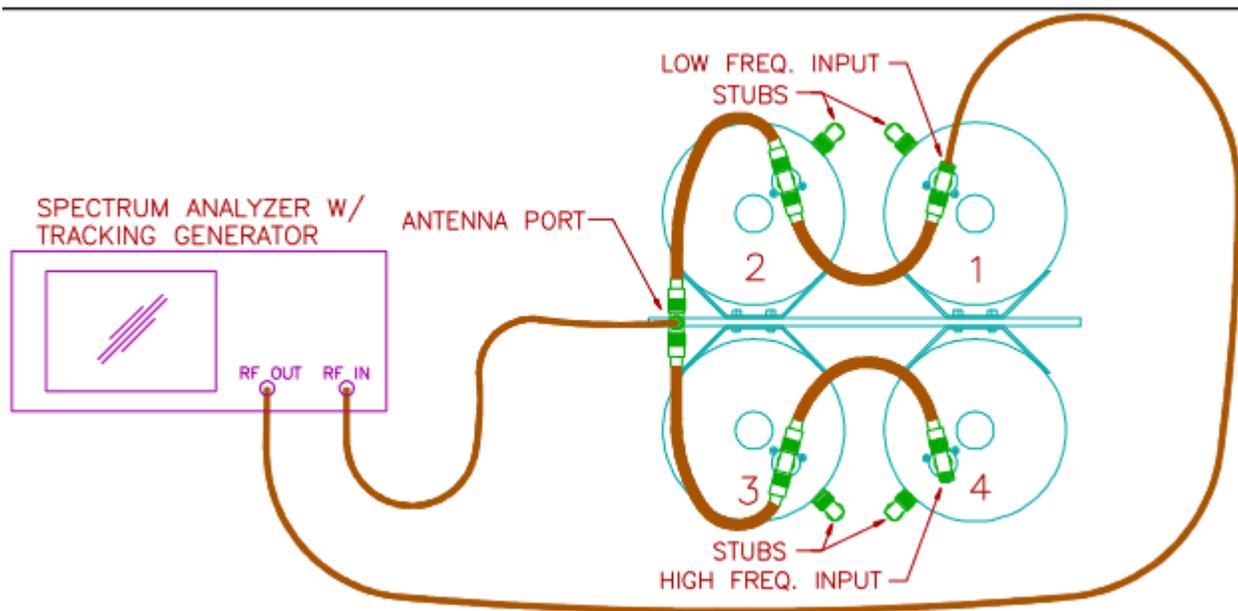
*NOW MY USUAL FUN/INFO STUFF*

*"I AM COMPLETELY OPERATIONAL AND ALL MY CIRCUITS ARE OPERATING NORMALLY"*

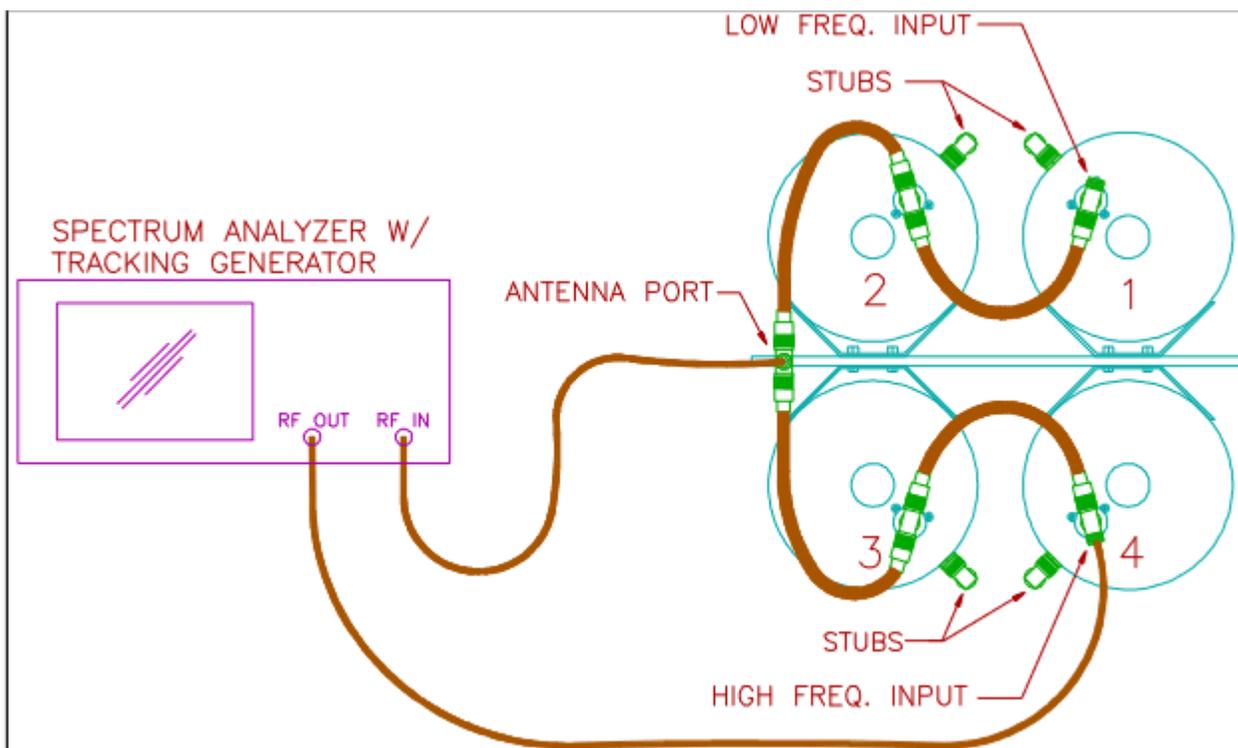
WHAT ARE CAVITIES AND HOW DO THEY WORK

BASICALLY VERY HIGH Q RESONANT CIRCUIT.. REMEMBER Q?

Cavity diplexers are three port devices used in Transceivers (transmitter and receiver) to separate the Transmitter frequency band from the receiver frequency band. They share a common antenna while working simultaneously at different frequencies. Testing and adjusting cavities require some fancy equipment but here is how the testing and adjustment is done when it is available!! Like at the K5MJD man cave!!



**Figure 1. Hook-up for tuning of low pass.**



**Figure 2. Hook-up for tuning of high pass.**

The cables between the cavities and antenna are very critical length wise. They are  $\frac{1}{4}$  wave long including the length of the interior coils. Remember our velocity discussion? Yes, that must be considered in the length calculations.

Our cavities are Bp/Br. That means they are Band pass and Band reject. So, pass one frequency reject the other!! How much you ask?

Well, if the transmitter is 50 watts (17 dBw or 47dBm.) and our receiver has a sensitivity of .2 micro volts (or

-120dBm) for difference of 160 dBm. So, cavities must have at least 160 dBm of isolation. We do however have another thing in our favor frequency separation. On two meters the difference between transmit and receive frequency is 600KHz. And on 450 band is 5 MHz. So, assuming we have a transmitter with no noise cavities are great. Now if the receiver was only listening to our receive frequency and nothing off that frequency, we are also still great. How ever how many of you have a receiver that only tunes one frequency? What happens is the receiver front end (which is usually a wideband amplifier) is affected by what we call desense. What is that you ask? A good example is field day with more that on radio running at the same time. Chances are you have heard the noise in your receive when someone else even on a different band transmits. Also try listening to your walkie while standing next to someone on the same repeater or even when two vehicles are close together. That is also called desense.

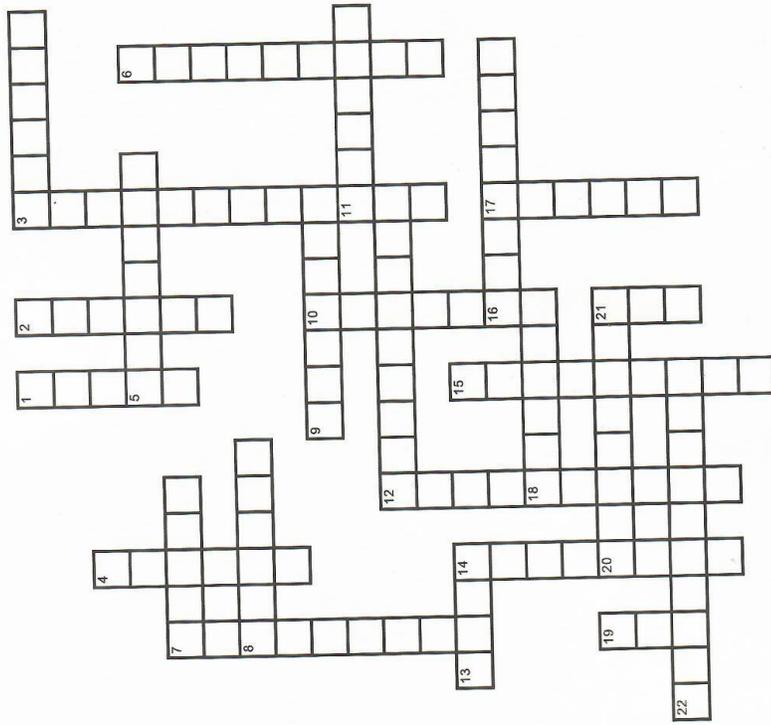
So now you know why we must have good cavities when using the same antenna for transmit and receive on a repeater.

De K5MJD

***NEXT PAGE FOR A REQUESTED CROSSWORD CHALLENGE***



CROSSWORD 9: ANTENNA MANUFACTURERS



Across

- 3 Classic CL-33-M three-element tribander (6)
- 5 X700HNA dual band base/repeater antenna and the D220R mobile discone scanner antenna (7)
- 7 Miracle Baby HT antenna and fold-over mobile antennas (5)
- 8 Stepper motor adjustable beams (6)
- 9 Standard and super mobile resonators for HF (7)
- 11 Portable and mobile antennas; now a division of Pulse Electronics (6)
- 12 HF2V, HF6V and HF9V verticals (9)
- 13 Survivor series of HF beams (1,3)
- 16 Spanish mfg. of monoband, triband, and hex beams (8)
- 18 HVU-8 vertical antenna (6)
- 20 Tactical portable wire and multi tap mobile antennas mfg. in Perth, Australia (8)
- 22 Wire antennas, surge protectors and coax switches (5,5)

Down

- 1 Tactical manpack and folded dipole antennas and air coils (1,3,1)
- 2 Ham-IV rotator and TH-11DX beam (6)
- 3 Largest antenna mfg. in the UK (9,3)
- 4 Vertical antenna array mfg. (6)
- 6 Tactical dipole and covenant compatible antennas (9)
- 7 A3 and A4 beams or the R8 and R9 verticals (9)
- 10 Motorized mobile antennas (7)
- 12 HamCall and wire antennas (10)
- 14 Full-size trap less beams made in Denmark (8)
- 15 Sentinel Barrett 160-6 m hex beam (5,4)
- 17 Log periodics now made by DX Engineering (6)
- 19 Challenger, Eagle, Viking and Voyager verticals (3)
- 21 Whips, wires and loops made in Starkville, Mississippi (3)