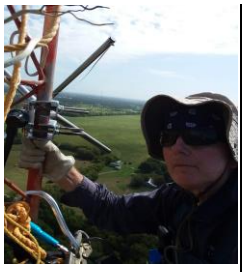
President- Keith Mumaw KI5VNL Vice-President- Mike Durbin – K5MJD Secretary-Sarah Richardson– KI5PZF

Treasurer- James Hunt- KI5DQ Trustee- Dr.Mike Durbin - K5MJD



May '2025 K5FRC Treasury Report

Yes – a gentle reminder, it is past time for membership dues (if not previously done). If not yet done so, please take care of supporting the K5FRC Radio Club.

The membership rates are changing, now is a good time to attend your club meeting and functions.

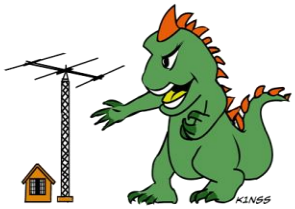
The K5FRC club is providing an interesting program every meeting. Along with technical Q&A.

One of the many club benefits is HF and VHF radio loans, available for the club members.
For availability, contact one of the club officers.

Currently, the club has a balance of $3535.80 in its checking account and a balance of $226.48 in its savings account. Since our last club meeting, the club has had the following deposits and expenditures: $40.00 was made 12April - club memberships into the checking account. The Savings Account was declared dormant, hence a $1.00 deposit was made. The club has had 0 expenditure since last month's meeting, the club check purchase is on a technical hold. To be discussed at the club meeting.

Many of the radio clubs are using a automated record keeping database, called: https://www.hamclubonline.com/
This modern concept was discussed last month at the club meeting. Will provide an update at the meeting.
73's,
James KI5DQ

FUNNIES!!!



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;
444.775 (100Hz. Tone) +5 MHz Offset
C4FM or Analog FM Emergency RPTR
CROSS B AND IN BONHAM IS ON 445.200 SIMPLEX WITH 100Hz.TONE
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

Facebook:
www.facebook.com/K5FRC/
Mark, KF5KUW is the administrator.
Website: www.k5frc.org

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April President's QSO
"Club Politics and the Integrity of the By-Laws"

One of the least favorable duties of being the President of any club or organization, is working through complaints brought by members within the group, let alone multiple members. This President's QSO is exactly that and unfortunately cannot be overlooked and must be addressed.

At the April meeting of the Fannin County Amateur Radio Club, the membership was informed that the current Trustee / VP Dr. Mike Durbin, was stepping down and was transferring the position to club member Mark Heatherington. Notification was given that the Trustee position must be an "Extra Licensee" and that the said position had to be held by a member that lived within the county and that it could simply be transferred by filling out a form. After an objection that the Trustee must be voted on by club members per the by-laws, I called for a vote to approve the "Trustee" issue. A vote was held using the "show of hands" method, and Mark Heatherington was deemed the new Trustee as there were no other nominations made.

After receiving several complaints about the method of notification, the method of voting and based on what was said to the club, I reached out to ARRL and asked for their help and advice. The staff at ARRL came back and indicated that there were "no" stated requirements to be a club "Trustee". With this information in hand, and the license requirement only being stated in the clubs by-laws, the fact that notice was not given to the Board of Directors, no notification being given to all of the current members holding and "Extra License", and a vote not tabulating the number of voting members present and the number of votes being tallied, I find myself in the position to declare the vote held at our April meeting, null and void since it did not meet the requirements of the by-laws.

Per our by-laws, the Club Trustee shall be an eligible voting member with an Extra Class license. Nominations for Trustee shall be approved by a two-thirds (2/3) majority vote of the members in attendance at any regular monthly meeting where it becomes necessary to reaffirm or replace the present trustee.

The term of office shall be ongoing until such a time as the present Trustee asks to be re-placed or the club deems it necessary to select a replacement.

With exception of the "Extra License" requirement. None of the other requirements as outlined were met, which is the bases for the complaints brought by several members in good standing.

As President of the FCARC,I have no choice but to call for the replacement of the club "Trustee" to be conducted as required by the club by-laws.

I am calling for nominations of any current "Extra Licensed" club member in good standing (meaning dues have been paid) if any, in addition to Mark Heatherington, to be brought forth. I would caution everyone to READ the by-laws as to the duties of the Trustee. These duties can be demanding and can potentially require a lot of your time.

Please understand that I have no issue with club member Mark Heatherington being "Trustee", the issue is entirely how the replacement of this critical position was handled. With procedures outlined in the club by-laws, it is imperative that the "integrity of the process" be maintained and properly handled / recorded as outlined.

I have reached out to the club Treasurer to determine if the following extra members are current and in good standing per club rules. ***Extra members in good standing include Mark Heatherington; Sarah Richardson; Jim Thomas; James Hunt; Jeff Cotner; David Keene; Shirley Smith*** – Please understand that this is NOT a nomination list, it is simply a list of members who hold an "Extra

License" and have been in good standing for a minimum of six months and is intended for informational purposes only.
Please be ready to conduct a vote as outlined in the club by-laws so this vital procedure can be properly handled, recorded and closed as required. **This vote must be approved by two-thirds of the members in good standing at the meeting and must be noted as such in our club minutes as required by the by-laws.**
I have added the by-law section covering this critical topic below for your review.

Article VIII – Vacancies of Office

1. **Vacancy of any office shall be filled by a special election to be held at the first regular monthly meeting following a written or emailed notification of the vacancy by the President.**

Article XII Section A:
Trustee the Club Trustee shall be an eligible voting member with an Extra Class license. Nominations for Trustee shall be approved by a two-thirds (2/3) majority vote of the members in attendance at any regular monthly meeting where it becomes necessary to reaffirm or replace the present trustee.
The term of office shall be ongoing until such a time as the present Trustee asks to be re-placed or the club deems it necessary to select a replacement.
Article XIII Section B: Duties of the Club Trustee:
1. Serve as a director on the Board of Directors
2. Serve as liaison officer of the FCARC .
3. Oversee the maintenance of all club equipment and the general condition of the club room.
4. Maintain an inventory list of club assets
5. Serve as chairperson, or appoint a chairperson that will report back to the Trustee, of a Technical Committee which will be responsible for:
a) Checking out all club members on the operation of the club radio equipment prior to their using said equipment.
b) Assisting any club member or Fannin County resident in resolving radio interference due to amateur radio transmissions. Committee members may be volunteers or selected by the chairperson.
c) Be responsible for writing and posting in the club room operating procedures for general use of the room.
If you are unsure about your current membership status, I would encourage you to reach out to the club Treasurer, James Hunt and he will help you.
I am also encouraging all members in good standing to attend the May 17th meeting as this vote will be held under "New Business".
There is a saying that says so much; "If you do the right thing, in the right way and for the right reason, there is no ground for complaints."

Respectfully.
Keith Mumaw
2025 President - FCARC
73

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SARAH RICHARDSON
KI5PZF
SECRETARY

Fannin County Amateur Radio Club
Regular Meeting Minutes
19 April 2025

President Keith Mumaw (KI5VNL) called the meeting to order at 0900, Mike Jeter (KG5OGC) led our prayer and Roy Riales (KE5WDE), as our oldest veteran, led our pledge. Guests Judge Laurie Blake and Shelly Vega were introduced. Keith has been using the clubs 991a and likes the radio. MTC sells that model for about $1,500.00. As a multiband radio, Technicians can use that model on the 10-meter band and there are a lot of contacts to be made in that frequency range.
VP/Trustee Dr. Mike Durbin (K5MJD) shared that he will be moving to the Lake Fork area, and there will need to be changes in the Trustee portion of his duties, because FCC says Trustee must reside in the county where the repeater(s) is/are. FCC has rules in addition to the club's by-laws that must be met. Extra class license is one requirement. Mark Hetherington (KF5KUW) is willing to serve as Trustee and can do so. Rebecca Bruner (KI5IOO) moved to accept the change in Trustee, James Yost (KA8FRK) seconded the motion, motion carried. Change will be when FCC approves Mark.
Secretary Sarah Richardson (KI5PZF) asked if everyone had read the minutes in the newsletter, found on the k5frc.org website under NEWSLETTERS 2024-2025 section. Sarah asked if there were any corrections to be made, none needed. Roy Riales moved to approve the minutes, Rebecca Bruner seconded, motion passed.
Treasurer James Hunt (KI5DQ) reports checking account balance of $3,495.80, savings account balance of $225.48 with no expenditures, although there will be some coming up soon. Rebecca Bruner motioned to accept the Treasurer's report, Mike Jeter seconded the motion, motion carried. James also is looking at the HamClubOnline for managing membership, assets and financial matters. Is this something the club wants to pursue? DeeDee Yakel (KI5VFV) motioned to approve researching the software, David Bruner (KI5ION) seconded, motion carried.
Keith asked Ralf Borgardt (KI5LVS) to give us an update on the membership drive. Ralf reports several suggestions have been implemented: Radio-On-Loan, being the biggest. ID badges are possible with the demo badge that Ralf had having K5FRC in gold on maroon on one side, the picture, name, call sign, and affiliations on the other side. The increase of membership dues with the club giving more for membership was discussed. Different levels of membership include Associate (no voting privileges for non-licensees) at $20, Individual $35, Family $50 and Lifetime per the formula in the by-laws is $800 (thank you, David, for your rapid calculator use). Mark Hetherington moved to approve the increase in dues to the stated amounts, Roy Riales seconded the motion, motion passed. The dues will be effective for the next membership year, starting January 1, 2026.
In New Business:
Roy Riales (KE5WDE) is donating a Kenwood <model?> to the Radio On Loan library, with the story of the radio shared, as he has history with it, and it with the club.
Dr. Mike Durbin is looking for someone to help with the webpage. He has done it for 30 years, with it starting as a bulletin board.
Bob Yakel has two items for consideration – first, the Bois D'Arc Creek Cowboy Church will be having an auction April 26 to raise funds for sending kids to church camps, along with a BBQ dinner; second, Paris club has asked for our help with the Tour de Paris Bike rally on July 19,

2025. This club has helped Fannin County with the Autumn In Bonham Bike rally and we should return the favor.

A motion to adjourn was made, and seconded, motion carried.

Testing session after meeting with a passing grade by Di Hopkins.

Attendance:

KI5PZF	Sarah Richardson
KI5VFV	Diane Yakel
KG5KKE	Bob Yakel
KI5VNL	Keith Mumaw
KE5WDE	Roy Riales
KF5KUW	Mark Hetherington
K5MJD	Dr. Mike Durbin
KD5UNY	Mike Lindsey
KI5IOO	Rebecca Bruner
KI5ION	David Bruner
KI5DQ	James Hunt
KI5WTZ	Kenneth Troutz
KG5OGC	Michael Jeter
KG5OMG	Brenda Jeter
KA8FRK	James Yost
KI5LVS	Ralf Borgardt
KK5SM	Sharon McEachern
N5JEP	Leo Salas
WB5KWK	Mike Rice
Guest	Shelly Vega
Guest	Lauri Blake
Guest	Di Hopkins

VICE PRESIDENT REPORT

De K5MJD

I have of course been asked many times why I am moving. The answer is simple in that I will officially retire July 1 (again but final this time) and have always wanted to live on a lake with my boat in a dock house.. Well found a place that fits all of my goals and also my wifes goal of living closer to kids, grandkids, and great grandkids. I have found a place that meets all the critiria at Lake Fork.

For those that wonder if I will still be active in the club the answer is YES. I will however be a bit further away. It is actually only 15 miles of south of Sulpher Springs in the giant community of Yantis. The house is actually 60 miles from the Ivanhoe repeater and closer to the Bailey repeater so I will still make nets etc. I will let everyone know when this move actually happens. Hey you know little things like selling the house I am in and finalizing the buy of the new house. Not to mention removing towers, antennas, moving a man cave, a red barn, boats, and a house full of stuff…

++

And my last update as Trustee!!

"I AM COMPLETELY OPERATIONAL AND ALL MY CIRCUITS ARE OPERATING NORMALLY" EXCEPT FOR THE NOISY ANTENNA ON 145.47 REPEATER

MEMBER ARTICLES…

CO LINEAR ANTENNA DESIGN

While it is not possible to home-brew a commercial quality antenna, it is very feasible to build a collinear antenna for average use. This article describes a collinear antenna made from very inexpensive RG58/U coaxial cable and encased in PVC pipe. FYI -- This was (many years ago) for a science fair I entered. Didn't win but had a great antenna when I was finished. Kind of looks like the modern fiberglass antennas we all have seen around..

Before we start building you need to know characteristics of coaxial cable. Remember that there is something called the velocity factor for coaxial cable. For RG58/U coax it is typically .66. This means that when we calculate the length of ½ wavelength in free space we need to adjust its size by multiplying it by the velocity factory. Simply put, RF is slowed down by the velocity factor when traveling through coaxial cable. Calculating the ½ wavelength of RG58/U coaxial cable with a frequency of 444 MHz.: I Chose 440 band because the lengths are small. Of course you can pick your own band by simply changing the frequency to say 145.47 MHz…

½ wavelength of coax = 300 / F / 2 * V

Where F = Frequency in Megahertz

V = Velocity factory of Coax

300 / 444 / 2 * .66 = .2229 meters or 223 millimeters or 8.78 in. (remember 25.4 mm per inch..)

Since most of us don't have mm tapes I will do this in inches..

To allow for cutting the ends of our coax, we will need to add .3 inches to each ½ wave length for a total of 9.08 inches.

You will need 8 half wave lengths (9.08 inches) of RG58/U coaxial cable to be cut and connected in the manner shown in Figure 1. First cut back .16 inches of the outer jacket, braid and dielectric exposing the center conductor as in Figure 2. Now cut back the outer jacket another .16inches to expose the braid and push the braid back about a millimeter to prevent it from shorting with the center conductor. Now solder each half wavelength section as shown below. Add a few feet of RG58/U to the bottom.

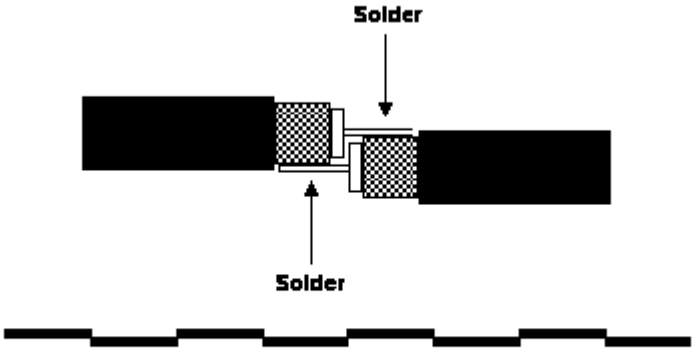

Figure 1

To add a ¼ wave element to the top of the antenna Use #16 solid wire or similar and solder it to the center conductor only. Or on the last element you make simply make it ¼ wavelength longer than the rest and then remove the shield. The length of the ¼ wave element is calculated as follows:

1/4 wavelength radiator = 300 / F / 4

Where F = Frequency in Megahertz

300 / 444 / 4 = .1689 meters or 169 millimeters or 6.65 inches

At the bottom of the array slide a 5/16 inch tube (or you can use braid from a piece of coax) over the feed point only. Solder the tube/braid to the shield of the bottom element. The length of the tube (or braid) is calculated as follows:

¼ wavelength of tubing = 300 / F / 4 * V

Where F = Frequency in Megahertz

V = Velocity factory of Tubing. (Use .95 for 5/16" tubing)

300 / 444 / 4 * .95 = .1604 meters or 160 millimeters or 6.4 inches

Because a collinear antenna is hot with RF along the shield of the coax, it is necessary to prevent the RF from coming back through the coax. Slide three FT50-43 or almost any similar sized toroids over the bottom end of the coax as shown in Figure 3. The toroids should be placed about ½ wave length from the bottom of the array. Use the same formula for calculating a half wave length of coax. If you prefer, apply RF to the antenna at this point and slide the toroids up and down until minimum SWR is found. Tape the toroids to the proper point on the coax using electrical tape or similar means.

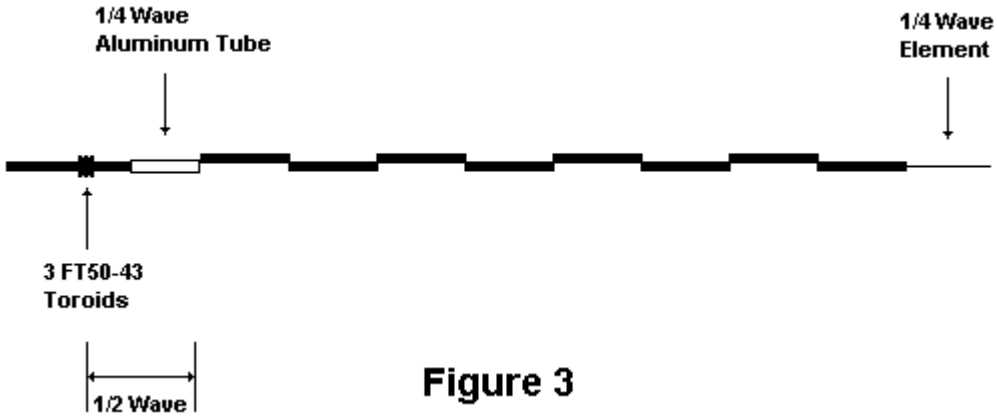

Figure 3

Carefully insert the coax assembly into a length 1/2" PVC pipe for final mounting. Place a cap on the top of the PVC after the antenna inserted. I taped a string to the top of the antenna (the bare ¼ wavelength) to allow me to pull the entire antenna into the PVC. On the bottom I used a cap with a hole drilled into it to mount a connector. I used a BNC connector which fits nicely into the ½ inch PVC. You could also just extend the bottom coax through the hole and put a connector on the coax. Do not cement end caps until the SWR has been doubled checked. ***Do not*** use RG58/U for your complete feed line. Use a low loss coax such as LMNR 8 for the main feed line.

After completing the assembly of the collinear antenna, apply a small amount of RF with the antenna on the ground. Low SWR should be observed at this point. Remember tuning can be accomplished with the toroids. The SWR will be lower once the antenna is mounted in the air. If the SWR is greater than 2 to 1 across the entire band, a connection may separated or a short occurred. It will be necessary to correct the problem before proceeding. After good SWR is obtained, I used heat shrink around each joint and the put a tie rap on each point. The tie rap will make the antenna fit bitter in a ½ PVC without moving around much.

If the eight ½ wave coaxial elements result in an antenna too long for your liking (over seven feet), then it is okay to use four ½ wave coaxial elements but the SWR may be slightly higher (Attach four ¼ wave vertical ground radials at the antenna feed point to help lower SWR.). ***No radials are needed for the eight element version.*** If 9 dB gain is still not enough for you then increase the number of coax elements from eight to sixteen. You will notice the antenna is getting kind of long if you do this!! Although only a 440 antenna was described in this article, the formulas can be easily calculated for any band.

If you go lower than 6 meters it is going to be very LONG..