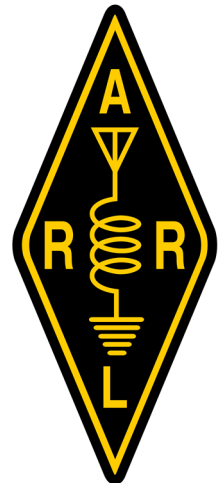




Year of 2020  
Volume 4, Issue 1



ICOM IC-7300



# PBARC Reflector

For Amateur's By Amateur's

## Letter From The President

Shane Driskill KG5SRO This past year we had a great time with activity's and fellowship. I have had a good time with N5RN and others at our POTA outings this year and we had a great time at field day. This year we will be doing even more as a club from POTA, Arkansas QSO Party, Field Day just like last year and oh boy was it fun, and even more. We are starting the news letter back up this year so any help (positive help) is needed. If you are doing any projects or want to write an article please let me know. If there is anything you want to do as a club let us know and we will do our best to make it happen. This club is only as good as its members and I want to see it grow this year. Also if you don't know we do breakfast every Saturday morning at 7:30 normally at The Corner Café and our other spot is Shannon's if Corner Café is closed. Please try and invite people to come and visit and who knows they might get hooked. All activities will be posted on the calendar on the pbarc website. Come on out and join us for another great year.

73, KG5SRO

Shane Driskill

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## Special points of interest

- Member Showcase
- Project Page

# Pinnacle Mountain

K-1110

Little Rock, Arkansas

July 4, 2019

Location: EM34su (34.836911, -92.479005)

Operators: Shane Driskill, KG5SRO and Glenn Wolf, N5RN

**Participants:** Shane Driskill, KG5SRO and Glenn Wolf, N5RN

**Weather:** Hot, Humid

**Location:** EM34su Lat: 34.836911, Lon: -92.479005

This was our second activation of Pinnacle Mountain. We chose it for two reasons. First, the park we were first interested in, K-0638 Lorange Creek. It was overgrown and didn't seem to have any picnic tables or even a spot to set up. Second, we knew about the Arboretum at Pinnacle and how long it would take to get setup. Shane and I talked about for a few minutes while at Lorange and decided that we would be better off going to Pinnacle and trying there.

We made the 30 minute or so drive from Lorange Creek to Pinnacle. Once there, almost with military precision we began the process of setting up. We've done this often enough that we know what needs to be done and when. The weather was hot and humid. Well it was July after all and we were in Arkansas.

The big difference with this activation is that we use some band pass filters that N5RN picked up for Field Day. Since we typically use a single loaded dipole on 40M and 20M those were the filters that we used. We had good luck with the filters at Field Day and they worked well on this outing as well. We talked about trying to do some FT8 work but that didn't materialize but we did setup to have two stations on the air simultaneously

After working through the setup, we had both operating positions on the same park bench. Shane got the 40M station and I got the 20M station. No rhyme or reason to how it worked out. Just the way that it did. There is a side story to this that I will share shortly.

Early on we determined that we had to separate our operating stations because we could not hear what was going on if the other was talking. Shane moved his station to a picnic table about 20 feet away from mine and things started to work out well.

We got going and it seemed that we were going to have a good outing. I was working lots of Qs but Shane not so much. I started to feel bad because as you know calling CQ with no one coming back to you gets old quick.

As the activation continued I noticed that 20M was dying and 40M was slowly but surely picking up with Shane making a few contacts. Using N1MM as our logging software I could see his progress. At one time I was up by 15 to 20 Qs over what Shane was doing. I was thinking to myself that maybe we should swap operating positions just so he could make some Qs. But then I would work someone and then got distracted.

Well as fate would have it. Twenty meters went dead and 40M was coming alive. Shane was making contacts at a rate that was about 2 Qs for each Q I was making. It wasn't long that he was within striking distance of making more Qs than I was. Yes I was getting nervous. I never expected 40M to be the active band during the middle of the day. I kept plugging away at it and then I saw KG5SRO pass me in the number of logged Qs. I couldn't believe it. But you could sense that Shane was having a good time with it. I think in the end he logged 10 or 15 more Qs than I did and he was so happy. I found out, after we shut everything down, that he had a personal goal of making more contacts than me. Well I will tell you that the competition was fun. I enjoyed it far more than I will admit even though I "lost". We both enjoyed it and will likely remember it as being one of our most fun outings.

As usual when we finish up a POTA we found a place for lunch. That place was TaMolly's one of our mutual favorites. Not only was the food good, the air conditioning felt so good.

We've talked about what our next POTA will be but it most likely won't be until the heat breaks. It is just too brutal out there.



## Field Day 2019

Wow is all I can say about field day. I had a blast and yes it was hot even though we were supposed to have AC, but I was still fun. We had a great turn out and a great time fellowshiping . I want to say a special thank you to Donnie Heinzelman my co-worker who came out and cooked fish and all the fixings for us. If you missed it all can tell you it was good. We set up two different antenna systems and had three stations on the air at once and it was fun. N5RN was running 20M, KG5SRO was running 40m, And KK5ZD was working everything else and he almost beat us in the number of q's. I think we made 60 q's for the day so that is the record we need to beat next year.







We are proudly displaying our PBARC Banner



This is Glenn N5RN station

The pic's to the left are from left to right  
The crew eating fish  
KK5ZD working q's  
KG5SRO and N5RN table

This is my station Shane, KG5SRO

This Beautiful Radio is Keith's KK5ZD Station and yes it is nice.



# Tuning The MFJ-17754 40/20 Meter Dipole

## MFJ-17754 40/20 Meter Dipole Instruction Manual

The MFJ-17754 is a two band, 40- and 20-Meter center-fed dipole antenna capable of handling 1500 watts. Its total length is 42 feet. Each side of the dipole is broken up by a coil that presents a high impedance at 20 meters and acts as a loading coil on 40 meters, allowing the antenna to resonate on 40 meters even though it is physically shorter than a half- wavelength (approximately 65 feet at 7.1 MHz).

Because this antenna acts as a dipole on both bands its impedance is in the vicinity of 50 to 70 ohms, permitting it to be fed with coaxial cable. The use of a current balun between the coaxial feedline and the antenna is highly recommended, to help prevent stray RF from traveling down the coaxial cable's outer shield. This is easily accomplished with an MFJ-915 RF Isolator and a "double male" coaxial connector.

### Assembly

This antenna comes assembled and ready to install, but may require adjustment of wire lengths once in place.

Ropes are needed to support the ends of the antenna from suitable structures or trees.

The antenna comes with the outer ends of the two sides of the antenna "loose." For initial installation, wrap these two ends loosely around the provided ceramic end insulators and back on themselves, using about six inches of wire on each end. Do not cut these wires; they are provided extra-long to allow for all possible installation situations. Wrapping the wire back on itself without cutting it shortens the electrical length of the wire while saving the full length for possible use later. Be sure to install your RF isolator or balun, if you choose to use one.

### Installation

The best location for this antenna is as high and far away as possible from utility wires, other antennas, and other structures. It is impossible to find a perfect location, so the best compromise usually must be accepted. The antenna can be installed in three basic ways:

**WARNINGS:** Always mount antennas so that they are out of the reach of adults and children. Contact with any part of this antenna can cause RF burns or other injuries.

Constructing or erecting antennas where they may contact electrical power lines can result in injury or death.

**Horizontal Antenna:** Requires two tall supports separated by more than 42 feet. Suspend the antenna with at least a 50 pound working load nylon rope or another equivalent strength weather resistant non-metallic rope. Never use wire or wire core rope to support the ends of any antenna. Attach the rope to the end insulators through the empty holes.

Try to keep the antenna as horizontal (level) as possible. The antenna should be at least 35 feet above ground to give acceptable performance on 40 Meters, and as high as possible for the best overall performance. The coaxial cable should drop vertically from the horizontal section of the antenna as far as is practical.

If you are using trees for end supports, be sure to allow enough slack or use some type of pulley and counter-weight system to prevent the antenna or rope from breaking when the trees sway in the wind. Try to keep the ends of the antenna at least five feet from metallic supports.

**Inverted "V" Antenna:** This method requires only one tall support and also places the least mechanical strain on the antenna. Hang the center insulator of the antenna from the support using nylon or other non- conductive rope tied to the center hole of the center insulator. The center insulator will be the highest point of the antenna. If possible, position the two ends of the antenna so the inside angle they form is at least 120 degrees, and never less than 90 degrees. Secure the antenna ends with nylon or weather resistant non-metallic rope to suitable supports.

Sloper Antenna: This antenna also can be suspended as a sloping dipole. This requires one tall support and one short support. The center (feed point) of the antenna should be at least 30 feet above the ground in this configuration. A sloping dipole radiates mainly in the direction of the downward slope. The optimum angle of "slope" will vary with the desired coverage and the frequency of operation, but will almost always be somewhere between 45 degrees and almost vertical.

#### Tuning

This antenna comes with the inner sections of wire (between the feed point and the coils) cut to resonate near the center of the 20-meter band. For operation near only one end of 20 Meters, the 20-meter wires can be lengthened or shortened to lower or raise the resonant frequency. This should be done before adjusting the lengths of the 40 meter wires (the wires from the coils to the ends of the antenna). Do not cut the 20- meter wires until you have temporarily installed the antenna and determined its 20-meter resonant point.

If you have followed the instructions and installed the antenna with about six inches of the ends wrapped back on themselves, the resonant frequency on 40 Meters should be somewhere near the bottom of the band (7 MHz). You can determine the resonant frequency of the antenna using an antenna analyzer or a transmitter and SWR bridge. The amount the 40-meter wires will need to be shortened to raise the resonant frequency a certain amount will depend on the type of installation (level, inverted vee, sloper) and on surrounding metal objects. A very rough rule of thumb is 3 to 6 inches per side for 100 kHz. When shortening the antenna, simply wrap more of the two wires back on themselves; do not cut them.

On 20 Meters this antenna should cover the entire 14.0 to 14.350 MHz range with an SWR below 2:1. On 40 Meters, because it is a shortened antenna, the 2:1 bandwidth is less, 30 to 50 kHz. The usable range of the antenna on 40 Meters can be extended using an antenna tuner at the transmitter.

#### Maintenance

This antenna is constructed of heavy duty materials and should withstand normal climates for many years. General Electric makes a pure silicone grease called "silicone dielectric compound" that can be applied sparingly to the soldered connections at the antenna's center insulator. This is the same type of sealer that commercial antenna installers and CATV companies use with great success. A less desirable but adequate sealer is the automobile seam sealer commonly marketed as "coax seal," a pliable black sealing compound.

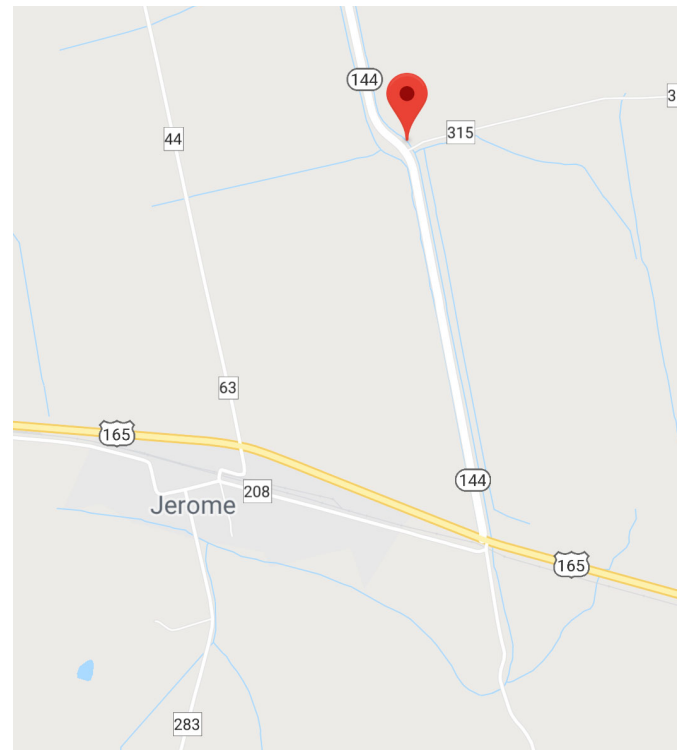
This is good information as this is the antenna we use for our mobile setup.



# ARKANSAS QSO PARTY



This year we have been ask to help in the Arkansas QSO Party and are planning on setting up around Jarome, AR. This will be a tri-county set up and we may even set up multiple tri-county locations. This should be a lot of fun and I hope as many that will, can come out and join us. The counties are Drew, Ashley, and Chicot. The picture to the right is a map view of the area and the picture below is the exact spot within 20 feet of all three counties. We will set up canopies to keep the sun from beating down on us . And don't forget bug spray.





# DMR REPEATOR

This is an update on the DMR Repeater that we talked about. At present,

1. The maggoire 442.175 KJ5PE machine has been pulled off the shelf, the Cat 300 controller removed, the receiver repaired and rcvr and xmtr tested okay.
2. Removed KJ5PE duplexers from Simmons Bank
3. Ordered and received the STM\_DVM\_PiHat and have it operational with configuration underway. Have to apply for DMR Repeater ID with radioid.net
4. The STM\_DVM\_PiHat links by wifi to a control panel on my desktop where all config work is done and it has a screen that shows status and activity. See attached pictures.
5. I think it will take a couple of more weeks to get all the wiring and testing done before going live.
6. If you have any questions, please let me know.

Bill



## Ham Humor

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Kit fun.

This reminds me of Bill KC5MN and his K3 build. Which he has completed.



"Yes I really am running just 5 watts QRP...although I suppose I do have an above average antenna system..."



#### PBARC Officers

President: Shane Driskill KG5SRO

Vice President: Brandon Mobley N5ADK

Treasurer: Glenn Wolf N5RN

Web Site: [WWW.PBARC.NET](http://WWW.PBARC.NET)

Email: See contact us on website

## Web Site Updating

If there is anything you want to see on the website please contact us so we can make that happen. Glenn N5RN has added a silent key page to the list since the last newsletter. You need to check it out. I was amazed at the Keys that have become silent that were members of this club. If there are any links you want to see added please let us know.

## Useful Links

[www.pbarc.net](http://www.pbarc.net)

[www.arrl.com](http://www.arrl.com)

[www.dxengineering.com](http://www.dxengineering.com)

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

[www.debcoelectronics.com](http://www.debcoelectronics.com)

[www.dxsummit.fi](http://www.dxsummit.fi)

