ARES District 4 Net Script

Jan. 02, 2020 Rev. B (net date)
Script Rev 09-04-2019

Good Evening everyone and welcome to the South Texas District 4 ARES net. This is

Tom *(name)* **K5BV** *(call)* **ARES EC For ARANSAS & SAN PATRICIO COUNTIES**

I will be the Net Control Station for tonight's net. First, if there are any stations with priority or emergency traffic please call **K5BV** at this time. UN-KEY

Either s*ay "**nothing heard**" or handle the traffic immediately.*

All hams in all Counties are welcome to check in to this net. You do not need to be an ARES member to participate in this net.

The purpose of ARES, the Amateur Radio Emergency Service, is to furnish emergency communications via amateur radio when regular means of communications fail or become inadequate during an emergency situation. ARES is sponsored by the ARRL, and supported by area radio clubs and individual hams. The only qualifications for ARES are that you possess an amateur radio license and you have a desire to help others. For more information or off-net questions please contact one of the following by email

Mark Dist. 4 EC - ad5ca@arrl.net
Tom EC for Aransas & San Patricio County - - - - - k5bv@arrl.net
Bob Asst EC for Aransas County- - - - - - - - - - - - - kf5cfu@arrl.net
Jim EC for Live Oak County- - - - - - - - - - - - - - - - w5im@arrl.net
Harley EC for Kelberg County - - - - - - - - - - - - - - kg5ayd@arrl.net

The net is currently scheduled monthly for the First Thursday at 8 PM. This is subject to change. We are currently using the 146.820 repeater in Corpus Christi with a (-) Minus offset and a 107.2 tone.

This net is being conducted for the purpose of providing training and information related to emergency communications; to serve as a forum for discussion; and to foster fellowship among Amateur Radio operators.

Next, are there any operators who would like to make announcement or provide information related to EmComm? This is not general check-in. Please state your call now.

Tonight after Check-In **NET CONTROL TOM** *(name)* **K5BV** *(call)* **2 Meter ANTENNAS and BASIC PROPAGATION** as this may apply to EmComm.

For Check-In, if the frequency has been clear a second or two key the MIC and s-l-o-w-y give your FCC call sign using ITU phonetics spoken clearly and slowly and UNKEY. Stating your name as well will be appreciated. Writing calls down takes a moment so allow a couple of seconds. Keep checking in and calls will be reviewed for clarifications, errors and missed calls. Please check-in with **K5BV** (Call) now.

(note these actions)

- *read each call back,*
- *ask for corrections*
- *ask for additional check-ins*

We will have comments after the tonight's material on **2 METER ANTENNAS**.

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(AFTER MATERIAL)

Before we go down the list for comments if there any late check-ins please provide your call now.

(again note these actions)

- *read each call back,*
- *ask for corrections*

Net Control **K5BV** *(your call)* will now go down the list for comments.

- *go down list of check-ins*
- *now have presenter give their comments)*

Final call for check-ins. Additional stations for the net please check-in now with **K5BV** *(your call)*.

(again note these actions)

- *read each call back,*
- *ask for corrections*
- *ask for comments*

THIS IS NET. We had XX check-ins tonight. Thank you all for joining the ARES net tonight, and thanks to the repeater owners and maintaineers for the use of these fine repeaters. I am now closing the net and returning these repeaters back to normal amateur radio use. Stations may remain on frequency to make additional QSOs.
Net Control _____ *(your call)* Out.

FCC CALL	NAME	DATE 01 - 02 - 2020
01 _____	_____ *(ENTER NET CONTROL)*	
02 _____	_____	
03 _____	_____	
04 _____	_____	
05 _____	_____	
06 _____	_____	
07 _____	_____	
08 _____	_____	
09 _____	_____	
10 _____	_____	
11 _____	_____	
12 _____	_____	
13 _____	_____	
14 _____	_____	
15 _____	_____	
16 _____	_____	
17 _____	_____	
18 _____	_____	
19 _____	_____	
20 _____	_____	
21 _____	_____	
22 _____	_____	
23 _____	_____	
24 _____	_____	
25 _____	_____	

South Texas ARES Monthly Meeting

2 Meter Antennas and Propagation for ARES

January 2020

2 Meter Antennas and Propagation

- The 2 meter radio is the mainstay of local, short range (<50 mile) communication for ARES
- For an ARES response, you need to be able to get your radio, transmission cable and antenna set up quickly, but effectively.
- All of the setup details are tradeoffs, so you have to decide what are the most important to the objective – good communication.

The VHF Elements

- The radio – a 50 watt mobile is quite a bit better, but a 5 watt HT is adequate.
- The transmission line – this is a lot more important in permanent installations than temporary, where ease of installation count the most.
- The antenna is more important than the radio power, so an HT with a good antenna is better than a 50 watt mobile with a bad antenna.
- Antenna height is the most important VHF factor, so let's look first at VHF propagation and why this is so.

VHF Propagation and Antennas for ARES

- 2 meter Transmission is primarily line of sight based on the curvature of the Earth
- The curvature of the earth limits the maximum range of a line of sight signal (Other obstacles may limit the range further)
- The point where the signal just touches the earth is called the Radio Horizon

How to Calculate the Distance

- With a little geometry – Distance to the Radio Horizon in miles ≈ the square root of twice the antenna height measured in feet
- So, a 32 foot high antenna has a horizon of the square root of (2x32=64) or eight miles.
- Add both antenna heights together to get the total distance, so two antennas at 32 feet would have a horizon of sixteen miles.
- Other propagation modes may help your signal go farther once it passes the Radio Horizon, and usually does.

The Antenna

- The key is getting the antenna up in the air, so something that can be suspended from a tree, or a push up pole is what you want.
- A roll up J Pole, or a simple ¼ wave vertical made from wire and an SO 239 connector are two cheap options. Or you can pretty much buy something for less than $35 that will work fine.

Example of the Roll Up J Pole

- This is the Edison Fong, WB6IQN J Pole, from QST 2007/03 – also available commercially:

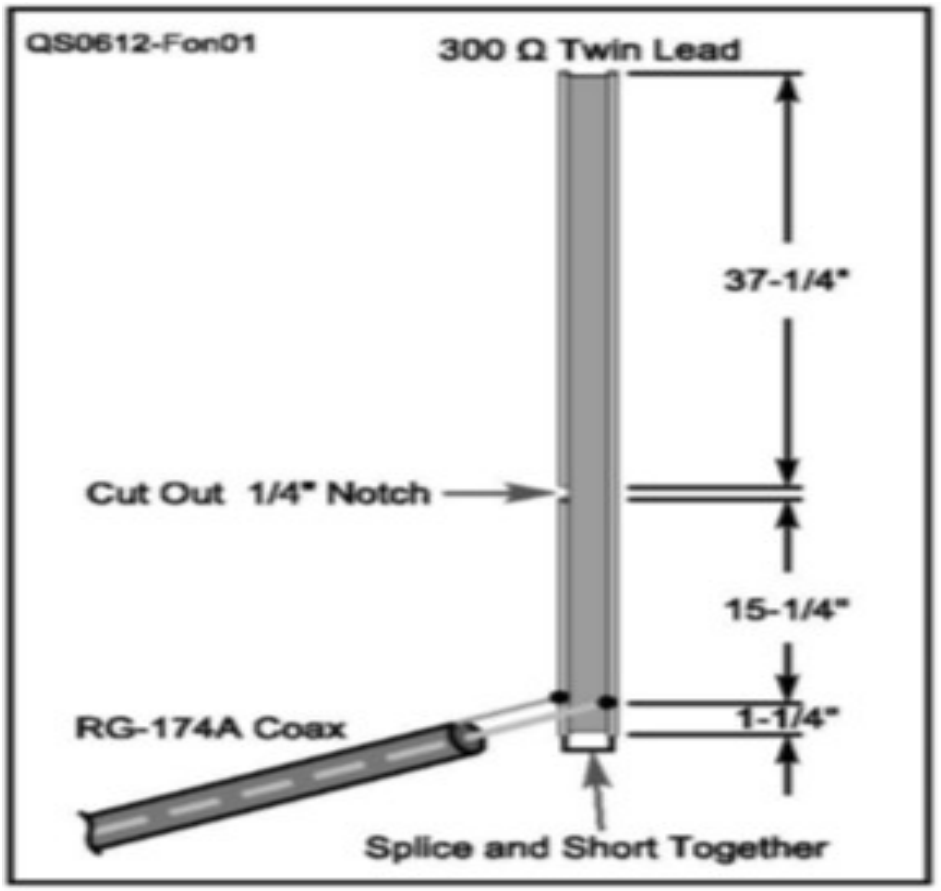
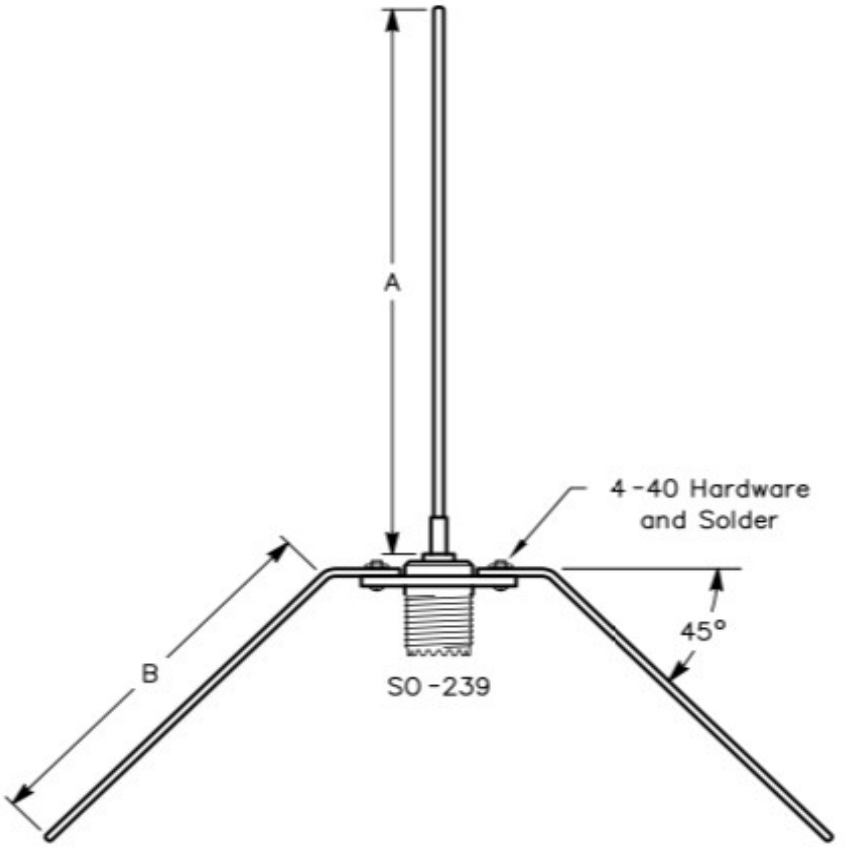


Figure 1 — The original 2 meter ribbon J-pole antenna.

Simple Quarter Wave Antenna

- From the ARRL Antenna Handbook:



Frequency (MHz)	A	B
146	19-5/16"	18-11/16"
225	12-5/8"	12"
445	6-3/8"	5-3/4"

Cable Selection

- Unlike a permanent home installation, ease of use and light weight are more important.
- Second, RG-8X is about a third the cost of 9913F7 or LMR400UF
- Lastly, for a 25 foot run – you will never tell the difference of about 10% in transmitted power loss

Coax Connectors

- SMA to UHF (PL-259) adapters are readily available.
- Making the cable with PL-259 connectors makes it much more compatible with other cables/HF radios for other uses.
- The insertion loss with a PL-259 adapter is negligible – so go with the more common cable connector and have some adapters on hand.

Next Steps

- Pick up a cheap push up pole or sling shot, build or buy an antenna and cable, and go out in the back yard and test your set up.
- When the weather is nice, you could use it for our next ARES monthly meeting.