

The modern J-Pole is derived from an antenna called the end-fed Zep. It's similar in design to the end-fed antennas of the 1930's; most notably the antennas used on the Zeppelin dirigibles. Of course the Zeps used on dirigibles were long wire HF antennas that trailed out the rear of the cabin. The modern J-Pole antenna is much shorter and optimized for VHF and UHF communication.

The J-Pole antenna can be best described as a ½ wave section over a ¼ wave vertical with a ¼ wave matching stub. The 2 quarter wave sections at the base of the antenna run parallel to each other. The current in the one section will be out of phase of the other, keeping that section of the antenna from radiating. The remaining half wave section will radiate extremely well since there is no counteracting field to keep it from radiating.

As a half wave antenna, the J-Pole doesn't need any radials or a ground plane to work. Average gain with a 2 meter J-Pole is about 3 db. Many like to compare the gain and antenna pattern to that of a Ringo Ranger. The biggest advantage of the J-Pole is that it is at DC ground, so it can be mounted just about anywhere and still work. No special grounding or a groundplane is necessary for operation.

KB9VBR J-Pole antennas are built with the highest quality materials and individually tested for optimum performance. If you have any questions about your antenna, or have a special request, please let me know. I am more than willing to help you out.



Order more J-Pole Antennas

The Original 2 meter J-Pole

Our most popular seller. This antenna has outstanding performance on 2 meters and loads up quite well on 70 centimeters. Overall length is 69 inches with an 11 inch mounting stub.

The Breakaway 2 meter J-Pole

The 2 meter J-Pole with a two piece design. Now the antenna will fit in the trunk of your car. Carry it with you for fast emergency communications deployment.

The 6 meter J-Pole

A monster of an antenna measuring in at 13.5 feet. Excellent performance, hit repeaters 40 mile away with only 5 watts. The 6 meter J features a two piece design for shipping and easy storage.

The 222 MHz J-Pole

Its difficult to find quality antennas for the 222 MHz band. This antenna will get you on the air with great signal reports. Overall length is 49 inches with an 11 inch mounting stub.

The 440 MHz J-Pole

440 MHz single band dedicated antenna. Short, lightweight, and always more gain than a 1/4 wave groundplane; only 30 inches overall with 11 inch mounting stub.

Other antennas (see website for details)

153 MHz Public Safety / MURS Antenna
155 MHz Marine band / Public Safety Antenna
162 MHz Railroad / NOAA Weather Antenna
462-467 MHz GMRS band Antenna
118-127 MHz Airband Antenna
87-108 MHz Low Power FM band Antenna

To Order, Contact:

Michael Martens, KB9VBR
1228 Arthur St
Wausau, WI 54403
(715)845-4218
kb9vbr@yahoo.com



Order online at: www.jpole-antenna.com

KB9VBR

J-Pole Antennas

Affordable antennas with superior performance.



- Solid copper construction, Durable in the harshest of environments
- SO-239 connector soldered on at point of lowest SWR for band
- Low SWR. 1.2:1 or less at 146 MHz for the 2 meter J-Pole.
- Efficient radiator. 3db of gain when compared to a 1/4 wave groundplane antenna.
- 11 inch mounting stub for easy installation. 6 meter model has 18 inch stub.
- Can be painted to blend into the environment.

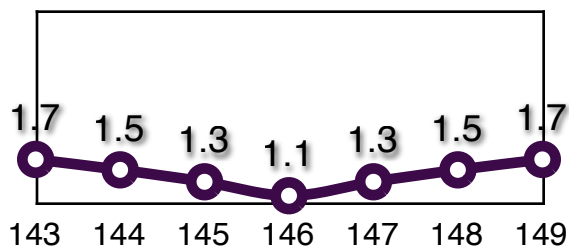
J-Pole antennas are balanced antennas. Since you will be connecting a balanced antenna to an unbalanced feedline, you may need to construct a balun to decouple the coax from the antenna. Doing so will increase the antenna's performance. Making the balun is easy, just take 5 loops of coax and loop them into a 6 inch diameter bundle. Secure the bundle with cable ties. The balun should be positioned about a foot away from the feedpoint.

Mount the J-Pole on a mast with at least 2 hose clamps or U-Bolts. The mounting section of this antenna is 11 inches long, that should be plenty of length to clamp the antenna onto a mast. The J-Pole is at DC ground, that means you can clamp it directly to a metal mast or support structure without affecting its performance. Just make sure that the mounting mast does not extend above the T connector. Seal the PL-259 connector with high quality electrical or Coax Seal.

As the antenna is exposed to the elements, the bright copper finish will slowly oxidize and create a lovely dark patina. This oxidation does not affect the antenna's performance.

The copper J-Pole is extremely durable. I have one installed at home that has gone through several winters without any problems. These antennas can also be mounted on a mast and jammed into the ground for an emergency station. Local ARES groups could work with emergency government to place J-Poles on the roofs of fire stations and shelter locations. These antennas require no maintenance and are inexpensive enough that they can be installed everywhere.

2 Meter J-Pole SWR Chart 144-148MHz



Go to www.jpole-antenna.com/FAQ for more antenna questions and answers.

What are the all copper J-Pole antennas constructed with?

My J-Pole antennas are constructed out of Type M solid copper pipe for the ultimate in durability and weather resistance. All joints are soldered with rosin core solder. An SO-239 connector is soldered onto the antenna at the point of lowest SWR.

How do your two meter J-Poles perform on the 440 MHz band?

The two meter J-Pole is tuned for maximum efficiency at the 2 meter band where the SWR is 1.2:1 or less at 146 MHz. It is a pretty good performer on the UHF band where the SWR is 1.5:1 – 2.0:1 between 445-450Mhz. This is still within the range of what modern radios can handle.

Can the antenna be painted?

You may paint the antenna with nonmetallic paint to protect it and help it blend into the surroundings. If you want to keep the antenna looking shiny and new on the tower, you can also paint it with a clear lacquer or nonmetallic enamel paint.

How to I connect your antennas to my hand held portable radio?

While the J-Pole antennas are designed to be base station antennas, they will all work very well with your HT or hand held radio. The antennas have an So-239 connector on them, and I recommend using coax cable with PL-259 connectors to connect the antenna to the radio. You will need an adaptor to connect the standard coax with PL-259 connectors to your portable radio. Radio Shack does sell an BNC to SO-239 adaptor and an SMA to SO-239 adaptor.

How much power will a J-Pole antenna handle

Typically, the 2 meter all copper J-Pole antenna will handle 250 watts or more of power. Copper is a very efficient conductor and will tolerate and dissipate heat energy very well.

What type of coax should I use?

Coax size is dependent on a couple of factors, most notably the length of your run and the frequency of your antenna. VHF and UHF signals are more prone to attenuation in the coax, so a low loss cable should be selected.

Feedline loss in DB per 100 feet:

Cable	146 MHz	446 Mhz
RG-58	6.5	12.2
RG-8X	4.7	8.6
RG-8U	2.3	4.7
9913/LMR400	1.6	2.9

A loss of 3 db will cut your power in half. A six db loss will cut your power into 1/4. I recommend RG-8 if your cable run is over 50 feet and RG-8X if it is less than 50 feet. You shouldn't use RG-58 for VHF/UHF unless it is a very short run (less than 15 feet.). GMRS J-Pole users should only use RG-8 for short runs and Belden 9913 for longer runs.

The SWR is really high on my antenna. What should I check?

Here are a few things you can check if your SWR is high.

- Check the coax, make sure there are no problems associated with it. The connectors should be well soldered or crimped without any shorts and there should be no apparent kinks in the cable.
- Check the mounting location, nearby buildings will affect the SWR. Keep structures at least six feet away from the antenna, or make sure the antenna is above the structure.
- Make a balun to keep RF from coming back down the coax. Make a coil of about 5 loops of coax with a coil diameter of about 6 inches. This coil should be located about a foot away from the feedpoint of the antenna. Secure the coil with cable ties or electrical tape.
- Inspect the antenna itself. Is the solder loose or cracked at the feedpoint. If it is, let me know.