

**Here are the building instructions on the 2 meter square loop.  
Credit is given to K0FF for most of this design.**

**We have added modifications that proved useful in the design.**

The mods will be presented under modifications in the design instructions.  
Special thanks to **W6ARQ** and, **KC5BBP** for thier input on this Antenna.

## **2 Meter Square Dipole by K0FF**

Here is the parts list and dim. sheet for the 2 meter square dipole, made of copper water pipe.

### **Parts List**

1/2 Inch Copper Water Pipe  
Long Sides 9 1/2 inches  
Open Ends 3 1/4  
2 Short Pieces on each side of "T" 4 7/16  
4-90 Degree Elbows  
2-Copper Caps  
1 Copper Tee  
Brass Plate for SO239  
Gamma Tube 4 3/4 of 3/8 Copper Tubing  
RG8 is 5 1/2 iches long  
Copper or Brass Gamma Tube Bracket  
SO239

### **Modification Parts (DO NOT USE STAINLESS STEEL)**

6 Brass Nuts-Note Any size  
2 Brass Screws at least 1 1/2 long

Instructions The mounting array to be affixed to a standard mobile mast that presents 3/8 X 24 threads.

Run coaxial cable right to the antenna and connect it to the built in SO-239.

There are two adjustments on the Antenna to match the coax Imp.

Adjust the Gamma Match Tube for Lowest SWR, then the tuneable stubs move in or out for lower swr.

Do not use Stainless Steel Screws, Soldering them to the end caps is almost impossible.

The 2 meter square loop is a folded Dipole around itself.

**The shape is 11" X 11".**

Solder the antenna parts together using 90 degree elbows at the corner open

ends and mind the gap.

All measurements are critical. The brass plate to hold them form an "L" 1-3/4" tall with a 1/2" lip.

A 5/8" hole is provided 1-1/4 inch from the bend, and attached using stainless steel or brass hardware.

Two small holes are drilled in the lip and mounted to the copper TEE with #6 self tapping screws.

Solder the 5 1/2 inch piece of RG8 to the SO-239.

When using the RG8 discard the outer shield and use only the Dielectric. Slip the RG8 inside the 4-3/4 Gamma Tube.

The Gamma bracket should be at least 1 1/2" long brass or copper.

Secure with stainless steel screws right before the 90 degree elbow.

Either side doesn't matter.

The Gap between the Open Ends is 2-3/8".

Adjustments to the gap in or out can be made with the modification of installing the brass screws on the end caps.

The Antenna is more or less Omni Directional and horizontally polarized.

It presents a high takeoff angle and is intended for use in the 144.200mhz area.

The Antenna can handle 100 Watts and has proved useful in working some satellites such as AO-27.

The Antenna provides excellant SSB results while mobile and have talked with other stations 200 miles with simularly equipped Antennas.

For further Information on assembly or instruction details Email the following hams below.

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[Kc5bbp lives too far back in the hills of Tennessee to get daylight...much less email!!!!](#)

I have found this Antenna works very well and, is a solid performer.

Best of luck with your Antenna.

**EXPERIMENT! EXPERIMENT! EXPERIMENT!**

73

Mike Gunter/Af4ar

Murfreesboro,Tn



GAMA MATCH CLOSE UP

