

## 6 METER EDZ SIGNAL SQUIRTER (DESIGNED FOR 50.200mhz + -)

The Six Meter Extended Double Zepp is a very easy and inexpensive antenna for the 6 meter buff to build in about an hour or less and will add about 3 db to your signal from it's broadside bi-directional pattern when installed about a half wave up from the ground. You might call it a dipole with gain!

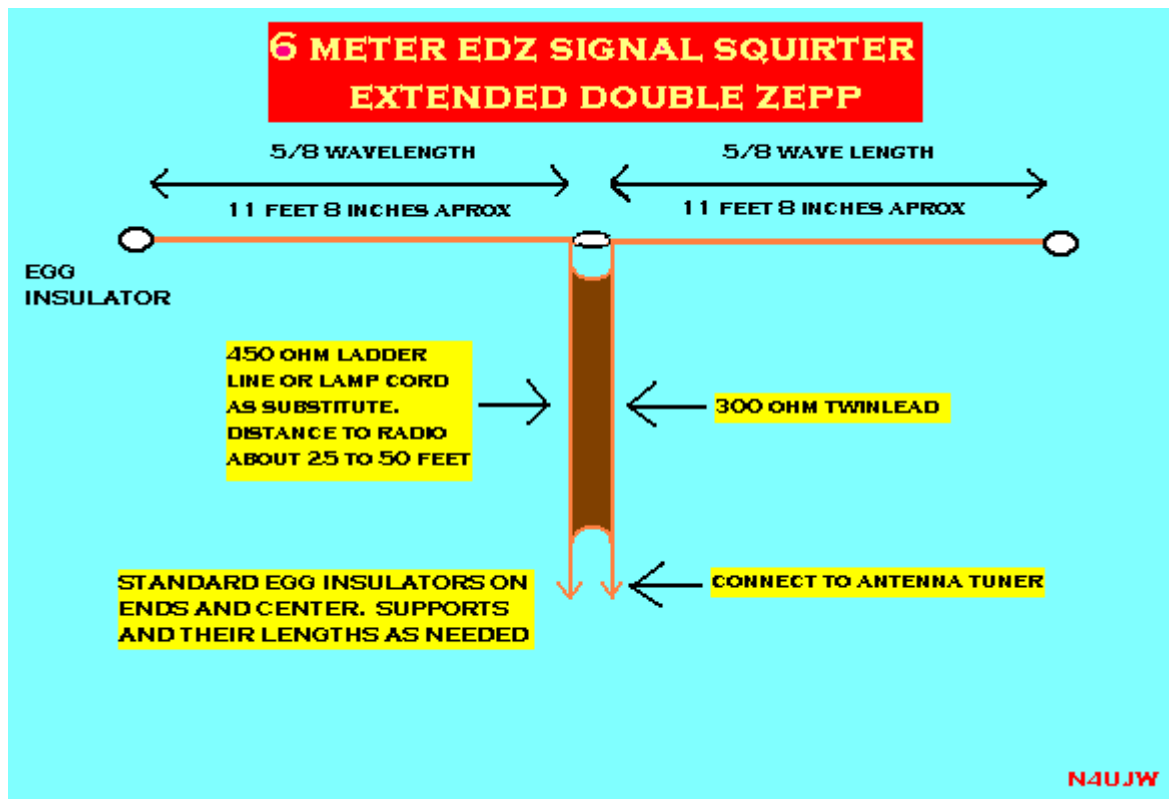
All of the materials used to build this antenna can be found locally or you may even have them laying around.

The wire for the main two halves of the antenna can be any strong wire size such as #14 stranded copper. The lead-in to the tuner can be 300 ohm "twinlead", regular lamp cord split in half or 450 ohm ladder line.

Keep the antenna and all of its parts including the line going to the tuner as far away from metal objects as possible to prevent pattern distortion, detuning, and swr problems. Support the antenna from ropes or cord of the proper length to trees, buildings, etc from the end insulators and as high as possible. Standard "egg" insulators or any other type of insulator (non-conductive) can be used on the ends and in the center.

**NOTE:** Cut the lengths for the horizontal sections about one foot longer than the actual lengths shown in the picture below so you will have enough wire to wrap thru the insulators and then back on it'self and tied tightly.

Below is a "crude" drawing of the antenna design....the pattern will be "looking at you and away from you as with any standard dipole.



You should end up with the approximate lengths shown in the picture drawing below.

Solder the connections at the center insulator and seal well with electrical tape and some kind of sealer appropriate for outdoor use. (you want to make the connections water tight if possible)

Attach the ends of the downlead to the "balanced" terminals of your tuner, fire up your 6 meter rig on 50.200mhz AM, using just enough power to check swr per normal procedures and trim antenna as needed for lowest swr as with any antenna project.

(You may get lucky and not have to do any trial and error!)  
 (Make sure you give your call and say testing while checking the swr!)

#### HOW TO CALCULATE APPROXIMATE LENGTHS FOR THE EDZ - OR HOW TO GET A MATH LESSON FOR FREE!

Since this is an Extended Double Zepp design, each half of the antenna is 5/8 wavelength long. If you remember, a half wave dipole length is calculated using the formula  $468/\text{freq in mhz} = \text{total length in feet}$ . A half wave when converted to decimals = .5  
 A full wave = 1.0  
 Therefore we can determine what 5/8's wave length long would be by first converting the formula above to a full wave length,  
 $468 \times 2 = 936$

SO,  
 $936/\text{our freq in mhz}$  would give us the total length of a full wave length antenna, but we are looking for 5/8's of one wave length for each side

so we have to determine what 1/8 of one wave length is and then multiply by 5.

**Example:**

Divide 936 by 8 (number of 8ths in one wavelength) = 117 for 1/8 wave length.

We're looking for the 5/8's formula so:

if  $117 = 1/8$

then  $5 \times 117 = 585$  (our magic number!)

So using this new found number substituted in the formula we have:

$585/50.2\text{mhz} = 11.65$  feet per side!

NOW WE KNOW EACH LENGTH PER SIDE!

BUT WAIT!!!!

HOW MUCH IS .65 of one foot IN INCHES?????

"MAN! I'M NEVER GONNA GET THIS ANTENNA UP BECAUSE OF ALL THIS MATH!"

Don't be so impatient!!!!!!

Here is how to find out how much .65 of one foot is!

Since we have decimals in use, .65 is the same as saying 65%.

Simply multiply 12 inches X .65 = 7.8 inches!

Our length for one half of the antenna is = 11 feet + 7.8 inches = 11 feet 7.8 inches per side or rounded off.....11 feet 8 inches!

[More formulas and another EDZ project here!](#)

Oh! I hate math!

"But sometimes ya gotta" Good luck with your project! 73

*This project is based on an article published in CQ VHF MAGAZINE*

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