

## Some small wire antenna ideas.

The GM3AAX delta loop. This needs a pole about 25' high and about 30 feet of horizontal garden space. It tunes 40m and 15 m and with the loading coil also covers 30m.

<https://www.scribd.com/document/99993086/Multi-Band-Mono-Delta-Loop-Ant>

This is a counterpoise tuner. It has a current meter to optimise the tuning of the counterpoise for each band used and once the current maximum is found the main antenna tuner is used to get the best SWR.

<http://www.remeeus.eu/index.php/ham-radio/miscellaneous/artificial-ground-tuner.html>

This article looks at the W3EDP, an 84 foot wire against a short counterpoise. The main wire can be bent to fit a garden and it works well 80m upwards but it does need a versatile (but simple) tuner. Ideal for a homebrew project and perfect for

QRP. <http://zs6rsh.blogspot.co.uk/2014/03/rf-current-measurements-on-long-wire.html>

The half wave end fed is a brilliant monoband antenna and can be used in an upstairs shack. The counterpoise is very short- a few feet. The key to success is not to have any DC connection between the antenna and the rig and the transformer coupled arrangement is best. While this design shows an 80m design it can be cut for other bands, just scale the counterpoise which would be about 6' on 30m for example.

<http://n6pet.com/80m-wire-antenna/>

Here is a very short antenna. It will be a compromise but it is better and far cheaper than the miracle antennas advertised- it is a good fun project.

<http://www.nc4fb.org/wordpress/ultra-compact-multi-band-wire-antenna/>

An antenna current meter. This does not have to be calibrated to be useful, you simply want maximum current in most circumstances. The diode does not have to be Shottky, a germanium diode works well and a simple silicon one like a 1N914 or 1N4147 works fine, albeit a little less sensitive. You don't have to use a clamp on ferrite, the RSGB ferrites work fine if you pass the antenna or counterpoise wire through them.

<http://www.ifwtech.co.uk/g3sek/clamp-on/clamp-on.htm>