

## Magnetic Loop Antenna's.

---

Why is an Magnetic Loop antenna so special, this antenna is picking only the MAGNETIC part of the ELEKTRO MAGNETIC radio wave. The big advantage of this antenna is that the electric interference from the big city (streetlights, television's , cars etc...) have no influence on the received signal. With the loop you can hear other stations that you can't hear if you use a DIPOLE, with a dipole the stations are buried in the noise.

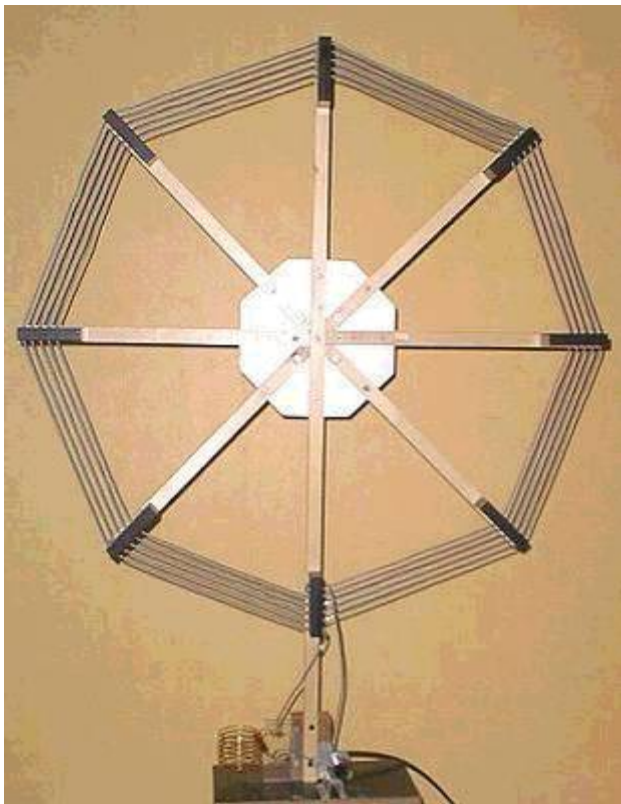
---

## Multi Turn Magnetic Loop.

---

This is the first loop I build from a article in the QST from February 1996, it's 30 Inch-diameter, and it's designed by G2BZQ/WØ for 80 M.

---



### Most asked Questions:

I'd like to talk a little more on your setup. it seems like something which I could get together if only some more data was available. do you have any notes etc still laying about since its build ?

The theory for calculating the loop is very simple. The circumference of a magnetic loop is 1/4 wave of the design frequency.

Example for 14 MHz.

$300 / 14 \text{ MHz} = 21.428 \text{ m}$  is 1 wave  
 $21.428 / 4 = 5.357 \text{ m}$  is 1/4 wave circumference

$5.357 / 3.14 = 1.706$  m diameter.

The recommendations are that you can tune the loop from the design frequency to the frequency divided by 2 to keep the efficiency acceptable.

$14 \text{ MHz} / 2 = 7 \text{ MHz}$

I made the small loop (800mm / 31.5 ") from soft copper tube on a role that you can buy in a plumbershop and it's easy to make a nice circle if you draw on the ground a circle with a rope and a piece of chalk.

For mounting the loop to the hardboard I used plastic clamps that they use for mounting copper tube on the wall.

---

## A very easy to build Piston Capacitor.

