

Two Receiving Magnetic Loop Antennas

Twin Magnetic Loop Antenna

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Twin Magnetic Antenna has some advantage compare to a usual magnetic antenna. The advantages are that the twin magnetic antenna, compare to usual magnetic antenna, has higher Selectivity and higher Effective Height. Twin Magnetic Antenna was tested in a pocket transistor radio. The antenna was able to receive radio stations from the distance up to 800- km. **Figure 1** shows the antenna.

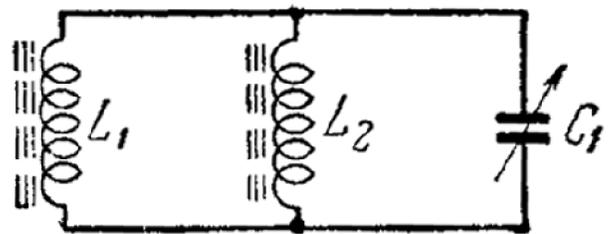


Figure 1 Twin Magnetic Antenna

Twin Magnetic Antenna consists of from two usual magnetic antennas switched into bridge. Effective height of the antenna would be higher in $\sqrt{2}$ compare to with a single magnetic antenna.

Thereof the L1 and L2 are connected to a bridge the inductance of the each inductor should be higher (for the same working band) compare to inductor for a single magnetic antenna.

Loop Antenna for DEGEN- 1103

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Receiver DEGEN- 1103 (in the USA/Canada it is sold as Kaito 1103) has sensitivity at MW near 100-micro-volt/m and at LW near 1- milli- volt/m. The sensitivity may be increased at least in 20- times if the receiver would be placed inside a loop shown on Figure 2. Sensitivity of the receiver depends on distance between axis of the loop and wires of the loop.

Loop with sizes 300x400- mm made of from wooden stick with sizes 50 x 10- mm. Loop contains 10- turns of the copper wire in 0.8- mm diameter (20- AWG). At the MW range the Loop is tuned by a variable capacitor 3x (12...500- pF). At the LW range an additional capacitor is switched to bridge to the variable capacitor. The additional capacitor may have capacity 1500- 2000- pF.



Figure 2 Loop for DEGEN 1103