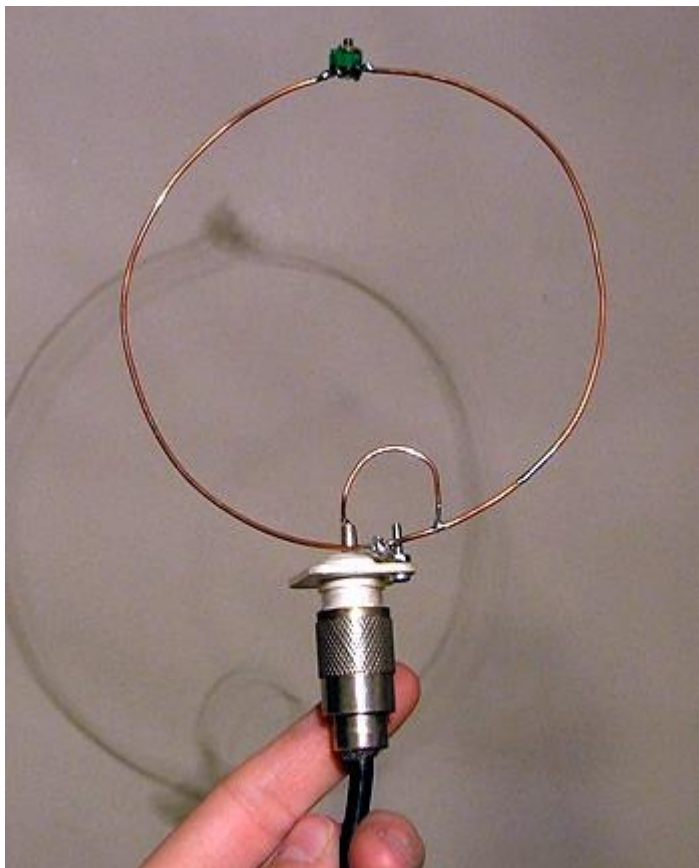


# Magnetic Loop Antennas

By M0UKD

I decided to experiment with Magnetic Loops. First, I tried something simple. A 145MHz 2m loop. Using the software at the bottom of this page, I worked out that a 36cm length of wire, will need a capacitance of around 3.6pf, and around a 50% efficiency. Making it any larger, and more efficient at 2m requires too small of a capacitor (eg 1pf and 70cm long wire loop, for an efficiency of 88%). Making efficient loops at HF is easier as the capacitance's are larger and stray capacitance is therefore not such an issue.

So I tried some local contacts on the 2m loop, and was surprised at the results, even with it just poked out of the window. The trimmer is a 2-22pf. Its probably just OK for 5w or so. It will tune from 50MHz to about 200MHz, although tuning is fiddly because of stray capacitance of your hand, and also must be done with an insulated tool. An antenna analyzer is really needed for building this loop.



VHF Magnetic Loop (145MHz)

It is coupled by a small loop. It took some fiddling with different lengths to get it right. A Faraday loop this small was out of the question. This inspired me to build a bigger loop for HF!