

Simple Receiving Magnetic HF Antenna- S- Match Loop

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While experimenting with S- Match I decided use in the match magnetic loops. Yes, why not use in this one not binocular transformer but just usual loop. I used small loop with diameter up to 70 cm. Each loop contains two turns. Connections the loops with each other are shown on the **Figure 1**. I used two wires with different color inside of the plastic frame that easy connect the loop together. Outdoor antenna connected through transformer 1: 4 or 1:9, it depends on local conditions and antenna design. Transformer coiled on ferrite ring ¼ inch OD, 1/16 inch ID.

Transformer has ratio 1:4 at winding 10 turns/5 turns and ratio 1:9 at winding 15 turns/5 turns. By experiment find best position to hook up antenna to the transformer and hook up the transformer to S- Match. **Picture 1** shows design of the S- Match Loop. You can see connections of the two loops, antenna transformer, tuning capacitor and selectable coil. **Picture 2** shows the Simple Receiving Magnetic HF Antenna- S- Match Loop.

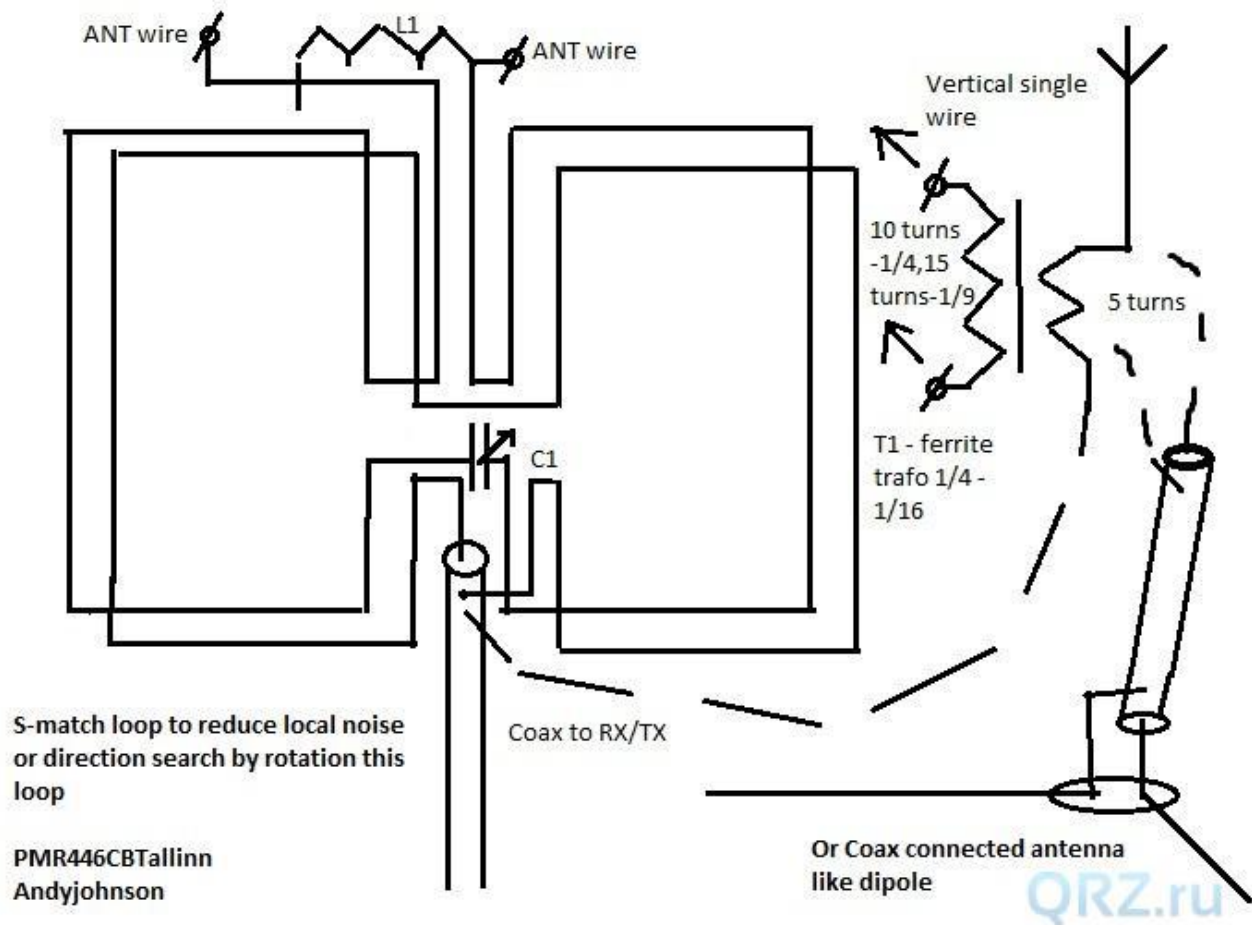
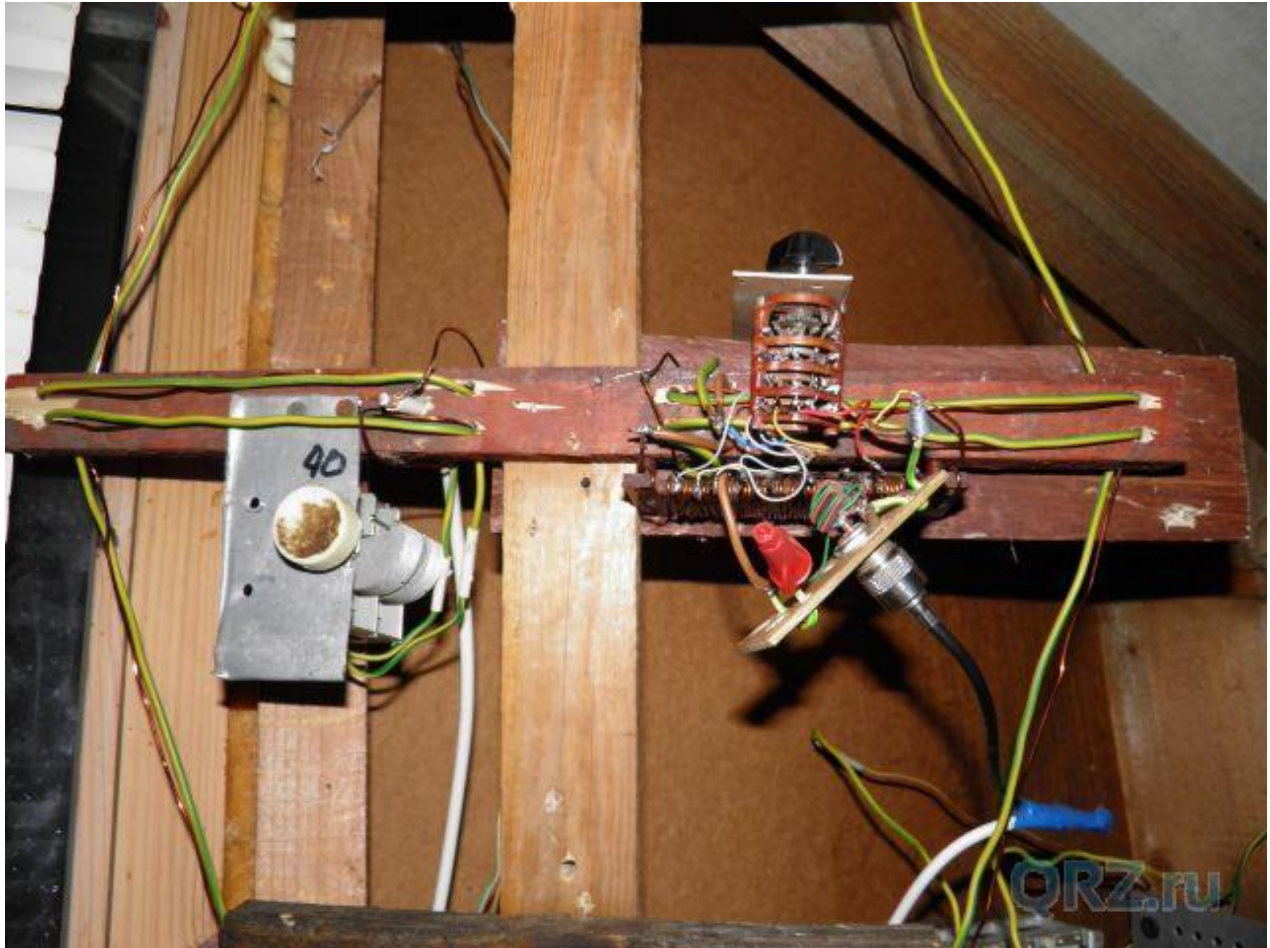


Figure 1 Simple Receiving Magnetic HF Antenna- S- Match Loop



Picture 1 Design of the S- Match Loop

Tuning the system is simple matter. By selections the tap from the coil and capacity of variable capacitor the system is tuned to resonance on to maxima of the receiving signal then by turning the small loop find position where noise is the minimal. Working range of the antenna system depends on value of the variable capacitor and selectable coil. As well it may depend on the length of the antenna wire. I connected two antenna wires in 10 meter long directly to the loop. However, if you use antenna feeding through a coaxial cable it is better connect the coaxial to S- Match Loop through transformer as it is shown on **Figure 1**. I used the antenna S- Match Loop on the 80- 10- meter bands.

Credit Line:

<https://www.qrz.ru/schemes/contribute/antenns/s-match-loop.html>



Picture 2 Simple Receiving Magnetic HF Antenna- S-Match Loop.