

Small Directional Antenna for 21- MHz Band

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The antenna is experimental variant of small directional antenna. Antenna is easy to do and for tuning, require a small room for installation, therefore provide good directivity.

Antenna is made from two aluminum Hula- Hoops. The sport circles are light to weight, easy to find and there are not expensive. As usual Hula- Hoop has diameter near one meter (here are used such Hula- Hoops). **Figure 1** shows design of the antenna.

Hula- Hoop is cut at the jointing, one side of the circle is feed-point Of the antenna to another side of the circle an aluminum stripe with dimensions 200 x 25- mm is connected.

Antenna is fed through a transformer $\frac{1}{4}$ or 50/200 Ohm. Design of the transformer is shown on the **Figure 1**.

Antenna was installed on the wooden mast in 7.5- meter high. In practice the antenna shows plus 7.5- dB in bidirectional side and minus 26- dB forward- back ratio. Antenna should feed through coaxial cable with length that does not multiple to 0.625 lambda because that length may transform antenna impedance to unappreciative way. Antenna is tuned to minimum SWR by bending the aluminum stripe inside the Hula- Hoop.

73! de RX3AX

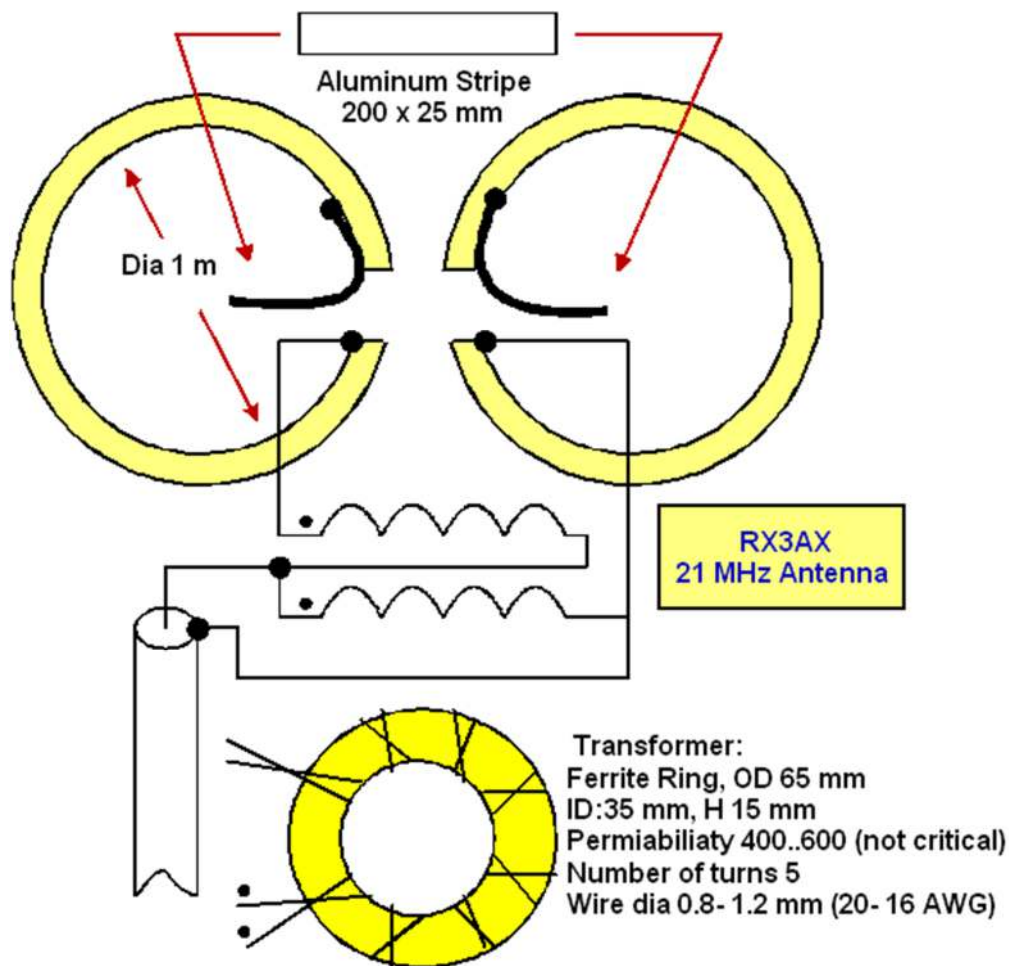


Figure 1 Small Directional Antenna for 21- MHz Band