

Fig 3: Practical design of a turnstile antenna.

ated as high as possible above the horizon, preferably above the house roof or in an open air space. Experiments made with a turnstile antenna located on the balcony of a blockhouse, satellites flying over at a low elevation angle were shielded by building or balcony. In short,

it is only possible to receive signals that are "seen" by the antenna. Instructions for building several types of turnstile antennas are on the authors homepage. Drawings describing the construction of a simple antenna made from plastic tube and 8 - 12 mm aluminium tube are given in the literature [18].

We have tested the antenna shown in Fig 3 with the receiver. The antenna was installed on a roof at 40m above the ground and gives high quality signal reception. The feeder connection for circular polarisation is shown in Fig 4. Fig 5 shows the polar diagram for this antenna, particular attention should be paid to the dipole to reflector spacing because it changes the polar diagram, the author chose $3/8\lambda$.

The manufacture of the Quadrifillar Helix antenna, which is shown in Fig. 6 can be done only in a well equipped machine shop. This antenna has slightly better reception of signals and moreover it can be used also in moving objects, such as yachts cruising in Mediterranean Sea. The article [20, 21] contain many descriptions of simpler mechanical constructions suitable, however, only for a short-term seasonal use, or for antennas made of copper heating tubes. If the distance of your receiver from the antenna will exceed 10m, I would recom-

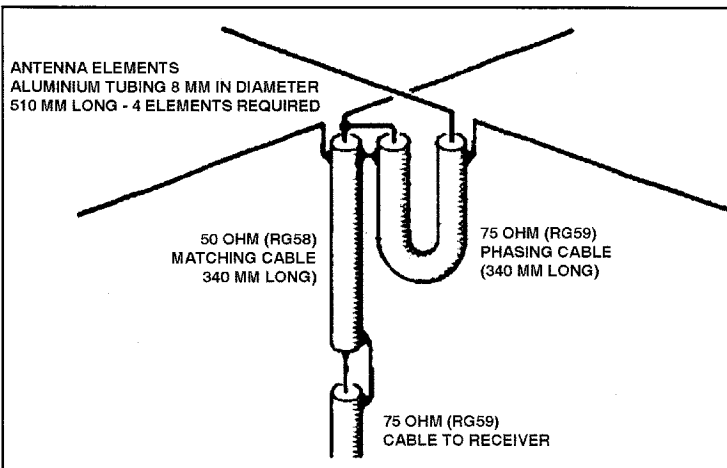


Fig 4: Details of feeder for turnstile antenna.