Low Noise HF- Antenna

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Low noise antenna could be used at environment with interferences from car and home appliances. **Figure 1** show the design of the Low Noise HF- Antenna for HF- Band 16- 50- meters.

Antenna consists of two cross- dipoles that are connected with receiver through twisted two- wire cord. It is possible to use usual main wire with twisted (artificially) wires.

However, it is better to use special RF- Twisted cable. Such cable was produced at the USSR at trademark RD- 16

The antenna has almost omnidirection diagram of directivity. However, stations that are in orthogonal direction (compare to the antenna wires) should be received better then stations that are in parallel (compare to the antenna wires) direction.

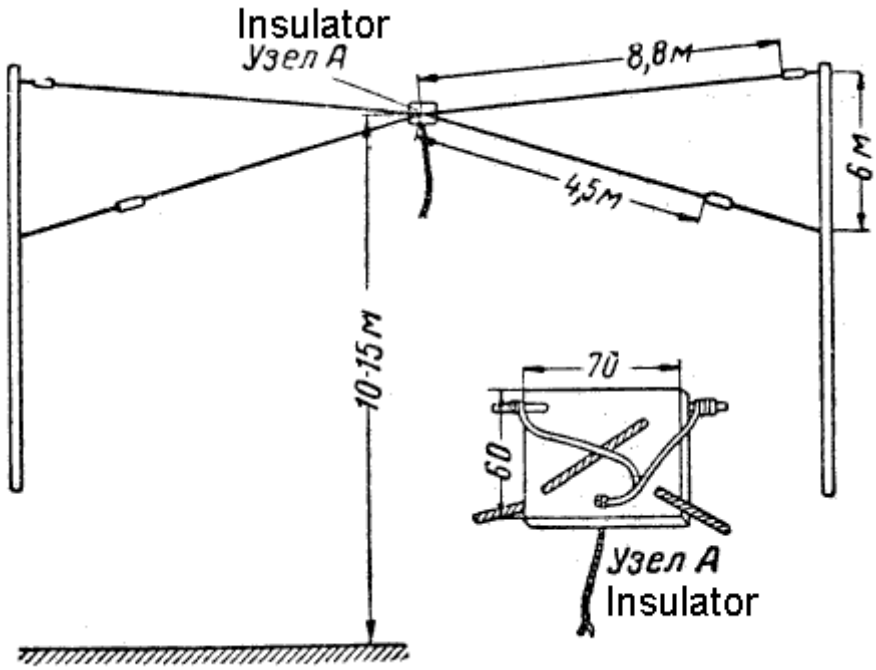

Figure 1 Design of the Low Noise HF- Antenna

Good result at strong interferences could be provided antenna shown in the **Figure 2**.

Antenna wire is hanged up at height 10-12- meters between two masts. Feeder of the antenna has cross-wires. At strong interferences part of the feeder, that it is placed in the zone of the strong interferences, may be made like feeder for antenna from **Figure 1**.

Antenna coupled with the receiver with help of a special symmetrical coil that is placed at the beginning and at the end of the input inductor of the receiver. Each part of the coil consists of 2…4 turns of the wire in diameter 0.5- 0.8- mm (24- 20- AWG).

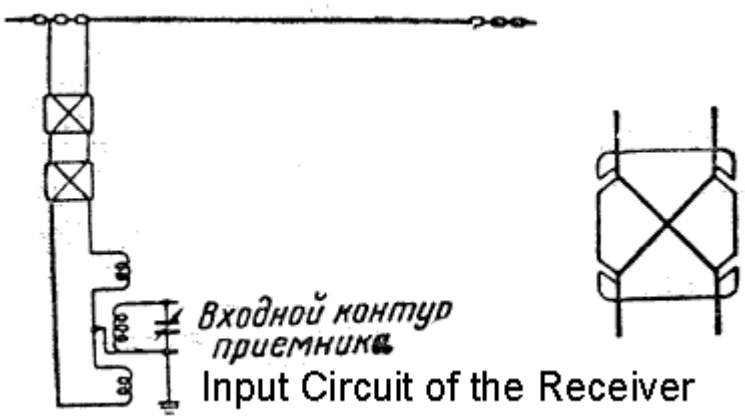

Figure 2 One Wire Low Noise HF- Antenna

Considerable lowering of the noise the antenna (Figure 2) provides at 80 and 160- meters.