

Three- Rod Vertical Ground Plane Antenna for the 10- meter Band

By: DM3SF

Credit Line: *Funkamateur # 8, 1968.*

Input impedance for a classical Vertical Ground Plane Antenna is 30... 33- Ohm. For matching of the input impedance with a coaxial cable (50- or 75- Ohm) it needs use to a kind of matching device. Often it is not conveniently and complicates the design of the antenna. DM3SF made simple Vertical Ground Plane Antenna that has rigid design, does not require any tuning and has input impedance close to 75- Ohm. It allows use for the antenna a cheap TV-Coaxial cable. The 75- Ohm coaxial as usual may be good matched with most of ham transceivers that has output for antenna "50- Ohm."

Figure 1 shows design of the antenna. The antenna made of three rods (*item 1*). The rod made from metal (copper or aluminum). Diameter of the rods is not critical. It may be 8... 15- mm. The rod has length 2610- mm. Gap between the rods is 10- mm. All three rods are connected together at the top. At the bottom two left sided rods are connected together. Last right rod connected to the radials (*item 2*) of the antenna. Radials may be made from the same rod as the antenna radiator made of. The radial has length 2620- mm. Core of the coaxial cable (*item 3*) is connected to the left sided rods. Braid of the coaxial cable is connected to the right sided rod with radials.



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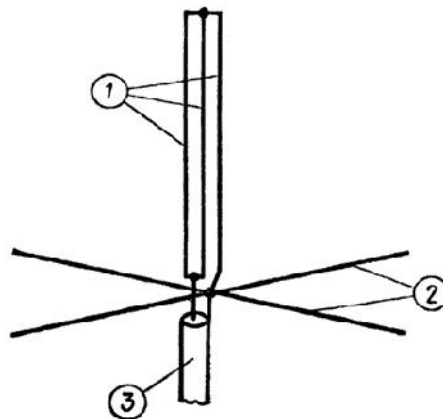


Figure 1 Design of the Three- Rod Vertical Antenna for the 10- meter Band