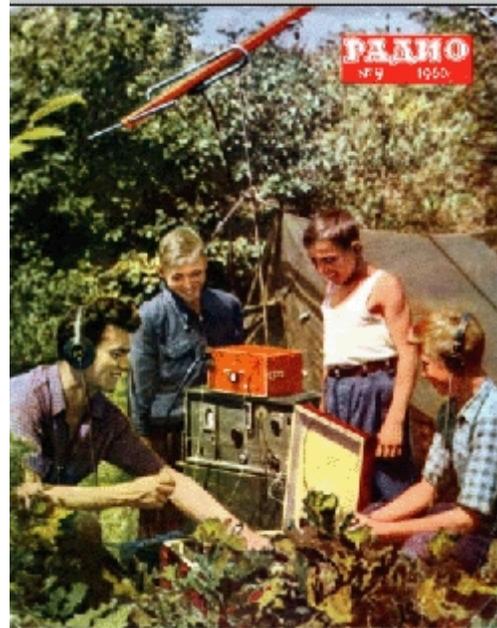


Vertical Antenna for 80- 40- 20- 15- and 10- meter Bands

Yuri Medinets, UB5UG, Kiev
Credit Line: Radio # 9, 1960, p. 44

The antenna is designed to work at 80-, 40-, 20-, 15- and 10- meter Bands without any commutation in the ATU (Antenna Tuning Unit). It is reached with the help of ATU made on the base of an open stub that is connected to the vertical radiator and counterpoises. The stub made from a coaxial cable and has electrical length 0.5- lambda at the 80- meter Band.



Radio # 9, 1960
Front Cover

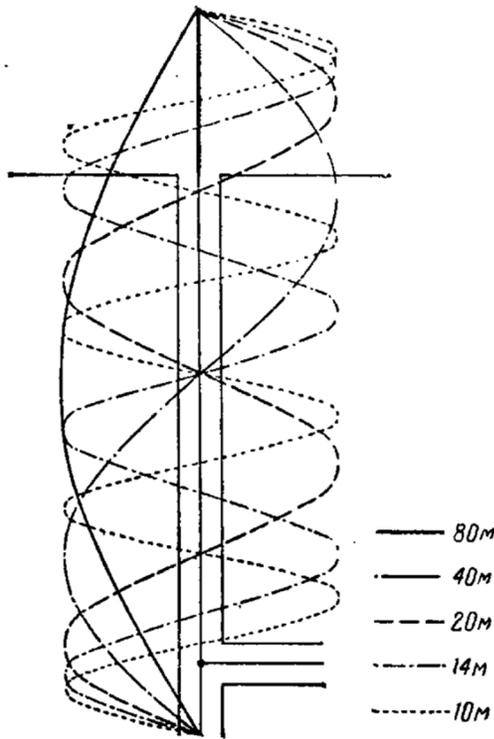


Figure 1 Current distribution along the antenna and the Stub

Is it possible to find terminals at the stub where matching on the amateurs Bands 40-, 20-, 15- and 10-meter is rather possible. Current distribution along the antenna and the Stub is shown on the **Figure 1**.

Design of the antenna is shown on the **Figure 2**. Length of the Vertical radiator and length of the stub is optimized for good diagram directivity for all working bands.

ПЯТИДИАПАЗОННАЯ ВЕРТИКАЛЬНАЯ АНТЕННА

Header of the Article

ANTENTOP- 01- 2012, # 016

PK-1- Russian Coaxial cable 77- Ohm

PK3- 3- Russian Coaxial cable 75- Ohm

Feeding terminals are chosen to best match of the antenna at all working bands. For the feeding terminals there were obtained: SWR at the 80- meter Band- 3... 3.5; SWR at the 40-, 20- and 15- meter Bands- no more the 1.5; SWR at the 10- meter Band- near 2.

Antenna made as an usual Ground plane antenna. Vertical Radiator made of aluminum tubes in diameter 20- 35- mm. Four counterpoises attached to the mast of the antenna with help of nuts' insulators. Stub of the antenna is radiated so it needs to be away from any conductive subjects.

The antenna was tested at the UB5UG radio station from July 1960 and it was obtained quarter good results. Antenna works fine at 40- and 20- meter Bands. At the 10- and 15- meter Bands the antenna works satisfactory (DD of the antenna is radiated at too high angles). At the 80- meters the antenna works also quarter satisfactory.

Vertical Antenna for 80-, 40-, 20-, 15- and 10-meter Bands

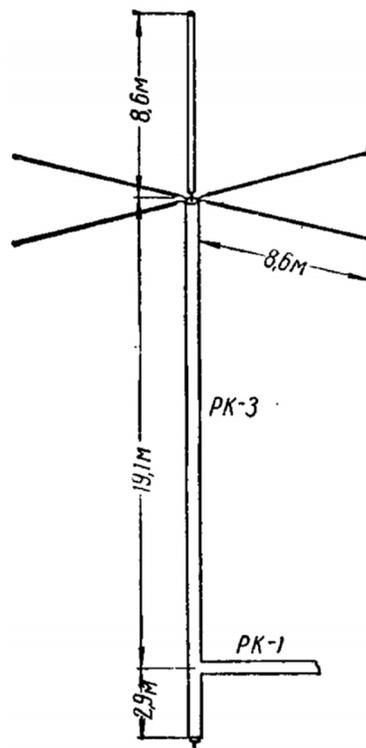


Figure 2 Design of the Vertical Antenna for 80-, 40-, 20-, 15- and 10- meter



Spiral Antenna from UN7GZZ



Credit Line: <http://forum.qrz.ru/thread22310-253.html>