

Helical Antenna for the 20- meter Band

Vladimir Semenov (RU4SJ)

Credit Line:

http://hamradio.mari-el.ru/technics/Spiral_RU4SJ/index.htm

Antenna bandwidth 13.941- 14.504 MHz. SWR 1.0:1.0 at 14.207 MHz. The Helix Antenna was fed by 75- Ohm coaxial cable in 15.82- meter length.

Design: PVC Pipe in diameter 110- mm and length 68- cm was used for the antenna. Antenna was wound by copper tube with OD 6- mm. Photos are shown design of the antenna. Lower part of the antenna contains 10 $\frac{3}{4}$ - turns and wound above the tube. Middle part of the antenna contains 35.5 turns. The coil is inside of the tube. Upper part of the antenna contains 7 turns and wound above the pipe. At the 20 meter Band the inner wire of the coaxial cable is connected to 5 turn (from the cold end) and ground of the coaxial cable is connected to the beginning of the spiral. Antenna should be placed in 50 cm above a surface.

Band 15 meter: The antenna being tuned to 20- meters should be matched at 15 – meter Band.

Band 10 meter: Antenna may be tuned at 10- meter Band. Ground of the coaxial cable is connected to 6 turn (from the cold end) and inner wire of the coaxial cable is connected through inductor (OD- 9- mm, 7 turns of 1,0- mm (18- AWG) copper wire) to 5th turn from the cold end.

73! RU4SJ

