

SHORT 'RUBBER DUCK' FOR VHF/UHF HAND- HELDIgor, UA6HJG, ua6hjq@mail.ru

All portable hand – held radios have a short “rubber duck” antenna. Some of the rubber duck antennas are rather long and if it is not necessary to communicate on a far distance, the long antenna just hinders to use a hand- held. I decided to make a short rubber duck antenna that is convenient for daily usage and for short distance communication.

Range 144 - 146 MFu**... For Yaesu VX-1R and C - 508**

I have made this antenna for **VX-1R** as it has a small RF-socket SMA. Antenna has length in 43-mm (together with RF-socket). Copper wire of diameter 0.6-mm (# 23 AWG) is coiled up a turn- to turn on a form of diameter of 8-mm. 25.5 turns were coiled. At thus the resonance of the antenna was at 145.3-MHz with SWR 1:1. After winding and checks of the resonance, put on a shrink plastic tube on the antenna, and heat it.

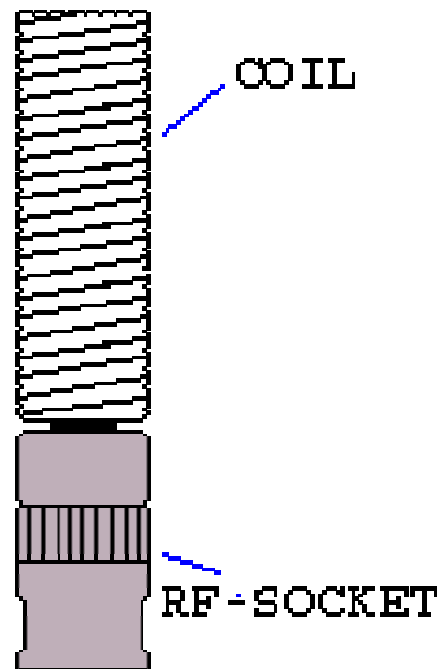
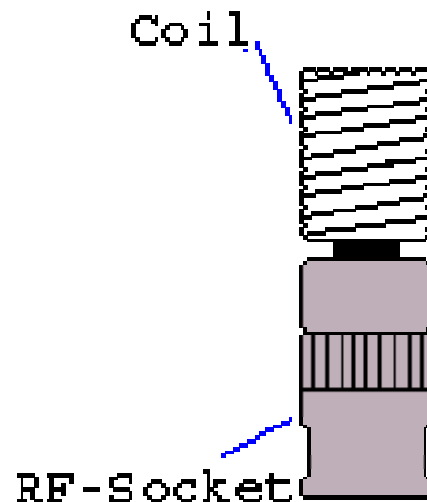
For any stations having BNC socket

Antenna has length in 69-mm (together with RF-socket). Copper wire of diameter 1.3-mm (# 16 AWG) is coiled up a turn- to turn on a form of diameter of 10-mm. 22 turns were coiled. At thus the resonance of the antenna was at 145.3-MHz with SWR 1:1. After winding and checks of the resonance, put on a shrink plastic tube on the antenna, and heat it.

Range 430 - 440 MFu

The design of an antenna for a range of 433-MHz does not differ from the previous design, only it need to reduce the number of turns of the coil. Antenna has length in 42-mm (together with RF-socket). Copper wire of diameter 1.3-mm (# 16 AWG) is coiled up a turn- to turn on a form of diameter of 8.5-mm. 6 turns were coiled. At thus the resonance of the antenna was at 435.3-MHz with SWR 1.8:1. After winding and checks of the resonance, put on a shrink plastic tube on the antenna, and heat it.

These designs were checked with hand-held radios VX-1R, C-568, FT-50 and C-508. At range of communication in city 1-2-kms the home- brew rubber duck almost do not lose to commercial – made ones.

73!**145 MHz 'Rubber Duck'****430 MHz 'Rubber Duck'**Credit Line: <http://www.cqham.ru/>