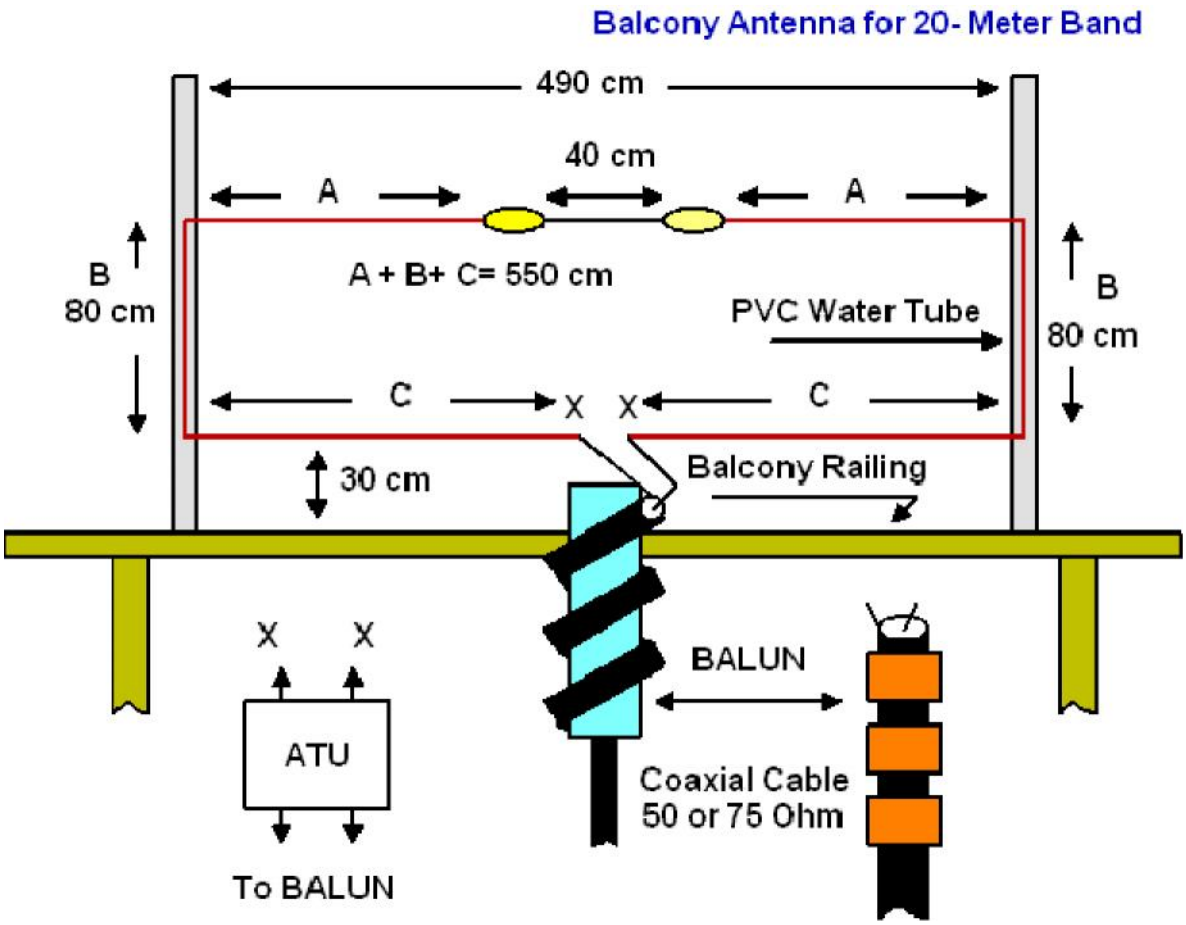
Balcony Dipole Antenna for 20 Meter

Credit Line: Forum WWW.CQHAM.RU



Description and pictures of the Balcony Dipole Antenna for the 20 Meter were published in ham forum at www.cqham.ru . Author of the antenna is unknown to me. However the antenna is work and may be used in tight conditions.

Antenna may be made practically from any wire (strand, solid) having a reasonable diameter – 0.5- 2.0- mm ((24- 12 AWG). Antenna may be installed at any balcony of 3- 6 meter length. The main thing is that A+ B+ C should be initially equal near 5.5- meters. Antenna tuned into resonance by shortening the part A. Part B of the antenna take main role in the radiation so the parts should be as long as it is possible. (For example, similar antenna UR5WCA, published at http://www.antentop.org/009/ur5wca009.htm, has helical wounded parts B and has no parts A.) Lower part C of the antenna should be placed at distance at least 30- cm under the balcony railing especially if this one is a metal made thing.

It would be very useful to place RF choke (or balun 1:1) near the feed point of the antenna. Most simple design of the balun may be done by the feeding coaxial cable that wound on to plastic form in 15- 30 mm diameter and contained 10- 20 turns. Also RF – choke (balun 1:1) may be made by putting 5- 10 ferrite ring or several ferrite clips on the coaxial cable.

Theoretically (in the free space) such antenna has low input impedance (near 20 Ohm) and narrow bandwidth. So it may be useful to install between antenna feed point X-X and the balun a simple ATU that may be made by any known schematic. However my experience shows that near a lossy house wall and metal balcony railing such antenna may have input impedance close to 50- Ohm (so it is no need any ATU) and 200- 500 kHz bandwidth at 1.5:1 SWR on the 20- Meter band.

73! VA3ZNW