

Delta Antenna for 80-, 40-, 20- and 15- meter Bands

*The publication is devoted to the memory
UR0GT.*

Credit Line: Forum from:
www.cqham.ru

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The Delta Antenna has perimeter 86- meter. Antenna has resonances at four amateur bands. There are 80, 40, 20 and 15 meter. However, input impedance at the bands not allows use a 50- Ohm coaxial cable to feed the antenna with low SWR at all the bands. Best solution is to use a 100- Ohm coaxial cable. Then simple ATU to match the antenna system with transceiver.

By the way, common use TV 75- Ohm coaxial cable may be used to feed the antenna. Two wires open line allows use the antenna at all amateur HF bands. At this case an ATU should be used to match the antenna system,

Figure 1 shows three version of the antenna. Each of the versions has some advantages and disadvantages.

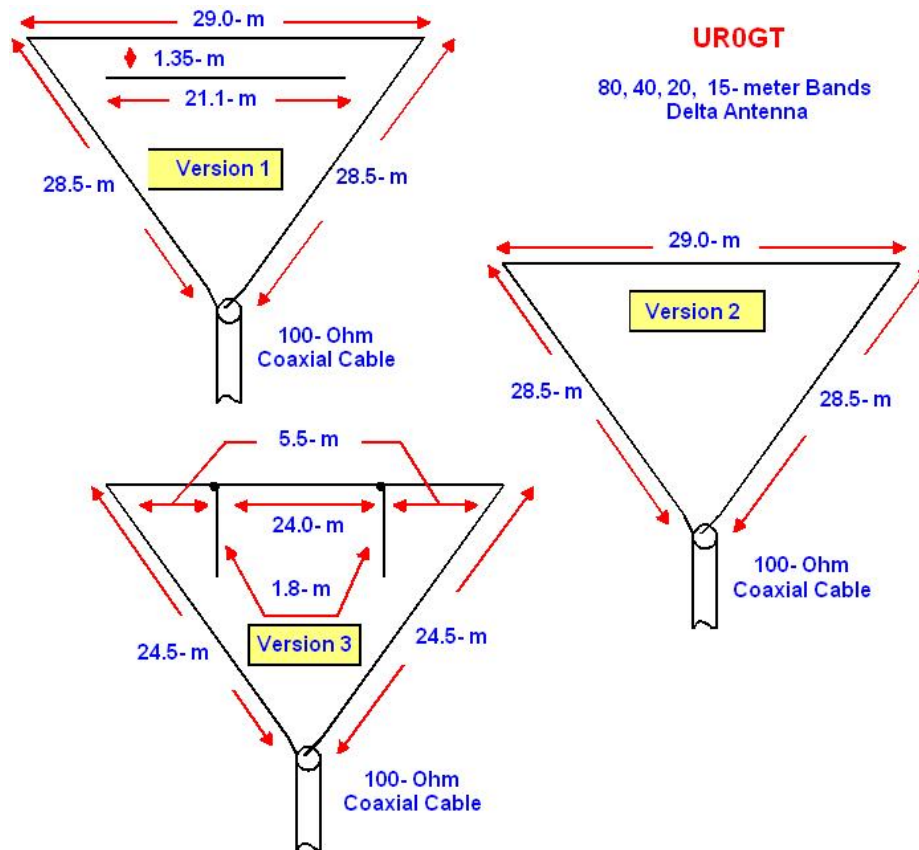


Figure 1 Design of the Delta Antenna for 80-, 40-, 20- and 15- meter Bands

Figure 2 shows SWR at 80- meter Band for version 1. Figure 3 shows SWR at 40- meter Band for version 1. Figure 4 shows SWR at 20- meter Band for version 1. Figure 5 shows SWR at 15- meter Band for version 1. Antenna is placed at height 15- meter above the ground.

Figure 6 shows SWR at 80- meter Band for version 2. Figure 7 shows SWR at 40- meter Band for version 2. Figure 8 shows SWR at 20- meter Band for version 2. Figure 9 shows SWR at 15- meter Band for version 2. Antenna is placed at height 15- meter above the ground.

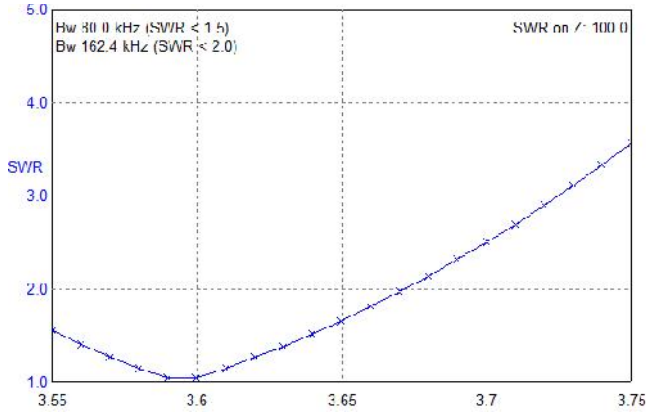


Figure 2 SWR at 80- meter Band for version 1

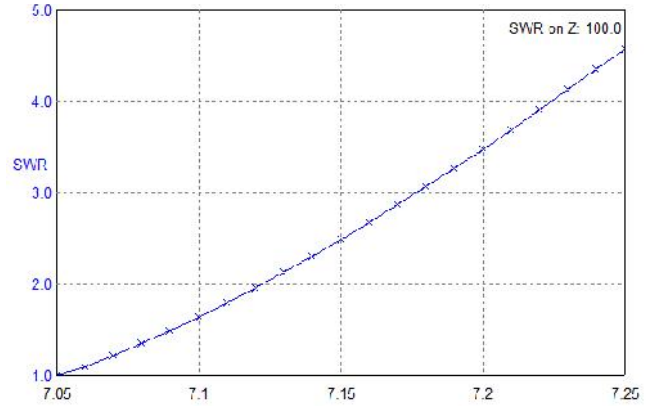


Figure 3 SWR at 40- meter Band for version 1

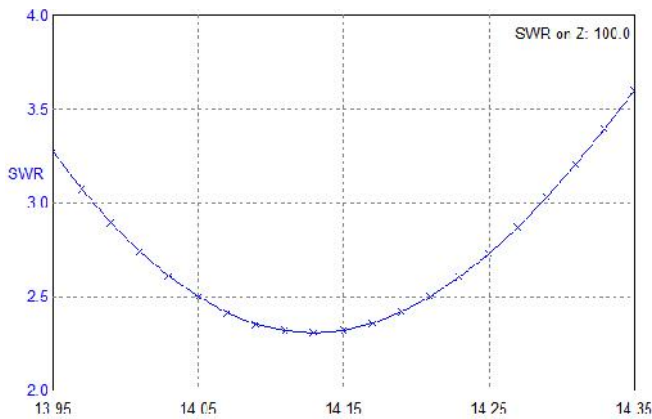


Figure 4 SWR at 20- meter Band for version 1

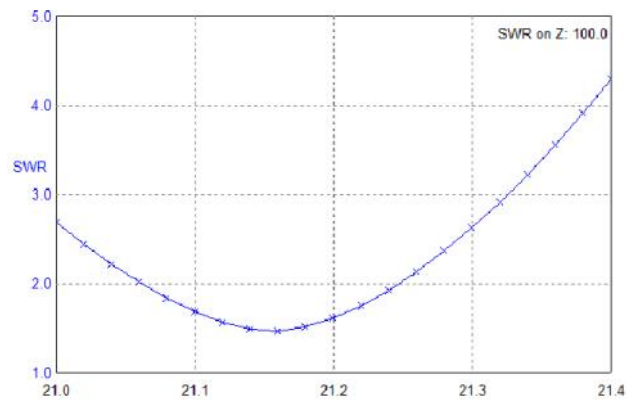


Figure 5 SWR at 15- meter Band for version 1

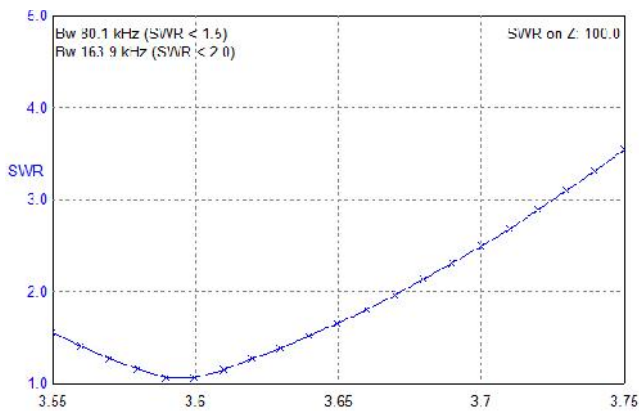


Figure 6 SWR at 80- meter Band for version 2

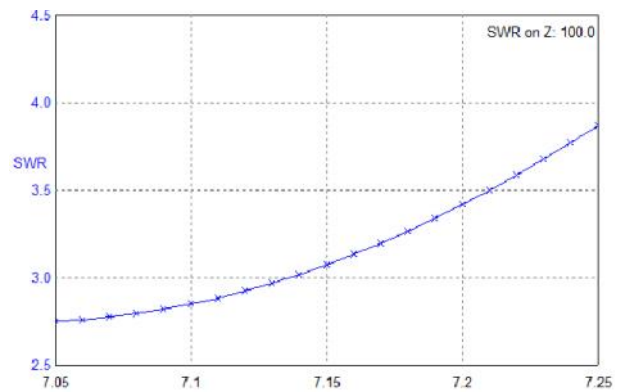


Figure 7 SWR at 40- meter Band for version 2

ANTENTOP- 01- 2014, # 018

Figure 10 shows SWR at 80- meter Band for version 3.
Figure 11 shows SWR at 40- meter Band for version 3.
Figure 12 shows SWR at 20- meter Band for version 3.
Figure 13 shows SWR at 15- meter Band for version 3.
Antenna is placed at leaning position at the ground.

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The MMANA model of the Delta Antenna for 80-, 40-, 20- and 15- meter Bands may be loaded: http://www.antentop.org/018/ur0gt_delta_018.htm

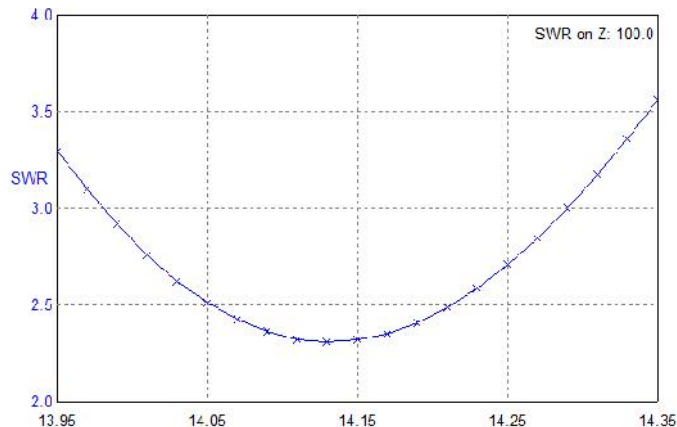


Figure 8 SWR at 20- meter Band for version 2

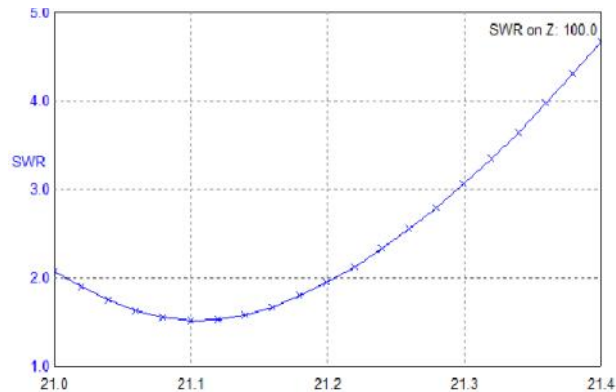


Figure 9 SWR at 15- meter Band for version 2

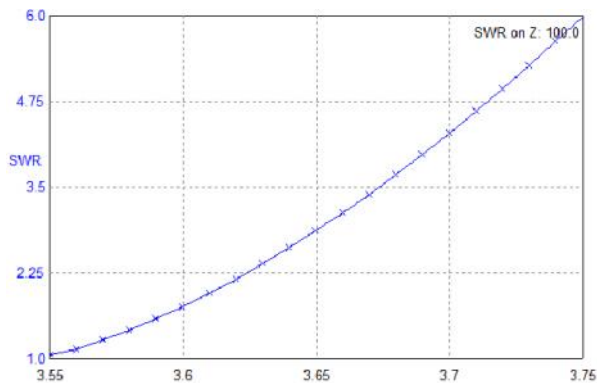


Figure 10 SWR at 80- meter Band for version 3

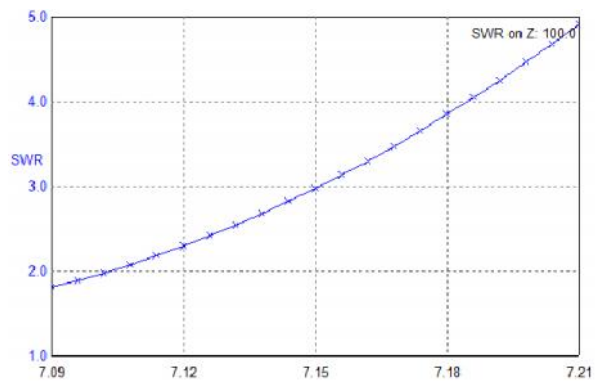


Figure 11 SWR at 40- meter Band for version 3

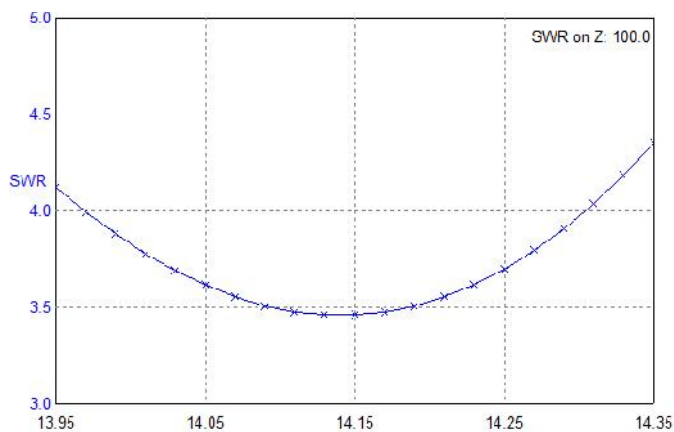


Figure 12 SWR at 20- meter Band for version 3

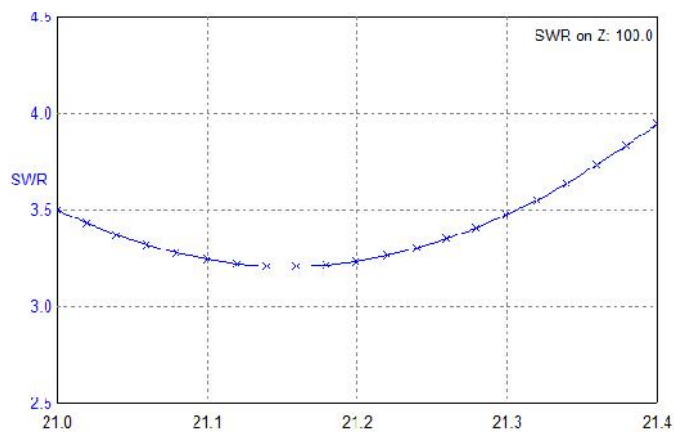


Figure 13 SWR at 15- meter Band for version 3

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