Antenna for 40- meter Band with Short Counterpoises

The publication is devoted to the memory UR0GT.

Credit Line: Forum from:
www.cqham.ru

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For good operation a vertical antenna in height of lambda/4 requires good ground or several counterpoises in length of lambda/4. However it is often not possible condition in amateur site at the place of the antenna. A vertical antenna in height of lambda/2 is not required the strict conditions and may operate with short counterpoises. The disadvantage of the lambda/2 antenna is the sizes.

However using a lengthening coil the antenna in in height of lambda/4 may be turn on to lambda/2 antenna, that it allows use with the antenna short counterpoises and does not care about good ground. **Figure 1** shows antenna in height of lambda/4 with lengthening coil at the base. The coil has inductance in 8.7- microHenry and should be made in considering the power going in to antenna.

The coil should be protected from atmospheric influences- rain, fog, snow, etc. The antenna has input impedance 50- Ohm. It allows use widespread 50- Ohm coaxial cable for feeding of the antenna.
Lengthening coil may be made on form in diameter of 20- 30 mm, what is ever available. To calculate the coil it is possible use MMANA Coil Calculator, any online calculator (tons in the internet) or tables from: http://www.antentop.org/009/lct009.htm

Figure 2 shows Z of the Vertical Antenna with short counterpoises for 40- meter Band. **Figure 3** shows SWR of the Vertical Antenna with short counterpoises for 40- meter Band. **Figure 4** shows of the Vertical Antenna with short counterpoises for 40- meter Band.

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The MMANA model of the Vertical Antenna with short counterpoises for 40- meter Band: http: // www.antentop.org/025/ur0gt_vertical_025.htm

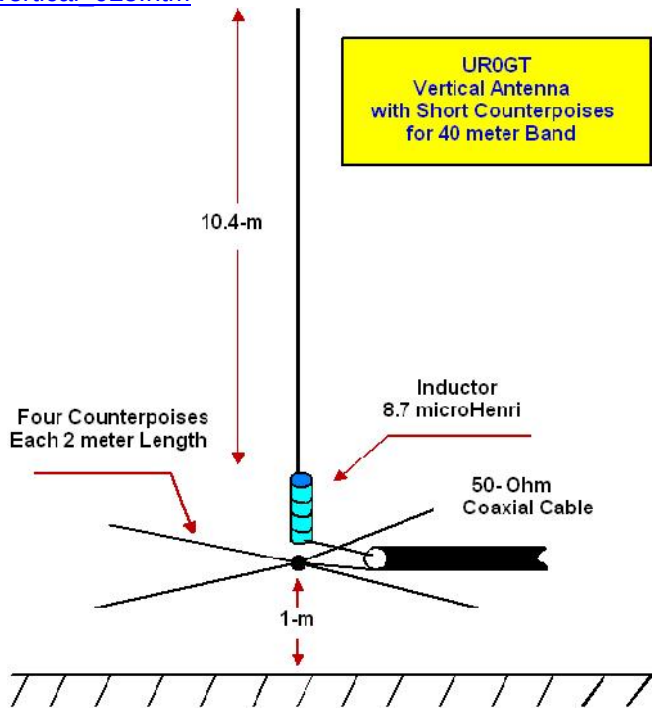

Figure 1 Antenna in Height of Lambda/4 with Lengthening Coil at the Base

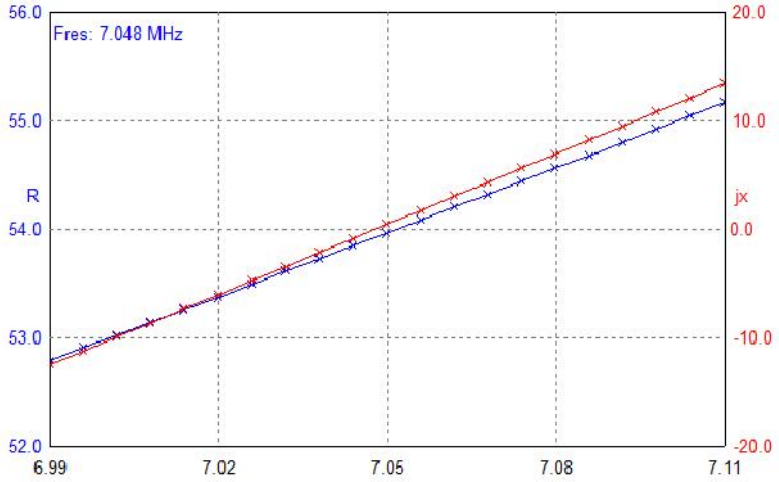

Figure 2 Z of the Antenna in Height of Lambda/4 with Lengthening Coil at the Base

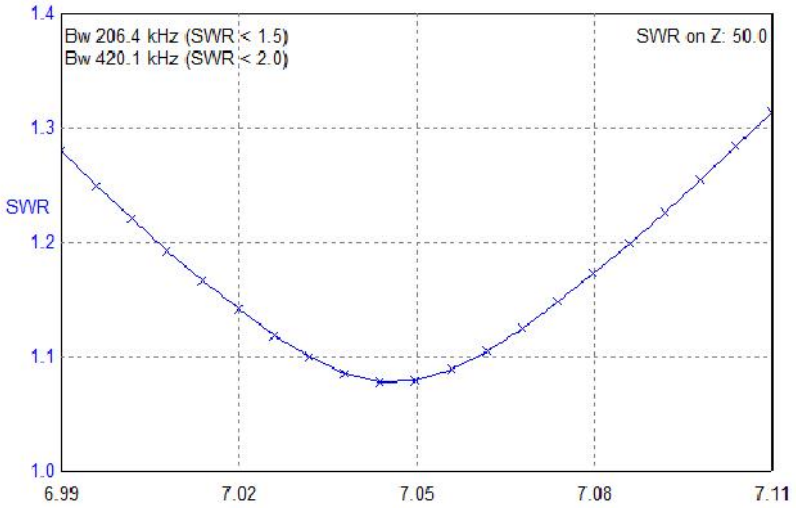

Figure 3 SWR of the Antenna in Height of Lambda/4 with Lengthening Coil at the Base

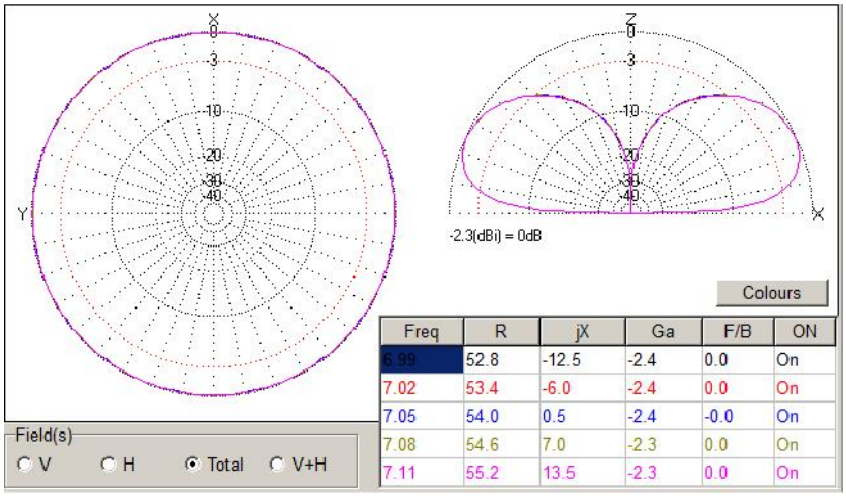

Figure 4 DD of the Antenna in Height of Lambda/4 with Lengthening Coil at the Base