YAGI for 145.5- MHz

Valery Kiselyov (UA4SZ)

Credit Line: http://www.hamradio.mari-el.ru/technics/UA4SZ

The vertical YAGI antenna has a sectioned half wave vibrator. Coaxial cable is going inside of the low half of the vibrator. To the low half of the vibrator is connected braid of the coaxial cable. The central core of the coaxial cable is connected to the upper half of the sectioned vibrator. Such design provides good symmetrical for the antenna and low SWR with the 50- Ohm coaxial cable. Antenna is radiated under a low vertical angle to horizon that is perfect for 2- meters Band communication. Antenna has gain near 8- 9-dB. **Figure 1** shows the design of the antenna.

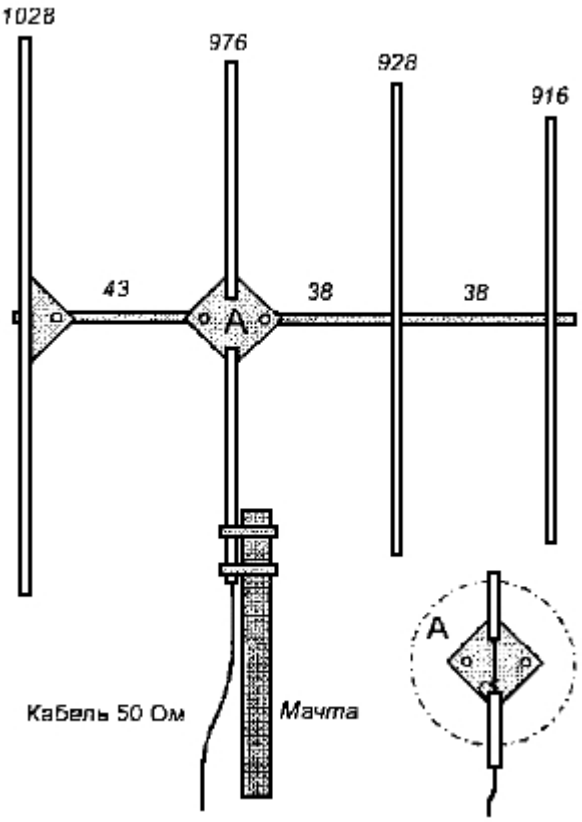

Figure 1 YAGI for 145.5- MHz

Traverse of the antenna made from insulator stuff. For example, it is possible to use an old skis stick. As usual such stick has diameter 12… 14- mm. Sectioned vibrator made from two metal tubes (it may be aluminum or copper) in diameter 12… 14- mm. Vibrator is fastened to the traverse with help of two square plates made from insulator stuff. Reflector and two directors of the antenna made from aluminum strand wire in diameter 5- 6-mm. However the reflector may be made from the same tube that sectioned vibrator made. At this case the reflector could be fastened to the traverse with help of two triangles. The triangles may be from insulator or ever metal stuff.

Antenna is fastened to the mast at the lower side of the sectioned vibrator. Antenna may be recalculated to other bands with help of the simple equations.

Reflector: Length = 149.5/F; **Vibrator**: Length = 142/F; **First Director**: Length = 135/F; **Second Director**: Length = 133/F; **Distance Reflector- Vibrator**: 62.5/F; **Distance Vibrator- First Director and First Director - Second Director**: 55/F