

SIMPLE 430 - MHz 3 - EL YAGI FOR MOUNTAINS

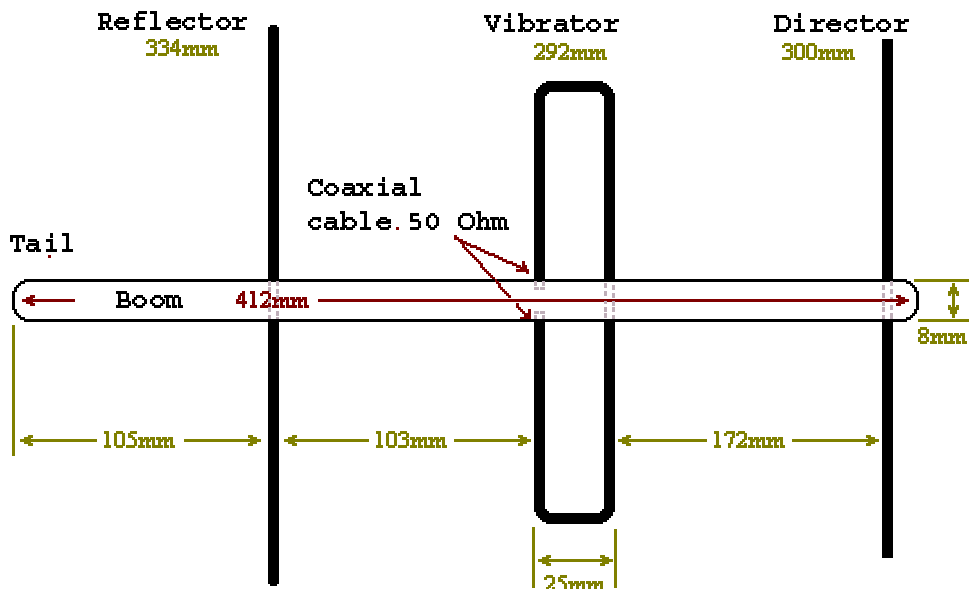
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I want to pay attention that UHF antennas for mountain climbing has the own specificity. So, antennas having the gain more the 6-9-Db-dB are not necessary in mountains at big height (from 3000 meters and is higher), as well as you do not need mast for the antennas. Also I prefer not knock- down antenna design. .

This antenna was developed specially for high-mountainous trip proceeding from my previous experience. At the first place I stand following characteristics: gain, weight, reliability. The antenna is optimized of the maxima forward gain. The design is made not knock- down that is



Figure 1



very conveniently as the antenna is always ready to operation. You can hold the antenna by its tail and direct the antenna to your correspondent at operation.

Figure 1 shows the design of the antenna. The boom is made of an ebonite rod of 412-mm length and of 8-mm diameter. Antenna elements are made of a copper wire of 2- mm (#12 AWG) diameter. 50 Ohms coaxial cable is soldered to antenna vibrator without any symmetrical and matching devices. The coaxial cable goes along the boom and get out from the antenna tail. Antenna elements are fastened to the boom by epoxies. The antenna can place above or inside a tourist backpack.

The coaxial cable has length of 50-mm. The place of the soldering of the coaxial cable to the vibrator must be protected from the weather. Antenna has weight of 150 gram. 150rp, real gain of 6-7 dB above half-wave dipole. SWR is: at 433-MHz =1.8:1, at 435-MHz =1.4:1, at 438-MHz=1:1, at 440-MHz=1.5:1 (it as measured by device 'SWR-121').

Commentary:

I recommend to use the antenna with low-power UHF radio (10-mWtts) for a range 433-434Mгц. I have 30- 50 kms of distance (at direct vision) using the antenna with such station. Also I recommend to use the antenna with usual UHF radios, be sure, you easy will skip more than 100-kms!

Credit Line: <http://www.mountain.ru>

