

The present invention relates to wideband antenna with dipoles arranged according to the periodic logarithmic function and can be used in radio facilities of the very-high-frequency or microwave range for transmitting or receiving radio signals with two orthogonal polarization axes. The purpose of the invention is to widen the low-frequency band and decrease outline dimensions of the antenna. The antenna contains a base member, a power supply unit, coaxial two-wire line with main low-frequency and high-frequency dipoles, and additional dipoles. The additional dipoles are bent as the Z symbol, at an angle 80 ... 100 degrees, in the area of end sections of the main dipoles, in the plane perpendicular to the coaxial two-wire line, forming an additional reflector antenna. The end sections of the additional dipoles are bent, in the said plane, round the arc of a circle 0.01 ... 0.02 λ in diameter. The additional dipoles are fitted to the coaxial two-wire line in parallel to the adjacent main dipoles, at a distance of 0.01 ... 0.001 λ from the main dipoles. To compensate effect of the main dipole, the physical length of the additional dipole is reduced by the value L determined from the following equation:

$$L = 0,25 - \frac{\lambda}{2\pi} \left\{ \operatorname{arccctg} \left[3 \operatorname{tg} \left(\frac{2\pi}{\lambda} h \right) \right] + \frac{2\pi}{\lambda} h \right\},$$

where h - the length of the main dipole adjacent to the additional dipole, λ - the operative wavelength of the additional symmetrical dipole.