

WAVEGUIDE ANTENNA EMBEDDED ON A RAILWAY VEHICLE

ABSTRACT

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The present invention relates to a transmitting and/or receiving (4) antenna mounted on a vehicle (A, B) moving along at least one way (2, 3) and communicating with a fixed continuous communication device (1) located along at least one way (2, 3) by means of hyperfrequency signals of given wavelength, this continuous communication device (1) comprising at least one transmitting face.

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The antenna is constituted by a waveguide of rectangular section whereof a large face is pierced by rectangular slots (5) whereof the large dimension is less than the half-wavelengths of said hyperfrequency signal, and in that the space between the centre of two successive slots (5) is less than a half-wavelength of the hyperfrequency signal (λ_g) propagated in the waveguide, so as to produce a directional radiation diagram with two symmetrical lobes.

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Figure 3