Title (en)

ARRAY FOR INFLUENCING THE RADIATION CHARACTERISTICS OF A REFLECTOR ANTENNA, PARTICULARLY A CENTRALLY FOCUSED REFLECTOR ANTENNA

Title (de)

ANORDNUNG ZUR BEEINFLUSSUNG DER STRAHLUNGSCHARAKTERISTIK EINER REFLEKTORANTENNE, INSBESONDERE EINER ZENTRALFOKUSSIERTEN REFLEKTORANTENNE

Title (fr)

DISPOSITIF SERVANT À INFLUENCER LA CARACTÉRISTIQUE DE RAYONNEMENT D'UNE ANTENNE À RÉFLECTEUR, EN PARTICULIER D'UNE ANTENNE À RÉFLECTEUR À FOCALISATION CENTRALE

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Application

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Abstract (en)

[origin: US2010085265A1] The invention relates to an array for influencing the radiation characteristics of a reflector antenna, particularly a centrally focused reflector antenna (1) consisting of a hollow conductor (3) with a horn (4) and a sub-reflector component (2), whereby the assembly consists of at least two immoveable triggerable radiator elements (5; 6; 7; 8), which influence the beam path between the reflector (9) and sub-reflector (10) in the operating state. The array has the advantage of providing a small-size technical solution which requires minimal mechanical and electrical efforts for reflector antennas and allows the antenna to track a satellite with high accuracy. Within certain limits, signal reception and the antenna diagram can be controlled such that reception and transmission can be simultaneous. The beam of diagram can be controlled in real time. Another advantage is that the hemisphere can be reproduced in full, i.e. at an angle of elevation ranging from 0° to 180° and an azimuthal angle ranging from 0° to 360°. The array can be used in previously known reflector antennas, is tolerant towards the ambient temperature, humidity, and vibrations and is inexpensive to produce since it requires a small number of control elements.

IPC 8 full level

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CPC (source: EP KR US)

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