

Title (en)

Plane antenna with fast mechanical scan.

Title (de)

Flache Antenne mit schneller mechanischer Abtastung.

Title (fr)

Antenne plate à balayage mécanique rapide.

Publication

EP 0161127 A1 19851113 (FR)

Application

EP 85400517 A 19850318

Priority

FR 8404552 A 19840323

Abstract (en)

1. Plane antenna allowing a mechanical scan and comprising an emission source (1) adapted to transmit a divergent beam (10) onto a collimating device (2), which transmits a collimated beam (11) having a predetermined linear direction of polarization (E), to a transmission network (8), which is constituted of dispersive linear networks (80), whose direction of radiation depends upon the transmission frequency, the antenna further comprising : - two plane and parallel guide means (3, 4) disposed on either side of the collimated beam (11) parallel to the direction of the linear polarization (E) of the beam and delimiting a guide medium (5) for the beam ; and - an adjustable reflexion device (6) disposed between the two plane guide means (3 and 4), the reflexion device being a plane mirror (6), whose reflexion plane (7) is perpendicular to the planes of the guide means (3, 4) ; characterized in that the height (h) of the mirror is inferior to the distance (d) which separates the two guide plates (3, 4), such that no friction occurs between the mirror (6) and the guide plates (3, 4) ; and in that transition means (14, Fig. 7) are provided and placed between the mirror (6) and the transmission network (8) and comprise microwave guides (14) of equal electric length, adapted to ensure the phases between the mirror (6) and the transmission network (8) to remain unaltered.

Abstract (fr)

Antenne plate dans laquelle l'émission se fait entre plans parallèles (3 et 4) vers un réseau dispersif d'émission (8) par l'intermédiaire d'un miroir (6). Le balayage en site est obtenu par variations de fréquences. Le balayage en gisement est obtenu par rotation d'un miroir (6) autour d'un axe (9). Elle peut être utilisée comme antenne radar anti-mortier.

IPC 1-7

H01Q 3/20

IPC 8 full level

H01Q 3/20 (2006.01)

CPC (source: EP)

H01Q 3/20 (2013.01)

Citation (search report)

- [Y] FR 1269316 A 19610811 - CSF
- [Y] GB 745038 A 19560215 - BRITISH THOMSON HOUSTON CO LTD
- [A] DE 882430 C 19530709 - SIEMENS AG
- [A] FR 1370602 A 19640828 - MARCONI CO LTD
- [A] DE 1937583 A1 19720330 - NORTH AMERICAN ROCKWELL

Designated contracting state (EPC)

DE GB IT NL

DOCDB simple family (publication)

EP 0161127 A1 19851113; EP 0161127 B1 19900912; DE 3579618 D1 19901018; FR 2561824 A1 19850927; FR 2561824 B1 19871218

DOCDB simple family (application)

EP 85400517 A 19850318; DE 3579618 T 19850318; FR 8404552 A 19840323