

Title (en)

Common antenna for primary and secondary radar.

Title (de)

Gemeinsame Antenne für Primär- und Sekundärradar.

Title (fr)

Antenne commune pour radar primaire et radar secondaire.

Publication

EP 0013240 A1 19800709 (FR)

Application

EP 79401063 A 19791221

Priority

FR 7836484 A 19781227

Abstract (en)

[origin: US4284991A] A bifunctional antenna of a primary/secondary radar system comprises a reflector having a concave front surface formed with a row of slots along a horizontal generatrix, the slots lying in front of respective cavities excitable to radiate interrogation signals in a directive sum pattern and supplemental radiation in a differential control pattern designed to blank minor lobes of the interrogation pattern. Some of the cavities and slots are symmetrically duplicated on a dielectric cap covering the convex rear surface of the reflector. The reflector and its cap form a closed shell of dielectric material, specifically a glass mat impregnated with epoxy resin, overlain at the front by a fiber-glass fabric incorporating orthogonally intersecting insulated copper wires. The fabric also lines the inner walls of each cavity which is filled with dielectric material; its radiating slot is spanned only by horizontal wires paralleling the plane of polarization of target-seeking radiation from a source illuminating the reflector.

Abstract (fr)

Antenne commune pour radar primaire et radar secondaire, dont la fonction radar secondaire est intégrée dans le réflecteur unique (1). La fonction radar secondaire est réalisée à partir d'un réseau (2) linéaire de fentes (21) réparties le long d'une directrice passant par le centre de phase du réflecteur. La fonction radar secondaire comporte une voie contrôle réalisée à partir d'un certain nombre de fentes du réseau. Application aux radars primaires et secondaires.

IPC 1-7

H01Q 21/28; **H01Q 25/00**

IPC 8 full level

H01Q 13/10 (2006.01); **G01S 7/02** (2006.01); **G01S 13/87** (2006.01); **H01Q 13/18** (2006.01); **H01Q 15/14** (2006.01); **H01Q 19/17** (2006.01); **H01Q 21/22** (2006.01); **H01Q 21/28** (2006.01); **H01Q 25/00** (2006.01)

CPC (source: EP US)

H01Q 21/28 (2013.01 - EP US); **H01Q 25/00** (2013.01 - EP US); **H01Q 25/001** (2013.01 - EP US)

Citation (search report)

- US 3550135 A 19701222 - BODMER MAXIMILIAAN HUBERT
- CH 328923 A 19580331 - STANDARD TELEPHON & RADIO AG [CH]
- DE 2411158 A
- FR 2284997 A1 19760409 - THOMSON CSF [FR]

Cited by

FR2510265A1; EP0021193A1; EP0033676A1; EP0053512A1; EP0237110A1; EP0057538A3

Designated contracting state (EPC)

AT BE CH DE GB IT LU NL SE

DOCDB simple family (publication)

EP 0013240 A1 19800709; **EP 0013240 B1 19821020**; AT E1686 T1 19821115; DE 2963910 D1 19821125; DK 549779 A 19800628; FR 2445629 A1 19800725; FR 2445629 B1 19820618; JP S5590876 A 19800709; JP S6034070 B2 19850806; NO 794240 L 19800630; US 4284991 A 19810818

DOCDB simple family (application)

EP 79401063 A 19791221; AT 79401063 T 19791221; DE 2963910 T 19791221; DK 549779 A 19791221; FR 7836484 A 19781227; JP 17018279 A 19791226; NO 794240 A 19791221; US 10573379 A 19791220