Title (en)

Wideband radar optical control device for receiving or transmitting

Title (de)

Vorrichtung zur optischen Steuerung eines Breitbandradars zum Senden und Empfangen

Title (fr)

Dispositif de commande optique pour l'émission et la réception d'un radar large bande

Publication

EP 0964476 A1 19991215 (FR)

Application

EP 99401312 A 19990601

Priority

- FR 9807240 A 19980609
- US 45737699 A 19991209

Abstract (en)

The circuit enables optical control of electronic scanning aerials. The device includes an assembly of optical circuits for creating delays, each receiving a first light beam of wavelength lambda 1 polarised in a first direction which is subject to an appropriate delay, and a second beam of wavelength lambda 2 polarised in a second direction. Each delay circuit (42) has a chromatic separator (CD) separating the wavelengths. A radiating aerial (EDk) is connected to the output of the delay circuit by a first photodetector (PD1). The two beams are modulated at the transmission frequency (fe) for each reception signal arriving from the radiating element (EDk). A local oscillator and hyperfrequency mixer are used to produce the final output signal from the device.

IPC 1-7

H01Q 3/26

IPC 8 full level

H01Q 3/26 (2006.01)

CPC (source: EP US)

H01Q 3/2676 (2013.01 - EP US)

Citation (search report)

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- [A] US 5307073 A 19940426 - RIZA NABEEL A [US]
- [A] RIZA N A ET AL: "PHASED-ARRAY ANTENNA, MAXIMUM-COMPRESSION, REVERSIBLE PHOTONIC BEAM FORMER WITH TERNARY DESIGNS AND MULTIPLE WAVELENGTHS", APPLIED OPTICS, vol. 36, no. 5, 10 February 1997 (1997-02-10), pages 983 - 996, XP000685218

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0964476 A1 19991215; **EP 0964476 B1 20080116**; FR 2779579 A1 19991210; FR 2779579 B1 20000825; US 6313792 B1 20011106

DOCDB simple family (application)

EP 99401312 A 19990601; FR 9807240 A 19980609; US 45737699 A 19991209