

Title (en)

Feeding device for a multibeam array antenna

Title (de)

Vorrichtung zur Speisung einer Mehrstrahl-Gruppenantenne

Title (fr)

Dispositif d'alimentation d'une antenne multisources et multifaisceaux

Publication

**EP 0734093 B1 20010530 (FR)**

Application

**EP 96400526 A 19960314**

Priority

FR 9503202 A 19950320

Abstract (en)

[origin: EP0734093A1] The antenna feed includes a low level beamformer which divides Nb input beam signals as a function of the required coverage characteristics. The signals are combined after a dephasing operation is performed to generate Na outputs. The beamformer has a non-orthogonal transfer matrix. In transmission mode, Na amplification modules amplify the Na output signals. An output power divider is positioned between the Na amplification modules and Ne radiator elements and has an orthogonal transfer matrix. The transfer matrix allows movement between an Nb distribution part positioned at the power divider input where the amplitude of the Na signals is equal for each of the Nb beams. The phases of the Na signals satisfy a condition where the scalar products of the Nb excitation vectors at the power divider input taken two at a time and the scalar products of the Nb excitation vectors at the corresponding outputs and the other parts of the Nb predetermined output distributions taken two at a time are equal.

IPC 1-7

**H01Q 25/00**

IPC 8 full level

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**EP 0734093 A1 19960925**; **EP 0734093 B1 20010530**; CA 2172013 A1 19960921; DE 69613035 D1 20010705; FR 2732163 A1 19960927; FR 2732163 B1 19970530; JP H09116334 A 19970502; US 5736963 A 19980407

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