

Title (en)
Shaped beam antenna.

Title (de)
Antenne mit geformtem Bündel.

Title (fr)
Antenne à faisceau conformé.

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EP 85111057 A 19850902

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Abstract (en)
A shaped beam antenna comprises an array antenna having a planar surface on which a plurality of radiating elements are arranged, and a main reflector disposed behind with respect to the radiating direction of the array antenna. The main reflector comprises a plurality of partial cylindrical or planar reflector segments. Where Cartesian coordinates is assumed having an origin in the center of the planar surface of the array antenna, an X-axis extending in a vertical center axis of the array antenna, a Z-axis extending in a direction perpendicular to the planar surface through the origin, and a Y-axis, extending in a direction perpendicular to the X- and Z-axes through the origin, the shaped beam antenna is characterized in that the longitudinal axis of each reflector segments is in parallel with the X-axis, the main reflector is symmetrical with respect to the X-Z plane and formed convex in a negative direction of the Z-axis, and each radiating element is disposed so that its excitation amplitude is symmetrical with respect to the Y-Z plane and its excitation phase is antisymmetrical with respect to the Y-Z plane, whereby a radiation beam formed by the main reflector is symmetrical with respect to the Z-axis on the Y-Z plane and is asymmetrical with respect to the Z-axis on said X-Z plane. Thus, with this antenna, a good beam shaping performance and an excellent cross polarization discrimination can be obtained.

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