



COHERENT, CYLINDRICAL MULTI-BEAM SUPPLY GRID

RF system to generate equiphase supply laws for a grid of radiating sources

Technological advantages

Innovative technology

Revolutionary symmetrical design, enabling consistent azimuthal distribution of beams

A flexible system

System can operate in multi-beam mode or with electronic beam scanning
Can be combined with elevated supply grid to reproduce conical antenna network

A high-performance solution

Gaussian amplitude distribution to monitor shape of main lobe and side lobes



Coherent, cylindrical multi-beam supply grid, using printed circuit technology

Overview of invention

Phased supply network with Gaussian amplitude distribution, revolving symmetrically around centre axis to provide azimuthal distribution of produced beams.

Degree of beam overlap for adjacent beams can be adjusted based on the number of beams with respect to the number of radiating sources, and with respect to the radius of curvature of the supply grid.

Commercial benefits

Simple, reliable design

Simple construction
Reproducibility through use of printed circuit on flexible substrate
No phase controls, facilitating the system design

Potential applications

Electronic scanning radar

High-speed data transmission requiring spatially selective antenna

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Patented invention, available under license