

TERRESTRIAL MICROWAVE INTERACTIVE ADAPTIVE TRANSPONDER,
HORN-PARABOLIC ANTENNA,
AND RADOME FOR SUCH TRANSPONDER

ABSTRACT

The invention relates to a terrestrial microwave interactive adaptive transponder comprising transmitting and receiving circuits of direct and return channels divided into equal azimuthal sectors. In each sector a microwave transmitter, an output waveguide and a
5 transmitting horn-parabolic antenna (HPA), a receiving HPA, an input waveguide and a microwave receiver are located. Transmitting and receiving antennas are adjusted for reception of radio signals with mutually orthogonal polarisation. The transponder is equipped with a router, a channel former, a power supply unit and a monitor of real atmospheric situation in azimuthal sectors and an adaptive transmitter power control unit.

10 Horn-parabolic antenna for said transponder equipped with a trumpet, aperture of which exceeds the horn's aperture.

The transponder's radome has dome-shaped roof and cylinder-like casing having alternate protuberant ledges with radio transparent windows and smooth gutters for water or snow draining located between said ledges.

Figure No. 1 is suggested for publication.