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AERONAVIGATION
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MONOCLE

Meteorological Radar System for Aerodrome Area

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Meteorological Radar System for Aerodrome Area (Monocle)

Meteorological radar system for aerodrome area (Monocle) ensures collection, processing and rapid provision of information on fields of cloudiness, precipitation and related weather hazards, rainfall intensity, wind conditions and the turbulent state of the atmosphere, cloud water content and other geophysical phenomena and processes, as well as creation of a aerodrome weather radar field (in areas of aviation bases), where there is no possibility of installing a stationary weather radar or such installation is impractical.

Monocle is designed to provide meteorological information to meteorological services and departments of civil aviation airfields, as well as to other users of radar weather information.

Monocle solves the following tasks:

- Detection and classification of meteorological phenomena during circle, sectorial and scanning monitoring of an adjacent airfield area;
- Detection of hazardous turbulence area, wind shear and icing, especially for takeoff and landing areas.

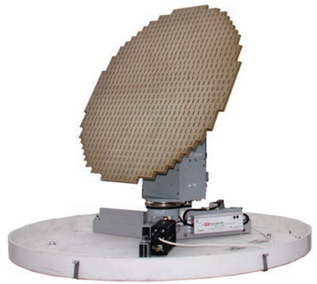
Monocle can be operated in automatic or in computer-managed mode (controlled from the workstation).

Radar system includes:

- Monocle meteorological radar;
- Automated operator workstation.

Operational testing is currently being run:

- at Orlovka aerodrome;
- at 3rd Central Military Clinical Hospital named after A.A. Vishnevsky under the Ministry of Defence of the Russian Federation;
- in Saint-Petersburg.



Tactical and technical characteristics of Meteorological Radar System for Aerodrome Area (Monocle)

Parameters	Values
Detection range:	
Hazardous meteorological phenomena, km	Up to 100
Wind shear areas, km	Up to 40
Dangerous turbulence areas, km	Up to 50
Transmitter power, W	Not less than 100
Emitted signals frequency, MHz	9330-9375
Surveillance coverage, degrees:	
in azimuth	From 0 to 360
angularly	From -1 to +90
Type of antenna	Notch antenna
Polarization	Horizontal
Width of antenna directional pattern	Not more than 3x3
Signal type	Coherent, pulse
Accuracy of distance measurement, m	At least 250
Accuracy of angles measurement, degrees	At least 1.5
Accuracy of speed measurement, m/sec	At least 1
Maximum weight, kg	75
Dimensions, mm	1100x1200x1200

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