

SOŁA

Redeployable Radar

ZDPSR SOŁA is a multi-mission three-dimensional (3D) radar, which has been designed to detect and track the air targets. The radar output data contains the full information about the detected targets, including three location coordinates, speed, heading and classification of helicopters as a separate target category.

Besides the typical airborne vehicles, the radar can detect UAVs and mortar bombs. The radar is designed for anti-aircraft operations of land forces to provide protection of the military bases, troops in move and facilities of high importance.



Advantages:

- beams scanned electronically in elevation
- a dedicated helicopter detection channel
- small size
- ability of relocation by any type of transportation, including air
- short deployment time (5 min)

The ZPSR SOŁA can operate autonomously or as a sensor of an anti-aircraft defense systems of land forces, using built-in wire and wireless data transmission means.

The radar scans the searched space with several beams which are steered electronically in elevation plane and with a rotating antenna in the azimuth plane. The radar applies numerous ECCM techniques. Due to the requirement of operation within automated anti-aircraft systems, the radar provides very short time of information refreshment (1 sec). The radar operation is controlled from a local console or remotely at the distance up to 400 m.

In its basic version, the radar is installed on the Żubr-P armoured vehicle. Any platform of 3,5MT payload can be applied.

Coverage	Range	Accuracy (RMS)	Resolution
Distance (at 30/60 rpm)	60/20 km (instrumented)	30 m	120 m
Azimuth	360°	0,50°	3.5°
Height	8 000/4 000 m	350 m	
Elevation angle	0° to +55°	1.8°	

Detection range at various RCS targets	Range	Height
Fighters with RCS as this of F-16/Mig-29 class	1.5 km to 40 km	50 m to 8 km
Targets of RCS =0,05 m2	1.5 km to 16 km	50 m to 4 km
Helicopters	1.5 km to 8 km	50 m to 2 km
98 mm mortar bomb	1.5 km to 8 km	50 m to 5 km °

Functional characteristics	
Operation frequency	S band (main channel); C band (helicopter channel)
Antenna rotation rate	60/30 rpm
Scanning type	transmit beam: electronically steered in elevation plane receive beams: digitally formed electronically steered in elevation plane
Maximum tracks traced	99
IFF	MARK XII/ MARK XIIA, mode S

