

TPS-77 MRR

Multi-Role Radar



LOCKHEED MARTIN 

TPS-77 MULTI-ROLE RADAR SYSTEM

Radar Characteristics	
General Characteristics Multi-Role Radar System Frequency Band (D/L) - 1215 to 1400 MHz Active Electronic Elevation Scanning Array Solid State Transmitters	
Multi-Role Characteristics Performance Designed to Meet Customer Requirements Highly Configurable Performance due to Flexible Time Energy Management Operator Mission Selection by Azimuth Identification	
Configurable Parameters	
Instrumented Ranges and Height	Rotation Rate
Maximum Elevation Coverage	Transmit Power
Example Missions Long Range Gap Filler Radar UAV Detection Low Level Flight Surveillance Tactical Ballistic Missile Warning Ground Based Air Defense Maritime Surveillance Border Security / Surveillance Ground Control Intercept Drug Interdiction Terminal Control Radar Customer Unique	
System Reliability	
Availability	99.9%
Critical MTBF	> 2000 Hours
MTTR	< 45 Minutes
Frequency Control	4 Agility Modes 100 Center Frequencies Azimuth Based Control
Target Loading	1500 Plots
Transportation Configuration C-130, Helicopter, Truck, Train	

Long Range Surveillance Mission	
Coverage Volume	
Range	10 - 463 km (5 - 250 nmi)
Azimuth	Selectable
Height Coverage	0 - 30.5 km (0 - 100 kft)
Elevation Coverage	0° - +20° with electronically adjustable tilt
Scan Rate	5 RPM
Performance	
Target Size	Typical fighter aircraft
Probability of Detection	80%
PD Range	222 km (120 nmi)
PD Height	up to 30.5 km (100 kft)
Accuracies - up to 15.2 km (50 kft)	
Range	< 50 m (164 ft) out to 222 km (120 nmi)
Azimuth	< 0.25° out to 222 km (120 nmi)
Height	< 1372 m (4500 ft) out to 204 km (110 nmi)

Low Level Flight Surveillance Mission	
Coverage Volume	
Range	2 - 150 km (1 - 81 nmi)
Azimuth	Selectable
Height Coverage	0 - 15 km (0 - 50 kft)
Elevation Coverage	0° - +40° with electronically adjustable tilt
Scan Rate	10 RPM
Performance	
Target Size	Typical fighter aircraft
Probability of Detection	90%
PD Range	150 km (81 nmi)
PD Height	up to 15 km (50 kft)
Accuracies - Up to 12km (40kft)	
Range	< 50 m (164 ft) out to 150 km (81 nmi)
Azimuth	< 0.20° out to 150 km (81 nmi)
Height	< 850 m (2800 ft) out to 150 km (81 nmi)

- Optional Mobility Configuration Shown -

With more than 65 years of experience developing and delivering ground-based radar solutions to our customers, our high-performing, high-reliability, solid state radar systems specialize in early warning, situational awareness and defense. Our radars are designed with significant commonality and fully integrated SSR systems. They can operate in all environments and are deployed worldwide.



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