

AN/TPS-59 (V)3 Tactical Missile Defense Radar



Proven in "live fire" tests, the AN/TPS-59 (V)3 radar is the most capable long range radar for TBM detection, track, and classification for anti-missile batteries in production today.

Features:

- Full 360° coverage
- 400 nmi (720 km) range to 10⁶ ft (305 km) altitude
- Accurate launch and impact point determination
- Target classification and debris/missile discrimination
- Effective anti-missile battery cueing
- Increased alert time for military and civilian personnel
- Increased defended footprint

Lockheed Martin's AN/TPS-59 (V)3 solid-state radar provides HAWK with an immediate enhanced TMD capability. Lockheed Martin's world-wide solid-state radar installation base insures continued system support.





In August 1996, at White Sands Missile Range, the AN/TPS-59 (V)3/HAWK system completed a "live fire" test program which included successfully engaging and destroying multiple targets including simultaneously launched multiple ballistic missiles and mixed ballistic and cruise missile targets.

Developed for the United States Ballistic Missile Defense Organization (BMDO) and the United States Marine Corps, the TPS-59 (V)3 is designed to operate with HAWK and Patriot. When integrated with HAWK, the TPS-59 (V)3/HAWK system is the most cost effective TMD system currently in production with successfully validated performance against ballistic missiles as well as air breathing threats. The radar has been designed to be rapidly transported by truck, helicopter, or C-130 cargo plane.

The TPS-59 radar's 740 km range and full 360° azimuth scan results in a surveillance volume of 603 million km³ for tactical missile defense.



System Characteristics		
Performance Frequency Transmitter Power	1215-1400 MHz 46 kW	
Tactical Ballistic Missiles Range Elevation Beam Steering Azimuth Sector Coverage Launch/Impact Point Prediction Surveillance Volume	400 nmi (740 km) with continuous coverage to 10^6 ft (305 km) $^{-5}$ ° to 60 ° 360 ° 3^{-5} km circular error probability for 50^{-700} km range TBMs $95 \times 10 \text{ nmi}^3$ ($60^3 \times 106 \text{ km}^3$)	
Air Breathing Targets Range Elevation Beam Steering Azimuth Sector Coverage	300 nmi (555 km) with continuous coverage to 10^5 ft (30.5 km) -2° to 20° 360°	
Deployment Air Transportable Truck Transportable Shelter Setup Site Preparation	C-130, CH 53, and CH 46 transportable 2.5 ton truck transportable Single S-280 shelter for low embarkation footprint Full operation in 4 hours from site selection Deployable to unprepared sites	
Reliability/Maintenance MTBF Availability	2000 hours .9947	

World-Wide Radar Deployment

Lockheed Martin has deployed more solid-state radars world-wide than any other supplier.

The TPS-59 is an all solid-state L-Band, three-dimensional air defense radar which provides long-range surveillance and ground-control intercept capability in a tactically mobile environment.

With over 126 radars deployed in seventeen countries world-wide, the TPS-59/FPS-117 family of solid-state radars has a record for performance and reliability which is unsurpassed.

TPS-59	USMC	12
TPS-59	Egypt	
GE592	Belgium	
Type 92	United Kingdom	
FPS-117	USAF Hawaii	
FPS-117	USAF Alaska	16
TPS-59M/34	Egypt	9
FPS-117	Saudi Arabia	17
FPS-117	Korea	
FPS-117	Canada	15
FPS-117	Kuwait	
FPS-117	Taiwan	
FPS-117	Belgium	
FPS-117	Mid-East	
TPS-117	Brazil	6
FPS-117	Iceland	
FPS-117	Germany	9
FPS-117	Italy	
FPS-117	Turkey	
FPS-117	Asia	
FPS-117	Romania	