The lightweight AN/TPQ-49 counterfire radar provides early warning for incoming rocket, artillery and mortar (RAM) fire and weapon locating capabilities.

The AN/TPQ-49 counterfire radar provides continuous 360 degree surveillance and 3-D RAM location using a non-rotating, electronically steered antenna. Its full azimuth coverage allows it to simultaneously detect and track multiple rounds fired from separate locations within a 315 square kilometer surveillance area. It can also be configured to scan less than 360 degrees, providing focused sector coverage with more frequent update rates.

Once RAM is detected, the radar sends an early warning message indicating a round is incoming. After sufficient data is collected to enable an accurate point of origin, the weapon’s location is reported back to an integrated command and control station or short range air defense system for a counterfire response.

The LCMR family of systems are the most widely fielded counterfire radars in the world and have proven capabilities to help save lives.
AN/TPQ-49 Counterfire Radar

Expeditionary Surveillance
The AN/TPQ-49 counterfire radar has been designed for use by expeditionary forces. Its predecessor, AN/TPQ-48, was originally developed as a quick reaction capability for the United States Special Operations Command to be compatible with airborne operations and deployable by parachute. Subsequently, it was upgraded in performance capabilities and ruggedized for the U.S. Army to become the AN/TPQ-49 counterfire radar.

The radar can be assembled or disassembled quickly by two soldiers in 20 minutes. It mounts on a tripod using lightweight antenna hardware, allowing for rapid emplacement and ease of relocation. It is small in size and consumes low prime power, making it ideal for low profile operation. It can be deployed in challenging locations previously unavailable to traditional counterfire radars, making it an ideal solution for force protection at Forward Operating Bases.

Proven Performance
The predecessor of AN/TPQ-49 received the Top 10 Army Greatest Invention award in 2004. This award recognizes the best technological solutions for soldiers, and how these new technologies increase competence for the U.S. Army.

The AN/TPQ-49 counterfire radar has proven to be exceptionally effective at detecting and locating the RAM threat that is facing troops today. The system is currently deployed by military forces around the globe.

Features
- Simultaneous tracking of multiple targets in 3-D
- Multiple modes including early warning and counterfire
- 360 degree coverage with non-rotating, electronically steered antenna
- Lightweight, small footprint and low power consumption
- Ruggedized with no moving parts for minimal maintenance
- Supports IP networks
- Rooftop, tower or tripod mountable
- Powered by AC grid, generator, 24 VDC vehicle, or battery
- Integrated logistics support

Benefits
- Saves lives by providing early warning of incoming fire
- Quickly locates enemy RAM launchers
- Cues a counterfire response from any integrated system
- Transports easily and installs rapidly (< 20 minutes) in challenging terrain
- Low lifecycle cost
- Unattended remote operation

Specifications
- Operating frequency: L-Band
- Detection range: > 10 km
- Point of origin accuracy: 75 m at 5 km
- Azimuth coverage: 360°
- Elevation coverage: 0 - 30°
- System weight: 68 kg / 150 lb
- System size: 1.25m / 4 ft diameter by 1.25m / 4 ft high
- Power requirements: 1,200 W, 110/240 VAC 50/60 Hz, 24 VDC