

MMR MULTI-MISSION RADAR

A proof-of-concept tactical radar system built for the U.S. Army to meet the needs of modern highly mobile forces

The U.S. Army's prototype multi-mission radar (MMR) performs air defense surveillance, air traffic control (ATC), counterfire target acquisition (CTA) and fire control in a single, stand-alone, transportable system. The MMR has proven to outperform expensive radar systems in both acquisition range and weapon location capabilities. All the while, it maintains single-HMMWV mobility and small crew size. Common logistics, including maintenance, spare parts, crew training and product improvements significantly reduce the overall lifecycle costs associated with maintaining two or more systems that address each mission requirement separately.



MMR PERFORMS AIR DEFENSE SURVEILLANCE, AIR TRAFFIC CONTROL, COUNTERFIRE TARGET ACQUISITION AND FIRE CONTROL IN A SINGLE SYSTEM



MMR MULTI-MISSION RADAR

PERFORMANCE SPECIFICATIONS

Air Defense Surveillance and ATC

- Surveillance coverage
 - Range: 1-100 km
 - Azimuth: 360°
 - Elevation: 28° (Selectable -10° to +55°)
- Track coverage
 - Azimuth: 360°
 - Elevation: -10° to +55°
- Track report rate: 1 per 2 sec
- Number of tracks: 1000

CTA

- Coverage
 - Range: 1-35 km
 - Azimuth: 1600 mils
- Location accuracy: 30 m or 0.3% of range (50% CEP)
- Friendly impact prediction: 30 m or 0.3% of range (50% circular error probable)
- False location rate: 1 per 24 hrs
- Number of simultaneous projectiles: 100
- Target classification: Rocket Artillery/Mortar, Light/Medium/Heavy

Fire Control

- Coverage
 - Range: 15 km
 - Azimuth: 90°
 - Elevation: -10° to +55°
- Simultaneous targets: 50

DESIGN SPECIFICATIONS

- Transmit power: 22 kW (peak), 2.2 kW (average)
- Operating frequency: S-Band (3.1 - 3.5 GHz)
- Aperture size: 1.5 m (width) x 2.0 m (height)
- Antenna rotation rate: 0-30 rpm
- Antenna electronic scan: +/- 45° (azimuth), +/- 30° (elevation)
- Antenna beamwidth: 3.8° (azimuth), 3.1° (elevation)



BELOW: the MMR provides the warfighter with superior performance for each mission



FEATURES

- Electronic scanning in elevation and azimuth
- Mechanical 360° rotation in azimuth
- Single-HMMWV mobility with small crew size
- C-130 single sortie transport, drive on/off



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