SURVEILLANCE SYSTEMS

MSTAR Manportable Surveillance and Target Acquistion Radar

The Low-Power, High-Performance Ground Surveillance Radar of Choice

The AN/PPS-5C Manportable Surveillance and Target Acquisition Radar (MSTAR) is a highly versatile low-power, high-performance ground surveillance radar. The MSTAR provides wide-area surveillance to a maximum range of 42 km, day or night and in all weather conditions. The MSTAR's effectiveness has been demonstrated in both combat and peacekeeping missions, including significant use in Iraq and Afghanistan. Today there are more than 1,800 MSTAR units deployed around the world.

The MSTAR system is transportable by two people, and can be put into action in less than five minutes. It is also easily integrated into larger security systems, and can be used as the anchor for other surveillance sensors. The MSTAR locates moving targets and uniquely classifies them as personnel, tracked vehicles or wheeled vehicles. The simple-to-operate man-machine interface allows for rapid self-location and surveillance area set up, and also provides for sophisticated interface support features.

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HIGHLIGHTS

- Wide area, long-range surveillance sensor
- Accurate target location
- "Slew-to-cue" other optical sensor platforms
- Target data output for data fusion
- Automated data entry
- Reduced sensor-to-shooter timelines
- Surveillance from 100 m to 42 km
- Multiple sector selection 200 to 6,400 mils continuous
- Acquisition (zoom) mode 1.5 km by 1.5 km window
- Fall-of-shot first round artillery correction to 15 km

PERFORMANCE FEATURES

TYPICAL MOVING TARGET DETECTION PERFORMANCE

Target Type	
Walking man	11 km / 6+
Light vehicle	24 km / 14 miles
Heavy vehicle	36 km / 22 miles
Aircraft (gliders, ultra-light)	12 km / 6+ miles
Artillery rounds (155 mm)	15 km / 9 miles
Minimum target radial velocity	< 0.5 m/s
Target location accuracy	
Range	±10 m
Azimuth	± 5 mils
Surveillance	
Range	100 m to 42 km
Azimuth	200 to 6,400 mils continuous

ELECTRICAL SPECIFICATIONS

Frequency	Ku band
Transmit power	< 4 W
Input power	< 75 W
MIL-STD-1275 vehicle power	18-33 VDC

RADAR CONTROLS AND INTERFACE

12.1 inch SVGA flat-panel display, 800 x 600 pixel resolution, PentiumTM-class processor, 20 GB mass storage, 256 MB RAM, AGP high speed video graphics, MIL connector panel, full QWERTY keyboard, internal 3.5 inch FDD, internal PCMCIA interface, communication ports include parallel, RS-422, RS-232, Ethernet and USB, XML 2.0 ICD compliant/USAF certified.

SYSTEM WEIGHT

Aerial head assembly	9.6 kg / 21.3 lbs.
Main electronics assembly	13.0 kg / 28.6 lbs.
Radar control & display unit	7.4 kg / 16.3 lbs.
Tripod kit	4.8 kg / 10.5 lbs.
Ancillary equipment	3.9 kg / 8.6 lbs.
Total	38.7 kg / 85.2 lbs.

FULLY QUALIFIED

Environmental	-40° to 55°C / -40° to 131°F, MIL-STD-810E, rain, sand, dust, vibration, shock, humidity, ice, thermal and wash down
Electromagnetic interference	A3 Tactical Vehicle MIL-STD-461C CE-03, RE-02, RS-03
Demonstrated fixed site application	> 12,000 hours between repairs

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