

# SQUIRE LPI Ground Surveillance Radar



**MSSC Company**

Date Revised: 20 DEC 02

## VENDOR DESCRIPTION

The SQUIRE is a man-portable (two man packs of 44 lbs), Low Probability of Intercept (LPI), ground surveillance radar that provides wide area surveillance. The SQUIRE is designed for battlefield surveillance, including artillery support, and for general wide area surveillance missions. It has a maximum range of 48 km (30 miles) and detects a single moving person out to a range of 10 km (6 miles). Target classification is performed automatically by SQUIRE or by the operator. SQUIRE can also be mounted on a vehicle, integrated with an Electro-Optical System, communications, GPS, compass, and a Command and Control network.





**Product Manager**  
**Robotic & Unmanned Sensors**  
 Telephone: (732) 427-5827 / DSN 987  
 Fax: (732) 427-5072 / DSN 987  
 e-mail: SFAE-IEWS-NV-RUS@IEWS.monmouth.army.mil

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System Characteristics	
Technology	FMCW LPI
Operating Frequency	Agile, 10.1 - 10.4 GHz
Weight (without batteries)	44 kg
Transmit Power	Solid State, 1W
Temperature	Operating -31°C to +49°C Storage -46°C to +71°C
Antenna	Typical: 29 dB, Patch Horizontal Polarization
Processing	Pulse Compression: 42 dB max FFT: 512 Cell Range x 128 Cell Doppler CFAR: Yes, false alarm 10-6
Data/Control Interface	RS-232
Scan Rate	7-14°/sec
Coverage	Azimuth Sector Scan 7° to 360°, within drive limit of ±270°
Target Classification	Automatic and Audio
Input Power	Nominal: 24 VDC (18-30 VDC), 80 W
Continuous Operations on Single Set of Batteries	12-14 hours, rechargeable batteries 18 hours non-rechargeable batteries

Performance Characteristics		
Detection Range	Personnel	10 km
	Vehicles	40 km
Accuracy	Range	5 m
	Azimuth	5 mils
Max. Remote Distance	100 m via field wire	
Detect Artillery Round Impacts	Yes	
Display latest target info for most recent target set	Yes, after operator selection of a target	
Target Capacity	Max. target at least 2000	
Minimum Detectable Radial Velocity	0.5 m/sec	
Operational Availability (Ao)	> 99%	
MTBF	> 6000 hrs	
MTTR	0.5 hrs	
Maintainability – 2 level BIT to LRM	Yes, in most cases down to shop-replaceable units	
Options		
GPS and Flux Gate Compass		
Wireless Remote Operation		
AC Power Adapter (103-264 V, 47/68 Hz)		
24 VDC Power Adapter (20-32 V input)		
Rechargeable Batteries & Battery Charger		