

Leveraging on the success of our advanced radar surveillance system, Telephonics offers its Foliage Penetration Surveillance Track Radar System (FPSTR-1). FPSTR-1 is a man portable ground surveillance system that can be controlled locally or remotely. System versatility allows for tripod, vehicle or tower mount.



Telephonics breaks through the foliage barrier and brings real-time field reconnaissance to new frontiers with the FPSTR-1.

The FPSTR-1 is suitable for man portable operations as well as tower or truck mount installations. Remote operation is accomplished via encrypted wireless links.

Technical Capabilities

The FPSTR-1 is a wideband Pulse Doppler ground surveillance radar operating at the UHF frequency band to minimize attenuation through foliage. It features Track While Scan (TWS) and pulse compression technology to provide a high performance wide area surveillance capability to search, detect, acquire and track targets through mixed foliage. It employs an array of pulse widths to provide continuous coverage at short ranges while maintaining maximum detection at longer ranges.

Operation at UHF frequencies allows radio waves to permeate clusters of foliage and dense woods which are otherwise obscured by conventional X-band radar systems. The system-1 has been tested to and complies with the requirements of MIL-STD-461 and MIL-STD-462, Measurement of Electromagnetic Interference Characteristics.

The FPSTR-1 radar capabilities include target detection and tracking during day, night and zero visibility conditions. The system can be chained along borders or perimeters to provide continuous networked coverage to a remote fusion center via UHF communication links.

The distinct advantages of Telephonics' FPSTR-1 are:

- Direct digital-to-RF, solid-state transmitter and receiver
- UHF band for optimal foliage penetration
- High range resolution and Doppler resolution
- Tactical collapsible antenna
- Flexible, modular design for adaptation to customer needs



- Full life cycle maintenance support
- Standard XML interface
- Unattended operation via optional solar power or generator
- Extensive Built-In-Test
- Enhanced display, PPI and B Scope, Digital Map, Clutter Map, Graphics-on-Color Display

System Detection Ranges

Target	Clear	Mixed Foliage	Dense Foliage
Crawling Pedestrian	1200 m	375 m	250 m
Pedestrian	1325 m	425 m	275 m
Group	1450 m	475 m	300 m
Light Vehicle	1850 m	575 m	325 m
Heavy Vehicle	2175 m	675 m	375 m
Hovering Helicopter	1800 m	575 m	325 m



- Automatic tracking and system features TWS for 60-300 targets
- Angle localization to within 10 degrees
- Search and Detect in any defined sector: up to 360 degrees and up to 13 km
- Minimum detection range: 40 meters
- Maximum instrumented range: 13000 meters
- Micro-Doppler target classification (option)
- User-Definable Alarm and no-interest zones
- Linux-based operational software
- Ruggedized laptop for local control and display
- Remote operation over encrypted Wi-Fi connection or via standard wired Ethernet
- XML Remote Interface
- Continuous 24 hours per day of operation
- Fully environmentally qualified
- Range accuracy: ± 3 meters
- Range resolution: 3 meters
- Doppler resolution: 0.15 meters/second (0.33 mph)
- Maximum Doppler velocity: 19 meters/second (42 mph)
- Fixed scan speeds: 1.2 RPM, 2.4 RPM, and 3.6 RPM
- Pulse compression transmitted peak-power: 35W
- UHF-Band radar for maximum foliage penetration
- Tactical collapsible antenna
- Power supply via 24-28 VDC (MIL-STD-1275D)
- Power consumption: 100W
- Unattended operation via optional power via solar charger or generator
- Ability to continuously record radar operation
- MTBF (Fixed Installation): >20,000 hours
- MTTR (O level): < 20 Minutes
- Weight: 17kg (Antenna 3kg / Pedestal 3kg / Signal Processor 3kg / Receiver 2 kg / Tripod Mast 6kg)
- Operating Temperature Range: -30C to +55C

