



Technology Service Corporation

Instrumentation Radar

Technology Service Corporation (TSC) has developed the Model 807 Instrumentation Radar as the result of an evolutionary process of creating specialized radars for test ranges. This radar is based on the proprietary design of the Multi-Purpose Interferometric Radar by MARK Resources Inc.

Key Features

- High resolution in range and Doppler
- High measurement accuracy in range and angle
- Continuously detects and tracks all objects within the field of view
- Performance proportional to target observation time
- Capable of target imaging
- Fully coherent
- High reliability, no moving parts, all solid state
- Compact design for easy transport
- Remotely operable over fiber optic link
- Remote data recorder (4 terabytes capacity)
- Complete software package
- Custom designed for specific applications
- Very affordable
- Ideal for multiple radar configurations

Typical Specifications

Model	807-Cv1	807-Cv2	807-Xv1	807-Xv2
Frequency	C-band	C-band	X-band	X-band
Transmit Power	100 w	200 w	100 w	100 w
Antenna Assembly	1.3 m square	2 m square	1.0 m square	1.3 m square
Field of view	12°	8°	9°	6°
Gain	24.5 dB	28 dB	27 dB	30.5 dB
Detection Range*				
20 ms processing	40 km	70 km	40 km	60 km
200 ms processing	70 km	125 km	70 km	105 km
Resolution				
Range	1 m	1 m	10 cm	10 cm
Accuracy (80 ms processing)				
Range	10 cm	10 cm	1 cm	1 cm
Angle	1.6 mrad	1.0 mrad	1.2 mrad	0.8 mrad

*Detection performance is based on a 1 m^2 non-fluctuating target at the specified range, with a combined noise figure and system losses of 5 dB, detection probability of 90%, and false-alarm probability of 10^{-8} , using the specified processing times.

WHY TSC?

TSC is recognized for developing unique, specialized high resolution radars for target imaging and classification, using advanced radar signal processing algorithms as used in interferometric and synthetic aperture radar (SAR) applications. We have built our reputation as a company of outstanding engineers and scientists who bring a very high level of technical capability to any radar problem. Our founder, Dr. Peter Swerling, was the inventor of the ubiquitous Swerling target models.

CONTACT INFORMATION

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