

AN/TSM-191(V)5 Electronics Shop, Transportable System Solution for the Field, Factory and Depot



Northrop Grumman's Electronics Shop, Transportable, commonly known as the Electro-Optics Test Facility (EOTF), tests an extensive range of Army electro-optics (EO) systems. It is part of the Integrated Family of Test Equipment (IFTE), a proven series of systems used for testing electronic and EO weapons devices such as missile systems, vehicles and aircraft.

EOTF tests and fault-isolates electro-optical and electronic line replaceable units (LRUs) in a full range of weapon systems. EOTF tests laser transmitters, receivers, spot trackers, forward looking infrared systems (FLIRs) and TVs.

The station can be housed in an Army standard shelter, forming the EOTF. The EOTF in the shelter is mounted on a five-ton truck. The truck-mounted EOTF can be relocated and it is capable of providing sustainment level support wherever the Army needs it on the battlefield.

Horizontal Technology Intergration (HTI) incorporating the Navy-developed Electro-Optical Subsystem (EOSS+) into the EOTF provides the subsystem EO testing capability.

Features

- VXI instrumentation for flexibility and easy modification for future technologies
- Touch-screen, color graphics display with menu-driven instructions
- "Pinless" interface with the unit under test
- State of the art radiometric thermal source
- Extremely accurate polarization-insensitive laser source/detector
- High resolution camera with anti-blooming capability
- All-reflective optical collimator



AN/TSM-191(V)5 Electronics Shop, Transportable

System Solution for the Field, Factory and Depot

Digital Testing

- Dynamic Testing
 - Pattern Interval Rate: 20 MHz
 - Programmable Stimulus Data Formatting
- Digital I/O: 192 Pins
 - Expandable to 318
 - RT Bidirectional
- Memory Depth per Pin
 - 16 kBits to 20 MHz (64 kBits Optional)
 - 64 kBits to 50 MHz
- Logic Levels
 - +30 to -30 V up to 10 MHz
 - +10 to -10 V up to 50 MHz
- Test Rates: Static to 50 MBits/sec
- Dual Threshold Receivers
- Tristate Detect
- RT Hardware Compare
- Pattern Match
- Programmable Terminators
- Int/Ext Synchronization
- Static Testing
- 128 Stimulus/Response Pins
- TTL
- 24 mA Max Source/Sink

Bus Testing

- Two Channels
- Manchester 1553 A/B Protocol
- Frequency 1 MHz Data Rate
- Prog Amplitude up to 12 Vpp
- Int/Ext Synchronization

Wizard Smart Probe

- ATG Compatible
- Dynamic Range to 50 MHz
- Short-Circuit Isolation

For more information, please contact:

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- Pulse Detection
- Auto-Detection of Circuit Contact or Loss of Contact

DC Loads

- Eight Channels
- Max Voltage: 250 V
- Max Power: 750 W

Analog Stimuli

- Four Signal Sources
- Functions: DC, Sine, Triangular, Square, Pulse, Arbitrary
- Frequency: Up to 25 MHz
Amplitude: Up to 20 Vpp
- Offset: -5 to +5 V
- Video Generation
- Raster, Stroke, Composite Color

Analog Measurement

- AC Volts: 0 to 200 V
- DC Volts: 0 to 200 V
- Resistance: 0 to 20 M Ω
- Frequency: DC to 100 MHz
- Period: 100 nsec to 10⁴ sec
- Rise Time: 100 nsec to 7.5 msec
- Fall Time: 100 nsec to 7.5 msec
- Pulse Width: 100 nsec to 33 msec
- Two-Channel Digitizer
 - 1001 Samples
 - 10 nsec Sampling
- Video Analysis
 - Raster, Stroke, Composite Color, Rectilinear, Polar Scans

UUT Interface

- 3200 I/O Pins
- 200 V/Pin
- 10 A Power Paths
- 1 A Signal Pins

Synchro/Resolver Simulation/Measurement

- Angle: 359.98°
- Frequency: 360 to 1000 Hz
- Line to Line Voltage: 11.8, 26, 90 VAC
- Ref: 26 or 115 VAC

Electrical Power Requirements

- Three-Phase, 115 VAC, 60 Hz

DC Power

- 8 Programmable Supplies
 - 150 W per Supply
 - Max Voltage: 100 V
 - Max Current: 20 A
- Fixed 28 VDC, 22 A
- DC References: -10 to +10 V at 100 mA (-16 to +16 V Optional)

AC Power

- Single-, Two- and Three-Phase Programmable Source
- 45 to 5000 Hz
- 0 to 270 V up to 10 A

Software/Programming

- Test Language: 716 ATLAS
- Incremental Compiler
- UNIX Operating System

Optical Testing

- Laser
 - Pulse Power, PRF and Beam Divergence
 - Range: 0.1 to 20 km with 5 m Resolution
 - Measurement: 30 to 300 mJ
 - Stimulus: 10⁻¹⁸ to 10⁻¹⁴ J/cm²
- Infrared
 - 27 Targets
 - Range: +40° to -10°C
 - Resolution: 0.01°C
 - Sensitivity: Resolution and Boresight Algorithms
- Visual
 - 28 Targets
 - 20 to 20,000 μ W/cm²-Sr
 - Sensitivity: Resolution and Boresight Algorithms

Maintenance Software

- Self-Test: BIT, Confidence, Fault Isolation
- Self-Alignment

Specifications and features subject to change without notice.