

# CAST EMT3500-3 EGI Diagnostic Tool

## Diagnostic Tool to Reduce EGI RTOK Rates

Recent investigations by the US military regarding EGI maintenance actions revealed that the majority of EGIs returned to depot are fully functional. These fully operational EGIs are being squawked off an aircraft resulting in high Re-Test OK (RTOK) rates. Minimal troubleshooting equipment is available and the current procedure is to return the EGI to the manufacturer for evaluation.

The EMT3500-3 diagnostic tool was designed to help identify failures ensuring EGIs returned to the Depot actually require repair. The EMT3500-3 is user-friendly field equipment that is easy for maintenance personnel to operate. Its graphical interface minimizes key strokes while CDNU-like inputs and readouts significantly reduce the learning curve.



### System Advantages

- Loads EGI OFP, Updates GPS Software, Provides Status and Verifies Load.
- Downloads and Saves Current Almanac, Restore Almanac, View Almanac in EGI.
- Request Periodic BIT Status, Initiates BIT, Write Current BIT to Display, Save Current BIT to Disk, Clear BIT, Display Saved BIT Result.
- Performs Inertial Testing: Has Mount for EGI Built into Rotating Table. Angle and Configuration is Designed to Excite Gyros and Accelerometers on all axis.
- Contains MIL-STD-1553 Interface for Primary Control and Communication with EGI.
- Contains RS-422 Interface for Providing Control and Interface with GEM.
- Contains Signal Generator Interface for Providing Data to/from GPS Signal Generator.
- Equipped with Custom Cabling including Test Stand Interface with Inertial Table and Other Components.

### GPS/INS Diagnostics

- Validates GPS Receiver Operation under Simple Jamming Environments
- Determines the Signal Input Quality of each GPS Channel
- Isolates a Bad/Weak Antenna or Cabling Issue
- Performs Pass/Fail Testing on all Inertial Sensors
- Provides Reports on GPS/IMU, BIT, OFP, Almanac and Mini-Bias Status

### Key Features

- OFP Load and Verify
- Reprogram GEM
- Almanac Functions
- GPS Test
- BIT Read and Initiation
- Inertial Mini-Bias
- Inertial Test
- Data Reporting



### Currently Supported Platforms

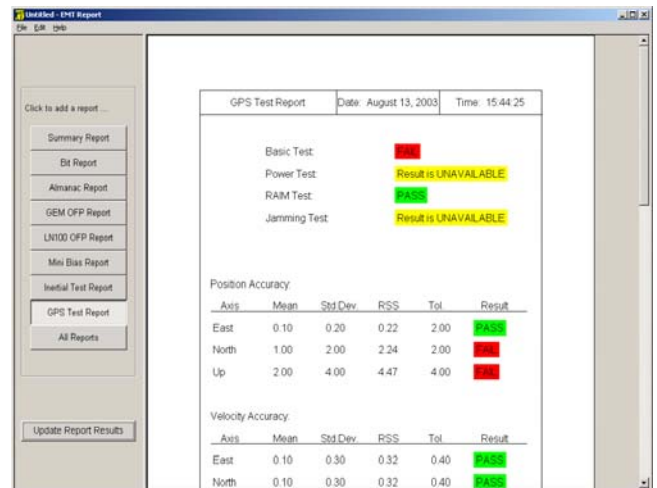
- AH-64 Apache
- OH-58D Kiowa Warrior
- UH-60 Black Hawk
- A-10 Thunderbolt
- C-5 Galaxy
- E-3 Sentry (AWACS)
- E-767 (AWACS) Japan
- F-15 Eagle
- F-16 Fighting Falcon
- KC-135 Stratotanker

## System Description

- Size (H x W x D) 55" x 24" x 32"
- Power Required 110/220 VAC  
50/60 Hz, 1200 W
- Operating System Windows, Lynx
- Keyboard, Pointing Device, and Color Monitor
- USB, CD RW and Floppy Drive
- Rack Mounted System in an Enclosure
- Inertial Rate Table
- Appropriate Cabling
- Laser Printer

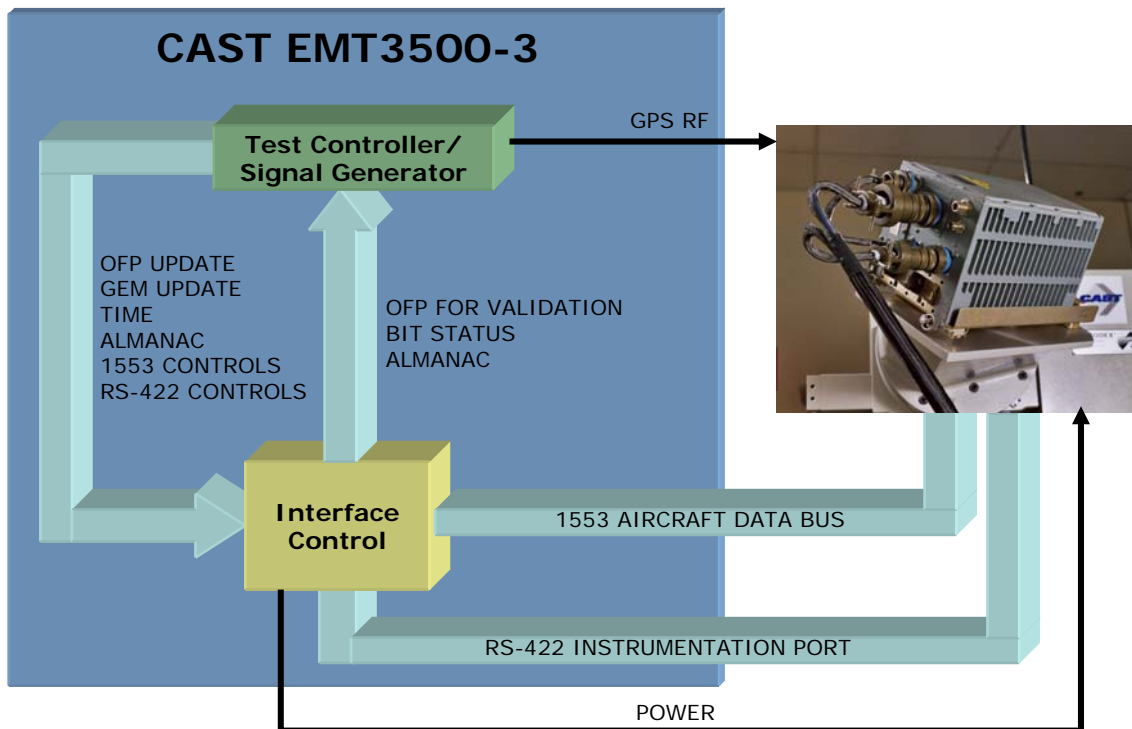
## System Options

- GPS RAIM Operation Validation
- Synchro Output Verification
- MIL-PRF-28800 Class 3 Ruggedized Case



The CAST EMT3500-3 EGI Diagnostics Report

## EGI Diagnostic Maintenance System



The EMT3500-3 loads and verifies OFFP and GEM software via 1553 and extracts receiver data via RS-422.

