

ADS-B INTEGRITY™, Cobham AvComm's new software application, controls the IFR6000 or IFR6015 Transponder Test Set and GPSG-1000 Positional Simulator to support Supplemental Type Certification (STC) and post approval testing for ADS-B Out equipment installations. For R&D requirements, the application will control the IFF-45TS/A MK XII/A Bench Test Set and the GPSG-1000 for ADS-B Out performance. A complete detailed ADS-B Out compliance report in FAA format will be generated showing Pass/Fail criteria.

Features/Benefits

- ADS-B equipment installation verification
- Complete AC 20-165B fast and convenient reporting to identify installation issues
- STC support
- Eliminate post STC operational flights
- Coupled testing in the hangar or on the flight line, eliminates:
 - ✓ Open sky requirements
 - ✓ GPS repeater
 - ✓ Weather issues
 - ✓ Interference with ATC operations
- Comprehensive solution for accurate system latency measurements
- Ability to measure latency and associated errors over a variety of simulated velocities and positions
- Save time and money

Accuracy and Integrity Performance Test (requires IFR6000 or IFR6015)

- Parameter checks per 20-165B (91.227) and FAA ADS-B Operation Compliance Report
- Mode S address validation (from GICB to ADS-B and against known problem values)
- ADS-B Out performance requirements for SIL, SDA, NIC/NUC, NACp, NACv
- Latitude/Longitude positional accuracy per bounds of NACp
- Emitter category reporting

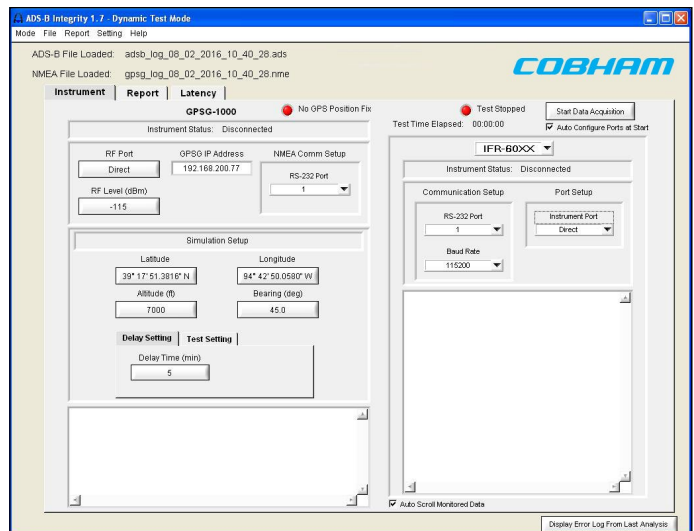
Positional Accuracy Test (requires GPSG-1000)

- Log of latitude and longitude positional data for evaluation of accuracy and integrity over a simulated flight path
- Exact simulated time and position information logged
- ADS-B squitter data received and logged
- Squitter positional data compared against coordinated simulation
- Logging and evaluation of SIL, SDA, NIC/NUC, NACp, NACv values in static or dynamic motion scenarios
- Logging of N/S, E/W Velocity data with reasonableness testing per bounds of NACv

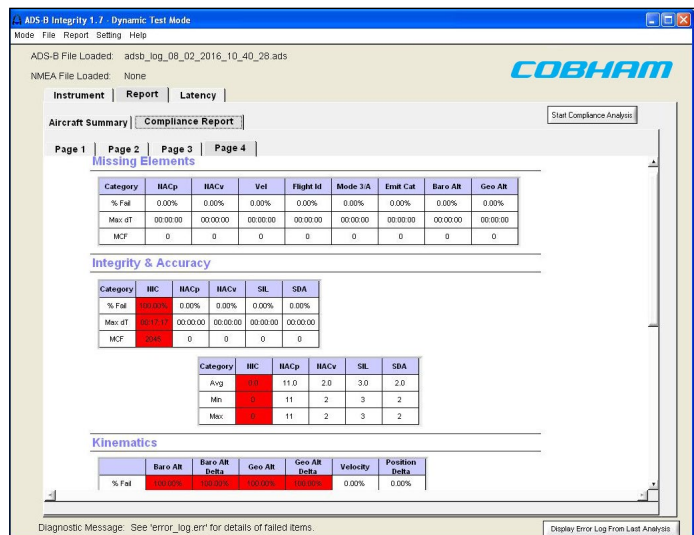
Application

Performance verification of:

- ADS-B Transponders
- UAT Transceivers
- GPS Receivers



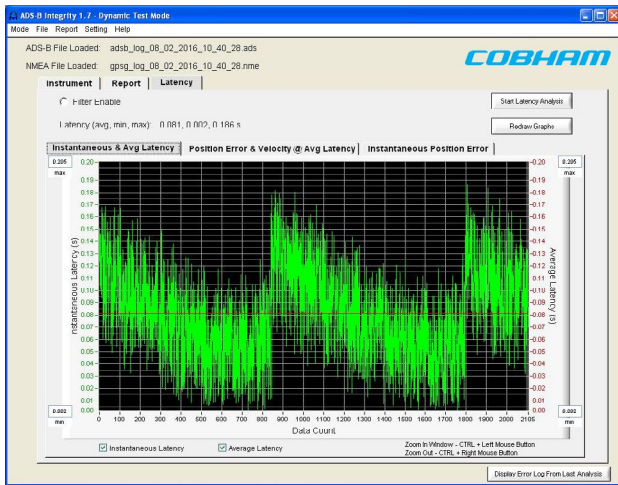
Instrument Setup



Data analysis screen identifies compliance failures

Latency

Plots of instantaneous and average system latency, velocity at average latency, and instantaneous positional error based on linear track are available.



Instantaneous Latency

PC Minimum Requirements

Windows® XP or Windows® 7 32-bit (or later)
 CPU: Intel® Core 2 Duo P8400 2.26 GHz or equivalent
 RAM: 2GB
 Monitor: XGA (1024 x 768) or higher
 Free Disk Space: 1GB

Required Equipment for ADS-B Installation/Verification and Compliance Report

Part No	Description
72422	IFR6000 Mode A/C/S Transponder/DME Test Set
<i>or</i> (72424	<i>IFR6015 Military version including E-TCAS and TACAN)</i>
83411	6000OPT3 ADS-B 1090 Mhz Option
112795	6000OPT5 UAT 978 Mhz Option (If applicable)
140609 *	6000OPT6 ADS-B Integrity Test Option*
112350	UC-584 Coupler Kit Single Antenna (<i>recommended</i>)
87339	GPSG-1000 Twelve Satellite GPS Simulator
140607	GPSGOPT3 ADS-B Integrity Test Option

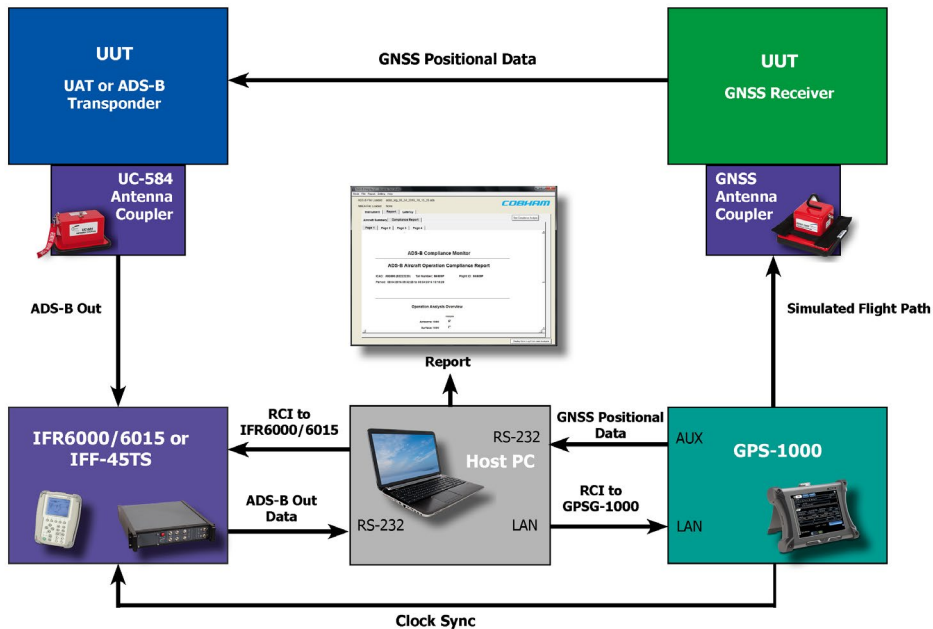
* This option includes the ADS-B INTEGRITY™ app

Required Equipment for R&D and Factory Test

Part No	Description
72438	IFF-45TS Mode A/C/S Transponder/DME Test Set
<i>or</i> (72439	<i>IFF-45TS-A Military version including E-TCAS and TACAN)</i>
140608*	IFF45TS/A-OPT10 ADS-B Integrity Test Option*
87339	GPSG-1000 Twelve Satellite GPS Simulator
140607	GPSGOPT3 ADS-B Integrity Test Option

* This option includes the ADS-B INTEGRITY™ app

AC 20-165B Compliance Testing System Interconnect Diagram



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