

# Fortress 757

## Multi Purpose Flight Recorder

**CURTISS-  
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### Key Features

- Combined voice, data, datalink, image and display recording (stand-alone options available)
- ED-112A compliant
- Designed to meet all current and possible future regulations
- Ultra compact and lightweight - 8.1 lb (3.7 kg)
- Webserver for fast and free data download
- Approval to (E)TSO-C123c, C124c, C176a, C177a
- 90 day Ultrasonic Locator Beacon to TSO-C121b

### Applications

- Crash protected recording
- Data storage for other applications including
  - + FOQA/FDM/FDAP
  - + Aircraft performance monitoring
  - + Engine condition trend monitoring

## Overview

Recorders are built to meet the latest regulations and often designed with any upcoming changes in mind. To ensure they meet the requirements of new and old aircraft, some modifications may be required, or additional data formatting hardware used. Curtiss-Wright has been manufacturing recorders since 1957 and introduced the world's first to obtain RTCA-DO178 approval for solid state recorders.

Fortress 757 provides a complete aircraft recording solution supporting parametric flight data at rates of 64/128/256/512/1024/2048/4096 words-per-second, 4 channels of cockpit voice recording, CPDLC recording each for up to 25 hours along with cockpit image recording for 2 hours minimum.

Fortress 757 is designed in accordance with RTCA/DO-178C and RTCA/DO-254. It meets all current and anticipated FAA and EUROCAE ED-112A requirements and has a 90 day Ultrasonic Locator Beacon (ULB), certified to TSO-C121b, fitted as standard. The core memory is expandable to support up to EUROCAE class 6 Cockpit Voice Recorder requirements for 25 hours recording capacity.

Fortress 757 attaches directly to an airframe to eliminate the need for heavy mounts or equipment racks/trays and easily integrates with other systems to provide additional functionality such as

- High speed (<45 seconds) and license free flight data download via a Gigabit Ethernet link
- Reachback capability for FOQA/FDM/FDAP Aircraft Performance and Engine Condition Trend monitoring programs

The Fortress 757 is supported by dedicated Recorder Independent Power Supply, Cockpit Area Microphone, Cockpit Area Camera and Cockpit Control Unit. Supporting dual recorder installations, the Cockpit Control Unit enables data and image distribution to two installed Fortress 757 Recorders through an integrated Ethernet switch.

## Specifications

### Interfaces

- Flight Data Recorder (FDR)
  - + 25 hours capacity from ARINC 717 format 64 at 4096 wps
  - + Automatic data rate detection
  - + Real time data monitor output
- Cockpit Voice Recorder (CVR)
  - + 4 channels, 30 minutes to 25 hours duration
  - + 3 crew channels
  - + 1 cockpit area microphone channel (amplified or unamplified)
  - + Summed Audio Monitor output
- Datalink Recorder (CPDLC)
  - + 2 to 25 hours, ARINC 429
- Airborne Image Recorder (AIR)
  - + 2 hours, up to 16 fps, 100BASE-T Ethernet
- Receives GMT/UTC via ARINC 429
- Comprehensive BIT including individual discrete output for each recording function
- OMS via ARINC 429
- Tri-axial accelerometer input
- Rotor tachometer input
- Gigabit Ethernet maintenance port

## Electrical and Mechanical

- Power
  - + 28 VDC
  - + 13W max
  - + Dual power input
- Mass: 8.1 lb (3.7 kg) including underwater locator beacon
- Dimensions (H x L x W) within
  - + 4.8 x 10.63 x 4.88" (122 x 270 x 124 mm)
- Underwater Locator Beacon: Beacon to TSO-C121b, battery and bracket included

## Environmental

Adheres to ED-112A defined crash survivability tests

- Fire intensity
  - + High: 1100°C for 60 minutes
  - + Low: 260°C for 10 hours
- Impact shock: 3,400 G for 6.5 ms
- Penetration resistance: 500 lb from 10 ft ¼ inch contact point
- Static crush: 5,000 lb for 5 mins per axis
- Shear/Tensile strength: 6,000 lb for 1 minute each axis
- Fluid immersion: Immersion in aircraft fluids for 24 hr
- Water immersion: 30 day sea water
- Hydrostatic pressure: Equivalent to depth of 20,000 ft

### RTCA-DO160G Environmental Qualification

- Temperature
  - + Operating: -55°C to +70°C
  - + Non-operating: -55°C to +85°C
- Altitude: -1,000 ft to + 55,000 ft
- RTCA-DO160G categories
  - + E1ABB(R(C,C1),U2(F,F1))EWFSFTAZ(XX)AZCWXRMA3J3L3XXAC

## Optional Equipment

- Cockpit Control Unit (CCU)
- Recorder Independent Power Supply (RIPS)
- Cockpit Area Camera (CAC)
- Cockpit Area Microphone (CAM)
- Flight Recorder System Accelerometer
- Ground Replay Software

## Ordering Information

Please contact Curtiss-Wright Defense Solutions.



Fortress 757 features a 90 day ULB