

Fortress CVR-25

Cockpit Voice Recorder

**CURTISS-
WRIGHT**

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Key Features

- 25 hour 4 channel voice recording
- 25 hour datalink recording
- ED-112A compliant
- Meets all current and possible future regulations
- Lightweight, 9.4 lb (4.25 kg)
- Webserver for fast and free data download
- Approval to (E)TSO-C123c, C177a
- 90 day ULB to TSO-C121b
- Reliability >217,000 hrs, A_{1c} @ 35°C MTBF (MIL-217F+)

Applications

- Crash protected recording

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, introduced the world's first recorder developed to RTCA-DO178 and the first to certify a 25 hour cockpit voice recorder CVR.

Fortress CVR-25 provides 4 channels of cockpit voice recording and 1 channel of CPDLC datalink recording, each for 25 hours minimum capacity supporting EUROCAE class CVR requirements. Audio recording performance exceeds that required by ED-112A with each channel providing area microphone performance and quality of 150 Hz to 6 kHz bandwidth resulting in superior clarity of recording.

Fortress CVR-25 is designed in accordance with RTCA/DO-178C and RTCA/DO-254, design assurance level D. It meets all current and anticipated FAA and EUROCAE ED-112A requirements.

Fortress CVR-25 is designed to install into existing aircraft equipment trays offering a simple upgrade path from current 2 hour voice recorders, easily integrating with other system components.

Fortress CVR-25 also includes a 90-day underwater locator beacon that provides improved battery safety features including a new non-restricted Class-9 lithium battery and containment of thermal runaway thus reducing the need for special handling, storage and shipping.

Fortress CVR-25 provides an integrated web based interface running across a gigabit physical Ethernet interface allowing rapid data access and recovery.

The Fortress CVR-25 is supported by dedicated recorder independent power supply (RIPS), cockpit area microphone, cockpit control unit and the PGS download and replay software suite.

Specifications

Interfaces

- Cockpit Voice Recorder (CVR), 25 hours minimum duration
 - + 4 channels, each with area microphone bandwidth performance of 150 Hz to 6 kHz
 - + Summed audio monitor output
- Datalink recorder (CPDLC)
 - + 25 hours duration, ARINC 429
 - + Williamsburg V3
- Receives GMT/UTC via ARINC 429
- Comprehensive BIT including individual discrete output for each recording function
- OMS via ARINC 429
- Rotor tachometer input
- Gigabit Ethernet maintenance port
- MTBF 217,000 hours iaw MIL-217+ Aic @ 35°C

Electrical and Mechanical

- Power
 - + 28 VDC or 115 VAC, 400 Hz
 - + 13W max, excluding exported power
- Mass: 9.4 lb (4.25 kg) including underwater locator beacon
- Dimensions (H x L x W) within
 - + 1/2 ATR short per ARINC 404A
- Rear Connector: DPXBMA-57-34P-0101-SF
- Front Connector: ZDA15S-1AKN-146
- Underwater locator beacon: Beacon to TSO-C121b, battery and bracket included

Regulatory Specifications

ARINC 404A, 573/717/757, EUROCAE MOPS ED-112A, RTCA/DO-160G, RTCA/DO-178C Level D, RTCA/DO-254 Level D

Environmental

Adheres to ED-112A defined crash survivability tests

- 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
- Fire intensity
 - + High: 1100°C for 60 minutes
 - + Low: 260°C for 10 hours
- 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
 - + F2ABB/ER(B3,B4),H(R)EWFSFSAZ(XX)/A(CF)AR/K(CF)CCXRRMA3J3L3AX

Optional Equipment

- Cockpit control unit (CCU)
- Cockpit area microphone (CAM)
- Recorder independent power supply (RIPS)
- Ground replay software

Ordering Information

Please contact [Curtiss-Wright Defense Solutions](#).



Fortress CVR-25 features a 90 day ULB