

Application Note

Avionics Software Test Facility

Depot Level Avionics Computer Software Test Systems



AP Labs developed a C-17 depot level test system for McDonnell Douglas (now Boeing). A total of 20 types of racks were developed. LRUs are removed from the aircraft and inserted into a connector identical to the test connector onboard the C-17.

The C-17 Line Replaceable Units (LRUs) tested by the AP Labs system include:

- HUD - Heads Up Display
- APDMC - Aircraft Propulsion Data Management Computer
- CSMU - Crash Survivable Memory Unit
- QAR - Quick Access Resorder
- SAU - Signal Acquisition Unit
- CAWS - Central Aural Warning System
- CCU - Communications Control Unit
- CNC - Communication-Navigation Control
- MC - Mission Computer
- MCK - Mission Computer Keyboard
- MFD - Multi-Function Display
- WACC - Warning and Caution Computer

Large integrated System designed to test OFP software in over 20 LRU airborne computer systems

· VME-based, real-time system for stimulating and acquiring data from the LRUs

· wide range of electrical interface types supported, including:

- MIL-STD-1553
- Digital I/O (both 28 VDC and TTL)
- Serial (RS-422 and RS-232)
- ARINC-429, ARINC-573
- D/A and A/D
- VGA

· AP Labs supplied racks, cabling, driver and AT software, and documentation