C-17 TRAINING SYSTEM

Producing Combat-Ready C-17 Pilots, Loadmasters and Technicians

L3 Link Training & Simulation's proven C-17 Training System (TS) delivers fully qualified, combat-ready pilots, loadmasters and aircraft maintenance technicians. In undertaking a Total Tailored Training Solution, L3 Link has structured the program to support "guaranteed student" aircrew training.

Our comprehensive training system solution encompasses program management, aircrew instruction, Contractor Logistics Support and change management support. At our aircrew and maintenance training system support centers L3 Link also provides support in the areas of: courseware, engineering, configuration and data management, logistics, and test and evaluation.

The C-17 TS provides initial and mission qualification instruction to more than 1,500 pilot, co-pilot and loadmaster students annually. In addition, L3 Link supports continuation training for more than 8,000 active, reserve, Air National Guard and foreign military students annually.

As the C-17 TS prime integrator, L3 Link is responsible for the operation and maintenance of 10 C-17 CONUS training sites, two OCONUS training sites and the Royal Australian Air Force Base training site in Amberley, Australia.

The C-17 TS encompasses a total of 164 aircrew training devices and 28 maintenance training devices.

WEAPON SYSTEM TRAINER

The key element of the C-17 Training System (TS) is the Weapons System Trainer (WST). Comprised of a very high-fidelity C-17 Full Motion Simulator (FMS) for pilot training and the Loadmaster Station (LS) for use by loadmaster aircrew, the system allows for preflight, inflight, mission, and emergency operation training.

FULL MOTION SIMULATOR

The C-17 Full Motion Simulator (FMS) is an FAA Advisory Circular Level D-equivalent training device. The FMS is equipped with a visual system that provides a 220 degree horizontal by 55 degree vertical field-of-view and is powered by state of the art liquid crystal on silicon projectors. A worldwide, imagery-based database simulates the full range of day/night/NVG and weather effects while immersing pilots in robust training scenarios. The visual and radar environment databases are fully correlated to support higher fidelity training. The 6 degree-of-freedom, full-motion based devices use actual aircraft aerodynamic data to ensure they meet stringent C-17 operational requirements.

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LOADMASTER STATION

The C-17 Loadmaster Station (LS) is a replication of the LS on the aircraft and allows the loadmaster to practice procedures, both independently and, when linked with the FMS, as part of a coordinated aircrew. The forward loadmaster station functions interactively with the mission computer system. Indicators and displays function in the same way they will on the actual aircraft. The system includes a visual representation of the cargo compartment as viewed from the aircraft's LS.

COCKPIT SYSTEMS SIMULATOR

The Cockpit Systems Simulator (CSS) is identical to the FMS without the motion and the visual system. The CSS is specifically used to teach integrated aircraft system operation, normal and emergency procedures, and crew resource management to the pilot and co-pilot.

VIRTUAL TRAINING DEVICE

The C-17 Virtual Training Device (VTD) is used to augment and enhance training while offering students an opportunity to train and practice in either a structured lesson or in a free-play environment. The VTD has the capability to run on a full spectrum of media devices from a desktop or tablet simulation to a full cockpit mockup and runs the same operational flight program (OFP) as the full simulator.

CARGO COMPARTMENT TRAINER

The C-17 Cargo Compartment Trainer (CCT) is a full scale and exact replication of the C-17 cargo compartment, floor, ramp, and cargo door and includes all the necessary equipment to conduct actual loading procedures. This device, consisting of the exact same form, fit, shape and function of the aircraft cargo compartment, is used to conduct full scale actual loading operations of real pallets, vehicles, aero medical stations, and airdrop configurations.

CARGO LOAD MODEL TRAINER

The Cargo Load Model (CLM) is a one-tenth scale replication of the C-17 cargo compartment, ramp, and cargo door and includes the necessary simulated cargo and additional equipment. The CLM is used to provide loadmaster trainees with three dimensional experience in the aircraft constraints directly related to the C-17 in the areas of load planning, loading and unloading necessary to support the air land missions of the aircraft.

AIRCRAFT ENGINE MAINTENANCE TRAINER

The C-17 Aircraft Engine Maintenance Trainer is a non-powered engine maintenance training device that is capable of training over 130 engine maintenance tasks.

AIRCRAFT MAINTENANCE SYSTEMS TRAINER

The Aircraft Maintenance Systems Trainer (AMST) simulates the first 70 feet of the C-17 aircraft and includes a functional flight deck, avionics racks, with all major LRUs, cargo bay with removable panels to the maintenance tunnel, crew entry door, avionics cooling, and loadmaster station. The AMST simulates the electrical, Floatation Explosive Development System (FEDS), On Board Inert Gas Generating System (OBIGGS), navigation, communication, loadmaster, avionics busses and a 1553 database for testing and troubleshooting common 1553 bus problems.

AIRCRAFT CARGO DOORS AND RAILS TRAINER

The C-17 Aircraft Cargo Doors and Rails Trainer (ACDRT) is used to train maintenance technicians in the operation and maintenance of aircraft cargo doors and mission systems.

AIRCRAFT LANDING GEAR TRAINER

The C-17 Aircraft Landing Gear Trainer (ALGT) consists of two platforms representing the C-17 main and nose landing gear systems and is used to provide maintenance technicians training on brakes, steering, and other landing gear subsystems. The ALGT is capable of training over 90 maintenance tasks.

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TRAINER EVALUATION PERFORMANCE AIRCRAFT TRAINING SET

The Trainer Evaluation Performance Aircraft Training Set (TEPATS) is used to train and certify technicians on the operation and fault isolation of aircraft systems. Equipped with a fully functioning flight deck and Heads Up Display, the TEPATS supports maintenance engine run training and interfaces with a number of avionics and communications/navigation-related sets.

AIRCRAFT AUTOMATIC FLIGHT CONTROLS SYSTEM TRAINER

The C-17 Aircraft Automatic Flight Control System Trainer (AAFCST) is used to train maintenance technicians in the operation of the flight control system, rigging and component removal and installation. The AAFCST simulates the operations of every flight control surface found on the aircraft.

AIRCREW INSTRUCTION

The C-17 TS offers over 30 different courses and over 1800 hours of aircrew instruction on the operation of the C-17 aircraft.

TRAINING SYSTEM SUPPORT CENTER

L3 Link operates the C-17 Training System Support Center (TSSC) that provides support in the following areas:

- Logistics
- Courseware
- Engineering
- Configuration management
- Test and evaluation
- Safety
- Security

Through a blend of core competencies, expertise, and experience, the L3 Link C-17 TSSC provides for the complete life cycle support of aircrew and maintenance technician training.

TRAINING MANAGEMENT SYSTEM

The C-17 Training Management System provides for training system administration, student management, resource scheduling and management, data collection and evaluation, and ties together the entire C-17 TS architecture.

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