

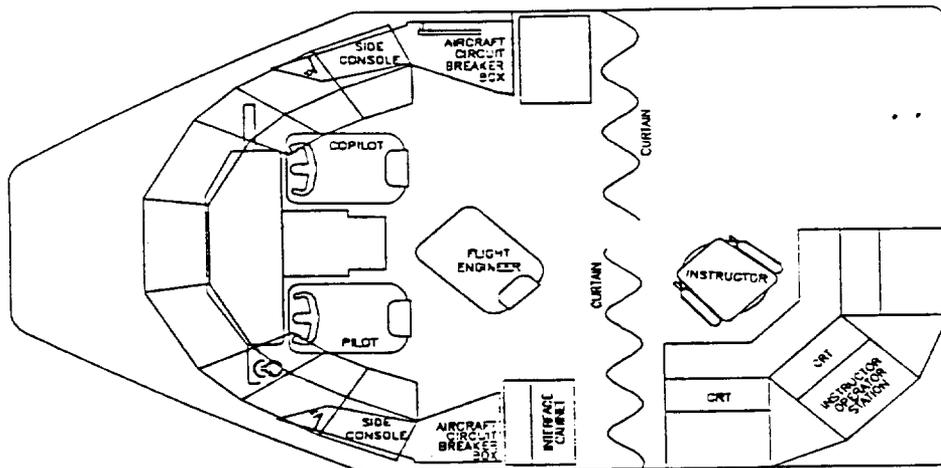
**SUMMARY OF
KC-130R AIRCRAFT OPERATIONAL FLIGHT TRAINER (OFT)**

April 1997

Device 2F107A

NAVAL AIR WARFARE CENTER TRAINING SYSTEMS DIVISION

ORLANDO, FLORIDA



TRAINING CATEGORY:

Aviation - Operational Flight Trainer (OFT)

ORIGINATING AGENCY:

DCNO/AIR

SECURITY CLASSIFICATION OF DEVICE:

Device 2F107A is unclassified.

PURPOSE OF DEVICE:

To provide pilot, copilot, and flight engineer ground training in cockpit familiarization and operations for the acquisition, development, and maintenance of ground, in-flight, safety and emergency procedures for the KC-130R aircraft.

INTENDED USE:

The 2F107A OFT is used to minimize in-flight training time by providing the necessary cockpit familiarization and ground training for personnel who are or will become pilots, copilots, and flight engineers for the KC-130 aircraft.

Flight crews can be trained in limited phases of ground and in-flight operational cockpit procedures and systems management techniques required to operate the KC-130 aircraft. Mechanics and crew chiefs also can be trained in ground operations related to cockpit procedures such as engine start-up, run-up, checkout and malfunction management. Motion and visual cues are not simulated.

FUNCTIONAL DESCRIPTION:

The 2F107A OFT provides computer controlled, simulated operation of the KC-130R cockpit systems involved in the performance of normal and emergency flight procedures. Instructor-controlled insertion of simulated aircraft system malfunctions and failures requires the flight crew trainers to follow the emergency corrective procedures designated for actual aircraft emergencies. In this manner, the trainee is monitored and evaluated for judgement and performance in reacting to emergency situations. The trainees acquire knowledge of the procedures necessary to sustain mission effectiveness during a wide range of flight conditions. The OFT

cockpit equipment consists of instrument panels, circuit breaker panels and operating equipment panels. Communication equipment is simulated to operate as an intercom between the instructor and flight crew trainees. Navigation functions and procedures are simulated and operate between the software program, instructor, and flight trainees. The Instructor Operator Station (IOS) enables the instructor to observe and control the training situation. A two-bay power supply cabinet provides operating power to the cockpit equipment and the communication/navigation interface links. The Digital Control Loading System is used to control four controlling surfaces of the aircraft: elevators, ailerons, rudder, and nose wheel steering. These four channels give the student pilot the same feel and characteristics of the real aircraft.

PHYSICAL INFORMATION:

The trainee station with IOS is about 12 x 20 feet in size; the approximate weight is 8,250 pounds.

OPERATIONAL EQUIPMENT (all unmodified):

Ground Proximity Warning System (GPWS) Mark 11, Flight Control System (FCS) FCS-105, Altitude Alerter/Preselect System (AAPS), Combined Altitude Radar Altimeter (CARA), AN/APN-232, Inertial Navigation System (INS) LTN-72, Omega Navigation System (ONS) LTN-211, Automatic Direction Finder (ADF) Radio Compass DF-206, Very High Frequency (VHF) Transceiver AN/ARC-186, VHF Receiver AN/ARN-126, Tactical Air Communications and Navigation (TACAN) Radio Set AN/ARN-118, True Airspeed System (TAS) B&D 2504, Direct Air Support Center (DASC), Compass System C-12, Global Positioning System (GPS), and Multimode Radio Set AN/ARC-210(V).

EQUIPMENT REQUIRED (NOT SUPPLIED):

None.

POWER REQUIREMENTS:

Input: 120/208 Vac 50 Hz 3 phase 4 wire.
Max Peak Power: 36.4 KVA.
Max Starting Power: 36.4 KVA, 175 amps/phase.

INSTALLATION REQUIREMENTS:

Minimum Installation Area: 20' x 28' simulator room with 6' x 14' computer room. Floor loading ~ 35 lb/sq ft.; air conditioning ~ 48,000 BTU/hr.

PUBLICATIONS FURNISHED:

Operation & Maintenance Handbook with Parts Catalog - NTSC P-6630 (U); Planned Maintenance System - NTSC P-6631 (U); Commercial Computer Documentation Set - NAVTRADEV P-4410 (U); Instructor Utilization Handbook - NTSC P-6633 (U); and On-the-Job Training Handbook - NTSC P-6634 (U).

PERSONNEL:

Instructor: One qualified instructor, graduate of 2F107A Instructor's Training course.

Operator: Instructor-operated.

Trainees: Crew training for pilot, copilot and flight engineer.

Maintenance: One Electronics Technician (one per 40-hour utilization week).

CONTRACT IDENTIFICATION:

Manufactured by CAE-Link Corporation, Binghamton, New York, under NAVTRASYS-SCEN Contract Numbers N61339-87-G-0001, Delivery Order 0004 and N61339-89-G-0002, Delivery Order 0001.

Modified by Aero Simulation Inc., Tampa, Florida, under NAWCTSD Contract Number N61339-95-C-0047.

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