



The Aircraft Dual Electrical System Trainer is a comprehensive system that is ideal for trainings on an aircraft dual-engine electrical system. By using this trainer, students both learn the functionality of each component, and develop logical and systematic approach to perform troubleshooting tasks.

The system is designed to depict a typical aircraft electrical system, and contains standard aircraft components and wiring. Model ELC 100D is a complete functional simulation of a dual-engine 28V DC electrical system include in 115/26 VAC 400 hz system.

## Specifications

### Features

- Understanding fundemantels of aircraft Electrical System and its components
- Typical aircraft Dual Electrical System system.
- Instructor's fault panel for introduction ( 10 simulated faults )
- Typical Cockpit Instrumentation, Circuit Breakers, and Controls
- Digital Instrument Panel (ECAM) System
- Analog Instruments
- DC and AC powers
- Representative DC and AC Loads
- AC and DC bus system (Main, Auxiliary, Bus, Gen, AC, Avionics)
- Internal and External Lights
- Split bus system
- Battery charging system
- Distribution terminal strip
- The system mounted on a metal/aluminum mobile stand.
- Metal/aluminum frame with 4 wheels. 2 of 4 wheels are lockable.
- Training video for teachers
- Delivered fully assembled tested and ready to operate
- Colored Ultraviolet printing method on aliminium compozit panel.
- Generators and battery should be in a box under the trainer with transparent plexiglass in front.
- All components should be connected via terminals.
- Computer Control Software (CCS)
  - Trainer monitored
  - Fault panel control from software
  - All data shown in the software

## Components

- Control Panel
  - All Bus control sw
  - All Load control
  - Nav light control
  - Beacon control
  - Volt metre selector knob
  - External lights control switches
  - Internal lights control switches
- Breaker (CB) Panel
  - Generator CB
  - NAV CB
  - Avionic CB
  - Beacon CB
  - Actuator CB
  - Main Bus CB
  - Blower CB
  - Auxiliary- (Non- essential) CB
  - External power bus CB
  - Circuit breaker lockout
- Relays
  - Two ac bus relay
  - Two ac bus 26 vac relay
  - Generator bus 1 relay
  - Generator bus 2 relay
  - Battery bus relay
  - Main bus relay
  - Two Auxiliary- (Non- essential) (bus relay)
  - External power bus Relay
  - Avionics bus relay
  - Battery relay
  - Generator relay
  - Blower relay
  - Starter relay
  - Reverse current relay
- Electromechanical Loads Generator
  - Landing Gear Motor
  - Cabin Air Blower
  - Electromechanical Actuator Starter engine

## Components

- Two 24 volt starter
- External Lights
  - Navigation Lights with Strobes
  - Right wing
  - Left wing
  - Tail
  - Beacon
  - Landing Light
  - Taxi Light
- Bus bars
  - Two ac bus 115 vac 400hz
  - Two ac bus 26 vac 400hz
  - Two gnd bus
  - Generator bus 1
  - Generator bus 2
  - Battery bus
  - Main bus
  - Two Auxiliary- (Non- essential) bus
  - External power bus
  - Avionics bus
- Internal Lights
  - Cabin Light
  - Reading Light
  - Multifunction Cockpit Light with Dimmer
- Instruments
  - Digital Instrument Panel (ECAM)
    - All bus voltmeter
    - All bus status should be illustrated
    - All switch positions
  - Load status
  - Two Analog Voltmeter
  - Analog Ammeter
  - Two Hourmeter
  - Analog Pressure Gauge
  - Analog Temperature Gauge
  - Two Analog Fuel level Gauge
- Wiring
  - Aircraft wires, with clear identification labels for each wire.

- All wires are coded and labeled for trouble- shooting.
- Electrical driven by 230 VAC/50 Hz Motor.
- Generator Controls (for two generator)
  - Electronic Controlled Generator
  - Driven motor control switch and light
  - Driven motor speed control knob
  - Voltage regulators
- AC Powers
  - One Static Inverters 115VAC @ 400 Hz.
  - One static inverter 26VAC @ 400 Hz
- DC Powers
  - Two 28 volt generator driven by electrical motor
- Aircraft EPU plug
- Aircraft EPU Socket

## Documentation

- User's Manual
- Study Guide
- Instructor's Guide
- Wiring Diagrams
- Device's original Wiring Diagrams
- Components Diagrams

## Power Specs

- Electrical box
- Residual current device
- Emergency Button
- Energy Signal Lamp
- 110 VAC 60 Hz or 220-240 VAC 50 Hz