

AT-13002 Dual Electrical Trainer



Aircraft electricians install, inspect, test, repair and maintain electrical and electronics systems on passenger airplanes. They are responsible for the proper functioning of instrument systems, landing gear and avionics components.



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Wholly Owned By ORIENTAL TECH DEVELOPMENT LTD.

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AT-13002 Dual Electrical Trainer

Electrical Components:

- DC Alternators
- Alternator Control Units
- 115VAC/26VAC 400Hz Static Inverter
- 3 Phase 400 Hz Static Inverter
- Dummy Starter Motor
- Ammeters
- Voltmeters
- Main Bus Bar
- Auxiliary Bus Bar
- Battery Bus Bar
- 3 Phase @ 400 Hz Bus Bar
- 115VAC @ 400 Hz Bus Bar
- 26VAC @ 400 Hz Bus Bar

Instructor Panel:

- Switches to simulate faults, which allows the instructor to insert or simulate faults, allowing students to identify and troubleshoot the faults.
- Indicators:
 - i. Alternator Status Indication
 - ii. Inverter Status Indication
 - iii. Bus Configuration Indicator

Annunciator Panel:

- Stall Warning System on Aural & Visual Warning

Circuit Breaker Panel:

- Trip-free circuit breakers used as primary electrical circuit protection.

Switch Control Panel:

1. Starter switch
2. Master switch
3. Parallel/Split Bus Selector
4. Alternator switch
5. Inverter Power Switch
6. Internal & External Lighting Switch
7. Instrument Power Switch
8. Simulated Landing Gear Switch
9. Cabin Air Blower Switch
10. Avionics Blower Switch

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Specifications of Primary Units:

1. Alternator Specifications:
 - FAA-PMA: Yes
 - Rated Voltage: 24-28 Volts
 - Rated Continuous Current: 70A
2. 115/26 VAC Static Inverter
 - Input Voltage: 20 to 36 VDC
 - Input Current @ 28 VDC: 2.7 A
 - Output Power: Total: 50 VA, 115VAC @ 50VA, 26VAC @ 30 VA
 - Power Factor: 0.8 to 0.95
 - Phase/ Waveform: Single/ Sine
 - Frequency: 400Hz \pm 1%
3. 3 Phase 115 VAC Static Inverter
 - Input Voltage: 28VDC \pm 4VDC
 - Input Current: 10.7 amps typ. at 28 VDC / 85 VA load per phase
 - Output Voltage:
 - i. 3 Wire Delta – 115Vrms \pm 3% Line to Line
 - ii. 4 Wire Wye - 115Vrms \pm 3% Line to Neutral, 200Vrms \pm 3% Line to Line
 - Output Current:
 - i. Delta 115V line to line – 0.73A/Phase
 - ii. Wye 115V line to neutral – 0.73A/Phase
 - iii. Wye 200V line to line – 0.43A/Phase
 - Output Power: 85 VA/Phase, 250 VA total
 - Power Factor: 0.8 to 0.95 leading power factor
 - Phase/ Waveform: Three/ Sine
 - Frequency: 400Hz \pm 1%
4. Battery
 - Maintenance free
 - Rating: 10AH
 - Voltage: 24V
5. Toggle Switches
 - Compliance to MIL Specifications
6. Master Switch
 - Compliance to MIL Specifications
7. Starter Switch
 - Compliance to MIL Specifications
8. Alternator Control Unit (ACU)
 - ACU at 28VDC providing voltage regulation, field-current overload protection, alternator feeder, field-current fault protection and troubleshooting light.
9. Ammeter
 - Range from -30A to +30A.
10. Voltmeter
 - Range from 0V to 35V

Accessories Components:

- Cabin light
- Reading light
- Cockpit light
- Beacon light
- Navigation lights
- Strobe lights
- Landing/Taxi light
- Stall Warning System
- Fuel Indication
(Fuel Probe and Fuel Gauge)
- Avionics Blower
- Cabin Air Blower
- Simulated Landing Gear



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