



Aircraft Cockpit Instrument Training Set(CBT-100A) is a complete and fully functional simulation of typical aircraft cockpit. It includes essential flight, engine and pitot-static instruments. This training set provides hands-on maintenance training while also functioning as a demonstration tool for instructors. It demonstrates the principles of gyros, altimeter and the engine instruments, and also can be used for teaching of instrument removal and replacement.

NOTE: The trainer can be customized with sensors and indicators according to your training needs. Please contact us for your special requests.

This trainer also allows to perform practical tasks of EASA PART 147 ATA-31-00-00

Specifications

Features

- The system combine “Cockpit analog flight instrumentation”, “primary flight instrumentation”, “aircraft systems instrumentation” and “engine instrumentation”.
- Trainer use Digital ADAHRS (Air Data and Attitude Heading and Reference Systems).
- “Air Data and Attitude Heading and Reference Systems” provide highly accurate and reliable referencing of aircraft position, rate, vector and acceleration data.
- Three degrees of freedom instrument panel permits full demonstration of attitude and directional gyro functions.
- Functional engine monitoring system be connected to engine sensors.
- All analog instruments operate manually
- Primary flight display be mounted on a panel that can simulate roll, pitch, and yaw movements controlled by a mechanism operated by a control yoke.
- Provision of engine sensor simulation.
- Pitot-static system to conduct pitot static system checks for digital instrument at the trainer.
- Instructor’s Panel for fault insertion.

Components

- **PFD Screen**
- **MFD Screen**
- **Engine Data Modules**
- **Analog instruments**
 - Attitude Gyro and Indicator
 - Directional Gyro / Heading Indicator
 - Airspeed Indicator

- Altimeter
- Vertical Speed Indicator
- Turn and Slip Indicator
- Fuel Temp/Press Indicator
- Oil Temp/Press Indicators
- Fuel Level Indicator
- MAP
- RPM
- Vacuum Gauge
- **Sensors**
 - Oil Temperature Sensor
 - Carburetor Air Temp Sensor
 - Manifold Pressure Sensor
 - Fuel Level Sensor
 - Oil Pressure Sensor
 - Fuel Pressure Sensor
 - Engine RPM Sensor
 - Fuel Flow Sensor
 - Ammeter Shunt
 - CHT Thermocouples (Qty 4)
 - EGT Thermocouples (Qty 4)
 - OAT Sensor
 - Pitot Tube
 - Static Port
 - Inductive sensor
- **Aircraft circuit breakers.**
- **Throttle Lever**
- **Propeller Lever**
- **Pitot-Static System:**
 - Pitot Tube
 - Fuselage Static Port
 - Alternate Static Port
 - Static Source Selector Switch
 - Two Test Ports for Pitot-Static Test Set
- **Power**
 - Main Power
 - PDF
 - Tachometer
 - Turn&Slip
 - Vacuum Pump

- **Contacs:**
 - Pitot Heater
 - L/G
 - Taxi Light
- **Auxiliary Flight Control:**
 - Aileron Trim
 - Elevator Trim
 - Flap Position
- **Electronic Simulation of Sensors:**
 - Oil Temperature Manifold Pressure
 - Engine RPM
 - Oil Pressure
 - Fuel Level
 - Fuel Press
- **Sender Selector Panel**
 - Fuel System
 - Oil System
- **Vacuum Control Panel**
 - Static System Instrument
 - MAP
 - Fuel Flow

Components Technical Specs

- PFD-MFD Screen
- PFD Page Layout have at least the following:
 - Airspeed Indicator
 - Ground Speed (GS)
 - True Airspeed (TAS)
 - Airspeed Bug
 - Airspeed Trend Rate
 - Attitude Indicator
 - Flight Path Marker
 - Altimeter
 - Setting Barometer (BARO)
 - Altitude Bug
 - Altitude Trend Rate
 - Barometer Setting, and Density Altitude.
 - Vertical Speed Indicator
 - Vertical Speed (VS) BUG.
 - Heading Indicator/Directional Gyro

Components Technical Specs

- Heading (HDG) BUG
- Slip Ball
- Angle of Attack Indicator
- OAT(Outside air temperature)
- Winds Aloft magnitude and vector
- Artificial Horizon/Synthetic Vision
- Menu Page have at least the following:
 - Six Pack
 - Terrain Alert
 - Airport Flags
 - HSI SRC
 - Bugs
- Main Menu bar are at the bottom of the screen and should include following functions:
 - FPL – Flight Plan
 - INFO
 - MENU
 - Message(NO MSG / MESSAGE / CAUTION / WARNING)
- Flight Data Modules have at least the following:
 - All sensors should be solid state.
 - Accelerometers, which measure forces in all three directions
 - Rotational rate sensors, which sense rotation about all three axes
 - Pressure transducers for measuring air data
 - Magnetometers on all three axes for measuring magnetic heading.
- Engine Data Modules have at least the following:
 - These modules support popular four and six-cylinder engine installations and should measure a variety of engine and environmental parameters, such as:
 - RPM
 - Manifold pressure
 - Oil temperature
 - Oil pressure
 - Exhaust gas temperature (EGT)
 - Cylinder head temperature (CHT)
 - Fuel levels for multiple tanks
 - Voltage
 - Current
 - Fuel pressure

Components Technical Specs

- Fuel flow
- Carburetor air temperature
- Coolant pressure and temperature
- Flap and trim potentiometers
- External contacts
- Fuel Computer
- Pitch Trim Indicator
- Roll Trim Indicators
- Flap Indicator

Documentation

- User's Manual
- Study Guide
- Instructor's Guide
- Device's original Manual
- 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

Others

- GPS receiver / antenna
- Aircraft circuit breakers.
- Throttle lever.