

# Autopilot / Automatic Flight Controls Trainer

Model AP-100C



Your local Partner

## EL ESLEK

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Autopilot Trainer is an excellent resource for teaching the principles of automatic flight controls by demonstration using a complete system that encompasses all the aspects of three(3) axis autopilot and automatic flight controls.

## Differences from AP-100B Model

- Automatic/Motorized Yoke System
- Automatic/Motorized Rudder Pedal System
- Automatic/Motorized Throttle Lever
- Pitch Trim Servo System
- Heading Feed Back
- Altitude Feed Back
- Active Remote Gyro HSI System
- Flux Detector(The Magnetic Azimuth Transmitter)
- Slaving Accessory
- Remote Control Panel
- Vacuum Pump

## Specifications

### Features

- Indicators operate in sync with auto-pilot system
- Aircraft position controlled by yoke.
- Automatic/Motorized Yoke System
  - Yoke automatically/motorized moves in two axis with data from autopilot computer. It performs automatic positioning according to the position of the airplane.
- Automatic/Motorized Rudder Pedal System
  - Rudder Pedal automatically/motorized moves in one axis with data from autopilot computer. It performs automatic positioning according to the position of the airplane.
- Automatic/Motorized Throttle Lever
- Yoke and rudder pedal can move the control surfaces of the aircraft.
- Servos operate in sync with auto-pilot and yoke/rudder pedal.
- 2 axis DOF + 1 DOF system
- Pitch Trim Servo System
- Heading Feed Back
- Altitude Feed Back
- Active Remote Gyro HSI System
- Remote Control Panel

- Vacuum Pump
- Remote Altitude control & feedback
- Remote Heading control & feedback
- Remote side wing control
- Remote head wing control
- The aircraft automatically calibrated to runway position when the trainer is turned on.
- Instructor's panel for Fault Insertion
- The system mounted on a metal/aluminum mobile stand.
- Metal/aluminum frame with 4 wheels. 2 of 4 wheels are lockable.

## Components

### 15-inch PFD-MFD screen

- Attitude Directional Indicator(ADI)
- Directional Gyro(HSI)
- Airspeed Indicator(ASI)
- Altimeter(ALT)
- Vertical Speed Indicator(VSI)
- Turn and Slip Indicator
- Course deviation bar(CDI)
- Course Pointer
- RPM indicator
- Manifold Pressure indicator
- Engine instruments(Oil, Fuel system)
  
- **Yoke ( Automatic/Motorized )**
- **Rudder Pedal ( Automatic/Motorized )**
- **Throttle Control ( Automatic/Motorized )**
- **Pitch / Yaw / Roll / Pitch Trim servos**
- **The trainer should have auto-pilot panel.**
  - Active AP(auto-pilot) function button,
  - Active Pitch function button,
  - Active Roll function button,
  - Active ALT(altitude) function button,
  - Active V/S(vertical speed)function button,
  - Active FLC function button,

- Active HDG(heading) function button,
  - Active FEET function Knob,
  - Active FPM function Knob,
  - Active HDG function Knob,
  - All function buttons should be illuminated.
- **Master Power and Switch panel.**
    - DC master power switch,
    - Master power lamp,
    - Beacon switch,
    - Engine Start,
    - PFD circuit breaker,
    - Auto-Pilot circuit breaker,
    - Beacon circuit breaker,
    - Gyro circuit breaker,
    - Circuit breaker lockout,
    - Aural warning horn,
    - Resettable master caution
  - **Model Metal Aircraft**
    - Aircraft size should be minimum 1400mmx1300mm
    - Aircraft color should be white
    - Moveable Aileron/Elevator/ Trim & Rudder
    - Aileron/elevator/trim and rudder are different color
    - • DOF system should operate in sync with auto-pilot(aileron/elevator/rudder) and yoke&rudder pedal.
    - The trainer should have a beacon.
  - **Remote Directional Gyro**
    - Remote mounted
    - Drive signal for heading loop drive motor
    - Slaving meter drive signal
    - Original Mounted Tray
    - Shock mounted
    - Internal power supply
    - Provide's a gyro-stabilized magnetic heading
    - Used in conjunction with the Magnetic Azimuth Transmitter.
    - Power: 14 or 28 volt dc
    - 300 degree free turnable system for testing

- **Flux Detector(The Magnetic Azimuth Transmitter)**
  - Senses the direction of the earth's magnetic field and transmits information to gyro.
- **Slaving Accessory**
  - Slave/Free Gyro Switch
  - Slaving Meter indicator
  - CW/CCW Adjustment
- **Remote Control Panel**
  - Heading Control
  - Altitude Control
  - Speed Control
  - Side Wings Control

## Documentation

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