



# DC POSITION CONTROL SERVO SYSTEM TRAINER

MODEL-SCM06

This trainer has been designed to study and demonstrate the principle and working of a DC position Servo system. It consists of a common potentiometer with calibrated dial as master or input transducer and a rebalance potentiometer to convert output position into a voltage signal alongwith specially designed DC motor with suitable coupling, feedback patch, summing amplifier, preamplifier and power amplifier. Various controls for different parameters are provided It is a highly accurate, highly sensitive demonstrator with good repeatability, linearity and fast response.

## FEATURES

1. All components are soldered on hollow tags of 0.25" diameter height of 0.4" on the front side of PCB
2. The complete circuit diagram is screen printed on component side of the PCB with circuit and parts at the same place.
3. The true value of component is printed on component side.
4. The PCB with components on front side is fitted in elegant wooden box having lock and key arrangement
5. The acrylic cover is fitted on PCB to safeguard parts. It has holes for alignment and repair.
6. The testing points are provided with 1.25" tags to connect CRO probe
7. All Trainers are operated on 230V AC mains and must be self-contained unit.

## SPECIFICATIONS

1. PRINCIPLE : DC Position Servo System
2. DISPLACEMENT : Angular (0 to 270 deg).
3. INPUT TRANSDUCER : Command or master potentiometer with calibrated dial (0 to 270 deg)
4. Motor : Specially designed bi-directional, geared, permanent magnet armature control led DC motor.
5. COUPLING : Suitable coupling of motor to output rebalance potentiometer.
6. AMPLIFIERS : Summing amplifier of adjustable gain preamplifier and power amplifier for driving DC on basis of error signal.
7. AMPLIFIER GAIN : Controlled by the Voltage signal derived by the conversion of the output position of rebalance potentiometer into voltage signal.
8. OUTPUT : Slave dial coupled to the servo mechanism and mounted with calibrated dial.
9. CONTROLS :
  1. Master or command potentiometer.
  2. Potentiometric for zero adjustment.
  3. Potentiometric for span adjustment to adjust the minimum and maximum limit
  4. Potentiometric for gain adjustment.
  5. Servo Motor ON/OFF control.
10. All parts are soldered on TAGS on SINGLE PCB with complete circuit diagram SCREEN PRINTED.
11. Standard Accessories :
  1. A Manual having practical
  2. Patch Cords.

In keeping view of SIGMA policy of continuous development and improvement, the Specifications may be changed without prior notice or obligation.

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