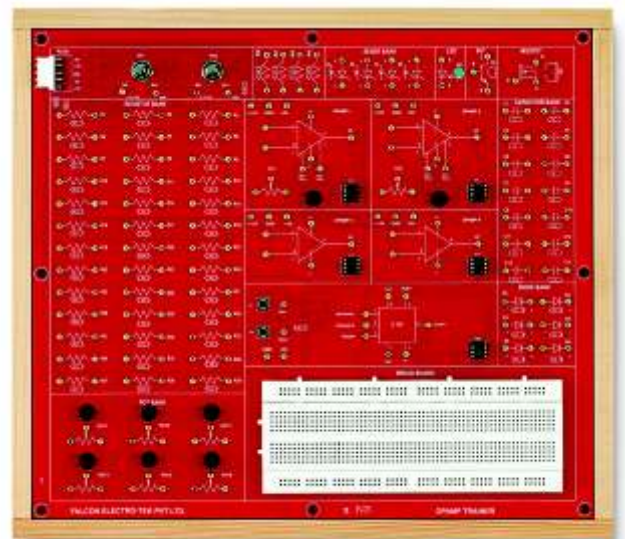


OPT-01

OP-AMP TRAINER



FEATURES

- Covers Op-Amp (741) and its various applications
- Allows study of timer using 555 IC
- Study of F/V, V/F using LM331
- On-board Resistor, Capacitor, Diode and Potentiometer Banks of different values
- Bread board area allows construction of circuits using external components along with on-board resources
- On-board fixed power supply and variable regulated positive and negative power supply
- Descriptive experimental manual and an interactive e-manual

SPECIFICATIONS

- $\pm 15V$, ± 12 and $+5V$ fixed DC power supply
- DC 1.5 to 10V, -1.5 to -10V variable power supply
- IC 741 Op-Amp stage
- 555 IC stage
- LM331 IC stage
- Pin ZIF socket
- Resistors bank
- Capacitors bank
- Potentiometers
- Diodes
- Zener Diodes
- NPN Transistor
- N-channel MOSFET
- LED
- Bread board

EXPERIMENTS

Op-Amp IC-741 based

- Measurement of Input Offset Voltage, Input Bias Current, Input Offset Current
- Measurement of Differential Input Impedance, Output Resistance
- Measurement of Common Mode Rejection Ratio (CMRR), Slew Rate, Unity Gain Bandwidth

- Inverting and Non-Inverting Amplifier (AC/DC)
- Voltage follower (AC/DC)
- Integrator, Differentiator, Differential Amplifier
- Inverting Summing, Scaling and Averaging Amplifier
- Non-Inverting Summing, Scaling and Averaging Amplifier
- Differential Summing and Subtractor Amplifier
- Log and Anti-Log Amplifier
- Instrumentation Amplifier
- Low Pass, High Pass, Band Pass, Narrow Band Reject, All Pass filters
- Phase Shift Oscillator, Wein Bridge Oscillator, Quadrature (Sine-Cosine) Oscillator
- Square, Triangular, Saw-Tooth Wave Generator
- Current to Voltage, Voltage to Current, Digital to Analog Converter
- Positive and Negative Clipper Circuit
- Positive and Negative Clamper Circuit
- Level shifter Circuit
- Half Wave, Full Wave Rectifier
- Basic Comparator
- Astable, Bi-Stable, Mono-Stable Multi-Vibrator
- Zero Crossing Detector
- Schmitt Trigger
- Window Detector
- Peak Detector
- Sample and Hold circuit
- Function Generator
- Frequency to Voltage, Voltage to Frequency Converter using LM331.

IC-555 Based

- Astable, Bi-Stable, Mono-Stable Multi-Vibrator
- Frequency Divider and Frequency Stretcher
- Schmitt Trigger
- PWM Modulator