



BASICS OF ELECTRONICS TRAINING STAND

A6

Product number
MSEMP01

This training stand is designed to teach the fundamentals of electronics through practical measurement and testing. It features integrated components such as resistors, capacitors, coils, diodes, transistors, DC motor, and switches, providing students with hands-on opportunities to learn core principles. Equipped with a dedicated multimeter, it supports accurate measurements of various electrical values. The stand is mobile, lightweight, and offers versatile mounting options, making it suitable for diverse classroom setups.



Specifications

- Resistors: Measures 1 Ω to 1 k Ω ; adjustable decades from 100 Ω to 1 M Ω .
- Potentiometers: Measures 1 k Ω to 100 k Ω .
- Capacitors: Measures 10 nF to 10 μ F.
- Coils: Measures 4.7 μ H to 10 mH.
- Diodes: Tests rectifier, Schottky, Zener, LED, and photodiodes.
- Transistors: Tests PNP, NPN, N-Channel, and P-Channel MOSFETs.
- Switches: Includes manual and push-button switches.
- Relays: Supports relay testing.
- Lamps: Integrated for testing lighting circuits.
- Phototransistors: Open measurement points for hands-on testing.
- PWM: Includes high-power manual PWM driver.
- Voltage regulator: Manual voltage control testing.
- DC motor: Simulates motor operation with visual spinning.
- Multimeter: Built-in for precise measurements.
- Measuring wires: Includes 12 wires with a stand.
- PJEZO signaler: Supports signal generation connections.



Features

- Integrated resistors, capacitors, potentiometers, coils, and diodes for diverse measurement scenarios.
- Built-in transistor testing for PNP, NPN, N-Channel, and P-Channel MOSFETs.
- Manual switch, push button, and PJEZO signal connection points for interactive circuit exploration.
- DC motor simulation for learning correct wiring sequences and operational principles.
- High-power PWM driver and manual voltage regulator for hands-on learning of advanced electrical techniques.
- Removable multimeter provided with each stand for accurate and reliable measurements.
- Lightweight, mobile design with both vertical and horizontal mounting options.

Value for Students

- Learn to measure resistor values across ranges from 1 ohm to 1 kohm, and decades of resistors from 100 ohms to 1 Mohm using manual adjustments.
- Gain hands-on experience with potentiometers, capacitors (10 nF to 10 μ F), and coil inductance (4.7 μ H to 10 mH) measurements.
- Explore diode characteristics, including rectifier, Schottky, Zener, LED, and photodiodes, through practical connections and testing.
- Understand transistor behavior with measurements of PNP, NPN, N-Channel, and P-Channel MOSFETs.
- Perform relay tests, visualize DC motor operations, and connect manual switches and push buttons for circuit simulations.
- Develop skills in using a multimeter for accurate diagnostics, eliminating the need for additional tools.
- Learn how to integrate and operate various lamps and phototransistors for electrical circuit studies.
- Explore pulse-width modulation (PWM) principles with manual high-power PWM drivers and voltage regulators.

