

Electronics Trainer Module Set

LTET-1102

Package Features:

- Comprehensive measuring instrument with multi-meter, function generator, power supply all-in-one.
- It is possible to practice measuring the characteristics of each module of electronic circuit using measuring equipment.
- DC + 5V, $\pm 15V$ fixed voltage, DC variable power
- supply, AC variable power supply for analog and digital experiment.
- For safety, overload and short circuit protection circuit should be attached to the power supply of main unit module.
- The main body is able to be docked or plugged and combine
- the training module will provide required number of modules to cover all training concept in the specification.
- possible to configure the circuit by using breadboard, and to be mounted on the multi-experiment module or to be detachable to the main body.

Specifications of Electronics trainer

Basic Panel

The basic panel works as the main platform where other modules will be docked or plugged.

Consists of power supply for boards.

DC Circuit Experiment Module

Topic coverage:

Ohm's Law

Serial/Parallel Circuit

Kirchhoff's Law

Galvanometer

Wheatstone Bridge

AC/DC Circuit Experiment Module

Topic coverage:

Capacitance

Inductance

RC/RL circuit

LC resonance (Series/Parallel)

AC/DC voltage measurement

AC/DC current measurement

Ohm's Law

Kirchhoff's Law



Note: Picture just Reference. It may change

Series-parallel combination circuit

Thevenin's theorem

Newton's theorem

DC circuit (RC) and transient phenomenon

AC circuit (RC/RL/RLC)

Characteristics of transformer

Resonant circuit (series/parallel) and LC filter

Signal Conversion Circuit Experiment Module

Topic coverage:

- A/D converter
- D/A converter
- F/V converter
- V/F converter

Digital Logic Experiment Module

Topic coverage:

- Shift register
- Decoder
- Encoder
- Half adder/Full adder
- Multiplexer/De-multiplexer

- Diode Logic
- AND gate
- OR/XOR gate
- Inverter
- JK flip-flop
- RS flip-flop
- Counter

Diode circuit with voltage regulation module

Topic Coverage:

Bridge rectifier
Voltage regulator
Diode/Zener diode
Rectifier circuits
Oscillator Experiment Module

Topic coverage:

Phase shift oscillator
Colpitts oscillator
Hartley oscillator
Crystal oscillator

Filter circuits
Characteristics of transistor
Characteristics of LED

Semiconductor Circuit Experiment

Topic coverage:

Diode characteristics
Zener diode
NPN Transistor
PNP Transistor

J-FET characteristics
MOS-FET characteristics
SCR characteristics
TRIAC characteristics

OP-AMP Circuit Basics and Application Experiment

Topic coverage:

Amplifier biasing
Complementary Amplifier
Common emitter Amplifier
Darlington Amplifier
Inverting amplifier

Non-Inverting Amplifier
Differential Amplifier
Summing Amplifier
Push Pull Amplifier

Filter Circuit

Topic coverage: Low pass filter, High pass filter, Band pass filter

Sensor Circuit Experiment

Topic coverage:

- Temperature sensor circuit experiment,
- Photoelectric sensor experiment,
- Hall effect sensor circuit experiment
- Humidity Sensor Circuit Experiment,
- Gas Sensor Circuit Experiment

Pulse Circuit Module

Topic coverage:

Clipper circuit
Schmitt trigger
Bistable multi vibrator
Monostable multi vibrator
Breadboard Module

Topic coverage:

Voltage: DC 5V, -15V, +15V

Variable voltage
Variable resistor: 1k Ω
Toggle switch
LED indicator lamp
Digital I/O; Relay output (A)

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