Analog & Digital Electronics Lab Training Modules

ME 1155 - Analog & Digital Lab Trainer (Bread Board Model)

Features :

- Advanced lab trainer for students to perform more than 100 experiments of analog & digital electronics
- Compatible with optional ready to use experimental modules
- Glass Epoxy PCB used as front panel & mounted on light weight shock proof Plastic cabinet
- On board power supplies, Function generator, and other input signals
- Bread board provided
- Supplied with connecting wires

Technical Specifications :

DC Regulated Power Supplies

- Output voltages : One fixed DC regulated power supply of +5V/1Amp
  : One fixed DC regulated power supply of ±15V/1Amp
  : One variable DC regulated power supply of 0-±15V /200mA
- Load regulation : ± 0.2% Line regulation: ± 0.05%
- Ripple : Less than 3mV RMS
- Protections : Short circuit & over load protected

AC Supply

- Output voltage : 5V-0V-5V,10V-0V-10V.
  Can be used as 5V,10V,15V, 20V & also as center tap

Function Generator/TTL Generator

- Operating modes : Sine, Square
- Frequency range : 10Hz to 1MHz (Amplitude 15V pp Sine Wave)
  (Amplitude 10Vpp Square Wave)
- TTL : 5V
- TTL Clock Fixed : 0.1Hz

Switches/LED/Display

- 8 Nos toggle switches for High/Low TTL Level
- 8 Nos. LED Display (High Low TTL Level)
- Logic Probe Logic level indicator for TTL(7 Seg.)

Potentiometer & Speaker

- 6 Nos. Potentiometer (100ohm ~ 47Kohm) &Speaker 8 ohms for audio use
- Power requirement : 220 VAC ±10% , 50 Hz
- Weight : 4.0Kg Approx.

Standard Accessories :

- 5 mtr. hookup wire, 10 nos. Patch Chords with2mm banana plug on one end, Power Chord & Instruction Manual
- Bread Board Strips 2 Nos vertically common strips (640 Tie points each), 4 Nos horizontally common strips(100 Tie points each)

Optional Accessories :

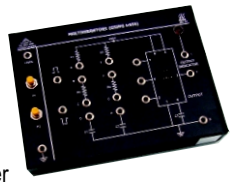
- Dual Trace CRO 20MHz (ME 3020) & Digital Multimeter (VC 97)
- 20 Nos. Patch Chords with both side 2mm banana plug (Required only when optional ready to use analog & digital modules ordered with ME 1155)

Optional Ready to use modules for ME 1153, ME 1154, or ME 1155

Features :

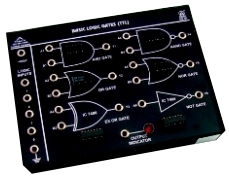
- Ready to use modules are specially design for master lab trainer
- Circuit diagram printed on Glass Epoxy PCB used as front panel of 172mm x 128mm & mounted on light weight shock proof plastic cabinet
- All important IC's mounted on front panel & test points brought out on 2mm socket
- Input and output signal for modules taken from master lab trainer or other external Instruments
- Supplied with detailed experimental manual for required experiments
- Weight : 500gm Approx.
- Dimensions (mm) : 175 (L) x130(B) x 25(H)

Ready to use Analog Lab Modules



Model	Description
AC-01	Darlington Pair Amplifier
AC-02	Class B Amplifier
AC-03	Common Emitter Amplifier
AC-04	Common Collector Amplifier
AC-05	Common Base Amplifier
AC-06	Class A Amplifier
AC-07	Class C RF Tuned Amplifier
AC-10	RC Coupled Amplifier (Two Stage)
AC-11	Complementary Symmetry Amplifier
AC-12	Feed Back Amplifier (Positive & Negative)
AC-13	Differential Amplifier (Transistorized)
AC-15	FET Common Source Amplifier
AC-20	IFT Amplifier
AC-21	Audio Power Amplifier using IC TBA 810
CA-02	Transistor Characteristics (CB, CE, CB in NPN & PNP)
CA-03	Transistor Characteristics (CB NPN)
CA-04	Transistor Characteristics (CB PNP)
CA-05	Transistor Characteristics (CE NPN)
CA-06	Transistor Characteristics (CE PNP)
CA-07	Transistor Characteristics (CC NPN)
CA-08	PNP & NPN Transistor Tester
CA-09	Transistor Characteristics (CC PNP)
CA-10	FET Characterisitics
CA-11	Zener Voltage Regulator
CA-12	Transistor Series Voltage Regulator
CA-13	Transisitor Shunt Voltage Regulator
CA-14	UJT Characteristics
CA-15	MOSFET Characteristics
CA-16	SCR Characteristics
CA-17	TRIAC Characteristics
CA-18	DIAC Characteristics
CA-20	Rectifier Circuits (Half Wave, Full Wave & Bridge Rectifier)
MO-01	Multivibrators (Astable/Monostable)
MO-05	Colpit Oscillator
MO-07	Wein Bridge oscillator
MO-08	Phase Shift Oscillator
MO-10	Phase Locked Loop
NF-01	Activer Filters (Low Pass and High Pass)
NF-02	Active Band Pass Filter
NF-03	Notch Filter (Active+Passive)
NF-04	Two Port Network Parameter
OP-01	Op-Amp (Inverting/Non-Inverting/Differentiator)
OP-02	Operational Amplifier (Adder/Scalar)
OP-03	Operational Amplifier (Integrator/Differnetiator)
OP-05	Schmit Trigger and Comaparator
OP-06	Sawtooth Generator using Op-Amp
PE-01	Phase Angle Control with Thyristor
PE-02	Phase Angle Control with Triac
PE-05	Thyristor as DC Voltage Switch

Ready to use Digital Lab Modules



Model	Description
DE-01	Logic Gates
DE-02	Universal Gate - NAND/NOR Gate
DE-03	EX-OR Gate Implementation
DE-04	Demorgan's Theorem
DE-05	EX-OR Gate Application
DE-06	Code Conversion (Binary to gray and gray to binary)
DE-07	Code conversion (BCD to excess-3 codes)
DE-08	Binary Adder/Subtractor
DE-09	Encoder/Decoder (8 to 3 Line Encoder, 3 to 8 Line Decoder)
DE-10	Multiplexer /Demultiplexer (4-1 Line Multiplexer, 1-4 Line Demultiplexer)
DE-11	Flip-Flops (R-S,D,J-K,T Flip-Flops)
DE-12	Shift Resistors 4 Bit Serial n-Parallel Out
DE-13	4Bit Synchronous Binary Counter (Up Counter)
DE-14	4Bit Binary Ripple Counter (Up Down Counter)
DE-15	BCD to 7 Seven Segment Decoder
DE-16	Digital to Analog Converter (R-2R Ladder)