

Ambey International



Product Code:

AL-E139

CATALOGUE

#2557/4, BENGALI MOHALLA, Ambala Cantt, Haryana (India),

DIGITAL LAB TRAINER



The DIGITAL LAB is intended for elementary as well as advance training of digital electronics. The digital lab covers regular digital circuits by solder-less interconnections on breadboard and as well as compatible with all optional modules through use of 2mm brass terminals and patch cords. Various clock generators, logic level input/output indicators and DC regulated power supplies etc. are in-built. The unit housed in attractive enclosure is supplied with mains cord, patch cords, Instruction manual and Component Set.

Experimental Coverage:

01. Logic gates operation
02. To verify De-morgan's theorem with boolean logic equations
03. Binary to Gray code conversion
04. Gray code to Binary conversion
05. Binary to Excess-3 code conversion
06. Binary Adder and Subtractor
07. Binary Multiplier
08. EX-OR gate implementation
09. Application of EX-OR gate
10. Johnson Counter
11. To verify the dual nature of Logic Gates
12. Study of Flip-Flops RS, JK, D&T
13. Multiplexer and Demultiplexer
14. 4 Bit Binary up and down counter
15. Study of 8 to 3 Line Encoder
16. Study of 3 to 8 Line Decoder
17. Study of Shift Register (SIPO)
18. CMOS-TTL Interfacing
19. Study of Crystal oscillator
20. Study of pulse stretcher circuit

Bread Board : Unique solder-less large size, spring loaded breadboard consisting of two Terminal Strips with 1280 tie points and 4 Distribution Strips with 100 tie points each, totaling to 1680 tie points. (Size : 112mm x 170mm approx)

Regulated DC Power Supply : +5V at 1 Amp, -5V at 500 mA, 3 to +15V at 500mA, and -3 to -15V at 500 mA.

Pulse Generator : 1 Hz to 1 MHz in 6 Steps. Variable in between steps

- Amplitude : 3-15V (CMOS), 5V (TTL)

- Duty Cycle : 50% TTL / CMOS Output

Pulsar Switches : 2 independent buffered bounce free manual pulser (useful for freezing the action of each stage of the counter after every clock pulse)

Data Switches : 12 Nos. independent buffered logic level inputs to select High / Low TTL levels, each with a bi-color LED to indicate high / low status and termination.

Logic Indicators : 12 Nos. independent buffered logic level indicators for High / Low status indication with bi-color LED for digital outputs

Seven Segment Display : 2 Nos. BCD to Seven Segment Decoder / Driver IC with terminals

Logic Probe : Logic level indicator for TTL / CMOS

CMOS/TTL : Provided

Power : 230 V \pm 10%, 50 Hz

Components Provided : ICs-4001/1, 4049/1,4069/1, 7400/1, 7402/1, 7404/1, 7406/1, 7408/2, 7410/2, 7411/3, 7420/2,7432/3, 7474/2,7476/2,7486/1.Resistors-330E/1,1K/2, 1K8/1,,15K/1, 47K/1.1M/2, Capacitors- 0.01mF/1, 0.1mF/1, 0.22 mF/1,Crystal-32.768MHz/1.

Accessories : Mains cord, Operating and Experimental manual, Red & Black patch cords (2mm with Pin) 10 each, Red & Black patch cord (Pin to Pin) 10 each. Wire 24/25 SWG. 1Meter each 5 Colour Instruction manual : Strongly supported by detailed operating instructions.