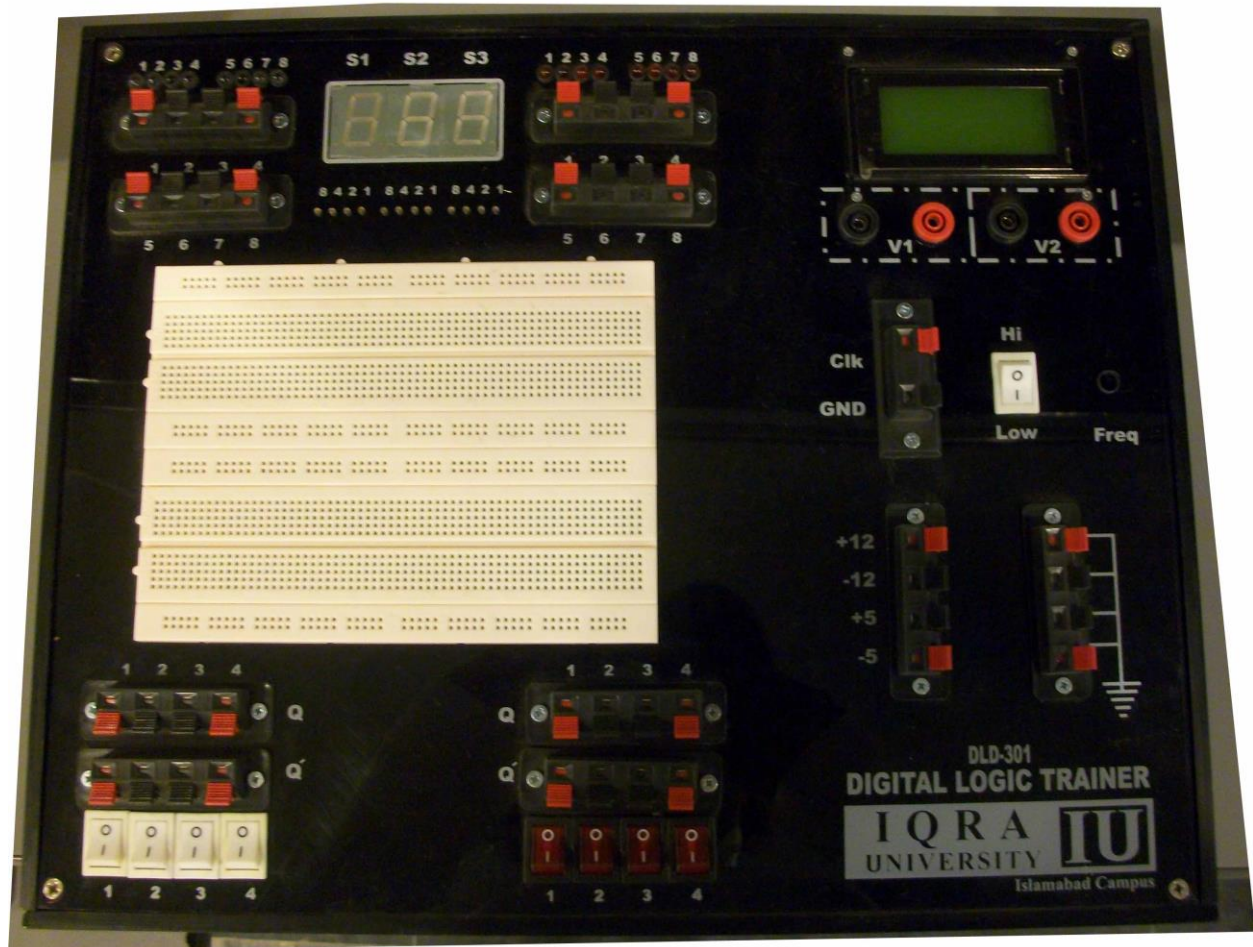


DIGITAL LOGIC DESIGN TRAINER

Digital Logic Design Trainer is a major part of Digital Lab. To become familiar with this part here is a complete system in which Digital Logic Design Trainer is a comprehensive and self-contained system suitable for anyone engaged in digital logic experiments. All necessary equipments for digital logic experiments such as power supply, signal generator, switches and displays are installed on the main unit.



MAIN ASPECTS OF THIS TRAINER

- Suitable for combinational logic, sequential logic, and microprocessor circuit experimentation and Design.
- Ideal tool for learning the basics of digital logic circuits.
- Integrated training system, with complete curriculum.
- Comprehensive power supply, signal supply, and testing devices for convenient experimentation.
- Expandability and flexibility of experiments greatly increased by large breadboard.
- Use with TTL, CMOS, NMOS, PMOS and ECL circuits.
- All supplies equipped with overload protection.
- 13 experiment modules form basis for over 60 fully documented experiments.
- Main units and experiment modules also available separately for economical construction of class sets.

Features:

1. Power Switch with Inner Light Indicator
2. Input Power Supply Power Supply 110/220V AC $\pm 10\%$ 50/60Hz & Fuse Protected

3. Fixed DC Power Supply Voltage range: +5V, -5V, +12V and -12V
4. Maximum current output: 1.A for +5V rail, 300mA for others
5. Output overload Protection (Fuses)
6. Removable Solder less Breadboard 1680 interconnected tie points, accepting all DIP devices, components with leads and solid wires of AWG #22-30 (0.3mm to 0.8mm)
7. Logic Switches with +5V
8. Logic Switches with Inverted Output
9. Logic Indicators, 5mm LED displays indicate high and low logic state
10. Variable Clock Generator frequency ranges From 1Hz-1000Hz
11. High Low Edge Triggering Switch with Frequency
12. Seven-Segment Displays Four sets of independent 7-segment displays, with BCD, 7-segment decoder/driver and decimal point input terminal
13. 4x16 LCD for Digital Volt Meter & Frequency Meter Display
14. Inbuilt 2 Digital Volt meters with Probes V1 & V2
15. Inbuilt Digital Frequency meters
16. input with 8-4-2-1 code Logic Probe TTL and CMOS level
17. Accessories Power lead
18. user manual

This trainer is flexible in Design as well Devices Mounted on it are not inter connected. Students have to connect all the devices in the required manner in order to perform experiments. This also allows Teachers to Design new experiments for the students as assignments

EXPERIMENTS:

1. Familiarization with basic logic gates and,or,nor ,xnor ,not
2. Designing basic gates using Nand Universal Gates
3. Combinational circuit Design using basic gates
4. Design of half adder, full adder,4 bit adder
5. Design of 4x1 and 8x1 multiplexer
6. Design of BCD to seven segment decoder
7. Design of SR Latches, SR Flip Flop, JK Flip Flop
8. Design of 4 bits
9. Basic Logic Gates
10. Design of Parity Generator and Checker Circuits
11. Design of Adders and Sub tractors
12. Design of Decoders/Demultiplexers/Multiplexers
13. Design of Comparators
14. Design of ALU
15. Design of Seven Segment Decoders
16. Design of BCD to seven segment decoders using 7404 IC
17. Design of BCD to Excess 3 Converter
18. Design of Up Counter
19. Design of Down Counter
20. Design of Up/Down counter
21. Design of Digital Clock

22. Design of Stop Watch
23. Design of Stop Watch using
24. Design of Latches
25. Design of Flip Flops (D,JK,T)
26. Design of Shift Registers
27. Design of Universal Shift Registers

28. Design of Sequence Recognizer

For Projects

29. Traffic Lights Controller
30. Electronic Lock
31. BCD Calculator
32. Digital Clock
33. Digital Stop Watch
34. Electronic Thermometer
35. Water Level Sensor
36. Electronic Dice
37. Tic Tac Toe Game
38. Led Flasher