



### SPECIFICATIONS OF MASTER UNIT

- ◆ Built in Power Supply:  
DC Power Supply: 5V / 1A,  $\pm 12V$ , 500mA  
0 -  $\pm 15V$  150mA (variable),  
AC 12-0-12, 150mAAC
- ◆ Built in Function Generator:  
Output Waveform: Sine, Triangle & Square / TTL  
Output Frequency: 1 Hz to 200KHz in 6 ranges, with amplitude & frequency control pots. O/P Voltage 20V p-p max.
- ◆ Clock Generator : 10 MHz TTL clock.
- ◆ Input Data Switches and output LED status indicators for High/Low indication (15+1No.)
- ◆ Pulsar switches (2 Nos.) With four debounced outputs - 2 No.
- ◆ Fixed TTL(5V) clocks : 4 Nos. 1KHz, 100Hz, 5Hz, 1Hz
- ◆ Logic probe to detect High/Low level pulses upto 1MHz, with bi-colour LEDs to indicate status.
- ◆ 2 digit 7 segment display with BCD to 7 segment decoder.
- ◆ LED BAR graph with 10 LED indicator to display 0-2.5V or 0-4V input.
- ◆ Onboard DPM is provided with mode selection.  
DC volt/current: 200mA/20V - 1No.
- ◆ Onboard POTS: 1K - (1No.) & 1M - (1No.)
- ◆ Onboard speaker: 8 $\Omega$ , 0.5 Watt - (1No.)

Note: Specifications are subject to change.

- ◆ Built in bread board panel with 1280 tie points and 400 distribution points, totalling to 1680 points along with 4mm banana sockets for tapping from the trainer +5V, +12V, GND for the circuits to be assembled on bread board using single stand (#22/24)wire.
- ◆ Optionally components for circuit practice (resistors, capacitors, diodes, ICs etc.) supplied as overlay learning system.

- ◆ 20 Pin ZIF : Various analog/digital IC's can be tested.

#### Mechanical Dimensions:

- (A) Master Unit : 460mm (W), 160mm(H), 350mm(D)  
Net weight : 5Kg. Gross weight : 7Kg.
- (B) Panel : 215mm(W), 165mm(H), 40mm(D)  
Net weight: 700 gm approx.

- ◆ Operating Voltage : 230V  $\pm 10\%$ , 50Hz/35A.

### SALIENT FEATURES

- ◆ Aesthetically designed injection molded electronic desk.
- ◆ Master unit carrying useful experiment resources Variable Power supplies / Status / Pulsar / Function Generator, DPMs etc. while the central slot will hold various replaceable experiment panels.
- ◆ Connection through Sturdy 4mm Banana Sockets & Patch Cords.
- ◆ Hands on learning by constructing circuits using built in power bread board panel as well as optionally using Discrete component panel.
- ◆ Set of Users Guide provided with each Unit.
- ◆ If you need components for circuit practice buy overlay learning system specified below.

**TECHNICAL SPECIFICATIONS:** Replaceable panels in place of Breadboard.



<b>MODEL</b>	Digital IC Trainer (DIT-I)
IC Used	7400, 7404, 7408, 7432, 7486, 7476, 7490, 7476, 7495, [7402 (optional)]
Sockets	142
Discrete componen used	10K x 1, 0.1µF x 1 100K Pot
Experiment	Basic logic gates- OR, AND, INVERTER, NOR, NAND, EX-OR, EX-NOR, Boolean Algebra Theorems - 25nos., Kaurnaugh Map, Combinational circuits - Adder, subtractor, code converter like Gray code, 7 seg BCD, Hex, Excess- 3, Parity checker, Encoder / Decoder, Multiplexer / Demultiplexer. Sequential Logic circuits like Flip-Flops- R-S, J-K, T, D. Counters- Async/Sync, decade, ring/twisted, divide by N (modulo N).



<b>MODEL</b>	TTL CMOS Trainer (DIT-II)
IC Used	74280, 7407, 74HCT14, 4011, 7485, 74191, 4051, 74123
Sockets	142
Discrete component used	10K x 2, 100K Pot, 4K7 x 1, 220K x 1, 0.1µF x 1
Experiment	Study of TTL, CMOS characteristics, Schmitt gate circuits, Circuits using NAND gate, Multiplexer/Demultiplexer circuits, Open collector gate circuits, Parity generating circuits, High speed monostable circuits, Comparator circuits, Counter circuits, CMOS device characteristics.



MODEL	ZIF Panel-I	ZIF Panel-II
IC Used	40 pin universal ZIF socket	6 Nos. of 20 Pin ZIF sockets
Sockets	75	122
Discrete component used	10K x 2	as required

**Overlay Learning System (OLS)**

**Digital** : 16 Nos. of tracings supporting 56 Experiments, **Analog** : 14 Nos. of tracings supporting 39 Experiments. **Set of Components useful for** As per your order and specification consisting of Resistor(92nos.), Capacitor (43nos.), Inductor (4nos.), Transistor **Above OLS**(11nos.), Diode (9 nos.), LEDs (13 nos.), ICs (53 nos.) etc. Supplied with 22 or 24 SWG SS Hook up wires for BB panel 1 mtr length & 4mm yo 22 SWG SS (300mm) X 10Nos



**Bread Board Trainer: (Power Project Board)**

Bread board : With 1280 tie points & 400 distribution points totalling to 1680 points with built in power supply : +5V, ±12V, variable 0 to ±12V



Note: Specifications are subject to change.