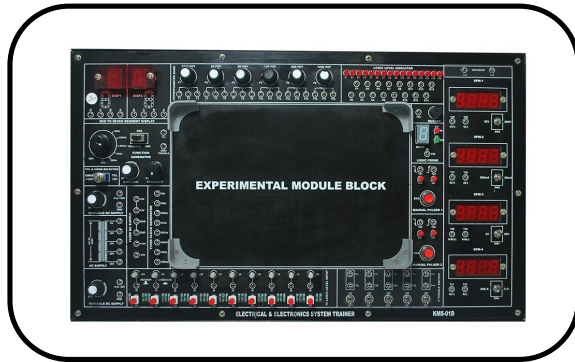## KMS-01D
ELECTRIC AND ELECTRONIC SYSTEM TRAINER

KMS-01D Electric and Electronic System Trainer is versatile trainer which is capable of performing the role of Linear/Digital IC Trainer, Gates, Flip flop, synchronous, ADC, DAC, Decoder, Multiplexer, Eprom, RAM, FPGA, CPLD, Basic Electronics Trainer, network circuit & theorems trainer, rectifier, filter & regulator trainer, Transistor amplifier circuits trainer, oscillator & wave shaping circuits trainer, linear circuits trainer, electrical bridges trainer, power electronics trainer and digital electronics trainer.

Specifications

- 16 TTL/CMOS Logic Level Inputs with Dual color LEDs for Logic Low & Logic High indication.
- 16 output LED's Logic Level Indicators.
- Two nos. of BCD Seven Segment Display.
- Fixed Clock Generator of 1Hz, 10Hz, 100Hz, 1KHz, 10KHz, 100KHz, 1MHz, 10MHz.
- Dual Pulser Generator (2 nos.) with four debounced output logic probe to detect High/Low level pulses, with bi-colour LEDs to indicate.
- Logic Probe facility provided with LED indicator and one Seven Segment Display to indicate Logic High, Low and Tri-state.
- Signal Generator in Six Step 1Hz-1 MHz Sine, Square (TTL), Triangle output with amplitude and frequency control pots. O/P voltage 20 Vp-p (Sine/Triangle)
- Fixed DC Power Supply: +5V/1A & ±15V/500 mA.
- Variable Supply of 0 to +30V/100 mA.
- Variable Supply of 0 to +15V/100 mA.
- High volt DC -15V to 110V / 100 mA
- AC Supply 12-0-12V, 150 mA with short circuit protection
- On-board Speaker provided
  - 8 ohms, 0.5 watts (1 no.)

- On-board DPM (4 Nos.) with mode selection :
  - DC Volt: 2V/200V
  - DC Current: 2mA / 200 mA
  - DC Volts/Current: 20V/200 mA
- On-board moving iron meters provided
  - AC Current: 1AMP
  - AC Voltage: 15V
- On-board 1K & 1M Variable Potentiometer
- All interconnections are made using 2mm
- Bare board Tested Glass Epoxy SMOBC PCB is used.
- Attractive Metal Enclosure.

Accessories:
- Set of Shrouded Cables
- Set of Manuals with Experiments.
- Demo CD showing Experiments

Optional Accessories:
- Working Table (KWT-01)**….**1 No
- Multimeter **…** 1 No
- Tool Kit**…** 1 No
- Bread Board**…** 2 No

Digital experimental boards:

1. DN-01 Gates/Arithmatic Logic Board

- Experiments on AND,OR,NOR,NAND gates
- Experiments on NOT, Ex-OR, EX-NOR.
- Experiments on Characteristics, Noise margin, delay of TTL & CMOS Logic
- Experiments on De-morgan's law
- Experiments on Binary adder and substracter

2. DN-02 Decimal to Binary & Binary To Decimal Board.

- Experiments on Binary to Decimal convertor.
- Experiments on Decimal to Binary convertor.

3. DN-03 Buffer/Latch/ Seven Segment Decoder Board

- Experiments on Buffer output
- Experiments on Latch output
- Experiments on Seven Segment Decoder

Note : Specifications & Photos can be altered without notice in our constant efforts for improvement.

4. DN-04 Flip Flop/ Shift Register Board

- Experiments on RS, T, & D Flip Flop.
- Experiments on JK Flip Flop & Master Slave JK Flip Flop.
- Experiments on Universal Shift Register.

5. DN-05 Multiplexer / Demux / Magnitude Comparator Board

- Experiments on 8 channel Multiplexer
- Experiments on 8 channel Demultiplexer
- Experiments on 4 bit Magnitude Comparator

6. DN-06 Synchronous / Asynchronous Counter Board

- Experiments on 4 bit Asynchronous Counter.
- Experiments on 4 bit Synchronous Counter.

7. DN-07 8 Bit ADC & DAC Board

- Experiments on 8 bit Analog to Digital Convertor.
- Experiments on 8 bit Digital to Analog Convertor.

8. DN-08 EPROM / RAM Experimental Board

- Experiments on Program & Write operation of 64k EPROM.
- Experiments on Read & Write operation of 32K RAM

9. DN-09 CPLD XC9572 Board

- Experiments on Full Adder, Adder/ Substractor.
- Experiments on Seven Segment Decoder
- Experiments on Binary to Grey Conversion
- Ex per i ment s on Compar at or, Decoder, Demultiplexer
- Experiments on Encoder, Multiplexer, Parity Generator
- Experiments on T, D JK Flip Flop

10. DN-10 Ripple / Johnson Counter

- Experiments on 4 bit Ripple counter
- Experiments on 4 bit Johnson counter

11. DN-11 Encoder / Decoder Board

- Experiments on 8 bit Decoder
- Experiments on 8 bit Encoder

12. DN-12 Encoder/Decoder Board

- Experiments on 8 bit Decoder
- Experiments on 8 bit Encoder

13. DN-13 Stepper Motor Demonstrator Panel

- Control of direction, step rate, auto / manual operation of stepper either built in 7.5° step or external 3 kg-cm motor (1.8°) in half / full / wave stepping modes / current chopper mode.

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