

**OMEGA TYPE LTB-841** Digital Logic Trainer (TTL) / Logic Trainer Board based on 74 series has been designed specifically to make the students familiar with the study of TTL ICs and verification of the truth table of logic gates, flip-flops, Gated & Master Slave JK flip-flops, Schmitt Trigger, Expanders, Binary address, Counters, Shift registers, Multiplexer (Encoder), Demultiplexer (Decoder), 8 Bit D/A Converter and 8 Bit A/D Converter etc. Large area of Bread Board is provided on the front panel for ICs. Students can make the circuit easily on the Bread Board with the help of other accessories which are provided on the front panel of Digital Logic Trainer. Practical experience on this trainer/board carries great educative value for Science and Engineering Students.

**OBJECT:-**

- 01 To study NAND function using Quad 2-input NAND gate IC-7400/74C00 / 1
- 02 To study NOR function using Quad 2-input NOR gate IC-7402/74C02 / 1
- 03 To study NOT function using HEX INVERTER (NOT GATE) IC- 7404/4069 / 1
- 04 To Study AND function using Quad 2-input AND gate IC-7408/74C08 / 1
- 05 To Study Dual NAND Schmitt Trigger IC-7413/4093 / 2
- 06 To Study OR gate function using Quad 2-input OR gate IC-7432/74HC32 / 1
- 07 To study Expandable Dual 2-wide 2-input AND-OR-INVERTER(NOT) gate IC-7450/4085 / 2
- 08 To study Dual 4-input Expander IC-7460/4048 / 2
- 09 To study Edge Triggered JK flip flop IC-7470/74HC109 / 1
- 10 To study Dual JK Master/Slave flip-flop IC-4027 / 2
- 11 To study Dual JK MASTER/SLAVE flip-flop with separate clears and clock IC-7473/74C73 / 2
- 12 To study 4-Bit binary Full Adder IC-7483/74C83 / 1
- 13 To study Quad 2-input exclusive OR gate IC-7486/4070 / 1
- 14 To study Decade counter IC-7490/74C90 / 3
- 15 To study Divide-By-twelve counter(Divide-by-Two and Divide-By-Six) IC-7492/74C92 / 1
- 16 To study 4-Bit-Binary counter IC-7493/74C93 / 1
- 17 To study 4-Bit parallel Access Shift Register IC-7495/74C95 / 1
- 18 To study Quadruple Bus Buffer gates with three state outputs IC-74126/74C126 / 1
- 19 To study 8-input multiplexer IC-74151/74C151 / 1
- 20 To study 4-line To 16-line Decoder/Demultiplexer IC-SN74154/74C154 / 1
- 21 To study 8-bit D/A converter IC-DAC 0808 / 1
- 22 To study 8-Bit up Compatible A/D converter with 8-channel multiplexer IC-ADC-0808 / 1



**SPECIFICATIONS**

- 01 OUTPUT D.C. VOLTAGE : Fixed 5V, Variable 0 to  $\pm 18$  V.
- 02 OUTPUT CURRENT : 1 Amp.
- 03 LOAD REGULATION :  $\pm 1\%$  of the highest  
(NO LOAD TO FULL LOAD) specified output voltage.
- 04 RIPPLE AND NOISE : less than 2 mV.
- 05 VARIABLE CLOCK FREQUENCY : 1 Hz to 1 MHz by three frequency range & multiplier.
- 06 LOGIC INPUTS : 16 switches for High/Low
- 07 OUTPUT INDICATORS : 16, 5 mm bright Red LEDs.
- 08 SEVEN SEGMENT DISPLAY : 4 digit seven segment display with decoder driver.
- 09 DIGITAL VOLTMETER : Digital DC voltmeter range 0 - 20V.
- 10 OPERATING CONDITIONS : 0 to 40°C and 95% R.H. at 40°C.
- 11 BREAD BOARD : Unique solder - less large size, spring loaded breadboard consisting of 2 Terminal Strips with 640 tie points each and 4 Distribution Strips with 100 tie points each, totaling to 1680 tie points.
- 12 Ic's PROVIDED : 29 Ic's have been provided.
- 13 Mains ON/OFF switch, Fuse and Jewel light.
- 14 The unit is operative on 230VAC  $\pm 10\%$  at 50Hz.
- 15 Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections / observation of waveforms.
- 16 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.
- 17 Weight : 5 Kg. (Approx).
- 18 Dimension : W 415 x H 165 x D 315.

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

**OMEGA ELECTRONICS**

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