

OMEGA TYPE LTB-842 Digital Logic Trainer (CMOS) / Logic Trainer Board based on 74 C/4000 series has been designed to make the students familiar with the study of CMOS ICs and verification of the truth tables 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 easily the circuit on the bread board with the help of other accessories which are provided on the front panel of Digital Logic Trainer. The logic trainer board is quite educative and is a must for Science and Engineering Students.

OBJECT:-

- 01 To study NAND Function using Quad 2-input NAND gate IC-74C00 / 1
- 02 To study NOR function using Quad 2-input NOR gate IC-74C02 / 1
- 03 To study NOT function using INVERTER (NOT GATE) Circuit IC-4069 / 1
- 04 To Study AND function using Quad 2-input AND gate IC-74C08 / 1
- 05 To Study QUAD 2-INPUT NAND Schmitt Trigger IC-4093 / 2
- 06 To Study OR gate function using Quad 2-input OR gate IC-74HC32 / 1
- 07 To study Dual 2-wide 2-input AND-OR-INVERTER Gate CD-4085B / 2
- 08 To study 3-State Expendable 8-Function 8-Input gate IC-4048 / 2
- 09 To study Dual J-K positive Edge- Triggered Flip-Flop IC-7470 / 1
- 10 To study Dual J-K Master/Slave Flip-Flop IC-4027 / 2
- 11 To study Dual J-K Flip-Flops with clear IC-74C73 / 2
- 12 To study 4-Bit Binary Full Adder IC-74C83 / 1
- 13 To study Quad 2-Input Exclusive-OR gate IC-4070 / 1
- 14 To study 4-Bit Decade Counter IC-74C90 / 3
- 15 To study divide-by-Twelve Counter (Divide-By Two and Divide-By-Six) IC-74LS92 / 1
- 16 To study 4-Bit Binary Counter IC-74C93 / 1
- 17 To study 4-Bit Right Shift/Left-Shift Register IC-74C95 / 1
- 18 To study TRI-STATE Quad Buffer IC-MM74HC126 / 1
- 19 To study 8-Channel Digital Multiplexer IC-74LS151 / 1
- 20 To study 4-line to 16-line Decoder/Demultiplexer IC-74C154 / 1
- 21 To study 8-Bit Digital to Analog (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 ± 18 V. |
| 02 | OUTPUT CURRENT | : 1 Amp. |
| 03 | LOAD REGULATION
(NO LOAD TO FULL LOAD) | : $\pm 1\%$ of the highest
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 | : 5.700 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