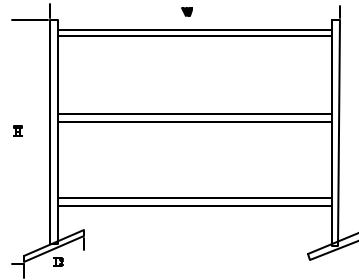


# LINEAR CIRCUITS TRAINER

Model: LCT-101300A

## I. FEATURES

1. THIS DEVICE INCLUDES SOME BASIC EXPERIMENT UNITS AND CAN BE EXPANDED TO THE ADVANCED SYSTEM. MODULAR DESIGN MAKES IT EASY TO USE AND MAINTAIN.
2. EACH EXPERIMENT UNIT CONSISTS OF SEVERAL MODULE BOARDS. ALL INPUT AND OUTPUT SIGNALS, CONTROL FLOWS AND WIRINGS ARE SHOWN ON THE MODULE BOARDS.
3. CIRCUIT DIAGRAMS AND/OR BLOCK DIAGRAMS, ARE SILKSCREENPRINTED ON THE MODULE BOARD.
4. ALL THE TEST POINTS AND CONNECTION TERMINALS ARE BROUGHT OUT ON THE FRONT FOR EASY ACCESS AND MEASUREMENT,
5. CONNECTION TERMINALS ARE STANDARD .16"/4MM DIAMETER JACKS.
6. MAIN PANEL FRAME (STAND) IS MOLDED, SPECIALLY TREATED AND PAINTED FOR LONG-LASTING.

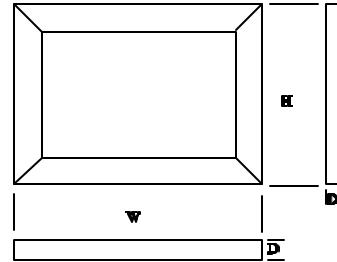


## B. MODULE BOARD

1. USING COMBINATION OF SMALL COMPONENT AND MODULE BOARDS FOR EXPERIMENTS.
2. BOARD SIZE: Type-A: 80mm x 150mm, FIBER OPTIC; Type-B: 160mm x 160mm, FIBER OPTIC; Type-C: 300mm x 200mm, FIBER OPTIC; Type-M: 13.4"/.34mm (W) X 9.45"/.24mm (H) X 1.9"/.048mm (D), PLASTIC EXTRUSION.
3. MAGNETIC PINS: 30MM X 10MM DIAMETER, 20 PIECES. THEY ARE

## II. EXPERIMENTS

1. INVERTING AMPLIFIER
2. SUMMING AMPLIFIER
3. NON-INVERTING AMPLIFIER
4. VOLTAGE-FOLLOWER AMPLIFIER
5. COMPARATOR AMPLIFIER
6. DIFFERENTIAL INPUT AMPLIFIER
7. INTEGRATING CIRCUIT
8. DIFFERENTIAL CIRCUIT
9. INSTABLE OSCILLATION CIRCUIT
10. 555 IN-STABLE OSCILLATION CIRCUIT
11. TRANSISTOR OSCILLATION CIRCUIT
12. SCHMITT TRIGGER
13. D/A CONVERTER
14. A/D CONVERTER
15. V/F CONVERTER
16. F/V CONVERTER
17. UJT OSCILLATION CIRCUIT
18. SCR TRIGGER AND PHASE CONTROL CIRCUIT
19. DIAC AND TRIAC PHASE CONTROL CIRCUIT
20. PUT OSCILLATION CIRCUIT
21. SCS CIRCUIT
22. SBS CIRCUIT
23. AC WATT CONTROL CIRCUIT
24. DC MOTOR SPEED CONTROL CIRCUIT
25. STEP MOTOR DRIVER CIRCUIT
26. L.V.D.T. CIRCUIT



USED WITH TYPE-A, TYPE-B, AND TYPE-C MODULE BOARDS TO ATTACH TO THE WHITE DEMO BOARD.

## C. CONNECTION WIRES

1. EXTRUDED HERMAPHRODITIC BANANA PLUGS, STANDARD 1.6"/4mm DIAMETER.
2. TOTAL 30 WIRES OF LENGTH 7.9"/.2M, 31.5"/.8M AND 59"/1.5M

## D. COMPONENTS

1. FUNCTION GENERATOR/COUNTER:
  - a). WAVEFORM: SINE, TRIANGLE, SQUARE, AND PULSE.
  - b). FREQUENCY RANGE: 2Hz - 200KHz.
  - c). ADJUSTMENT: 5-RANGE COARSE AND 1 FINE.
  - d). DUTY CYCLE ADJUSTABLE ON (PULSE) KNOB.
  - e). ATTENUATION: ADJUMENT, COURSE 0-20 dB AND FINE.

## III. SPECIFICATION

### A. MAIN PANEL FRAME

SIZE: 31"(W) X 34.6"(H) X 15.7"(D).

MATERIAL: STEEL FRAME AND ALUMINUM RACK.

- f). DIGITAL FREQUENCY COUNTER: 4-DIGIT, LED DISPLAY.
- 2. DUAL DC POWER SUPPLY: 0~30V CONTINUOUS VARIABLE, 1A.
- 3. DC POWER SUPPLY: +/- 12V, + 5V, 2A.
- 7. VARIABLE RESISTOR MODULE, x2A.
- 8. NPN MODULE, x1B.
- 9. RELAY MODULE, x1A.
- 10. LED DISPLAY MODULE, x1A.
- 11. DIODE MODULE, x1A.
- 12. OPA MODULE, x2B.
- 13. SCR MODULE, x2B.
- 14. V/F MODULE, x1M.
- 15. F/V MODULE, x1M.
- 16. UJT MODULE, x1B.
- 17. PUT MODULE, x1B.
- 18. TRIAC MODULE, x1B.
- 19. DIAC MODULE, X1B.
- 20. 74194 MODULE, x1B.
- 21. 4029 MODULE, x1B.
- 22. PULSE TRANSFORMER MODULE, x1B.

- 4. DIGITAL MULTIMETER MODULE, x1B.
- 5. RESISTOR MODULE, x2A.
- 6. CAPACITOR MODULE, x2A.

## **F. LOAD UNIT**

- 1. LAMP: AC 110V, 5W, x2B.
- 2. SPEAKER: 8 Ohm, 5W, x1B.
- 3. DC MOTOR, x`1B.
- 4. STEP MOTOR: 4Kg-cm , 1.8 DEGREE PER STEP, x1M.  
RATING CURRENT 0.9A.
- 5. LVDT (LINEAR VOLTAGE DIFFERENTIAL TRANSFORMER)
  - a). LINEARITY RANGE: +/- 5mm
  - b). INPUT FREQUENCY: 1KHz.
  - C). 1B

## **G. EXPERIMENT MANUAL**

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## **H. POWER:**

AC 110V/220V +/- 10%, 60/50Hz.

## **IV. ACCESSORIES**

### **A. CONNECTION WIRES**

- 1. EXTRUDED HERMAPHRODITIC BANANA PLUGS, STANDARD  
1.6"/4mm DIAMETER.
- 2. TOTAL 30 WIRES OF LENGTH 7.9"/.2M, 31.5"/.8M AND 59"/1.5M.

### **B. EXPERIMENT MANUAL**

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Specifications are subject to change without prior notice.



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