

Product Code:

AL-E129

## CATALOGUE

#118, Karanpuri, Behind B.D.Floor, Ambala Cantt, Haryana (India),

### LINEAR IC TRAINER (LIT)

Which perform (Op-AMP as Adder, Subtractor, Differentiator, Integrator, Amplifier, Voltage Follower, Comparator, Astable and Mono Stable, Bistable Multivibrator, PLL, 555 TIMER) - The board consists of the following built-in parts: 01.  $\pm 15V$  D.C. at 50mA, IC Regulated Power Supply. 02. Three 0-2V D.C at 100mA, continuously variable regulated Power Supplies. 03. OP-AMP IC741. 04. Two SPST switches and adequate no. of other electronic components. 05. Mains ON/OFF switch, Fuse and Jewel light. \* The unit is operative on  $230V \pm 10\%$  at 50Hz A.C. Mains.

**Picture:**



**Low cost, multi-experiment Linear Electronics Circuit Trainer.**

- Solder-less connection to save time & money in experimentation.
- All inputs/outputs & components for experimentation terminated on 2mm brass terminations.
- Interconnection through 2mm stackable patch cords.

- Built-in various DC regulated power supplies, AC supply and logic level output indicators.
- Housed in an ergonomically designed sturdy plastic abs enclosure with provision for safe keeping of mains cord, patch cords & top lid for protection during storage.

## SPECIFICATION

- The Linear IC Trainer Model covers both the basic and advance linear electronics as follows:
  - Study of operational amplifier (op-amp IC 741) parameters such as input resistance, output resistance, slew rate, frequency response, input offset voltage, input offset current, input bias current, CMRR, differential input resistance, unity gain band width, rated output & full power response.
  - Study of operational amplifier amplifications such as inverting amplifier, non-inverting amplifier, difference amplifier inverting summing amplifier and voltage follower.
  - Study of operational amplifier basic applications such as adder, Subtractor, multiplier, divider, Integrator, differentiator, limiter, comparator (level detector) and Schmitt trigger.
  - Study of operational amplifier advance applications such as active LPF/ HPF, zero crossing detector, AC-DC converter and waveform generators.
  - Study of operation and characteristics of a Timer (IC 555).
  - Study of timer applications such as astable / monostable bistable multivibrators, frequency divider, PWM, PPM, 50% duty cycle oscillator and timers.
  - Study the operation of voltage regulators for positive/negative fixed and variable outputs.
  - Many other experiments can be designed/performed using the onboard components and special Vero board provided. (For use of external components without soldering).
- PLL 565 circuits as FM demodulators, to find its PLL characteristics.
- NE 566 a function generator to study how the square and triangular waveform can be generated with small circuits.
- Opto coupler MCT2E characteristics
- Op-amp comparator circuits using LM324, LM339

## TECHNICAL SPECIFICATIONS

<b>Power Supplies :</b>	a. +12V/500mA (fixed and with facility to vary from 0 to +12 V) b. -12V/500mA (fixed and with facility to vary from 0 to -12 V)
<b>AC Supplies :</b>	9-0-9 V AC / 500 mA
<b>Logic Level indicators :</b>	Four independent buffered logic level indicators for High/Low status indication
<b>Vero board :</b>	Unique Vero board type socket with termination for use of external components / IC's up to 20 pin without soldering
<b>Potentiometer :</b>	One Potentiometer (100K) with terminations
<b>Speaker :</b>	One 8 ohms miniature speaker with terminations
<b>Relay :</b>	One 12V/1 C.O. relay with terminations
<b>Power ON :</b>	Power ON switch with indicator for mains on indication and fuse for protection
<b>Patch Cords(Stackable) :</b>	Set of 20 assorted colored multi-stand wires with 2mm stackable plug termination at both ends
<b>Power Requirement :</b>	230V $\pm$ 10% VAC, 50 Hertz, single phase

**Instruction  
Manual :**

One detailed instruction manual with well thought out experiments covering the above topics

**Packing list**

- Instruction manual
- Power supply mains 3 pin cord
- Patch cords