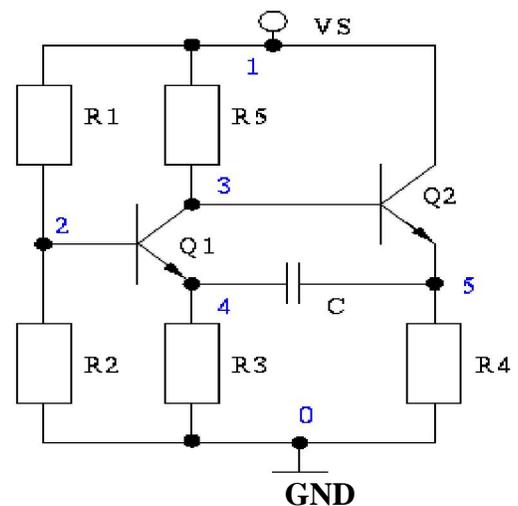
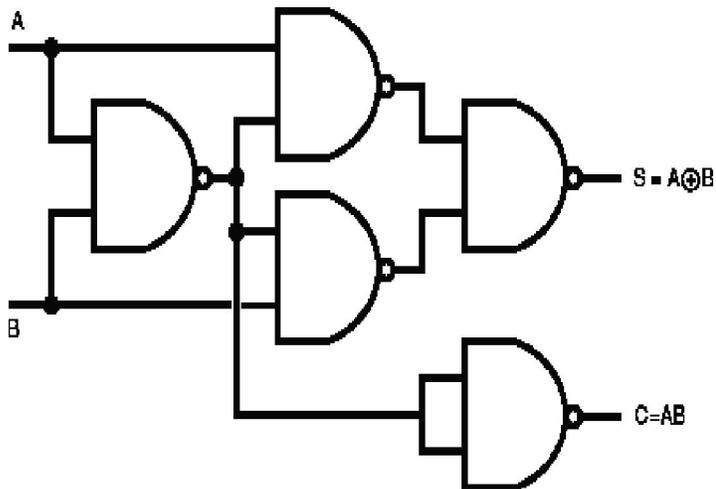


# Electronic Trainer



## About This Manual

The ELECTRONICS LEARNER'S COMPUTER (ELC): Laboratory Manual has been designed to carry out the basic experiments of Analog and Digital circuits. The students and professionals can get benefit of this product interested in learning or developing solutions. This manual has been tailored specifically keeping in view the students of Engineering to get them geared up, for rigorous on real time system.

## Why Hands-On Experience Is Necessary ?

Today a number of software tools are available to facilitate the designing and simulation of electronic circuits. The normal trend has become now to make the circuits on PCs using those tools and simulate them to qualify their functioning. To name some of such tools are Pspice, Design Centre, Electronic Work Bench etc. these tools are certainly helpful to rapidly build and qualify the circuits, but there are number of problems which may occur in real work, but remain hidden while working with such software tools. It is necessary to get actual hands-on experience to know about the real life problems. Even an imperfect soldering or bad component mounting can cause severe problems in the circuits.

ELC is a hardware tool to facilitate the users to build and test the actual circuits.

## ELC: SPECIFICATIONS:

### 1. Breadboard: AD-222

Interconnected with 2712 tie points nickel plated contact fitted all DIP sizes. It can be changed and replaced for different purpose and can be connected with demonstration panel. Due to this, it is convenient for both teachers and students.

### 2. DC Power Supply:

- (a) Fixed DC Output: +5V, 2A
- (b) Fixed DC Output: -5V, 500mA
- (c) Variable DC Output: 0V to +15V, 500mA
- (d) Variable DC Output: 0V to -15V, 500mA

### 3. Potentiometers:

- (a) Variable Resistor VR1=1K(B)
- (b) Variable Resistor VR2=100K(B)

### 4. Function Generator

#### (a) Frequency Range:

- 1Hz -- 10Hz
- 10Hz -- 100Hz
- 100Hz -- 1KHz
- 1KHz -- 10KHz
- 10KHz -- 100KHz

#### (b) Amplitude:

- Sine wave /Triangular /Square Wave
- + - 8V output Peak to Peak variable
- TTL mode output: 0 - +5V

### 5. Eight Bit Data Switches

8pcs toggle switches.

### 6. Speakers

2 1/2 inch diameter. 8 ohm/0.25W

### 7. Four Channel Adaptor

Two banana sockets and two BNC jack points, provided to connect peripherals.

### 8. Two Digits of Segment LED Display.

### 9. Two Pulse Switches

2pcs push-buttons contain switch de-bouncer for eliminating the bouncing effect.

### 10. DC Volt Meter

.2V to 20V . Slectable by Rotary Switches.  
3 1/2 7 Segment LED Display.

### 11. Dimensions

325x250x95mm (LxWxH)

### 12. Weight

4.3 Kg.