Electronics Kit

Digital Trainer

EM1766-001 Creation of Digital Logic using Gates

Description:

The 'IEC' **DIGITAL TRAINER KIT** is a self contained set of electronic circuits that can be interlinked by students to create working circuits. Component parts cannot be removed or lost in the classroom and interlinking is performed by short coloured cables fitted with small insulated alligator clips.

Digital logic is the processing of only two states or conditions of ON and OFF. There are certain electronic chips (called gates) that convert simple on and off conditions to create a third on or off condition. The basic gates are AND, OR, NAND, NOR and NOT.

These digital gates are explained and combinations of these simple gates in various configurations permits more complex logic or counting and maths to be computed.

The students find digital gates and digital counting interesting, challenging and exciting. In very short time they are making up their own working 'LOGIC CIRCUITS'.

Length: 315mm	Width: 170mm	Height: 65mm	Weight: 460g

Kit Contains:

1 pce Main circuit board with legend and pins for connecting the sections together.

1 pce Transparent cover which can be used as a storage tray during experiments.

1 pce Experiment manual with many projects for the instructor and students to perform.

2 sets of 10x cables, with alligator clips for connection of circuits.

Why Digital ?

Digital electronics is now used in all fields of electronics from computers to digital phones and most industrial machines and motor vehicles. If electronics is to be studied or if computer programming is to be attempted, digital logic should be studied.

Digital logic can be either mechanical or electrical. If a door has 2 locks, AND logic is required to open the gate. Lock 1 opened AND lock 2 opened = door OPENED. If a light has 2 on/off switches in different rooms, OR logic must be used. Switch 1 on OR switch 2 on = light ON.

Features of the 'IEC' Digital Trainer:

- It is made in Australia by IEC and is low in cost.
- It is very compact and easy to store.
- Parts cannot be removed by students.
- Students can see and feel the circuit board and can touch the component to become familiar with electronic components.
- Can be powered from any 12V.AC or DC power source by banana sockets.
- Circuits are easy to make and the 'Digital Circuits' are exciting to create. After some brief explanation, most students proceed with enthusiasm.
- The instruction and experiment book is written by IEC and is complete with Glossary of terms, many experiments and much information valuable to a student involved in digital electronics or computer programming options.
- Using this digital trainer, the student is exposed to basic electronic theory of power supplies, regulation, ripple filtering, oscillators (multivibrator), rectifiers, diodes and transistor amplifiers. After this basic course, the student proceeds to an understanding of digital electronics.

Repairs:

It is impossible to make electronic equipment 100% safe from damage by students, but care has been taken to protect the circuits from damage. Should this equipment ever need repair, IEC is in Melbourne and can repair all equipment that it manufactures.

Designed and manufactured in Australia