BASIC ELECTRICITY - SNAPTRICITY

Features

Snaptricity is the introductory kit of our "Snapcircuit" kits (ask for data sheets) which start from here and progress to Microprocessor training. The basis of the Snap Circuit is an unbreakable matrix on which the electronic components can be placed. Each component is mounted on a plastic carrier on which is printed its electronic symbol. Interconnection is obtained through "snap" terminals which connect the components mechanically and electrically.

The experimental assemblies mostly faithfully reproducce its schematic circuit. Each project is described in full colour with a detailed "Educational corner" explanation. 78 projects are described but more can be done according to the Educator's or Learner's imagination.

Battery power makes this safe for an introductory unit; may be used for demonstration or Learner's own experimentation.

Educational Content

Introduction to electronics: Electronic playground – Switches – **Static electricity:** Electricity in your clothes – Electricity in your hair - Bending a water stream – Tricks with Static Electricity – **Electrical Materials:** Lamp circuit – 2-position switch – Voltage across a lamp – Voltage across a motor – The Ohm – Resistance of a lamp – Resistance of graphite – Resistance of water – **Basic Electrical Circuits:** Lamps in series – Lamps in parallel – changing parallel to series – The light bulb – Batteries in series – Batteries in parallel – Voltage divider - Current in series circuits – Triple voltage divider – Triple switching voltmeter – Triple switching Ammeter – Current divider – Ohms law – Ohms law for a cold lamp – **Putting electricity to use:** 2-way switch – 3-speed motor – More motor speed – Simulating a switch – 3 position switch - 4 position switch – The **AND** gate with switches – The **NAND** gate with switches – The **OR** gate with switches – **Magnetism**: The magnetic compass – Magnetic fields – Extending a magnet – The electromagnet – The electromagnet magnetic field – An electromagnet tower – electromagnet suspender - Electromagnetic direction – Magnetic field around a wire – Magnetic induction – **Motor Cicuits:** The motor – The propeller – Back EMF – Generator – Generating current – RPM and output – Overload – Advanced Magnetic Circuits: **Making a magnet**: – The Relay – Making and using a relay – The buzzer – Reed Switch – **Electrochemistry:** "Cola" power – Fruit power – Current from water – **Fun Circuits:** Indian Rope trick – Hypnotic Discs – Morse code – Flying saucer – Light regulator.

Specification

1	Matrix	1	Zinc Electrode	1	Iron core
3	1 Snap wire	1	Magnetic field unit	1	Bag paper clips
6	2 Snap wire	1	Jumper wire red	1	Thin rod
3	3 Snap wire	1	Jumper wire black	1	Grommet
1	4 Snap wire	3	Lamp socket	1	Meter
1	5 Snap wire	3	4.5V bulb	1	Magnet
1	6 Snap wire	1	Motor	1	Nut snap
1	3 Battery holder	1	Fan blade	1	Pushbutton switch
1	Compass	1	Motor top	1	Slide switch
1	Copper electrode	1	Electromagnet	1	Manual