

## BET – Basic Electricity Trainer



### Key Features:

- Stand Alone Operation
- Includes all the Basic Electrical fundamentals
- Solderless connections
- Complete set of coils and cores to understand the Basics of Electro magnetic induction and Transformer

The basic electricity trainer can be used to develop the student's abilities and teach basic electrical circuits such as series and parallel circuits, electromagnet induction, coil behaviour with AC and DC circuits, diode and transistor characteristics etc. This simple training kit provides a strong operation for future studies in electrical or electronics.

### Experiments

- Resistances individually, as well as in series and in parallel connections
- Ohm's law mathematical relationship between three variables; voltage (V), current (I) and resistance (R).
- The behaviour of current when light bulbs are connected in a series/parallel circuit.
- Kirchhoff's Law for electrical circuits
- R-C circuit and the behaviour of a capacitor in an R-C network and phase shift due to capacitor.
- The L-C circuit and its oscillations
- The characteristics of a semiconductor diode
- The characteristics of a transistor.
- Faraday's Law of electromagnetic induction
- The behaviour of current when inductance is introduced in the circuit.
- Lenz's Law and effect of eddy current.
- The relay and constructing a switching circuit by using a relay.
- The Oersted experiment
- The phenomenon of mutual induction.
- Construction and study of the step down transformer with the help of coils and cores.
- Construction and study of the step up transformer.
- The effects of moving I core on a step up transformer
- Conversion of a galvanometer into voltmeter.
- Conversion of a galvanometer into ammeter.
- The Hysteresis curve.

## Specification

DC Power Supply	5V, 200 mA
AC Power Supply	6V, 1A
Relay	V
Galvanometer	30 - 0 - 30
Galvanometer Resistance	80 W
Light Bulbs	6V
Potentiometers	25W, 1W, 10KW
Switch	1 Pole, 2 Way Toggle type
Coil Types	E, I, U
Fuse	1 Amp.
Power Supply	230 V $\pm$ 10%, 50 Hz
Dimension	W 345 $\times$ D 245 $\times$ H 105

No. of Turns	Wire Dimension (mm.)	Maximum Current (Amp.)	Inductance (Approx.)
200 Turn	0.818	1.46	590 mH
400 Turn	0.573	0.728	2.3 mH
800 Turn	0.404	0.363	9.2 mH
1600 Turn	0.251	0.144	34.2 mH
3200 Turn	0.170	0.072	134 mH

## Ordering Information

### Model Number:

Consists of:

### BET

Components box with

1. Resistors
2. Capacitors
3. Transistors
4. Diode
5. Potentiometer

E, I, U cores

Set of coils

Magnetic compass

Bar magnets

Screw driver

Multimeter

Connection patch cords

Manual

### Notes.

1. Specification is subject to change without notice.

2. All dimensions are in mm unless otherwise stated

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