

Nvis 'Electricity Lab' NV6000 is a versatile Training System for the laboratory. It is designed such that all the basic electrical circuits can be tested. The experiments given with this Training system will develop clear understanding of series and parallel circuits, electromagnetic induction, coil behaviour with AC and DC circuits, diode and transistor characteristics etc. This simple training system provides a strong platform for detailed studies in electricals and electronics.



- ▣ **Stand alone operation**
- ▣ **Durable, Easy to use kit**
- ▣ **Includes all the Basic Electrical fundamentals**
- ▣ **Solderless connections**
- ▣ **Complete set of coils and cores to understand the Basics of Electro magnetic induction and Transformers**
- ▣ **Provided with a component box to perform all the experiments**
- ▣ **CBT covering all the experiments**
- ▣ **2 Years Warranty**

Technical Specifications

DC Power Supply	: 5 V, 200 mA
AC Power Supply	: 6 V, 1A
Relay	: 5 V
Galvanometer	: 30 - 0 - 30
Galvanometer Resistance	: 80 W
Light Bulbs	: 6V
Potentiometers	: 25 W, 1 W, 10 KW, 1 W
Switch	: 1 Pole, 2 Way Toggle type
Core types	: E, I, U

Coils

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

Fuse	: 1 Amp.
Power Supply	: 230 V \pm 10%, 50 Hz
Dimension	: W 345 \times D 245 \times H 105

Scope of Learning

- To study the Resistances individually as well as in series and in parallel connections.
- To study the Ohm's Law mathematical relationship between three variable Voltage (V), Current (I) and Resistance (R).
- To study the voltage and current flowing into the circuit.
- To study the Kirchoff's Law for electrical circuits.
- To study the R-C circuit and find out the behaviour of capacitors in a R-C network and study the phase shift due to capacitor.
- To study the L-C circuit and find out its behaviour as resonance circuit.
- To study the characteristics of a semiconductor diode.
- To study the characteristics of a transistor.
- To study the behaviour of current, when light bulbs are connected in circuit.
- To understand the Faraday's Law of electromagnetic induction.
- To study the phenomenon of mutual induction.
- To study the Lenz's Law and effect of Eddy current.
- To study a Relay and construct a switching circuit by using relay.
- To study Oersted experiments.
- To convert a Galvanometer into Volt meter.
- To convert a Galvanometer into Ammeter
- To construct and study a step down transformer with the help of given coils and cores.
- To construct and study a step up transformer.
- To study the effects of moving I core on a step up transformer.
- To study the hysteresis curve

Training System includes

1. Components box with
 - a. Resistors
 - b. Capacitors
 - c. Transistors
 - d. Diode
 - e. Potentiometer
2. E, I, U cores
3. Set of coils
4. Magnetic compass
5. Bar magnets
6. Screw driver
7. Multimeter
8. Connection patch cords
9. CBT covering all the above experiments

