

## **611-2460 (60-110) Demonstration Meter**

**Introduction:** electricity has many properties. What is confusing for many people is the difference between volts and amperes. In short, volts are the electrical potential difference between two objects, and amperes are the strength of the current.

Two types of instruments exist for measuring volts and amps: the aptly named voltmeters and ammeters. However, there is one piece of equipment that can be used for either purpose: the galvanometer. A galvanometer is an analog electromechanical transducer; essentially, it converts electricity to mechanical movement. It consists of a needle that is set up to deflect in the presence of an electrical field. This allows it to be calibrated to read current or potential. Our set contains a galvanometer.



**Operation:** your demonstration meter requires a low voltage power supply to operate. There are a number of ways you can use the equipment. Using the included cords, you can attach your power supply directly to the meter through the jacks on the base. However, for a greater range of currents and potentials, you can use the extension box. Using a voltage power supply, you can generate 3V, 10V, 30V, or 100V. Alternatively, you can produce 10A, 5A, 1A, or 0.1A.

Your apparatus also comes with five cards with various values written on them. They are double sides, giving you ten scales to measure electricity on. These are large with easy to read numbers. To use them, slide them into the brackets on the back of the meter. This will hold them in the correct position and put them into an easy to read position. On the rear of the meter is a lever to adjust the needle position from the far left to the center. This is useful because some of the cards require either position.

### **Warranty and Parts:**

We replace all defective or missing parts free of charge. Additional replacement parts may be ordered toll-free. We accept MasterCard, Visa, checks and School P.O.s. All products warranted to be free from defect for 90 days. Does not apply to accident, misuse or normal wear and tear. Intended for children 13 years of age and up. This item is not a toy. It may contain small parts that can be choking hazards. Adult supervision is required.

### **May we suggest:**

**615-4735 Digital Multimeter:** This is a great new multimeter with a 1" high contrast LCD that can tilt up and down for ease of use. It includes a single 32 position easy-to-use rotary switch for function and range. The device features auto power off and overload protection. The multimeter is CE approved. A protective holster,

fold-out stand and full instructions are provided.

Technical specifications:

DCV: 200mV-1000V +/--(0.5%+1)

ACV: 2V-700V +/--(1.2%+3)

DCA: 20mA-20A +/--(0.8%+3)

ACA: 20mA-20A +/--(0.8%+1)

OHM: 200 ohms - 200 mega ohms +/--(1.2%+3)

CAP: 2000p-20 microF +/--(2.5%+3)

TEMP: -40°C-1000°C +/--(0.75%+1)

FREQ: 20kHz +/--(1%+1)

**615-4120 Low Voltage Power supply:** Our CE certified power supply is a must for any laboratory. Capable of generating 2 to 12 volts, AC or DC, with overload protection and great durability. Unit runs on 110V AC current 50/60.

**615-4005 Battery Holder 2 D-cell with banana plugs:** Because this plastic battery holder comes with three banana plug jacks, you can easily select DC, 1.5 volt and 3 volt power for your experiments. You need two D-cell batteries.

**615-4000 Banana Plug Switch:** Power your low-voltage experiments with the touch of a switch. You can attach alligator clips or use banana plugs for added safety. With plastic housing.