

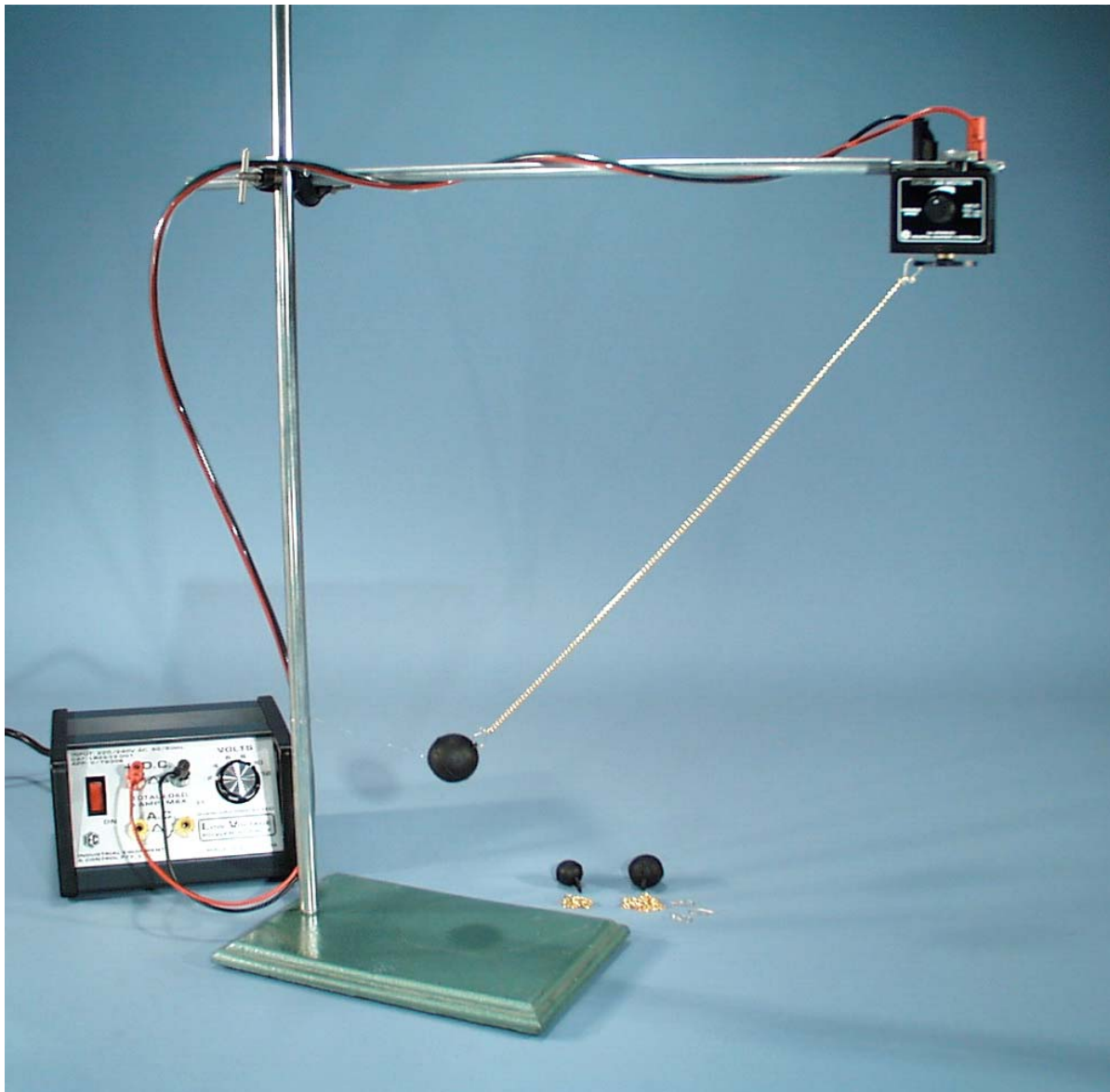
CIRCULAR MOTION KIT - mini, electric

Cat: MF0848-001 With integral speed controller AC or DC

DESCRIPTION:

The Circular Motion Kit permits the swinging of a mass in a circular orbit under controlled conditions. Measurements are made on orbit diameter, mass of the projectile and revolutions per minute. Mechanical experiments on circular motion can be performed with excellent accuracy.

MF0848-001 with integrated speed controller



Physical size: 475x75x65mm LxWxH

Weight: 0.33 kg

Speed controller is integral with the motor drive. AC or DC can be used.



KIT CONTENTS:

- Motor and disc, mounted on support tube with cable and banana plugs. Runs from a transformer or low voltage power supply (from 8 to 12V AC or DC). This motor unit is complete with its electronic speed controller to adjust and maintain small but steady rotational power to maintain the circular motion of the masses.
- 3 x Special rubber masses, approx. 20mm diam x 4g, 25mm diam x 8g, 32mm diam x 16g, with measurement reference line, mass in grams marked on each and loop for attachment to light chain or cord.
- 3 x Pieces of very light alloy chain cut to different lengths.
- 4 x Metal clips to connect each chain to a mass and the motor disc.
- 1 x Set of experiment notes (by Bruce Saunders).

MAKING THE JOINING CHAINS: (thin fishing line also can be used)

- Take 3 metal clips, open them and thread each through the last link at one end of all three chains. Close up the clips. Thread one clip through the hole in the motor disc.
- Take one of the masses, open the clip on the end of a chain and loop it through the eye on the mass and close the clip. Hook the last link on the other end of the chain over the clip in the motor disc and close the clip to attach the chain to the disc.
- Hold the mass at about 45° to the vertical and gently pull the chain taut and apply a small power to the motor. Gently ‘throw’ the mass in the direction of rotation. The mass should rotate in a large circular orbit at the end of the chain and the motor should apply just sufficient force to maintain the rotation. Motor must not spin fast. A slight ‘singing’ noise from motor is normal. **Do not over-power the motor.**
- To adjust rotation speed, adjust the motor voltage **slightly** and wait perhaps 10 seconds for the mass and chain to change to the new steady speed.

SIMPLE MEASUREMENTS BEFORE STARTING AN EXPERIMENT:

Each mass is provided with a line that represents its centre of mass. Using a ruler or a tape, measure from the centre of the motor shaft to the line around the mass.

Each mass has its weight marked, but this should be checked on a balance. The light chain also has mass, but this is usually ignored for the simpler experiments.

Use the instruction notes provided in the kit for making other measurements and for performing the experiments.

Designed and manufactured in Australia