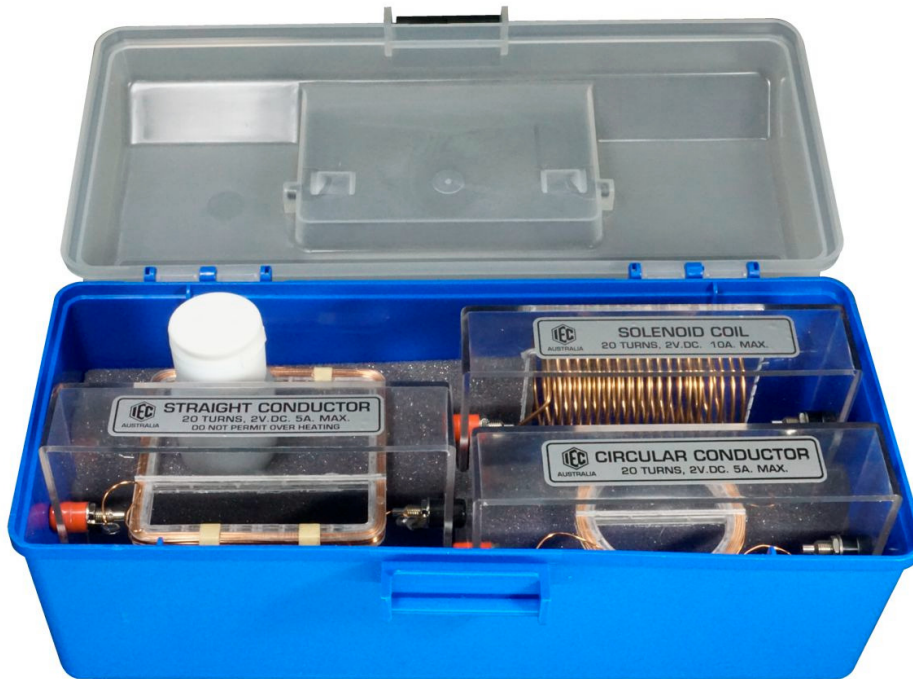


# Magnetic Field Demonstrator

## Set of 3 Coils & Iron Filings



**EM2067-001**

### Description:

The IEC Magnetic Field Demonstrator Kit consists of a small carry case containing three different shaped coils passing through transparent base plates to carry current so the field shape around each coil can be demonstrated. The coils provide examination of:

- Magnetic field around a straight conductor
- Magnetic field through a coil.
- Magnetic field through a solenoid.

Base size of each coil is 140 x 96mm. A shaker of Iron Filings is included in the kit but small plotting compasses can be used also to view the magnetic fields.

### Instructions:

Each coil unit is transparent and therefore can be used on an overhead projector. A shaker bottle of iron filings is included in the kit and the magnetic field formed by the coils can easily be seen and studied by lightly sprinkling the iron filings on the flat surface of the base and gently tapping the base while the current is flowing through the coil.

A very good result can be obtained also with a set of small plotting compasses.

Length: 290mm	Width: 130mm	Height: 115mm	Weight: 0.9kg
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### Caution:

The selected coil is connected to a DC power source. **DO NOT EXCEED 2V to 3V DC.** because the maximum current through the small coils is 5 amps and through the spiral solenoid is 10 amps. Although a high temperature plastic (polycarbonate) has been chosen for construction,, if coils are overheated, the plastic can soften.

### **BE CAREFUL NOT TO OVERHEAT THE COILS.**

Connection to each coil is by red / black 4mm banana sockets. The large spiral solenoid coil can carry 10 amps and the small coils have 20 turns of copper wire and are comfortable at about 3 or 4 amps. This should be enough to produce a magnetic field for a good demonstration.

The iron filings must be quite fine and the plastic base will require some tapping with the finger to encourage the filings to form nice lines in the field.

When projected to the wall or to a screen, large sharp images will enhance the demonstration for the whole classroom.

Designed and manufactured in Australia