



ELECTRONIC KIT expandable EM1764-001 for basic electronic training

## **Product Information**



The IEC Electronics Kit contains components necessary to perform a large range of experiments for the teaching of basic electronic theory. It can be tailored to suit the requirements of the different teaching systems throughout the world. In its standard form, the kit contains both battery holders and an AC low voltage Plug Pack and meters for measurements.

Components are contained in strong transparent plastic housings and each is easily visible to help students recognise electronic devices. Smaller components are contained in strong transparent vials with screw top lids. The kit comes complete with a set of connecting links and cables with good quality stackable banana plugs moulded to the cables. The excellent digital meters provided are for both AC and DC, including capacitance measuring ranges.

The standard components are:

- 1 Mains Plug Pack for 12V.AC. at 1 amp
- 2 Cell holders for 'D' sized cells
- 1 Voltage regulator module for smoothly adjustable DC voltage 1 to 12V.DC. at 1 amp
- 1 Signal Generator module for sine & square waves from 0.1Hz to 10kHz at 0.1 amp.
- 1 Speaker for emitting sounds
- 1 Microphone for speech and sound
- 2 Digital multimeters with DC & AC ranges
- 30 jumper links in red, blue, black & yellow
- 15 jumper cables with 2mm stackable plugs
- 6 jumper cables with 4mm stackable plugs
- 1 Potentiometer, 220 ohm, 3W
- 1 Potentiometer, 10k ohm, 0.5W

Resistors, in housings: 2x 100 ohm, 1x 470 ohm, 2x 1k ohm, 1x 4k7 ohm, 2x 10k ohm, 1x 47k ohm, 2x 100k ohm, 1x 470k ohm.

- Capacitors in housings: 2x 0.1uF, 1x 0.47uF,
- 1x 1.0uF, 1x 10uF bipolar, 2x 100uF electro, 1x 470uF electro, 1x 1000uF electro.
- 2 Diodes, 1 amp in housings
- 1 Zener diode, 6.2V in housing
- 1 Bridge rectifier in housing
- 3 Small signal transistors, 2 NPN, 1 PNP
- 2 Power transistors, 1 NPN, 1 PNP.
- 2 Lamp holders, in housings
- 1 Switch, single pole, one way, in housing
- 1 Switch, single pole, two way, in housing
- 1 Switch, press button
- 1 LED white light source
- 1 Light sensitive resistor (LDR)
- 1 Heat sensitive resistor (NTC)
- 3 LEDs, 1 red, 1 green, 1 yellow
- 1 Connector box for alligator clips
- 10 MES lamps for small currents
- 4 Alligator clips to fit to banana plugs
- 4 Alligator clips fitted with banana plugs
- 2 Conductivity plates, stainless steel



The strong, compact and colour coded 2mm IEC link system that joins all the components can also adapt the 2mm banana plug system back to 4mm banana plugs in places where 4mm connections are necessary.

All connection links are stored in sets of 10 in convenient special storage holders to avoid losses.

The images above show some of the components and the methods of linking and connecting together with the expansion of the working area.

**PHILOSOPHY:** The components have synthetic rubber feet that press and hold firmly into the back plates which can be locked together to expand the working area. All connections are made on the top surface of the components for total flexibility and to avoid confusion. The special 2mm stackable links avoid a tangle of wires on the components. The kit is complete with an extensive experiment manual and a glossary of terms to help the teachers and students to learn and understand basic electronics.

IEC designs and manufactures a large range of educational apparatus in the fields of Science, Physics and Chemistry. Our range is constantly expanding and updating as we continue to design new apparatus to suit our customers' needs.

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