

5. **Digital Multimeter (DMM):** It's commonly used to measure voltage, current, resistance and continuity.



6. **Manual:** A fully illustrated multilingual lab style manual, with 3D Diagrams illustrating each experiment.

SEEK-Basics Kit Main Experiments and Projects:

- Building Simple Electrical Circuits (Bulb, Buzzer, Electric Motor, Dynamo, Electro Magnet,... etc).
- Connecting Batteries in Series or Parallel.
- Connecting Resistors in Parallel & Series.
- Connecting Light Bulbs in Series & Parallel.
- Connecting Solar Panels in Parallel or Series.
- Connecting Capacitors in Series & Parallel.
- Ohm's law.
- Kirchoff's Current Law.
- Kirchoff's Voltage Law.
- Oersted's Experiment.
- The Basic Operation of a Diode.
- Diode Characteristics.
- Testing Diodes.
- Using a LED in a circuit.
- Zener Diode Characteristics.
- Zener Diode as Voltage Regulator.
- Solar Panel voltage and current output.

- Light Dependent Resistor (LDR).
- Infrared Led Transmitter and Receiver.
- Using Digital Multimeter to measure voltage.
- Using Digital Multimeter to measure current.
- Using Digital Multimeter to measure resistance.
- Using Digital Multimeter as continuity tester.
- Using Digital Multimeter to test Diode and LED.
- Using IR LED to perform remote control functionality.
- Testing the Conductivity of Water & Different Solutions.
- Wheatstone Bridge Circuit.
- Half-Wave Rectifier circuit.
- Full-Wave Rectifier circuit.
- Transistor leads identification.
- PNP and NPN transistor identification.
- Capacitors charging and discharging.
- Capacitors and RC Circuits.
- Transistor as a switch (Light-control Switch using LDR).
- Transistor as a switch (Using Water Sensor).
- Transistor as a switch (IR Remote control).
- 555 timer projects (Electronic Piano, Indicator & Alarm circuits).
- NOT Logic Gate.
- AND Logic gate.
- OR Logic Gate.
- NAND Logic Gate.
- NOR Logic Gate.



Science Easy Experiments Kits
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SEEK - Basics Kit



The Basics of Electronics & Electricity

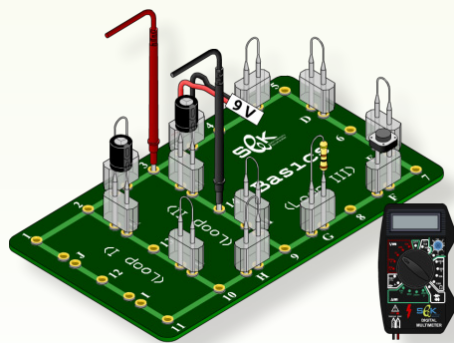




This easy-to use Kit is a perfect hands-on tool covering the basics of electricity and electronics, it comes with a fully illustrated lab style manual, it is suitable for 10+ years students.

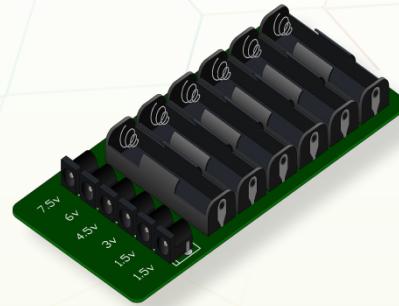
SEEK-Basics Kit Contains:

1. **Basic Board (Basics):** The Basics Board is a printed circuit board (PCB) used to connect electrical circuits, making it easy to arrange and dismantle each circuit. It consists of three loops containing 14 particular holes numbered from 1 to 14, and 14 pairs of holes, with letters A through N, considered as open circuits.

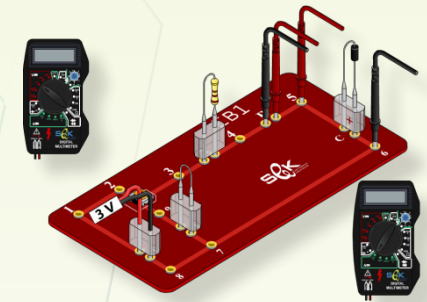
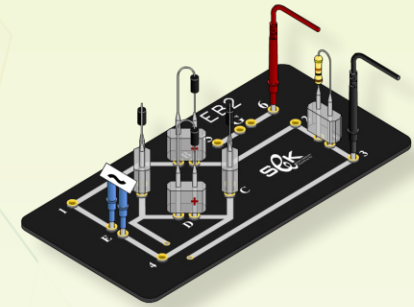
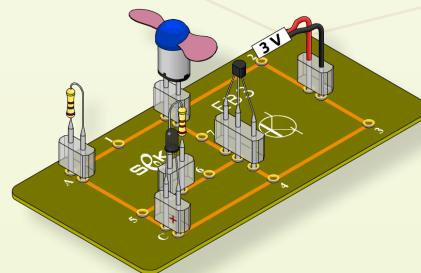
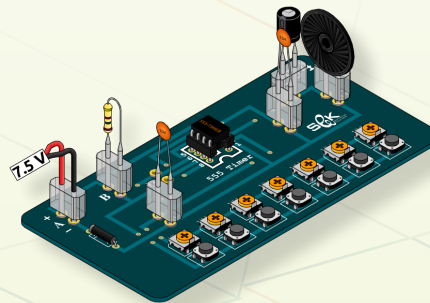


2. **Power Supply Board (PSB):** (Voltage Source): There are six AA type 1.5V batteries present in the board. There are also seven outlets that can be adjusted to

multiple DC output voltages (1.5, 3, 4.5, 6 and 7.5 volts). The outlets can be connected to the Basics Board and other experiment boards with the use of a connection wire.



3. **Experiments Boards (EB1, EB2, EB3 & EB4):** These additional printed circuit boards are used to build some specific circuits, for example, the Wheatstone bridge experiment, some transistor circuits and timing circuits such as the Piano and indicator circuits.



4. **Electronic Components:** Such as Capacitors • Resistors • Variable resistors • DC Motor • Electro Magnet • solar panels • compass • Wire Connections • LED (light emitting diode) • Diode • Zener Diode • IR LED transmitter • IR LED receiver • small light bulb and holder • Water sensor, ... etc.

