

Product Name: Mand Labs KIT-1 Premium Edition: The Coolest DIY STEM Electronics Kit

Seller SKU: MLKIT1GPE

Images: See the Pictures folder

UPC: 857897006017

Product Descriptor:

Mand Labs KIT-1: The All-in-One STEM Electronics Kit is your most comprehensive do-it-yourself (DIY) learning kit that takes you on a journey of **60 hands-on projects** from fundamentals of **electricity to advanced concepts of transistors in electronics and robotics**. And everything is step-by-step.

No prior experience in electronics is required. As a beginner, you start with simple hands-on projects, learn to use a digital multimeter and grab the basic fundamentals of electricity, including charge, voltage, current, resistance, Ohm's law and Kirchhoff laws.

As you advance, you start learning about new components, make more complex projects and progress both in terms of knowledge and skill levels. At the end of level-3, you will be working with sensors and transistors to build interesting projects such as IR security alarm, H-Bridge (motor driver circuit used in Robotics) and many more.

In the process, not only are you able to make projects, but also understand the science behind them using in-depth theoretical and circuit analysis. Designed to be more open, content rich and modular, KIT-1 gives you complete intellect freedom to invent, make mistakes and learn from them. Messing up with real world components and tools, using your imagination and creativity to come up with something new, learning about real world skills and doing everything on your own is what makes it more fun!

Who is it For:

- 8+
- For students, hobbyists, makers and educators

What's Included:

- 60 experiments pack (covers fundamentals of electricity and electronics)
- 165 electronic components and tools packaged in a portable workstation
- 9 hours of video library for learning at your own pace
- A flash drive containing videos and visual step-by-step project building instructions
- Two reference books for understanding the physics and math behind
- Highly visual and detailed step-by-step building instructions of each project

- Premium projects: IR Security Alarm System, Temperature Sensor, Joule Thief (Drawing energy from a dead cell)
- Unique portable design that opens up into a personalized lab or electronic workstation
- Breadboard carry case

KIT-1 courseware:

Charge, Battery, Voltage, Current, Resistance, LED, Multimeter, Resistors, Ohm's law, Series and Parallel Combination, Variable Resistors: Potentiometer, Preset and LDR, Switches, Capacitors, Relay, Semiconductors, Diode and Its Types, Digital Logic Gates: NOT, OR, AND, NOT, NAND, Zener Diode, DC Motor, Transistors, Inductors, IR (Infrared) LED, Photodiode, Temperature Sensor (Thermistor).

Some Exciting Projects:

Automatic Night Lamp, Burglar Alarm, Touch Activated Switch (passing current through body), LED Flasher/Blinker, Sequential Glowing of LEDs, Staircase Lighting, Alternate light control using a Preset, DC Motor as Generator, IR Security Alarm System, Temperature Sensor, Joule Thief (Drawing Energy from a Dead Cell).

Benefits:

- Prepares you for college level physics (AP physics C, Electrical Engineering 101, IGCSE Physics)
- Gain prototyping skills needed for a successful STEM career
- Understand the technology around and learn about mind blowing facts
- Become a maker of technology rather than being a consumer of it
- Educators and maker spaces can convert their classrooms into an electronic playground and conduct hands-on activities or workshops
- Makers and hobbyists can brush up their fundamentals and invent more
- Parents and homeschoolers can run a full-semester course on electrical engineering

Media Mentions:

1. [Fatherly](#)
2. [The Maker Mom](#)
3. Learn Electronics Product Review: [Watch video](#)