SparkFun Inventor's Kit - v4.1

KIT-15267

The SparkFun Inventor's Kit (SIK) is a great way to get started with programming and hardware interaction with the Arduino programming language. The SIK includes everything you need to complete five overarching projects consisting of 16 interconnected circuits that teach everything from blinking an LED to reading sensors. The culminating project is your very own autonomous robot! No previous programming or electronics experience is required to use this kit.

The full-color, spiral-bound SIK guidebook (included) contains step-by-step instructions with circuit diagrams and hookup tables for building each project and circuit with the included parts. Full example code is provided, new concepts and components are explained at point of use, and troubleshooting tips offer assistance if something goes wrong.

The kit does not require any soldering and is recommended for beginners ages 10 and up who are looking for an Arduino starter kit. For SIK version 4.1 we took an entirely different approach to teaching embedded electronics. In previous versions of the SIK, each circuit focused on introducing a new piece of technology. With SIK v4.1, components are introduced in the context of the circuit you are building, and each circuit builds upon the last, leading up to a project that incorporates all of the components and concepts introduced throughout the guide. With new parts and a completely new strategy, even if you've used the SIK before, you're in for a brand-new experience!

The SIK V4.1 includes the Redboard Qwiic which allows you to expand into the SparkFun Qwiic ecosystem after you have become proficient with the SIK circuits. The SparkFun Qwiic Connect System is an ecosystem of I^2C sensors, actuators, shields and cables that make prototyping faster and less prone to error. All Qwiic-enabled boards use a common 1mm pitch, 4-pin JST connector. This reduces the amount of required PCB space, and polarized connections mean you can't hook it up wrong. With the addition of the SparkFun RedBoard Qwiic, you *will need* to download a new driver install that is different from the original SparkFun RedBoard.

EXAMPLES

- Project 1: Light
  - Circuit 1A: Blinking an LED
  - Circuit 1B: Potentiometer
  - Circuit 1C: Photoresistor
  - Circuit 1D: RGB Night-Light
- Project 2: Sound
  - Circuit 2A: Buzzer
  - Circuit 2B: Digital Trumpet
  - Circuit 2C: "Simon Says" Game
- Project 3: Motion
  - Circuit 3A: Servo Motors
  - Circuit 3B: Distance Sensor
  - Circuit 3C: Motion Alarm
- Project 4: Display
  - Circuit 4A: LCD "Hello, World!"
  - Circuit 4B: Temperature Sensor
  - Circuit 4C: "DIY Who Am I?" Game
- Project 5: Robot
  - Circuit 5A: Motor Basics
  - Circuit 5B: Remote-Controlled Robot
  - Circuit 5C: Autonomous Robot

INCLUDES

- SparkFun RedBoard Qwiic
- Arduino and Breadboard Holder
- SparkFun Inventor's Kit Guidebook
- White Solderless Breadboard
- Carrying Case
- SparkFun Mini Screwdriver
- 16x2 White-on-Black LCD (with headers)
- SparkFun Motor Driver (with Headers)
- Pair of Rubber Wheels
- Pair of Hobby Gearmotors
- Small Servo
- Ultrasonic Distance Sensor
- TMP36 Temp Sensor
- 6' USB micro-B Cable
- Jumper Wires
- Photocell
- Tricolor LED
- Red, Blue, Yellow and Green LEDs
- Red, Blue, Yellow and Green Tactile Buttons
- 10K Trimpot
- Mini Power Switch
- Piezo Speaker
- AA Battery Holder
- 330 and 10K Resistors
- Binder Clip
- Dual-Lock™ Fastener

https://www.sparkfun.com/products/15267/8-13-19