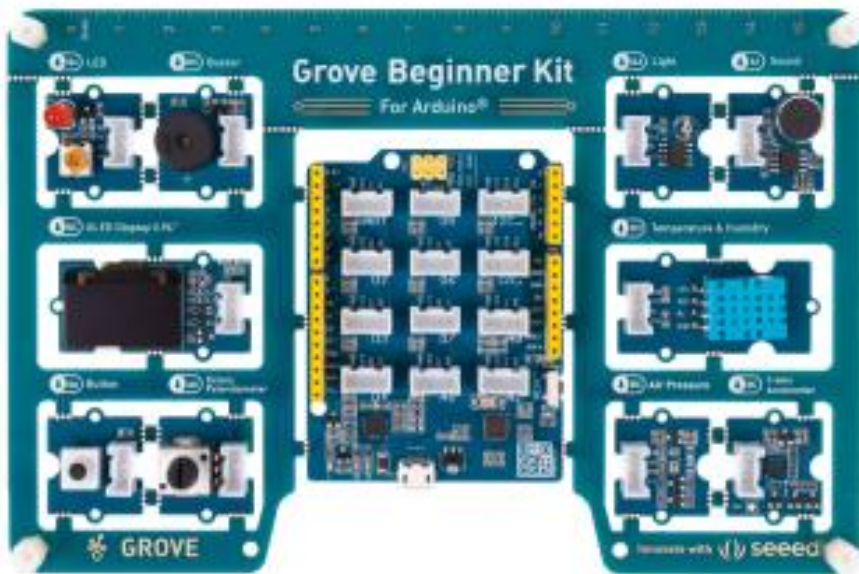




Companion guide  
to  
AmateurLogic 145:  
Grove Beginner Kit  
for Arduino

Getting Started with your Grove Beginner Kit for Arduino



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**FIRST EDITION**

# *a 'How-To...'* *AmateurLogic.*



## **Included in Kit:**

Grove Beginner Kit For Arduino Board x 1  
Micro USB Cable x 1  
Grove Cables x 6

## Included onboard:

Grove - LED x 1  
Grove - Buzzer x 1  
Grove - OLED Display 0.96" x 1  
Grove - Button x 1  
Grove - Rotary Potentiometer x 1  
Grove - Light x 1  
Grove - Sound x 1  
Grove - Temperature & Humidity Sensor x 1  
Grove - Air Pressure Sensor x 1  
Grove - 3-Axis Accelerator x 1  
Seeeduino Lotus x 1

## **Before you start:**

The Grove Beginner Kit for Arduino is nicely packaged in a descriptive cardboard box. The inside flap is nicely printed with commonly used Arduino Libraries for use as a reference. Inside the two side flaps you'll find the micro USB cable and six Grove interface cables.

Use care when opening the box if you wish to use it to store your kit. The box is sealed with tape discs, and best sliced with a box cutter or X-Acto knife as they can't be removed without damaging the box.

If you wish, the Seeedunio Lotus / Grove backplane board, as well as the sensor boards can be (carefully) broken away(snapped apart) if you wish. However once this has been done. they can't be re-attached.

## **So your Grove Beginner Kit for Arduino arrived –Now What?**

### **Stuff you'll need:**

Just a Windows or Mac computer (with at least 1 USB port). Everything else that you'll need is in the box!

### **Stuff that you need to know:**

This is a kit made for beginners. No soldering or electronics knowledge is required in order to experiment with this kit.

## **All-in-one Arduino Compatible Board with 10 Sensors and 12 Projects**

The Grove Beginner Kit for Arduino® is powered by one Arduino UNO compatible Board (ATmega320p based Seeeduino Lotus) together with 10 additional Grove Arduino sensors all in one piece of the board.

- All modules are pre-wired, no breadboard and jumper cables required.
- 74 pages PDF wiki + 12 step by step project tutorials
- Compatible with over 300 Grove modules
- Unlike most kits, the Grove Beginner Kit for Arduino is an all-in-one kit, no breadboard, no soldering, even no wiring is needed.
- All the modules have been connected to the Seeeduino(Microcontroller) through the PCB stamp holes so nothing other than Grove cables are needed to make connections..
- You can also take the modules out and use Grove cables to connect the modules. It is a combination of Seeeduino and Base Shield. It uses an Atmel ATMEGA328P-MU and CP2102N. ATMEGA328P-MU is a high performance, low power AVR 8-Bit Microcontroller. The CP2102N is a USB bus converter chip that can realize a USB to serial interface. Seeeduino Lotus has 14 digital input/outputs (6 of which can output PWM) and 7 analog input/outputs, a micro USB connection, an ICSP header, 12 Grove connections, a reset button.

## Resource Links:

Wiki:

<https://wiki.seeedstudio.com/Grove-Beginner-Kit-For-Arduino/>

Seeeduino Lotus

[https://wiki.seeedstudio.com/Seeeduino\\_Lotus/](https://wiki.seeedstudio.com/Seeeduino_Lotus/)

Schematics:

<https://files.seeedstudio.com/wiki/Grove-Beginner-Kit-For-Arduino/res/Grove-Beginner-Kit-for-Arduino-SCH-PCB.zip>

Schematics(pdf)

[https://github.com/SeeedDocument/Grove\\_Starter\\_Kit\\_v3/raw/master/res/Grove-Starter\\_Kit\\_v3\\_sch\\_pdf.zip](https://github.com/SeeedDocument/Grove_Starter_Kit_v3/raw/master/res/Grove-Starter_Kit_v3_sch_pdf.zip)

Schematics (Eagle):

[https://github.com/SeeedDocument/Grove\\_Starter\\_Kit\\_v3/raw/master/res/Grove-Starter\\_Kit\\_Eagle.zip](https://github.com/SeeedDocument/Grove_Starter_Kit_v3/raw/master/res/Grove-Starter_Kit_Eagle.zip)

Initial Arduino Firmware Demo:

<https://files.seeedstudio.com/wiki/Grove-Beginner-Kit-For-Arduino/res/GroveBeginnerKitFirmwareFINAL.zip>

Grove Beginner Kit For Arduino Resources in one:

[https://files.seeedstudio.com/wiki/Grove-Beginner-Kit-For-Arduino/res/Grove-Beginner-Kit-For-Arduino-Resources-in-one\(20200401\).7z](https://files.seeedstudio.com/wiki/Grove-Beginner-Kit-For-Arduino/res/Grove-Beginner-Kit-For-Arduino-Resources-in-one(20200401).7z)

**Sensors:**

Sensor Datasheet:

<https://files.seeedstudio.com/wiki/Grove-Beginner-Kit-For-Arduino/res/Grove-beginner-kit-for-arduino-datasheet.zip>

Grove - Button Source File:

[https://github.com/SeeedDocument/Grove\\_Starter\\_Kit\\_v3/raw/master/res/Grove-Button\\_v1.0\\_Source\\_File.zip](https://github.com/SeeedDocument/Grove_Starter_Kit_v3/raw/master/res/Grove-Button_v1.0_Source_File.zip)

Grove - LED Source File:

[https://github.com/SeeedDocument/Grove\\_Starter\\_Kit\\_v3/raw/master/res/Grove-LED\\_v1.0\\_Source\\_File.zip](https://github.com/SeeedDocument/Grove_Starter_Kit_v3/raw/master/res/Grove-LED_v1.0_Source_File.zip)

Grove - Buzzer Source File:

[https://github.com/SeeedDocument/Grove\\_Starter\\_Kit\\_v3/raw/master/res/Grove-Buzzer\\_v1.0\\_Source\\_File.zip](https://github.com/SeeedDocument/Grove_Starter_Kit_v3/raw/master/res/Grove-Buzzer_v1.0_Source_File.zip)

Grove - Rotary Angle Sensor Source File:

[https://github.com/SeeedDocument/Grove\\_Starter\\_Kit\\_v3/raw/master/res/Grove-Rotary\\_Angle\\_Sensor\\_v1.2.zip](https://github.com/SeeedDocument/Grove_Starter_Kit_v3/raw/master/res/Grove-Rotary_Angle_Sensor_v1.2.zip)

Grove - Relay Source File:

[https://github.com/SeeedDocument/Grove\\_Starter\\_Kit\\_v3/raw/master/res/Grove-Relay\\_v1.2\\_Eagle.zip](https://github.com/SeeedDocument/Grove_Starter_Kit_v3/raw/master/res/Grove-Relay_v1.2_Eagle.zip)

Base Shield Source File:

[https://github.com/SeeedDocument/Grove\\_Starter\\_Kit\\_v3/raw/master/res/Base\\_Shield\\_v2.zip](https://github.com/SeeedDocument/Grove_Starter_Kit_v3/raw/master/res/Base_Shield_v2.zip)

Grove - Sound Sensor Source File:

[https://github.com/SeeedDocument/Grove\\_Starter\\_Kit\\_v3/raw/master/res/Grove-Sound\\_Sensor\\_v1.3\\_eagle.zip](https://github.com/SeeedDocument/Grove_Starter_Kit_v3/raw/master/res/Grove-Sound_Sensor_v1.3_eagle.zip)

Grove - Buzzer Source File:

[https://github.com/SeeedDocument/Grove\\_Starter\\_Kit\\_v3/raw/master/res/Grove-Buzzer\\_V1.1\\_eagle.zip](https://github.com/SeeedDocument/Grove_Starter_Kit_v3/raw/master/res/Grove-Buzzer_V1.1_eagle.zip)