

#### WARNING

 This product contains small magnets. Swallowed magnets can stick together across intestines causing serious infections and death. Seek immediate medical attention if magnets are swallowed or inhaled.

- · Most littleBits are small parts. DO NOT allow children under
- 3 years old to play with or near this product.
- NEVER connect any littleBits or circuits to any AC electrical outlet.
- Do not touch or hold any moving parts of littleBits while they are operating.
- Keep conductive materials (such as aluminum foil, staples, paper clips, etc.) away from the circuit and the connector terminals.
- ${\mbox{ \bullet}}$  Always turn off circuits when not in use or when left unattended.
- · Never use littleBits in or near any liquid.
- Never use in any extreme environments such as extreme hot or cold, high humidity, dust or sand.
- littleBits are subject to damage by static electricity. Handle with care.
- Some littleBits may become warm to the touch when used in certain circuit designs. This is normal. Rearrange modules or discontinue using if they become excessively hot.
- Discontinue use of any littleBits that malfunction, become damaged or broken.

#### VERY IMPORTANT NOTE

 Several projects in this kit involve the use of a box cutter, grill skewers and/or a hot glue gun.
These tools should be used ONLY under direct adult supervision and ONLY by children capable of using them safely.

#### INSTRUCTIONS

We recommend using littleBits brand 9-volt batteries, but standard alkaline or standard rechargeable batteries may also be used. Properly discard and replace exhausted battery. Do not connect the two battery terminals with any conducting material.

#### CARE AND CLEANING

Clean Bits modules ONLY by wiping with a dry cloth. If necessary, isopropyl alcohol on a cloth may be used sparingly, and then wipe with a dry cloth.

DO NOT use any other cleaning products on Bits modules. Congratulations for reading this fine print. Your dedication and persistence will serve you well.

#### FC RADIO AND TELEVISION INTERFERENCE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. • Consult the dealer or an experienced radio/TV technician for helo.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commissions rules.

#### SEND US YOUR LOVE

Contact support@littleBits.cc with any questions or comments.

#### www.littleBits.cc

littleBits Electronics, Inc. 60 E. 11th Street NY, NY 10003 (917)464-4577

You are a proud owner of the **Base Kit v1** from the Exploration Series. Over 150,000 combinations?! Are you serious? Yep, www.littleBits.cc/mathmagic

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# THE LITTLEBITS™ BASICS



littleBits<sup>™</sup> is an expanding library of modular electronics that snap together with magnets.



## S<sup>™</sup> COLOR CODED

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littleBits™ are grouped into 4 different categories, which are color coded: **POWER** needed in every circuit and the start of all your creations.

**INPUT** these Bits modules accept input from you and the environment and send signals to the modules that follow.

**OUTPUT** these Bits modules DO somethinglight, buzz, move...

**WIRES** these Bits modules expand your reach and change direction-great for helping to incorporate littleBits into your projects.

### **ORDER IS IMPORTANT**

Power Modules always come first and Input Modules only affect the Output Modules that come after them.

## **MAGNET MAGIC**

4

littleBits<sup>™</sup> snap together with magnets. The magnets are always right, you can't put modules together the wrong way.

## littleBits"+ any thing

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littleBits are just the beginning. Combine them with craft materials, building sets, and other toys to electrify your life. We'll show you how!



# KNOW YOUR **BITS**<sup>™</sup> MODULES

This is the Base Kit, Version 1 Learn more and shop for individual Bits Modules at littleBits.cc/Bits This power module lets you use a 9-volt battery to supply electricity to your littleBits. Snap in the battery + cable (both included) and flip the switch to turn it on.

off on

it all starts

POWER pl

with power ...

plpower

## BUTTON i3

i3 butto

I-volt

turn it on and off

right here

battery and cable included

> Big, round, and springy for comfortable pressing! Push to turn on, and release to turn off.

do something you've never done before.



## LIGHT SENSOR i13

The light sensor measures how much light is shining on it. In "light" mode, the more light shines on the sensor, the higher the signal it sends out. In "dark" mode, it's just the opposite – the signal increases the darker it gets.

### **DIMMER** i6

Our dimmer lets you control your creations with a simple knob, just like the volume on your stereo. Turn it clockwise to send more signal to the following Bits modules. Try using it to control the volume of the buzzer or speed of the DC motor.

twist it

ieldimmer

### WIRE w1

The wire allows you to physically separate your Bits modules. Try it whenever you need to break up your chain of littleBits, like when you need to put a light at the top of a model building.





A small littleBit with a big light, just like a bike light. Like our other LED modules, it's a great way to shed some light on your creations. Choose the bright LED when you want a LOT of bright white light.

The bargraph is one of our favorite Bits modules: it has five LEDs in different colors that light up to show you how much signal the module is receiving.

The buzzer is like the sound in an alarm clock: it makes a noise that you just can't ignore. It buzzes whenever it gets an ON signal. Try

using it to make your own doorbell or alarm!

### DC MOTOR 05

The DC (or "Direct Current") motor rotates a shaft when you send it an ON signal. The left/ right switch controls the direction of rotation. Try attaching various things to make windmills, cars, helicopters, and more.



a cable to connect it to the power module.

of your creations!

Connect it and then flip the switch to power all

motorMate works with the DC motor. This makes it easy to attach wheels, paper, cardboard, and lots of other materials to the DC motor. Simply slide it on the "D" shape of the shaft. A LEGO<sup>™</sup> axle also fits in the end. This little purple screwdriver is used to modify any littleBit that has a micro adjuster.

# TRY THESE CIRCUITS

Get started with these but don't let us hold you back – every module fits with every other module – feel free to experiment.



#### LIGHT METER Measure light around your house. light sensor bargraph power 00000 Cum .... measure it . sense it turne

INTRO TO DC MOTOR Get to know the motor.





**CAR SPEED** Speed it up, slow it down.



122 11.



PROJECTS **Tickle Machine** TRY THESE **2 Prank Handshake** ..... AND INVENT YOUR OWN 3 The Night Rider **4 Flashlight** 5 Art Bot 6 Doorbell 7 Lil' Breezy 8 Three Wheeler Tons more projects online www.littleBits.cc/base

## PROJECT 1: How can electronics help spread laughs? TICKLE MACHINE

Start with this circuit













## And now a brief intermission from the projects. **VISIT US AT** LITTLEBITS.CC/TIPS FOR SOME AMAZING **TIPS & TRICKS**





















# This booklet's over but the fun's not done.

Upload your project and you may be handsomely rewarded. We regularly feature awesome community projects and send out exclusive gifts.

Visit us online where we've got tons more projects and tips and tricks for every Bits module. Check out other littleBits in the expanding library.

Online we'll show you how to make this great PUPPET MASTER www.littleBits.cc/puppet and

TONS MORE PROJECTS at www.littleBits.cc/base

#### Want More? You got it! EXPLORATION SERIES





Premium Kit

Deluxe Kit

### INDIVIDUAL BITS<sup>™</sup> MODULES

