1. Connect battery and cable to blue module.
2. Turn it on.
3. Pink modules affect modules after them.
4. Green modules do something.
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.
• 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.

IMPORTANT NOTE
• Several projects in this kit involve the use of a box cutter, grill skewers and/or a hot glue gun.

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.

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, may cause harmful interference to radio communications. 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 help.

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 Commission 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)444-6577
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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Made in Dongguan City, China
littleBits, Bit, Circuits in Seconds, and Make Something That Does Something are trademarks of littleBits Electronics, Inc.
1. **Circuits in Seconds**
   littleBits™ is an expanding library of modular electronics that snap together with magnets.

2. **Color Coded**
   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 something—light, buzz, move...
   - **Wires** these Bits modules expand your reach and change direction—great for helping to incorporate littleBits into your projects.

3. **Order is Important**
   Power Modules always come first and Input Modules only affect the Output Modules that come after them.

4. **Magnet Magic**
   littleBits™ snap together with magnets. The magnets are always right, you can’t put modules together the wrong way.

5. **littleBits™ + Anything**
   littleBits are just the beginning. Combine them with craft materials, building sets, and other toys to electrify your life. We’ll show you how!

---

*littleBits™ is an expanding library of modular electronics that snap together with magnets.*

*You always need a Blue and a Green, Pink and Orange are optional, in between.*

*no soldering*  
*no programming*  
*no wiring*
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.

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

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.

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.
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!

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 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.
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® axle also fits in the end.

This little purple screwdriver is used to modify any littleBit that has a micro adjuster.

This Kit contains a 9-volt alkaline battery and a cable to connect it to the power module. Connect it and then flip the switch to power all of your creations!
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.

MORNING ALARM  Wake up with the sun!

INTRO TO DC MOTOR  Get to know the motor.

CAR SPEED  Speed it up, slow it down.

SIREN  Pump up the volume.

don't forget to connect your battery to the power module

yep! battery

+ cable here

spin it

spin it

spin it

spin it

spin it

spin it
PROJECT 1: How can electronics help spread laughs?

TICKLE MACHINE

1. Start with this circuit

- power
- wire
- DC motor
- motorMate

2. Always connect battery and cable to power module

3. Attach feathers to the motorMate

Try other materials too!

TICKLE YOUR FRIENDS (and dust your bookshelf)

PROJECTS
1. Tickle Machine
2. Prank Handshake
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

TRY THESE AND INVENT YOUR OWN

TIME: 15 mins
DIFFICULTY: ★★★★★

YOU'LL NEED
- feathers
PROJECT 2: Want to trick a friend? We’ll show you how!

PRANK HANDSHAKE

1. Start with this circuit

   - Power
   - Wire
   - Button
   - Wire
   - Buzzer

   How else can you surprise your friends using littleBits?

   TIME: 15 mins
   DIFFICULTY: 🍁🍁🍁🍁🍁

   YOU’LL NEED
   - Rubber bands

2. Put the circuit on your hand and arm using rubber bands

3. Go ahead, shake a hand, SURPRISE YOUR FRIENDS!

   - Turn me on
   - You
   - Me
   - End
   - Assume nothing
   - Stretch it

   Put the circuit on your hand and arm using rubber bands.
PROJECT 3: How can you create a light that only turns on at night?

**THE NIGHT RIDER**

1. Start with this circuit:
   - Power
   - Light Sensor
   - Bargraph

2. Rubber band battery cable in a loop.

3. Cut a hole in the bottom of the cup and pull the cable loop through the hole.

4. Hang it on your bike and RIDE ON!

**TIME:** 30 mins  
**DIFFICULTY:** 1 out of 5

**STAY SAFE!** Don’t have a cup? What other materials can glow?

- Plastic cup
- Bike
- Box cutter

**STAY SAFE!** Always use with an adult.
PROJECT 4: Illuminate your way with household materials.

FLASHLIGHT

1. Start with this circuit
   - power
   - button
   - wire
   - bright LED
   - turn me on?

2. Put circuit in tube
   - wrap with rubber bands
   - battery inside tube
   - bright and white
   - ensure that LED light faces out
   - PRO TIP: you can put a clear plastic cup in the end to diffuse the light.

3. Turn it on and go EXPLORING WITH YOUR FLASHLIGHT!
   - we used a cup to diffuse the LED. What can you try?

YOULL NEED
- rubber bands
- tube
- plastic cup

TIME: 30 mins
DIFFICULTY: 🅰️孔雀

1. You can put a clear plastic cup in the end to diffuse the light.
2. We used a cup to diffuse the LED. What can you try?
3. Turn it on and go EXPLORING WITH YOUR FLASHLIGHT!
PROJECT 5: How can you build a device to draw for you?

ART BOT

1. Start with this circuit:
   - Power
   - DC motor
   - Use the motorMate

2. Put the motorMate on the DC motor and attach with a rubber band:
   - Tuck the battery under the DC motor and insert your charcoal or marker.

3. Attach the LEGO™ axle and wheel:
   - Don't have an axle or wheel? Make one!

4. What other tools can you draw with?
   - Put it on paper, turn it on and let it draw!

TIME: 30 mins
DIFFICULTY: •••••

What other tools can you use to draw?

- Don't have a LEGO™ axle or wheel? Make one!
And now a brief intermission from the projects.

VISIT US AT LITTLEBITS.CC/TIPS FOR SOME AMAZING TIPS & TRICKS

10 ways to decorate your dimmer... Play with your food by attaching it to the DC motor... You are a musician! Learn the mystical art of playing the buzzer... Find out why the wire is the second most important littleBit... 12 ways to diffuse the bright LED... bitFeet™ + cardboard = 5 different attachment techniques... Don't throw that away! It could transform your next project... What household item enhances any lighting project? We'll show you... 6 things you didn't know about the button... What do a buzzer and a baby have in common? We'll show you... 3 ways to get over your fear of the dark (hint: use the light sensor)... How many wires would it take to circle the globe? Find out!
PROJECT 6: Deck out your bedroom door.

DOORBELL

1. Start with this circuit:

   - power
   - wire
   - button
   - wire
   - dimmer
   - bargraph
   - buzzer

2. Find a box and cut the bottom off.

3. Place modules in box and tape down.

4. Make top piece.

5. Cut out decorative doorbell shape and glue to top piece.

**TIME:** 60 mins

**DIFFICULTY:** 🌟🌟🌟🌟🌟

**NEEDED:**
- box
- cutter
- push pin
- marker
- tape
- scissors
- glue
- cardboard box

**PRO TIP:** You can disconnect the connector to feed through small holes. Don’t forget to reconnect it!

**STAY SAFE!** Always use with an adult.

**ALWAYS CONNECT YOUR BATTERY TO THE POWER MODULE.**

**ALWAYS USE WITH AN ADULT.**

**SHARP! BE CAREFUL!**

**STAY SAFE!** Always use with an adult.
6. Glue one tab on top piece and attach to inside of box.

7. Place doorbell outside door and rest of bit modules inside room.

8. We'd like to see your take on the doorbell project, upload it here! littleBits.cc/upload

Customize it!
Add paint, stickers... Go all out!
Project 7: Make your own spinning windmill.

Lil' Breezy

1. Start with this circuit:
   - Power
   - Dimmer
   - Wire
   - DC Motor
   - Wire
   - Bright LED

   **Stay Safe!** Always use with an adult.

   - Hot glue
   - Glue
   - Scissors
   - Pencil eraser
   - Popsicle sticks

   **TIME:** 90 mins
   **Difficulty:** 🍀🍀🍀🍀

   **You need:**
   - Hot glue
   - Glue
   - Scissors
   - Pencil eraser
   - Popsicle sticks

2. Make a house out of popsicle sticks. Use scissors to cut popsicle sticks down to size.

3. Put the littleBits in your house. Make a shelf for the Bits modules to sit on.

STAY SAFE!

- Always use with an adult.
Put a pencil eraser on the DC motor.

Build a fan out of popsicle sticks and attach to the eraser with your glue.

This is a fun alternative to the motorMate!

Enjoy your charming desk decor!
PROJECT 8: Learn how to make a light-controlled vehicle.

THREE WHEELER

1. Start with this circuit

- power
- wire
- light sensor
- wire
- DC motor

- Choose whether to drive in light or dark.
- Always connect your battery to the power module.
- STAY SAFE! Always use with an adult.
- Use the motorMate.

TIME: 90 mins
DIFFICULTY: ★★★★☆

2. Make 3 wheels

- Trace a cup on cardboard to get perfect circles.
- Cut a slot in the cardboard wide enough to fit the wheel.
- Be careful!

3. Make the base out of cardboard

- Cutout, color, and mark the center.
- What other objects can be a wheel? Try a CD!
- Ours is 4in x 6in, what size will yours be?

STAY SAFE!

Always use with an adult.

See this tutorial with video extras at littleBits.cc/base

What other objects can be a wheel? Try a CD!

Ours is 4in x 6in, what size will yours be?
4. Put littleBits on cardboard base

- Use tape to hold modules down.
- Use pen to poke hole in wheel. MotorMate will go in here.

5. Add wheel to MotorMate

- Use pen to poke hole in wheel. MotorMate will go in here...
- ...then add wheel to MotorMate in cardboard slot.
Poke skewer through two remaining wheels and glue them in place; these will be the back two wheels.

Cut a rectangle of paper and fold in half...

...then place over axle and tape down.

Draw yourself and cut the figure out.

Attach back wheels.

This is an axle.

After you’ve made the axle cut the ends of the skewers.

(not too tight, axle should still spin)

RIDE THROUGH THE NIGHT!

Try the light sensor in both modes. Which is your favorite?
This booklet’s over but the fun’s not done.

LITTLEBITS.CC/UPLOAD
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

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