UNLEASH YOUR INNER INVENTOR.

littleBits

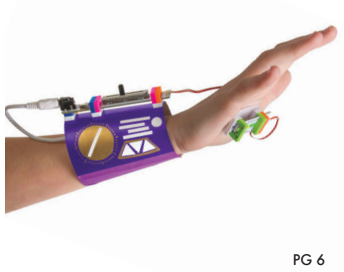
GIZMOS & GADGETS

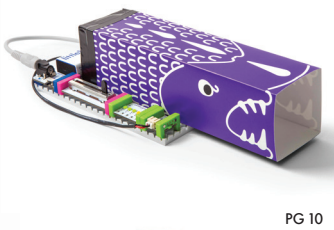
INVENTIONS

2 littleBits Basics

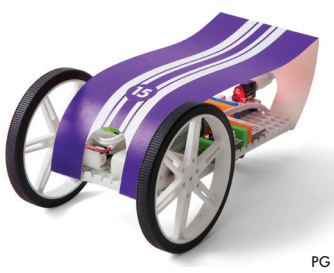
4 Breezy Buddy
5 Spinmate
6 Megablaster
8 Wireless Doorbell
9 Mischief Machine
10 Bubblebot
12 Bumperball
14 Bitbot
16 Rotolamp
18 Spy Box

20 Bit™ Index
20 Trouble-shooting
23 littleBits Invention Cycle


PG 6


PG 10


PG 12

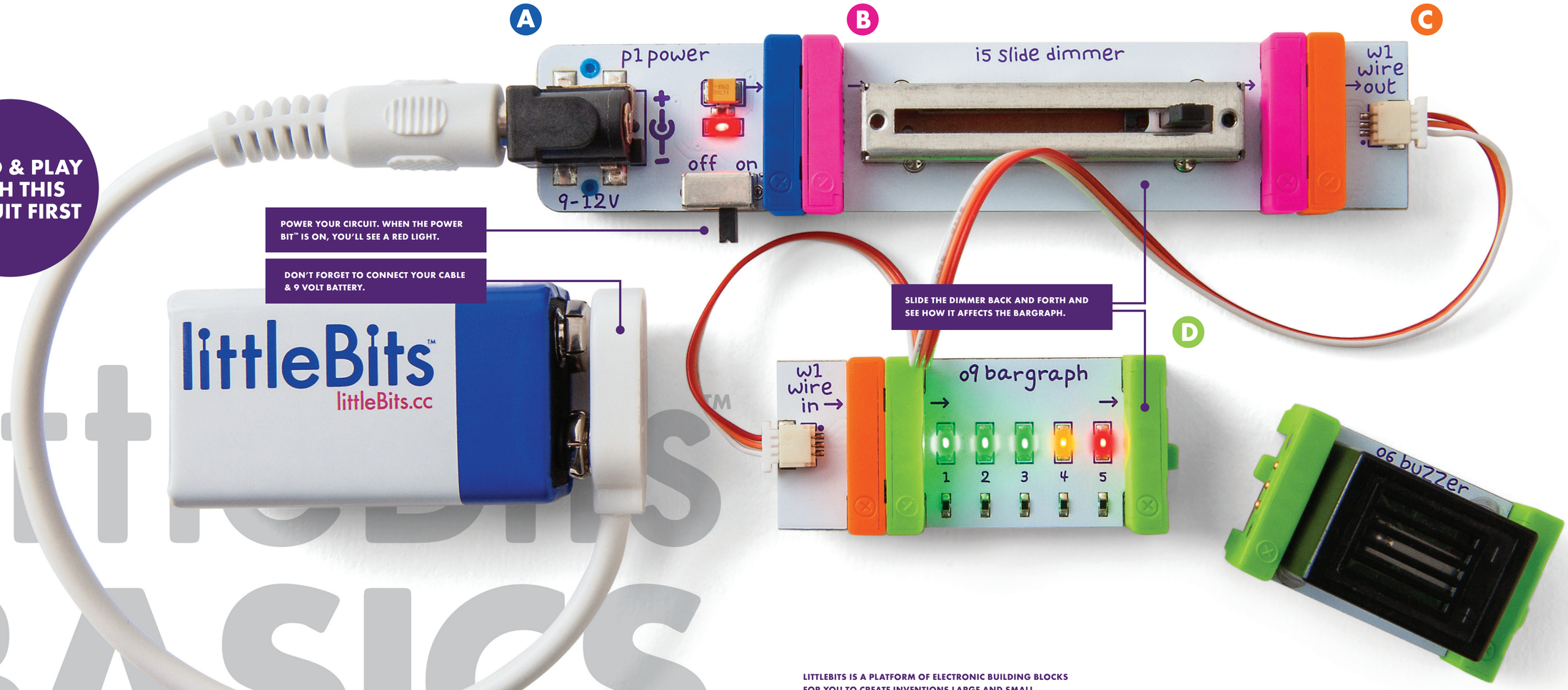

PG 14


PG 16

PG 18

littleBits BASICS

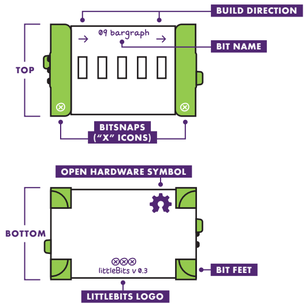
BUILD & PLAY WITH THIS CIRCUIT FIRST



LITTLEBITS IS A PLATFORM OF ELECTRONIC BUILDING BLOCKS FOR YOU TO CREATE INVENTIONS LARGE AND SMALL.

1 ANATOMY OF A BIT

Learn how you can tell top from bottom.



2 COLOR-CODED BY FUNCTION

Bits are grouped into four different categories, which are color-coded.

A POWER (BLUE)
Power Bits, plus a power supply run power through your circuit.

B INPUT (PINK)
Input Bits accept input from you or the environment and send signals that affect the Bits that follow.

C WIRE (ORANGE)
Wire Bits connect to other systems and let you build circuits in new directions.

D OUTPUT (GREEN)
Output Bits do something – light up, buzz, move...

Learn more about your Bits in the **BIT INDEX ON PG 20**

3 MAGNET MAGIC!

Bits snap together with magnets. The magnets are always right – you can't snap them together the wrong way.

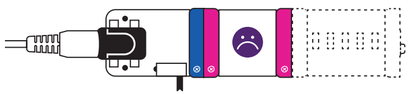
ARROWS SHOULD POINT IN THE SAME DIRECTION

IF THE BITS WON'T SNAP TOGETHER, TRY SPINNING ONE AROUND AND MAKE SURE THE ARROWS POINT IN THE SAME DIRECTION

4 ORDER IS IMPORTANT

POWER BITS always come first and **INPUT BITS** only affect the **OUTPUT BITS** that come after them.

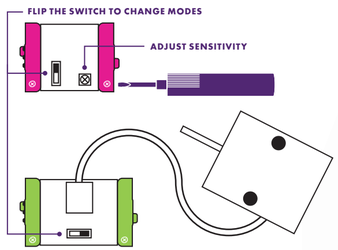
WITH NO OUTPUT BIT AFTER IT, THE INPUT BIT HAS NOWHERE TO SEND ITS SIGNAL



THE INPUT BIT AFFECTS THE OUTPUT BITS THAT FOLLOW

5 SOME BITS ARE ADJUSTABLE

Switches, buttons, and sensitivity dials on the board allow you to change how the Bit functions.



THE LITTLEBITS INVENTION CYCLE

Keep an eye out for these icons as you're inventing! Learn more about **THE LITTLEBITS INVENTION CYCLE PG 23**

Download the littleBits App to get inspiration for new projects and step-by-step instructions for inventions and community challenges. Discover a world of infinite inventing possibilities.

LEARN MORE ON PAGE 23

INVENTION 01

BREEZY BUDDY

TIME 5 min

LEVEL ●○○○○

battery & cable

p1 power

i5 slide dimmer

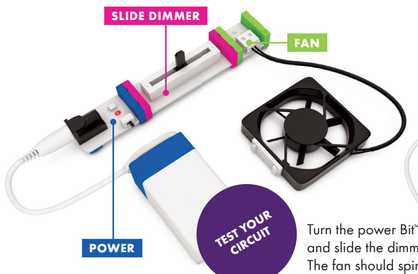
o13 fan

a9 mounting board

Glue Dots®

CREATING YOUR OWN ELECTRONIC INVENTIONS CAN BE FUN, and functional! Whether your classroom feels like the surface of the sun or you want to bring the breeze with you on your next nature walk, this simple fan will keep you cool.

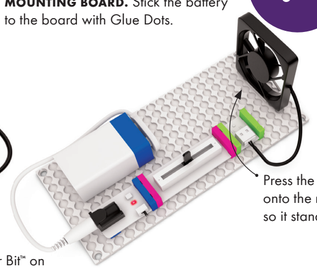
1 CREATE — BUILD YOUR CIRCUIT.



Turn the power Bit™ on and slide the dimmer. The fan should spin.
TROUBLESHOOTING PG 20

2 PRESS YOUR CIRCUIT ONTO THE MOUNTING BOARD.

Stick the battery to the board with Glue Dots.



Your fan should be blowing **AWAY** from the circuit.

Press the fan's little feet onto the mounting board so it stands up on its side.

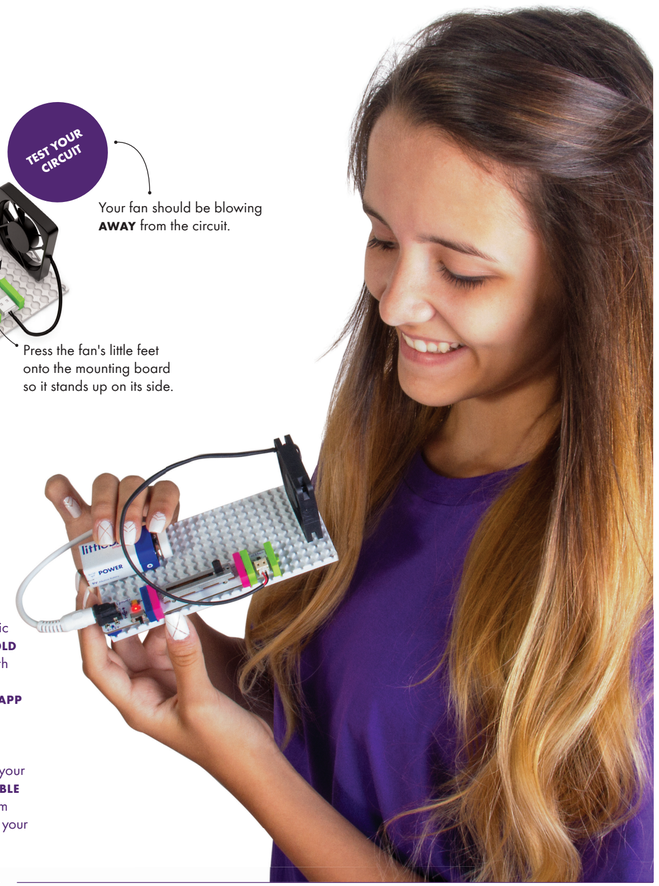
3 PLAY — COOL OFF!

SHARE

COMMUNITY CHALLENGE: You just invented an electronic fan! **WHAT OTHER HOUSEHOLD OBJECTS** can you create with your Bits?
LITTLEBITS.CC/GGKIT & THE APP

SHARE

CUSTOMIZE: Can you make your Breezy Buddy into a **WEARABLE FAN?** Use craft materials from around the house to attach to your body or clothes.



REMIX

FAN OF FORTUNE

A SPINNING FAN CAN DO MORE THAN BLOW AIR. Could yours predict the future? Here we use the fan's spinning motion to create a fortune teller. Ask the Fan of Fortune any question – we just hope you're a fan of the answer!

MATERIALS
- paper
- tape
- stickers

1 REMIX — MIX UP YOUR CIRCUIT!

Take the fan off your mounting board and tape it to the middle of a sheet of paper.

2 LEARN WHAT YOUR FUTURE HOLDS!

Write four fortunes on a piece of paper. Use stickers to make an arrow on the middle of the fan, pointing at one of the fortunes.

3

Turn power on and move the slide dimmer up to get the fan spinning. Slide the dimmer back down. When the blades stop, **THE ARROW WILL POINT TOWARD YOUR DESTINY!**

SHARE

COMMUNITY CHALLENGE: Can you design an invention around the idea of chance? Roll some dice, flip a coin, or remix a fortune teller to get inspired.

 SHARE AT LITTLEBITS.CC/GGKIT

INVENTION 02

SPINMATE

TIME 15 min

LEVEL ●○○○○

battery & cable

p1 power

i5 slide dimmer

o25 DC motor

a9 mounting board

wheel

Glue Dots®

stickers

decorating materials‡

‡nice to have

MAKE A SPINNING SIGN FOR YOUR LEMONADE STAND OR A CREATURE THAT DANCES DIZZILY ON YOUR DESK! Create this versatile invention and let your imagination run wild.

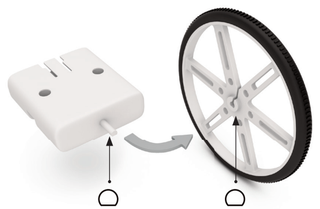
1 CREATE — BUILD YOUR CIRCUIT.

Make sure the DC motor Bit is in **VAR** (variable) mode.
LEARN MORE PG 21

Turn power on and slide the dimmer. How does it change the speed and direction of your motor?
TROUBLESHOOTING PG 20

2

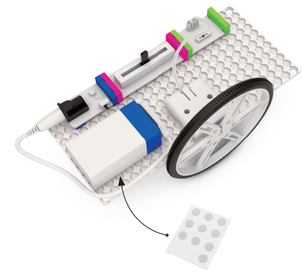
While your circuit is off, **ATTACH A WHEEL TO THE DC MOTOR.** Your sign will spin on top of the wheel.



Match the **FLAT EDGE** on the motor shaft with the flat edge of the hole in the wheel.

3

PRESS YOUR CIRCUIT ONTO THE MOUNTING BOARD. Use Glue Dots to stick the battery to the board.



4 PLAY

SPIN YOUR HEART OUT! Set the wheel on a flat surface. It will act as the base for your sign to spin on.

SHARE

CUSTOMIZE: THE BACK SIDE OF THE MOUNTING BOARD IS YOUR CANVAS. Make it useful, playful or just plain weird using the provided stickers or any materials you'd like.
LITTLEBITS.CC/GGKIT & THE APP

SHARE

COMMUNITY CHALLENGE: How would you show your personality on a sign? **WHAT DO YOU WANT TO SAY?**

REMIX

ART SPINNER

YOU CAN DO SO MANY THINGS WITH THE CIRCUIT YOU JUST CREATED. By adding a few adhesive shoes, Glue Dots, a paper plate, and some markers, it transforms into a spin art platform!

MATERIALS
- adhesive shoes (2)
- Glue Dots (2)
- paper plate
- markers

1 REMIX — MAKE A FEW SMALL CHANGES TO YOUR CIRCUIT AND ACCESSORIES.

First, take the DC motor off the mounting board. Snap two adhesive shoes to the motor and then take the backing off and stick to a table edge. Attach a paper plate to the top of the wheel with Glue Dots.

2

Turn power on, set the slide dimmer to a desired speed, and make your mark right on the paper plate! **CREATE SPIN ART MASTERPIECES.**

SHARE

COMMUNITY CHALLENGE: PICTURE YOUR FAVORITE PAINTING. Can you recreate it on your spinning art machine? We recommend something abstract!

SHARE AT LITTLEBITS.CC/GGKIT

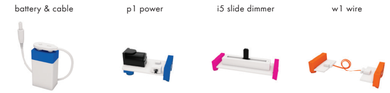
INVENTION 03

MEGABLASTER

IT'S A BIRD! IT'S A PLANE! IT'S SUPER KID! If you could have one superpower, what would it be? Would you walk through walls? Turn bad guys to stone? With a few Bits™ and a little imagination, you can blast that power onto anything! Just use the slide dimmer on your wrist cuff to activate a bargraph in the palm of your hand. When it's at full capacity, **POW!** Shoot your imaginary power wherever it's needed.

TIME
15 MIN

LEVEL


battery & cable

p1 power

i5 slide dimmer

w1 wire


o9 bargraph

Glue Dots®

a6 hook & loop shoes (×5)


a6 hook & loop strip


template A


tape*


scissors*


decorating materials‡

*from around the house

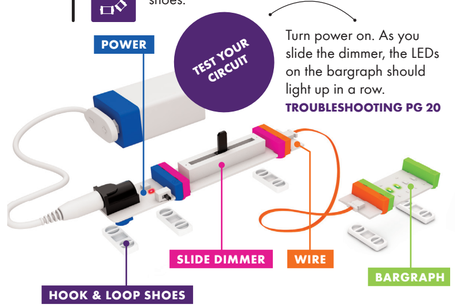
‡nice to have

SHARE

CUSTOMIZE: Stick the bargraph to either the back or front of your hand, **DEPENDING ON WHICH SUPERHERO YOU ARE. LITTLEBITS.CC/GGKIT & THE APP**

1 **CREATE**

BUILD YOUR CIRCUIT and press on hook & loop shoes.



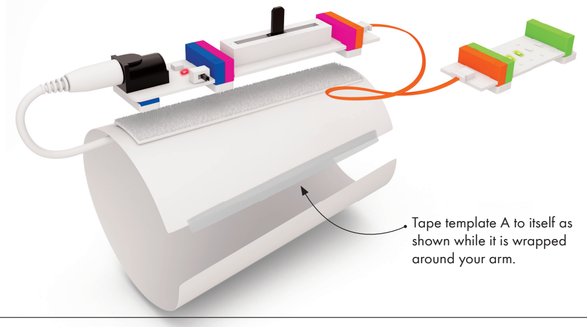
Turn power on. As you slide the dimmer, the LEDs on the bargraph should light up in a row.
TROUBLESHOOTING PG 20

2 Decorate template A from your Kit. This will be your Megablaster wrist cuff. Think about your **FAVORITE SUPERHERO** for inspiration.

3 **MAKE THE WRIST CUFF** by sticking the battery to the inside of template A with Glue Dots.

4 Cut a 3.5" (9cm) piece of hook & loop strip.

5 Wrap it around your wrist with the battery on the inside and tape it in place. **STICK HOOK & LOOP STRIP TO CUFF** and press power and slide dimmer onto the cuff as shown.



6 **MAKE THE SUPERPOWER-BLASTING HAND PIECE.** Cut a 2" (5cm) hook & loop strip, and stick it to your hand. Press the bargraph portion of the circuit to the strip.

7 **PLAY**

YOU'RE A SUPERHERO! Slide the dimmer to light up the bargraph and activate your imaginary power.

SHARE

COMMUNITY CHALLENGE: MAKE A SUPERHERO COSTUME to match your Megablaster! **SHARE AT LITTLEBITS.CC/GGKIT**

ONLINE REMIX

PETMATE

Done playing superhero? This circuit can double as an accessory for your favorite furry friend. All you need to do is change the material the circuit sits on. Keep your Bits™ (and your buddy!) safe by keeping them dry.

FULL INSTRUCTIONS ONLINE AT LITTLEBITS.CC/GGKIT

1 **REMIX**

REMOVE THE CIRCUIT FROM THE CUFF AND CONNECT IT TO THE DOG COLLAR with hook & loop strips, just like you did with the cuffs. Secure the battery to the collar using tape or a rubber band.

SHARE

COMMUNITY CHALLENGE: What will pets be wearing in **THE YEAR 3000?** Create futuristic pet fashion with Bits and share the look.

INVENTION 04

WIRELESS DOORBELL

TIME 20 min

LEVEL ●●○○○

CREATE AN INVENTION THAT KEEPS PEOPLE FROM BURSTING INTO YOUR PRIVATE SPACE! Your new doorbell will alert you when someone wishes to enter by sending a wireless signal from outside the door to the buzzer inside your room. Could you use this system to communicate secret messages without your parents knowing? Show us how you're using the wireless doorbell on our community pages.

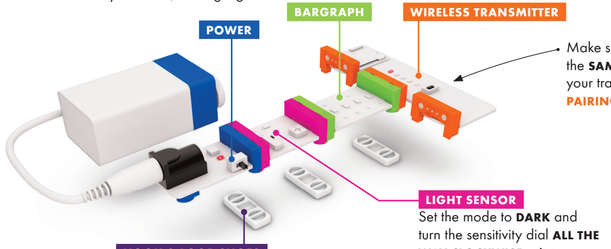
battery & cable (×2) · p1 power (×2) · i13 light sensor · w22 wireless transmitter · w21 wireless reciever

o6 buzzer · o9 bargraph · a6 hook & loop shoes (×6) · hook & loop strip · Glue Dots® · scissors*

*from around the house

1 CREATE

You're going to build two circuits that talk to each other wirelessly. First build your **WIRELESS TRANSMITTER CIRCUIT**. This circuit will send a signal to the buzzer in your room, making it go off.



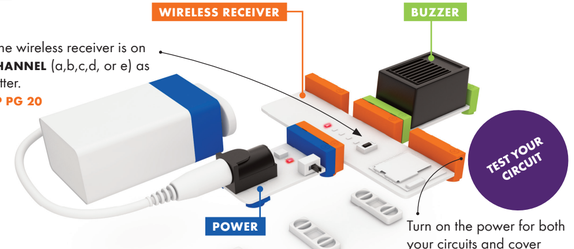
Make sure the wireless receiver is on the **SAME CHANNEL** (a,b,c,d, or e) as your transmitter.
PAIRING TIP PG 20

LIGHT SENSOR
Set the mode to **DARK** and turn the sensitivity dial **ALL THE WAY CLOCKWISE** using your purple screwdriver.
LEARN MORE PG 20

HOOK & LOOP SHOES
Press on hook & loop shoes to keep your circuit together.

2

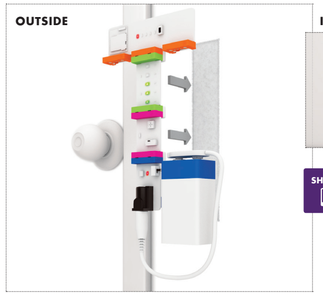
Now build the **WIRELESS RECEIVER CIRCUIT.** This will be the buzzer in your room. Press on hook & loop shoes to keep your circuit together.



Turn on the power for both your circuits and cover the light sensor with your hand. It should buzz.
TROUBLESHOOTING PG 20

3

Cut pieces of the hook & loop strip and stick them to the place you want your doorbell to hang. Attach the **TRANSMITTER CIRCUIT** to the strips, and place the receiver inside your room **USING THE SAME METHOD**. Stick your battery to the wall with Glue Dots.

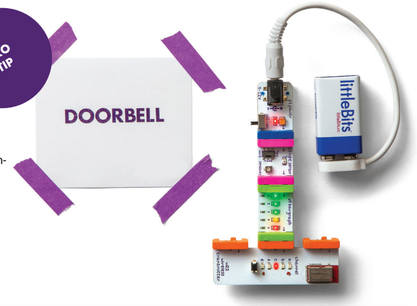


SHARE
COMMUNITY CHALLENGE: Create a **SECRET LANGUAGE** made of buzzes. Share your language on our community pages.
LITTLEBITS.CC/GGKIT & THE APP

4 PLAY

GUESTS CAN NOW ANNOUNCE THEIR ARRIVAL BY COVERING THE LIGHT SENSOR TO "PRESS" THE DOORBELL. Try adjusting the sensitivity on the light sensor and see if you can get it to detect the shadow of anyone approaching your room.

PRO TIP
Create a sign telling people to put their hand over the light sensor to announce their arrival.



REMIX

STUFF GUARD

PRIVACY, PLEASE! Keep your parents' or siblings' grubby fingers out of your stuff by setting up a wireless alarm system. By installing the light sensor (transmitter circuit) in your drawer, you'll know that someone is looking through your stuff when your buzzer goes off on your receiver circuit.

MATERIALS
- drawer or secret compartment
- mounting board

1 REMIX

ADJUST YOUR INVENTION. Switch the light sensor's mode to **LIGHT** and turn the **SENSITIVITY DIAL ALL THE WAY CLOCKWISE**. Any hint of light will now trigger an alarm!

SHARE
CUSTOMIZE: This wireless alarm can be installed anywhere that's dark, so why not an entire room? **EXPERIMENT WITH DIFFERENT SPACES** and light sensor sensitivities. Know when someone walks into a room and turns on a light.

2

SET UP YOUR ALARM.

TEST YOUR CIRCUIT
Opening the drawer should set off your buzzer, even if your receiver circuit is on the opposite end of your house. Busted!
TROUBLESHOOTING PG 20

SHARE AT LITTLEBITS.CC/GGKIT

INVENTION 05

MISCHIEF MACHINE

TIME 20 min

LEVEL ●●●○○

CREATE AN INVENTION TO MAKE YOUR PARENTS SHRIEK, EEK! A pair of wireless Bits™ and a servo help you pull this prank on unsuspecting friends and family while you watch it all go down. Wirelessly control the mechanical arm to rustle whatever you put it into – is it a mouse or a monster? Who knows! Just hope they don't prank you back.

battery & cable (×2) · p1 power (×2) · i5 slide dimmer · w22 wireless transmitter · w21 wireless reciever

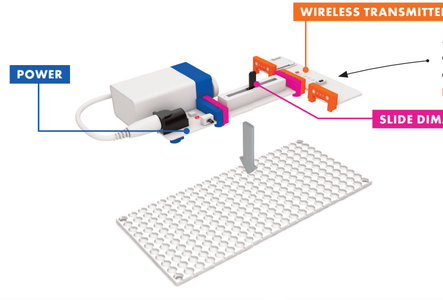
o11 servo & hub · mechanical arm · servo mount · Glue Dots® · screws (×4) · a9 mounting board (×2)

non-metallic bag/container* · Phillips-head screwdriver* · *from around the house

PRO TIP
Use a chip bag with a non-metallic finish. Metallic finishes may interfere with wireless signals, derailing your prank.

1 CREATE

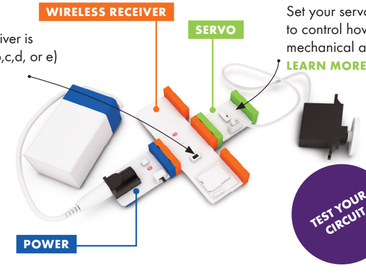
You're going to build two circuits that talk to each other wirelessly. First build your **WIRELESS TRANSMITTER CIRCUIT**, which will work as your remote controller, sending its signal to the mechanical arm. Then press it onto a mounting board.



Make sure the wireless receiver is on the **SAME CHANNEL** (a,b,c,d, or e) as your transmitter.
PAIRING TIP PG 20

2

Build the second circuit. This will be the **WIRELESS RECEIVER CIRCUIT** that will rustle your bag.



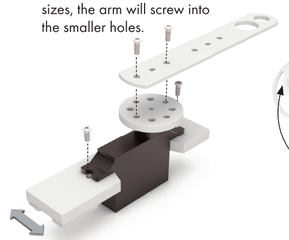
Set your servo to **TURN** mode to control how and when your mechanical arm moves.
LEARN MORE PG 21

Turn on the power for both your circuits and move the slide dimmer to see how it wirelessly controls the servo.
TROUBLESHOOTING PG 20

3

BUILD YOUR PRANK ARM. On the receiver circuit, assemble the servo mount, hub, and mechanical arm using a Phillips-head screwdriver.

The servo hub has two hole sizes, the arm will screw into the smaller holes.



4

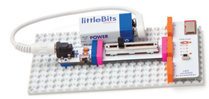
PRESS YOUR RECEIVER CIRCUIT ONTO A MOUNTING BOARD.

Use Glue Dots to stick the batteries onto the mounting board.

5 PLAY

HIDE THE ENTIRE RECEIVER CIRCUIT INSIDE A CHIP BAG and place it wherever your unsuspecting victim will find it. Quickly slide the dimmer back and forth when you're ready to scare the daylights out of them!

SHARE
CUSTOMIZE: WHERE ELSE CAN YOU HIDE THE MISCHIEF MACHINE? Could you stick it in a drawer or under your brother's bed?
LITTLEBITS.CC/GGKIT & THE APP



SHARE
COMMUNITY CHALLENGE: HOW LOUD CAN YOU MAKE SOMEONE SCREAM? TAKE A VIDEO of your personalized prank and share it on the community page!

REMIX

GOLF-O-MAT

You can use your Mischief Machine for all kinds of fun – **NOT JUST PRANKS!** We found it's great for playing mini golf. Build your golf course using some colored paper and a paper cup. Can you cook up any other ways to use your mechanical arm?

MATERIALS
- ball from caster
- bottle cap
- paper cup

NICE TO HAVE
- colored paper
- toothpick (flag)

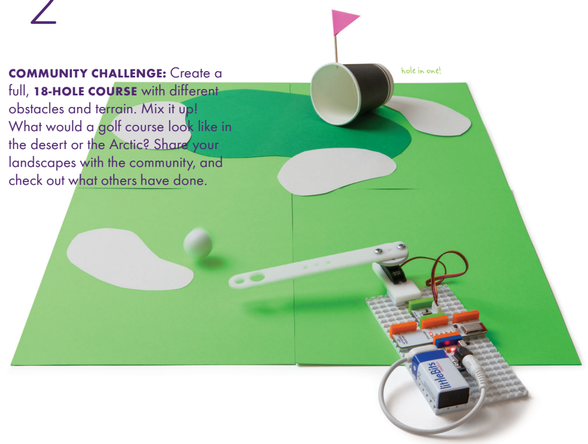
1 REMIX

Remove the ball from the ball caster. This is now your golf ball!

2

PLAY GOLF! Line up your new golf putter and swing away wirelessly.

SHARE
COMMUNITY CHALLENGE: Create a full, **18-HOLE COURSE** with different obstacles and terrain. Mix it up! What would a golf course look like in the desert or the Arctic? Share your landscapes with the community, and check out what others have done.



SHARE AT LITTLEBITS.CC/GGKIT

INVENTION 06

BUBBLEBOT

Using household objects and a few of our favorite Bits™, you can create **BIG, BEAUTIFUL BUBBLES AS IF BY MAGIC.** Dip the bubble tube in bubble mix and slowly move the slide dimmer to watch your bubbles come to life. Control how quickly the bubble grows by keeping an eye on the bargraph – it tells you how much power you're sending to the fan.

TIME 30 MIN

LEVEL

PRO TIP

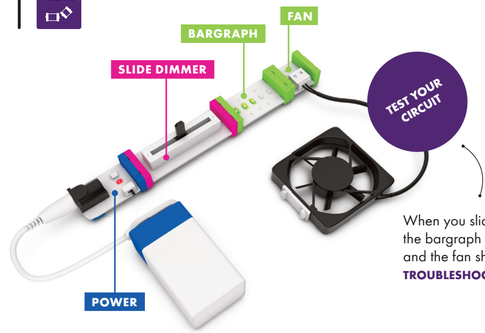
Adding a few drops of glycerine (available at most drug stores) to the solution will make your bubbles even bigger.

PRO TIP

To keep the bubbles from popping too quickly, try slowing down the fan with the slide dimmer or pulsing the fan on and off.

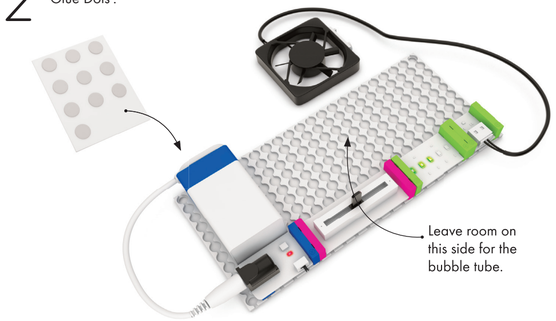
bigger, bigger, bigger!

1 CREATE **BUILD YOUR BUBBLEBOT CIRCUIT.**



When you slide the dimmer, the bargraph should light up and the fan should spin.
TROUBLESHOOTING PG 20

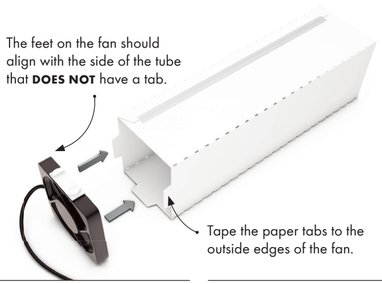
2 **PRESS YOUR CIRCUIT ONTO THE MOUNTING BOARD.** Stick the battery on using Glue Dots®.



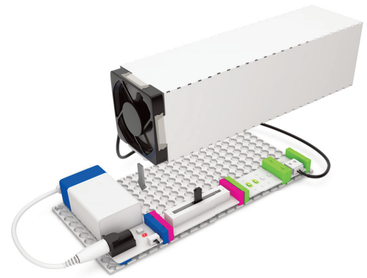
3 **BUILD THE BUBBLE TUBE.** Decorate template B before you fold it. Fold template B to form a rectangular tube and tape along the tab.

4 Place the fan against the end of the bubble tube that has the three paper tabs. Make sure you position the fan so it's blowing air **INTO** the tube.

The feet on the fan should align with the side of the tube that **DOES NOT** have a tab.



5 **FLIP YOUR FAN AND TUBE OVER AND PRESS THE FEET ONTO THE MOUNTING BOARD.** Taping the tube to the mounting board will also help keep it in place.



6 PLAY **LET'S BLOW SOME BUBBLES!** Pour bubble solution into a small plate or bowl. With the fan completely off, dip the tip of the bubble tube into the bubble solution. Lift the tube out of the solution, then slowly use the slide dimmer to turn the fan on and start blowing bubbles.

Cutting fringes along the edge of the bubble tube allows the tube to hold more bubble solution, which will help you blow bigger bubbles!

PRO TIP

SHARE **COMMUNITY CHALLENGE: TRY OTHER MATERIALS.** Give your Bubblebot some personality. Swap your paper tube for containers around the house to make your invention more interesting, and sustainable! Can it be a hot air balloon, or a bubble-blowing barnyard animal? Decorate the container to transform your bot!
LITTLEBITS.CC/GGKIT & THE APP

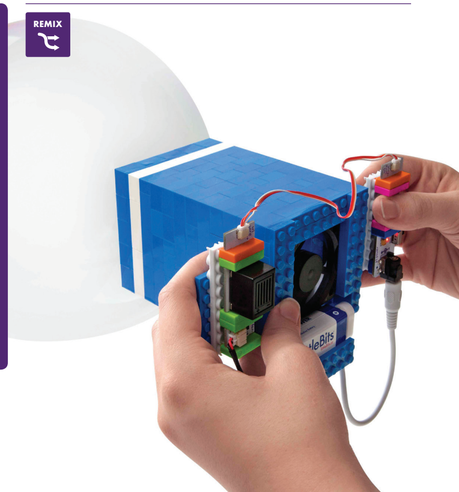
ONLINE REMIX

BUBBLE CHARMER

Can you charm your bubbles out of their bot with a single tune? You're about to swap a few Bits™ to **TURN YOUR BUBBLEBOT INTO AN EXOTIC, BUBBLE-CHARMING FLUTE.** First, add a buzzer so your Bubblebot will make noise when you turn it on. Next, swap the slide dimmer for a light sensor. Finally, if you have any LEGO®, this would be a great chance to use your brick adapters. Play the instrument by holding it with the fan facing your feet and placing your finger over the light sensor.

FULL INSTRUCTIONS ONLINE AT LITTLEBITS.CC/GGKIT

REMIX



INVENTION 07

BUMPERBALL

INVENT A GAME THAT PUTS A NEW SPIN ON AN OLD ARCADE FAVORITE: the pinball machine. Use the slide dimmer to catapult the ball and watch it bounce and bump all over the box like it's out of control!

TIME 60 MIN

LEVEL

battery & cable

p1 power

i5 slide dimmer

o11 servo & hub

mechanical arm

a7 adhesive shoes (×3)

screws (×2)

ball caster

Glue Dots®

templates C1, C2 & C3

Gizmos & Gadgets box (or other)

stickers

screwdriver*

tape*

decorating materials*

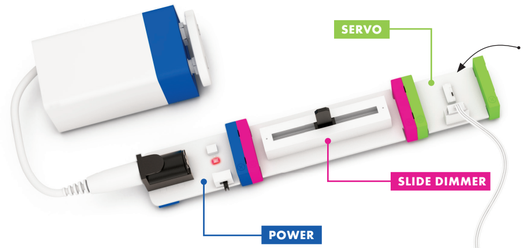
*from around the house

SHARE

ADD STICKERS AND DECORATE with markers to create a theme for your Bumperball game. **LITTLEBITS.CC/GGKIT & THE APP**

1 CREATE

BUILD YOUR CIRCUIT. This will be the controller you hit the ball with. Sliding the dimmer will make the mechanical arm turn.



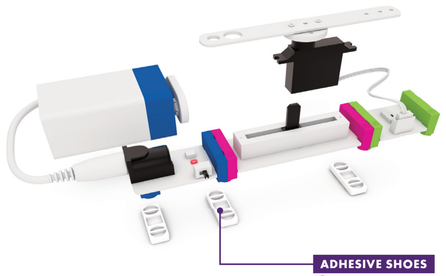
Put servo on **TURN** mode.
LEARN MORE PG 21

2 Use a Phillips-head screwdriver (not the small purple one) to add the **MECHANICAL ARM TO THE SERVO HUB.** The servo mount has two hole sizes. The screws will fit into the smaller holes.

PRO TIP

To align the mechanical arm just right, power on your circuit, move the slider on the dimmer to the middle position, and then attach the arm parallel to the servo's body, as shown in the image. You may have to remove the servo hub and put it back on so it's oriented with the small holes as shown.
TROUBLESHOOTING PG 20

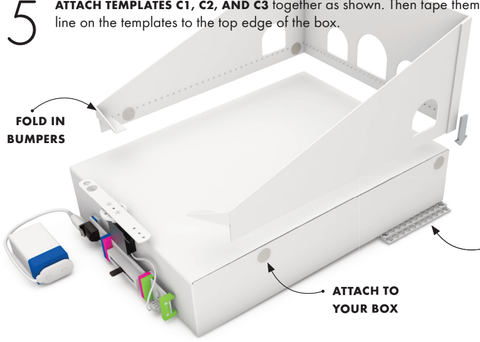
3 Press **ADHESIVE SHOES** onto your circuit.



4 **PLACE THE CIRCUIT ON YOUR BOX** by peeling the red adhesive off the shoes and sticking to the side. (Note: Adhesive shoes are one-time use only.)

Turn power on and slide the dimmer back and forth to see how the arm swings!
TROUBLESHOOTING PG 20

5 **ATTACH TEMPLATES C1, C2, AND C3** together as shown. Then tape them around the border of the Kit box. Align the dotted line on the templates to the top edge of the box.



SHARE

CUSTOMIZE: Use thumbtacks, rubber bands, and everyday objects **TO CREATE OBSTACLES.** You can use a book, magazine, or a mounting board **TO ADD LIFT.**

6 PLAY

START BUMPING YOUR BALL! Drop the ball in one of the holes on the side and use the slide dimmer to turn the arm and hit the ball.

SHARE

COMMUNITY CHALLENGE: ASK YOUR PARENTS to recall their favorite pinball machine from childhood. Find it online and decorate your Bumperball game to look like it. Generations collide!

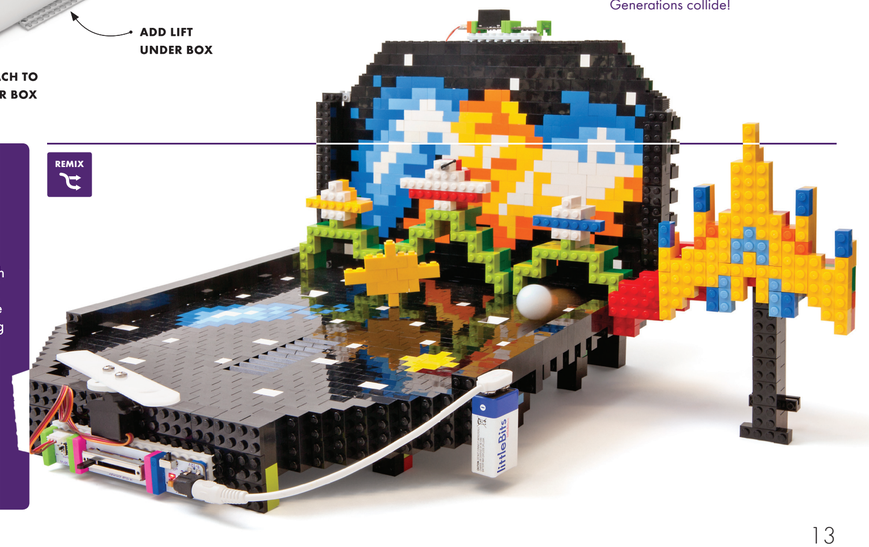
ONLINE REMIX

NOISY SCOREBOARD

Add some bells & whistles to your Bumperball game. With a few extra Bits™ and a LEGO® "ball catch," a buzzer will sound with victory every time you score a point. If you are feeling adventurous, you could even remix the whole thing in LEGO!

FULL INSTRUCTIONS ONLINE AT LITTLEBITS.CC/GGKIT

REMIX



INVENTION 08

BITBOT

ROAM YOUR WORLD WIRELESSLY! This remote-controlled bot will do your bidding, thanks to a pair of wireless Bits™ and a few DC motors. Use this versatile vehicle to prank your pets, set up a snack delivery system for Mom, or turn your room into a race track! What sort of adventures will your Bitbot go on?

TIME 40 MIN

LEVEL

battery and cable (×2)

p1 power (×2)

i5 slide dimmer (×2)

w1 wire

w22 wireless transmitter

w21 wireless receiver

w19 split

o25 DC motor (×2)

a9 mounting board (×2)

ball caster

wheels (×2)

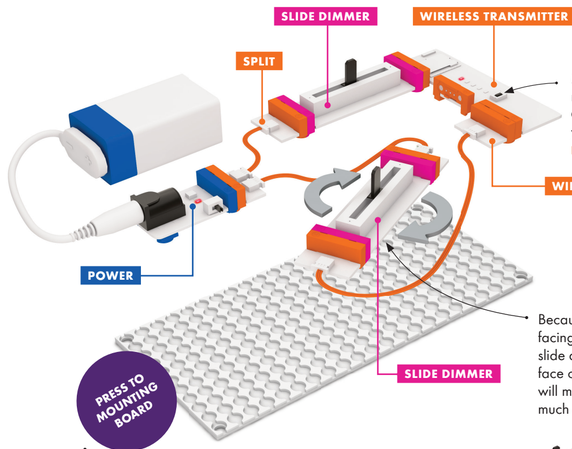
Glue Dots®

template D

SHARE **COMMUNITY CHALLENGE:** Take your new bot for a spin in a place that doesn't exist yet! **DESIGN A NEW CITY OR PLANET** to roll around in. **LITTLEBITS.CC/GGKIT & THE APP**

SHARE **CUSTOMIZE: GIVE YOUR BOT SOME CHARACTER!** Is it a creature, a race car, or a roaming genie lamp? Use the provided stickers and your own decorating materials to add some personality. Be sure to share your designs and check out what the community has done.

1 **CREATE** First build your **WIRELESS TRANSMITTER CIRCUIT**, then press onto mounting board. This will work as your remote controller, sending its signal to the Bitbot.

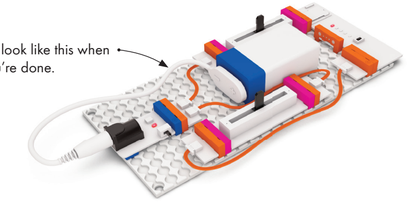


Make sure the wireless receiver is on the **SAME CHANNEL** (a,b,c,d, or e) as your transmitter.
PAIRING TIP PG 20

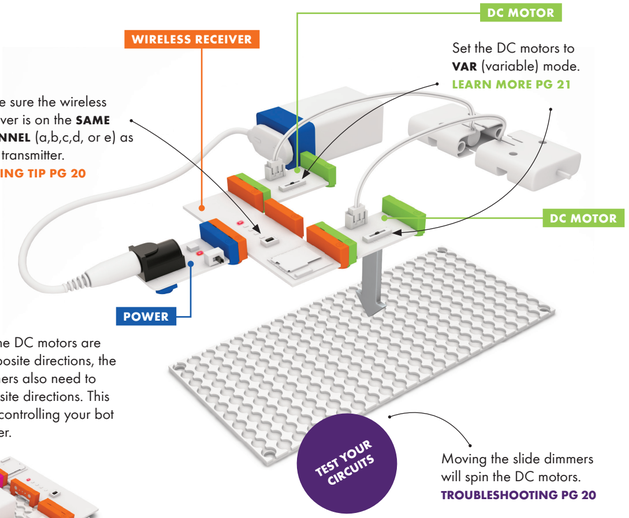
Because the DC motors are facing opposite directions, the slide dimmers also need to face opposite directions. This will make controlling your bot much easier.

Use Glue Dots to stick the battery to the board.
MOUNTING BOARD TIPS ON PG 21

It'll look like this when you're done.



2 Build the second circuit. This will be the heart of your **BITBOT**. After the circuit is made, press it onto a mounting board.



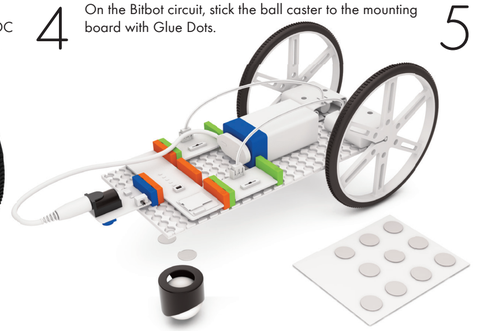
Set the DC motors to **VAR** (variable) mode.
LEARN MORE PG 21

Moving the slide dimmers will spin the DC motors.
TROUBLESHOOTING PG 20

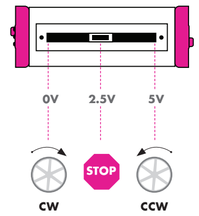
3 Turn off your circuits and **ATTACH WHEELS TO THE DC MOTORS.** Ensure that the flat edge on the shaft of the DC motor aligns with the flat edge of the hole in the wheel.

Match the **FLAT EDGE** on the motor shaft with the flat edge of the hole in the wheel.

4 On the Bitbot circuit, stick the ball caster to the mounting board with Glue Dots.



5 **PLAY** **CONTROLLING YOUR BITBOT.** The middle position of the slide dimmers (~2.5V) will stop the wheels. Pushing both slide dimmers in the same direction will move it forwards or backwards. Take it for a spin!



SHARE **CUSTOMIZE:** Attach the bot template to the mounting board using tape or Glue Dots.

ONLINE REMIX

DRAWBOT

WHAT ELSE CAN YOU DO WITH THIS ROAMING ROVER? Add a few Bits™ & accessories to your bot to create robotic art masterpieces. Draw a portrait, write your name, or even make some expressive abstract paintings when you add a mecanical arm to your Bitbot. The arm automatically swings side to side while you drive the bot around with the controller.

FULL INSTRUCTIONS ONLINE AT LITTLEBITS.CC/GGKIT

REMIX

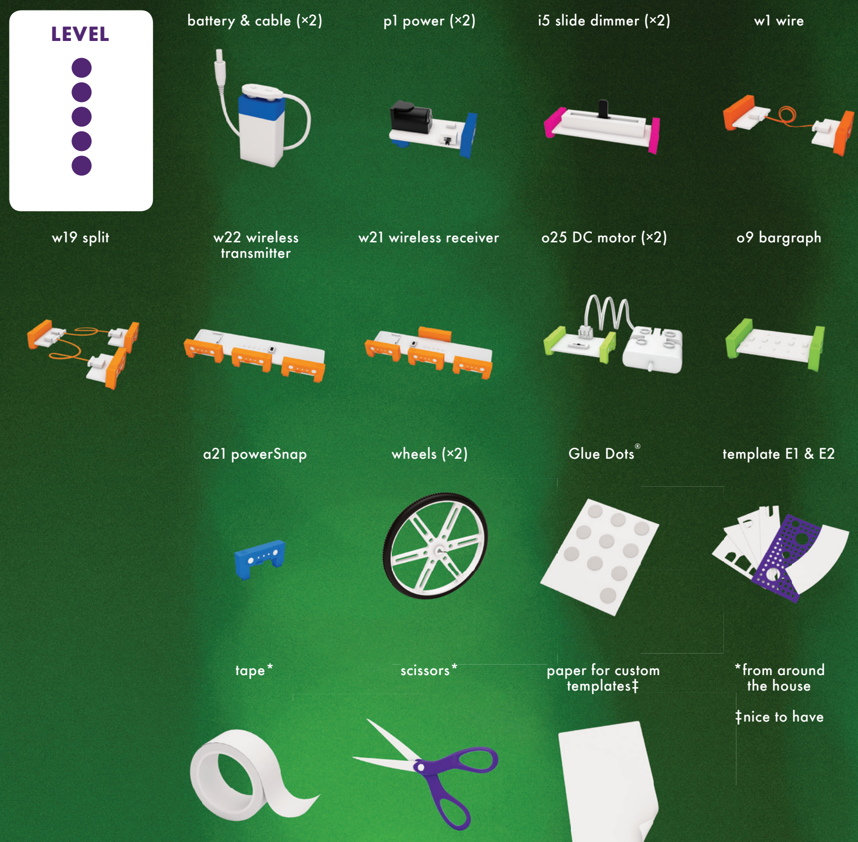
INVENTION 09

ROTOLAMP

WHEN THE LIGHTS GO AWAY, THE WALL CREATURES COME OUT TO PLAY! Create your own light patterns that dance in the dark with this rotating light projector. How creative can you get? Can you build a constellation that rotates as though it were above you in the sky? Personalize your creation and control its speed and direction wirelessly.

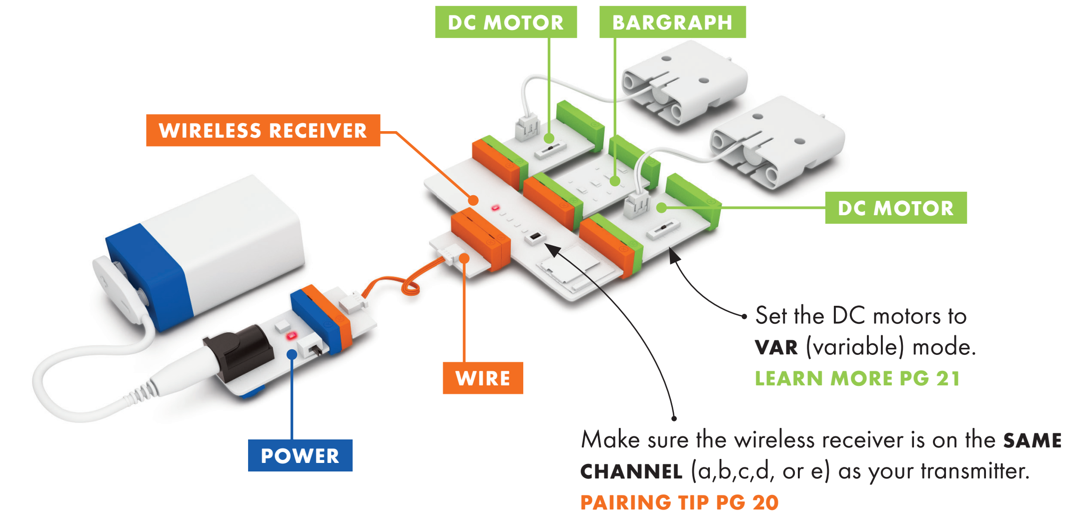
TIME 30 MIN

LEVEL ●●●●●



SHARE **COMMUNITY CHALLENGE:** Light can set the mood, but it can also tell a story. Decorate your Rotolamp to help you recreate a scene from your favorite book or movie.
LITTLEBITS.CC/GGKIT & THE APP

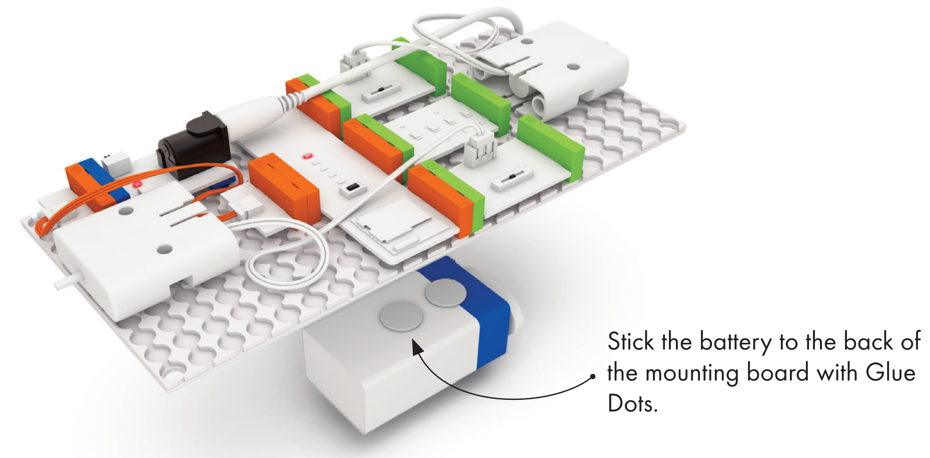
1 CREATE You're going to build two circuits that communicate with each other wirelessly. First build the **ROTOLAMP CIRCUIT.**



Set the DC motors to **VAR** (variable) mode.
LEARN MORE PG 21

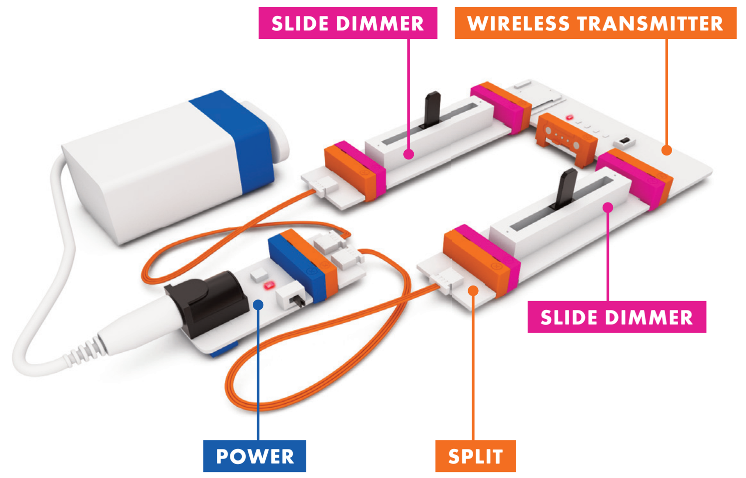
Make sure the wireless receiver is on the **SAME CHANNEL** (a,b,c,d, or e) as your transmitter.
PAIRING TIP PG 20

2 Now, **PRESS THE CIRCUIT ONTO THE MOUNTING BOARD.** Make sure the mounted circuit looks just like the image below so everything fits nicely for the final build.



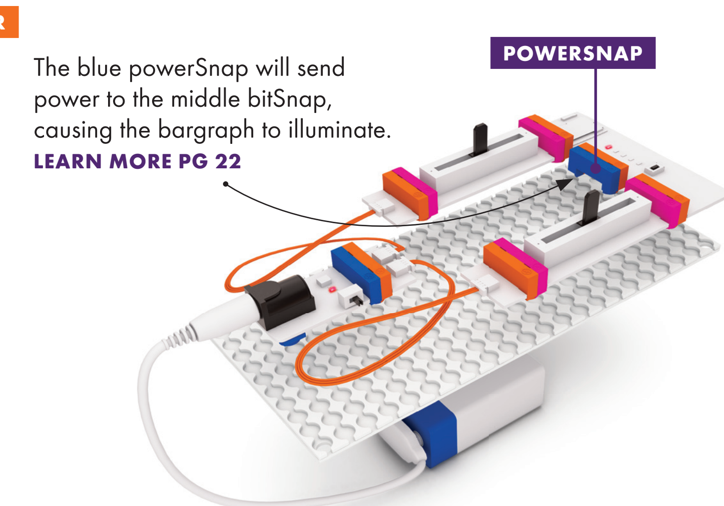
Stick the battery to the back of the mounting board with Glue Dots.

3 Start building the **TRANSMITTER CIRCUIT.**

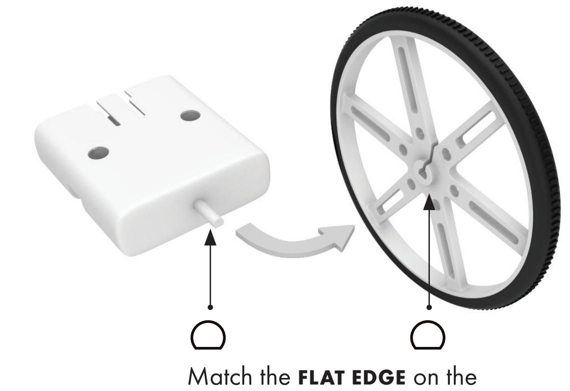


4 Finish the **TRANSMITTER CIRCUIT** by adding a **POWER-SNAP** to the middle bitSnap on the transmitter circuit. Then, press onto a mounting board.

The blue powerSnap will send power to the middle bitSnap, causing the bargraph to illuminate.
LEARN MORE PG 22



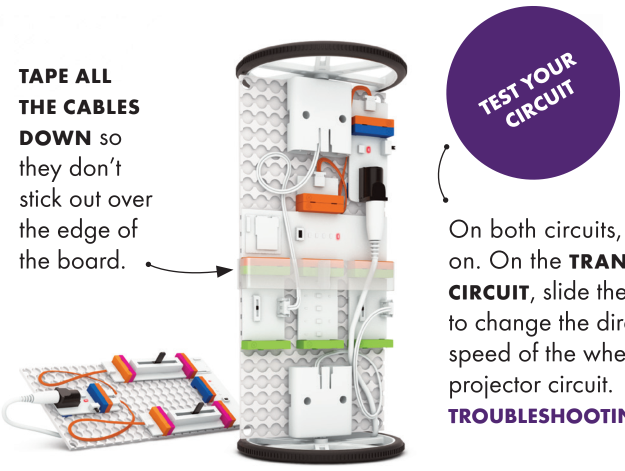
5 **TURN OFF THE PROJECTOR CIRCUIT AND ADD WHEELS TO THE DC MOTORS.** The wheels will help you spin your projector and provide the structure for the projector to stand on.



Match the **FLAT EDGE** on the motor shaft with the flat edge of the hole in the wheel.

6 Tape all cables down so they don't stick out over the edge of the board. Stand the Rotolamp up with one wheel as the base. Use the transmitter circuit to spin the projector!

TAPE ALL THE CABLES DOWN so they don't stick out over the edge of the board.

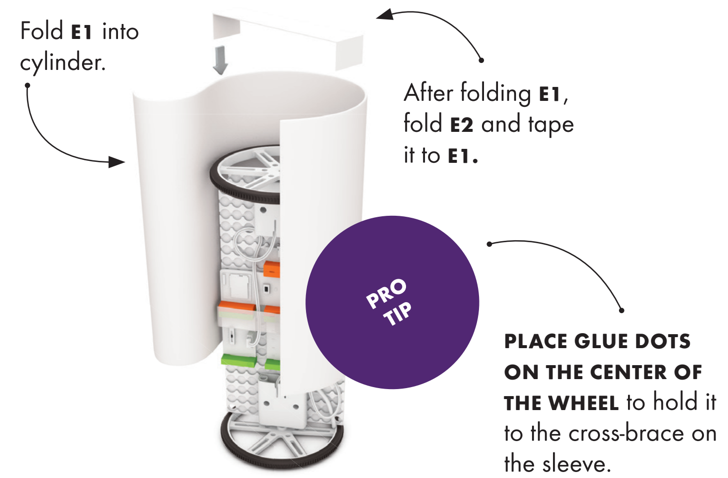


TEST YOUR CIRCUIT

On both circuits, turn power on. On the **TRANSMITTER-CIRCUIT**, slide the dimmers to change the direction and speed of the wheels on your projector circuit.
TROUBLESHOOTING PG 20

7 Build the **ROTOLAMP SLEEVE** from templates E1 and E2 and place it on top of the Rotolamp circuit. Make sure to turn off your Rotolamp circuit while building the sleeve.

Fold **E1** into cylinder.



After folding **E1**, fold **E2** and tape it to **E1.**

PRO TIP

PLACE GLUE DOTS ON THE CENTER OF THE WHEEL to hold it to the cross-brace on the sleeve.

8 PLAY **PLACE YOUR ROTOLAMP IN A DARK ROOM** near a wall. On both circuits, turn power on and watch your invention illuminate the walls.

SHARE **CUSTOMIZE:** Create your own pattern on a piece of 8-½" by 11" or A4 paper.

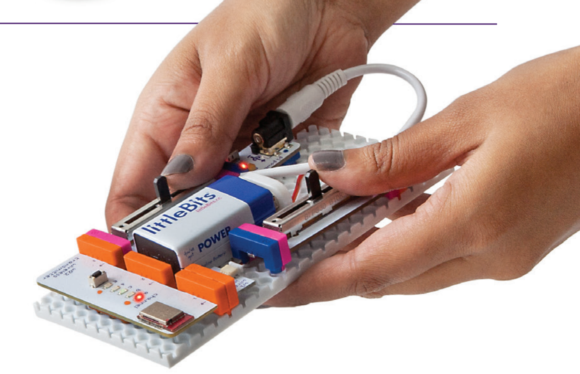
ONLINE REMIX

SPIN ROLLER

WITH A LITTLE CIRCUIT MANIPULATION, you can turn your projector into a rolling vehicle. In general, the form of your project will stay the same, but the function will be totally different!

FULL INSTRUCTIONS ONLINE AT LITTLEBITS.CC/GGKIT

REMIX



INVENTION 10

SPY BOX

YOU'VE BEEN PROMOTED TO TOP-SECRET SPY! Your mission, should you choose to accept it, is to organize a hand-off with a surprising and dramatic reveal. When your fellow spy picks up the trigger, your secret spy box will open, allowing your partner to get at the stashed goods. This is made possible with wireless Bits™ and a servo that pushes a secret door open.

TIME 60 MIN

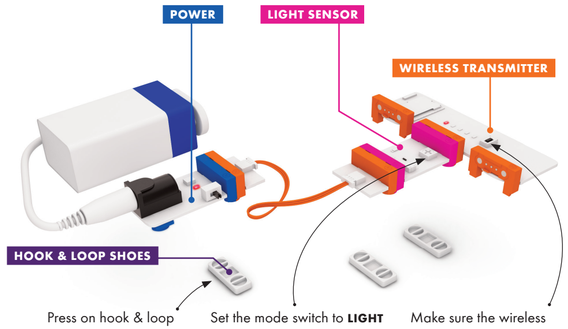
LEVEL

We disguised our transmitter to look like a book.

Lift the special book and the secret box will open!

1 CREATE

First build your **WIRELESS TRANSMITTER CIRCUIT**, which will work as your remote controller, sending its signal to the receiver in the box.



Press on hook & loop shoes to keep your circuit together.

Set the mode switch to **LIGHT** and turn the sensitivity dial **ALL THE WAY CLOCKWISE** using your purple screwdriver.
LEARN MORE PG 20

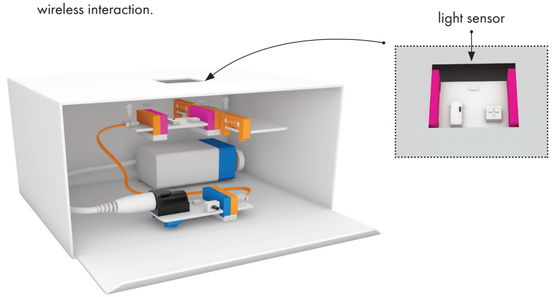
Make sure the wireless receiver is on the **SAME CHANNEL** (a,b,c,d, or e) as your transmitter.
PAIRING TIP PG 20

SHARE

COMMUNITY CHALLENGE: Your next mission is to **MAKE YOUR OWN SPY MOVIE.** Devise a secret mission and ask your parents to film as you act it out. Invite all your friends to the premier!
LITTLEBITS.CC/GGKIT & THE APP

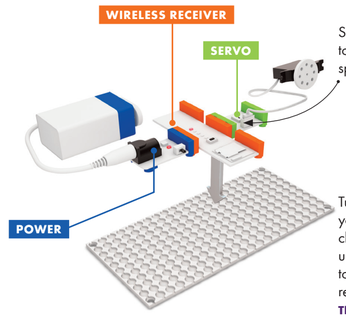
2

BUILD A TRIGGER BOX and place your transmitter circuit within it. Cut out a small hole, and use Glue Dots to stick the light sensor and wireless transmitter to the side with the hole. The light sensor should be facing out of the hole. Exposing the light sensor will activate the wireless interaction.



3

Build the **RECEIVER CIRCUIT.** Press it onto a mounting board.



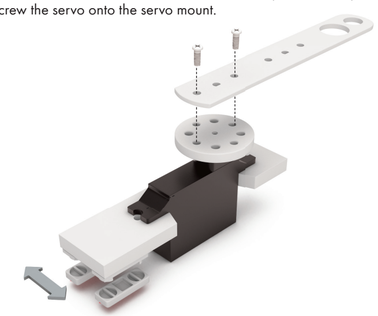
Set your servo to **TURN** mode to control the direction and speed of your arm.

TEST YOUR CIRCUIT

Turn both circuits on and set your wireless Bits™ to the same channel (a,b,c,d, or e). Cover up the hole on the trigger box to see the servo turn on the receiver circuit.
TROUBLESHOOTING PG 20

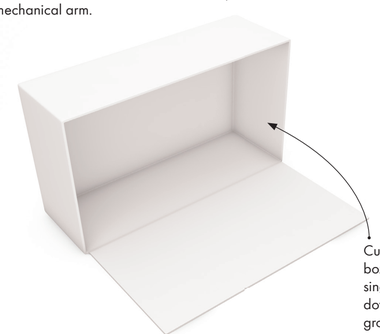
4

BUILD THE MECHANICAL ARM with the receiver and transmitter **ON**, and the hole of the trigger box **COVERED UP.** This will set the servo in the correct position for opening the Spy Box. **DO NOT** screw the servo onto the servo mount.



5

BUILD YOUR SPY BOX. You can use any kind of box that's at least as long as the mechanical arm.



Cut the entire side of the box so that it opens as a single flap. It should swing down so it lies flat on the ground when open.

6

Use Glue Dots and adhesive shoes to **ATTACH THE SERVO TO THE TOP OF THE INSIDE OF THE BOX** so that the mechanical arm pushes against the top of the flap when triggered. Stick the mounting board to the back of the box using more Glue Dots. (Note: Adhesive shoes are one-time use only.)

Tape two cardboard tabs to the top edge of the flap. The tabs will tuck into the box and hold the flap in place.

7 PLAY

Turn on the transmitter circuit, close up the trigger box, and set it down with the hole facing down. Turn on the secret compartment, stash your goods, and close it. When you're ready, **ASK YOUR FELLOW SPY TO PICK UP THE TRIGGER BOX.** This will wirelessly activate the secret compartment, revealing the hidden goods!

SHARE

CUSTOMIZE: Make your transmitter and compartment **LOOK LIKE EVERYDAY OBJECTS**. This way, only you and your confidants will know how to access the hidden goods.

ONLINE REMIX

MAGIC HAT

REMIX

GATHER YOUR AUDIENCE! Tell them that you have created a magic connection between your magic hat and magician's wand. Slowly lift your hat and amaze your audience as the wand slowly begins to rise into the air. By swapping a few Bits and adding some specialty props, you can turn your spy box into a magic trick fit for the stage!

FULL INSTRUCTIONS ONLINE AT LITTLEBITS.CC/GGKIT

BIT™ INDEX

p1 POWER

The power Bit lets you use a 9-volt battery to supply power to all the Bits that are connected. It also sends a 5-volt signal that controls what your other Bits do. Connect the battery and cable and flip the switch to turn it on. To make a simple circuit, connect the power Bit to any green output Bit (like the bargraph).

REAL WORLD ANALOGY
AC ADAPTER

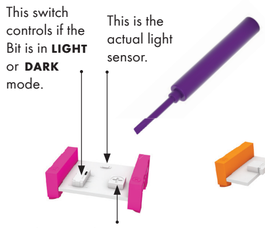
SEE IN
ALL THE PROJECTS!

i5 SLIDE DIMMER

You control the slide dimmer by moving its slider from one end of the Bit to the other. By doing this, you are changing the signal that runs through your circuit. It functions just like a light dimmer you might find at home, or a volume fader in a recording studio. Snap a bargraph Bit after it for some adjustable mood lighting.
The slide dimmer is an analog input, which means that as you adjust the position of the slider, you are changing the signal that runs through your circuit.

REAL WORLD ANALOGY
LIGHT SWITCH DIMMER

SEE IN
MEGABLASTER PG 6



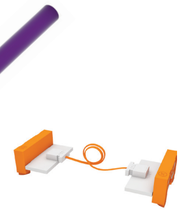
i13 LIGHT SENSOR

The light sensor measures how much light is shining on it. It has two modes: **LIGHT** and **DARK.** In **LIGHT** mode, the more light shines on the sensor, the more signal it lets through. In **DARK** mode, it's just the opposite – the signal increases as the environment gets darker. You can use the purple screwdriver to adjust the sensitivity of the sensor. Snap before a bargraph to see how it works! The light sensor is an analog input. This means the amount of signal sent to the Bits that follow it changes depending on how much light it senses.

REAL WORLD ANALOGY
STREET LIGHT SENSOR
NIGHT LIGHT SENSOR

SEE IN
WIRELESS DOORBELL
PG 8

PRO TIP In **DARK** mode, turn the sensitivity dial all the way clockwise using your purple screwdriver. This essentially turns your sensor into a button.

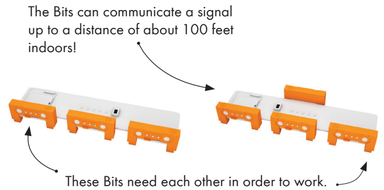


w1 WIRE

The wire does just what it sounds like – it allows you to put more space between your Bits. Try it whenever you need to break up your chain, like when you need to put a light at the top of a model building!

REAL WORLD ANALOGY
EXTENSION CORD

SEE IN
MEGABLASTER PG 6



w22 WIRELESS TRANSMITTER & w21 WIRELESS RECEIVER

Control your Bits remotely with the wireless transmitter and receiver. To do this, you'll need to make two separate circuits, one to transmit the signal and one to receive it. The three bitSnaps (labeled 1, 2, and 3) on both the transmitter and receiver correspond to each other. For example, if you send a signal through bitSnap 1 on the transmitter circuit, the output connected to bitSnap 1 on the receiver circuit will send out that same signal.

PAIRING TIP
SETTING UP WIRELESS

The five transmission channels allow for up to five transmitter/receiver pairs to be used in the same vicinity.

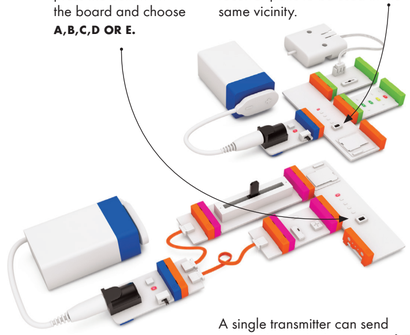
The wireless Bits are able to communicate on five different transmission channels, like a walkie talkie. Both the wireless transmitter and receiver need to be set to the same channel in order to talk to each other.

REAL WORLD ANALOGY
WALKIE TALKIES

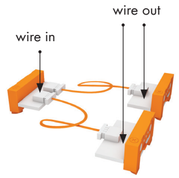
SEE IN
MISCHIEF MACHINE
PG 9

PRO TIP When playing with Bitbot or Rotolamp, we recommend that you turn the transmitter circuit on first and set the slide dimmers to the halfway position (2.5V). Since the motors on the receiver circuit are in **VAR** (variable) mode, they will stand still when you turn on the receiver circuit.

To change the channel, press the button on the board and choose **A,B,C,D OR E.**



A single transmitter can send its signal to multiple receivers on the same transmission channel. However, multiple transmitters can't send their signal to the same receiver.



w19 SPLIT

The split Bit sends a single signal to two other Bits. It's great for controlling two outputs with one input, like driving two motors with one light sensor. You can also use it like a wire Bit if you ignore one of the connections. Both **WIRE OUT** bitSnaps will output the same amount of signal voltage that they receive from the **WIRE IN** bitSnap.

REAL WORLD ANALOGY
POWER STRIP

SEE IN
BITBOT PG 14

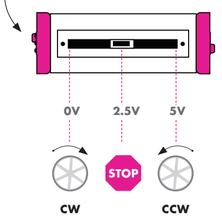
o25 DC MOTOR

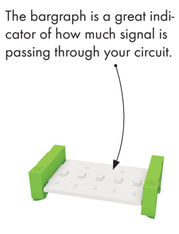
The DC (or "direct current") motor rotates a shaft when you send it a signal. The **CW/VAR/CCW** (clockwise, variable, and counter-clockwise) switch controls the direction it rotates. The tethered motor can be oriented in any direction and pressed onto littleBits mounting boards and shoes. For a more permanent mounting solution, you can use screws to secure the motor to a surface with the mounting holes. The mounting holes are also designed to fit with Actobotics™ parts.

REAL WORLD ANALOGY
REMOTE CONTROL CAR
FERRIS WHEEL

SEE IN
ROTOLAMP PG 16

When the DC motor is in **VAR** (variable) mode, the amount of signal voltage the motor receives from an analog input, like a slide dimmer, allows you to control the speed and direction (clockwise or counter-clockwise) of its motion.



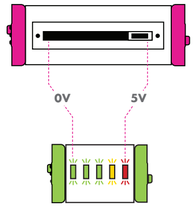


o9 BARGRAPH

The bargraph has five LEDs in different colors that light up to show you how much signal the Bit is receiving. Try it with a slide dimmer to make your own adjustable lamp.

REAL WORLD ANALOGY
MUSIC VISUALIZER

SEE IN
BUBBLEBOT PG 10



o6 BUZZER

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!

REAL WORLD ANALOGY
CAR HORN
DOORBELL

SEE IN
WIRELESS DOORBELL
PG 8

o13 FAN

The fan is just what you'd think: a small electric fan tethered to a Bit. Use our little fan to create fluttering movement in your creations or just to keep yourself cool. Feet attached to the fan allow you to secure it onto a mounting board or shoes.

REAL WORLD ANALOGY
HOUSEHOLD FAN
COMPUTER FAN

SEE IN
BUBBLEBOT PG 10

o11 SERVO & HUB

The servo is a controllable motor that can swing back and forth. It has two modes: in **TURN** mode, the input from other Bits determines the position of the arm. Try using a dimmer to set the angle you want. In **SWING** mode, the servo will move back and forth on its own – the input controls the speed. Attach a flag to make a signaling machine!

REAL WORLD ANALOGY
SPEEDOMETER

SEE IN
BUMPERBALL PG12

When used with a DC motor, this 3-3/16" (80mm) diameter wheel is perfect for making bots, vehicles, and spinning inventions alike.

The motorMate makes it easy to attach paper, cardboard, LEGO® axles, and lots of other materials to the DC motor. Simply slide the motorMate onto the shaft on the motor. The motorMate has two different sized slots: one fits most standard craft sticks and the other fits thicker papers like cardstock.

To use the mounting board always first snap together your littleBits circuit, then press the feet of your Bits into the holes of the mounting board. Press down on the bitSnaps – not the circuit board – when attaching your Bits to the mounting board. There are four holes in the corners so you can permanently mount your circuit to any surface.

TROUBLE-SHOOTING

MY CIRCUIT ISN'T WORKING
1) Make sure your power Bit is on. You should see a red LED illuminated on the board.
2) Try swapping in a new 9-volt battery. Low batteries can cause a circuit to behave erratically.
3) Make sure the power cable is securely fastened to both the battery as well as to the power Bit.
4) Make sure your Bits are arranged in the proper order. Remember that you always need a power Bit + power supply at the beginning of each circuit and an output Bit at the end. If the last Bit in your chain is an input, then it won't do anything to affect your circuit.
5) Check your connections. Make sure that all the Bits are securely snapped to each other. You can also try gently wiping down the ends of the bitSnaps with a soft cloth (like your sleeve) – sometimes dust gets in the way of a strong connection. While the circuit is still on, try unsnapping, cleaning the bitSnaps, and snapping it all back together again.

THE SENSITIVITY OF MY LIGHT SENSOR KEEPS CHANGING.
Are you moving your circuit around between different rooms and spaces? Light conditions can vary quite a bit depending on many different factors like the type of light you're working under, or the time of day (sun coming in from the windows comes in at different angles, depending on what time it is). If your light sensor is in a new environment (for example, if the sun went down), it can change how the circuit responds to the situation.

THE SENSOR IS NOT TURNING ALL THE WAY ON/OFF WHEN I COMPLETELY COVER UP THE SENSOR WITH MY FINGERTIP. THE SENSOR IS NOT REACTING TO CHANGES IN LIGHTNESS/DARKNESS.
1) Make sure you are covering the sensor component on the board.
2) If the ambient light is bright enough, the light may actually be traveling through your fingertip and hitting the light sensor - it's quite sensitive. You may need to move to an area with a little less light or try to shield your circuit from ambient light.

MY WIRELESS TRANSMITTER/RECEIVER DOESN'T SEEM TO BE DOING ANYTHING.
The transmitter and receiver only work as a pair. You will need to make two separate circuits, each with its own power supply.

MY WIRELESS PAIR ARE NOT COMMUNICATING/ACTING ERRATICALLY.
1) Make sure both circuits are switched on and that the batteries have enough power. A low battery in either the transmitter or receiver can make your circuits behave erratically.
2) Then, make sure both the transmitter and receiver are on the same channel. Also make sure no one else in the area is using the same channel as you.
3) Make sure your bitSnaps correlate. If you are using a slide dimmer on bitSnap 1 on the transmitter to control a bargraph on the receiver, the bargraph should be snapped to bitSnap 1 on the receiver.
4) Make sure your two circuits are in range of one another. Try moving closer to see if that helps. Sometimes obstacles (like walls and floors) can get in the way.

MY SERVO IS MOVING ERRATICALLY
1) Check your battery. Try swapping in a new one.
2) Check to make sure the servo's wire is connected to the board.
3) The servo motor can only take so much weight. If you have something attached to it, you might need to lighten the load.
4) If your servo is receiving a signal from a light sensor, changing light conditions may have an effect on your servo. Try placing the circuit in a more stable light environment, like away from a window.

HOW CAN I CHANGE THE POSITION OF MY MECHANICAL ARM?
Did you know that you can remove the servo hub from the servo motor? To do this, hold the black part of the servo motor and pull the hub away from it. It should pop off. Then you can rotate the position of the arm to your liking and press the hub back on. You may need to try this a few times to get it just right.

I TURNED OFF MY TRANSMITTER CIRCUIT IN BITBOT OR ROTOLAMP, BUT THE WHEELS ON MY RECEIVER CIRCUIT ARE STILL RUNNING.
This happens because your DC motors are set to **VAR** (variable) mode. When the wireless transmitter is off, the wireless receiver assumes that it is receiving a 0V signal. As seen above, in variable mode, a 0V signal causes the motor to rotate **CW** (clockwise) mode at full speed. If you don't want this to happen, just turn off the receiver circuit before you turn off the transmitter.

I'M HAVING TROUBLE ATTACHING THE WHEEL/MOTORMATE TO MY MOTOR.
Make sure that the flat side of the hole on the wheel/motorMate matches up with the flat side on the motor shaft.

BIT™ INDEX

SERVO HUB & ACCESSORIES

The servo hub lets you easily attach materials to your servo motor and add more complex movements to your littleBits projects.

The servo hub has two different sized mounting holes. When used with the included #6 screws, the larger holes are through holes and the smaller holes are self-tapping.

The servo hub can be removed by gently pulling it off the servo motor. This is helpful if you need to reorient how the holes are positioned for a project.

Your servo also comes with a few extra black attachments to help you in your inventions. These parts are interchangeable with the servo hub.

For a more permanent connection, secure the hub/arm attachments to the servo with the tiny screw found in the extra servo accessories.

To attach the servo mount, gently press the servo motor in from the side, then secure the servo motor to the mount with two #6 screws and a Phillips-head screwdriver.

MECHANICAL ARM

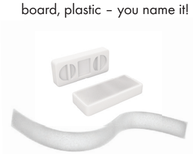
The mechanical arm can be used with both the servo and DC motor to expand the mechanical capabilities of your projects.

SERVO MOUNT

With the servo mount, you can secure the tethered servo motor to a mounting board or any surface using littleBits shoes.

a7 ADHESIVE SHOES

These shoes have a sticky backing. Simply snap together your littleBits circuit, press the feet of your Bits into the holes of the shoes, remove the red adhesive backing, and place the circuit on any surface – paper, cardboard, plastic – you name it!



a6 HOOK & LOOP SHOES

These shoes have a VELCRO®-like backing. Simply snap together your littleBits circuit, press the feet of your Bits into the holes of the shoes, and then place the circuit on the provided **HOOK & LOOP STRIP.** Cut the strip to the size you need before peeling off the backing, and stick to any surface.

a8 BRICK ADAPTERS

The brick adapter enables you to easily attach Bits to LEGO® bricks. Each pack comes with brick adapter studs and sockets. With brick adapter studs, your Bits will defy gravity! Simply attach the adapter underneath your bricks and press the feet of your Bits into place. With brick adapter sockets, you can mount your Bits on top of LEGO bricks. Simply attach the adapter to your bricks, and press the feet of your Bits into place.

a21 POWERSNAP

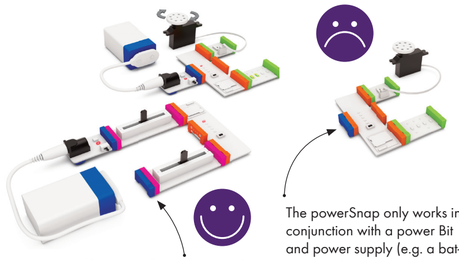
Every littleBits circuit needs power and every Bit receives power through its input bitSnap. For Bits with multiple inputs, like the wireless transmitter, using a split will only send power to two of the wireless transmitter's input bitSnaps. The third input bitSnap is left hanging – this is where the powerSnap comes in. Adding a powerSnap to that third input bitSnap is an easy way to supply power to the hanging input without the need for extra forks, splits, or power supplies. The powerSnap basically takes the power from the power supply pin of the circuit (often referred to as VCC) and reroutes it to the input bitSnap's signal pin.

Note that powerSnaps are not currently compatible with 2-input logic Bits.

BALL CASTER

The ball caster works as a wheel, and can be attached to a surface using Glue Dots® or small screws (not included). The white ball can also be removed from the socket to be used as a ball.

EXAMPLE CIRCUIT
POWERSNAP USAGE



This powerSnap re-routes the power coming from the power Bit, so the circuit only needs one power Bit.

The powerSnap only works in conjunction with a power Bit and power supply (e.g. a battery), and is not a replacement for them. You should only use a powerSnap with Bits that have multiple input bitSnaps, like the wireless transmitter.

THE LITTLEBITS INVENTION CYCLE

CREATE

Put something together. It doesn't matter if you build it from instructions or make something from your imagination. Your first creation may not be perfect, and it might even fail, but the truth is that failure is actually pretty helpful. When something doesn't work, you get a chance to learn why, and fix it.

PLAY

Use it! Playing with what you created is a lot of fun, but it's also an important part of being an inventor. Playing is a kind of test run, a chance to see how well your creation works and look for ways you can make it better.

REMIX

Start experimenting. Try adding new Bits, swapping parts with other inventions, or taking all the pieces apart and putting them together in a different way. Remixing is a great way to improve what you've created or discover new ways to use it.

SHARE

Inspire others by showing the world what you've created. Get inspired by exploring what other people have shared. Try creating, playing with, and remixing their inventions to see what new and wonderful things you can create. This is how the community grows and awesome new inventions enter the world.

FAVORITE MATERIALS + USEFUL TOOLS

EVERY MAKER LIKES TO HAVE SOME GOOD MATERIALS AND TOOLS ON HAND. Here are some of our favorites. If you're going to be making a lot of projects, you might want to collect some of these things ahead of time and keep them in a tool box or bin. Less time searching the house for tools means more time inventing cool stuff!

CARDBOARD Even the fanciest littleBits projects usually start out as cardboard models. Shipping boxes are a good source of rigid corrugated cardboard – cereal boxes are the perfect source for thinner, more flexible stuff.

GLUE DOTS® Half-way between glue and tape, these double-sided sticky dots are easy to apply, don't need to dry, and have serious sticking power.

EMPTY CONTAINERS (PAPER CUPS, MILK JUGS, WATER BOTTLES) We go through our recycling bins all the time looking for cool shapes and materials to work with (pro tip: wash before using!).

CONSTRUCTION TOYS These are a great way to build quick structures for littleBits projects (check out the Bumperball remix we did with LEGO® for an example).

SCISSORS
STRING
CONSTRUCTION PAPER
CAMERA
PHILIPS-HEAD SCREWDRIVER
TAPE
RULER
SKETCHBOOK
PENCILS, PENS & MARKERS

GET CONNECTED

LITTLEBITS COMMUNITY ON THE GO

INTEGRATED COMMUNITY & DESIGN CHALLENGES

FIND NEW PROJECTS, GET INSPIRED

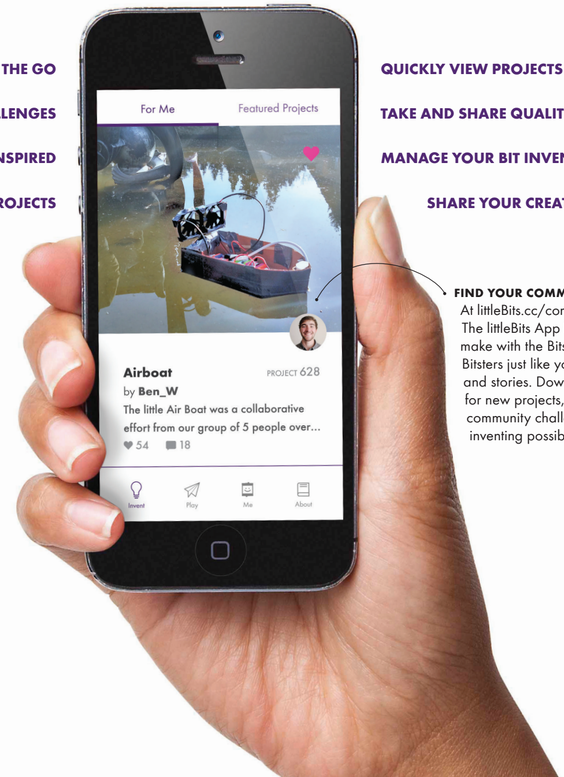
STEP-BY-STEP INSTRUCTIONS FOR PROJECTS

QUICKLY VIEW PROJECTS YOU HAVE LIKED

TAKE AND SHARE QUALITY PHOTOS OF YOUR PROJECTS

MANAGE YOUR BIT INVENTORY AND BUILD YOUR LIBRARY

SHARE YOUR CREATIONS ONLINE



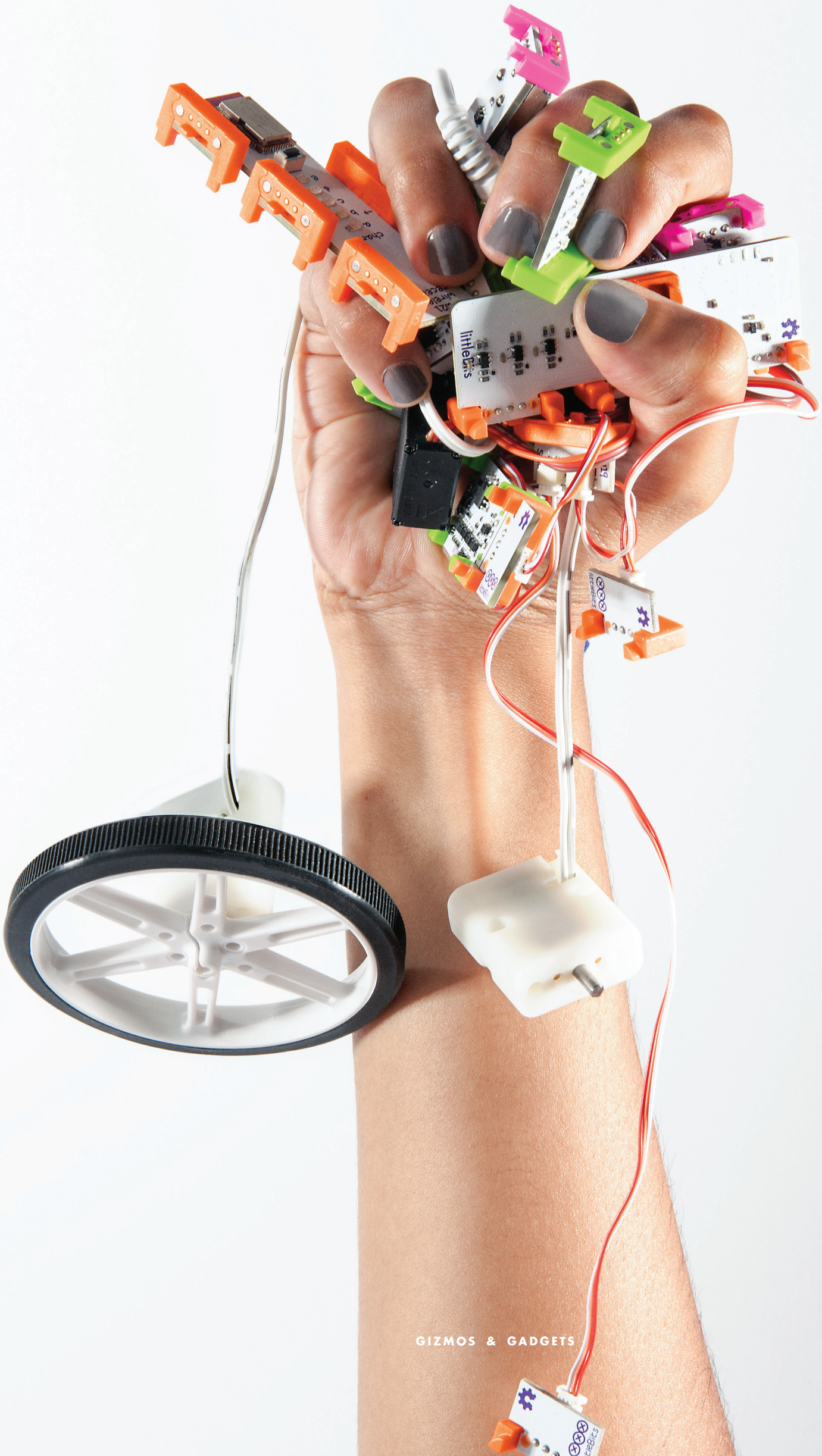
YOU ARE NOW PART OF A GLOBAL COMMUNITY OF INVENTORS. You bring ambitious ideas to life, and use failure as an opportunity to make your inventions better. Your inventions tell stories, about you and the world around you. You are a lifelong learner. Most of all, you empower like-minded inventors to keep creating inventions of every size and shape. Discover your community online at littleBits.cc/community, or right in the palm of your hand.

IN THE COMMUNITY YOU'LL FIND
- An engaged community of new friends.
- Hundreds of projects to browse and search – with more added everyday!
- Global Chapters – join a chapter and attend workshops in your city.

FIND YOUR COMMUNITY ONLINE.
At littleBits.cc/community, or right in the palm of your hand. The littleBits App features hundreds of inventions you can make with the Bits you own. Plus, you get to see what other Bitsters just like you create, and share your own creations and stories. Download the littleBits App to get inspiration for new projects, step-by-step instructions for inventions, community challenges and to discover a world of infinite inventing possibilities.

...AND MORE!

littleBits™



GIZMOS & GADGETS