

## Getting to Know Your Electronics Inventor Kit

### What's Inside?

Every Circuit Scribe Maker Kit comes with the pieces you need to take your doodles from art to electric.



**Circuit Scribe Pen** Filled with non-toxic conductive ink, the Circuit Scribe Pen draws electrical connections.



Magnetic Modules Snap these onto your circuits to power up your doodles. Different modules do different things like light up, buzz, spin and more. (Some modules sold separately.)

You Also Need: Paper & Your Imagination



**Steel Canvas** The magnetic Steel Canvas creates a strong connection between the ink and your Magnetic Modules.



**Circuit Stencil** Helps create perfectly sized and spaced landing pads.





Snap your Magnetic Modules onto the round pads. Don't forget the power module!

## A Few Simple Projects to Get You Started:

### THE BASICS DRAW A CIRCUIT

### What to Do:

Step 1. Use the Circuit Stencil to draw landing pads for your power module and landing pads for the red-blue LED module.



Step 2. Draw a connection between each set of landing pads. Something like this: Or this:



Step 3. Place the power module (with the battery connected) on one set of landing pads. Place the light module on the other set of landing pads.



Step 4. Switch on the power module and watch your art light up!

## **Troubleshooting Tips and Tricks**

### Why Won't My Doodle Power On?

### Check your circuits.

- Are they thick enough? Lines at least the thickness of a penny work best. Like this:
- Was your circuit left open? A break in your drawn circuit will keep the charge from reaching your Magnetic Modules.



#### Check your Magnetic Module placement.

- Use the Circuit Stencil to draw your landing pads at the end of your drawn circuits. This makes it easier to snap your modules onto the right spot.
- Make sure your module pads are placed on top of the round landing pads. Pads should be filled in completely.
- Check your power module. If it's working,
- the blue LED will light up.
- Is the module switched on?
- Is the battery dead?
- Is the connecter wire locked firmly onto the battery?

# **EXPERIMENT CLOSE A CIRCUIT GAP**

### You'll Also Need:

Some Household Objects (Paper Clip, Pencil, Pipe Cleaner, Fabric, Bottle Cap, Rubber Band, Key, Aluminum Foil, Magnet, Your Finger, Hair Clip, etc.)

### What to Do:

- Step 1. Use the Circuit Stencil to draw landing pads for your power and red-blue LED modules.
- Step 2. Draw two more landing pads midway between one set of module landing pads. This will be your circuit gap.
- Step 3. Draw a connection between the landing pads of the closed circuit. Then draw connections to the landing pads of the circuit gap.



Step 4. Snap your modules to the landing pads and switch on the power.

Step 5. Place your different household items on the landing pads of the gap circuit. See what happens to the light as you close the circuit with a paperclip, a finger, etc.



Are you working on a magnetic surface?

Modules and your drawn circuit.

• You must use a magnetic surface to create

Kit includes Steel Canvas, you can use a

to make awesome refrigerator art.

a strong connection between the Magnetic

cookie sheet, steel table top, or a refrigerator







You'll Also Need: More Paper or Cardstock, Tape & Scissors

### What to Do:

parallel rectangles.

- your shape.

## My Pen Isn't Working

### Is the silver settling?

- If the silver is settling at the tip: shake towards the back then shake towards the tip, Store tip up until the silver spreads out. Store on the side.
- If the ink splits in half one side silver, one side clear: Shake the pen before using. Lay pen on its side until the silver spreads out.

### Is it leaking?

- This doesn't happen a lot, but if it does, wipe the outside of your pen with a damp paper towel. Make sure to wash your hands with soap and water afterward. You can still use your pen, but watch out for future leaks.
- To prevent future leaking, store the pen on its side.
- If your pen is leaking when you open your kit, let us know and we'll replace it for you.















Switch on the power module and watch your art come to life.

## GET CREATIVE MAKE A PAPER PUSH BUTTON

Step 1. Follow steps 1-4 of the "Close a Circuit Gap" project, shown previously. Instead of round landing pads on the circuit gap, draw two



Step 2. Use the scissors to cut a fun shape out of the paper or cardstock (we chose a cloud). Using the Circuit Scribe, Pen draw a filled-in oval on the back side of

Step 3. Roll up two pieces of tape and place them on either side of the oval You now have your paper button



Step 4. Tape the paper button onto the circuit over the rectangular landing pads. Press down to light up your doodle.



Is it clogged?

- Tap your pen on the edge of a table
- (or other hard surface).
- Wipe tip with damp cloth.

Is the tip dried out?

- Scribble with the Circuit Scribe Pen (just like you would any other roller pen).
- If that doesn't work, draw on a damp paper towel until the ink flows again.