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An Invention Kit for Everyone

Ever played Mario on Play-Doh or Piano on Bananas?
Alligator clip the Internet to Your World.

ORDER NOW



In stock! Ships immediately!

Reviews

"four-year-old daughter has managed to connect the kit"

~BBC

"Rejoice!" ~Mashable

"by far the coolest Kickstarter project" ~Kotaku

"turns the whole world into a keyboard" ~Engadget

"a lot of enthusiasm and love" ~Wired

"crazy, inventive experiments" ~PC World

"We love a good diy project" ~Lifehacker

"So small, so quirky, so simple, so awesome." ~Contiki

"Mind explosion in progress." ~Indie Cookie

"turns your alphabet soup into a keyboard" ~New Scientist

"Edison meets OK Go" ~Cool Material

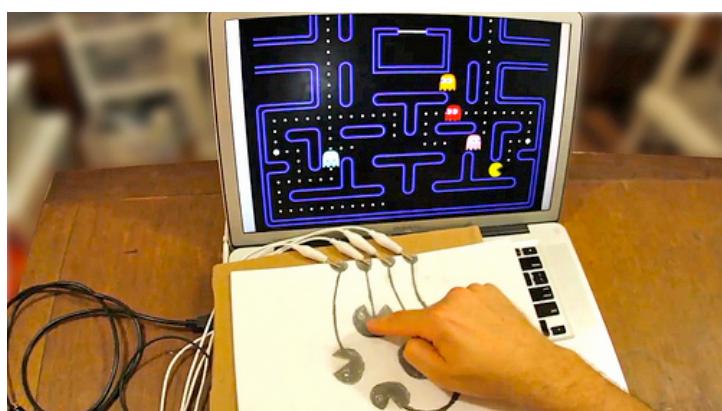
What Can I Make?

That's up to you! First, load up a computer program or any webpage.



Let's say you load up a piano. Then, instead of using the computer keyboard buttons to play the piano, you can hook up the MaKey MaKey to something fun, like bananas, and the **bananas become your piano keys**

Or let's say you Google for an online Pacman game and draw a joystick with a pencil:

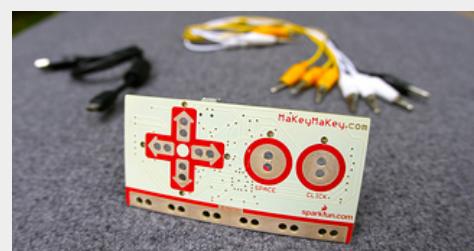


Then you can play Pacman by touching the drawing.

Or you could load up facebook or gmail and send a message on a custom-made alphabet-soup keyboard:

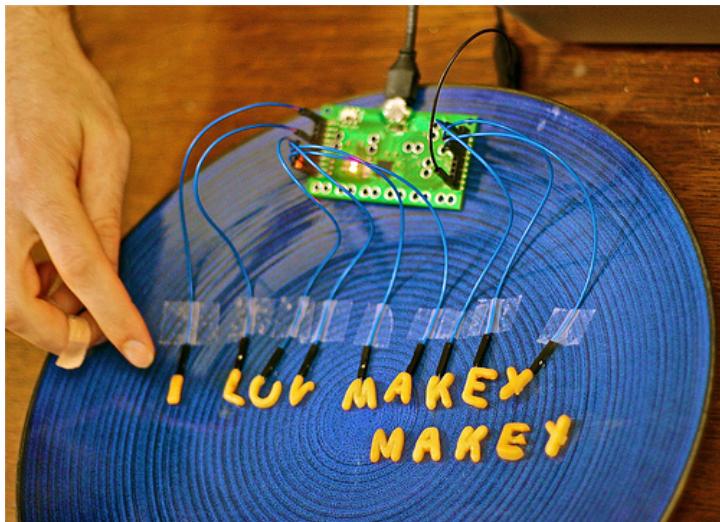
Email

[Sign up!](#)



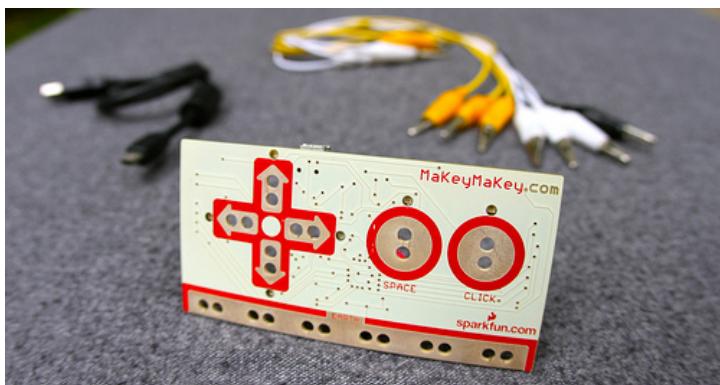
Order Your Kit

Includes MaKey MaKey, Red USB Cable, 7 Alligator Clips, 6 Connector Wires



What's MaKey MaKey?

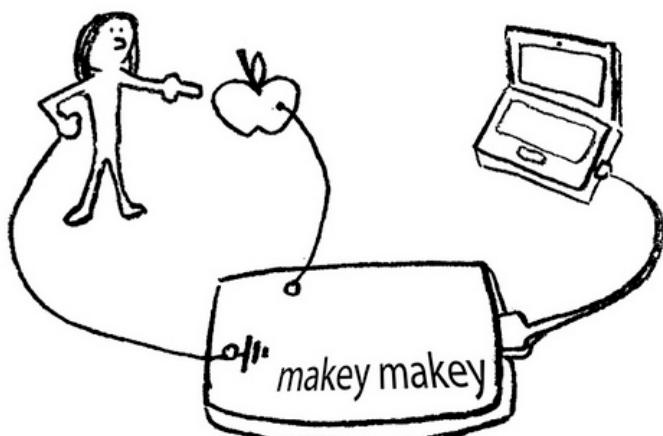
MaKey MaKey is **an invention kit for the 21st century**. Turn everyday objects into touchpads and combine them with the internet. It's a **simple Invention Kit for Beginners and Experts** doing art, engineering, and everything inbetween:



The kit will include everything you see above: MaKey MaKey, Alligator Clips, USB Cable.

How Does it Work?

Alligator Clip two objects to the MaKey MaKey board. For example, you and an apple.



When you touch the apple, you make a connection, and MaKey MaKey sends

Who's Behind This?

Jay Silver and Eric Rosenbaum are final-year PhD students at the MIT Media Lab. They have both been working with invention kits for the last decade. They are the people who brought you Drawdio and Singing Fingers, and they are on the Scratch programming language team in the Lifelong Kindergarten group at MIT. The kit is based on research at [MIT Media Lab](#), and the circuit was designed in collaboration with [Sparkfun](#). The original funding was [Kickstarted](#).

ERIC'S BIO



[Eric Rosenbaum](#) is a doctoral student in the

Lifelong Kindergarten group, where he creates new technologies at the intersection of music, improvisation, play and learning. His projects include software for finger painting with sound, painting with light, improvising with looping sounds, and creating interactive behaviors in 3D virtual worlds. His recent speaking appearances have included TEDx Pioneer Valley, Economist Tech Frontiers, and Dust or Magic App Camp. His work has been shown at venues including San Francisco Exploratorium, the Smithsonian National Museum of American History, San Jose Tech Museum, and the OFFFmatica and CineKid festivals.

Eric holds a Bachelor's degree in Psychology and a Master's degree in Technology in Education from Harvard University. He also holds a Master's degree in Media Arts and Sciences from MIT Media Lab, for which he developed Jots, a system to support reflective learning in the Scratch programming environment.

[See Eric's Portfolio](#)

JAY'S BIO



[Jay Silver](#) is a PhD student at MIT Media Lab where he won a Lemelson-MIT Award for Invention and Innovation. He works for Intel Labs "Interaction Experience Research" group as a Maker Research Scientist. Time named one of his inventions "Top 15 Toys for Young Geniuses." Jay has given talks at TEDx Sacramento, TEDx Santa Cruz, and TEDx Amherst. He has exhibited internationally at the National Taiwan Museum of Fine Arts, Exploratorium, Ars Electronica, etc. He also runs digital prototyping workshops for many companies such as IDEO, LEGO, and Intel.

the computer a keyboard message. The computer just thinks MaKey MaKey

is a regular keyboard (or mouse). Therefore it works with all programs and webpages, because all programs and webpages take keyboard and mouse input.

Make + Key = MaKey MaKey!

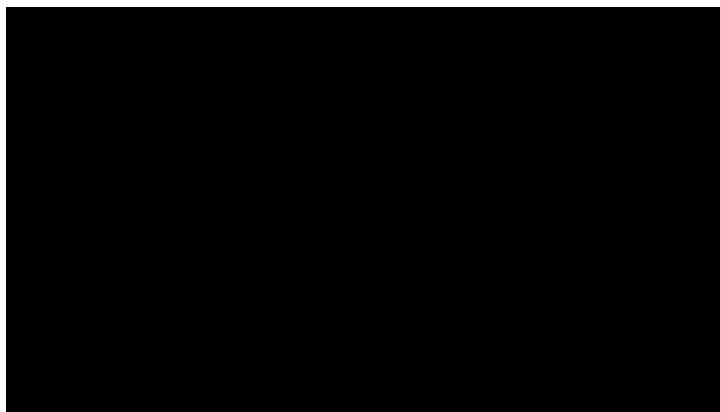
Who is MaKey MaKey For?

Artists, Kids, Educators, Engineers, Designers, Inventors, Makers... Really it is for everyone. Here is a photo of some 8-year-olds using MaKey MaKey in a Maker Space:



She invented a "knife-and-log" interface for cutting virtual wood in an online game.

We ran a workshop in February 2012 with some professors and grad students who specialize in interaction design. One grad student made this beachball game controller:



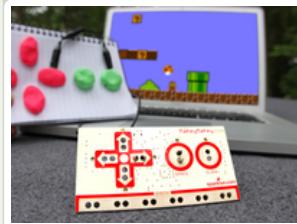
Another grad student made this working pressure sensitive switch by layering Play-Doh under a spring:



Jay studied electrical engineering at Georgia Tech where he was named Engineer of the Year. He was awarded a Gates Scholarship to earn a master's in Internet Technology from Cambridge University. He also holds a master's in Media Arts and Sciences from MIT Media Lab where he invented "Camera for the Invisible."

[See Jay's Portfolio](#)

Kickstarted



MaKey MaKey: An Invention Kit for Everyone

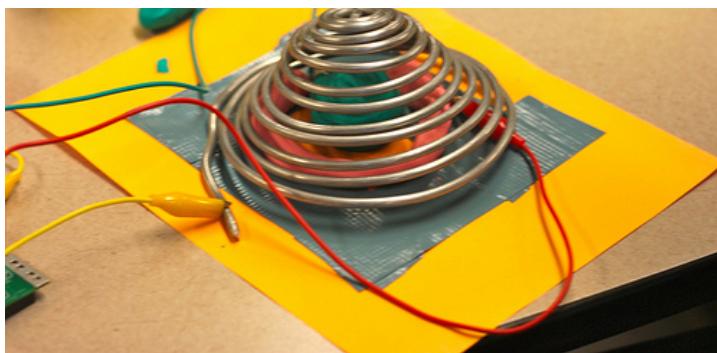
by Jay Silver

Ever played Mario on Play-Doh or Piano on Bananas? Alligator clip the internet to your world and start inventing the future.

Santa Cruz, CA

SUCCESSFUL!

2,272% \$568,106 FUNDED
FUNDLED PLEDGED JUN 12, 2012



The workshop took place at Queen's University during a conference.

With MaKey MaKey, kids can start inventing right away, and experts can make working prototypes in minutes instead of days.

What materials work with MaKey MaKey?

Any material that can conduct at least a tiny bit of electricity will work. Here are some materials people have used in our workshops including Ketchup, Pencil Graphite, Finger Paint, Lemons, etc.:



Other materials that work great: Plants, Coins, Your Grandma, Silverware, Anything that is Wet, Most Foods, Cats and Dogs, Aluminum Foil, Rain, and hundreds more...

Why Are You Creating MaKey MaKey?

We believe that **everyone is creative, inventive, and imaginative**. We believe that everyone can create the future and change the world. So we have dedicated our lives to making easy-to-use invention kits. We believe that the whole world is a construction kit, if we choose to see it that way.

We are inspired by the Maker Movement. We want to help people start to think of themselves as Makers and agents of change. When you have the "Maker's Mindset," you know you can change the world.

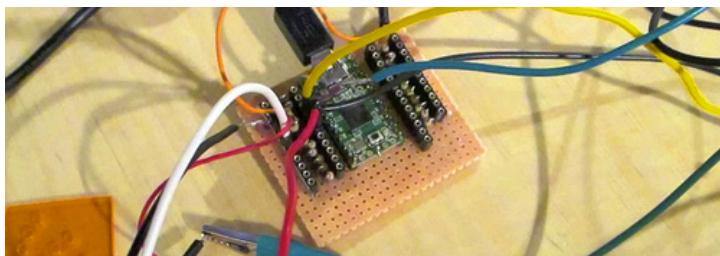
Before we created MaKey MaKey we worked on other creative tools and invention kits such as: [Drawdio](#), [Singing Fingers](#), and [Scratch](#).

From Prototype to Product

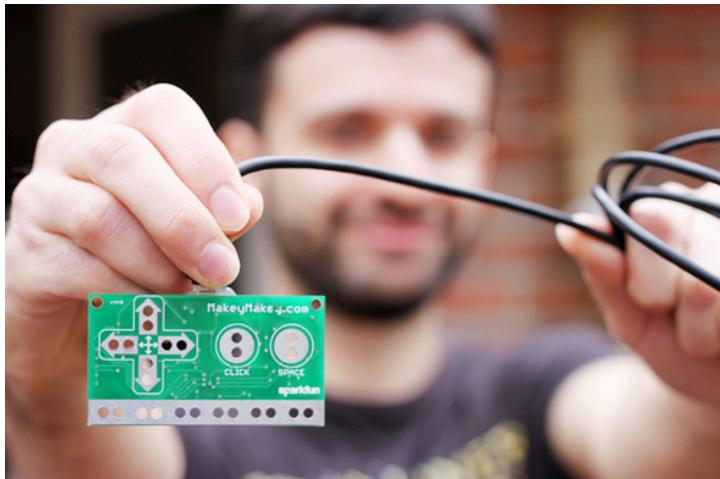
Everything in the video is real, running on either the first or the second prototype.

Two years ago, we created the first prototype for MaKey MaKey at the San

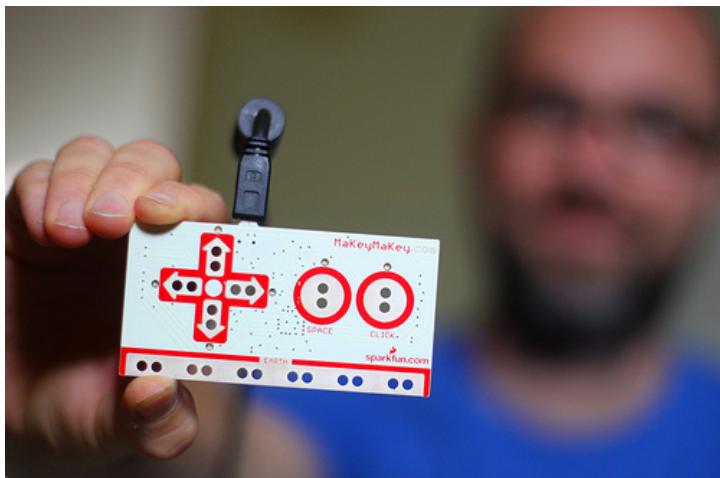
Francisco Exploratorium:



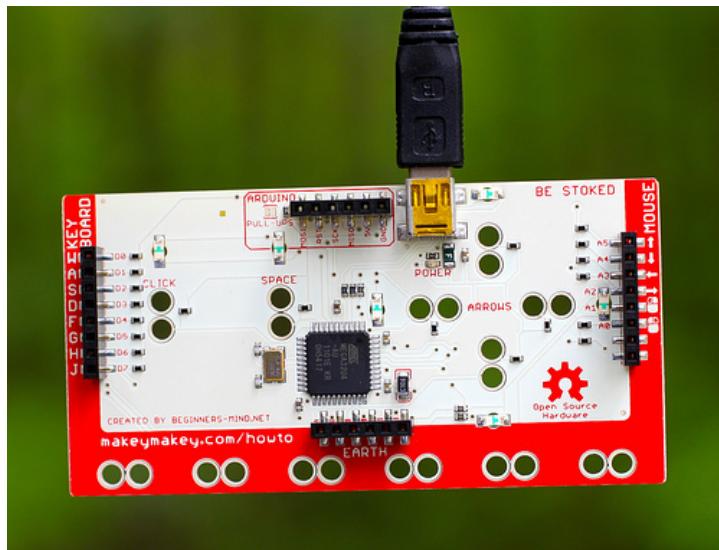
Then we built the second prototype from 2011 to 2012, which looks like this:



Our third prototype ended up being the final product, and looks like this:



What Does the Back of the Board Look Like?



The back of the board has hookups for 6 keyboard keys (although 8 are shown in this version), and mouse control. It also has the open hardware logo, a link for help getting started, and an area for using the board to control outputs.

Wait... Is this thing an Arduino?

No, but you can use it like one. MaKey MaKey runs on top of Arduino. But, you can start using your MaKey MaKey board in "Arduino mode" at any time. This would allow you to spin motors, turn on LEDs, or anything else that an Arduino can do. If you want to learn to use Arduino or other electronics, but want to start without any programming or breadboarding, MaKey MaKey is a good starting point. There's no need to understand Arduino in order to use MaKey MaKey. On the other hand if you just want an Arduino, why not get that instead?

Who Did You Work With?

You can see the complete list on our [about](#) page, but some of the biggest contributors were Mitch Resnick at MIT Media Lab, Jim Lindblom and Nathan Seidle at SparkFun Electronics, and Kickstarter.

Seriously, I Am a Geek, Tell Me All the Krazy Tech Stuff

MaKey MaKey is a printed circuit board with an ATmega32u4 microcontroller running Arduino Leonardo firmware. It uses the Human Interface Device (HID) protocol to communicate with your computer, and it can send keypresses, mouse clicks, and mouse movements. For sensing closed switches on the digital input pins, we use high resistance switching to make it so you can close a switch even through materials like your skin, leaves, and play-doh. We use a pull-up resistor of 22 mega ohms. This technique attracts noise on the input, so we use a moving window averager to lowpass the noise in software, saving money on hardware filtering. There are six inputs on the front of the board, which can be attached to via alligator clipping, soldering to the pads, or any other method you can think of. There are another 12 inputs on the back, 6 for keyboard keys, and 6 for mouse motion, which you can access with jumpers via the female headers, paper clips, or by alligator clipping creatively around the headers. If you wish to use a different set of keys, or otherwise change the behavior of your MaKey MaKey, you can simply reprogram it using the Arduino environment. By cutting a trace on the back of the board, you can disconnect the large pull-up resistors if you want

to, which would be necessary in a small minority of Arduino projects. Have more geeky questions? Post them in the [forums](#) and we'll answer them.



Contact: support@joylabz.com