



Adaptive Design's Morse Code for GBoard Hardware Interface Pack

PRODUCT ID: 3937

At the time of its invention Morse code definitively changed the way we communicate. Historically it's been used in nautical navigation to aviation to radio, but its easy to learn and the universal nature makes it a great data entry method for folks who use Assistive Technology!

GBoard is an alternate keyboard for Android devices that lets you type using Morse code. It then converts those dots and dashes into letters and numbers, letting someone control a tablet or phone with only two buttons. The Morse Code for GBoard Interface Starter Pack will help you build a simple input device for GBoard that doesn't require soldering or elaborate construction techniques.

The Circuit Playground is powered directly from the tablet or phone, so no extra power pack is required. Using Circuit Playground Express's alligator clip pads lets us avoid avoid soldering altogether and makes this a quick, easy project to build by anyone!

This pack includes everything you need:

- 1 x Circuit Playground Express
- 1 x USB OTG Cable - MicroB to A
- 1 x USB A to Micro Cable
- 1 x Small Alligator Clip Test Lead (set of 12)
- 2 x Micro Switches

Tania Finlayson, a developer, details the opportunities having a Morse system provided in her own life (<http://www.tandemmaster.org/background.html>). With her understanding of Morse, Tania has worked with her husband, Ken, and others to create the TandemMaster -- a Morse Code USB input device. Recently, in partnership with some friends at Google, Tania and Ken contributed to the development of the Morse Code GBoard.

We've got many ways you can build the GBoard project, check out our learn guide using CircuitPython which will show how to use switches or capacitive touch. You can also visit the official GitHub repository for easy instructions on how to create your own custom interface for entering Morse Code letters into Google's GBoard Morse Code virtual keyboard.

About Circuit Playground Express:

Circuit Playground Express is the next step towards a perfect introduction to electronics and programming. We've taken the original Circuit Playground Classic and made it even better! Not only did we pack even more sensors in, we also made it even easier to program.

The board is round and has alligator-clip pads around it, so you don't have to solder or sew to make it work. You can power it from USB, a AAA battery pack, or with a Lipoly battery (for advanced users). Circuit Playground Express has built-in USB-support. Built-in USB means you can plug it in to program and it just shows up, no special cable or adapter required. Just program your code into the board then take it on the go!

Here are some of the great goodies baked into each Circuit Playground Express:

- 10 x mini NeoPixels, each one can display any color
- 1 x Motion sensor (LIS3DH triple-axis accelerometer with tap detection, free-fall detection)
- 1 x Temperature sensor (thermistor)
- 1 x Light sensor (phototransistor). Can also act as a color sensor and pulse sensor.
- 1 x Sound sensor (MEMS microphone)
- 1 x Mini speaker with class D amplifier (7.5mm magnetic speaker/buzzer)
- 2 x Push buttons, labeled A and B
- 1 x Slide switch
- Infrared receiver and transmitter - can receive and transmit any remote control codes, as well as send messages between Circuit Playground Expresses. Can also act as a proximity sensor.

- 8 x alligator-clip friendly input/output pins
- Includes I2C, UART, 8 pins that can do analog inputs, multiple PWM output
- 7 pads can act as capacitive touch inputs and the 1 remaining is a true analog output
- Green "ON" LED so you know its powered
- Red "#13" LED for basic blinking
- Reset button
- ATSAM21 ARM Cortex M0 Processor, running at 3.3V and 48MHz
- 2 MB of SPI Flash storage, used primarily with CircuitPython to store code and libraries.
- MicroUSB port for programming and debugging
- USB port can act like serial port, keyboard, mouse, joystick or MIDI!

TECHNICAL DETAILS

- Circuit Playground outer diameter: ~50.6mm / ~2.0"
- Circuit Playground weight: 8.9g