

## Thank you for purchasing a PiiWee!

The PiiWee is a small circuit board made to be installed into an arcade stick. The PiiWee emulates a Classic Controller and is made to be connected to a Wii-mote, allowing you to use your arcade stick on any Nintendo Wii or Virtual Console game.

Before continuing, please take a moment to verify that all of the components needed for this kit are present:

- 1x PiiWee circuit board
- 1x 28 pin IC Socket (usually clipped in the board)
- 1x 28 pin Atmel microcontroller
- 1x 10k ohm resistor
- 1x 0.1 uF ceramic capacitor

You will also need a cord that can plug into a Wii-mote. These are sold separately, but can be scavenged from any controller made to plug into a Wii-mote, or by purchasing a cheap Wii extension cable like those offered by [monoprice.com](http://monoprice.com) and [dealextreme.com](http://dealextreme.com).

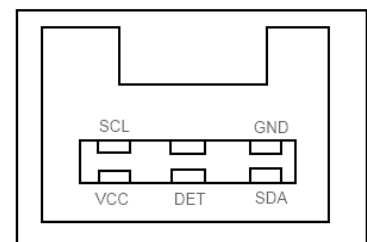
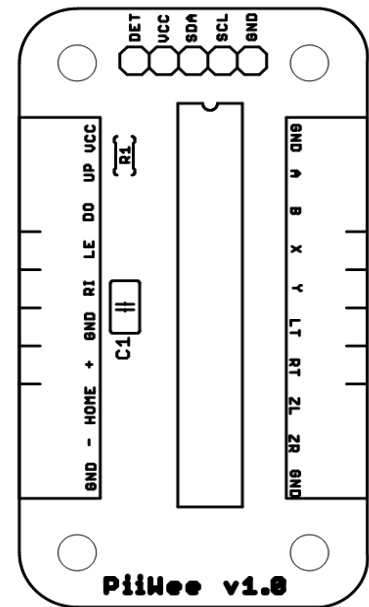
Optionally, you can also use 3.5mm pitch screw terminals to make the connection to your stick parts solderless and removable.

**Assembly:** Assembling the PiiWee is fairly straight forward. The IC socket has a notch in one end, while the silkscreen of the board underneath has a matching notch. Verify that the socket notch is on the same end as the silkscreen notch, and then solder the socket to the board. Bend the resistor legs and insert it in the spot marked R1. Insert the legs of the small capacitor and place it in the spot marked C1. Both the resistor and capacitor don't have any orientation, so don't worry about which way they go in, just that they go into their spots. Solder them in place, and clip the extra length of legs short. If you have screw terminals you wish to install, go ahead and solder them in place now.

**Cord:** The next step is to install the Wii accessory cord to the PiiWee. The cord will be soldered to four or five of the points on the end of the board, but first we need to identify which wire goes to which pin. Using a multimeter, you need to determine which wire goes to which pin on the end. Below is a list of colors and their pin for some known and tested cables, but it is highly recommended you test out the specific cable you'll be using. If you need some help using your multimeter to determine the pinout, please read the following Instructable:

<http://www.instructables.com/id/How-to-pin-out-a-console-cable-for-installation-on/>

The image on the right is what the Wii connector will look like on the cable if you are holding it in your hand. Use your multimeter to determine which wire goes to which pin, and solder that wire into the matching point on the PiiWee board. Some Wii cables have only a single wire that is connected to both the VCC and DET pins. When this happens, solder that wire to the pin marked VCC on the PiiWee. If you have additional wires other than the four or five needed for these pins, cut them short. Any shielding wire should be cut short and contained by wrapping in electrical tape.



**Known cable colors:** Use as a starting point ONLY. Always check your cables.

Source	VCC	GND	SCL	SDA	DET
Hori Wii Stick	Red*	White	Yellow	Green	Red*
Monoprice.com	Red*	White	Yellow	Green	Red*
DealExtreme	Black	Orange	Red	Blue	Green

\*One wire for both VCC and DET.

**Operation:** By default, the directions are reported to the Wii as movement of both the directional pad ('dpad') and the left analog stick. You have the option of selecting which (or both) to report the directions as, and this setting can be saved as the default by including the Home button when you power the PiiWee up. The easiest way to do this is to turn off the Wii, connect the PiiWee to the Wiimote, hold the three buttons down, and then turn on the Wii via the Wiimote power button with your other hand.

Stick Controls:	Buttons to hold to set for this play (when powering on)	Buttons to hold to set for this play and save for future play (when powering on)
Dpad and Left Analog	Plus and Minus	Plus, Minus, and Home
Dpad	Plus	Plus and Home
Left Analog	Minus	Minus and Home
Selectable with a LS/DP/RS switch	N/A. Automatic when LS or RS is used	N/A. Automatic when LS or RS is used

Note: Using these requires a dedicated Home button. If you do not have a dedicated Home button, use a wire to short Home to Ground, and select and save your choice, then remove the wire.

**Advanced Use:** If you wish to connect your PiiWee to use the 'LS/DP/RS' slide switch present on the MadCatz FightStick, connect the 'RSTICK' point to pin 14 of the PiiWee chip, and the 'LSTICK' point to pin 15 of the PiiWee chip. As soon as either 'LS' or 'RS' is selected on the slide switch, the PiiWee will see this and remember that they are connected and act accordingly. If the PiiWee is removed from the slide switch, set the default stick mode using the directions under 'Operation'.

The PiiWee is a common ground board, and can be used in an arcade stick alongside other common ground boards. However, this is a very advanced mod, and no support of any kind will be given to assist you with this. If you require any technical support of the PiiWee, it will only be given when in a stick by itself with no other electronics involved.

The PiiWee assumes you have a dedicated button for Home. Many sticks have only two control buttons for what would be the Plus and Minus buttons. If your stick doesn't include a dedicated button for Home, there are a few settings that can be enabled to help. By holding the X, Y, A, and B button (and no other!) down when powering on the PiiWee,

Setting	How to enable	Notes
Dedicated Home Exists	Four buttons + Stick in neutral	Default
Plus + Minus = Home, Wii only	Four button + Up	Ignores Home line entirely
Plus + Minus = Home, all PCBs	Four buttons + Down	For dual mod sticks