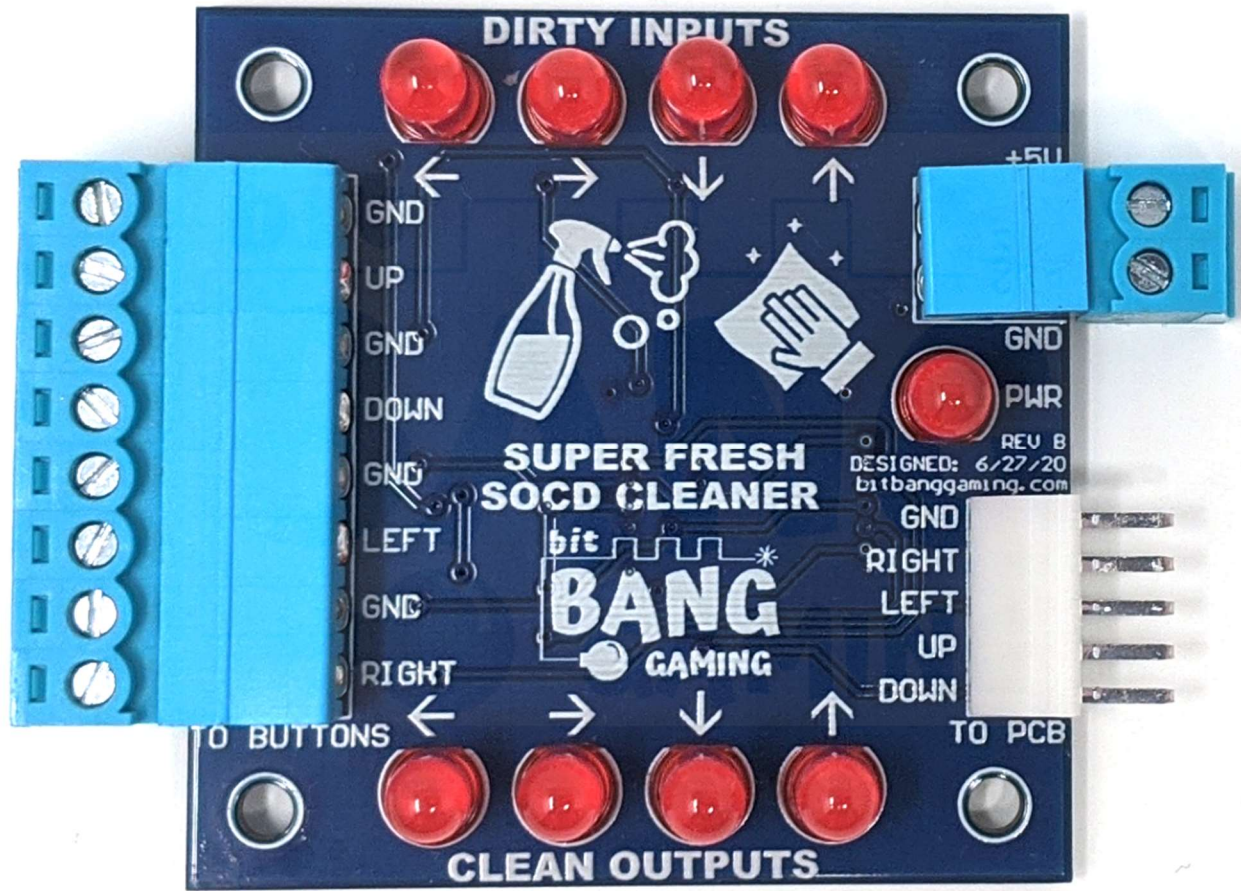


Super Fresh SOCD Cleaner



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Overview

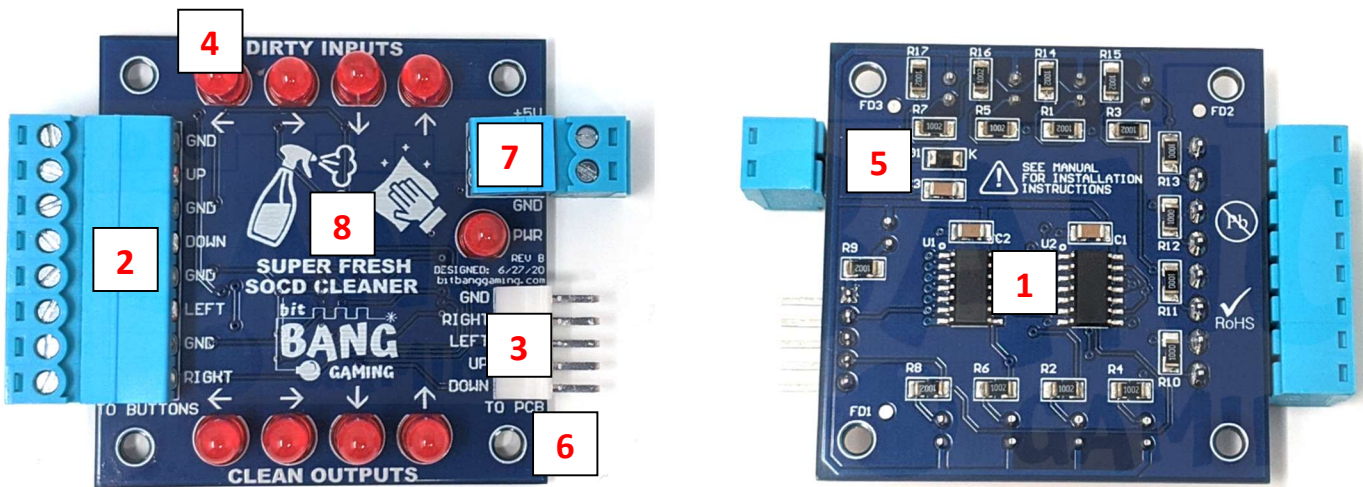
Product Description:

Make your hitbox inputs shine with the Super Fresh SOCD Cleaner!

If you are not a hitbox player, you may not be familiar with a Simultaneous Opposite Cardinal Directions Cleaner (SOCD Cleaner for short). With a joystick it is generally not possible to press both left and right or up and down at the same time. However, since hitboxes use buttons for all directions, this is entirely possible. Some games handle these simultaneous inputs oddly and sometimes can be used as an unfair advantage over players with joysticks. It also makes the results unpredictable when playing different games.

To fix this issue, the inputs on a hitbox must be “cleaned” and this is absolutely required to gain entrance into a tournament.

The Super Fresh SOCD Cleaner both looks clean and has the following features:



1. No lag with dedicated logic gates resulting in nanoseconds of response time. (Note: Though lag is still possible from other sources such as the arcade controller control board. However, no lag is introduced by the Super Fresh SOCD Cleaner.)
2. Pluggable terminal block for an easy installation experience and custom wiring.
3. Standard 5 pin JLF (JST-NH) for easy connectivity to most control PCBs.
4. Low current indication LEDs for dirty inputs and clean outputs, and power (each LED draws less than 1mA) – perfect for showing tournament officials your PCB is legal when using a clear bottom panel and to confirm a successful installation.
5. Reverse polarity protection on the power input so that even the worst wiring mistakes are forgiven.

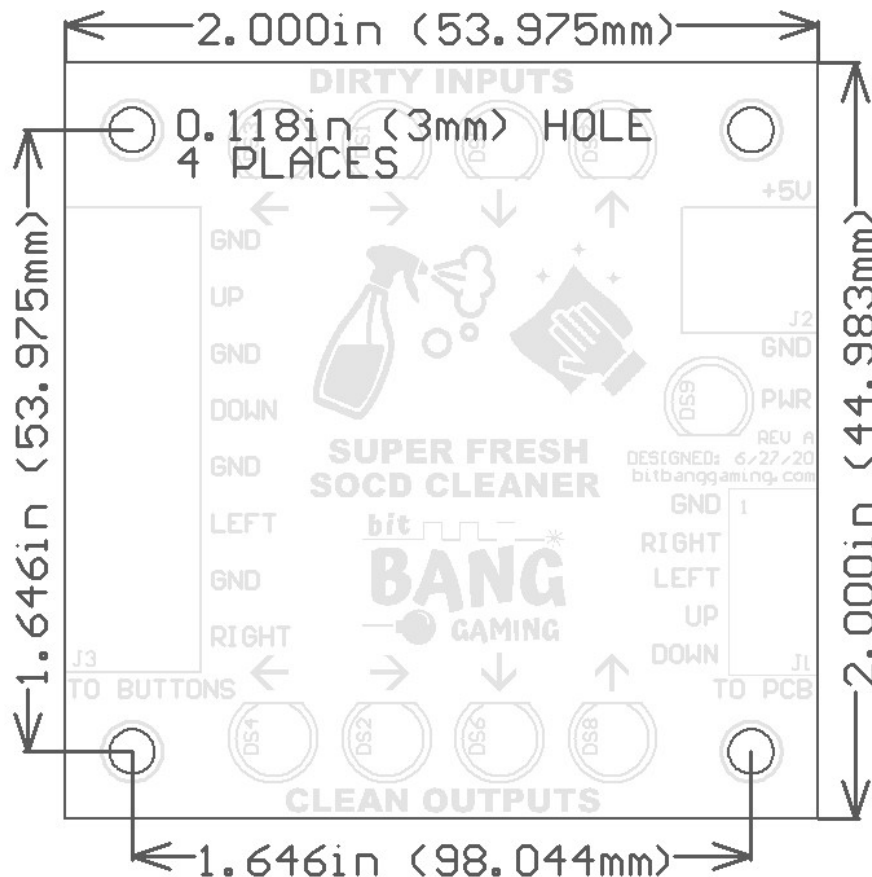
6. 3mm mounting holes on all corners for easy mounting.
7. Pluggable terminal block for power wires and T-tap connectors for V+ and ground to help facilitate a solderless installation (depending on your installation, soldering may still be required or even preferred).
(Note: Even though the positive power terminal is labeled as +5V, the Super Fresh SOCD Cleaner is also compatible with +3.3V arcade controllers. The silkscreen on the Super Fresh SOCD will change from "+5V" to "+3.3V to +5V" in the next order of inventory.)
8. Inputs are cleaned to a common tournament standard (pressing left and right registers as neutral, pressing down and up registers as up).
(Note: For more cleaning modes, please see the Magicians SOCD Cleaner.)

What's Included:

- (1) Super Fresh SOCD Cleaner
- (2) 22-18 AWG T-taps (0.250in)
- (1) Pair of power wires w/ 0.250in fully insulated quick disconnects pre-crimped

We offer mounting hardware and cable accessories / services compatible with this product. Please visit our website for more details.

Dimensions:

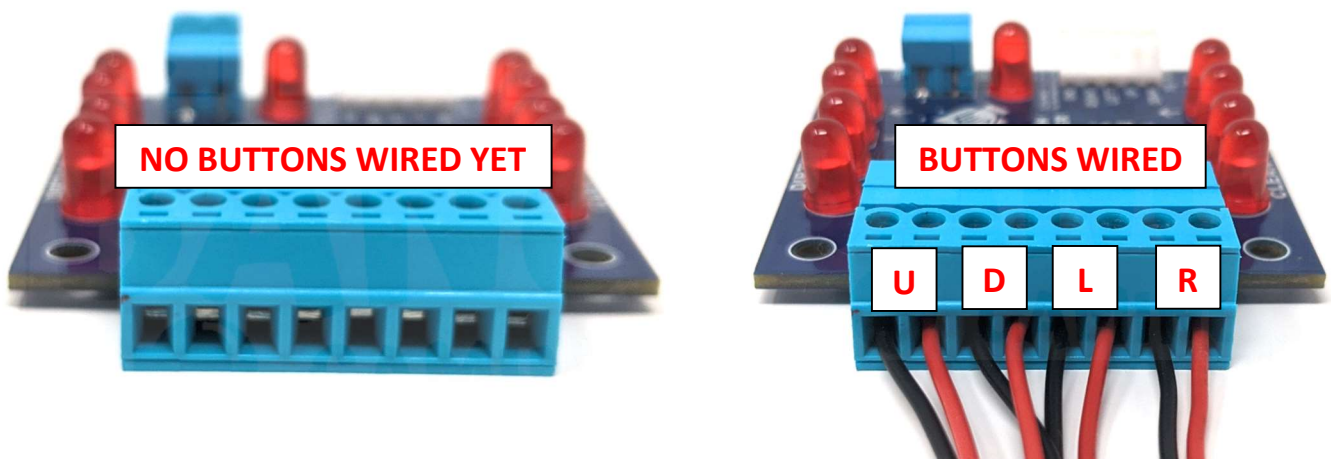


How to Use

Reading over the manual once before attempting installation is suggested.

Connect the Buttons:

The Super Fresh SOCD Cleaner comes with an 8 pin pluggable terminal block for easy connectivity and custom cable creation. Take the wires from the hitbox directional buttons and wire them to the respective signal and ground terminals on the 8 pin pluggable terminal block. These are labeled by each pin on the board. If using a “hitbox harness” that typically has the ground wire daisy chained, only one of the grounds are needed on the 8 pin pluggable terminal block as the Super Fresh SOCD Cleaner is also wired as common ground.

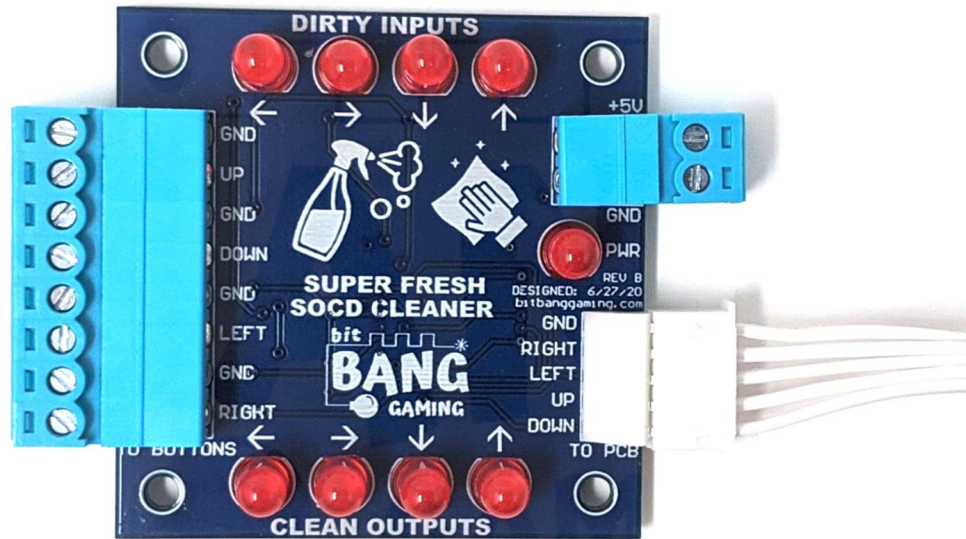


Connect the Control PCB:

The Super Fresh SOCD Cleaner has a standard 5 pin JLF port (also known as a JST NH connector) commonly used in Japanese arcade controllers coming from the control board. If your arcade controller has the mating JLF plug, simply connect to this port.



If your arcade controller has the JST XH connector, common on many arcade controllers (such as the Mayflash F500), a 5 pin control board wire harness (*Part #: CONTROL-5P-WIRE-HARNESS*) can be used. If you require one, this can be purchased on our website.

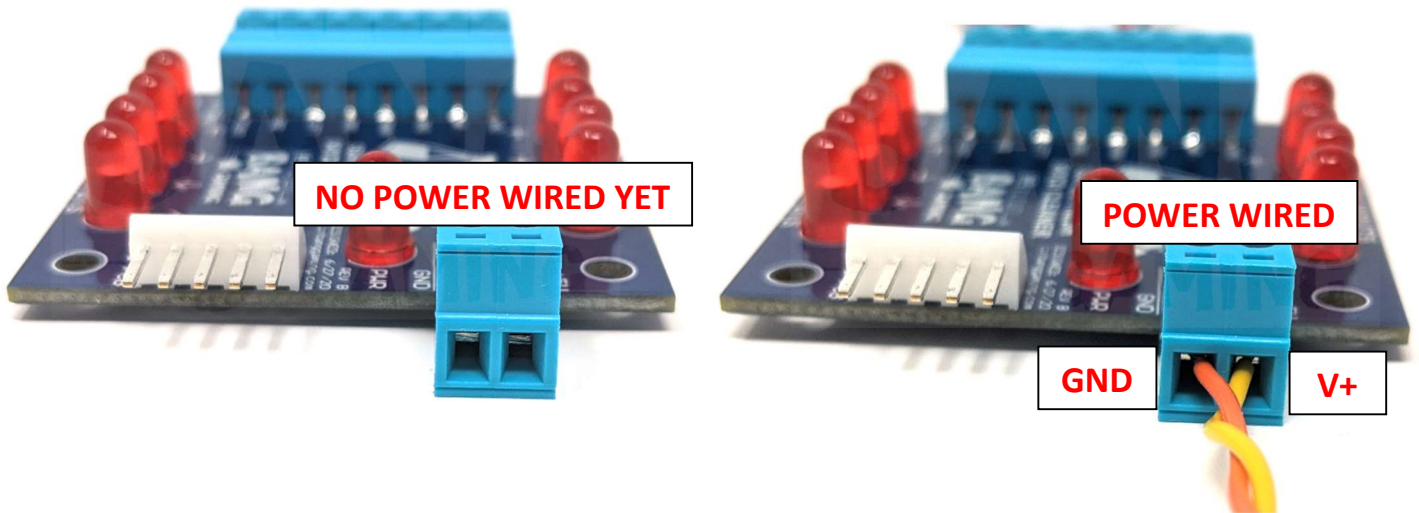


If your arcade controller has none of these, then you will need to create your own harness. In this case, a 5 pin JLF wire harness, (*Part #: JLF-5P-WIRE-HARNESS*) can be used. If you require one, this can be purchased at our shop.



Connect the Power:

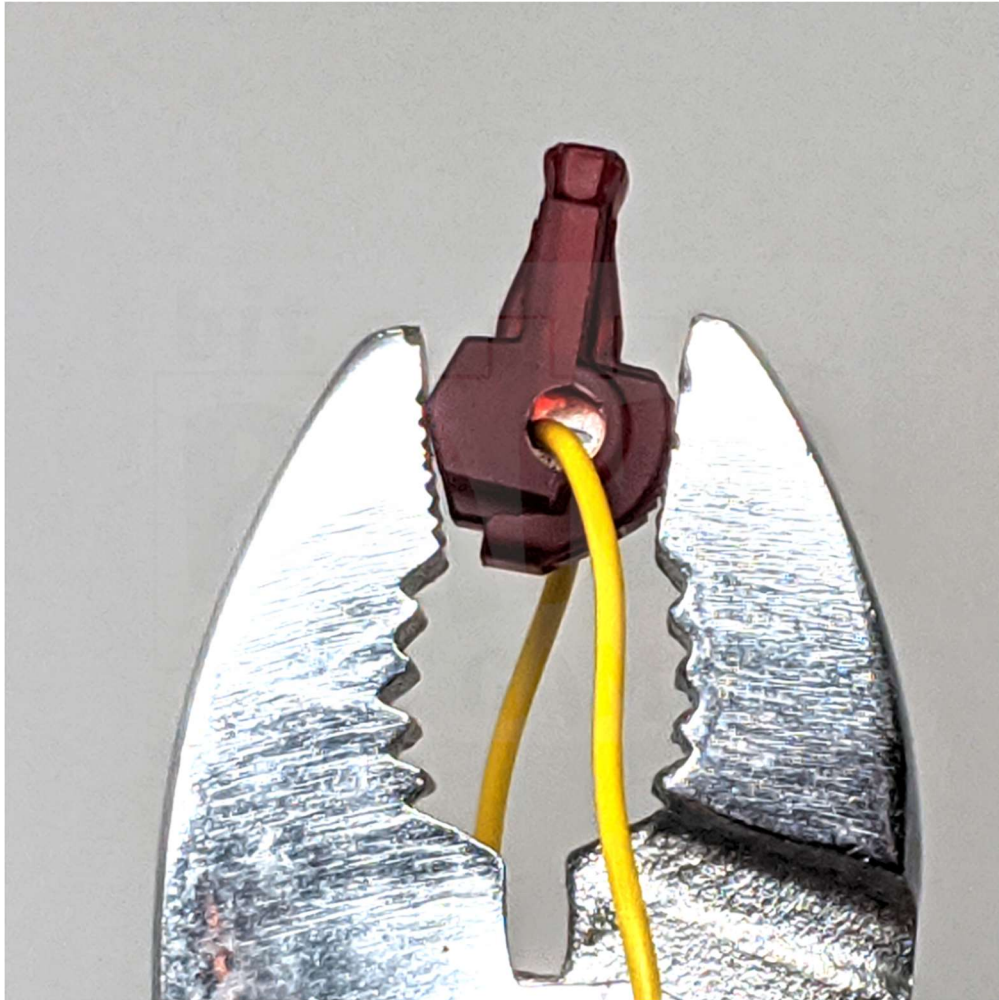
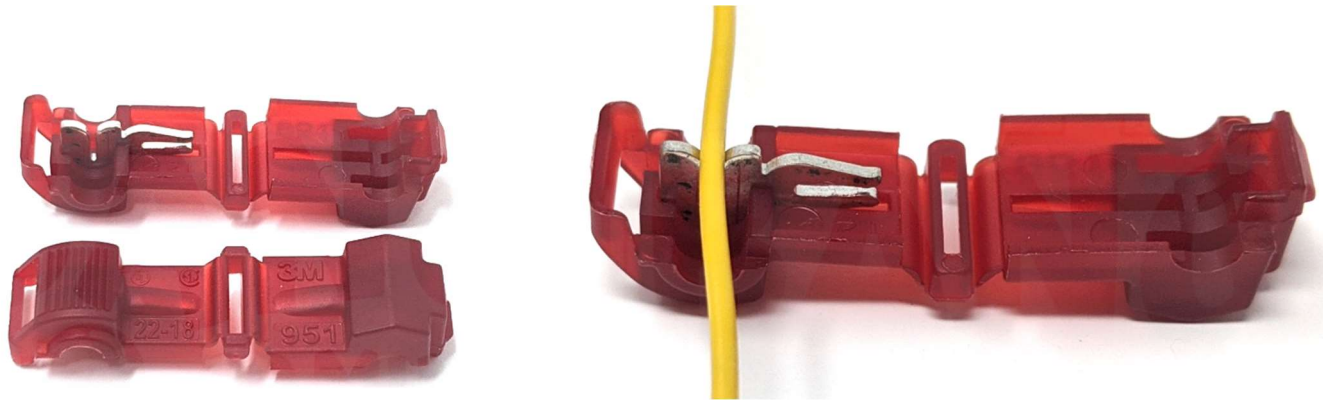
The Super Fresh SOCD Cleaner can use between +3.3V to +5V as its primary voltage source and connects to it with a 2 pin pluggable terminal block.



This 2 pin pluggable terminal block comes pre-wired and pre-crimped with 0.250 inch fully insulated male quick disconnects. If soldering is desired instead, then cut off these quick disconnects and proceed to solder. If a shorter length wire is desired, simply cut the wire shorter and re-strip.



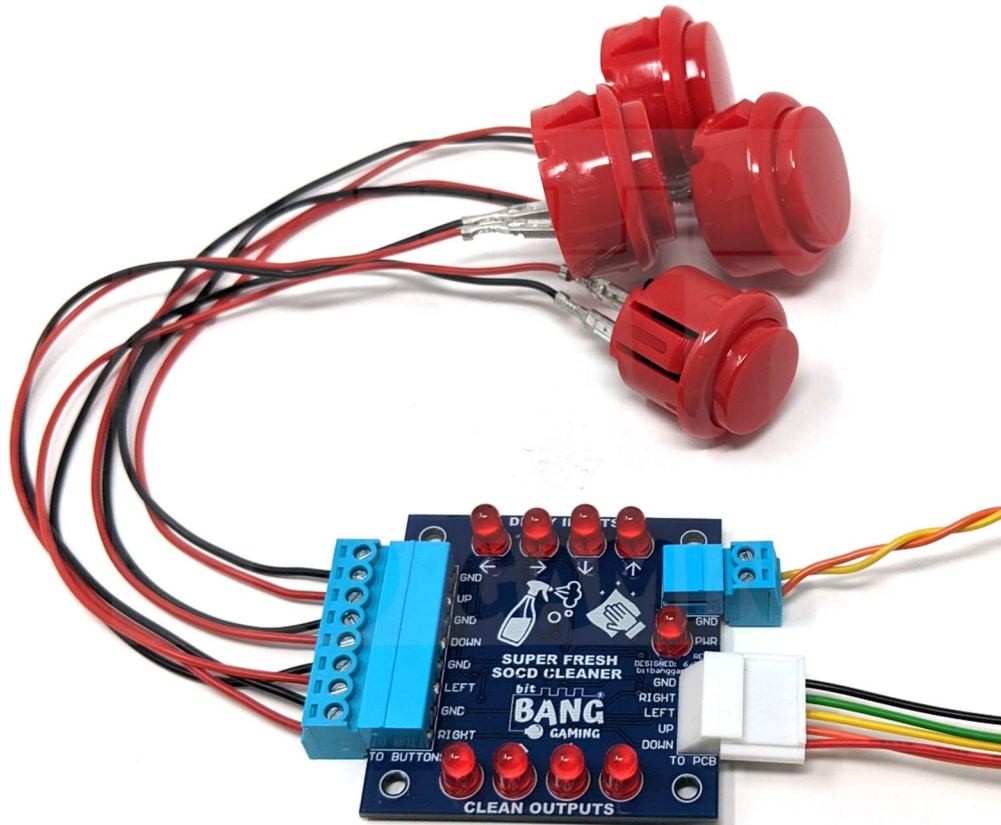
For a solderless installation, t-taps have been included. Install these on the positive and ground power wires on the control board. These will usually be red and black (ground) on the USB cable connecting to the control board. Just position over the wire to tap into and squeeze shut with pliers (standard pliers, needle nose pliers, channel locks, your abnormally strong fingers, etc.). Try to be as far away from the control board as possible when doing this to eliminate strain on its plug. If there is not enough room to fit the t-tap, you may need to cut the cable insulation (not wire insulation) of the USB cable to expose more of the red and black wires.



Once the t-taps are connected, simply plug in the quick disconnects. If you plug them in the wrong way, don't worry, the Super Fresh SOCD Cleaner will not get fried as it has a reverse polarity protection diode. Just switch the quick disconnects around and the power LED will turn on indicating power is properly applied. Always unplug by grabbing the plastic (not the wire) for ANY connector to reduce the risk of damage to the wire connection.

Final Testing:

With the Super Fresh SOCD Cleaner fully installed and the arcade controller powered, press each directional input and you will see the dirty input LEDs turn on and off. Verify proper cleaning by pressing both left and right, the corresponding clean outputs will be off. Now press both up and down, the corresponding clean outputs will show up being pressed. Finally, try playing a few rounds for final validation.



Troubleshooting:

In the event that there is strange directional behavior, it is very likely that the stock control PCB is not mapped how the Super Fresh SOCD Cleaner assumes, which is the most common configuration. There are two ways to fix this;

1. Unscrew the wire from the 8 pin pluggable terminal block and screw into the correct position. Though the LEDs will still function, they will not be accurate as to what they represent.
2. Change the wiring on the 5 pin JLF (JST-NH) side on the arcade controller control board. This is trickier to do and is usually not possible.

The Super Fresh SOCD Cleaner assumes the same configuration as other well-known SOCD Cleaners on the market, as it is the most common configuration. See below for a list of sticks that are compatible with this common configuration.

- Razer Atrox
- Razer Panthera
- Razer Panthera EVO
- Hori Fighting Edge
- Hori Rap 4
- Hori Rap 4 Kai

- Hori Rap V
- Hori Rap N
- Hori VLX
- Madkatz TE
- Madkatz TE2
- Madkatz TE2+
- Madkatz TES
- Madkatz TES+
- Ettoki Omni K Lever
- PDP Injustice
- Brook UFB/WFB/Audio

If it is desired to have the feature work across all are controller conventions with the directional LEDs then our Magicians SOCD Cleaner will need to be used instead. The added benefit will be the choice between 16 different cleaning presets.

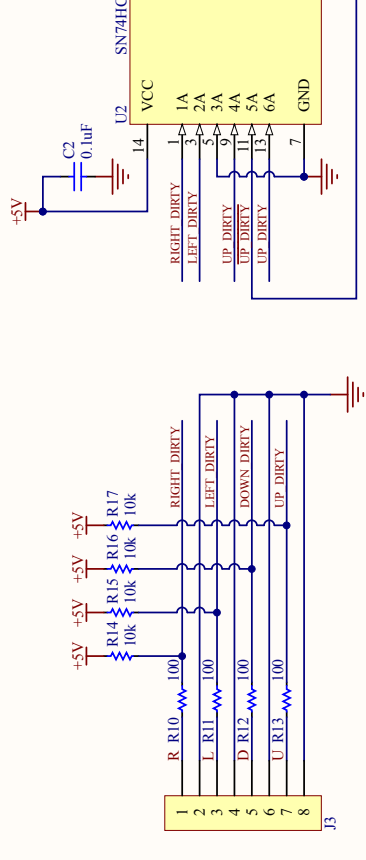
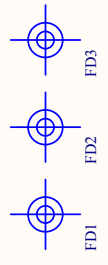
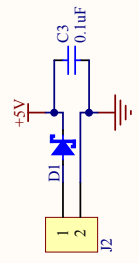
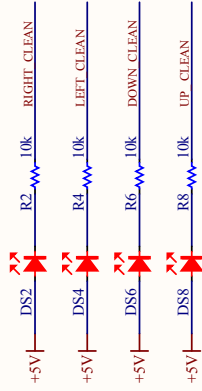
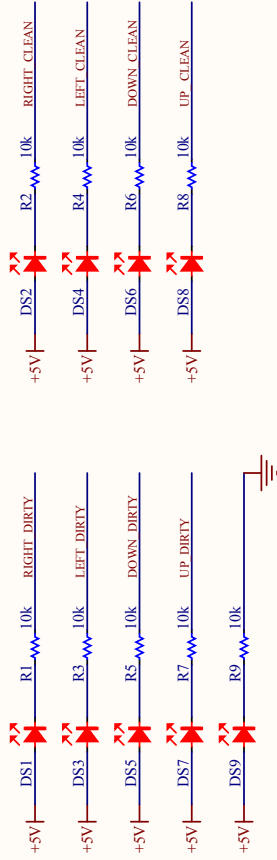
Questions?



If you have any questions please connect via Twitter ([@BitBangGaming](https://twitter.com/BitBangGaming)) or email (bitbanggaming@gmail.com).

Revisions

Revision	Date	Description	Initials
A	7/8/2020	Prototype Release	JC
B	9/14/2020	Initial Release	JC



BOOLEAN EQUATIONS:
LEFT_CLEAN = RIGHT_DIRTY + LEFT_DIRTY
RIGHT_CLEAN = LEFT_DIRTY + RIGHT_DIRTY
DOWN_CLEAN = UP_DIRTY + DOWN_DIRTY
UP_CLEAN = UP_DIRTY

