



SIMUCUBE

Simucube 2

Accessory Port


Application Guide

Version 1.0
November 1st, 2019

Accessory Port Application Guide Changelog

Version	Date	Changes
1.0	2019/11/01	Initial release

Warnings and Guidelines for Safe Operation

- The Simucube Accessory port is a female D15 connector on the back of the device.
 - The signal levels are from 0 to 5 Volts.
 - Do not connect any unknown devices to this connector.
 - The port is not a serial port connector although the mechanical connector is the same as a 15-pin serial port.
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D15 Connector Pinout

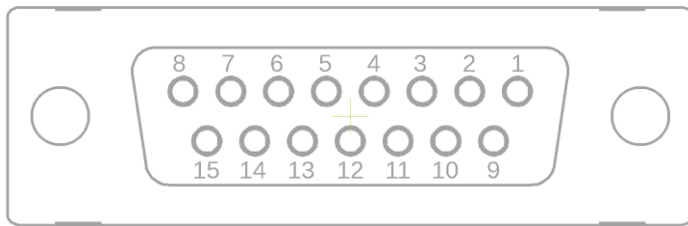


Figure 1 Accessory port connector pinout.

Pin numbering follows the connector as seen on the back plate of the device.

Pin	Function	Notes and suggested usage
1	Reserved for future use	Leave unconnected
2	GND	
3	Reserved for future use	Leave unconnected
4	Reserved for future use	Leave unconnected
5	Digital input	Joystick/sequential shifter button.
6	Analog input	Accelerator/gas
7	Analog input	Clutch
8	+5 V output	Maximum current 120 mA
9	Reserved for future use	Leave unconnected
10	Reserved for future use	Leave unconnected
11	Digital input	Joystick/sequential shifter button.
12	Reserved for future use	Leave unconnected
13	Analog input	Brake
14	Analog input	Handbrake
15	GND	

Wiring Notes

- Maximum current from the 5 V output (pin 8) is 120 mA. Please do not exceed this. Measure the power consumption of the devices before connecting them if not known.
- Analog input voltage range is 0 – 5 Volts.
- Use the D15 Connector Shield for only cable shielding.
 - **Do not connect the cable shield with GND pins.**
- A button / switch can be connected between pins 5/11 and GND. The inputs have internal pull-up resistor and the inputs show as the first buttons in the DirectInput joystick interface.

Example Analog Input Wiring

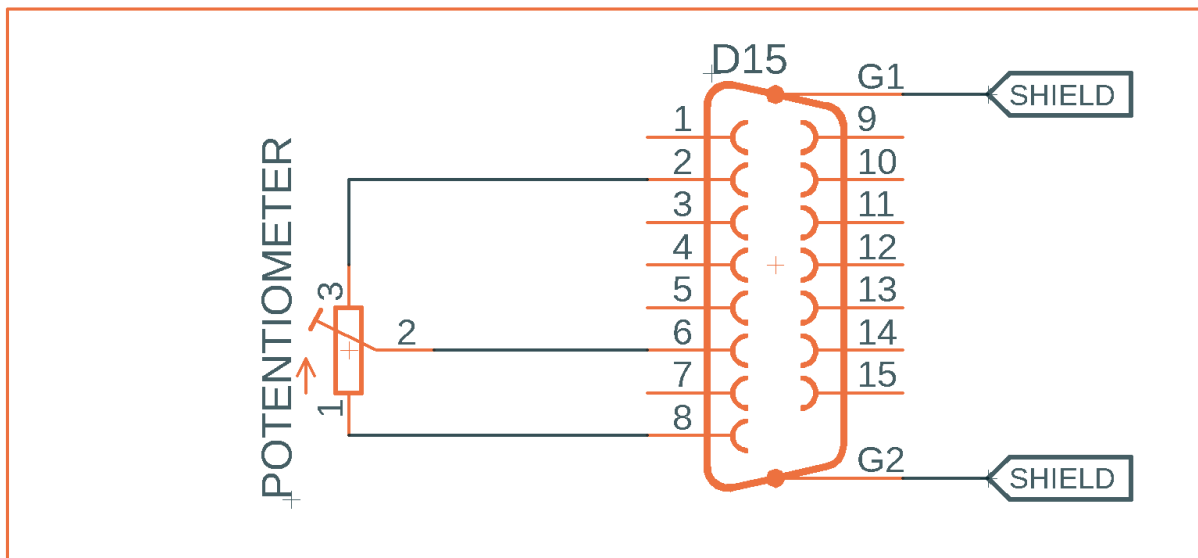


Figure 2 Example analog input wiring with potentiometer

Example Button Input Wiring

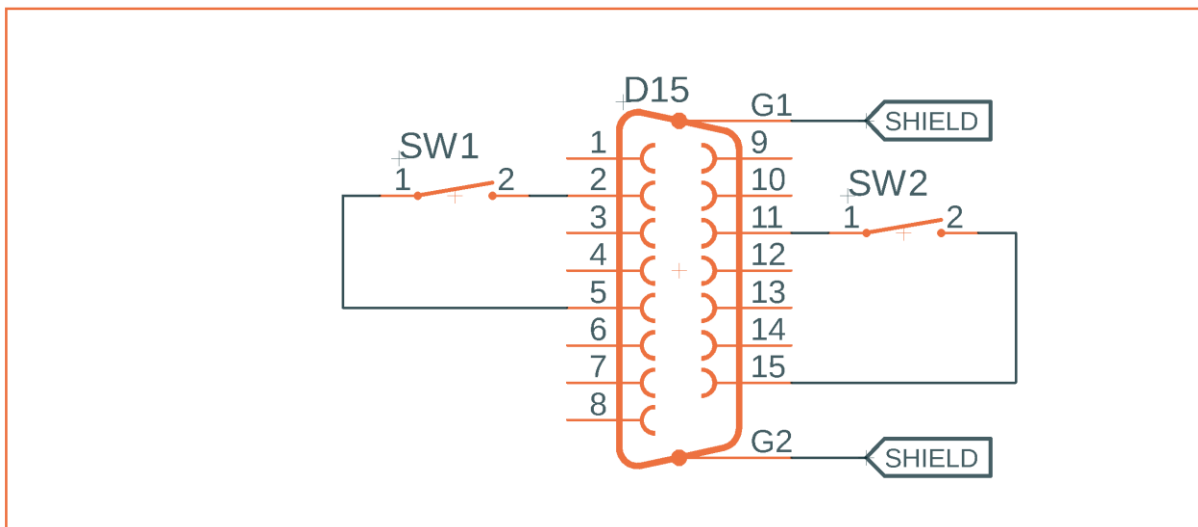


Figure 3 Example button input wiring for e.g. shifter use

Configuring Analog Inputs in True Drive Software

Analog inputs can be configured in the Analog Inputs configuration window (Figure 4).



Figure 4 Configure Analog inputs button location

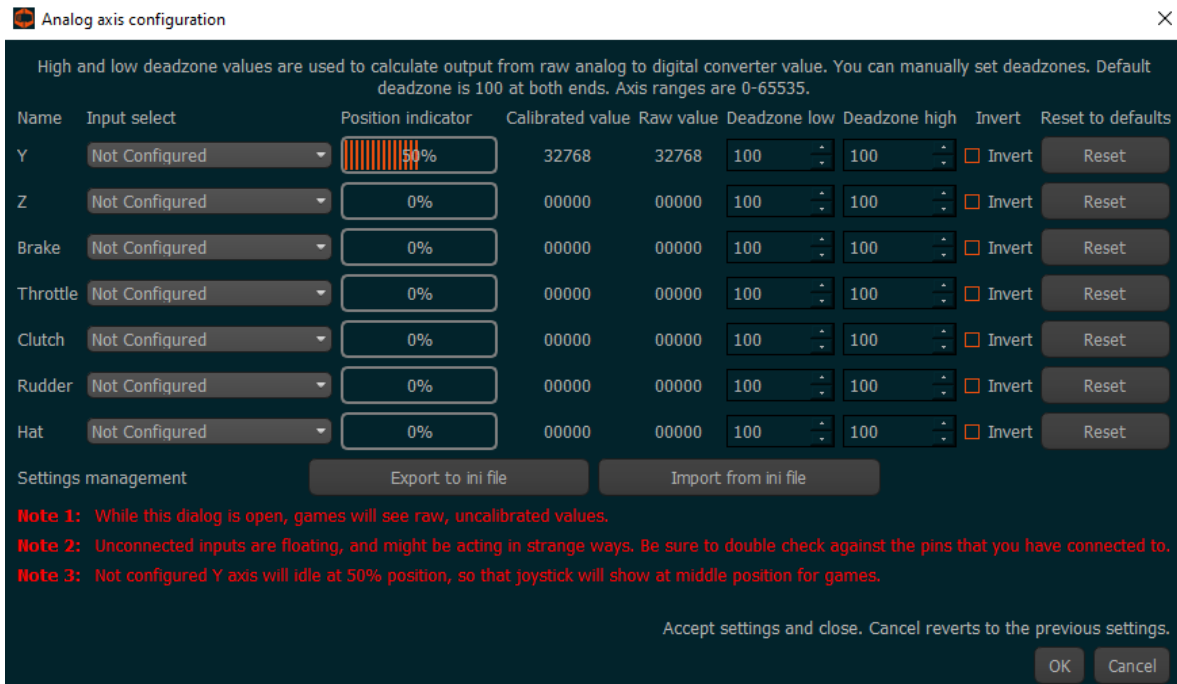


Figure 5 Analog input settings

The pedal set developer will supply a configuration file that can be imported to the settings with the Import from ini file button.

The analog inputs can also be configured manually via the dialog (Figure 3).

Input select: Select the input pin from D15 connector here.

Position indicator: Shows the calibrated position of the pedal.

Calibrated value: Shows the calibrated position of the pedal in the range of 0..65535 (16bit) range.

Raw value: Shows the value before calibration.

Deadzone low and **Deadzone high:** These values are used for calibrating the raw analog input so that e.g. non-pressed pedal would show completely non-pressed signal and fully pressed pedal would show as fully pressed.

Invert: If input seems to work in opposite way with regards to intended direction, checking this will cause the output to be inverted in software.

Recommendations

It is recommended that user does not use the Y axis for any pedals, as this axis can be detected as being not idle when a pedal is not pressed, and this can cause issues when assigning controls in games. Therefore if this axis is unused, the it will show at half way pressed.

Manufacturer information

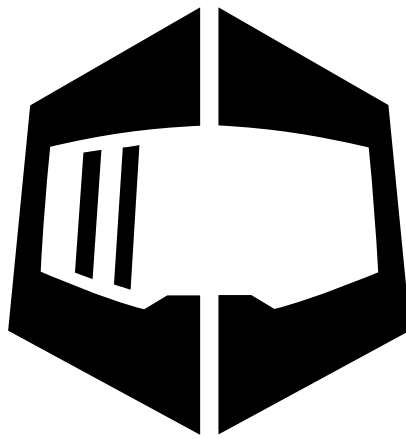
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