Project Documentation

Joystick Simple Interconnect Board

Project number: 139

Revision: 0

Date: 22.12.2019

C64 Joystick – Simple Interconnect Board Rev. 0

Module description

Introduction

This board serves as an interconnect module for the joystick. It provides separability of the arcade joystick, the fire buttons and the joystick cable and reduces the complexity of the wiring and the likelihood of failure.

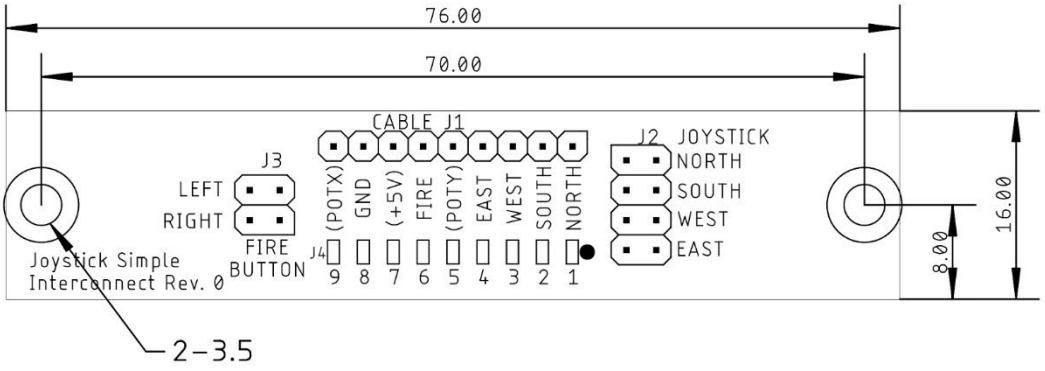


Figure 1: Measures of the PCB

Connector Pinouts

Cable connector – J1, J4

J1: Standard pin header, 9pin, 2.54mm pitch (optional)

J4: direct solder pads (surface)

Pin J1	Pin J4	Pin D-Sub (f)	Signal
1	1	1	North
2	2	2	South
3	3	3	West
4	4	4	East
5	5	5	PotY*
6	6	6	Fire
7	7	7	+5V*
8	8	8	GND
9	9	9	PotX*

Arcade joystick connector – J2

Standard pin header, 2x4 pins, 2.54mm pitch, matching connector: 2x4 DuPont crimp housing

Signal	Pin	Pin	Signal
North	1	2	GND
South	3	4	GND
West	5	6	GND
East	7	8	GND

Fire Buttons – J3

Standard pin header, 2x2 pins, 2.54mm pitch, matching connector: 2x2 DuPont crimp housing

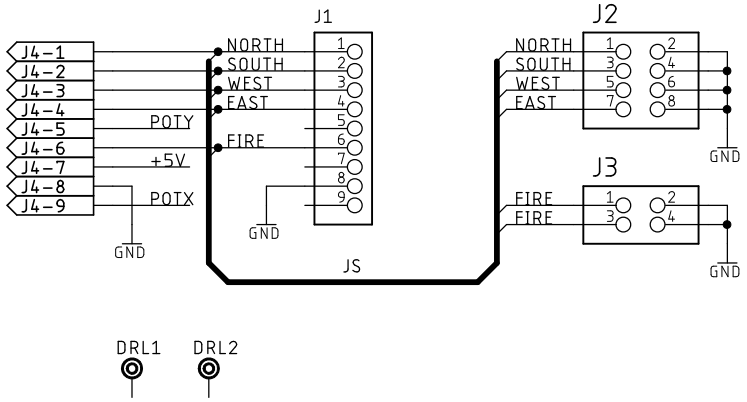
Signal	Pin	Pin	Signal
Right button	1	2	GND
Left button	3	4	GND

Connecting the Board

The cable with the D-SUB can either be connected to J1 or J4, whatever is easier. The pads of J4 are connected to vias (that means, they have a drill which is plated through). This is to provide more stability to the pads, which would be easy to tear off without those via.

The arcade joystick is connected to J2 and it does not matter, which side of the micro switch is connected to GND or the direction signals (North, South etc.). They do not have a dedicated direction.

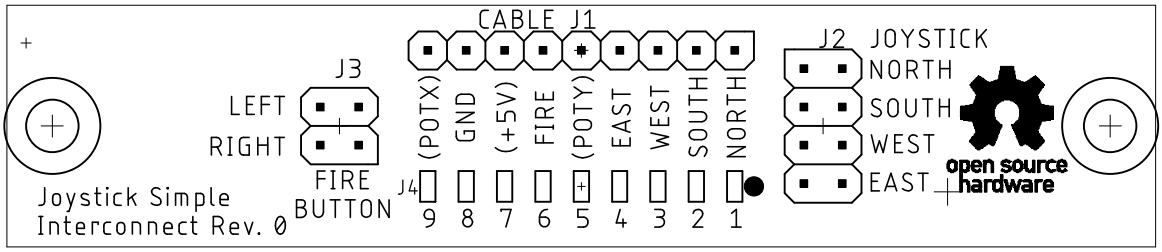
The same applies to the fire buttons. It also does not matter, which button is connected to "Left" and "Right", because both buttons are parallel, the connect to the single Fire signal of the Joystick.



open source hardware

Title: Joystick Simple Interconnect		Doc.-No.: 139-1-01-00 Draft.: Sven Petersen
Date: 11.08.2020 13:47	Rev.: 0	Page 1/1
File: js_simple		
http://github.com/svenpetersen1965		A4

Sven Petersen 2019	Doc.-No.: 139-2-01-00	
	Cu: 35µm	Cu-Layers: 2
js_simple		
11.08.2020 13:51		Rev.: 0
placement component side		



Sven Petersen 2019	Doc.-No.: 139-2-01-00	
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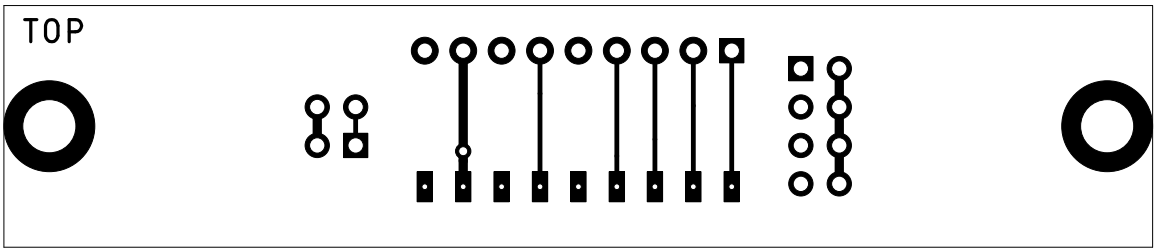
js_simple		
22.12.2019 11:03		Rev.: 0
top		



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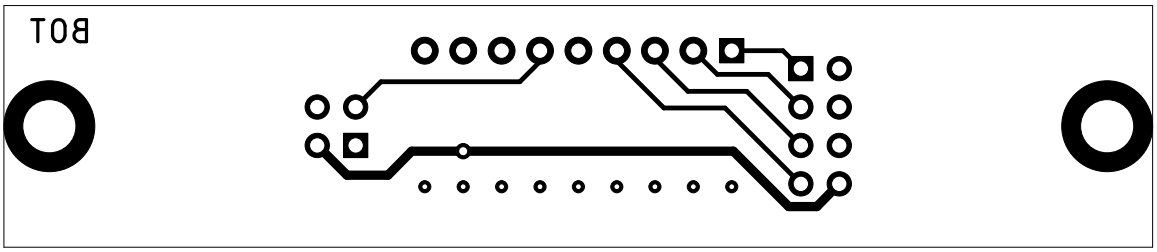
js_simple		
22.12.2019 11:03		Rev.: 0
bottom		



Sven Petersen 2019	Doc.-No.: 139-2-01-00	
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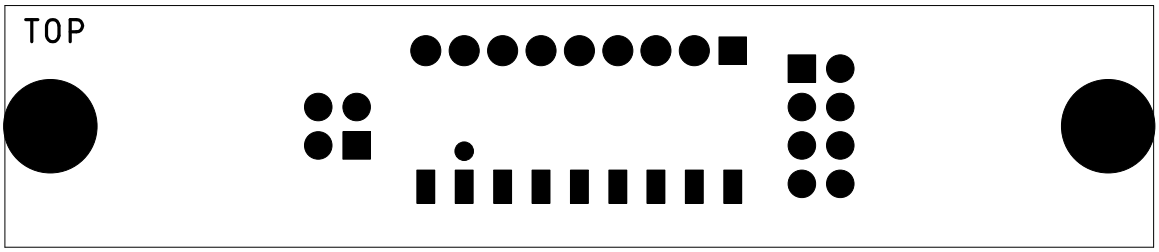
js_simple		
22.12.2019 11:03		Rev.: 0
stopmask component side		



Sven Petersen 2019	Doc.-No.: 139-2-01-00	
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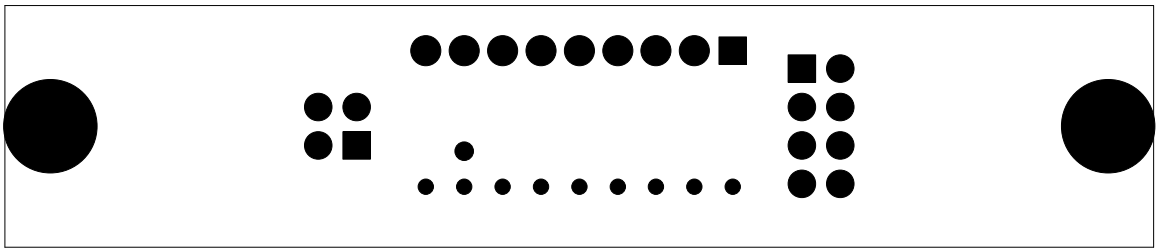
22.12.2019 11:03		Rev.: 0
stopmask solder side		



Sven Petersen 2019	Doc.-No.: 139-2-01-00	
	Cu: 35µm	Cu-Layers: 2
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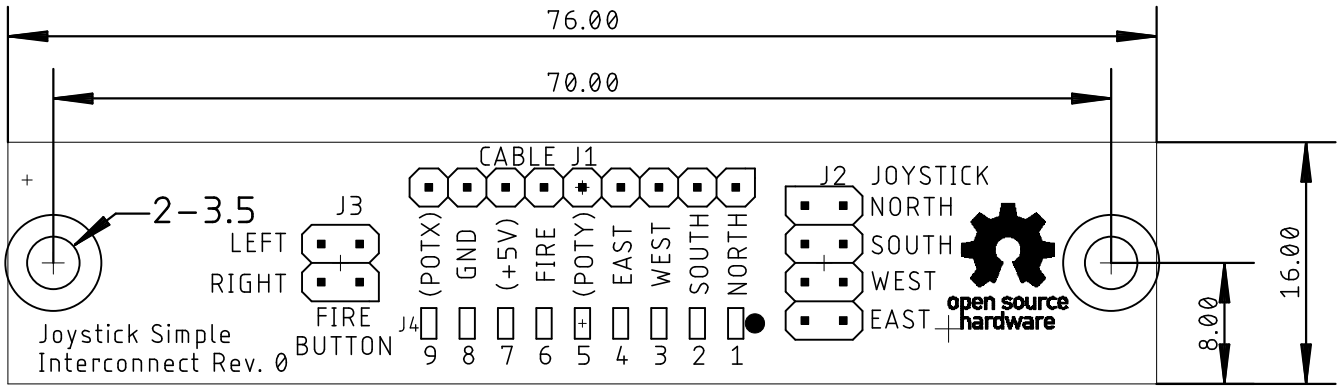
11.08.2020 13:51		Rev.: 0
placement component side measures		



Joystick - Simple Interconnect Board Rev. 0
Bill of Material Rev. 0.0

Pos.	Qty	Value	Footprint	Ref.-No.	Comment
1	1	139-2-01-00	2 Layer	PCB Rev. 0	2 layer, Cu 35μ, HASL, 76.0 x 16.0mm, 1.6mm FR4
2	1	1x9, pitch 2.54mm	1X09	J1	standard pin header
3	1	2x2, pitch 2.54mm	2X02	J3	standard pin header
4	1	2x2, pitch 2.54mm	2X04	J2	standard pin header