THE BACKOFFICE
Ultimate Joystick Interface v2.0

Pin assignments:

1	VIN – Unregulated voltage input
2	GND - Ground
3	5V – Regulated voltage output (use this!)
4	Channel 1 - Digital Button Input
5	Channel 2 – Analogue Input (VDa)
6	Channel 3 – Digital Button Input
7	Serial RX – Embedded Serial Stream
8	Serial TX – Embedded Serial Stream
9	Channel 4 – Analogue Input (VDa)
10	Channel 5 – Analogue Input (VDb)
11	Channel 6 – Analogue Input (VDb)
12	Channel 7 – Analogue Input (VDc)
13	Channel 8 – Analogue Input (VDc)
14	Channel 9 – Analogue Input (VDd)
15	Channel 10 – Analogue Input (VDd)
16	5V – Regulated voltage output (use this!)
17	GND - Ground
18	VIN – Unregulated voltage input

www.backofficeshow.com
www.youtube.com/backofficeshow
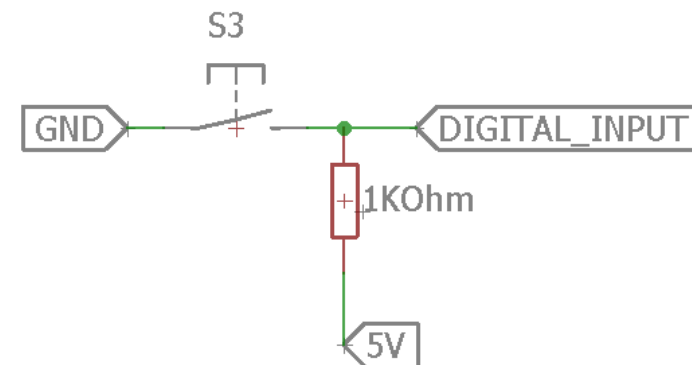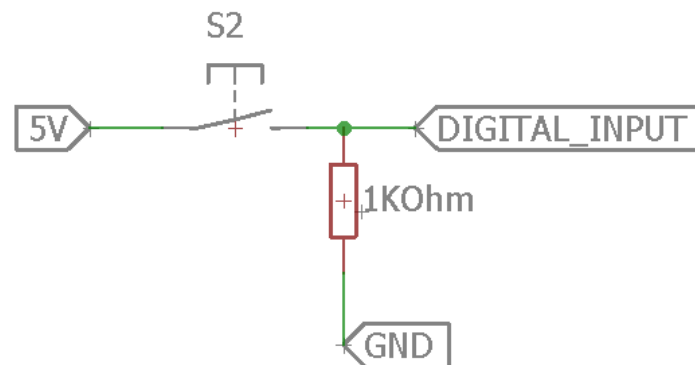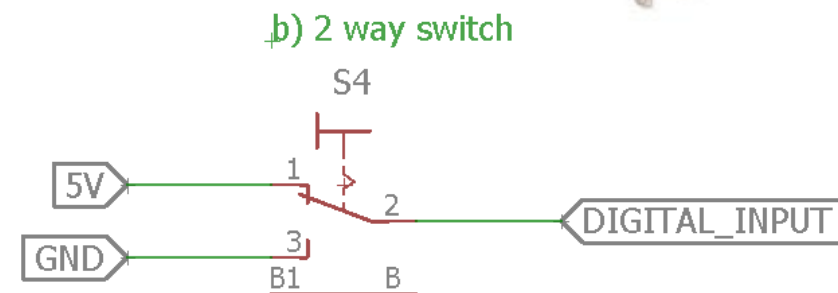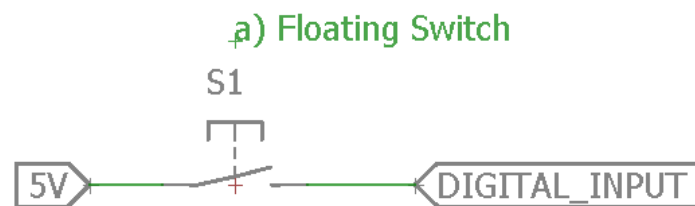
Digital Button Input
- Suitable for buttons and switches
- Anything with an on or off state
- Reports a value of 0 at zero volts
- Reports a value of 255 above 3 volts

Try to avoid leaving the input floating as in image **a**, where you can consider a pull-down circuit (c) or pull-up circuit (d)

2 way switches provide a very accurate input and do not require a resistor.

a) Floating Switch

S1

5V — DIGITAL_INPUT

b) 2 way switch

S4

5V
GND

1
2
3
B1   B

DIGITAL_INPUT

S2

5V — DIGITAL_INPUT

1KOhm

GND

c) weak pull-down

S3

GND — DIGITAL_INPUT

1KOhm

5V

d) weak pull-up

NEVER CONNECT THE VIN TO YOUR INPUTS! ALWAYS USE THE 5V OUTPUT PINS

Analogue Inputs
- Can be used as a digital input (see previous section)
- Suitable for variable resistors
- Suitable for rotary pots
- Suitable for potentiometer joysticks
- Provides values from 0 to 16368 for the 0v to 5v range
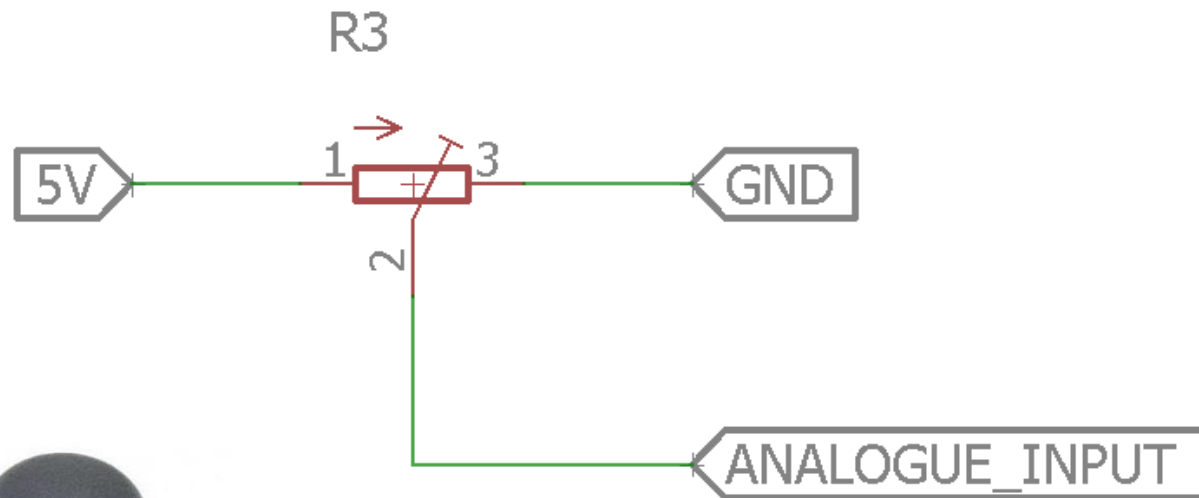
R3

5V — 1 — 3 — GND

2

ANALOGUE_INPUT

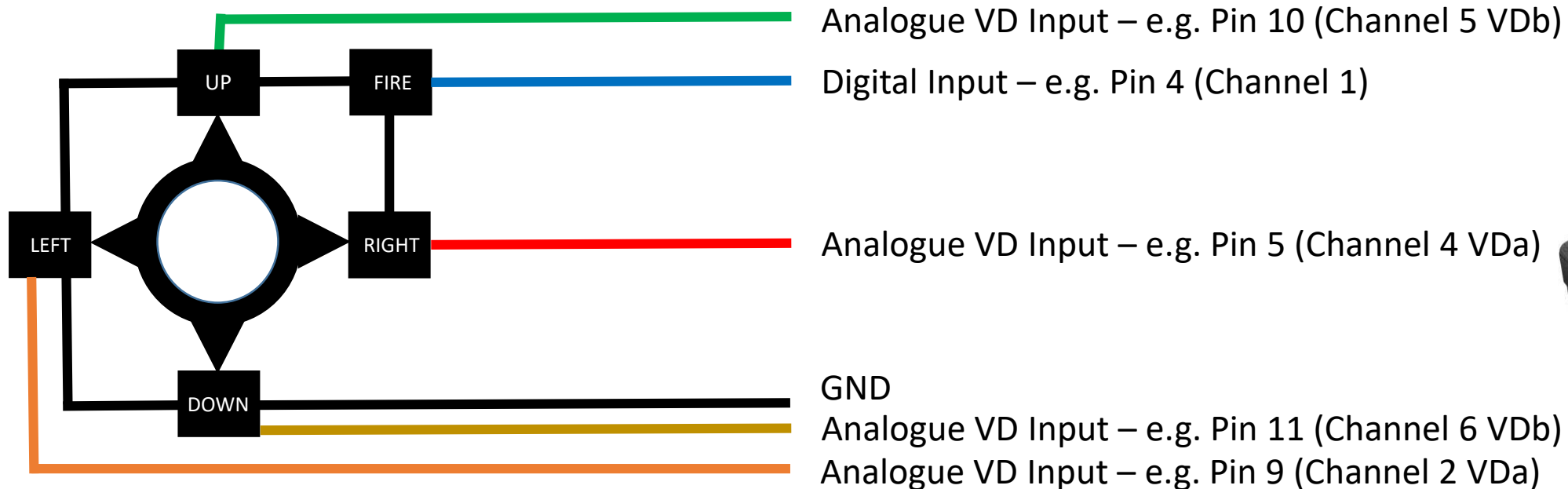NEVER CONNECT THE VIN TO YOUR INPUTS! ALWAYS USE THE 5V OUTPUT PINS

THE BACKOFFICE
Input Port Descriptions – Virtual Digital VDs

Virtual Digital VDs

The analogue input channels are paired such that 4 differential digital joystick channels can be accommodated
This is for the use case where you wish to interface to an older digital joystick with a common ground on the buttons

Analogue VD Input – e.g. Pin 10 (Channel 5 VDb)

Digital Input – e.g. Pin 4 (Channel 1)

Analogue VD Input – e.g. Pin 5 (Channel 4 VDa)

GND
Analogue VD Input – e.g. Pin 11 (Channel 6 VDb)
Analogue VD Input – e.g. Pin 9 (Channel 2 VDa)

NEVER CONNECT THE VIN TO YOUR INPUTS! ALWAYS USE THE 5V OUTPUT PINS

THE BACKOFFICE
Input Port Descriptions – Virtual Digital VDs

The Virtual Digital (VD) Channels (channels 11 to 14) resolve to a single analogue output. The behaviour is as follows:

Input A	High	Low	Low	High
Input B	Low	High	Low	High
Analogue Output	Low	High	Medium*	Medium*

* This is effectively the dead zone of the stick

NEVER CONNECT THE VIN TO YOUR INPUTS! ALWAYS USE THE 5V OUTPUT PINS

THE BACKOFFICE
Input Port Descriptions - vJoy

vJoy is a device driver that allows you to connect hardware to your PC and route its output to the Joystick system in Windows. Think of it as a "Virtual Joystick"

Simply go to the vJoy site and after downloading, install it:

http://vjoystick.sourceforge.net

THE BACKOFFICE
Input Port Descriptions - vJoySerialFeeder

vJoySerialFeeder is an application that takes a serial data stream and turns it into inputs usable by vJoy. It is a very powerful program as it allows you to configure your virtual control in any way you wish, even allowing you to script actions.

This powerful tool is what allows the "Ultimate Joystick Interface" to be so versatile and configurable.

You can download it from here:

https://github.com/Cleric-K/vJoySerialFeeder/releases

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