3D Printer

2019-03-27

LED Light Relay

Raspberry Pi 4B Rev 1.2.

The relay module is connected to physical pins 4 (5V), 6 (GND), and 36 (GPIO 16).

The version of wiringpi in the Raspberry Pi OS repos is out of date and doesn't support the Pi 4B, so we have to install a newer version.

```
cd /tmp
wget https://project-downloads.drogon.net/wiringpi-latest.deb
sudo dpkg -i wiringpi-latest.deb
```

Then we can figure out how our Pi's physical pins map to wiringpi's pin numbers:

	+			 -	Pi 4B	+·	+			++
BCM		Name			Physical			Name		
	· 	3.3v			1 2			5v		 I I
2	8	SDA.1	IN	1	3 4			5v		
3	9	SCL.1	IN	1	5 6			0v l		
4	7	GPIO. 7	IN	1	7 8	1	I IN I	TxD	15	14
		0v			9 10	1	I IN I	RxD	16	15
17	0 1	GPIO. 0	IN	0	11 12	0	I IN I	GPIO. 1	1	18
27	2	GPIO. 2	IN	0	13 14	l		0v		
22	3	GPIO. 3	IN	0	15 16	0	I IN	GPIO. 4	4	23
		3.3v			17 18	0	I IN	GPIO. 5	5	24
10	12	MOSI	IN	0	19 20	l		Ov I		
9	13	MISO	IN	0	21 22	0	I IN	GPIO. 6	6	25
11	14	SCLK	IN	0	23 24	1	I IN	CEO I	10	8
		0v			25 26	1	I IN	CE1	11	7
0	30	SDA.0	IN	1	27 28	1	I IN	SCL.0	31	1
5	21	GPI0.21	IN	1	29 30	l		0v		
6	22	GPI0.22	IN	1	31 32	0	I IN	GPI0.26	26	12
13	23	GPI0.23	IN	0	33 34			0v l		
19	24	GPI0.24	IN	0	35 36	0	I IN	GPIO.27	27	16
26	25	GPI0.25	IN	0	37 38	0	I IN	GPI0.28	28	20
	l I				39 40 +++	-		GPIO.29		21
	wPi	Name	Mode	l V	 Physical +Pi 4B	l V	Mode	Name	wPi	BCM

Here, we can see that physical pin 36 maps to wPi 27 (BCM $16 == GPIO\ 16$). Why the fuck is this so needlessly confusing?

Set the pin to output:

gpio mode 27 out

Turn the relay on:

gpio write 27 1

Turn the relay off:

gpio write 27 0