

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The version of wiringpi in the Raspberry Pi OS repos is out of date and doesn't support the Pi 4B, so we have to install a newer version.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

```
$ gpio readall
```

-----Pi 4B-----												
BCM	wPi	Name	Mode	V	Physical	V	Mode	Name	wPi	BCM		
		3.3v			1	2		5v				
2	8	SDA.1	IN	1	3	4		5v				
3	9	SCL.1	IN	1	5	6		0v				
4	7	GPIO. 7	IN	1	7	8	1	TxD	15	14		
		0v			9	10	1	RxD	16	15		
17	0	GPIO. 0	IN	0	11	12	0	GPIO. 1	1	18		
27	2	GPIO. 2	IN	0	13	14		0v				
22	3	GPIO. 3	IN	0	15	16	0	GPIO. 4	4	23		
		3.3v			17	18	0	GPIO. 5	5	24		
10	12	MOSI	IN	0	19	20		0v				
9	13	MISO	IN	0	21	22	0	GPIO. 6	6	25		
11	14	SCLK	IN	0	23	24	1	CE0	10	8		
		0v			25	26	1	CE1	11	7		
0	30	SDA.0	IN	1	27	28	1	SCL.0	31	1		
5	21	GPIO.21	IN	1	29	30		0v				
6	22	GPIO.22	IN	1	31	32	0	GPIO.26	26	12		
13	23	GPIO.23	IN	0	33	34		0v				
19	24	GPIO.24	IN	0	35	36	0	GPIO.27	27	16		
26	25	GPIO.25	IN	0	37	38	0	GPIO.28	28	20		
		0v			39	40	0	GPIO.29	29	21		
BCM	wPi	Name	Mode	V	Physical	V	Mode	Name	wPi	BCM		
-----Pi 4B-----												

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
```