

# Holiday Lights Configuration

Turn on your Raspberry Pi. You will first need to install some necessary “libraries” - special files that will help us control the lights.

To do this, we will be using a “terminal”, as shown in the picture below:



Type in the following commands in the terminal:

```
sudo pip3 install rpi_ws281x
```

If this causes errors, do the following command instead:

```
sudo pip3 install --trusted-host pypi.org --trusted-host  
files.pythonhosted.org rpi_ws281x
```

*(you'll see a bunch of text, as the library is being downloaded)*

```
sudo pip3 install adafruit-circuitpython-neopixel
```

If this causes errors, do the following command instead:

```
sudo pip3 install --trusted-host pypi.org --trusted-host
files.pythonhosted.org adafruit-circuitpython-neopixel
```

*(you'll see a bunch of text again)*

Now, we need to make a few configuration changes on your Raspberry Pi. From the terminal type in the following command:

```
sudo nano /etc/modprobe.d/snd-blacklist.conf
```

This will open an editor and you will be editing the configuration file that opened up. Add the following line to the end of this file:

```
blacklist snd_bcm2835
```

This line will deactivate audio output, which will allow us to control the lights via GPIO 18.

Save the file by pressing CTRL + O then Enter  
Close the file by pressing CTRL + X.

Now open another configuration file:

```
sudo nano /boot/config.txt
```

Find the following lines in that file (use the arrow keys to scroll through the file):

```
# Enable audio (loads snd_bcm2835)
dtparam=audio=on
```

Add a hash key (#) in front of dtparam, so it looks as follows:

```
#dtparam=audio=on
```

Save the file: CTRL+O then "Enter"  
Exit the file CTRL+X then "Enter".

Reboot your Raspberry Pi. You can do that by clicking on the raspberry symbol on your desktop and finding an option to reboot.

When your Raspberry Pi starts back up, you are already to control your lights.