

Setting up the Slave UMDs



This page is work in progress and is incomplete

Slave Raspberry Pi(s)

The slave Raspberry Pi(s) download the latest 'my_data.txt' from the Master Raspberry Pi (once a second) using a 'wget' command, this means that each slave knows what to display. The my_data.txt file is downloaded every second, so changes to the file via the web interface propagate through the UMDs very quickly.

The 'my_data.txt' file has 8 lines, each line is for a particular display, so for example, line 1 & 2 are for LCD1 and reference monitors 1 and 2. Lines 5 & 6 are for LCD and reference monitors 5 & 6.

The setup of the slave UMDs is very simple compared to the Master. Setup Raspbian, copy some files and away you go.

Set Static IP Address

To set a static IP address, we need to login to the RPi via SSH and change the following file:

The default login is **username: pi** and **password: raspberry** (if this is an existing unit that is misbehaving, the login will be **pi** and **EricssOn**)

```
/etc/dhcpd.conf
```

Enter the following

```
sudo nano /etc/dhcpd.conf
Add these lines to the end of the file (default is dhcp) using your own IP Address details
eth0
    static ip_address=192.168.1.11/24
    static routers=192.168.1.1
    static domain_name_servers=192.168.1.4
```

Use Ctrl-X to exit and Y to save, now reboot the pi and connect to the new address

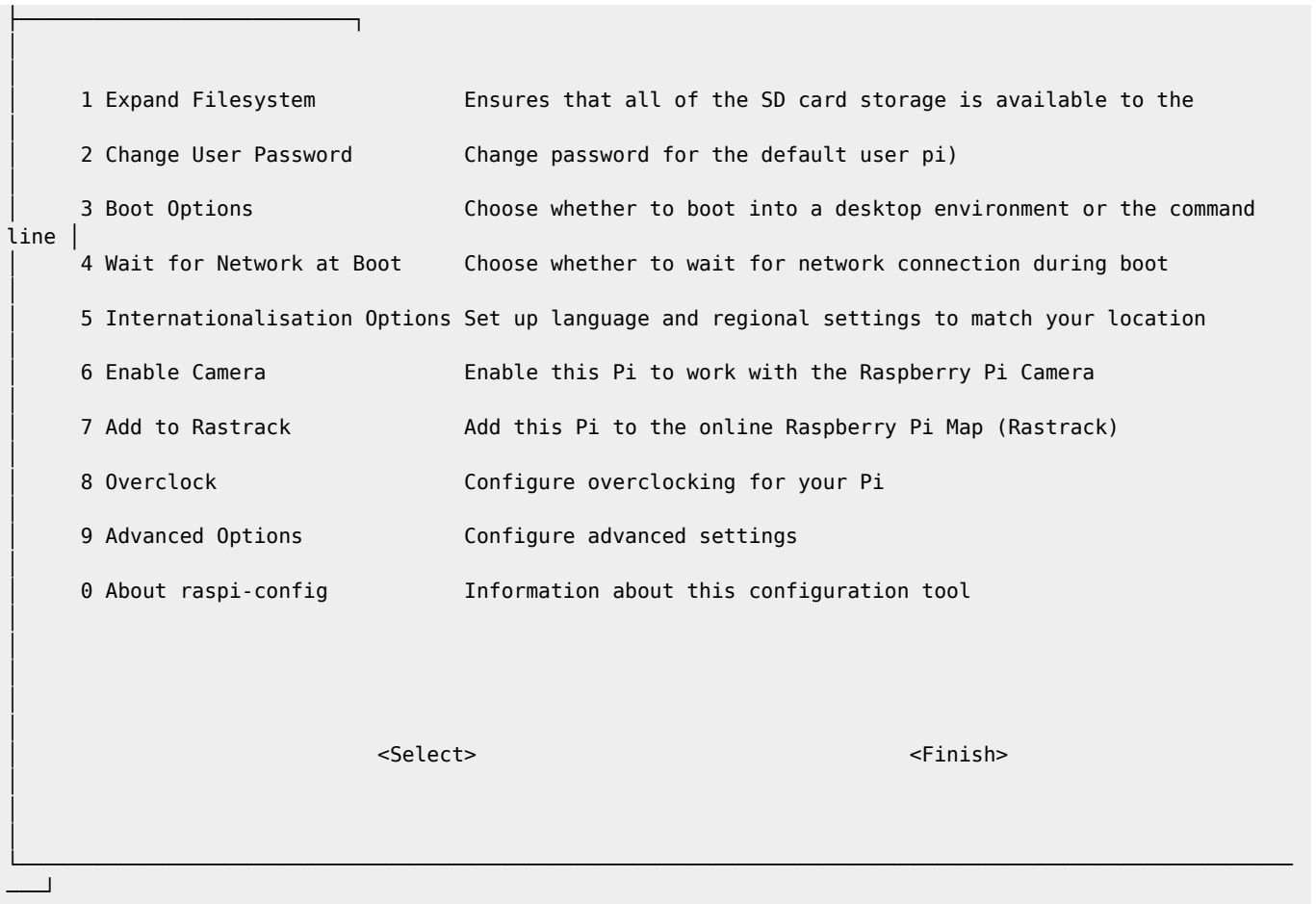
Raspi Config

From the terminal, run:

```
sudo raspi-config
```

You will see the following menu, there are several items we want to change here.

```
|_____| Raspberry Pi Software Configuration Tool (raspi-config)
```



Select Option 2 (Change User Password) - Change the password to **Ericss0n**

Select Option 3 (Boot Options) - Change to **B2 Console Autologin Text console, automatically logged in as 'pi' user**

Select Option 9 (Advanced) then A2 (HostName) - Change the Hostname to **UMD00n** (where n is the display number)

Select **Finish** when asked to reboot select **Yes**

Update RPI

Even if you downloaded the latest version of Raspbian, chances are there are some updates. To update the RPi use the following command line:

```
sudo apt-get update && sudo apt-get upgrade -y
```

This will most likely take a few minutes on a new install.

Create Folder, Copy Files, Set Permissions

To hold the UMD LCD files, create a folder in your home location called Python and give the following rights:

```
mkdir /home/pi/Python
sudo chmown www-data /home/pi/Python
sudo chmod 777 /home/pi/Python
```

We need to copy the files to the /home/pi/Python location, for the Slave there are four files:

- launchUMD.sh - A script to auto start the UMD at boot

- getData - This is the script that gets the updated my_data.txt file
- my_data.txt - This holds the LCD data text, and downloaded from the Master via wget commands
- UMDisplay02.py - The Python code that runs the LCD

These files need to be copied to the /home/pi/Python location

```
sudo chmod 777 /home/pi/Python/*
```

Edit getData File

The getData file contains the wget command that pulls the latest version of my_data.txt from the Master Pi. The my_data.txt contains the 8 lines of text for the four LCD displays (2 lines for each LCD).

Example my_data.txt

```
UPPER MONITOR (1) - H264 SD
LOWER MONITOR (2) - H264 HD
UPPER MONITOR (3) - HEVC SD
LOWER MONITOR (4) - HEVC HD
UPPER MONITOR (5) - UHD TV
LOWER MONITOR (6) - HDR UHD TV
UPPER MONITOR (7) - Sky Cinema HD
LOWER MONITOR (8) - Sky Sports UHD
```

Example getData

```
sudo wget -q http://192.168.1.11/my_data.txt >null -O my_data.txt
```

In the getData file we need to replace the IP Address with the IP Address of our Master UMD Pi.

To change the IP Address use:

```
sudo nano /home/pi/Python/getData
```

You could use HostNames, but I have found hostnames on Pi's pretty unreliable.

Edit launchUMD File

The launchUMD file contains a link to the UMDisplay0x.py file

```
#!/bin/sh
# launchUMD.sh
# navigate to home directory, then to this directory then launch script

cd /
cd home/pi/Python
sudo python UMDisplay01.py &
cd /
```

This file needs to be edited so that the line `sudo python UMDisplay1.py &` points to the correct UMD Device (so if this is your third UMD Device it needs to contain UMDisplay03)

```
sudo nano launchUMD.sh
```

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