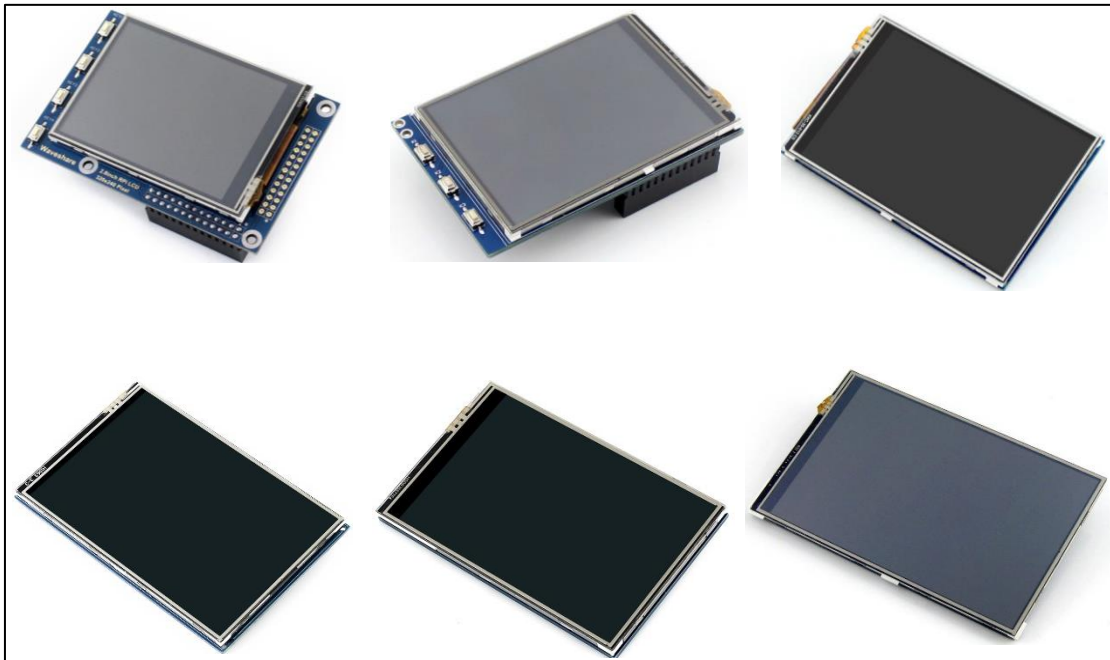




# RPI LCD User Manual

## OVERVIEW

We have various kinds of RPi LCD which are designed for Raspberry Pi. This instruction will show you how to use RPi LCD with Raspberry Pi.



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## HOW TO USE<sup>1</sup>

The RPi LCD can be driven in two ways: Method 1. install driver to your Raspbian OS. Method 2. use the Ready-to-use image file of which LCD driver was pre-installed.

## HARDWARE CONNECTION

Take 2.8inch RPi LCD (A) as example, you need to insert the RPi LCD to 40Pin header of Raspberry Pi.



## METHOD 1 DRIVER INSTALLING

1. Download OS image file from [Raspberry Pi Website](https://www.raspberrypi.org/) (Raspbian/Ubuntu Mate/Kali/RetroPie)
2. Download image and extract to get .img file

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<sup>1</sup> The instruction is based on Raspbian OS.

3. Insert SD card to your PC, format it and write .img file to SD card by Win32 Disk Imager software.
4. Insert SD card to your Raspberry Pi and power on. Access Raspberry Pi via SSH or you can connect HDMI screen and keyboard to it directly. Open Terminal
5. Download driver, don' t forget connect network

```
git clone https://github.com/waveshare/LCD-show.git  
  
cd LCD-show/
```

- 5.1. For 2.8inch RPi LCD (A)

```
sudo ./LCD28-show  
  
#or (for Raspbian-Stretch-Lite)  
  
sudo ./LCD28-show lite
```

- 5.2. For 3.2inch RPi LCD (B)

```
sudo ./LCD32-show  
  
#or (for Raspbian-Stretch-Lite)  
  
sudo ./LCD32-show lite
```

- 5.3. For 3.5inch RPi LCD (A)

```
sudo ./LCD35-show  
  
#or (for Raspbian-Stretch-Lite)  
  
sudo ./LCD35-show lite
```

- 5.4. For 3.5inch RPi LCD (B) old version

```
sudo ./LCD35B-show  
  
#or (for Raspbian-Stretch-Lite)
```

```
sudo ./LCD35B-show lite
```

5.5. For 3.5inch RPi LCD (B) V2 version

```
sudo ./LCD35B-show-V2  
  
#or (for Raspbian-Stretch-Lite)  
  
sudo ./LCD35B-show-V2 lite
```

5.6. For 3.5inch RPi LCD (C)

```
sudo ./LCD35C-show  
  
#or (for Raspbian-Stretch-Lite)  
  
sudo ./LCD35C-show lite
```

5.7. For 4inch RPi LCD (A)

```
sudo ./LCD4-show  
  
#or (for Raspbian-Stretch-Lite)  
  
sudo ./LCD4-show lite
```

6. Waiting for rebooting

## METHOD 2 USER READY-TO-USE IMAGE

- Download the ready-to-use image which has driver pre-installed
  - [2.8inch RPi LCD \(A\)](#)
  - [3.2inch RPi LCD \(A\)](#)
  - [3.5inch RPi LCD \(A\)](#)
  - [3.5inch RPi LCD \(B\) V2](#)
  - [3.5inch RPi LCD \(C\)](#)
  - [4inch RPi LCD \(A\)](#)

- Use Win32DiskImage to write the image to SD card
- Insert SD card to Raspberry Pi and power on.

## SETTING ORIENTATION

After installing driver, you can change screen' s orientation by executing commands

as below:

```
cd LCD-show/
```

1. For 2.8inch RPi LCD (A)

```
sudo ./LCD28-show X  
  
#X should be 0, 90, 180 or 270
```

2. For 3.2inch RPi LCD (B)

```
sudo ./LCD32-show X  
  
#X should be 0, 90, 180 or 270
```

3. For 3.5inch RPi LCD (A)

```
sudo ./LCD35-show X  
  
#X should be 0, 90, 180 or 270
```

4. For 3.5inch RPi LCD (B)

```
sudo ./LCD35-show X  
  
#X should be 0, 90, 180 or 270
```

5. For 3.5inch RPi LCD (B) V2

```
sudo ./LCD32B-show-V2 X  
  
#X should be 0, 90, 180 or 270
```

6. For 3.5inch RPi LCD (C)

```
sudo ./LCD35-show X  
  
#X should be 0, 90, 180 or 270
```

7. For 4inch RPi LCD (A)

```
sudo ./LCD4-show X  
  
#X should be 0, 90, 180 or 270
```

## CALIBRATION

If the touch of RPi LCD is not calibrated, you can calibrate the touch screen.

1. Copy and install calibrator tool

```
cp LCD-show/xinput-calibrator_0.7.5-1_armhf.deb ~/
  
sudo dpkg -i -B xinput-calibrator_0.7.5-1_armhf.deb
```

2. Install X service

```
sudo apt-get install xserver-xorg-input-evdev  
sudo cp -rf /usr/share/X11/xorg.conf.d/10-evdev.conf /usr/share/X11/xorg.conf.d/45-evdev.conf  
sudo reboot
```

3. Running calibrator and finish calibration

```
DISPLAY=:0.0 xinput_calibrator
```

4. Saving the calibration data to 99-clibration.conf file

```
sudo mkdir /etc/X11/xorg.conf.d  
  
sudo nano /etc/X11/xorg.conf.d/99-calibration.conf
```

The calibration data looks like;

```
Section "InputClass"  
    Identifier      "calibration"  
    MatchProduct   "ADS7846 Touchscreen"  
    Option "Calibration" "208 3905 288 3910"  
    Option "SwapAxes" "0"  
EndSection
```