

# 13.3inch HDMI LCD (H) V2

## User Manual



## CONTENT

Introduction .....	3
Features.....	3
How to use .....	4
Working with PC .....	4
Tablet PC Settings.....	4
Working with Raspberry Pi.....	8
Rotation .....	9
Buttons.....	11

## INTRODUCTION

13.3inch, IPS, 1920x1080, Capacitive Touch Screen LCD with Toughened Glass

Cover, Supports Multi mini-PCs, Multi Systems

## FEATURES

- 13.3inch IPS screen, 1920x1080 high resolution
- Toughened glass capacitive touch panel, 6H hardness
- Supports popular mini PCs such as Raspberry Pi, BB Black, as well as general desktop computers
  - When works with Raspberry Pi, supports Raspbian, Ubuntu, WIN10 IOT, single touch, and driver free
  - When work as a computer monitor, supports Windows 10/8.1/8/7, ten-points touch, and driver free
- Multi languages OSD menu, for power management, brightness/contrast adjustment, etc.
- 3.5mm audio jack, supports HDMI audio output
- Embedded ferrite Hi-Fi speaker
- Also supports VGA input (**specific cable is required and should be purchased separately**)
- 75x75mm spacing mounting holes (M4 screw hole) for general wall mount
- Comes with 75° tilt angle stand

## HOW TO USE

### WORKING WITH PC

This product supports Windows 10/8.1/8/7 OS.

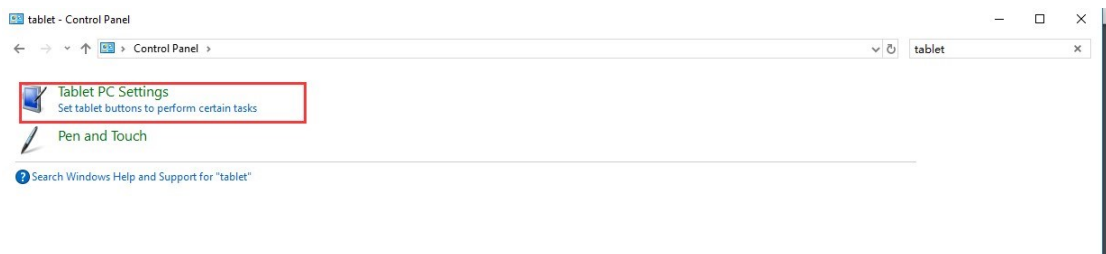
1. Connect 12/1A power adapter to the DC interface of LCD, after connecting the backlight will light on.
2. Connect the TOUCH interface of LCD to the USB interface on your PC. Waiting for a moment, the touch will be recognized by Windows automatically
3. Connect Display cable
  - If you use HDMI, you need to connect the HDMI interface of LCD to the HDMI port of PC. About 5s later, you can see that the LCD display properly.
  - Use VGA, you need to connect the VGA interface of LCD to PC's VGA ports by specific cable which should be purchased separately

#### 【Note】

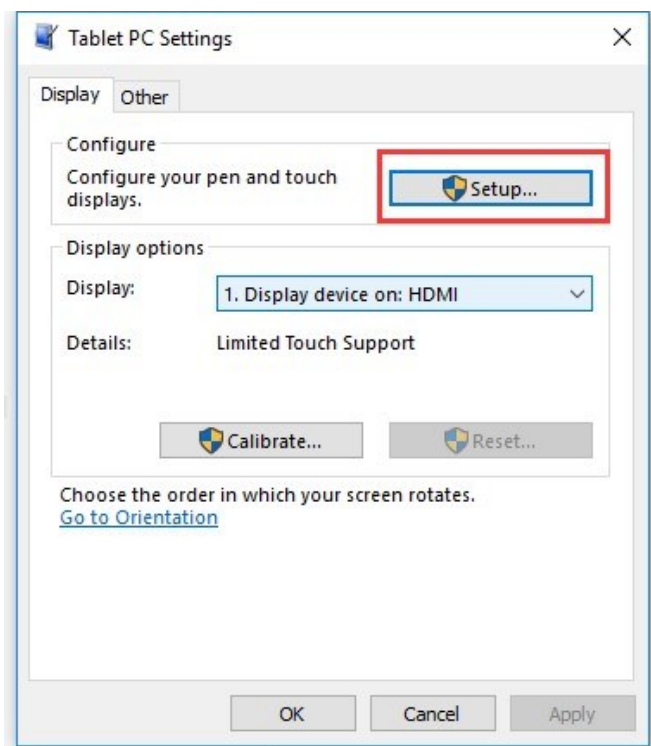
- Some of PC cannot support HDMI screen Hot Plug. In this case, you need to restart your PC
- HP audio output only works while using HDMI communication.
- Mini HDMI to VGA Cable (Specific Cable) is necessary and need to be purchased separately if you use VGA communication.

As we know, when multiple displays are detected by your PC, the LCD can only be used to control the cursor on main display. So it is proposed to set the touch LCD as the main display. In Windows 10, there is Tablet PC Settings allow you to set touchscreen to control other displays instead of main display. Here we use Waveshare 7inch HDMI LCD (C) as example to show you how to do this setting.

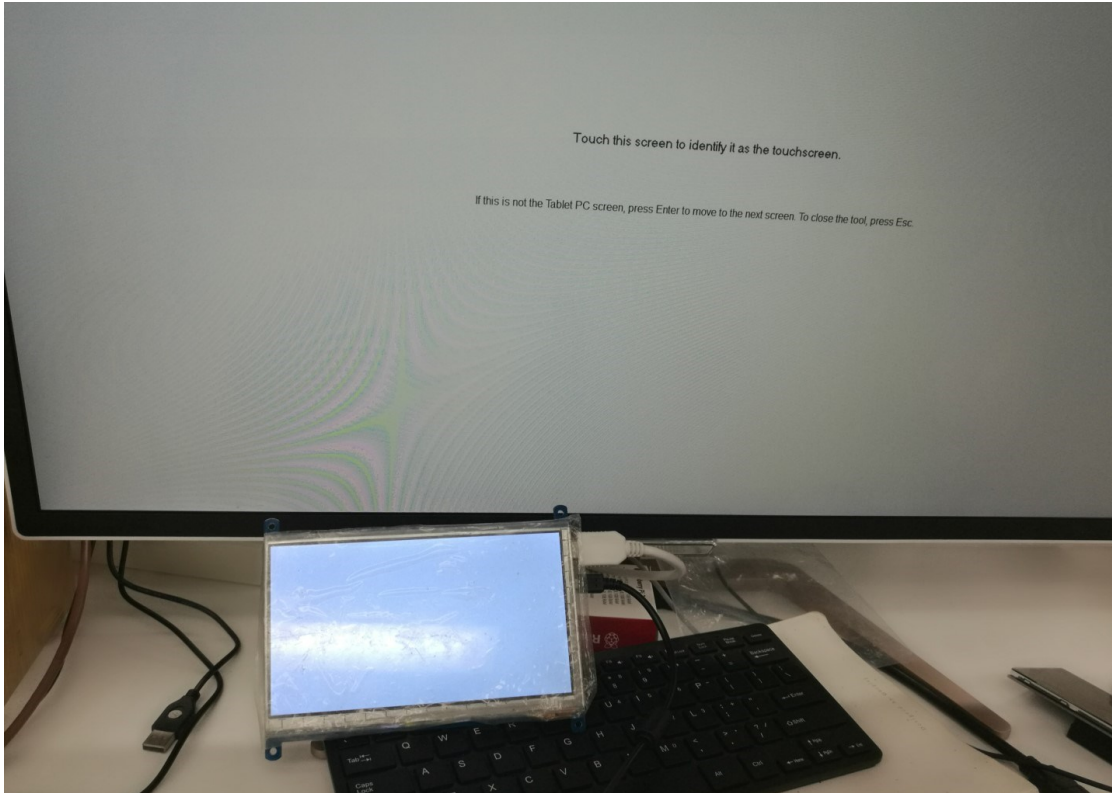
1. Connect your touchscreen as [Hardware Connection](#).
2. Open Control Panel and search Tablet PC Setting, then open this tool. Note that if you didn't connect touchscreen first, this tool couldn't be searched.



3. Click button "Setup..." to begin setting



4. To this step, you can find there is prompt on your first screen with white background color.



5. Press "Enter" on keyboard, this operation work as tell the PC this screen is not the touchscreen I want to control. Then, you can find that the prompt has turn to

the second display (the one we want the touch controls)



6. Touch the center of touchscreen, to set this display as touchscreen. If there are only two displays, after touch, the setting will finish, and you can find that touchscreen controls itself now.

**【Note】** This method can be used to make touchscreens control different displays if there are multiple touchscreen connected.

## WORKING WITH RASPBERRY PI

Supports Raspbian/Ubuntu mate/Windows 10 iot Core

When working with Raspberry Pi, you should set the resolution of the LCD by yourself, or else the LCD screen will not work.

1. Connect 12/1A power adapter to the DC interface of LCD, after connecting the backlight will light on
2. Download the Raspbian image from Raspberry Pi web site.
3. Write the image to a TF card and append the following lines to the config.txt file which is locate in the root of your TF card:

```
max_usb_current=1
hdmi_group=2
hdmi_mode=82
hdmi_cvt 1920 1080 60 6 0 0 0
```

You must make sure that there are no spaces on either side of the equal sign.

4. Connect the Touch interface of LCD to USB port of Raspberry Pi
5. Connect HDMI interface of LCD to HDMI port of Raspberry Pi
6. connect the TF card to your Pi then power up.



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## ROTATION

### Display Rotating

1. To rotating the display, you can append this statement to the config file

```
display_rotate=1 #1: 90; 2: 180; 3: 270
```

2. Reboot the Raspberry Pi

```
sudo reboot
```

### Touch Rotating

Note: To rotate the touch, you can re-compile the kernel as well. There is an example for reference (use 7inch HDMI LCD (C).)

- [Re-Compilation Method](#)

Another way, you can set the libinput.

1. Install libinput

```
sudo apt-get install xserver-xorg-input-libinput
```

2. create an xorg.conf.d folder


```
sudo mkdir /etc/X11/xorg.conf.d
```

3. copy file 40-libinput-conf to the folder which we created

```
sudo cp /usr/share/X11/xorg.conf.d/40-libinput.conf /etc/X11/xorg.conf.d/
```

4. Append a statement to touchscreen part of the file as below:

```
sudo nano /etc/X11/xorg.conf.d/40-libinput.conf
```



```
pi@raspberrypi: ~
GNU nano 2.7.4 File: /etc/X11/xorg.conf.d/40-libinput.conf
EndSection
Section "InputClass"
  Identifier "libinput touchscreen catchall"
  MatchIsTouchscreen "on"
  Option "CalibrationMatrix" "0 1 0 -1 0 1 0 0 1"
  MatchDevicePath "/dev/input/event*"
  Driver "libinput"
EndSection
Section "InputClass"
  Identifier "libinput tablet catchall"
  MatchIsTablet "on"
  MatchDevicePath "/dev/input/event*"
  Driver "libinput"
EndSection
^G Get Help  ^C Write Out  ^W Where Is  ^K Cut Text  ^J Justify   ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text ^T To Spell  ^_ Go To Line
```

##### 5. save and reboot your Pi

```
sudo reboot
```

After completing these steps. The LCD could rotate 90 degree both display and touch.

##### 【Note】

90 degree: Option "CalibrationMatrix" "0 1 0 -1 0 1 0 0 1"

180 degree: Option "CalibrationMatrix" "-1 0 1 0 -1 1 0 0 1"

270 degree: Option "CalibrationMatrix" "0 -1 1 1 0 0 0 0 1"

## BUTTONS



1. **Power:** Open or Close LCD display. If you don't need the LCD for long time, you can use this button to reduce consumption
2. **Menu:** Open menu and "Return" function
3. **Up/Left/Down/Right:** Direction button
4. **Exit:** Return button