

# 7inch HDMI LCD (C)

## User Manual



## CONTENT

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

## INTRODUCTION

1024×600, 7inch Capacitive Touch Screen LCD, HDMI interface, supports various systems

- 1024×600 high resolution, IPS screen
- Capacitive touch control
- For the Raspberry Pi, supports Raspbian, Ubuntu, single touch, and driver free
- When work as a computer monitor, supports Windows 10/8.1/8/7, five-points touch, and driver free
- Supports Banana Pi / Banana Pro, comes with Lubuntu, Raspbian images
- Supports BB Black, comes with Angstrom image
- For other mini-PCs, driver is required and should be developed by users
- HDMI interface for displaying, USB interface for touch control
- Backlight can be turned off manually to lower power consumption

## HOW TO USE

### WORKING WITH PC

This product supports Windows 10/8.1/8/7 OS. For the Windows 10/8.1/8 OS, the touch screen supports multi-touch up to 5 points. For some Window 7 OS, the touch screen supports single touch only.

1. Turn on the "backlight" switch
2. Connect USB Port of LCD to USB Port of PC
3. Connect HDMI Port of LCD to HDMI Port of PC.

**【Note】** Please first connect the USB Ports then connect the HDMI Port).

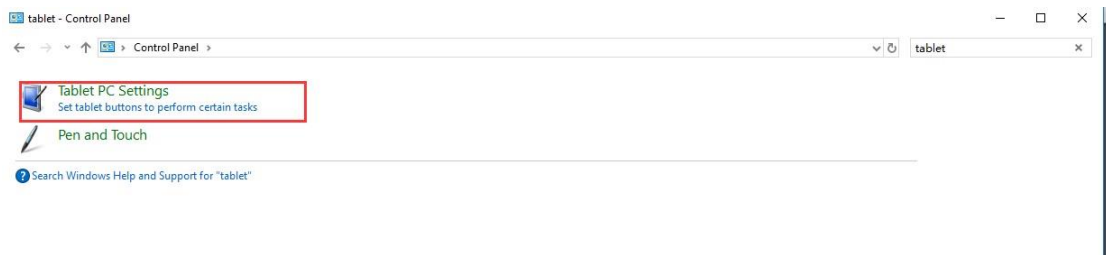
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### TABLET PC SETTINGS

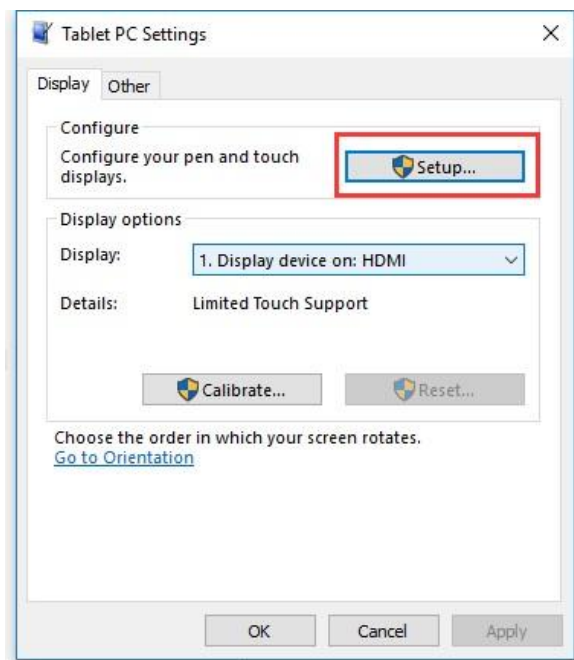
As we know, when multiple displays are detected by your PC, the LCD can only be used to control the cursor on main display. So it is proposed to set the touch LCD as the main display. In Windows 10, there is Tablet PC Settings allow you to set touchscreen to control other displays instead of main display. 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](#).

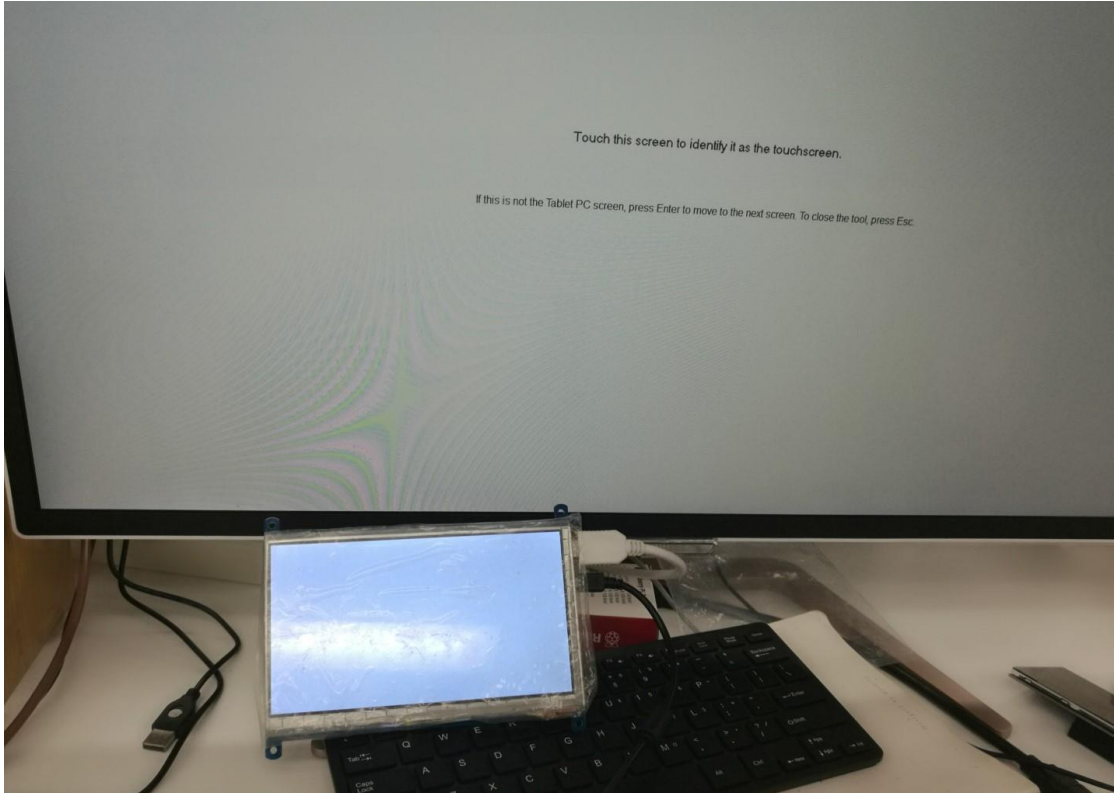
2. Open Control Panel and search Tablet PC Setting, then open this tool. Note that if you didn't connect touchscreen first, this tool couldn't be searched.



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

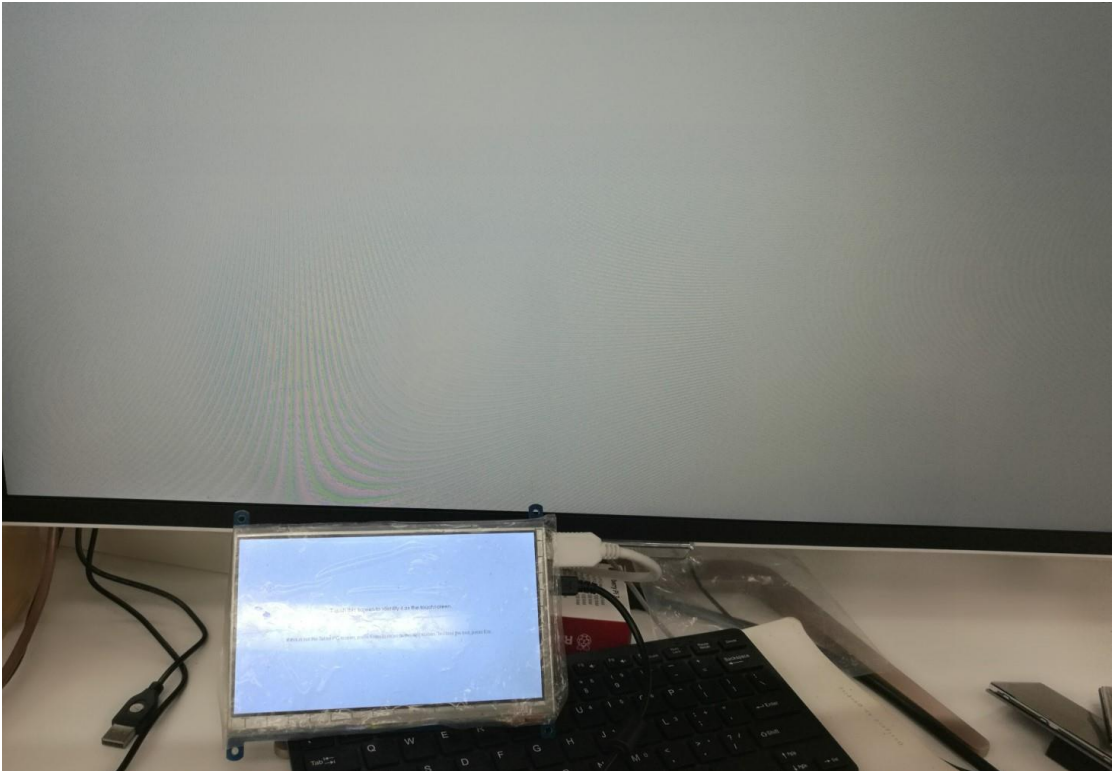


4. To this step, you can find there is prompt on your first screen with white background color.



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

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

1. Turn on the "backlight" switch
2. Connect the HDMI Port of LCD to HDMI Port of Pi
3. Connect USB Port of LCD to USB Port of P
4. Download the Raspbian image from Raspberry Pi website.
5. Write the image to a TF card and append the following lines to the config.txt file

which locates in the root of your TF card:

```
max_usb_current=1
hdmi_group=2
hdmi_mode=87
hdmi_cvt 1024 600 60 6 0 0 0
hdmi_drive=1
```

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

6. Save and connect the TF card to your Pi then power up.

### 【Note】

1) Make sure you have appended configure lines as above. Or the LCD could not work properly. If the LCD work in abnormal states for long time, it may destroy.

2) There is a potentiometer on the backside of LCD, at your first use, you had better adjust it for best display effect.



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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 ^O 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"

## IMAGES

For BB Black and BananaPi/ BananaPi Pro, we provide test image. The LCD could only work with this image.

- BB Black
  - [7inch HDMI LCD \(C\) Angstrom image](#)
- BananaPi/BananaPi Pro
  - [7inch HDMI LCD \(C\) Raspian image](#)
  - [7inch HDMI LCD \(C\) Lubuntu image](#)