

如何修改显示方向和触摸

(HDMI-电容触摸)

一、HDMI 接口型 LCD 旋转显示方法：

(适用于 HDMI 接口型 LCD(如 5 寸 B 款 (MPI5001), 7 寸 B 款, 7 寸 C 款), GPIO 接口型不适用)

打开 `config.txt` 文件, 在树莓派中执行命令:

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

找到 “`display_rotate`” 参数项, 如果没有该项则添加进去, 具体参数含义如下:

如需旋转 0 度, 则对应值为:

```
display_rotate=0
```

如需旋转 90 度, 则对应值为:

```
display_rotate=1
```

如需旋转 180 度, 则对应值为:

```
display_rotate=2
```

如需旋转 270 度, 则对应值为:

```
display_rotate=3
```

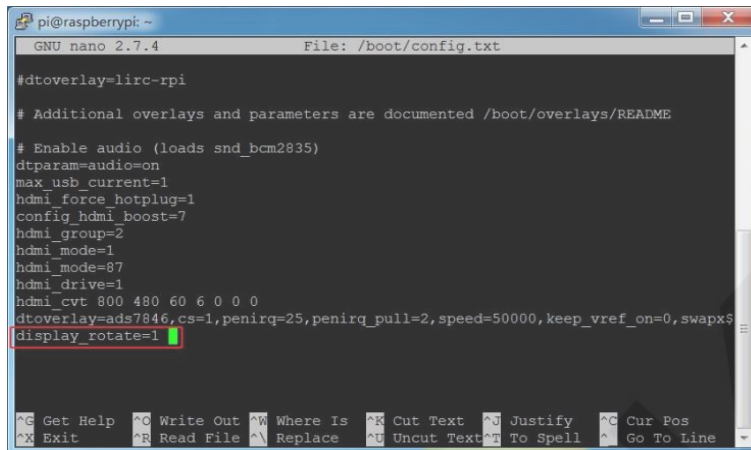
如需水平翻转显示, 则对应值为:

```
display_rotate=0x10000
```

如需垂直翻转显示, 则对应值为:

```
display_rotate=0x20000
```

按键盘 **Ctrl+X**，退出；



```
pi@raspberrypi: ~
GNU nano 2.7.4 File: /boot/config.txt

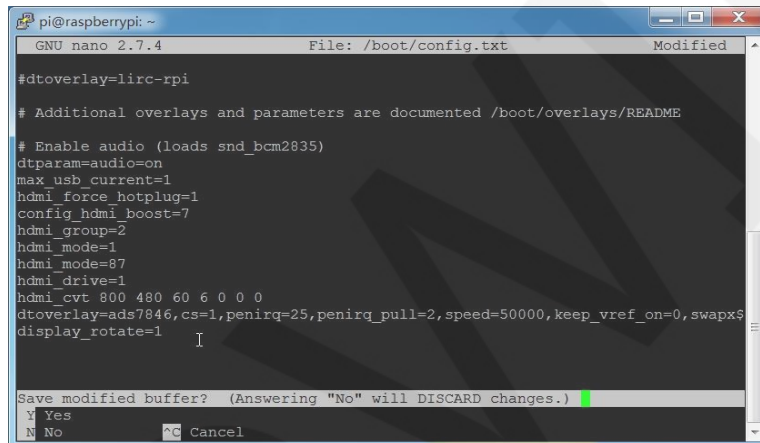
#dtoverlay=lirc-rpi

# Additional overlays and parameters are documented /boot/overlays/README

# Enable audio (loads snd_bcm2835)
dtparam=audio=on
max_usb_current=1
hdmi_force_hotplug=1
config_hdmi_boost=7
hdmi_group=2
hdmi_mode=1
hdmi_mode=87
hdmi_drive=1
hdmi_cvt 800 480 60 6 0 0 0
dtoverlay=ads7846,cs=1,penirq=25,penirq_pull=2,speed=50000,keep_vref_on=0,swapx$
display_rotate=1

^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
```

按 **Y**，确认保存；



```
pi@raspberrypi: ~
GNU nano 2.7.4 File: /boot/config.txt Modified

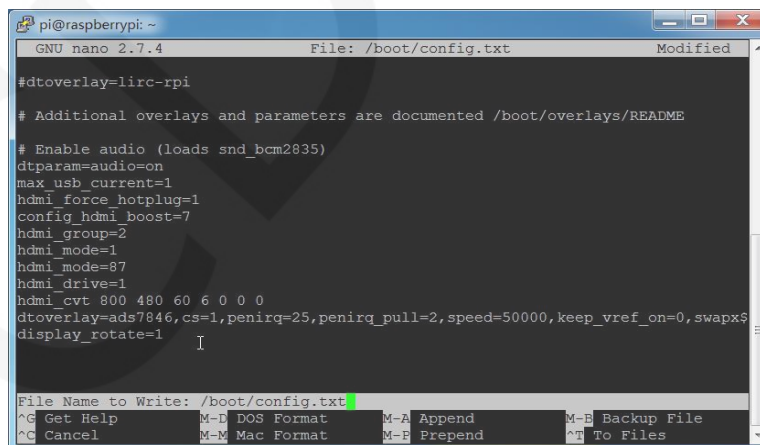
#dtoverlay=lirc-rpi

# Additional overlays and parameters are documented /boot/overlays/README

# Enable audio (loads snd_bcm2835)
dtparam=audio=on
max_usb_current=1
hdmi_force_hotplug=1
config_hdmi_boost=7
hdmi_group=2
hdmi_mode=1
hdmi_mode=87
hdmi_drive=1
hdmi_cvt 800 480 60 6 0 0 0
dtoverlay=ads7846,cs=1,penirq=25,penirq_pull=2,speed=50000,keep_vref_on=0,swapx$
display_rotate=1

Save modified buffer? (Answering "No" will DISCARD changes.)
Y Yes
N No ^C Cancel
```

按 **Enter**，确认保存文件名；



```
pi@raspberrypi: ~
GNU nano 2.7.4 File: /boot/config.txt Modified

#dtoverlay=lirc-rpi

# Additional overlays and parameters are documented /boot/overlays/README

# Enable audio (loads snd_bcm2835)
dtparam=audio=on
max_usb_current=1
hdmi_force_hotplug=1
config_hdmi_boost=7
hdmi_group=2
hdmi_mode=1
hdmi_mode=87
hdmi_drive=1
hdmi_cvt 800 480 60 6 0 0 0
dtoverlay=ads7846,cs=1,penirq=25,penirq_pull=2,speed=50000,keep_vref_on=0,swapx$
display_rotate=1

File Name to Write: /boot/config.txt
^G Get Help M-D DOS Format M-A Append M-B Backup File
^C Cancel M-M Mac Format M-P Prepend M-T To Files
```

重启树莓派即可生效。

```
sudo reboot
```

二、如何旋转电容触摸:

1. 安装 libinput

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

2. 在/etc/X11/下创建 xorg.conf.d 目录 (如果该目录已存在, 则直接进行第 3 步)

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

3. 复制 40-libinput.conf 文件到刚刚创建的目录下

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

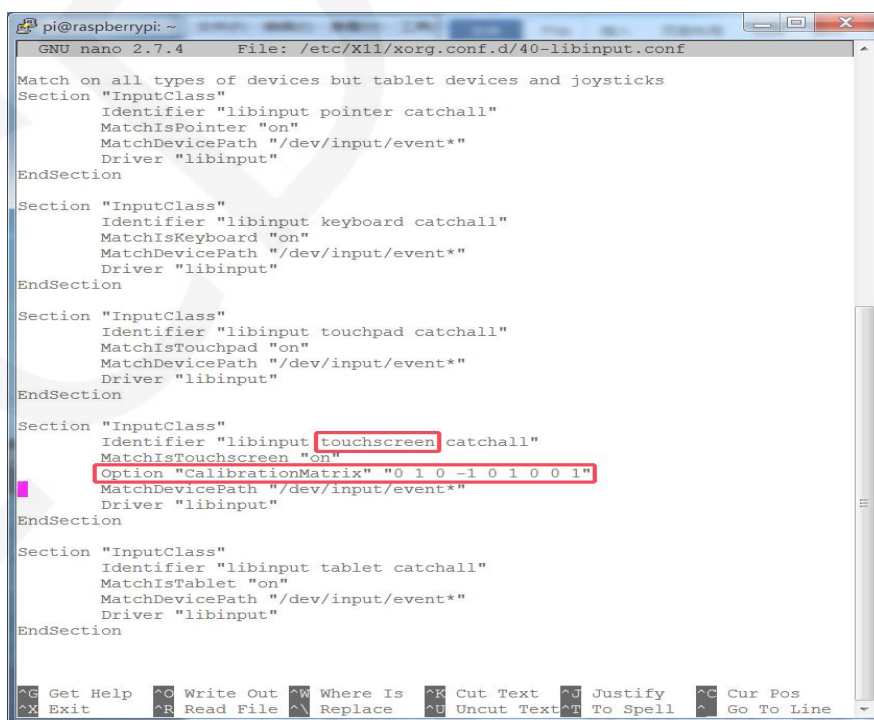
4. 打开并编辑 40-libinput.conf 文件

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

找到 **touchscreen** 的部分, 在里面添加以下语句 (旋转 90 度), 然后按 **Ctrl+X** 键退出; 按 **Y** 键确定保存; 按 **Enter** 键确认保存文件名

```
Option "CalibrationMatrix" "0 1 0 -1 0 1 0 0 1"
```

如下图:



```
pi@raspberrypi: ~
GNU nano 2.7.4 File: /etc/X11/xorg.conf.d/40-libinput.conf
Match on all types of devices but tablet devices and joysticks
Section "InputClass"
  Identifier "libinput pointer catchall"
  MatchIsPointer "on"
  MatchDevicePath "/dev/input/event*"
  Driver "libinput"
EndSection

Section "InputClass"
  Identifier "libinput keyboard catchall"
  MatchIsKeyboard "on"
  MatchDevicePath "/dev/input/event*"
  Driver "libinput"
EndSection

Section "InputClass"
  Identifier "libinput touchpad catchall"
  MatchIsTouchpad "on"
  MatchDevicePath "/dev/input/event*"
  Driver "libinput"
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

^C 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. 重启树莓派

```
sudo reboot
```

完成以上步骤即可进行 90 度旋转。

注：

0 度旋转对应参数：

```
Option "CalibrationMatrix" "1 0 0 0 1 0 0 0 1"
```

90 度旋转对应参数：

```
Option "CalibrationMatrix" "0 1 0 -1 0 1 0 0 1"
```

180 度旋转对应参数：

```
Option "CalibrationMatrix" "-1 0 1 0 -1 1 0 0 1"
```

270 度旋转对应参数：

```
Option "CalibrationMatrix" "0 -1 1 1 0 0 0 0 1"
```