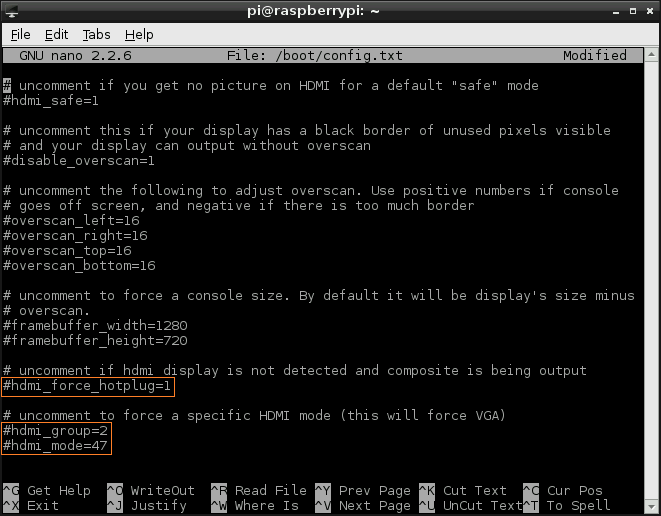
**Based on RASPBIAN JESSIE**

Version: March 2016  
Release date: 2016-03-18  
Kernel version: 4.1

**HDMI setting**

***<1>***To ensure that the necessary kernel modules are loaded at boot 

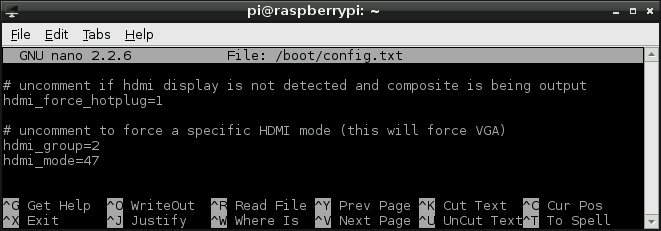
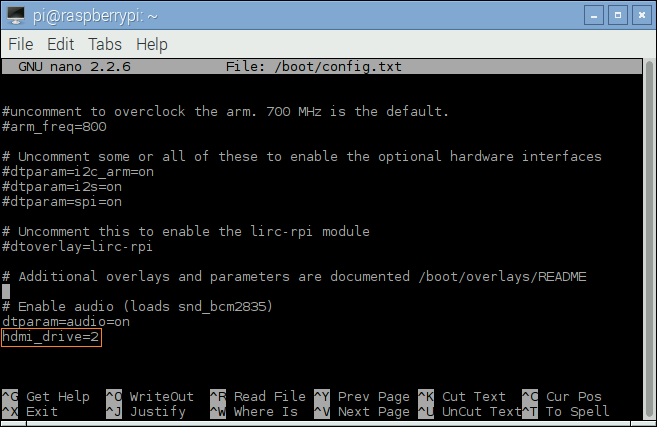
|  |
| --- |
| pi@raspberrypi **~ $**   sudo nano /boot/config.txt |

***<2>***Uncomment following three lines in config.txt by removing '#' located at start of the line. (check Images below)  
   
    
        
**hdmi\_force\_hotplug=1**      pretends that HDMI device is always attached  
**hdmi\_group**                            specifies whether monitor is DMT type (Computers) or CEA type (TV)  
**hdmi\_mode**                            specifies the resolution of monitor.  
  
***<3>*For hdmi\_group value selection**: If you’re using output as Computer monitor then replace value ’1′ with ’2′, so the new config will be like :

|  |
| --- |
| hdmi\_group=2 |

(Select value 1 for TV, Select value 2 for monitor)  
***<4>*For hdmi\_mode value selection :** Now open **[eLinux RPi config](http://www.suptronics.com/miniPCkits/vga_resolution_en.html" \t "_blank)** scroll down, there in hdmi\_mode two tables are given, select the correct resolution as per your monitor. (Table1 if you’re using TV & Table2 if you’re using Monitor)  
Since my monitor’s resolution is 1440×900 px, hdmi\_mode=47 fits me the best. So, the modified config.txt will be like.

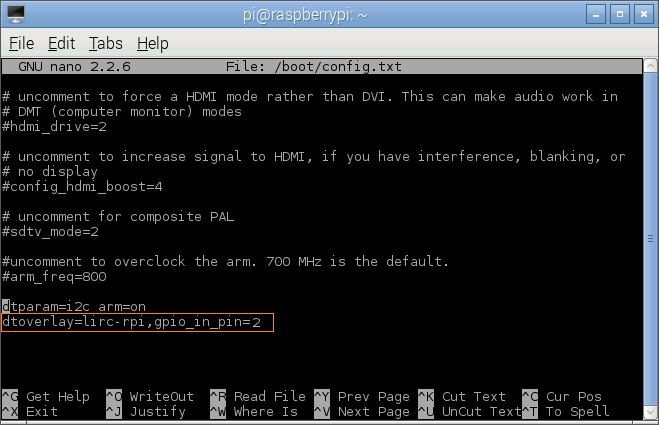
|  |
| --- |
| hdmi\_mode=47 |

**Overall my uncommented lines will look something like :   
  
  
  
*<5>*adding the "hdmi\_drive=2" line at the bottom   
  
  
  
*<6>*Save your changes by pressing Ctrl-x then Y  
  
*<7>*Reboot your Raspberry Pi**

|  |
| --- |
| pi@raspberrypi **~ $**   sudo reboot |
| Based on RASPBIAN JESSIE  Version: March 2016 Release date: 2016-03-18 Kernel version: 4.1  HDMI setting  <1> To ensure that the necessary kernel modules are loaded at boot    |  | | --- | | pi@raspberrypi **~ $**   sudo nano /boot/config.txt |   <2> Uncomment following three lines in config.txt by removing '#' located at start of the line. (check Images below)     http://www.suptronics.com/images%203/vga1.png        hdmi\_force\_hotplug=1      pretends that HDMI device is always attached hdmi\_group                            specifies whether monitor is DMT type (Computers) or CEA type (TV) hdmi\_mode                            specifies the resolution of monitor.  <3> For hdmi\_group value selection : If you’re using output as Computer monitor then replace value ’1′ with ’2′, so the new config will be like :   |  | | --- | | hdmi\_group=2 |   (Select value 1 for TV, Select value 2 for monitor)  <4> For hdmi\_mode value selection :  Now open [eLinux RPi config](http://www.suptronics.com/miniPCkits/vga_resolution_en.html" \t "_blank) scroll down, there in hdmi\_mode two tables are given, select the correct resolution as per your monitor. (Table1 if you’re using TV & Table2 if you’re using Monitor) Since my monitor’s resolution is 1440×900 px, hdmi\_mode=47 fits me the best. So, the modified config.txt will be like.   |  | | --- | | hdmi\_mode=47 |   Overall my uncommented lines will look something like :   http://www.suptronics.com/images%203/vga2.png  <5> adding the "hdmi\_drive=2" line at the bottom   http://www.suptronics.com/images%207/hdmi%20setting.png  <6> Save your changes by pressing Ctrl-x then Y  <7> Reboot your Raspberry Pi    |  | | --- | | pi@raspberrypi **~ $**   sudo reboot |   <8> Mouse right click the speaker icon and select audio output of HDMI   http://www.suptronics.com/images%206/x600%20setting%201.png  Testing the IR receiver  <9> Installing LIRC    |  | | --- | | pi@raspberrypi **~ $**   sudo apt-get install lirc |   <10> Add the two lines below to /etc/modules . This will start the modules up on boot. Pin 8 bellow will be used to take the output from the IR sensor.    |  | | --- | | pi@raspberrypi **~ $**   sudo nano /etc/modules |      |  | | --- | | lirc\_dev lirc\_rpi gpio\_in\_pin=2 |   http://www.suptronics.com/miniPCkits/images%201/ir_0%20-%20x3000%20(1).png  <11> Save your changes by pressing Ctrl-x then Y  <12> If you are using 3.18.x RaspberryPi firmware you must modify one additional file for the lirc-rpi kernel extension to be loaded:             Edit your /boot/config.txt file    |  | | --- | | pi@raspberrypi **~ $**   sudo nano  /boot/config.txt | |

and add:

dtoverlay=lirc-rpi,gpio\_in\_pin=2

  
  
***<13>***Edit /etc/lirc/hardware.conf and have it appear exactly as shown below. 

|  |
| --- |
| pi@raspberrypi **~ $**   sudo nano /etc/lirc/hardware.conf |

# /etc/lirc/hardware.conf

#

# Arguments which will be used when launching lircd

LIRCD\_ARGS="--uinput"

# Don't start lircmd even if there seems to be a good config file

# START\_LIRCMD=false

# Don't start irexec, even if a good config file seems to exist.

# START\_IREXEC=false

# Try to load appropriate kernel modules

LOAD\_MODULES=true

# Run "lircd --driver=help" for a list of supported drivers.

DRIVER="default"

# usually /dev/lirc0 is the correct setting for systems using udev

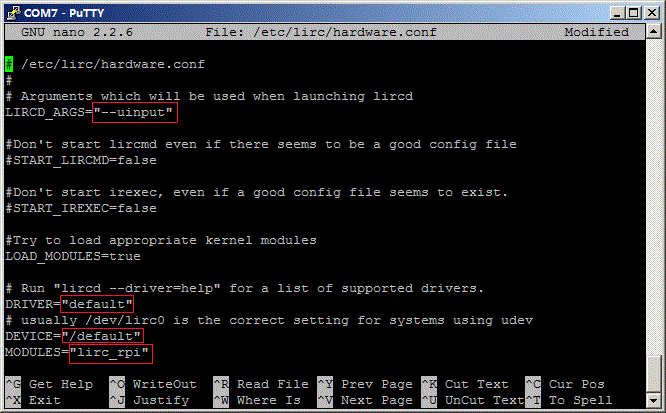
DEVICE="/dev/lirc0"

MODULES="lirc\_rpi"

# Default configuration files for your hardware if any

LIRCD\_CONF=""

LIRCMD\_CONF=""

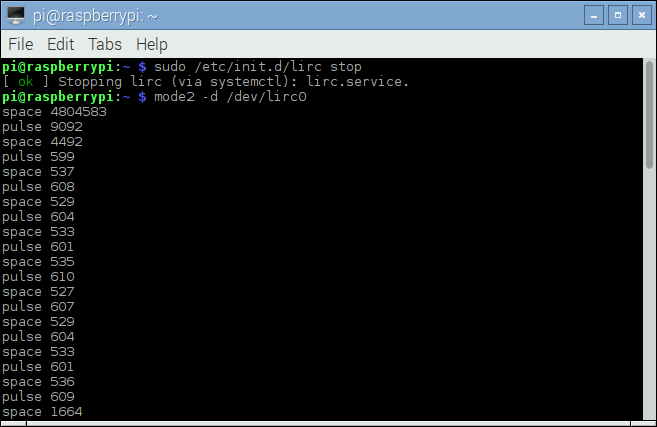
******The highlighted text are the parts that will need changing, though it’s worth checking the rest of the text incase you have a different initial configuration.

***<14>***Save your changes by pressing Ctrl-x then Y ***<15>****Reboot the Raspberry Pi*

|  |
| --- |
| pi@raspberrypi **~ $**   sudo reboot |

***<16>***Run these two commands to stop lircd and start outputting raw data from the IR receiver:

|  |
| --- |
| pi@raspberrypi **~ $**   sudo /etc/init.d/lirc stop  pi@raspberrypi ~ **$**   mode2 -d /dev/lirc0 |

***<17>***Point a remote control at your IR receiver and press some buttons. You should see something like this:    
 **