Step by Step guide to setup IR receiver

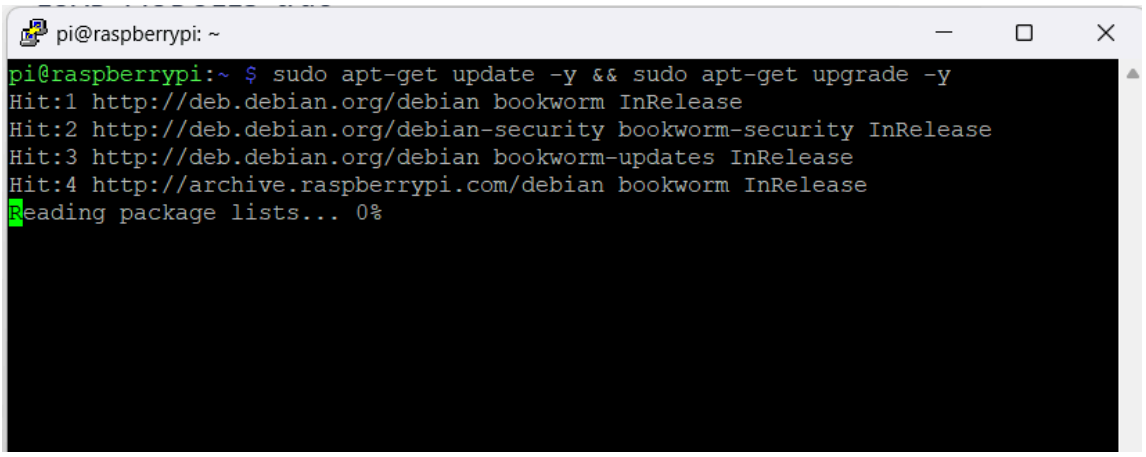
Make sure you have installed OS for PiPocket, If not follow guide here =>

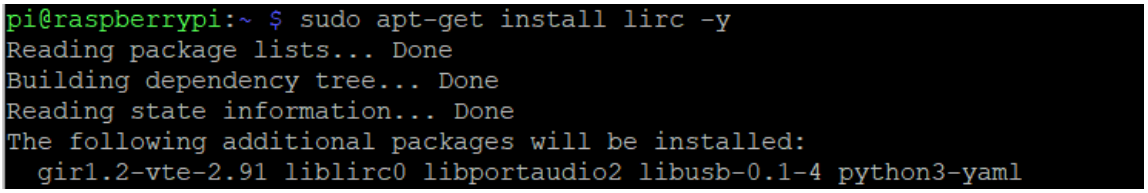
Instruction below is setup for 64bit bookworm OS and model CM4, make necessary changes if using with other configuration

Step 1: First update and install LIRC package

Run command to update and upgrade, after that install lirc package

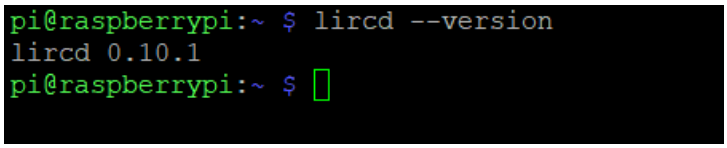
sudo apt-get update -y && sudo apt-get upgrade -y
sudo apt-get install lirc -y





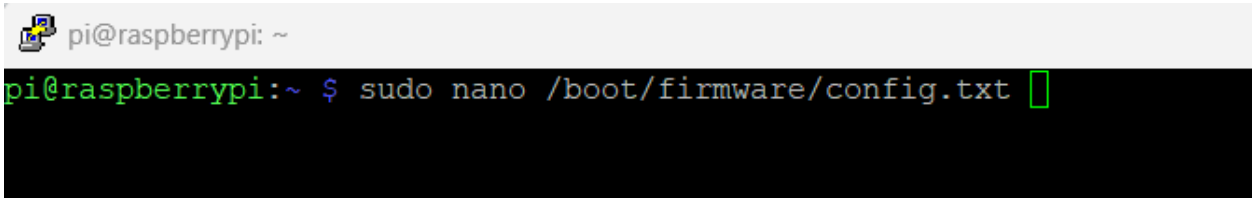
You can confirm with below version check command,

$ lircd --version

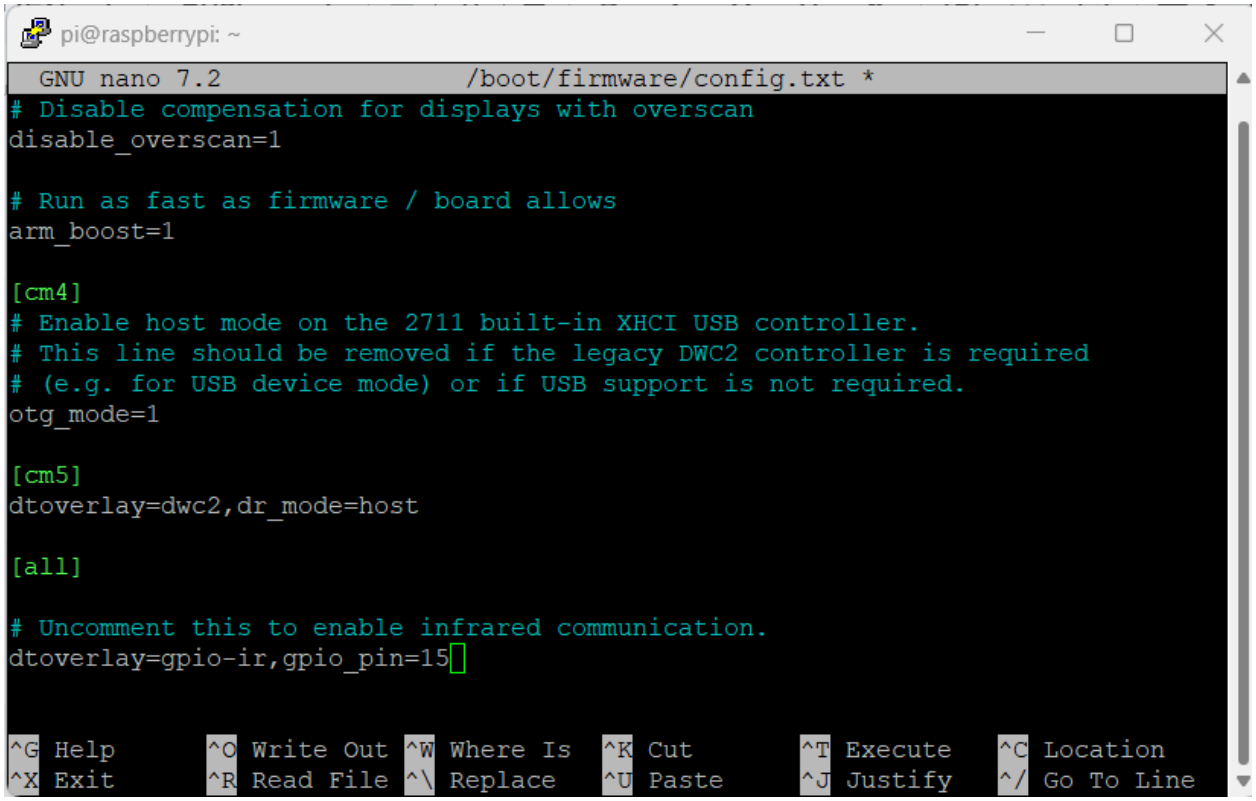


Step 2: Configure and Setup LIRC for IR Remote control
First we need to enable infrared communication, for this open config.txt file

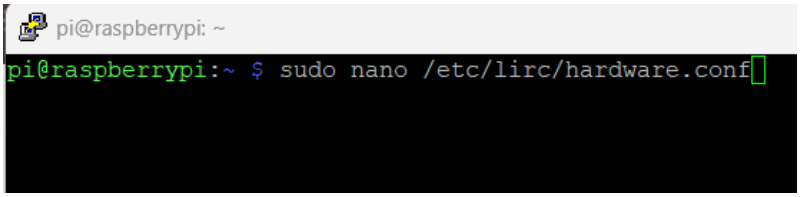
$ sudo nano /boot/firmware/config.txt



and add below lines and save exit =>
 # Uncomment this to enable infrared communication.
dtoverlay=gpio-ir,gpio_pin=15

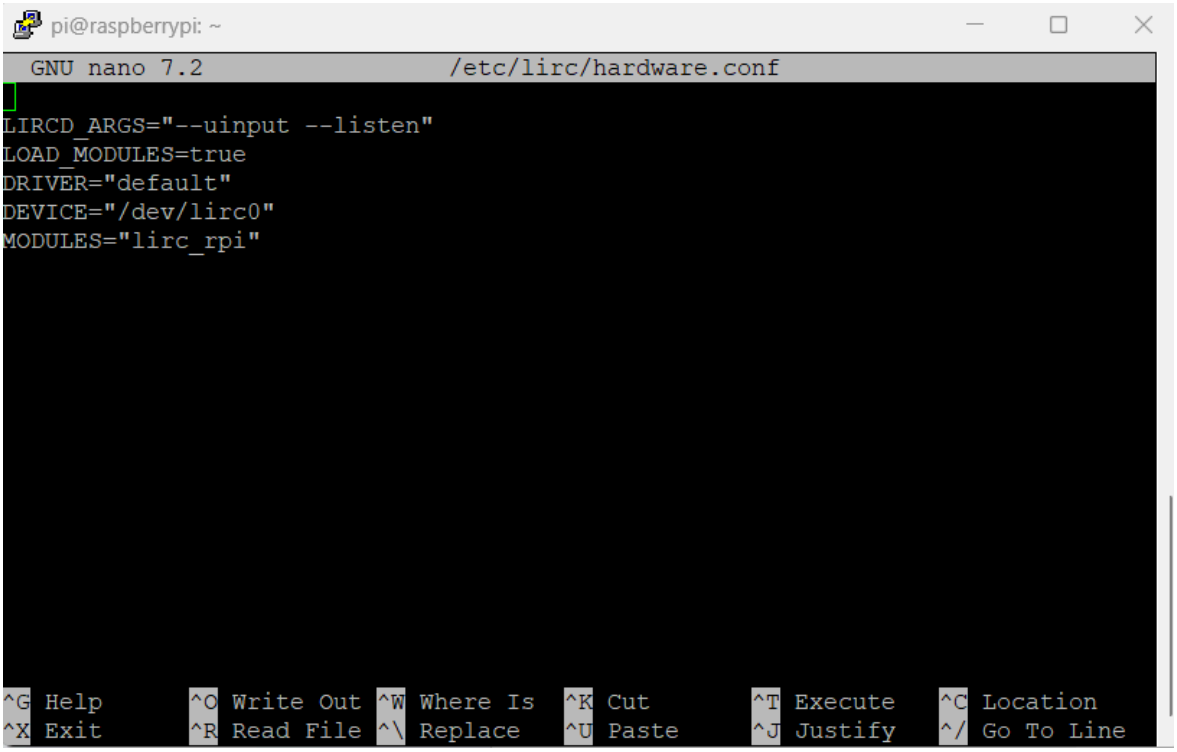


$ sudo nano /etc/lirc/hardware.conf

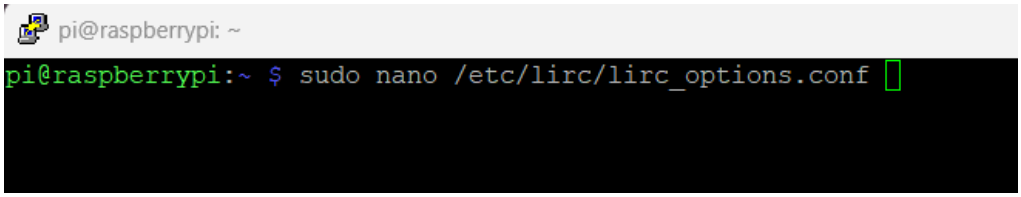


Enter below text, then save and exit,

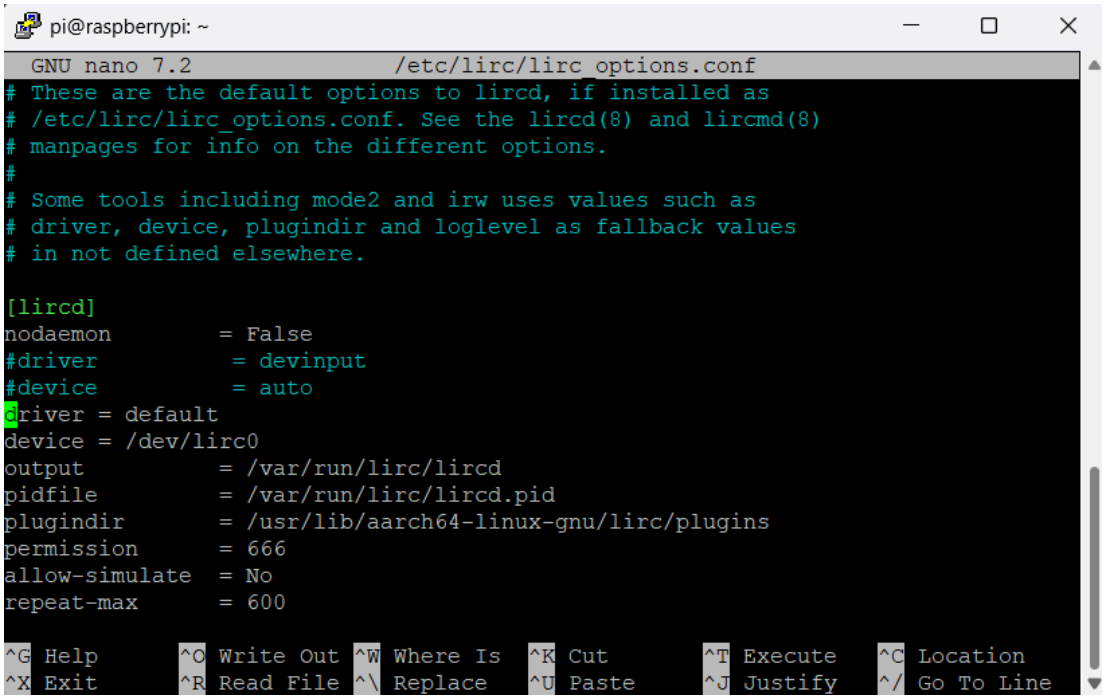
LIRCD_ARGS="--uinput --listen"
LOAD_MODULES=true
DRIVER="default"
DEVICE="/dev/lirc0"
MODULES="lirc_rpi"



Now update LIRC module options configure,
$ **sudo nano /etc/lirc/lirc_options.conf**



Change both **driver** and **device** values (line #3-4).
#driver = devinput
#device = auto
driver = default
device = /dev/lirc0



Once you've finished then save and exit, reboot Raspberry Pi to recognize the new bootloader.

$ sudo reboot

Check status with below running command,
$ sudo /etc/init.d/lircd status

```
pi@raspberrypi:~ $ sudo /etc/init.d/lircd status
● lircd.service - Flexible IR remote input/output application support
     Loaded: loaded (/lib/systemd/system/lircd.service; enabled; preset: enabled
)
     Active: active (running) since Sat 2025-02-01 01:53:55 EST; 1min 5s ago
TriggeredBy: ● lircd.socket
       Docs: man:lircd(8)
             http://lirc.org/html/configure.html
   Main PID: 633 (lircd)
      Tasks: 2 (limit: 447)
        CPU: 97ms
     CGroup: /system.slice/lircd.service
             └─633 /usr/sbin/lircd --nodaemon

Feb 01 01:53:55 raspberrypi lircd[633]: lircd-0.10.1[633]: Notice: /etc/lir…GGER
Feb 01 01:53:55 raspberrypi lircd[633]: lircd-0.10.1[633]: Notice: /etc/lir…PPY1
Feb 01 01:53:55 raspberrypi lircd-0.10.1[633]: Notice: /etc/lirc/lircd.conf.…PEN
Feb 01 01:53:55 raspberrypi lircd-0.10.1[633]: Notice: /etc/lirc/lircd.conf.…GER
Feb 01 01:53:55 raspberrypi lircd-0.10.1[633]: Notice: /etc/lirc/lircd.conf.…PY1
Feb 01 01:53:55 raspberrypi lircd[633]: lircd-0.10.1[633]: Notice: /etc/lir…HEEL
Feb 01 01:53:55 raspberrypi lircd-0.10.1[633]: Notice: /etc/lirc/lircd.conf.…EEL
Feb 01 01:53:55 raspberrypi lircd[633]: lircd-0.10.1[633]: Notice: lircd(de…ircd
Feb 01 01:53:55 raspberrypi lircd-0.10.1[633]: Notice: lircd(default) ready,…rcd
Feb 01 01:53:55 raspberrypi systemd[1]: Started lircd.service - Flexible IR…ort.
Hint: Some lines were ellipsized, use -l to show in full.
pi@raspberrypi:~ $
```

Step: Testing IR Remote commands
To test IR detection enter below command, hit enter and start pressing any button on IR remote

$ sudo mode2 -m -d /dev/lirc0

```
pi@raspberrypi: ~
pi@raspberrypi:~ $ sudo mode2 -m -d /dev/lirc0
Using driver default on device /dev/lirc0
Trying device: /dev/lirc0
Using device: /dev/lirc0
Running as regular user pi
 16777215

    9007     4516      570     1668      549     1694
     578     1665      551     1695      571      539
     548      564      547     1696      547      564
     549      564      574      539      548      564
     572      540      549     1694      550      562
     547     1696      550      562      572      541
     548      564      551     1692      550      563
     546     1698      548      566      546      565
     550      561      546     1696      547     1698
     549      562      548     1696      549      562
     547     1694      552     1692      548     1689
     546   131027-pulse 16777215-space

     891     1092      140     1675      111    11959

     138     4456      161     1975      240      764
     281      807      138     2367      140     7515
     271      848      234     1999      219     3193
      69     2227      163     2005      193     2182
     115     1747      402     2960      296     2159
     107     1922      431      945       74     2079
     282     1952      291     1909      301   132827-pulse  2296002-space

 2409948-space

     102      360      139    12897

      68     2118       75    25484

     110     3534       72    79301

      65    11054

     108    14612

     137     6324       72     5711      135     5308
     109   130968-pulse
```