## Raspberry Pi settings

**WHEN INSTALLING**

1. Add new beo/modern user:

<https://raspi.tv/2012/how-to-create-a-new-user-on-raspberry-pi>

1. Add new user to existing groups

<https://thepihut.com/blogs/raspberry-pi-tutorials/how-to-add-new-users-and-add-users-to-groups>

1. Follow <http://himeshp.blogspot.com/2018/08/fast-boot-with-raspberry-pi.html>
2. Using sudo raspi-config set RPI configurations such as I2C, SPI, overclocking (overclocking at 1GHz makes SPI->DAB\_card unstable), etc.
3. Setup /boot/config.txt settings as below:

disable\_splash=1

#uncomment to overclock the arm. 700 MHz is the default.

arm\_freq=950

# Uncomment some or all of these to enable the optional hardware interfaces

#dtparam=i2c\_arm=off

dtparam=i2s=on

dtparam=spi=on

# Overclock the SD card from 50 to 100MHz

# this can only be done with at least UHS Class 1 card

dtoverlay=sdtweak,overclock\_50=100

# Uncomment this to enable the lirc-rpi module

dtoverlay=hifiberry-dac

dtoverlay=i2s-mmap

# set bootloader dealy to 0 seconds. The default is 1 if not specified

boot\_delay=0

[all]

enable\_uart=1

start\_x=0

1. Install mpd and mpd for python:

sudo apt-get install mpc mpd

sudo apt-get install python3-mpd

1. Copy /etc/mpd.conf file to /beo directory and rename it to .mpdconf   
   Also change /etc/mpd.conf content to the same values as below.  
   Change its content as below:

music\_directory "/home/beo/BeoModern/Player"

playlist\_directory "/home/beo/BeoModern/playlists"

db\_file "/home/beo/Beoodern/tag\_cache"

log\_file "/home/beo/BeoModern/mpd.log"

:

#user "beo"

:

bind\_to\_address "localhost"

:

port "6600"

:

auto\_update "yes"

:

auto\_update\_depth "3"

:

audio\_output {

type "alsa"

name "My ALSA Device"

# device "hw:0,0" # optional

# mixer\_type "hardware" # optional

# mixer\_device "default" # optional

# mixer\_control "PCM" # optional

# mixer\_index "0" # optional

}

:

1. Install python access to GPIOs for raspberry pi:

sudo apt-get install rpi.gpio

1. Install pip for python3:

sudo apt-get install python3-pip

1. Install serial for python:

pip install pyserial

1. Install samba server

sudo apt-get install samba samba-common-bin

Edit /etc/samba/smb.conf with values placed below

[global]

netbios name = BeoModern

workgroup = WORKGROUP

[Player]

comment = Player Directories

path = /home/beo/BeoModern/Player

browseable = yes

read only = no

create mask = 0777

directory mask = 0777

public = no

[iRadio]

comment = iRadio Directory

path = /home/beo/BeoModern/iRadio

writeable=Yes

public = no

create mask = 0770

[RDS]

comment = RDS Directory

path = /home/beo/BeoModern/RDS

writable=Yes

public = no

create mask = 0770

Add beo to samba users and then restart samba service

sudo smbpasswd -a beo

sudo service smbd restart

In Windows PC, search using file explorer network PC with beomodern name. Enter beo/modern credentials

1. In folder /etc/system/system add file beomodern.service

Content of beomodern.service file:

[Unit]

Description=Start BeoModern

After=mpd.service

[Service]

User=beo

WorkingDirectory=/home/beo/BeoModern

ExecStart=/home/beo/BeoModern/BeoModern.py

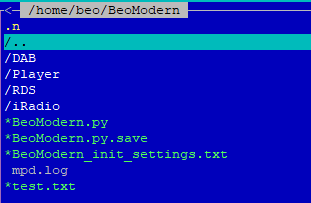
[Install]

WantedBy=multi-user.target

Save file and then run command sudo systemctl enable beomodern.service  
This will enable automatic start of beomodern python script at the system start-up.

1. Copy BeoModern folder structure to:

/home/beo/BeoModern/



1. Go to BeoModern folder and change python script to executable fil:

sudo chmod +x BeoModern.py

**WHEN USING**

1. To set Wifi details:

sudo raspi-config

Select the Network Options item from the menu, then the Wi-fi option.

<https://www.raspberrypi.org/documentation/configuration/wireless/wireless-cli.md>

1. To SSH into RPI:

Get IP from router. Ideally setup:

192.168.0.100 for ETHERNET

192.168.0.101 for WiFi b.g

192.168.0.102 for WiFi n

PuTTY with IP of RPi and over SSH port 22

L/P: beo / modern