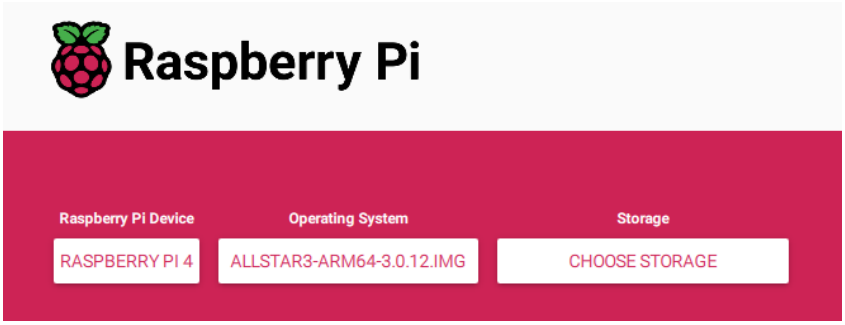
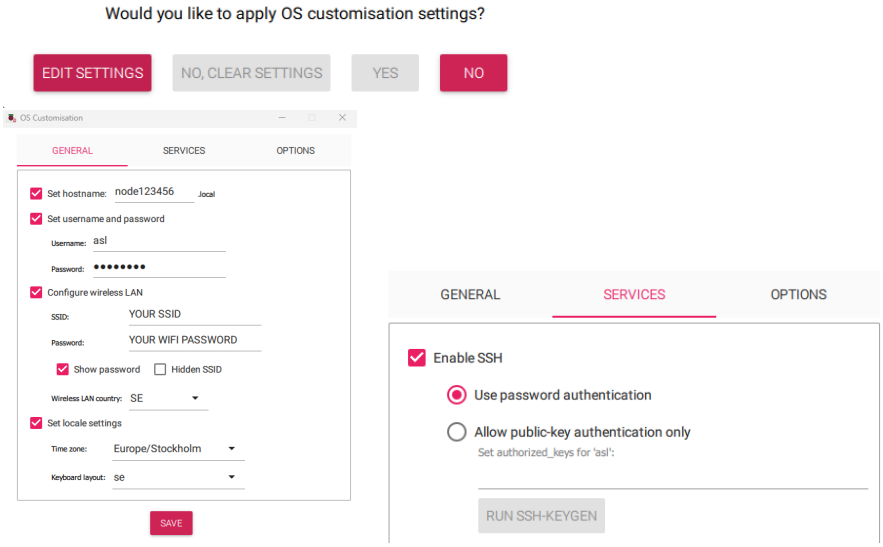
Installing ASL v3 on Raspberry PI 4 with jumbospot SHARI SR110U SA818

You need your node number and password for your allstar-link
https://www.allstarlink.org/
Hardware, raspberry pi 4 with power adapter and Shari radio unit.

1. Download ASL v3 to Raspberry PI and unzip img file.
   Index of /images/pi (allstarlink.org)
2. Download and start Raspberry PI Imager
   Raspberry Pi OS – Raspberry Pi
3. Open Raspberry PI Imager and choose Raspberry PI 4 under device > Use custom OS and select downloaded Allstar-arm64-3.0.12.img file > choose your SD card as Storage.



4. Click next and click Edit Settings > Change hostname to node12345 (replace 12345 with your node number) > set username to asl > and choose a secure password.
   Setup your Wi-Fi settings, Wi-Fi name (SSID) and password, and choose Wi-Fi country settings.
   Set your location settings and time zone and keyboard.
   Don't miss to enable SSH under service
   Save and write your SD card!

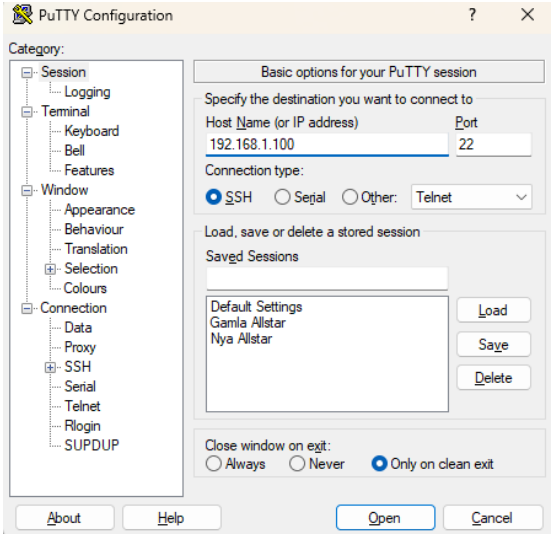


5. After writing is complete, put your SD card in your PI, connect your SHARI radio and power up the system. Now wait for about 5 minute for the system to turn on and do it's stuff.

6. Download and install the software Putty.
   [Download PuTTY: latest release (0.81) (greenend.org.uk)]

7. Look in your router settings to find out what ip-address your Raspberry PI have.

8. In Pytty enter ip-address to your PI, in my case 192.168.1.100 and click Open.
   The first time you connect you have to accept Security Alert, and login vid asl and your secure password.



9. Once you're logged in via SSH, it's time to do some configuration.

10. Using the arrow keys, click on the option 1 Node settings, then press the Enter key.
11. Click on the option 1 Allstar Node Setup Menu.
12. Enter your node number, **Do NOT use the numeric part of the keyboard!!**
13. In this example 12345, **in reality use YOUR node number!** then press the Enter key.
14. Enter your node password. (find this on AllStarLink | Portal | Nodes) then press the Enter key.
15. Click on the option 1 Hotspot (half duplex) with courtesy tones then press the Enter key.
16. Click on the option 1 SimpleUSB then press the Enter key.
17. Enter your call sign (use capital letters) then press the Enter key.
18. YES to restart Astrerisk.
19. Click on the option 0 Exit Menu.
20. Using the arrow keys to click Back
21. Click on the option 6 Expert Configuration Menu.
22. Click on the option 9 Edit simpleusb.conf file.
    Select 2 /bin/nano
    Edit text to this and paste and replace his, **your node number under config your node. [12345](node-main)**

```
;*************************************************
;********      Template-tized simpleusb.conf      ********
;*************************************************
; Note to editors: set tabs to 4 space characters. No wrap to keep comments neat.
; vim: tabstop=4
;
; SimpleUSB channel driver Configuration File
;
;;;;;                          New to ASL3                          ;;;;;
;;;;; The SimpleUSB "tune" settings have moved to ;;;;;
;;;;; this file. The simpleusb_tune_usb_1999.conf ;;;;;
;;;;; file is no longer used.                                      ;;;;;
```

```
; If you are going to use this channel driver, you MUST enable it in modules.conf
; change:
; noload => chan_simpleusb.so              ; CM1xx USB Cards with Radio Interface Channel Driver
(No DSP)
; noload => res_usbradio.so                ; Required for both simpleusb and usbradio
; to:
; load => chan_simpleusb.so                ; CM1xx USB Cards with Radio Interface Channel Driver
(No DSP)
; load => res_usbradio.so                  ; Required for both simpleusb and usbradio

[general]
;------------------------------ JITTER BUFFER CONFIGURATION --------------------------
; jbenable = yes                          ; Enables the use of a jitterbuffer on the receiving side of an
                                          ; simpleusb channel. Defaults to "no". An enabled
jitterbuffer will
                                          ; be used only if the sending side can create and the
receiving
                                          ; side can not accept jitter. The simpleusb channel can't
accept jitter,
                                          ; thus an enabled jitterbuffer on the receive simpleusb
side will always
                                          ; be used if the sending side can create jitter.

; jbmaxsize = 200                         ; Max length of the jitterbuffer in milliseconds.

; jbresyncthreshold = 1000                ; Jump in the frame timestamps over which the jitterbuffer is
                                          ; resynchronized. Useful to improve the quality of the
voice, with
                                          ; big jumps in/broken timestamps, usualy sent from exotic
devices
                                          ; and programs. Defaults to 1000.
```

; jbimpl = fixed ; Jitterbuffer implementation, used on the receiving side of an simpleusb

; channel. Two implementations are currenlty available - "fixed"

; (with size always equals to jbmax-size) and "adaptive" (with

; variable size, actually the new jb of IAX2). Defaults to fixed.

; jblog = no ; Enables jitterbuffer frame logging. Defaults to "no".

;---

[node-main](!)

;;

;;;;; Template for all your SimpleUSB nodes ;;;;;

;;

eeprom = 0

hdwtype = 0

rxboost = 0

carrierfrom = usbinvert

ctcssfrom = no

deemphasis = yes

plfilter = no

rxondelay = 5

rxaudiodelay = 10

txmixa = voice

txmixb = no

txboost = 0

invertptt = 0

```
preemphasis = yes
duplex = 0;;; End of node-main template

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
;;;;;;;;;;;;;;; Configure your nodes here ;;;;;;;;;;;;;;;
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;

[12345](node-main)
eeprom = 0
hdwtype = 0
rxboost = 0
carrierfrom = usbinvert
ctcssfrom = no
deemphasis = yes
plfilter = no
rxondelay = 5
rxaudiodelay = 10
txmixa = voice
txmixb = no
txboost = 0
invertptt = 0
preemphasis = yes
duplex = 0

;;;;; ASL3 Tune settings ;;;;;
devstr = 1-1.4:1.0
rxmixerset = 450
txmixaset = 990
txmixbset = 500
```

23. Click ctrl and o > then enter to save file changes in file.
24. Click ctrl and x to exit back to expert menu, now select R to restart Asterisk again.
25. Using the arrow keys to click Back to Main
26. Using the arrow keys to click Exit Main Menu, click Yes to exit ASL Main Menu.
27. In my case, this was incorrect! Check and edit if needed!
    sudo nano /etc/hosts
    127.0.0.1 node12345
    Edit ip-address on your node to 127.0.0.1, Click ctrl and o > then enter to save file changes in file.
    Click ctrl and x to exit back to expert menu
28. Time to config Allmon3
    Note the password in the file allmon3.ini : (pass:password)
    Run command : sudo nano /etc/allmon3/allmon3.ini
    Click ctrl and x to exit back
29. Set a password for the default user admin.
    Run command : sudo allmon3-passwd admin
    Enter same password as in allmon3.ini
30. Enable and restart the services
    Run command : sudo systemctl enable allmon3
    Run command : sudo systemctl restart allmon3
    You can now shutdown Putty.
31. Start a web browser and enter ip-address to your node
    example 192.168.1.100
    And click on Node Links, Click login and use “admin” as username and the password from allmon3.ini file you used before.
32. Now go back to 192.168.0.100 (or your ip-address)
    And click on Admin Portal
    Login with username : asl and the password you setup in Raspberry PI Imager.
    You may need to be able to log in during troubleshooting etc

Setup SA818 – radio

1. Run command in putty : sudo sa818-menu
2. Change Band, Receive freq and transmit freq, subton, volume.
3. Its important to change serial port to : /dev/ttyUSB0

4. Connection speed to 9600