This document is an outline which can be used to assist in setting up the ASL3 Allstar image on SHARI Allstar devices. Some of the advanced setups like activating the COS LED, installing Supermon and Allmon is done using the commands typed into the Terminal. To assist with this, the required entries on the terminal line are contained in this document as **bold text**. This text can be copied (highlight/right mouse click) and then pasted to the terminal line (left click to change the focus and then a right click to paste).

This outline is for ASL3, version 19 and above. (Note: It works for previous versions with the exception of programming the SA818 on a node using a Pi5 and the initial reboot process may be different)

To Begin

- Get detailed help from Allstarlink if required (https://allstarlink.github.io/user-guide/pi-detailed/)
- Download the latest .xy version ASL3 image from Allstarlink (https://repo.allstarlink.org/images/pi/)
- Install Raspberry Pi Imager on your computer (https://www.raspberrypi.com/software/)
- Get our ASL3 suggested settings documents: https://kits4hams.com/wp-content/uploads/2025/08/Kits-4-Hams-suggested-SHARI-settings-for-ASL3-version-19-and-above_v1.00.pdf

Write the image to microSD card using Raspberry Pi Imager:

- Plug microSD card into computer using USB adapter or uSD to SD adapter thingy
- Open Raspberry Pi Imager
- CHOOSE DEVICE is the type of Pi you are using (Pi0-2W, Pi2, Pi3, Pi4 or Pi5)
- CHOOSE OS is Use custom (end of list) and navigate to downloaded image
- CHOOSE Storage is your microSD card as discovered by Imager
- NEXT
- EDIT SETTINGS
- Set Hostname: Recommend *<your call>-<your node number>* but it is up to you. Just no spaces, use hyphen or underscore
- Set username and password
- Record your Hostname, username and password

- Configure wireless LAN if desired – be sure to set Wireless LAN country to US
- Set locale as desired
- SAVE
- Choose YES to apply customization settings
- YES to continue

Configure Node:

- Remove uSD card and insert in Pi
- Plug in ethernet cable if not using WiFi
- Apply power to the Pi
- Wait for the green COMMS LED on the SHARI board to begin blinking (not the green LED on the Pi)

Log in:

(You use your browser (Edge, Chrome, etc) to connect to your node)

- Open a new tab in browser
- Enter your Hostname followed by dot local (i.e. hostname.local) into address bar
- The cockpit opens – click on Web Admin Portal
- Reports as unsafe – proceed anyway by clicking on Advanced
- Enter User name and Password
- Click on Turn on administrative access when the dashboard opens.
- Sit back and wait. The node will automatically "reboot" after the initial boot, initial package updates, and initial configuration updates so you will see a “Reconnect” message when it is done with this initialization
- Click on Reconnect and Log in again

Updates:

If this is a new install there should be no updates. To check, click on Software updates to see and install

Note: If you get a get a LOCK message. Click on browser refresh page until they all get installed

Note: Click on Terminal and enter **sudo reboot** after any updates (unless you switched Reboot to on)

Login again

Set up your node:

- Go to Terminal (menu column on the left)
- Enter **sudo asl-menu**
- 1 Node Settings> 1 Allstar Node Setup Menu
- Enter new node number. Tab to OK then Enter
- Enter node password (from Allstarlink.org Portal>Node Settings)
- Choose: 1 Half-duplex node (Hotspot) with telemetry tones
- Choose: 1 SimpleUSB
- Enter your call sign
- Restart Asterisk
- Complete Simple USB
    - 2) RX Voice Level = 650
    - 3) TX Channel A=600
    - G) Toggle PL Filter=disable
    - J) CTCSS From='no'
    - W) Write
    - Exit
- **4** Update Asterisk IAX port if it is not 4569
- **3** Update Asterisk AMI Password (you can change this or use the default) If using the default, copy it and save for installing supermon later in this outline
- **2** Restart Asterisk

Program the SA818:

- Go to Terminal using <back>,<Exit Main Menu>,<Yes>
- Enter **sudo sa818-menu**
- Enter required data. Refer to Kits 4 Hams suggested settings for ASL3 document for settings https://kits4hams.com/wp-content/uploads/2025/07/Kits-4-Hams-suggested-SHARI-settings-for-ASL3-v1.07.pdf
- Exit

WiFi:

If you want WiFi and did not set it up in the data entered in to Raspberry Pi Imager

- Go to WiFi manager
- Scan for WiFI networks (if necessary)
- Enter SSID and Passphrase
- Return to terminal

Enable COS LED:

Go to Terminal

- Enter **sudo nano /etc/asterisk/rpt.conf** (You are now using the Nano editor. Use arrow keys – not mouse to navigate)
- Find the stanza labeled **[events]** (green color near bottom of file)
- Add two lines below line starting with ;status,2 .....
- Type them in or use the mouse and copy/paste to add them
- **cop,62,GPIO4:1 = c|t|RPT_RXKEYED**
- **cop,62,GPIO4:0 = c|f|RPT_RXKEYED**
- To exit the editor use <ctrl>-X (i.e. Ctrl then X keys pressed at the same time) then “Y” then <enter> to exit Nano editor
- Enter **sudo astres.sh** to restart asterisk
- Set correct frequency and CTCSS tone then transmit with radio
- Verify COS LED (the yellow one) works when you transmit
- Use DTMF *355553 to connect to a parrot node and verify audio level is correct by transmitting some audio to it
- Use DTMF *10 to disconnect

Install Supermon:

From the Terminal

- **cd /usr/local/sbin**
- **sudo wget "http://2577.asnode.org:43856/supermonASL_fresh_install" -O supermonASL_fresh_install**
- **sudo chmod +x supermonASL_fresh_install**
- **hash**
- **sudo supermonASL_fresh_install**
- **sudo wget "http://2577.asnode.org:43856/supermonASL_latest_update" -O supermonASL_latest_update**
- **sudo chmod +x supermonASL_latest_update**
- **hash**
- **sudo supermonASL_latest_update**

Edit the almon.ini file using the Nano editor

- **cd /var/www/html/supermon**
- **sudo nano allmon.ini**
  - Change nodes=12345,12346 to nodes=<your node number>
  - Change [12345] stanza to <your node number>
  - Change passwd=secret to passwwd=<the AMI password you were told to copy and save earlier in the outline>
  - Comment out (start each line with a semicolon ‘;’) the [12346] stanza headingand each line in the stanza
  - In the [LsNodes] stanza change …….node=12345 to node=<your node number>
  - Exit and save with Ctrl>+X, then Y (Yes) then <enter>

Setup the User and Password for you to log into Supermon

- **sudo rm .htpasswd**
- **sudo htpasswd -cB .htpasswd admin (**if a different user name than admin is desired change it here)
  Hint: You will be asked to enter the password twice, typing of the password does not show on the screen

Install Allmon3:

- **cd /**
- **sudo allmon3-passwd --delete allmon3** (error message is OK)
- **sudo allmon3-passwd admin**
- **sudo reboot**
- Wait for the blinking green COMMS LED on SHARI then Reconnect

Verify Allmon3:

- open new tab in browser
- <network name>.local/alllmon3
- verify Allmon3 login works

Finish Supermon Setup:

- open new tab in browser
- <network name>.local/supermon
- click on Nodes, then click on your node number to Activate the node number (must do this to log in)
- click on Login then login using Tab key to navigate - not the mouse
- Click on “Configuration Editor” button and select global.inc to edit. You can change anything in quotes.
- Recommend:

```
$CALL = "Your Callsign";
$NAME = "Your Name";
$LOCATION = "Howell, MI";
$TITLE2 = "12345 Cloud Server";  (we recommend a description of your node. i.e. SHARI PiHatU NeoPi5)
$TITLE3 = "AllStarLink/IRLP/EchoLink/Digital - Bridging Control Center";  (we recommend “Node <your node number>
$BACKGROUND = "background.jpg";  (we recommend deleting background.jpg so you have two quotes i.e. “”
$BACKGROUND_COLOR = "green";  (we like blue – the choice is yours)
$SMSERVERNAME = "12345 Cloud";  (we recommend Supermon <your node number>
$LOCALZIP = "48843";  (your zip code to get your local weather)
```

- Click on “Write your Edits” box at bottom to save your edits
- Click on Return to Index
- Click on Close Window
- Refresh your browser window

Backup:

- **sudo asl-menu**
- B Backup and restore Menu
- 1 Create node backup

Shutdown

- Back to Overview
- Shutdown (top right corner) or **sudo shutdown -h now** at the terminal