

From scratch again openplotter

Table des matières

Hardware used	1
Prepare SD	2
connect to wifi « openplotter »	2
connect with VNC	2
modify pi password	3
modify wifi hotspot	3
Internet access	4
install updates	5
configure raspberry	5
settime zone	5
interfaces.	5
Update applications.....	6
activate uart2.....	6
signalK.....	7
Update opencpn	7
Check system is ok.....	7
GPS install	8
Pypilot install	11
Pypilot config.....	11
Verification	14
Errors	15

Mince je ne l'ai pas fait du tout dans un ordre logique, il faut

Hardware used

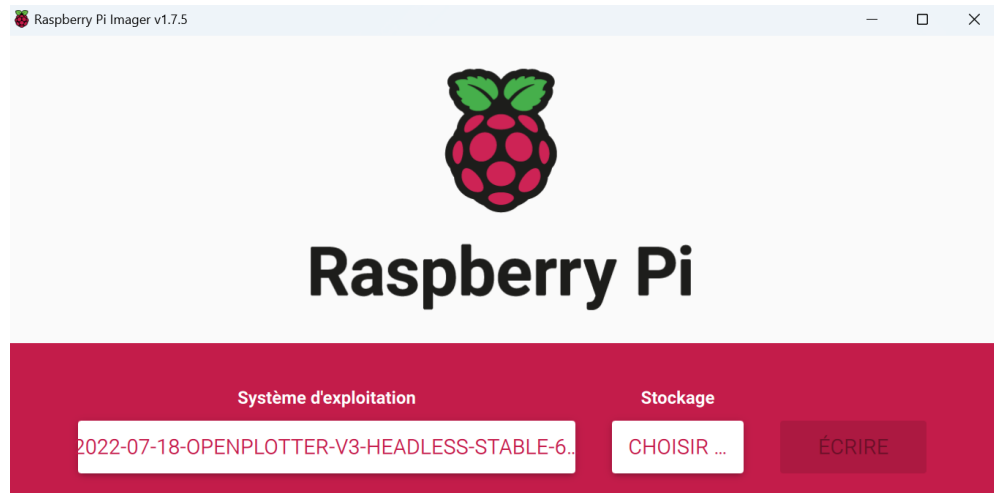
- Raspberry pi 4 4Gb
- Pypilot hat
- GPS hat <https://www.waveshare.com/l76x-gps-hat.htm>

GPS hat is connected as a USB device , with yellow jumpers on connexion « A » , I was not able to make to work with pypilot hat has they share the same pins on GPIO (as far as I understand).

GPS is connected as USB, pypilot hat is connected on GPIO.

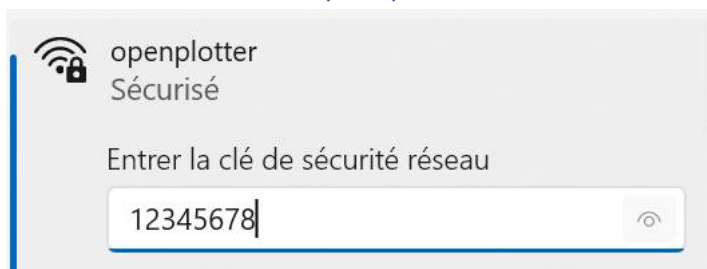
Prepare SD

with raspberry pi imager and last « openplotter headless » image.

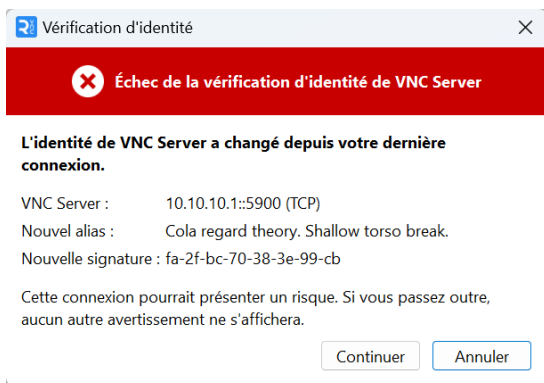
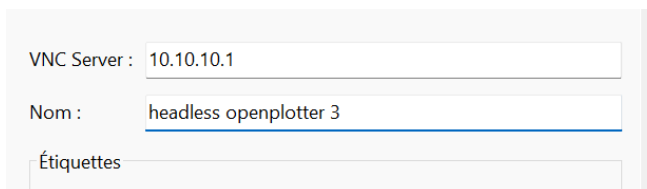


- boot

connect to wifi « openplotter »




connect with VNC



Authentification auprès de VNC Server
10.10.10.1::5900 (TCP)

Saisissez vos identifiants VNC Server
(Indice : Il ne s'agit PAS de vos informations de compte RealVNC)

Nom d'utilisateur :

Mot de passe : 

☐ Mémoriser le mot de passe [Mot de passe oublié ?](#)

Alias : Cola regard theory. Shallow torso break.

modify pi password

Raspberry Pi Configuration

System Display Interfaces Performance Localisation

Password:

Hostname:

Boot: ☐ To GUI ☐ To CLI

Auto Login: ☐

Network at boot: ☐

Splash Screen: ☐

modify wifi hotspot

- wifi access modify to « AP and station » and modify password

Network 3.1.7

Help Settings Addresses and Ports Check Network

Access Point Wlan Client

Network Mode Raspberry Pi 4 Model B Rev 1.2

☐ activate wlan security (nft filter)

AP:

☐ 5 GHz ☐ Add Ethernet port to the AP

Access Point Settings

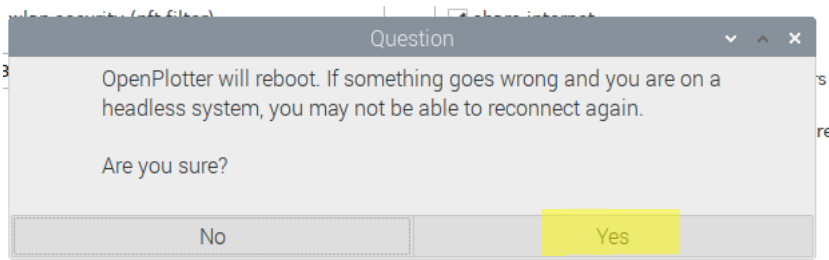
☒ share internet

SSID: maximum 32 characters

Password: minimum 8 characters required

Channel:

Edit settings and validate

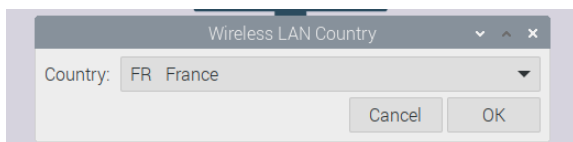
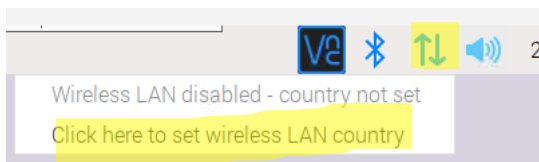


Internet access

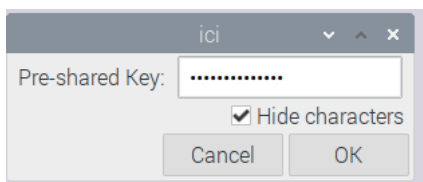
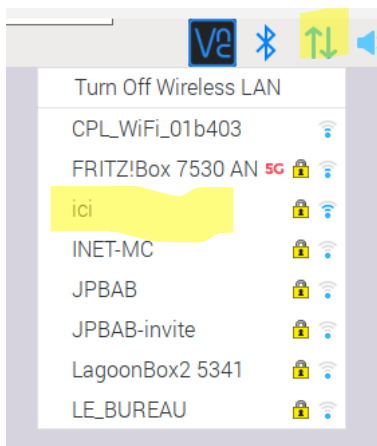
Connect to wifi « openplotter » with new password

Connect with VNC to 10.10.10.1 (you may use the name « openplotter » or « openplotter.local ») with the new « pi » password.

Set wireless LAN country



Select your wifi to access internet

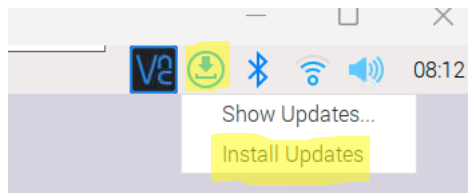


Reboot to verify all is ok and this will force the update check.

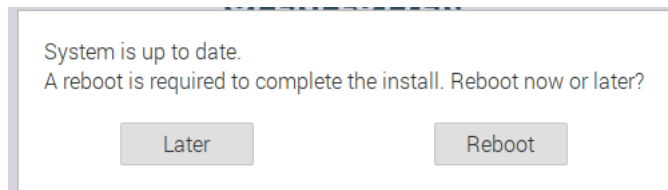
Nota , at this point the « openplotter » is still active , AND the pi is connect to your home network so you may access it with both networks.

install updates

at reboot updates can be installed

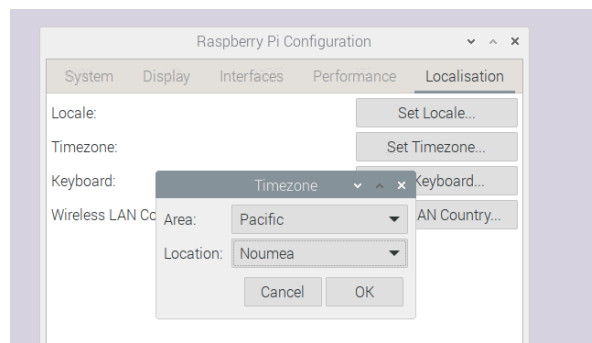


This may take some times.



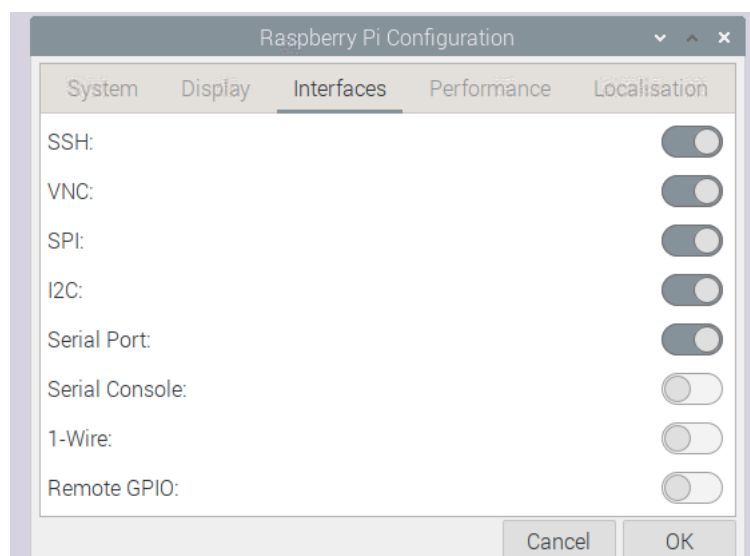
configure raspberry

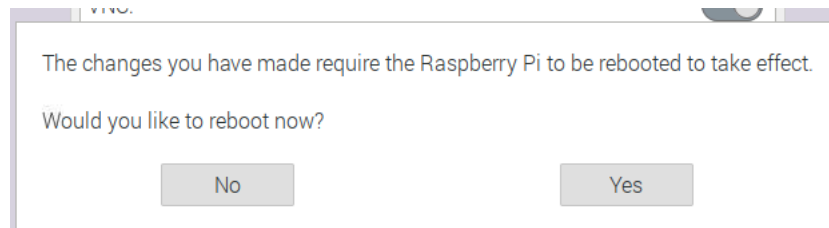
settime zone



interfaces.

Activate at least like below, deactivate « serial console »





Reboot

Update applications

Open all applications if asked and follow instructions for post-installation.

Settings 3.6.2				
<div> <div>Help</div> <div>Autostart</div> <div>Check System</div> </div>				
<div> <div>OpenPlotter Apps</div> <div>General Settings</div> <div>Raspberry Settings</div> <div>System log</div> <div></div> </div>				
<div> <div>Add Sources</div> <div>Get Candidates</div> <div>Refresh</div> </div>				
Name	Installed	Candidate	Pending tasks	
Settings	3.6.2-stable	3.6.2-stable		
Documentation	3.8.0-stable	3.8.0-stable		
Signal K Installer	3.1.16-stable	3.1.16-stable	Open to apply and refresh	
OpenCPN Installer	3.2.20-stable	3.2.20-stable		
XyGrib	1.2.6-3bullsey...	1.2.6-3bullsey...		
Dashboards	3.0.12-stable	3.0.12-stable		
Serial	3.2.0-stable	3.2.0-stable	Open to apply and refresh	
CAN Bus	3.2.21-stable	3.2.21-stable	Open to apply and refresh	
Network	3.2.0-stable	3.2.0-stable	Open to apply and refresh	
Pypilot		3.2.13-stable		
I2C Sensors		3.3.12-stable		
GPIO		3.2.32-stable		
IoB				

activate uart2

keep uart0 for bluetooth



signalK

login to set admin account at first connexion

The 'Enable Security' interface has a title 'Enable Security' and a subtitle 'Create an admin account'. It contains two input fields: 'Username' and 'Password'. Below these fields is a blue button labeled 'Enable' with a lock icon.

Modification mot de passe pi/ mareva

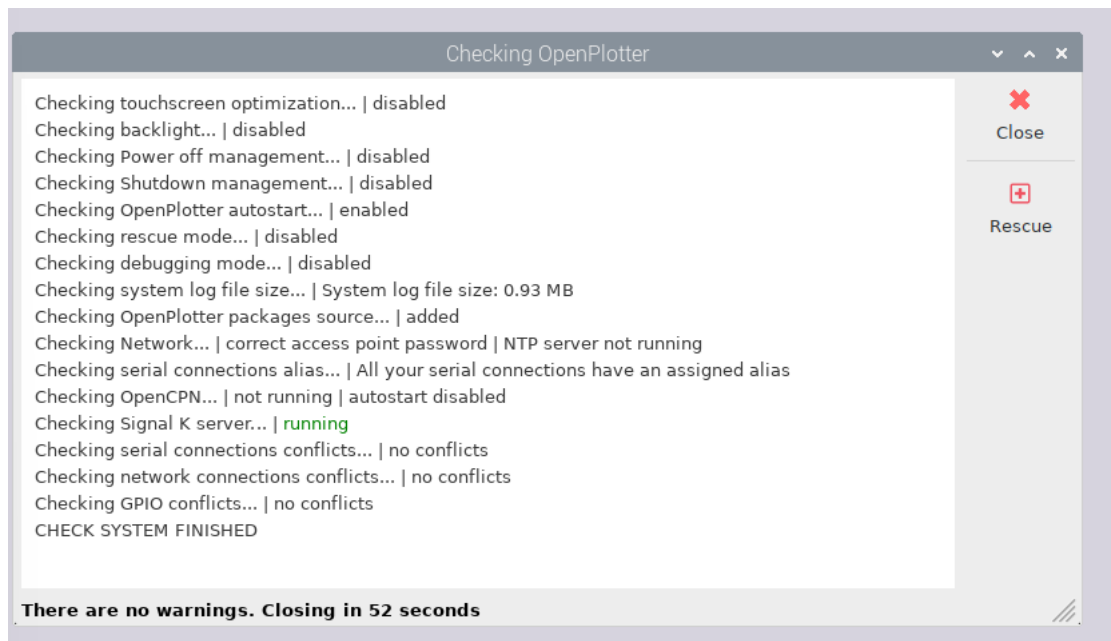
Modification mot de passe wifi avec l'application « network » Mareva2023

Update opencpn

run the opencpn installer, once for the update to finalize, and a second time to access the installer itself

« from backports » version is already installed click on install to have the shortcut rebuilt

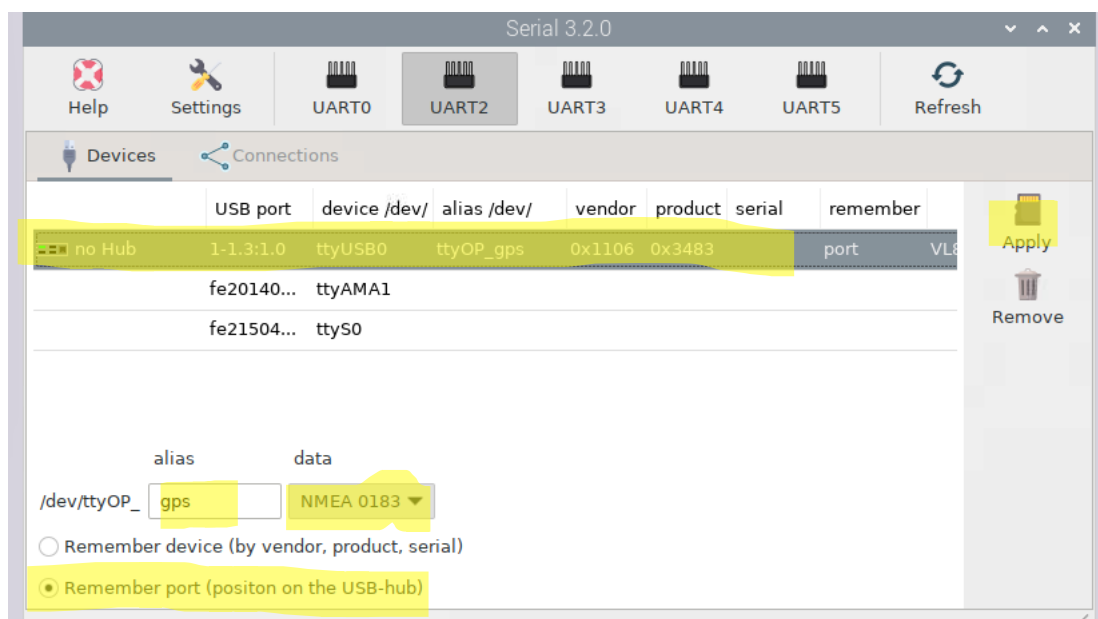
Check system is ok

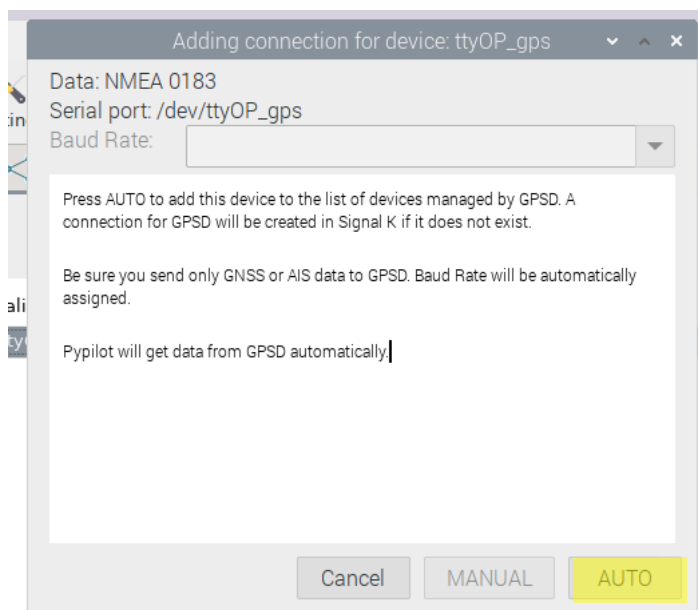
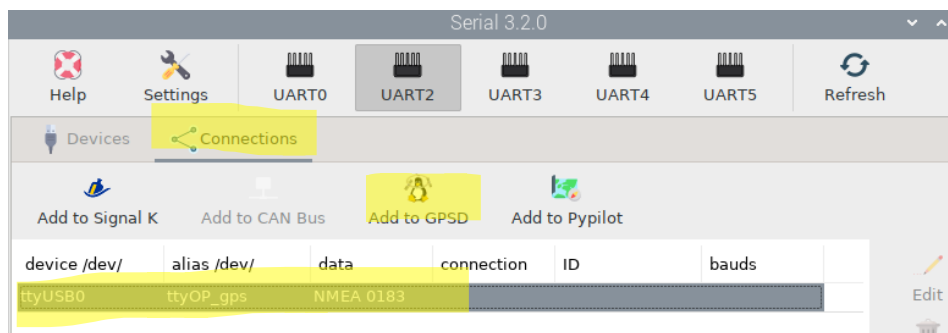


GPS install

There is a bug with udev, see [Serial device not added correctly \(openmarine.net\)](https://openmarine.net/serial-device-not-added-correctly)

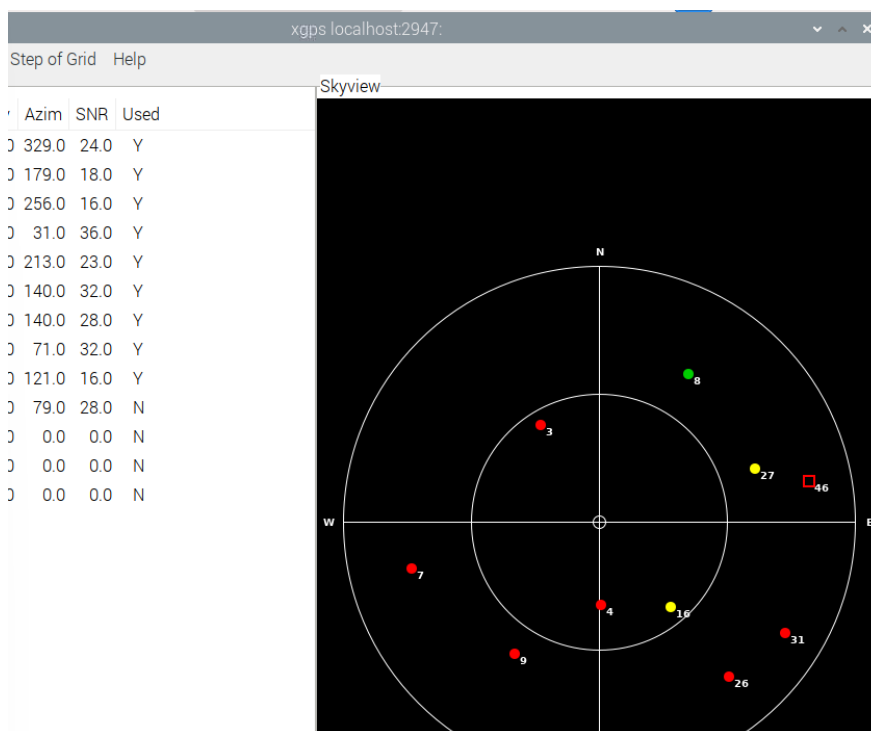
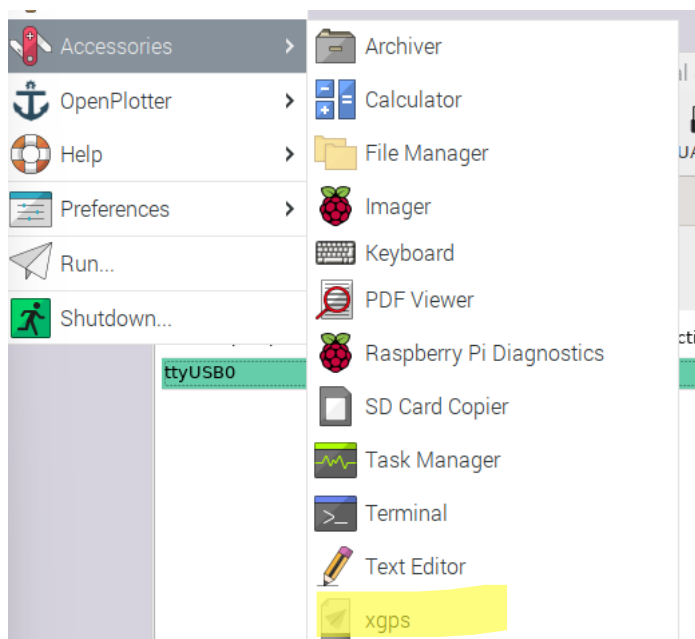
The gps has to be remembered by the port





device /dev/	alias /dev/	data	connection	ID	bauds
ttyUSB0	ttyOP_gps	NMEA 0183	GPSD	/dev/ttyOP_gps	auto

Verification with xgps



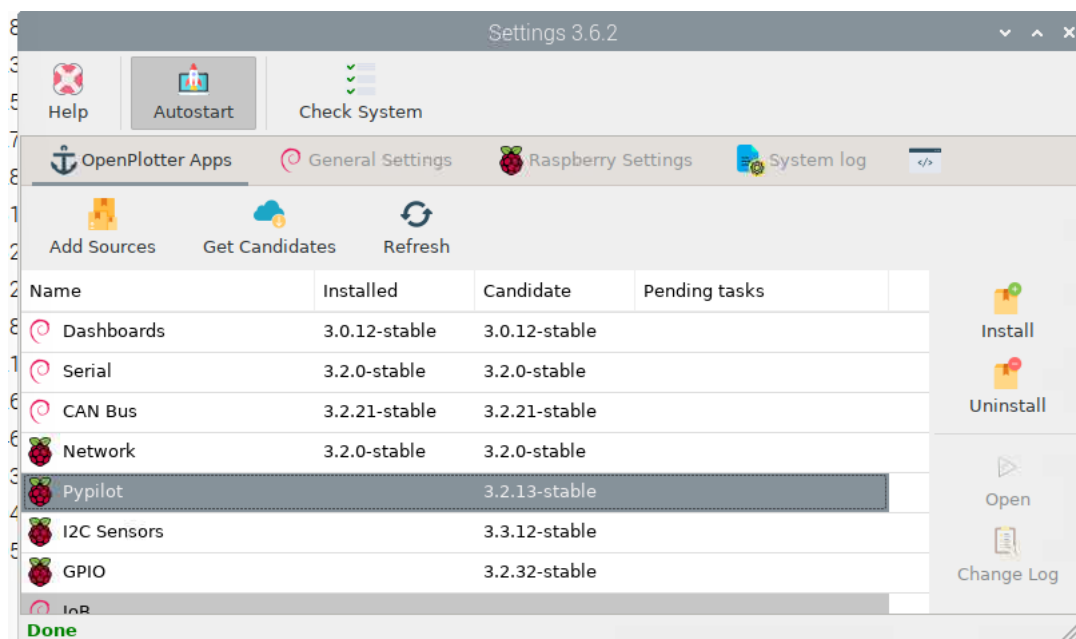
And signalK

Dashboard	
Webapps	
Data Browser	
Appstore	
Server	
Security	

Path	Value	Units	Timestamp	Source
navigation.courseOverGroundMagnetic	null	rad	06/15 12:31:57	OpenPlotter GPSD.GN (VTG)
navigation.courseOverGroundTrue	1.5221016410117956	rad	06/15 12:31:57	OpenPlotter GPSD.GN (RMC)
navigation.datetime	"2023-06-15T01:31:57.000Z"		06/15 12:31:57	OpenPlotter GPSD.GN (RMC)
navigation.gnss.antennaAltitude	37.1	m	06/15 12:31:56	OpenPlotter GPSD.GN (GGA)
navigation.gnss.differentialAge	0	s	06/15 12:31:56	OpenPlotter GPSD.GN (GGA)

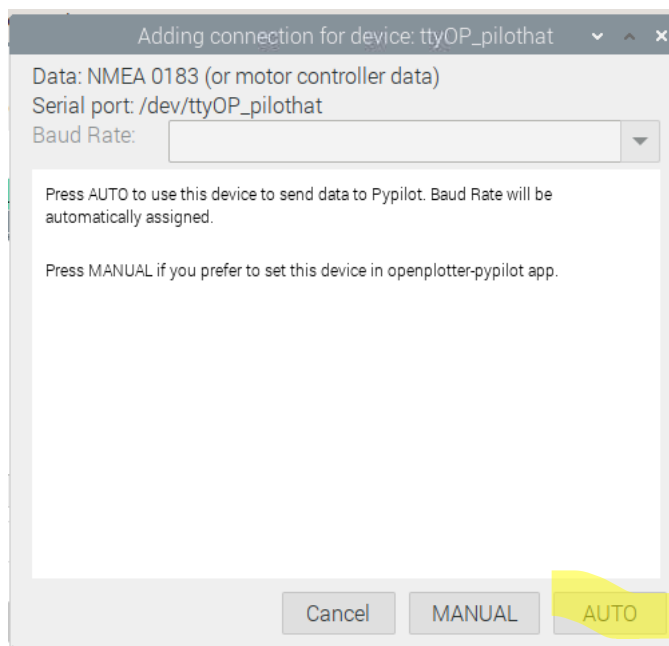
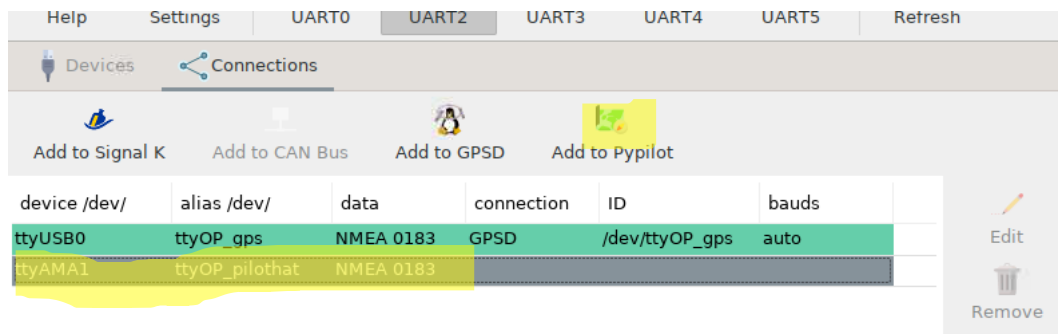
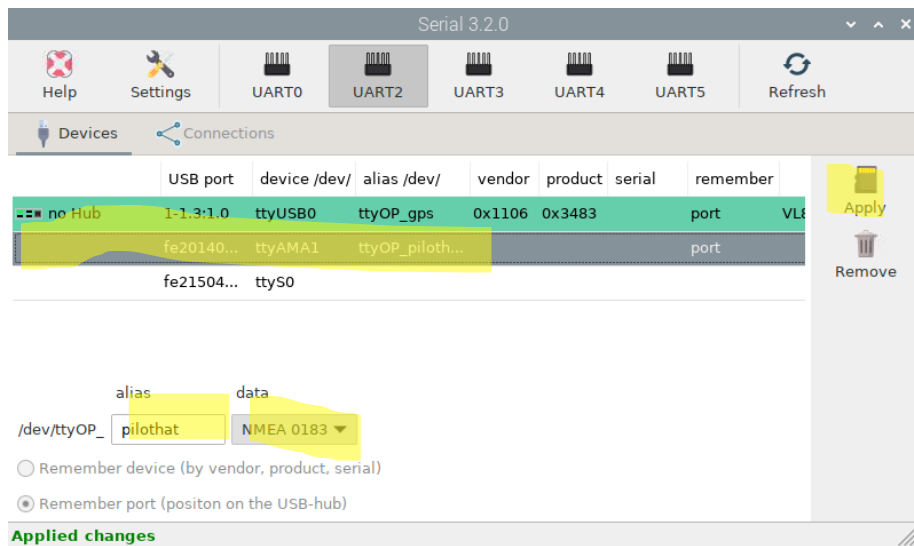
Pyplot install

From settings



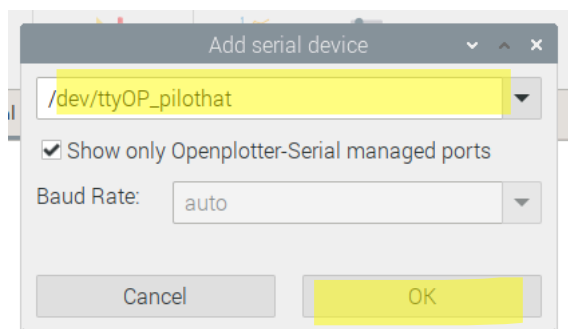
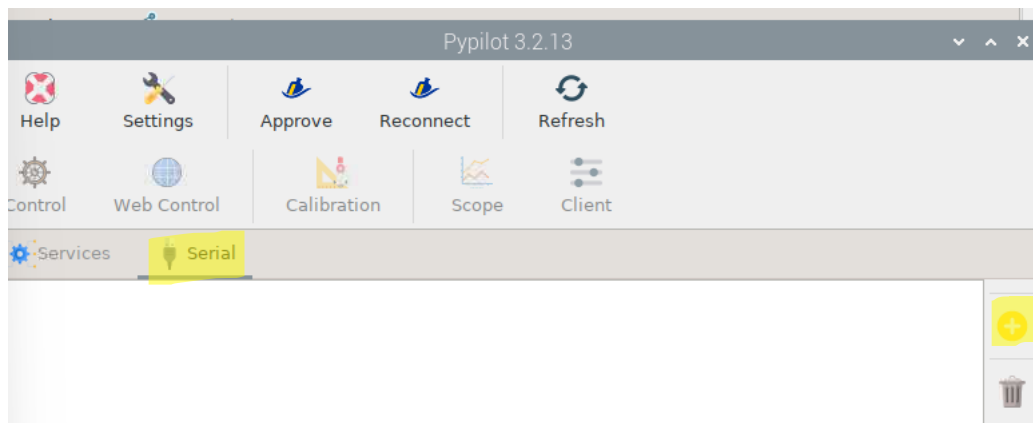
Pyplot config

With serial, set an alias for ttyAMA1 (AMA1 instead of AMA0 because of UART2 activated instead of UART0)

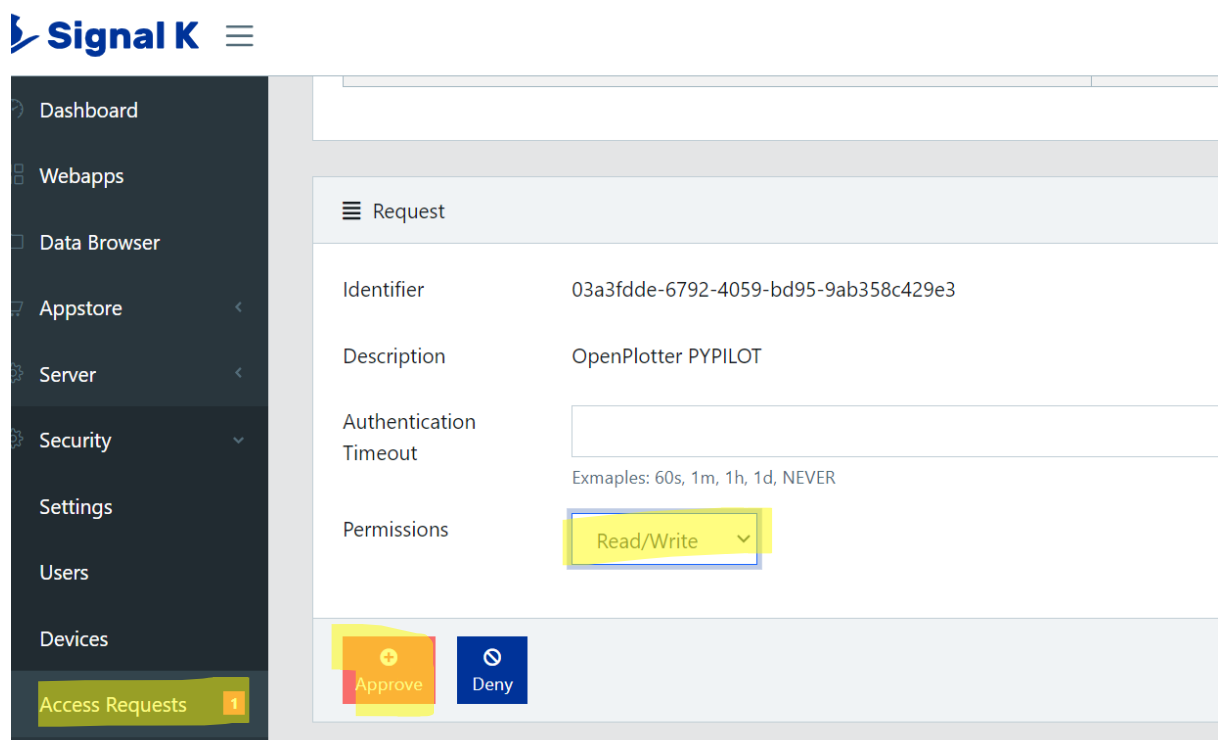


Run pypilot

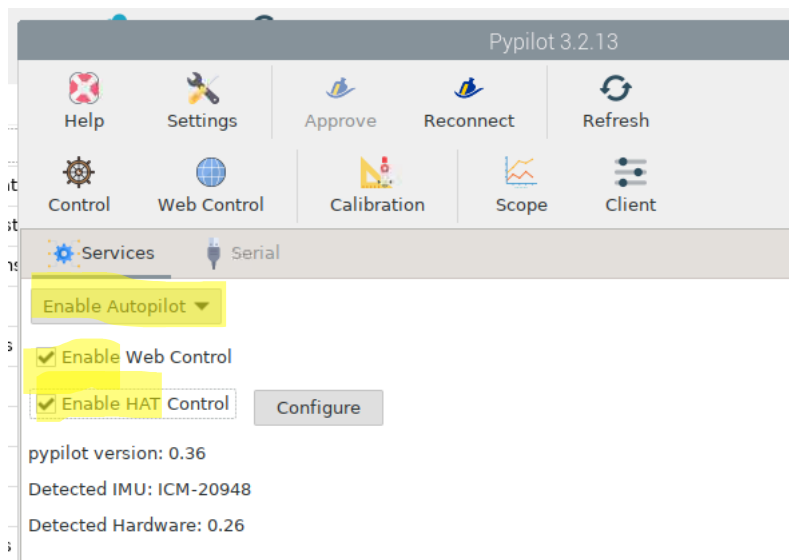
Add connexion



run signalk to authorize pypilot



Enable all the services

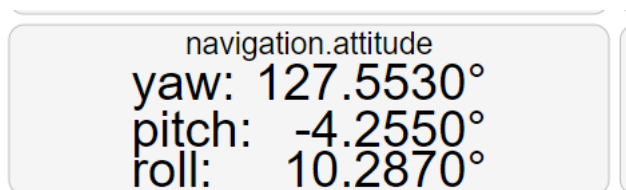


Reboot, to check that all is running at boot

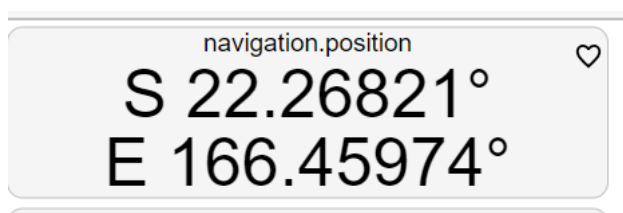
Verification

With signalk instrumental panel I see

Data from pypilot



Data from GPS



With openCPN

I have the GPS Data



And the LCD screen shows the COG

Errors

