Connect Avalon
to your onboard Wifi Box

Avalon Offshore for iOS
Avalon Offshore for Android

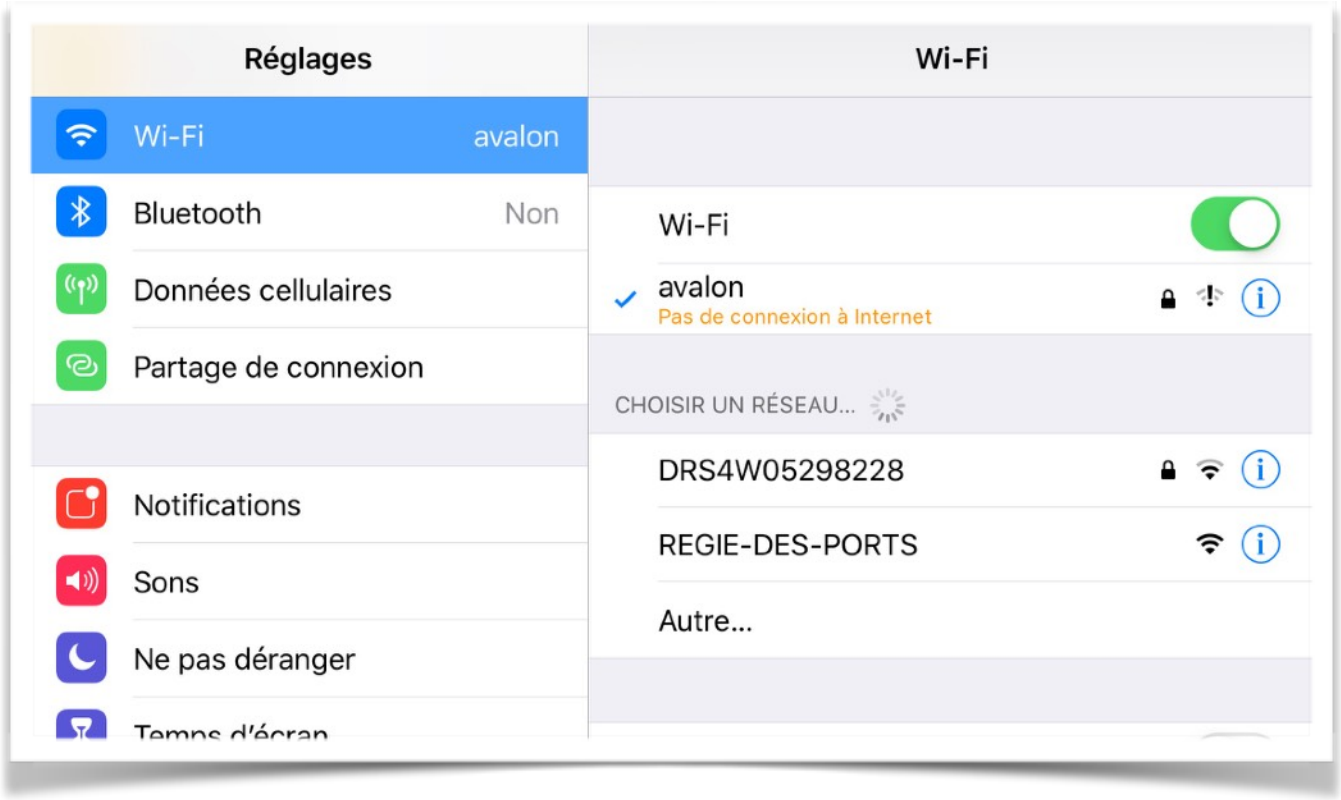
A. Introduction

To fully benefit from Avalon Offshore AIS and NMEA capabilities when sailing, you have to connect your mobile device(s) to an onboard wifi box.
This document explain step by step how to proceed.

In addition, this document explain how to connect several mobile devices to a box that only supports TCP communication protocol (i.e. that allows only one connection at a time).

B. Connect your iOS or Android device to the onboard Wifi box.

Step 1: Connect the device to the boat Wifi network.



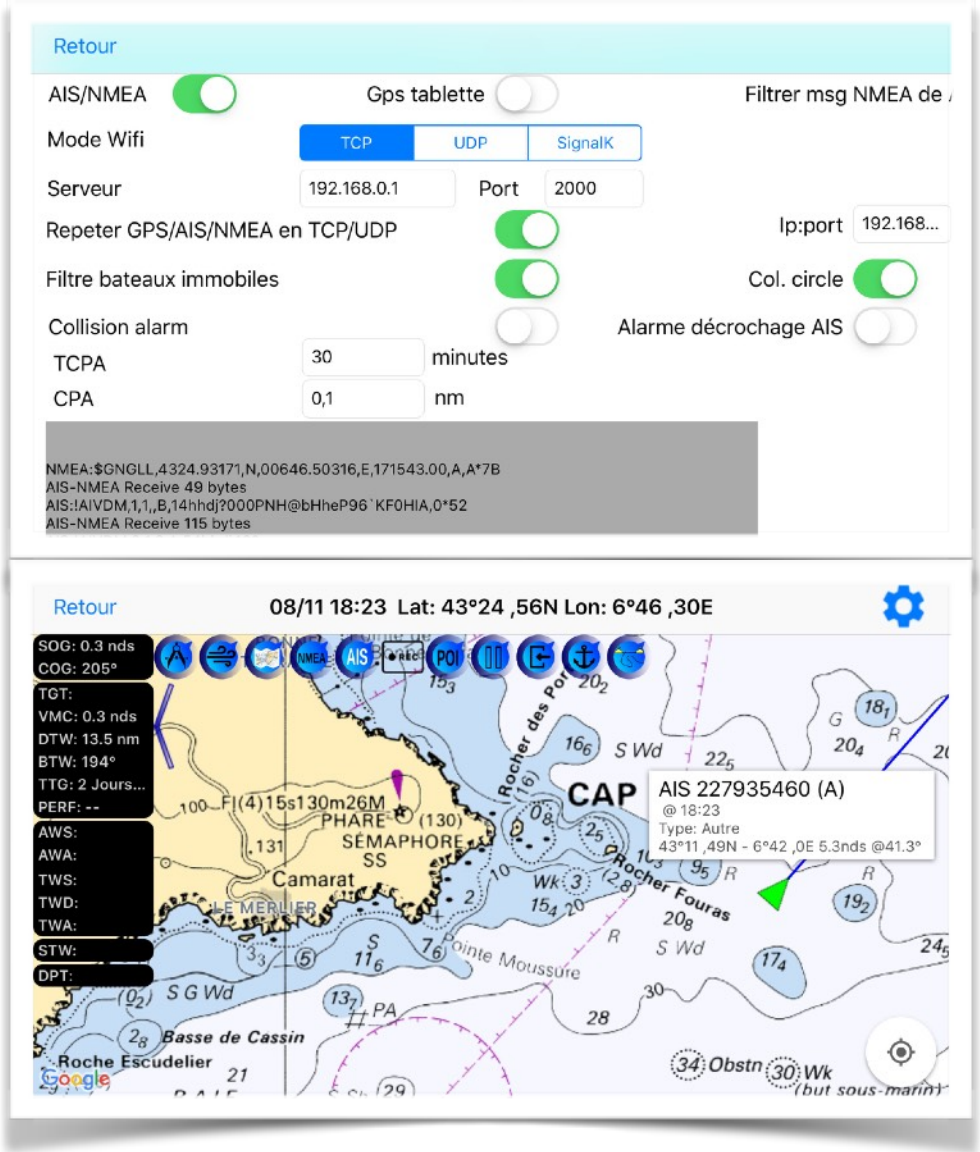
Step 2: Launch Avalon and go to the Navigation menu settings.

Get the required IP Adress and Port from your box user's guide, or get it from the appendix at the end of this document.

As an exemple, for an Emtrak B360, you should input:
- Wifi mode Wifi: TCP
- Server: 192.168.0.1
- Port: 2000

Switch on AIS/NMEA

AIS and/or NMEA messages will get displayed in the grey window
AIS targets will appear on the navigation screen.

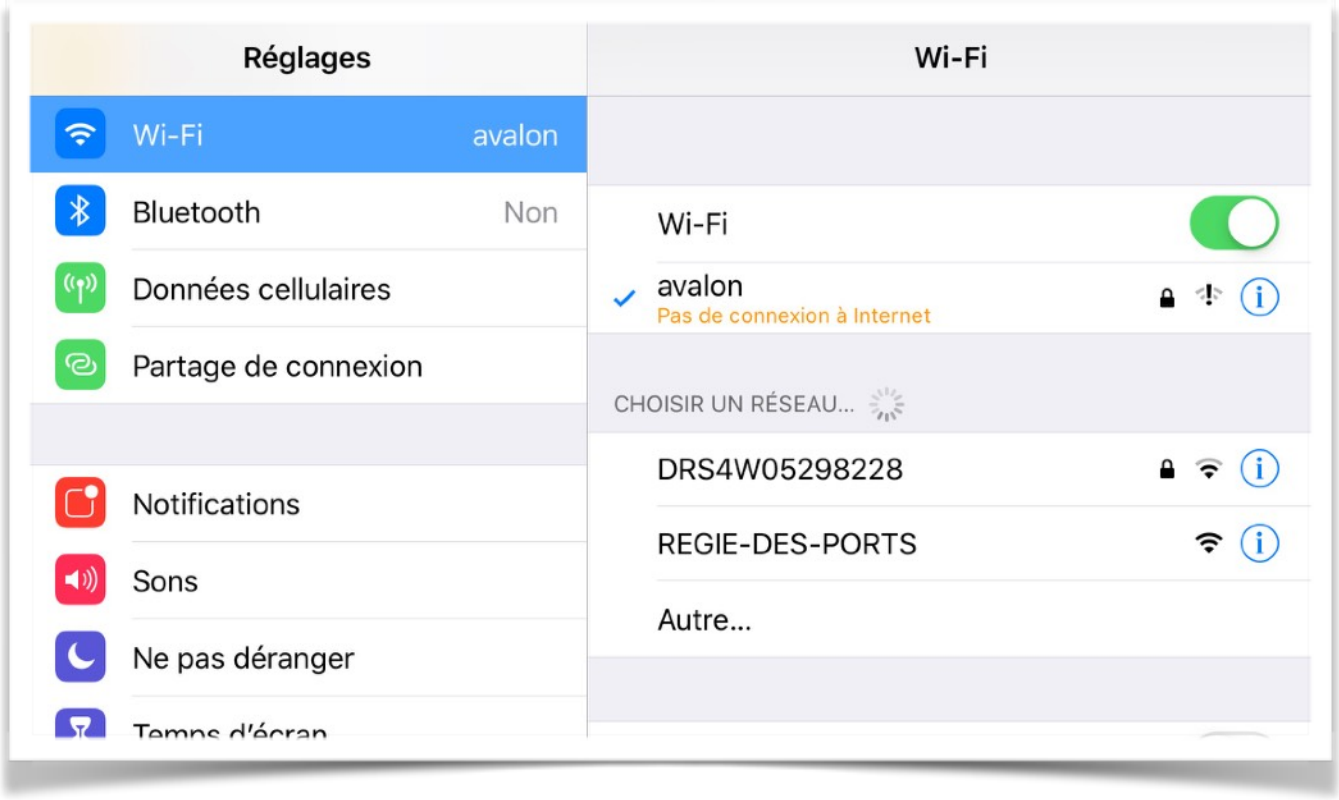


C. Connect several devices onto a box that only supports TCP communication protocol.

The TCP communication protocol only supports one, in contrary to the UDP ones that broadcast to as many devices as needed. If you have a TCP only box, can only get AIS/NMEA messages on one single iOS/Android device.

To overcome this issue, Avalon Offshore provides a solution described below.
You just need to follow the process described below to be able to connect several devices to your « TCP Only » box.

Step 1: Connect le first device to your boat wifi. (in this exemple, we connect an iPhone).



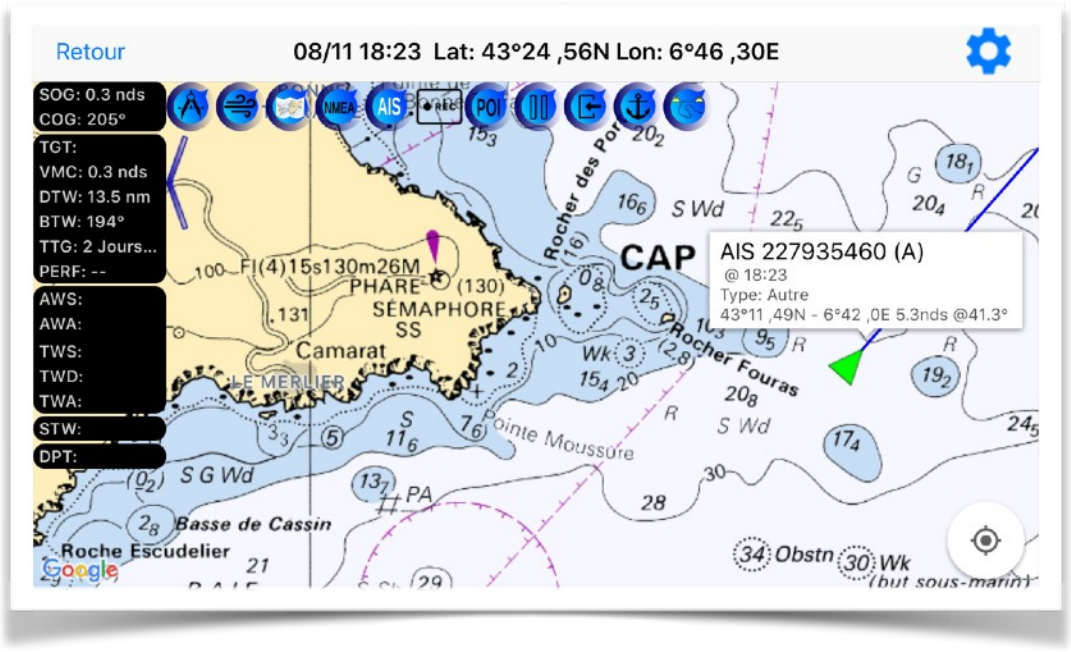
Step 2: Launch Avalon and go to the Navigation menu settings.

Get the required IP Address and Port from your box user's guide, or get it from the appendix at the end of this document.

As an exemple, for an Emtrak B360, you should input:
- Wifi mode Wifi: TCP
- Server: 192.168.0.1
- Port: 2000

Switch on AIS/NMEA.
AIS and/or NMEA messages will get displayed in the grey window

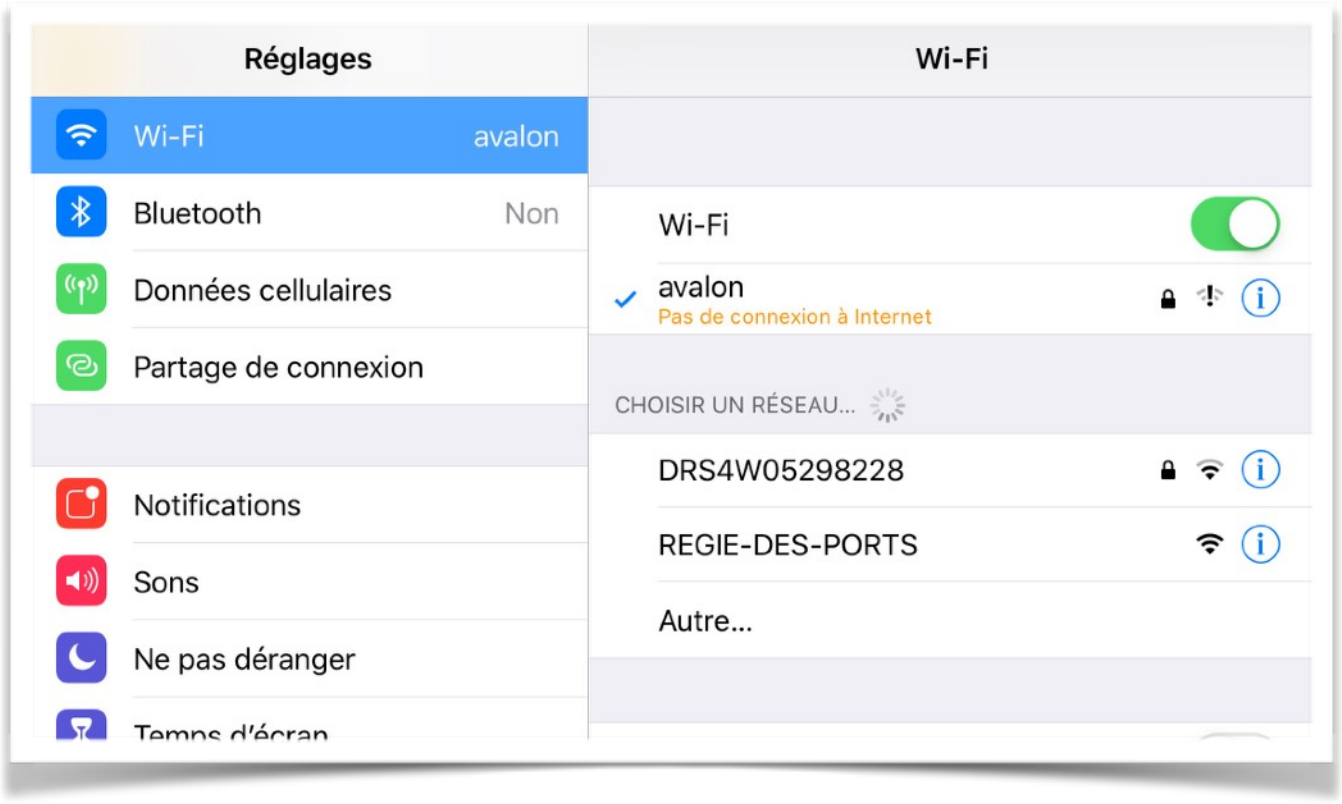
AIS targets will appear on the navigation screen.



To receive AIS/NMEA data on a second (or more) box, please modify the navigation settings on the first connected box (the iPhone in this exemple):

- Switch on « Repeat GPS/AIS/NMEA over TCP/UDP»
- Fill in the field ip:port with « your router adress » with the last 3 digits at « 255 » then « :your choice's port »
- In our exemple, I have set this field to 192.168.0.255:2000 as:
    - My router adresse is 192.168.0.1 and therefore 192.168.0.255
    - 2000 as port number. You can use the port number you wish but you have to use the same port number on all the connected devices.

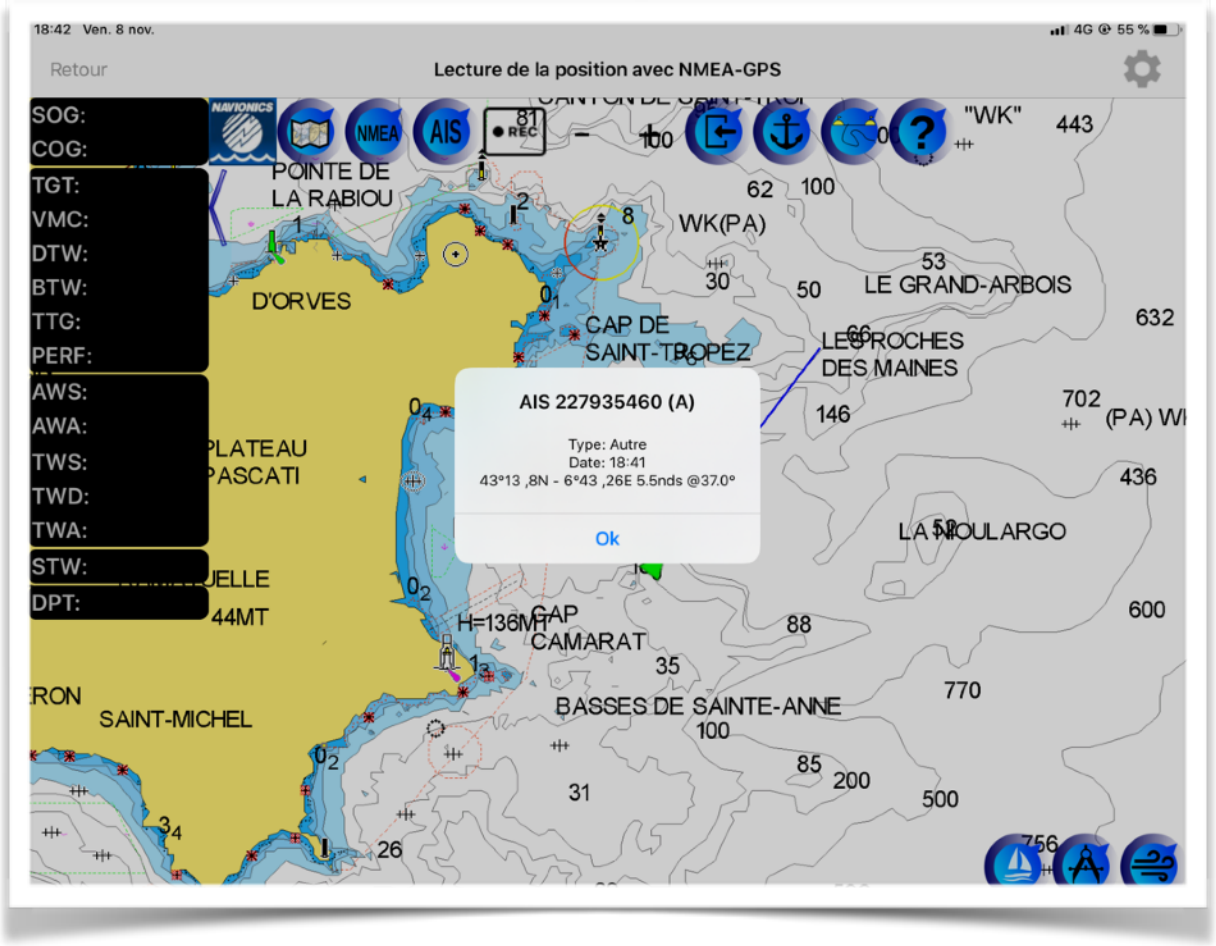
Then go to the second (or next) device to connect, an iPad in this exemple and connect this second (next) device to the boat wifi.



Then go to Avalon and the navigation settings.

Switch on AIS/NMEA and enter in the field ip:port the same port number as the one chosen in the first device, in our case the iPhone.

The same GPS/AIS/NMEA messages will get displayed on the second device and the AIS targets will also be visible on the navigation screen..



This solution has 2 main advantages:

- Get on several devices NMEA data and AIS targets on as many devices as you wish even if your box only supports one connection at a time.
- Be able to use a non cellular iPad when sailing.

D. Main wifi routers and transponders connection settings

Information below is indicative. Please refer to your box user guide to get more detailed information.

Brand	Model	Type	IP Adress	Port	Protocol
NKE	BOX Wifi	Multiplexer NMEA	192.168.56.1	50000	TCP, UDP
EMTRAK	B360	Transponder AIS, Multiplexer NMEA	192.168.0.1	2000	TCP
SHIPMODUL	Miniplex 3WI, Miniplex 3WI N2K Miniplex 2WI	Multiplexer NMEA	10.0.0.1	10110	TCP
AMEC	Camino 108W	Transponder AIS	192.168.1.1	3333	TCP
VESPER	Cortex M1	Transponder AIS	192.168.15.1	39150	TCP
VESPER	XB 8000	Transponder AIS	192.168.15.1	39150	TCP
MCMURDO	M10W	Transponder AIS	?	?	?