QTVLM COMPANION

Version 1.30

Contents

Introduction

qtVlm Companion is an application designed to work together with a qtVlm installation acting as a server. It cannot work without being connected to qtVlm, either via TCP (WIFI) or Bluetooth (Android only).

It can be installed on Android phones, tablets, and watches (Android Wear), and on iOS iPhones and iPads.

It can display around 30 data coming from qtVlm, and has also 4 special functions: Chart, Anchor, WP and Race Start.

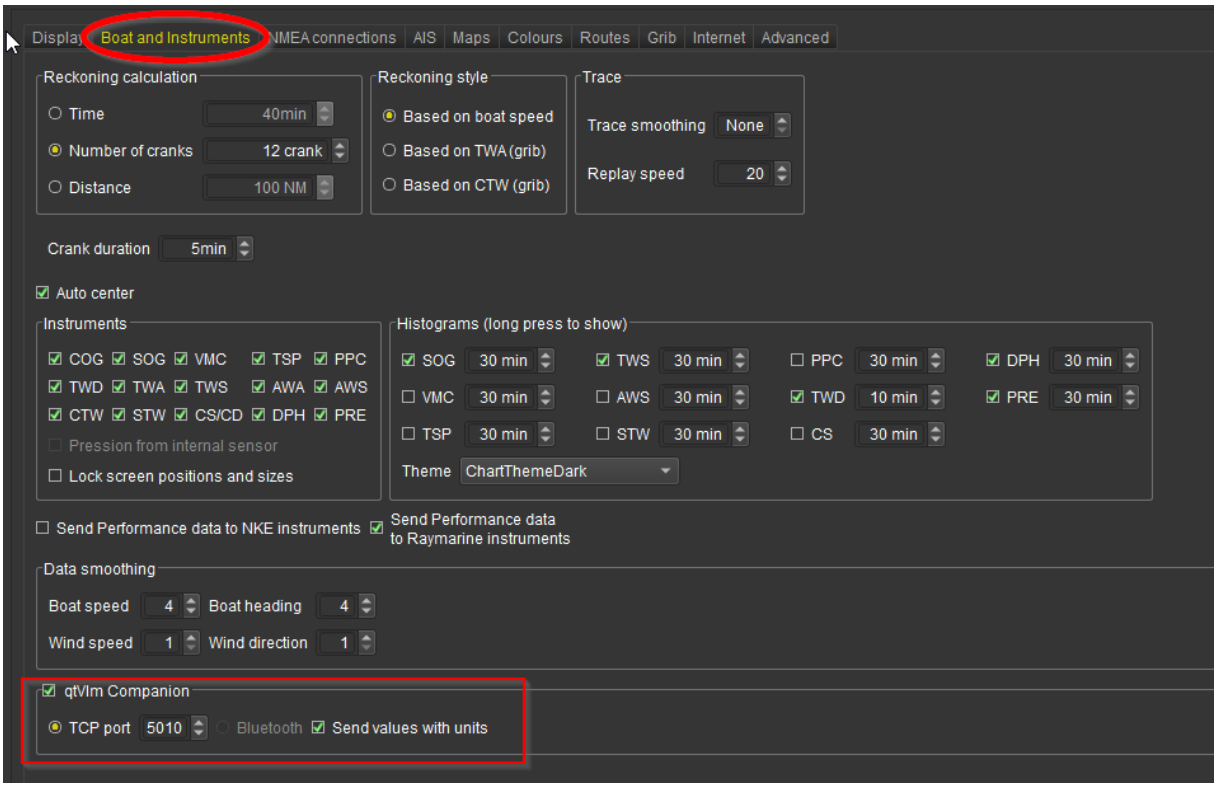
Once a successful connection has been established with qtVlm, all the features will be available for 1 **hour**. After this grace period the application needs to be purchased to be able to continue using it. It is a onetime purchase and not a subscription.

Installation and connection

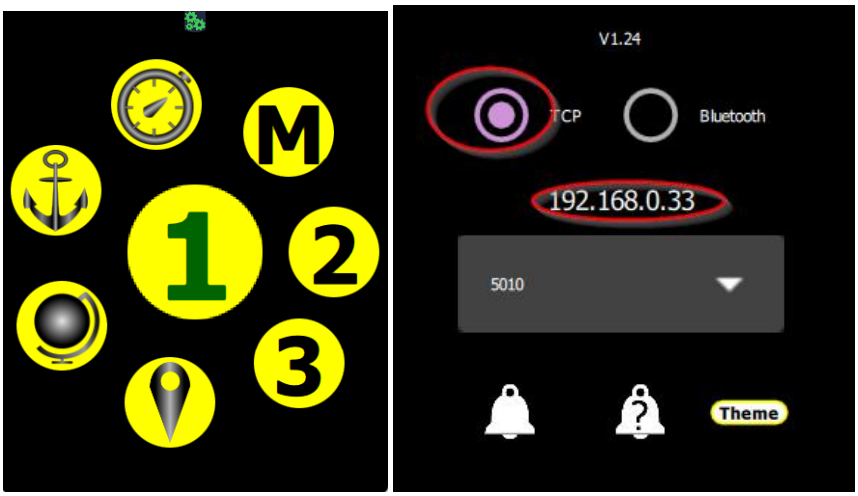
Once installed on a device, the user must define the kind of connection used to communicate with qtVlm. **Communication between qtVlm and Companion starts only when NMEA acquisition is started on qtVlm (or Simulation Mode).** The option "qtVlm Companion" must be checked in qtVlm to receive data in the Companion. **If units are not sent there will be more space to display values on the Companion screen and therefore numbers will be shown bigger.**

TCP connection

This type of connection is available for all qtVlm platform. On qtVlm the setting "qtVlm companion" must be on and a port should be selected. The default port is 5010.



On the Companion the IP address of qtVlm machine should be specified in the settings, with the same port number:



Note that on certain Android Watches (**Android Wear**) models, it is necessary to switch off Bluetooth connection for the TCP connection to work.

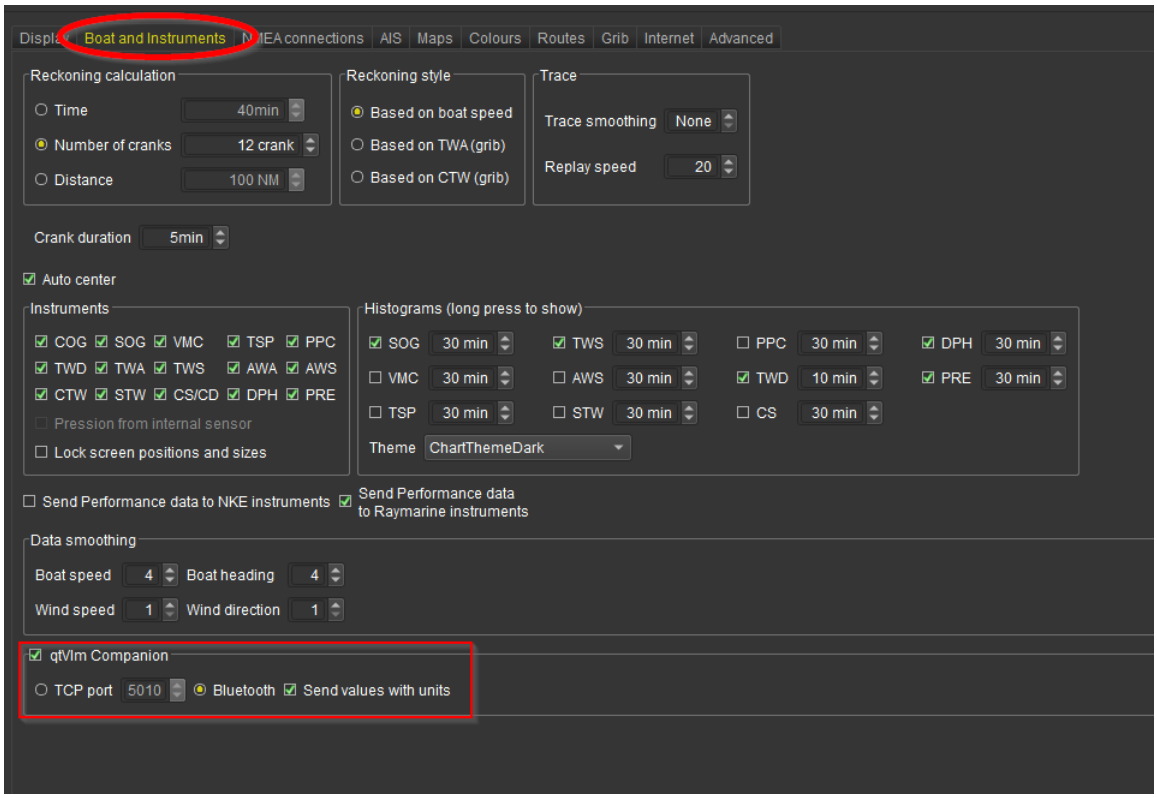
Bluetooth connection (not available on iOS)

It is also possible to connect the Companion to qtVlm via Bluetooth. **Bluetooth communication is not supported if qtVlm is running on old Windows versions or on iOS.**

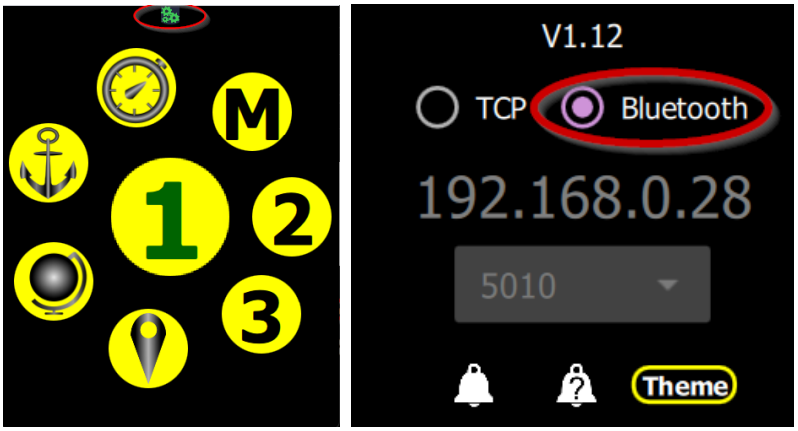
The devices (i.e. the machine running qtVlm and the machine running the companion) must be paired via their Bluetooth settings before the connection can take place. On MacOS it is necessary to leave the Bluetooth settings screen on so that the MacOS machine is discoverable.

On qtVlm side in the instruments settings the Companion checkbox must be checked, and the communication type should be set to "Bluetooth".

On some Android devices, it may be necessary to turn off "Scan for nearby devices" in order to achieve a smooth communication.



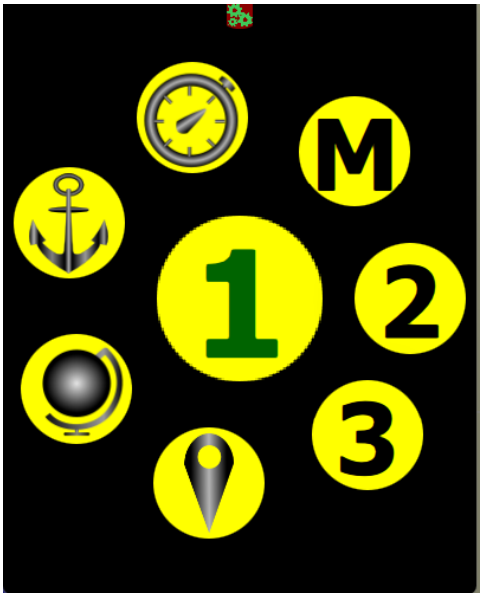
On the Companion side the communication settings should be set to Bluetooth.



Note that to go back to the main or the previous screen, you must use a **left swipe gesture.**

Checking the connection

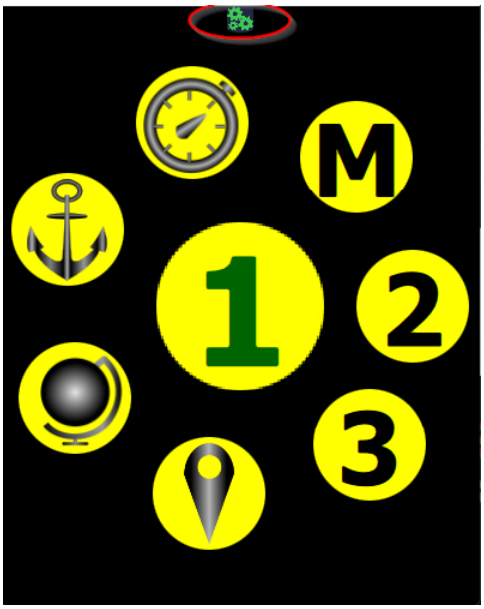
If the Companion cannot connect to qtVlm, the icon at the top is red.



In that case you should check that:

- qtVlm is running and has NMEA acquisition started (or is in Simulation Mode).
- If TCP communication has been chosen, verify that IP address and port number are OK.
- If Bluetooth communication has been chosen, check that the 2 devices are paired and connected. On MacOS leave the Bluetooth configuration dialog opened.

Once communication between qtVlm and the Companion has been successfully established, the icons at the top turns green.



Configurable boards

You can configure up to 3 different boards, as seen in this screenshot:

If a board is not configured, its number appear in black, otherwise it appears in green. To activate or configure a board, tap on it so it moves to the center, then tap on it again.

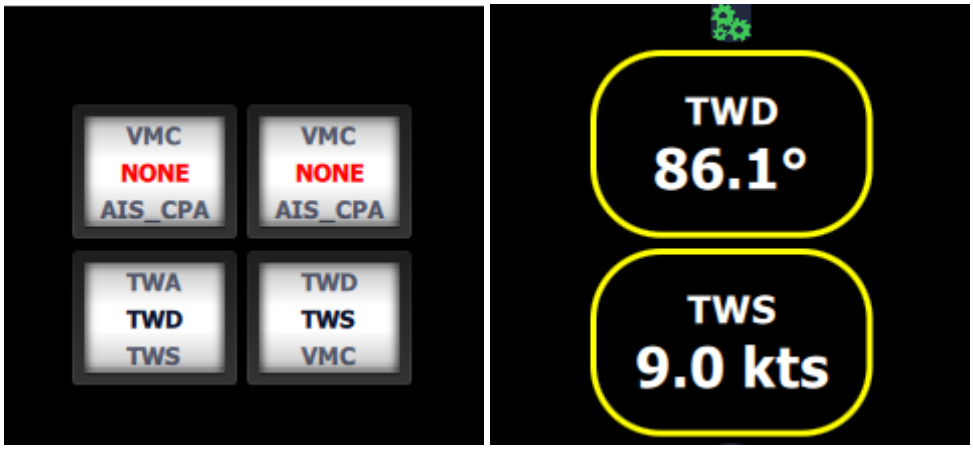
Let's configure the number 3:

Here we have the Companion running on a watch, so the screen is small and only 4 data can be configured for each board. The number of configurable data depends on the screen size.

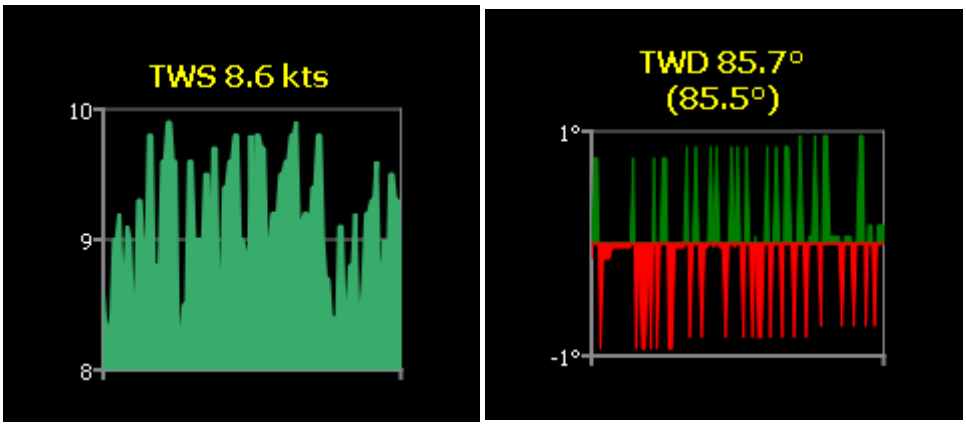
Here is for instance the configuration screen for a large tablet:

Once configured, the data chosen is displayed whenever you call this configurable board. You can always change which data is displayed by using the configuration button, on the top of the screen.

You are not obliged to set all the data. If you select less data, they will appear bigger on the screen

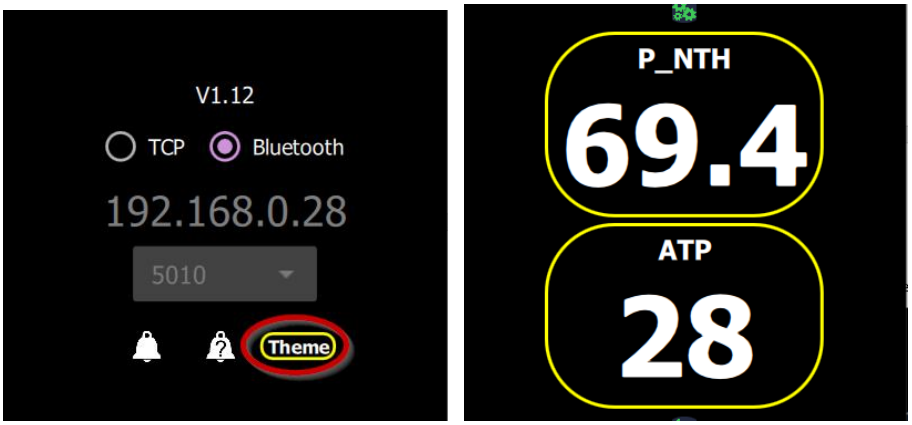


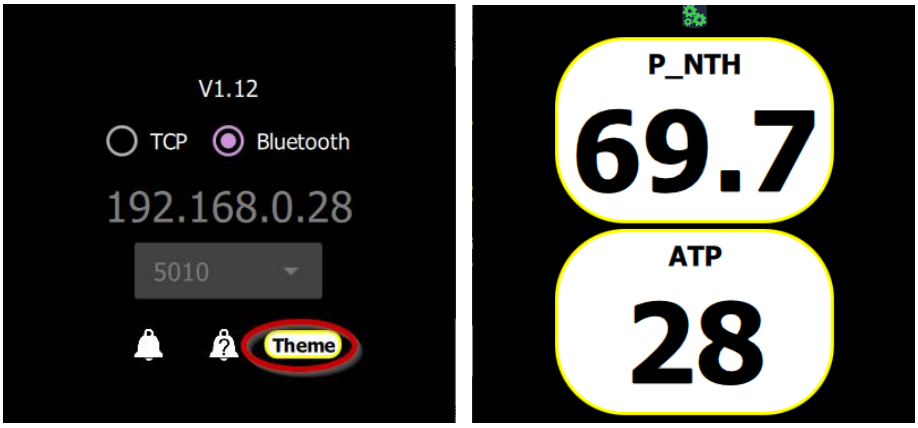
Each data can display a histogram (tap on the value to show it). For instance:



Themes

Two themes are available for displaying data, black on white or white on black.





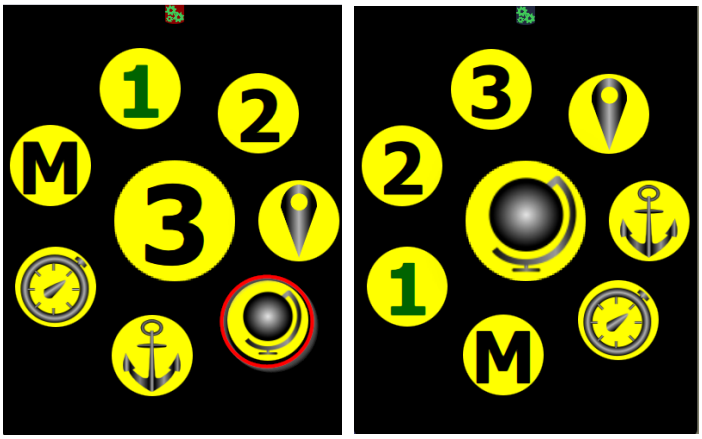
List of available data

There are 31 available data that you can choose to display in the configurable boards:

AIS_CPA	Closest Point of Approach distance for the most critical AIS target
AIS_TCPA	Time to Closest Point of Approach distance for the most critical AIS target
ATP	Air Temperature
AWA	Apparent Wind Angle
AWS	Apparent Wind Speed
CD	Currents Direction
CNM	Course to Next Mark
COG	Course Over Ground
CS	Currents Speed
CTW	Course Through Water
DNM	Distance to Next Mark
DPH	Depth
HDG	Heading
GWD	Ground Wind Direction
GWS	Ground Wind Speed
PCH	Pitch angle
PPC	% of current speed against theoretical polar speed
PRE	Pressure
P_BWA	Best Wind Angle according to polar
P_BWS	% Polar speed for P_BWA
P_CHDG	Target heading
P_CTSP	Target speed
P_NTH	Next Track Heading
P_PPC	% Actual speed to Target Speed
P_PST	Speed directly toward active WP
P_VHDG	Theoretical VMG Heading
P_VTSP	% Theoretical VMG Speed
ROL	Heel angle
RPM	Engine rotation per minute
SAIL	Current Sail theoretical choice
SOG	Speed On Ground
STP	Sea temperature
STW	Speed Through Water
TSP	Target Speed as a percentage
TWA	True Wind Angle
TWD	True Wind Direction
TWS	True Wind Speed
VMC	Velocity Made Course
XTE	Cross Track Error

Chart screen

By selecting the chart screen, you can display what is displayed on qtVlm screen.

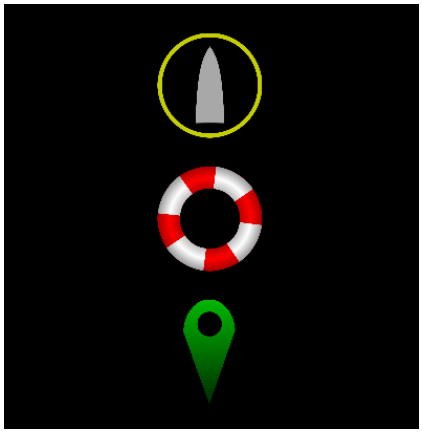


You can use your fingers to move or pinch the map. These actions will also update qtVlm display.

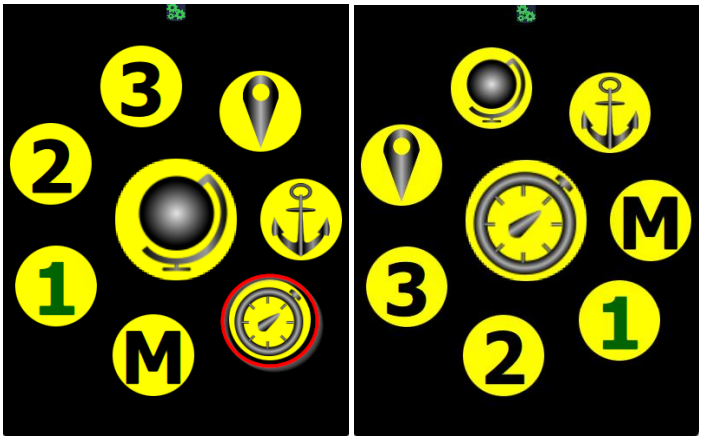
Since you can use your fingers or the mouse to move the chart, this screen is the only one with a back button instead of the a left swipe gesture to go back.

By using the WP button on the top of the screen, you can drop a mark (POI) or a MOB.

You can also center the boat on the screen (double tap) or keep it at this screen position (single tap).



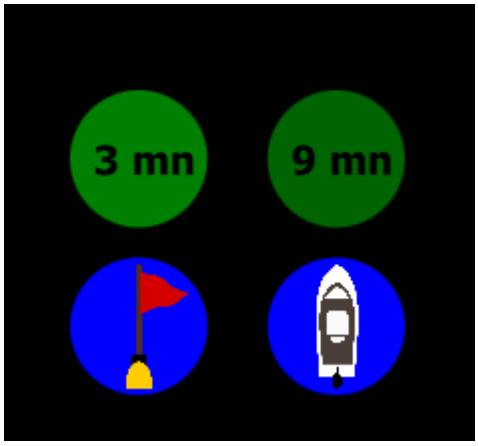
Race screen



To use the race screen in the Companion, the start race mode must be first activated in qtVlm.

If no buoy or committee boat as been defined yet, you will be presented with this screen :

Using the configuration button on the top of the screen, you can set the buoy and/or the committee, or start one of the 2 timers configured in qtVlm.



If you tap the buoy or the committee, they will be placed in qtVlm at the boat's bow.

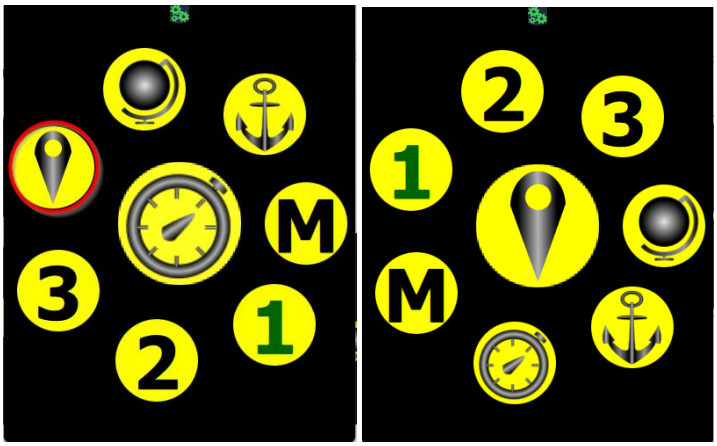
Once the committee and the buoy have been placed (either from the Companion or in qtVlm), and one of the timer started, the race screen will show the time and distance to the line and various other information :

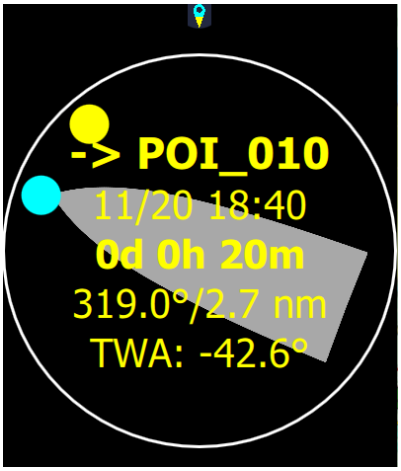
The cyan data represents the closest point on the line, the yellow one is where the boat is going to cross the line with the current heading.

The data in the middle is the Time to Burn, i.e. the difference between the time to go to the yellow point and the remaining time.

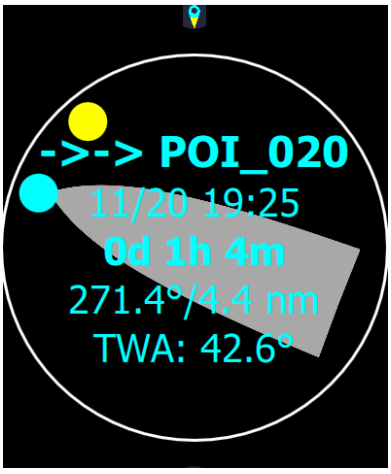
WP screen

The WP screen displays the boat current heading and information concerning current WP and eventually next WP (if the boat is engaged in an activated Route or Pathway).



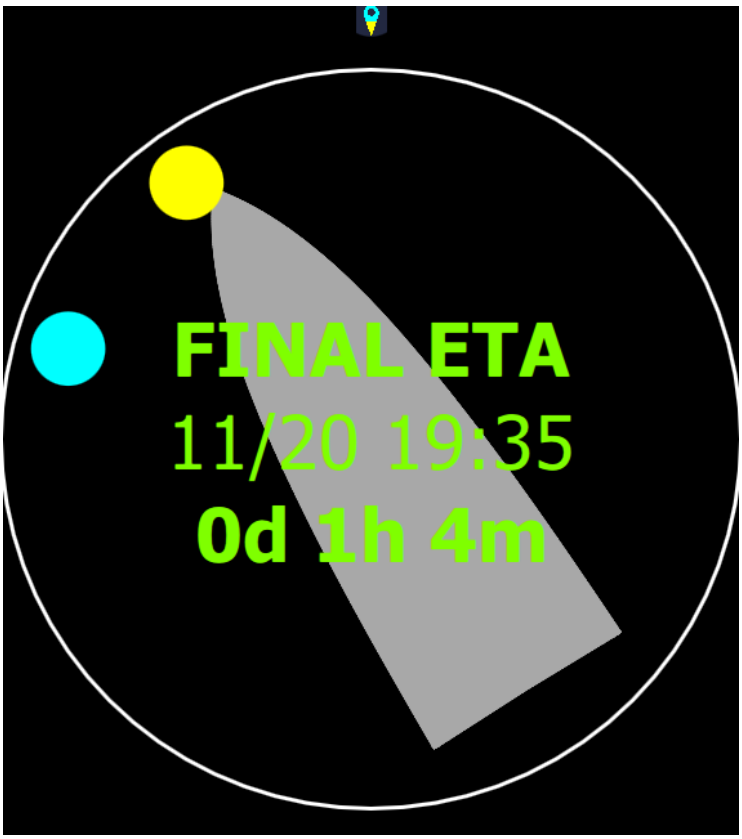


The yellow icon represents the active WP, and the blue one the next WP on the route or pathway. By pressing these icons, the information displayed concerns either the active WP or the next one.

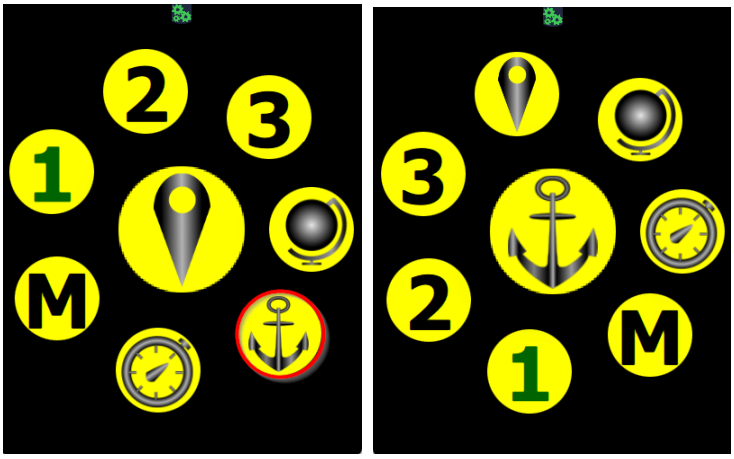


 The yellow to blue icon on the top will force qtVlm to skip current waypoint and activate next one. If no route is activated, the last activated route (if any) will be activated.

Pressing the WP name will show route's arrival ETA data:

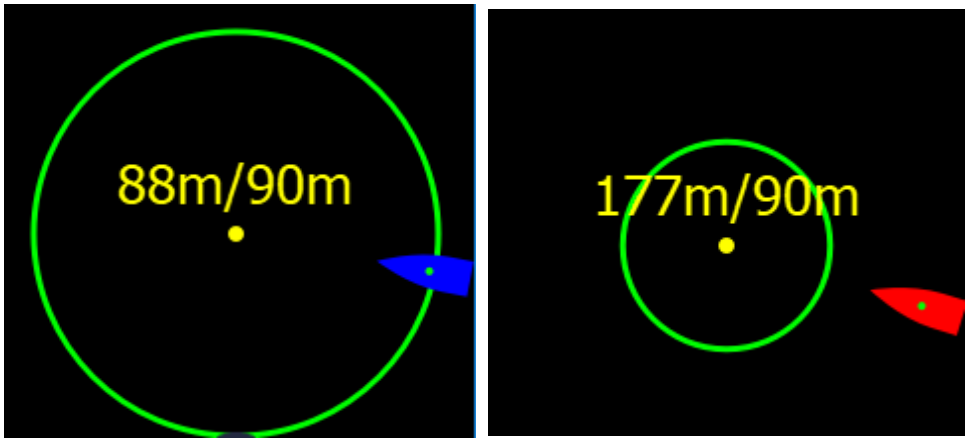


Anchor screen

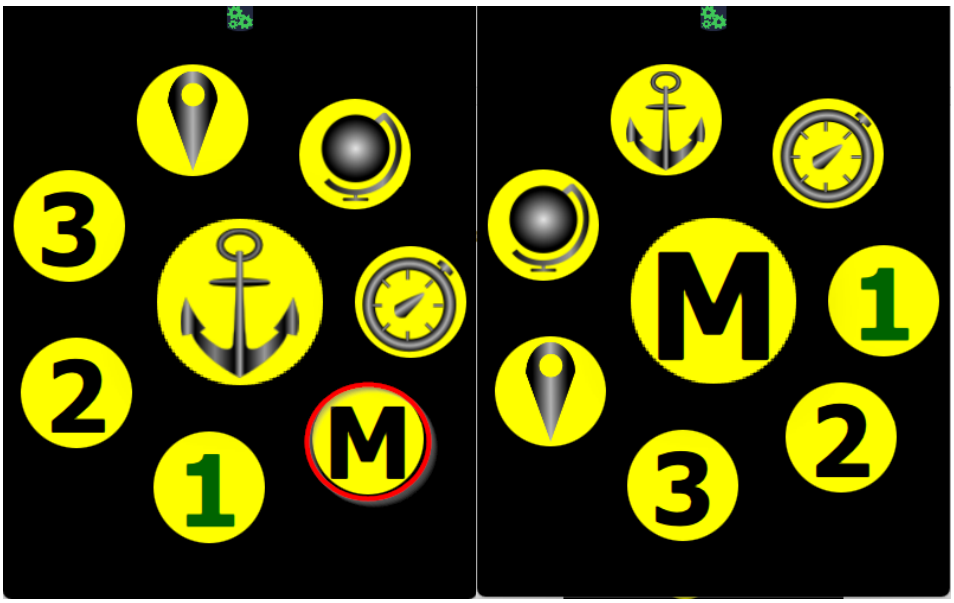


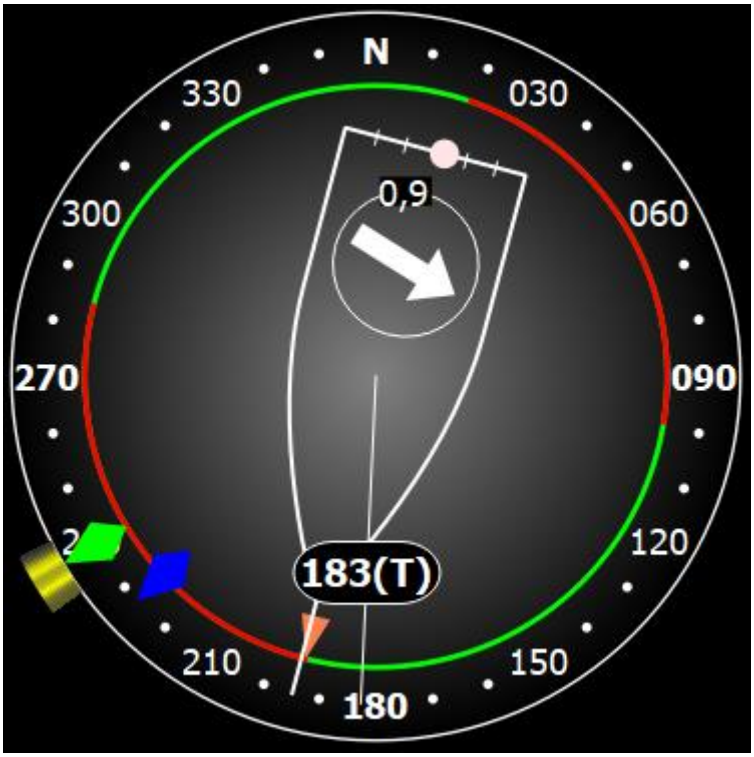
If the anchor has not been dropped yet in qtVlm, you will be presented with a big anchor button that you can press to drop the anchor in qtVlm. Anchor will be dropped at the boat's bow.

Once the anchor has been dropped, the Companion will display the anchor and the relative boat position. The circle represents the alarm distance as configured in qtVlm.

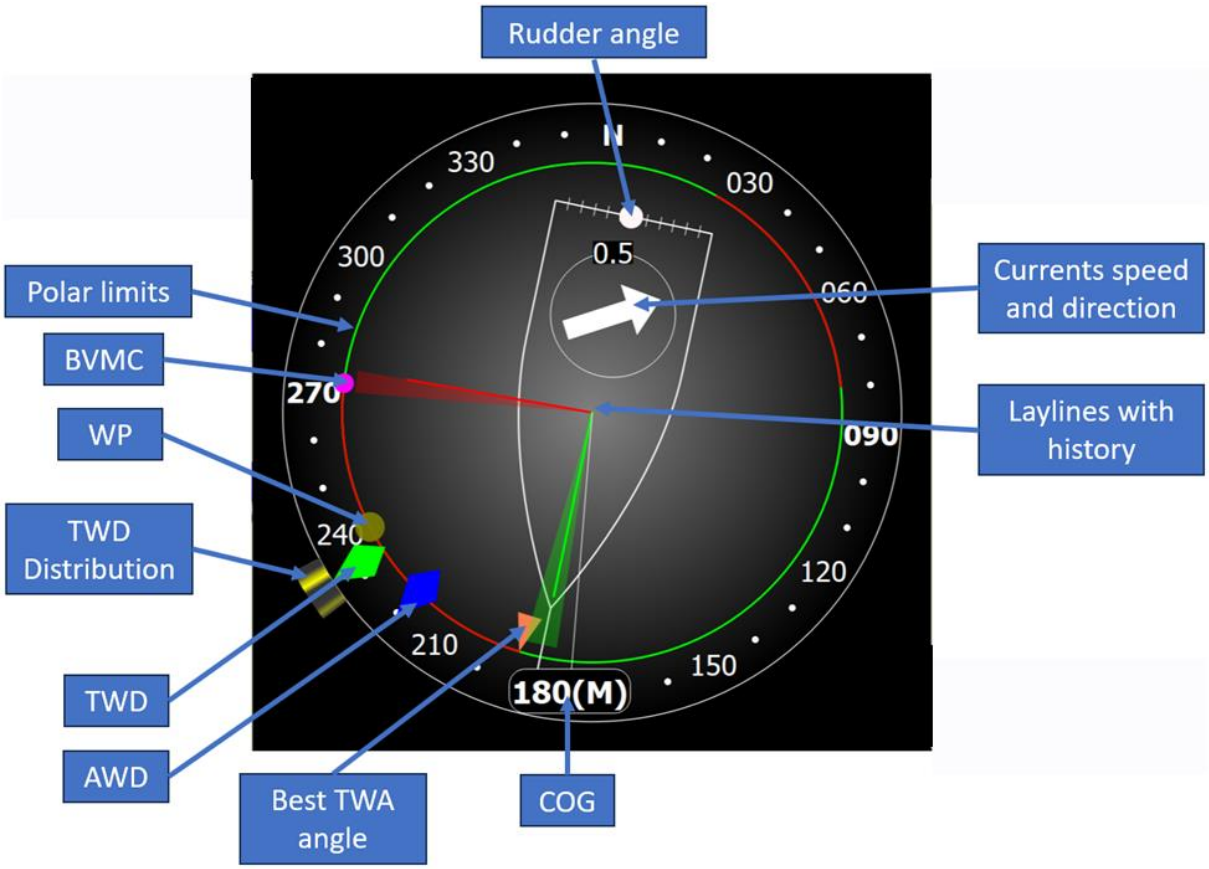


Tactical Microboard screen





This screen displays the Tactical Microboard from qtVlm, with the following data:



Alarms

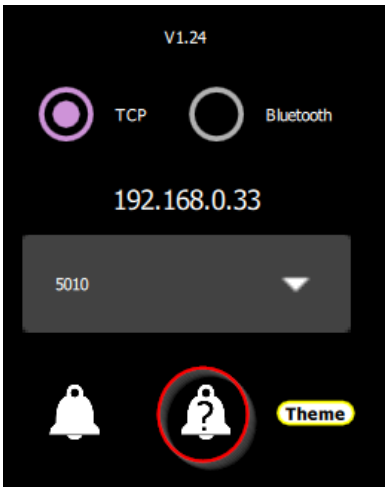
The Companion can receive alarms emitted by qtVlm. It does not calculate alarms by itself, therefore it can receive only alarms that are activated in qtVlm.

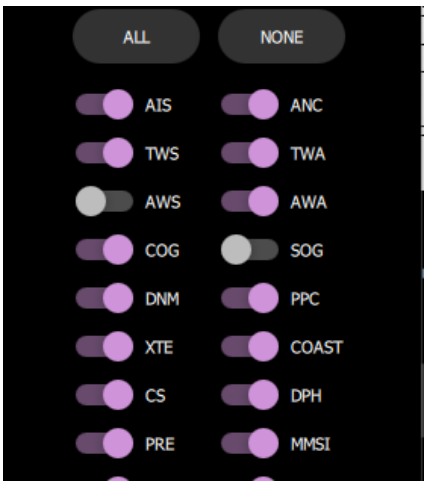
List of available alarms

AIS	AIS alarm according to qtVlm settings for CPA and TCPA
ANC	Anchor alarm
TWA	True Wind Angle alarm
AWA	Apparent Wind Angle alarm
AWS	Apparent Wind Speed
COG	Course Over Ground alarm
SOG	Speed Over Ground alarm
DNM	Distance to Next Mark alarm
PPC	Percentage Polar alarm
CS	Currents Speed alarm
PRE	Pressure alarm
DPH	Depth alarm
MMSI	Alarm if one of the MMSI defined in qtVlm appears on the map
COAST	Distance to coasts alarm
XTE	Cross Track Error alarm
HEEL	Heel angle alarm
TWS	True Wind Speed alarm
GPS	On GPS fix loss
INET	On Internet connection available
RADIO	Entering a compulsory Radio Call Area
CONE	Danger Alarm from ENC charts
TIME	Clock alarm
LAY	Time to layline Alarm

Configuration

To configure alarms, you should go to the main configuration screen and use the alarm button with a question mark:



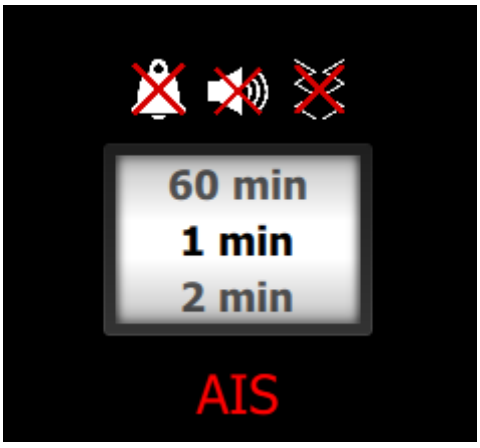


Alarms management and acknowledgment

If an alarm occurs, the bottom icon turns red with a bell symbol.

You must acknowledge the alarm by tapping on this button, which will show the alarm screen.

You can decide to stop the alarm for a duration (from 1 minute to 60 minutes). You can also stop or start the sound and the vibration. The vibration alarm is only available on Android.



This alarm screen can also be triggered from the settings dialog, even if no alarm is active.