



## RaceSense User Guide

Welcome to the future of racing! This guide will walk you step by step through the setup process on shore, once you get out on the water, and post racing with RaceSense.

### IMPORTANT DEFINITIONS:

- **Race Control:** The Vakaros tablet app used to control RaceSense: refers to the app in its entirety
- **Participant:** A unit added as a participant to the regatta, either a team competing, a spare, or a RC timer.
- **Race Committee Device:** A unit whose dedicated purpose is to be either a control, boat, or pin unit; this unit is not a competitor
- **Control Unit:** the control or 'coordinator' unit stays near the RC Tablet and interfaces with all the devices on the network. This device is responsible for sending and receiving all messages to the fleet.
- **Boat unit:** the unit on the right end of the start line
- **Pin unit:** the unit on the left end of the start line
- **RC Tablet:** the tablet which runs the Race Control app

### Section 1: Setting up your tablet

#### 1.1 RaceControl App

When you first get your race control tablet from Vakaros you will receive an email with a link to download our RaceControl app. This email address that it will be sent to will be used to create a RaceSense login.

Once you've downloaded the app you will create a new account and login to the app. Be sure to write this down as it is possible it may not be the same person logging in every time.

## **Section 2: Navigating the App**

### **2.1 Creating a Regatta**

Create your regatta at least a day or two in advance to make sure you have every boat input and to save time during the morning of the race.

The first page you'll see is an empty "My Regattas" page, you'll want to select "Add Regatta" in the bottom left.

Enter a name for the regatta, such as "Valencia 69F" and the dates that the regatta will take place. Feel free to include practice days, or don't. These won't matter in the long run.

Toggle whether you'd like tracking for the regatta to be available publicly. Again, this isn't really significant for the sailor or RC experience.

Once you've input the regatta data, select "Add Regatta". This will return you to the main regattas menu: you can click into the regatta you're running and then "Select Regatta" in the bottom right corner.

### **2.2 Regatta Configuration**

Now you'll be on a page with the name of the regatta at the top, the info in the top-left, and the Race Officers on the bottom-left.

The most important thing to do next is to set up the Division. To do this click on the pencil next to "Divisions", then press on the plus next to "Edit Divisions"

A division is similar to a class, in that it is usually a one design class or a single start

group (i.e. ORC 1).

The name of the division will serve as its identifier. We recommend using the name of the type of boat racing, or the respective class.

Make sure to select the correct class in the drop down as this is how the software identifies what boat shape and bow offset to use for an accurate start.

\*If you do not see the class that is competing in the drop down please notify your Vakaros representative to have it updated\*

Finally select the starting sequence length, and the type of flags that are being used (numeric or standard RRS 29).

Select “Add” and finally “Save”

Now this division will appear in the list and can be selected. Click into the division by tapping it.

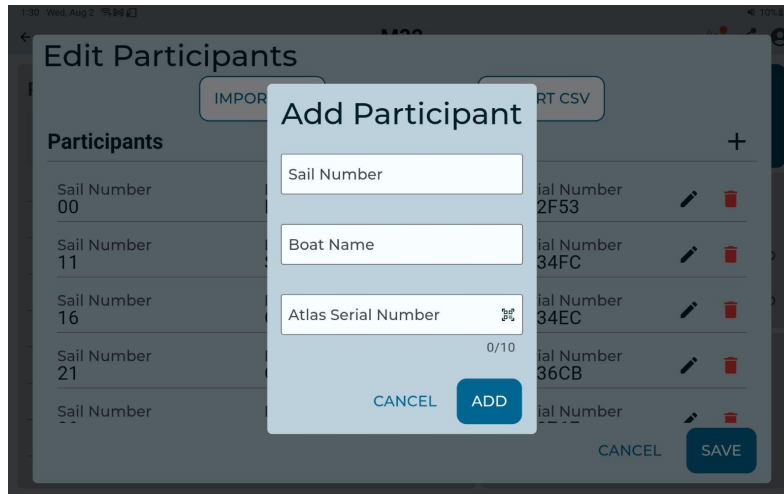
## **2.3 Division Configuration**

First add all of the participants by tapping on the pencil next to “Participants”, and pressing the plus button.

For each participant, you’ll want to enter their sail number, boat name, and then scan or enter the serial number that participant will be using as their bow unit.

Always add a participant that says Spare just in case a boat loses theirs needs a replacement for any reason. If you have an additional unit you’d like to use as a clock if that’s easier to see than looking at the tablet, add that unit as a participant named RC clock.

We recommend scanning the Atlas 2 unit used by each team at the beginning of every event, even if their respective serial numbers are already known. It is important to verify that each unit is on the correct firmware. In the future, this will be automated.



The sail number can optionally be replaced by a bow number, color, or other identifying information applicable to boats sailing in the event.

For RC devices, you'll need at minimum: a Control Atlas (which can also serve as the boat end of the starting line), and a Pin/Left start line mark Atlas. To gain more range **it is best to have a dedicated Pin, Boat, and Control Atlas.**

You'll add the RC devices in the 'RC Devices' panel in the lower right. Select the pencil to edit RC devices. To add your control device, click the button "Add Control Device" and scan the control device's QR code. Repeat a similar process, except selecting "Add Mark Device" for the boat and the pin devices. Make sure to select the appropriate role for any Atlas added as a mark unit.

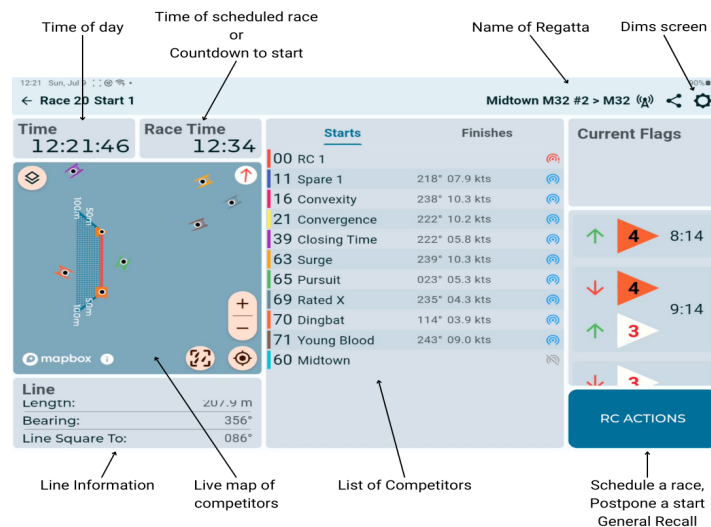
You will always want to make sure that the tablet running Race Control is near the Control Atlas.

Once you're ready to start racing, tap the RC Dashboard Button.

## 2.4 RC Dashboard

This is where the magic happens.

Once you have selected the RC Dashboard button this will have created your network for the day (**If for any reason this network is deleted while out on the water or before then all devices will need to be restarted to disconnect from the deleted network and reconnect to the new network**)



When a network is created the loading screen will continue to load until the control Atlas is turned on, has a GPS fix, and is connected to the tablet via Bluetooth.

To the left you'll see the time of day, time of current race. A map with all the participants, and connection information for the RC Devices.

In the middle is the list of all the participants. Here is where you'll be able to see who all is over early and the elapsed time of the race.

Next to each participant there is a circle which shows the connectivity to the RaceSense network.

- Grey has been in range between 5-30 seconds in the past
- Red circle means they're out of range but were within range within the past 30

seconds

- Blue circle means they're in range and connected, you will see their heading and speed as well.
- Grey with a line through it means the device has yet to connect to the network in this particular session.

## Section 3: Race Day

### 3.1 The Day Before

A checklist of things to confirm the day before to make for a smooth regatta.

- RC units are charged, Tablet is charged
- Bring a portable charger and cord for the tablet as a backup on the water
- Verify mounts for Pin, Boat and Control Atlases. A tall pole to get the control and boat unit above any T Top or flags that may be on the RC power boat.
  - Be sure that these units are mounted as far as reasonably possible from metals, covers, carbon, and other potential sources of GPS interference.

### 3.2 The Morning of the Race

If needed, distribute the competitors RaceSense units at the skippers meeting or whenever you communicate with the fleet.

Install the Pin Atlas (make sure it is on the course side of the mark) and boat unit IF you are using a mark as the boat. Make sure you turn these units on before leaving the dock. **If units are powered up and placed into a poor GPS environment (in a pocket, bottom of a boat, in a backpack or Pelican box), they MUST be restarted before racing commences to ensure best possible GPS performance.**

Activate the network on shore to verify the line data is active. All RC devices will need to be powered up.

Ensure you bring with you on the race committee boat; the control unit, the boat unit (if used/not already installed), the spare unit, mounts for the pole, portable charger and

cord.

### **3.3 On the Water**

Verify RC units are on, then tap on the RC Dashboard. Once all the boats are within range you will be able to verify connectivity with each team.

You will also receive line data including line distance, line square-to heading, and line bearing; this is visible in the lower left corner of the screen.

To start a race press “RC actions” then “Schedule Start”. You can either set the warning signal time or the start time then press confirm to send it out to all of the competitors.

You will see a countdown to each minute and then if any boats are OCS they will come to the top of the screen.

**It is imperative that an Atlas 2 is the official source of timing information: tablets, phones, wrist watches, and start boxes are not reliable or necessarily in sync with RaceSense.**

After the race has started press the sun icon in the top right hand corner to preserve the battery and place the tablet out of the sun to prevent overheating.

As soon as the race is done, go into RC Actions, select “End Race” and you can do it all over again.

You will also see in the RC Actions tab “Postpone Race” “General Recall”. If you have started a race but something happens and you need to start it at a different time press “Postpone race”, then go back into RC Actions press “End Postponement” and then you can schedule a new start with your new time.

### **3.4 Off the Water**

Once you get into the dock press the cell tower icon on the top right and press “Delete Network”. You will create a new network for each day of racing.

Collect the RC Atlases and turn them off.

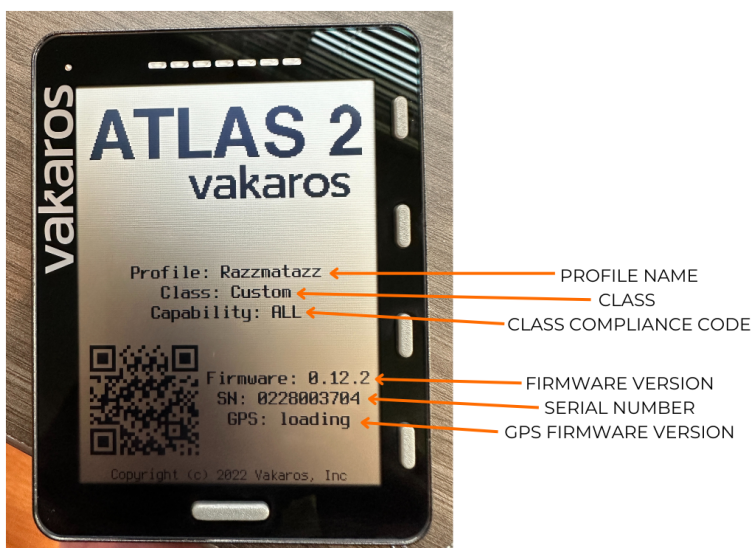
Make sure to charge the tablet every evening after racing.

## Section 4 Navigating The Atlas 2

### 4.1 Buttons



### 4.2 QR Home Screen





-To get to this screen simply press the power button once.