



# Sailboat Results

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Version 1

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February 2018

An Android App for recording laps and finish times of handicap and fleet sailboat races.

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## 1. Overview

**Sailboat Results** is an Android app for logging sailboat lap and finish times. It is based on displaying a scrollable list of competitors (a race sheet), and clicking the lap button against a competitor as they cross the line. It records and displays the time for that competitor and increments the number of laps for them. It also has a results sheet that calculates corrected times and displays the competitors in ranking order.

You can send the recorded results to a PC to be used in Sailwave or an alternative results program.

Although, primarily designed for handicap racing, it also works well for class racing in that all boats simply have the same rating. It caters for multiple fleets, either starting together or at periodic intervals. It uses the Portsmouth Yardstick rating system from the Royal Yachting Association (RYA), but another rating file that works on the same principle as the PY system can be substituted.

It has been tested on Android versions 4.1 to 4.3 (Jelly Bean), 4.4 (KitKat), 5 (Lollipop), 6 (Marshmallow), 7 (Nougat) and 8 (Oreo).

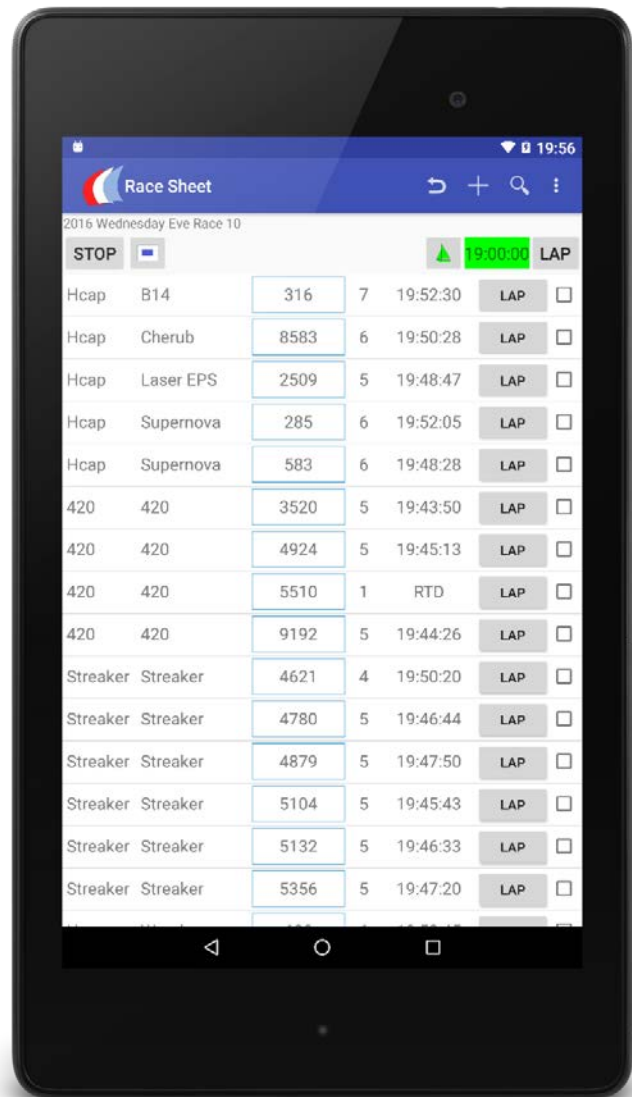
Versions earlier than 4.4 are not supported. It has also been tested on screen sizes from 4.3" to 10.1".

The images in this document are taken from a Nexus 7 (2013) tablet running Marshmallow.

Information and documentation can be found at the website, [www.sailboatsoftware.com](http://www.sailboatsoftware.com)

Training videos can be found on the Sailboat Results YouTube page, [https://www.youtube.com/channel/UCPqHp\\_-V1Irx2h8tGo6qv1Q](https://www.youtube.com/channel/UCPqHp_-V1Irx2h8tGo6qv1Q)

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## 2. Features

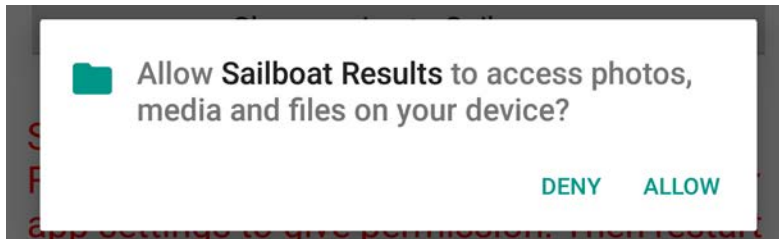
- Lap and finish times are recorded by a simple screen tap.
- Beep confirmation on lap time entry.
- Displays actual or elapsed times.
- Quick add competitors to the race.
- Pre-loading series competitors for the race.
- Race sheet ordered by predicted time to keep the next expected competitors at or near the top of the sheet.
- Rapid timestamp recording for lap and finish times.
- Manual escalation of competitors to the top of the race sheet.
- Sail number search and competitor escalation benefitting larger fleets.
- Sail number recognition for competitor entry.
- Countdown timer to race start.
- General recall facility to adjust fleet start times (see “Extended Race Control Functions”).
- 1<sup>st</sup> Lap facility to select out non-competing competitors and remove them from the race sheet (see “Extended Race Control Functions”).
- Shorten course facility to hide competitors as they finish the race (see “Extended Race Control Functions”).
- Auto-selection of non-competing competitors at race end for deletion.
- Results display showing all competitors or individual fleets on separate tabs.
- Class names and aliases in the PY table.
- Can be configured for auto selection of fleet based on class name, rating or boat type.
- Export race results in Sailwave compatible format.
- Context sensitive help / how-to.

## 3. Installation

### 3.1. From Play Store

Install **Sailboat Results** as a normal app from the Google Play Store.

If you are running Android 6 (Marshmallow) when you open the app for the first time you'll be shown this dialog:



This is a bit misleading. **Sailboat Results** needs to be able to create its own folder in the file system on your device, and to be able to read and write to that folder. It only reads and writes to that folder as well as reading and writing to its SQLite database (this is automatically permitted). You should therefore tap "Allow" for the app to continue.

You do not get this dialog on earlier versions of Android as permission was granted at install time.

You then see a progress bar while Android sets up its folder, creates its support files and initialises its database from them.



These support files allow you to modify or replace some of the tables for your needs, such as to add classes to the PY table, set up fleet definitions, or add local information to the help facility.

### 3.2. Beta Testers

**Sailboat Results** for beta testers is distributed as an apk file and should only be installed if you are happy to run beta software and accept that it may have bugs. To obtain a beta version you should contact Sailboat Software.

SailboatResults.apk is the app installation file. First, make sure you can sideload apps. Go to Settings > Security > tick "Unknown sources".

Download or copy SailboatResults.apk onto your Android device, and from a file manager app, tap on the apk file to run it.

You can now untick the "Unknown sources" in Settings. **Sailboat Results** will be in your app drawer.

### 4. Concept

**Sailboat Results** identifies races as being within series and competitors within races. You create a series, and then add races to it. For each race you have a race sheet to which you add competitors and record lap times for them.

A Competitor is defined by:

- The Fleet the boat belongs to.
- The Class of boat.
- The Sail Number of the boat.
- The Helm's name.
- The Crew's name, if there is one.

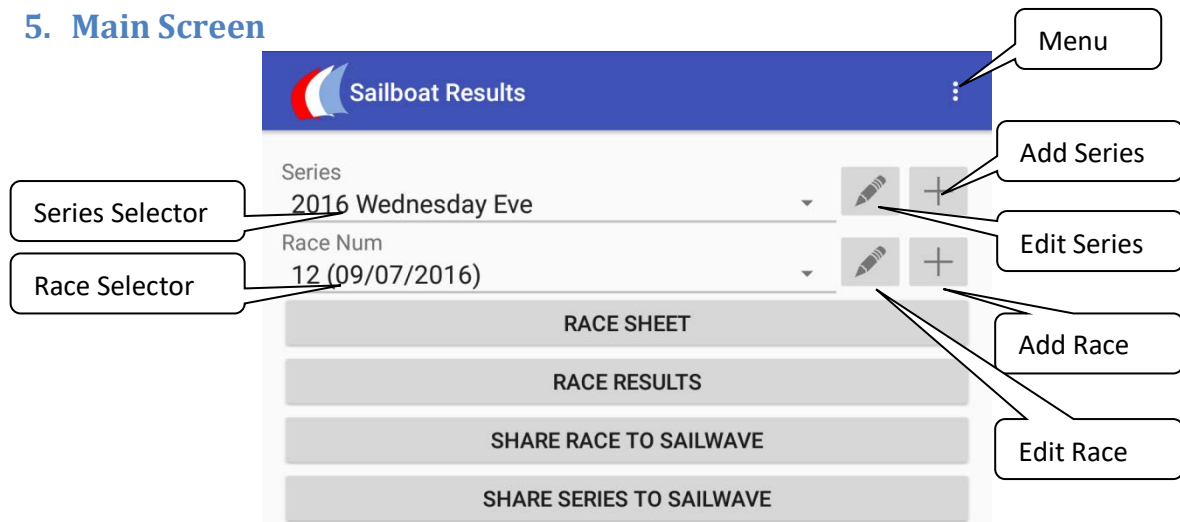
At the start of the race you tap a "Start" button on the screen to log the time the race starts, and when competitors come through the line to complete a lap, you tap a "Lap" button against that competitor to record the time for them. The number of laps for the competitor is the number of lap times recorded.

You can add competitors to a race by

- the QuickAdd facility on the race sheet itself,
- adding them individually by a dialog,
- importing the competitor details for those who have competed in the series previously,
- or importing them from a previously prepared file of competitors.

At the completion of the race, you can calculate the results and view them. You can export the results to a CSV file that can be read by Sailwave.

## 5. Main Screen



This is the screen that is displayed when the app is started. It allows you to select a series or create a new series and then select a race from that series or add a race to that series. You can then display the Race Sheet or Race Results or create a Sailwave import file for either the race or series.

The “Menu” button displays the main menu where you can customise the way **Sailboat Results** works, backup or restore the database and delete races or series.

*For most Race Officers turning up for a race duty, all they will do is select the series and add a new race to it, usually without changing any of the race parameters. They will then be viewing the Race Sheet for that race.*

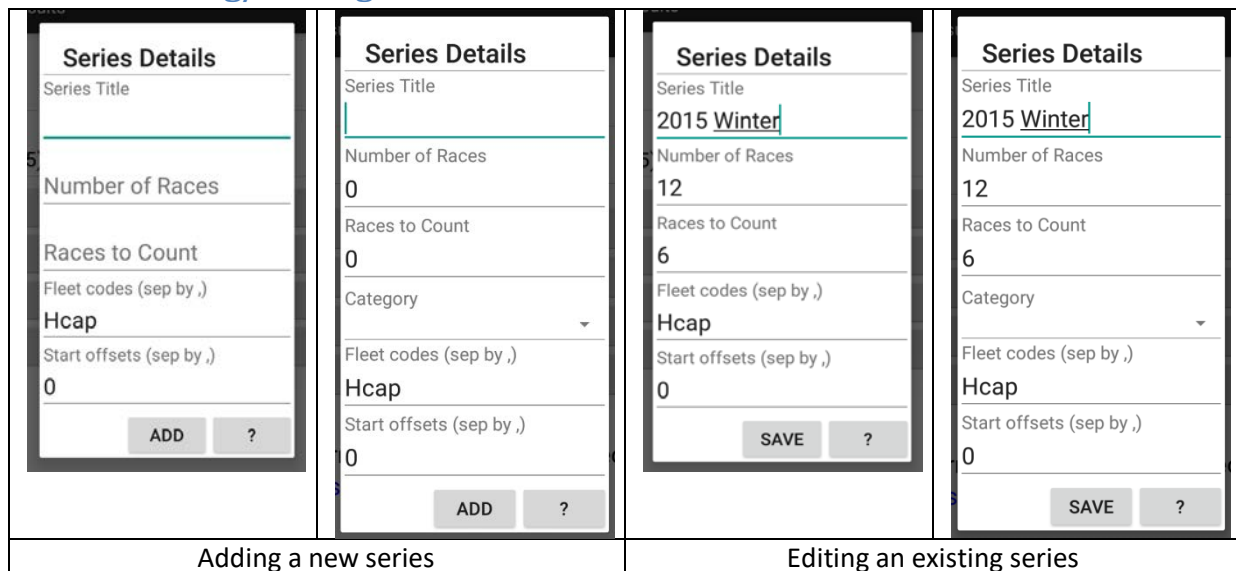
The following lists all the controls and menu options available on the Main Screen.

Item	Type	Action
Menu	Button	Displays the menu items. On some older devices there may be a physical menu button instead of this on-screen one.
Series Selector	Drop-down	Used to select the current series.
Add Series	Button	Displays the new series dialog (see below).
Edit Series	Button	Displays the edit series dialog (see below).
Race Selector	Drop-down	Used to select the current race. Races are shown as the race number within the series and the race date as entered in the dialog.
Add Race	Button	Displays the new race dialog (see below).
Edit Race	Button	Displays the edit race dialog (see below).
Race Sheet	Button	Display the race sheet for the current race within the current series.
Race Results	Button	Display the race sheet for the current race within the current series. If necessary the results will need to be calculated which may take some time. A progress bar will indicate calculation progress.
Share race to Sailwave	Button	Generates a Sailwave compatible CSV file of the competitors and their start times, finish times and laps in the SailboatResults folder and, if specified in Settings, shows a file handling chooser.
Share series to	Button	Generates a Sailwave compatible CSV file as above but for all the

Sailwave		racers completed in the current series.
Portsmouth Yardstick	Menu item	Displays the current PY table (classes and PYs) and has a button to reload the PY file.
Export Database	Menu item	Makes a copy of the internal database into the SailboatResults folder. This is for issue diagnosis by Sailboat Software.
Backup to CSV	Menu item	Creates CSV files in the SailboatResults folder for all the tables in the internal database. This is the main way to back up the database.
Restore from CSV	Menu item	Reloads the internal database from the CSV files in the SailboatResults folder. This is useful to restore from the previous backup, or if one or more tables has been modified for local use. This could include the PY (Ratings) table or the FD (Fleet Definition) table.
Export Series	Menu item	Creates a CSV file with the details of the series and all the races and results for that series. This can be useful in diagnosing issues or transferring the series so far to another device. It could also be used to keep a copy of the series before deleting it from the database.
Import Series	Menu item	Reads a CSV files created from “Export Series” and loads the series and its race information.
Delete Series	Menu item	Deletes the currently selected series and all the races in it. This cannot be undone. You are advised to export the series or backup the database to CSV if there is any possibility of wanting this information again.
Delete Race	Menu item	Deletes the currently selected race. This cannot be undone. You are advised to back up the database to CSV f there is any possibility of wanting this information again.
Settings	Menu item	“Settings” displays the settings screen where you can configure some aspects of <b>Sailboat Results</b> behaviour. See the Settings section or more information on these.
Help	Menu item	“Help” displays a help/how to screen where you choose a topic and it displays the appropriate steps for that topic.



### 5.1.Adding/Editing a Series



The dialog is similar for both “Add” and “Edit” and each has variants with or without a category field.

- The series title is free-form text. Keep it reasonably short, and unique.
- The number of races and races to count must be whole numbers and may be required in a future version for calculating series positions. They can be currently left at 0.
- A category drop-down may be displayed (as in the right hand image of each pair above) if Fleet Definitions have been implemented. In this case, choosing a category will automatically fill the fleets and offsets fields.
- Name the fleets, separated by commas. Keep the names short. E.g. Hcap , Laser , Solo.
- The offsets are the number of minutes after the first start that the fleets start. They are separated by commas. The number of offsets must match the number of fleets. E.g. 0 , 2 , 4 which has the 3 fleets starting at 2 minute intervals.
- You click “ADD” or “SAVE” to confirm the details in the dialog. The dialog disappears and you are returned to the main screen. If you change your mind before adding or saving you can return without saving by tapping your device’s back button.

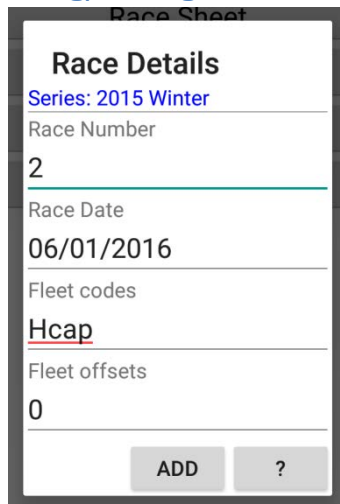
Note that on some devices, part of the dialog may be obscured by the on-screen keyboard. If this is the case, the dialog is scrollable by just dragging your finger vertically on the dialog contents.

You can move from one field to the next by the “NEXT” key on most on-screen keyboards. The way this key is shown depends on the keyboard in use. It is usually on the right-hand side; on the Google keyboard it is a right arrow with a vertical bar, Swiftkey shows it as a solid right arrow, on one of my Samsung devices it has the word “Next”. The last field, the Fleet offsets, changes this key to a “DONE” key. This is a tick mark on the Google keyboard, Swiftkey shows it as an “Enter” symbol, a left arrow with a vertical bar, and the Samsung keyboard says “Done”. Tapping this causes the on-screen key board to disappear.

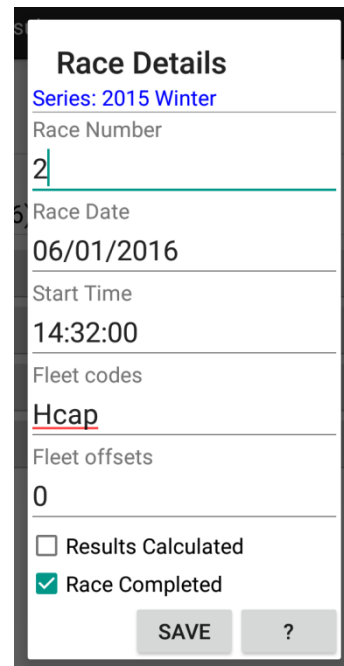
The current selected series is shown in the series selector. This is a drop-down. Just tap it to see the list of series defined and tap the one you want.

You must have selected a series before you can select or add a race.

## 5.2. Adding/Editing a Race



Adding a new race



Editing an existing race

The “add” and “edit” dialogs are a little bit different, with the “edit” dialog showing more detail from the race. Mostly you will be able to just use all the defaults.

- The race number is the number of the race in the series. Normally when you add a race it automatically selects the next number. If you want to miss out a race, perhaps the race was abandoned or not sailed, then just change the number.
- The date of the race will automatically be set to today’s date. Change it if necessary, but stick to the dd/mm/yyyy format.
- The race start time is only shown on the edit screen and is the actual time logged when the race started (see race sheet for how this is done). You can change it if you know the race start time was different.
- The fleets and offsets are as described in the series dialogs. They are initialised to the series defaults. Change them if, for example, you’ve decided to start two fleets together.
- The Results Calculated checkbox shows that the calculation process has been gone through for the Race Results display. Uncheck this if you wish to force a recalculation when you next display the Race Results.
- The Race Completed checkbox shows that the race is stopped. If unchecked and you select the race sheet it will show the race as running.

As with the series dialog, you can navigate between fields with the “NEXT” key, hide the keyboard with the “DONE” key and scroll the dialog if obscured.

When you add a race, the add button will take you straight to the race sheet for that race.

## 6. Race Sheet

The race sheet is shown either directly from adding a new race or from selecting “Race Sheet” on the main screen.

There’s a section at the top, just below the series and race identification, for the race controls, starting, stopping the race etc. and the remainder of the screen is for the competitor information. Competitors can be added before or during the race. They can be added individually, or in bulk from previous races in the series, or from a competitor file.

These screenshots show a race in progress with the competitors having their laps counted and timed. The competitors are in a scrollable list.

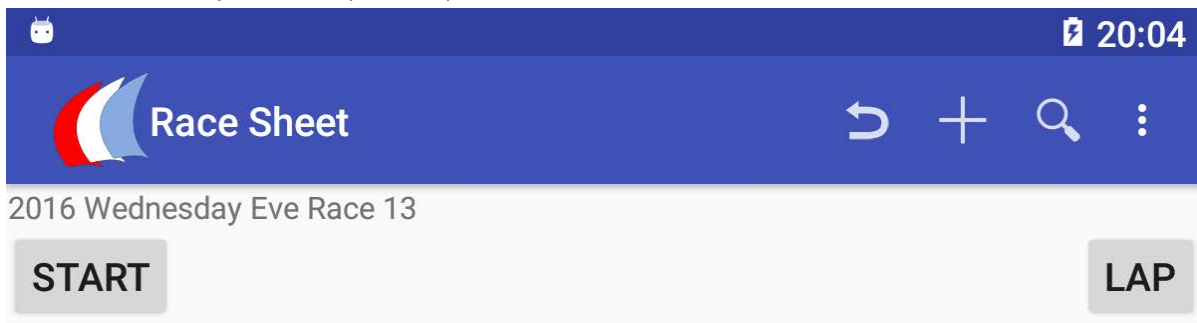
The first column is the **Fleet** of the competitor, followed by the **Class** and **Sail Number**. On smaller devices the Fleet is not displayed. The remaining columns are the number of **Laps**, the **Time** recorded for the most recent lap, a “**LAP**” button for recording the lap time, and a **checkbox** for selecting the competitor.

STOP				19:00:00	LAP
Hcap	B14	316	7	19:52:30	LAP <input type="checkbox"/>
Hcap	Cherub	8583	6	19:50:28	LAP <input type="checkbox"/>
Hcap	Laser EPS	2509	5	19:48:47	LAP <input type="checkbox"/>
Hcap	Supernova	285	6	19:52:05	LAP <input type="checkbox"/>
Hcap	Supernova	583	6	19:48:28	LAP <input type="checkbox"/>
420	420	3520	5	19:43:50	LAP <input type="checkbox"/>
420	420	4924	5	19:45:13	LAP <input type="checkbox"/>
420	420	5510	1	RTD	LAP <input type="checkbox"/>
420	420	9192	5	19:44:26	LAP <input type="checkbox"/>
Streaker	Streaker	4621	4	19:50:20	LAP <input type="checkbox"/>
Streaker	Streaker	4780	5	19:46:44	LAP <input type="checkbox"/>
Streaker	Streaker	4879	5	19:47:50	LAP <input type="checkbox"/>
Streaker	Streaker	5104	5	19:45:43	LAP <input type="checkbox"/>
Streaker	Streaker	5132	5	19:46:33	LAP <input type="checkbox"/>
Streaker	Streaker	5356	5	19:47:20	LAP <input type="checkbox"/>

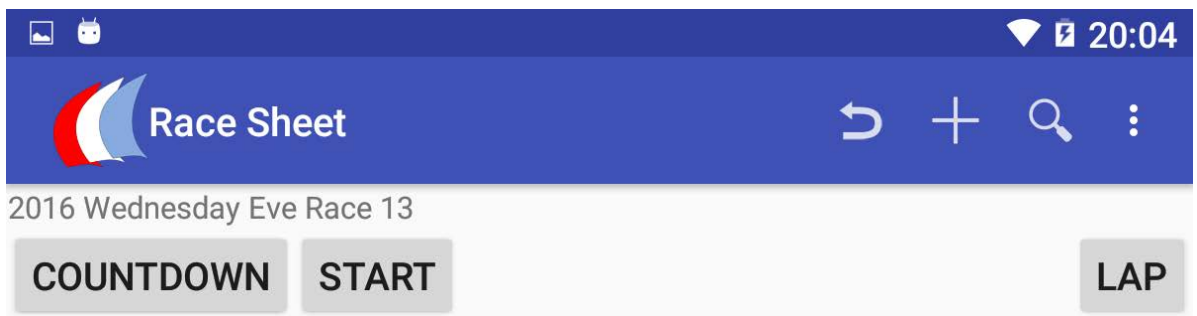
If the device is in landscape orientation, the **Helm** and **Crew** names are displayed as well, though fewer competitors can be displayed, and more scrolling will be required.

STOP				19:00:00	LAP	
Hcap	B14	316	Bucky Dawes & Luke Wheeler	7	19:52:30	LAP <input type="checkbox"/>
Hcap	Cherub	8583	Helen Bishop & Roger Sterling	6	19:50:28	LAP <input type="checkbox"/>
Hcap	Laser EPS	2509	Don Draper	5	19:48:47	LAP <input type="checkbox"/>
Hcap	Supernova	285	Coleman Carlisle	6	19:52:05	LAP <input type="checkbox"/>
Hcap	Supernova	583	Audrey Carlisle	6	19:48:28	LAP <input type="checkbox"/>
420	420	3520	Jeanne & Sarah-Beth Bucha...	5	19:43:50	LAP <input type="checkbox"/>
420	420	4924	Ed Baxter & Mona Sterling	5	19:45:13	LAP <input type="checkbox"/>
420	420	5510	Gene Hofstadt & Pete Camp...	1	RTD	LAP <input type="checkbox"/>

A new race initially shows a sparse top view, either



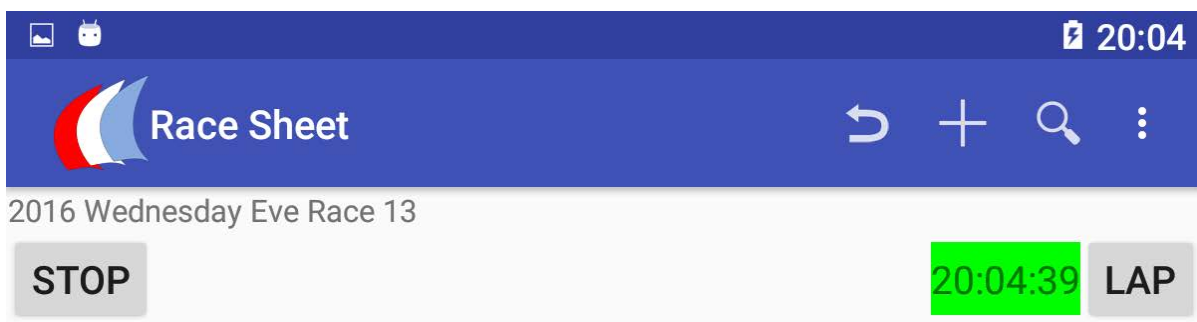
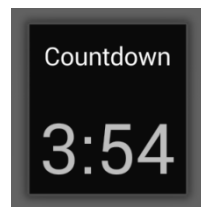
or



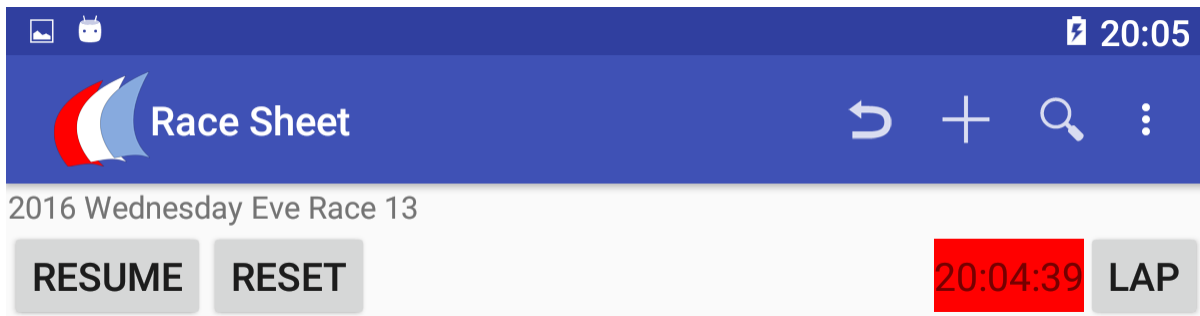
The countdown button being displayed depends on whether a countdown time has been defined in Settings.

### 6.1. Starting and Stopping the Race

- If a Countdown button is displayed, then tapping it will start the countdown process. The countdown dialog is displayed. When this reaches zero the race start time is logged. At any time you can click outside the dialog to cancel the countdown and tap the Start button to start the race immediately.
- The race can be started by tapping the Start button. Either way, the race start time is displayed with a green background to indicate the race is running and the Stop button is displayed.



- The Stop button stops the race recording. It changes the time background to red, the Resume and Reset buttons are displayed, and any competitors who have not registered a lap or a completion code are selected and you are prompted to delete them if you wish..

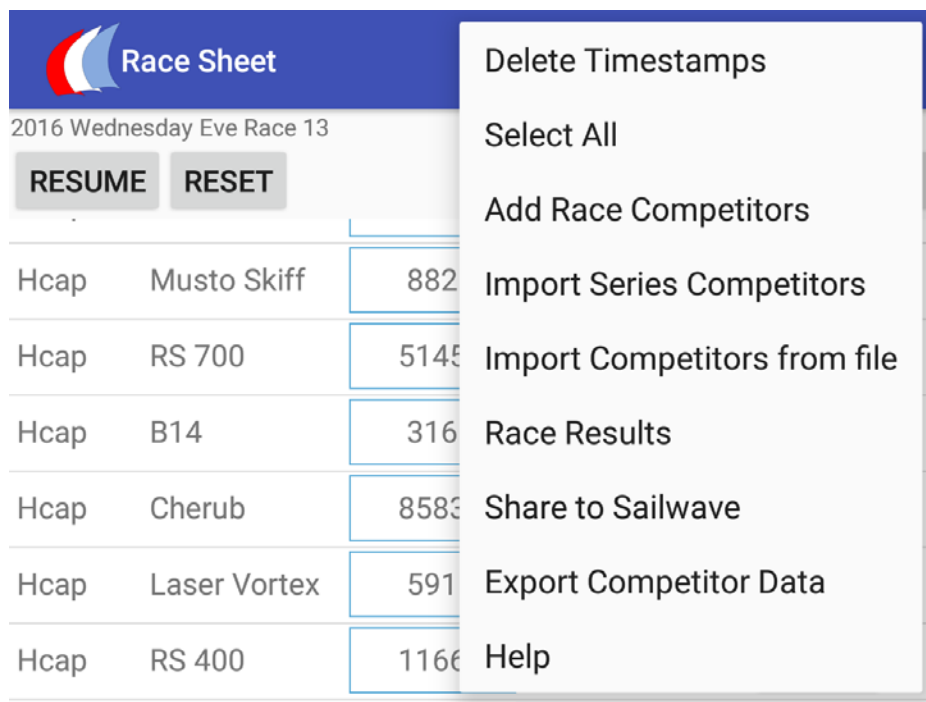


- The Resume button turns the race back to its running state with the background of the time green, and the Stop button displayed.
- The Reset button sets the race back to its pre-start state with all the competitors lap times discarded.






The other button in this row is the “LAP” button. Tapping this adds a timestamp to the timestamp row. This is discussed in the section “Timestamps”. It shouldn’t be confused with the individual competitor “LAP” buttons.

### 6.2. Race Controls Menu

On the top row of the app you have “Race Sheet” followed by a series of menu icons. The right hand icon may be the menu button itself, the three dots. On older devices with a hardware menu button this may not be shown. The number of buttons displayed is device dependent. The menu button displays the rest of the menu covering the icons, as shown here, though, with a hardware menu button the menu may be in a different place on the screen.



The meanings and actions of the icons and the menu items are listed in the following table.

Icon	Menu text	Action
		Undo : Undoes the latest lap time for a competitor and reduces their lap count by one. The time that was there is added to the timestamp row so it can be reused.
		Displays the QuickAdd row on the race sheet to easily add a competitor (see below).
	Delete timestamp	If a timestamp is selected then that is deleted. <i>The icon is only displayed if there's room.</i>
	Search	Opens a search field into which you can enter a sail number. As you enter the sail number a dropdown will show you matching sail numbers. When you see the one you are looking for, tap on it and that competitor will be escalated to the top of the race sheet.
	Menu	Displays a list of the text menu items including those where there isn't room for their icon.
Menu item only	Select All	Selects all the competitors so your action button or menu item operates on all the competitors. For example, you may want to add helm and crew names, so you would "Select All" competitors and then "Edit Competitor(s)".
Menu item only	Add Race Competitors	The "add competitor" dialog is displayed so you can add competitors including helm and crew details, e.g. from a sign-on sheet (see below).
Menu item only	Import Series Competitors	Adds any competitors who have competed in a previous race in this series to the race sheet. This must be done before adding any individual competitors to the race sheet.
Menu item only	Import Competitors from file	Adds competitors from a CSV file that you've placed in the SailboatResults folder. See the "Competitor.csv Specification" below.
Menu item only	Race Results	Display the race sheet for the current race within the current series. If necessary the results will need to be calculated which may take some time. A progress bar will indicate calculation progress.
Menu item only	Share to Sailwave	Generates a Sailwave compatible CSV file of the competitors and their start times, finish times and laps in the SailboatResults folder and, if specified in Settings, shows a file handling chooser.
Menu item only	Export Competitor Data	Creates a CSV that includes series and race information as well as comprehensive competitor data and results. This is primarily for debugging.
Menu item only	Help	Displays the Help dialog for the Race Sheet.

The menu items change when you have selected one or competitors and actions operate on the selected competitor(s). Again, some menu icons may be omitted and the function appears on the dropdown menu. The selected competitors are highlighted in blue with the selection box checked. To unselect them all, tap the back arrow on the left of the bar.

2016 Wednesday Eve Race 13

RESUME RESET 20:04:39 LAP

Hcap	Musto Skiff	882	0	00:00:00	LAP	<input type="checkbox"/>
Hcap	RS 700	5145	0	00:00:00	LAP	<input checked="" type="checkbox"/>
Hcap	B14	316	0	00:00:00	LAP	<input checked="" type="checkbox"/>
Hcap	Cherub	8583	0	00:00:00	LAP	<input checked="" type="checkbox"/>

And with the menu displayed:

2016 Wednesday Eve Race 13






RESUME RESET 20:04:39 LAP

← 3 selected

- Add Competitor Note
- Help

Hcap	Musto Skiff	882	0	00:00:00	LAP	<input type="checkbox"/>
------	-------------	-----	---	----------	-----	--------------------------

The following table explains the actions that can be taken when one or more competitor(s) are selected:

Icon	Menu text	Action
	Edit Competitor(s)	The edit competitor dialog is displayed for the first selected competitor. When cancel or save is tapped the dialog displays the next competitor till all checked ones have been edited. <i>The icon is only displayed if there's room.</i>
	Delete competitors	The selected competitors are deleted from the race. <i>The icon is only displayed if there's room.</i>
	Scoring Codes	Scoring Codes : A dialog is displayed to choose a scoring code that is then applied to all selected competitors.
	Add Competitor Note	You can add a note to the selected competitor(s). For example "Was OCS, returned but did not start correctly". This note will appear on the competitor's "Edit Competitor" dialog, and also on the Race Results screen.
	Menu	Displays a menu of the text menu items including those where there isn't room for their icon.
Menu item only	Help	Displays the Help dialog for the Race Sheet.

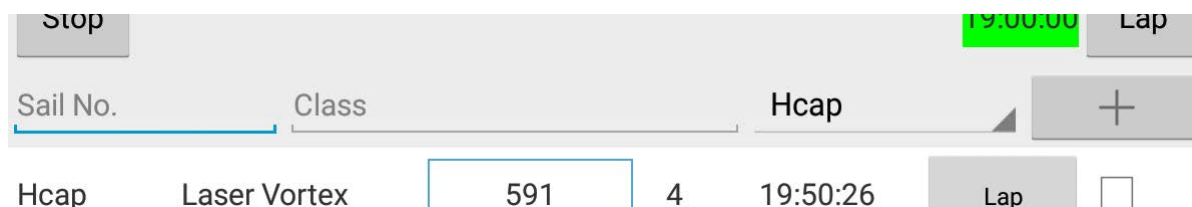
### 6.3. Adding Competitors

There are four ways of adding competitors to the Race Sheet. These are:

- using the QuickAdd facility,
- adding them by the Add Competitor dialog,
- importing them from the current series,
- or importing from a pre-defined list of competitors as described above.

### 6.4. QuickAdd Competitors

Tapping the "+" icon on the top bar opens up the QuickAdd row.



You start by entering the sail number. This auto-completes (see below) so as you enter the digits it will create a drop-down based on any competitors it finds. This allows you to select that number and it populates the class and fleet accordingly and automatically adds the competitor to the race. If you haven't selected a sail number from the dropdown then in the next field choose the class from a dropdown populated from the ratings table, and select the fleet also from a dropdown. Then tap the



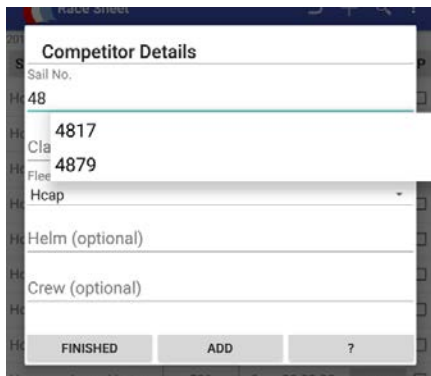
“+” button on the right of this row to add this competitor. (See “Editing with QuickEdit” to change details if necessary)

## 6.5. Adding Competitors by Dialog

If you want to add the competitors and include the helm and crew details at the same time, you need to invoke the Competitor dialog by tapping the menu and selecting “Add Race Competitors” from the drop-down list. This brings up the “Enter Competitor Details” dialog.

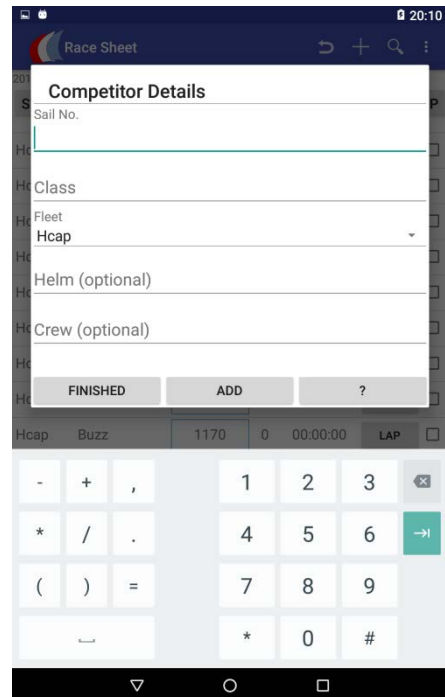
The cursor is positioned in the Sail No entry field and the software keyboard will display the numeric pad if the keyboard operates as standard.

The Sail No field auto-completes (see below) so as you enter



the digits it will create a drop-down based on any competitors it finds.

You can carry on typing or tap on one of the drop-down sail numbers. When the field is complete you can tap the next field symbol on the keyboard to move to the next field. Some keyboards on other devices might have a different symbol or the word “Next”.



The Class field also auto-completes (see below). The Fleet field is a drop-down based on what has been specified in the race setup.

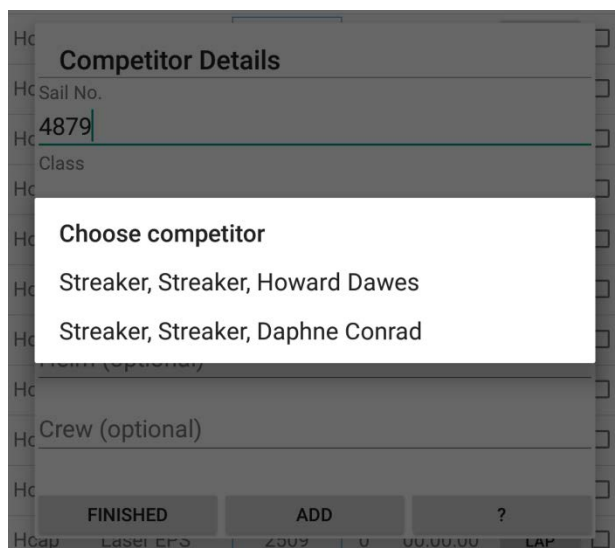
Helm and crew names are free format and are not necessary for the functioning of the app. Most likely you will not enter these if adding competitors during the race, but rather after the race by matching against the sign-on/off sheet and editing the competitor.

When the dialog is complete the just click “ADD”. The competitor will be added and the dialog cleared ready for you to add another. “FINISHED” closes the dialog.

## 6.6. Sail Number and Class Auto-Completion

When you start entering a sail number in either QuickAdd or by the dialog the dropdown lists the sail numbers in the database (from any series) that match what you have typed so far. You tap on the correct sail number if it is shown in the list. The database is checked for matching sail numbers from any series and if only one is found will add the record with the matching class, fleet, helm and crew if you are using QuickAdd or populate the dialog with the class, fleet, helm and crew from the match. You can overwrite these fields if they are incorrect for this competitor.

If two or more matching sail numbers are found, the details are displayed and you tap the one that is correct. The details displayed are fleet, class, helm and crew.



In this example, Streaker 4879 has been sailed by two different people. But it is possible you could have two or more different classes with the same sail number.

Tap the one you want to be used in this race.

The class field also auto-completes against the classes in the PY table. You do need to enter two characters for the auto-complete to start. If it is a very long list the last few items may be obscured by the keyboard, so just keep entering the name till the list is reduced sufficiently to see the class name.

## 6.7. Bulk Adding of Competitors

### 6.7.1. Existing Competitors in the Series

The “Import Series Competitors” menu option adds competitors who’ve previously competed in this series. A competitor is defined as the combination of Fleet, Class, Sail Number, Helm and Crew. However, within a race, the combination of Class and Sail Number can only occur once. You can have a situation that a particular Class-Sail Number combination can have been sailed by different crew combinations in different races. In this case you’ll be presented with a dialog notifying you that one or more competitors are being skipped. If you tap on the competitor that is proposed to be skipped you can choose which you want to add to the race.

If there are no competitors in the current series, typically when you you’ve just created the first race in a series and before you add the 1<sup>st</sup> competitor, then “Import Series Competitors” will prompt you to import competitors from a different series. If there is only one other series in the database then that will be chosen automatically. If there’s more than one other series then you’ll be asked to pick the series to import from.

As you get further into a series you’ll typically find that you’re importing a large number of competitors including those who’ve only turned up for one or two races. **Sailboat Results** has a setting, “Competitor Import Ratio” that allows you to filter out these infrequent competitors. The “Competitor Import Ratio” is a single integer that specifies the level at which competitors are included. For example, a figure of 3 says that for every 3 races completed, the competitor will be included if they’ve sailed one. I.e. for races 2 till 5 all competitors from this series will be included; for races 6 through 8 only competitors who’ve completed 2 races will be included, for races 9 through 11 only competitors who’ve completed 3 races will be included and so on. This will apply if you are importing from a different series because there are no competitors in this series.

### 6.7.2. From a Prepared File of Competitors

You can also import competitors into the race from a prepared list. This must be a CSV (comma separated values) file and the column headings recognised are “Fleet”, “Class”, “SailNo”, “Helm” and “Crew”.

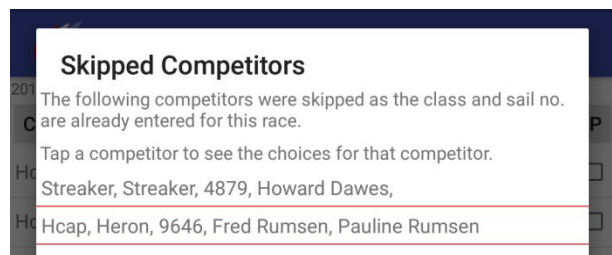
Any column with headings other than these will be ignored. You must have headings of “Class” and “SailNo”. If “Fleet” is omitted then a Fleet value will be assigned according to the race fleet definition. If there’s a Fleet Definition Category defined for this series then this will be used to assign the fleet. Otherwise if the class matches exactly one of the fleets in the race definition, that fleet will be used and if there’s no match the first fleet in the list will be used.

An example:

```
Fleet,Class,SailNo,Helm,Crew
Hcap,Tasar,2509,John Rischmiller,Chris Rischmiller
Laser,Laser,999999,Joe Bloggs,
Hcap,Laser EPS,999,Someone Else,
```

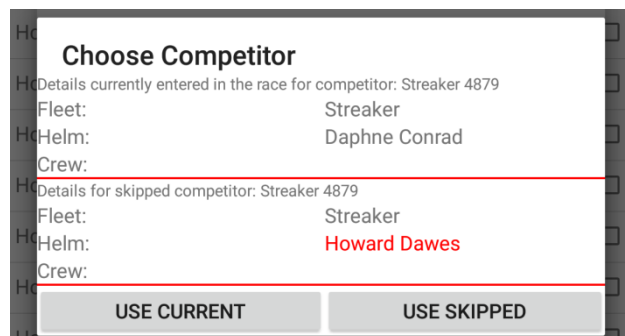
### 6.7.3. Skipped Competitors

When importing competitors from the series or from a file, you may encounter the “Skipped Competitors” dialog, a list of competitors unable to be added because that class and sail number combination has already been entered for this race. You can only have one occurrence of a class and sail number combination in a race. This may occur when importing previous competitors in the series, and the same boat has been sailed by different crews in different races.



For example, we can see that Streaker 4879, with helm Howard Dawes, has been skipped. If you tap that entry in the list, you’ll be shown the “Choose Competitor dialog”.

In this case, you can see the boat has already been entered but helmed by Daphne Conrad. You’re given the choice to replace that entry with the one helmed by Howard Dawes by tapping “USE SKIPPED”.



Tap “USE CURRENT” if you want to leave the competitor as Daphne Conrad.

## 6.8. Editing a Competitor

You can either edit a competitor by QuickEdit If you just want to change the sail number, class or fleet, or you can edit all the details with the competitor dialog.

### 6.8.1. Editing with QuickEdit

Tap the “Class” of the competitor you want to QuickEdit. The QuickEdit row appears populated with the competitor’s sail number, class and fleet. The competitor you are editing is also highlighted in yellow so can see them in the list.


1394	Finn	Hcap				✓
Hcap	Laser Vortex	591	4	19:50:26	Lap	<input type="checkbox"/>
Hcap	Laser EPS	2509	5	19:50:26	Lap	<input type="checkbox"/>
Hcap	Finn	1394	4	19:50:13	Lap	<input type="checkbox"/>

Make the changes you require in the QuickEdit row and tap the button to the right with the tick on to save the changes. You cannot create a duplicate of a class and sail number combination already in the race.

### 6.8.2. Editing a Competitor with the Dialog

Editing a competitor with the dialog requires you to select the competitor(s) so a tick appears alongside the competitors to be edited. Often, you will use this dialog to add competitor helm and crew names from the sign-on sheet. In this case you will probably want to select all the competitors and there is a menu item, “Select All” for this purpose. If you just want to edit one or a few of the competitors, say to change a sail number you’ve misread, or you’ve realised it’s a Laser radial rather than a Laser, then select the individuals by tapping the tick box against the relevant competitor(s).

Hcap	Supernova	583	0	00:00:00	Lap	<input checked="" type="checkbox"/>
------	-----------	-----	---	----------	-----	-------------------------------------

Then select the menu item “Edit Competitor(s)” or the pencil icon, , if it is displayed.

The dialog displayed is similar to the “Add Competitor” one, other than the “ADD” button is replaced by “SAVE”, and the “FINISHED” button is replaced by “SKIP”.

The Helm name is highlighted as this is the field most likely to be changed first, but any field can be selected by tapping in it.

If you’ve added notes to a competitor, these will appear in the dialog below the crew field.

**Competitor Details**

Sail No.  
882

Class  
Musto Skiff

Fleet  
Hcap

Helm (optional)  
**Dawn Chambers**

Crew (optional)

SKIP    SAVE    ?

When you have completed the changes to the competitor's data, tap "SAVE" to store the changes. The next competitor in your selection will be displayed.

If you don't want to make any changes for this competitor then just tap "SKIP" to move to the next competitor.

When all selected competitors have been displayed the dialog disappears.

If you want to break out of the edit cycle, then tap the device's "back" button (you may have to tap "back" again if the first just removed the on-screen keyboard).

## 6.9. Editing times

The race start time and individual competitor lap times can be edited by tapping them. This brings up the dialog shown.

You can either overwrite the hours, minutes and seconds as the onscreen keyboard will be shown, or adjust the values by tapping the "+" and "-" buttons. Click "OK" when finished.




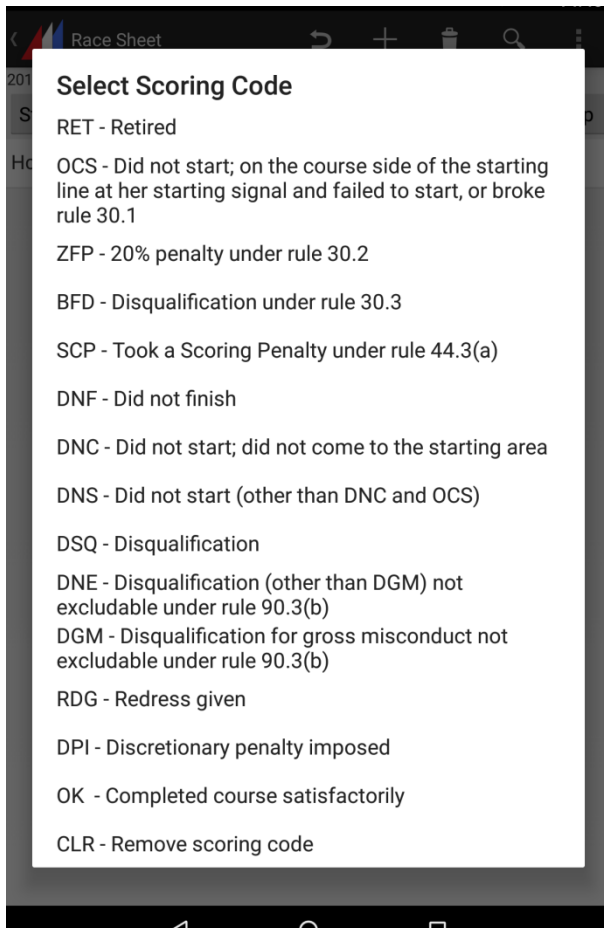
## 6.10. Editing Lap Times

The competitor's "Laps" field is a count of the number of lap times recorded for them. By tapping on the "Laps" field of a competitor, you invoke the lap times editor. A list of the lap times for that competitor is shown in an ordered list with edit ("pencil"), add ("+") and delete ("wastebin") icons against each. Tapping edit against any time invokes the time editor on that time, as does "add" except that the time is then inserted into the list. Delete removes a time from the list.




## 6.11. Scoring Codes

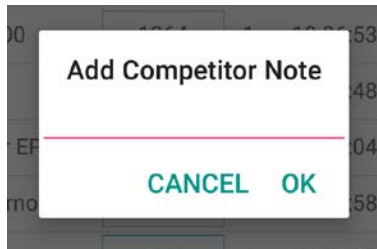
When one or more competitors has retired or not finished for a different reason, select those competitors and tap the “Scoring Codes” icon, , if displayed or select “Scoring Codes” from the menu. The Scoring Codes dialog is displayed.



Tap the particular code you want to apply and the dialog disappears and the code is applied to the selected competitors. This list is in a table in the database. You can add your own codes and meanings by updating tblSC.csv and restoring that to the database. For example, you could “ROD – Race Officer Duty” in order to identify Race Officers in the Series results and give appropriate points values in Sailwave.

## 6.12. Notes


To add a note to one or more competitor(s), select the particular competitor(s) and either tap the “Note” icon, , if displayed or the “Add Competitor Note” menu item. The “Add Competitor Note” dialog is displayed.



You enter your note on the line with the soft keyboard (you may have to tap the entry line to get the soft keyboard to appear). On tapping OK the note is added to all the selected competitors. If a note already exists for a competitor, this note is added to the existing one.

Notes are viewed either on the Race Results screen or on the “Edit Competitor” dialog.

## 6.13. Deleting Competitors from the Race

To delete one or more competitors from the race, select the competitor(s) to be deleted, competitors and either tap the “Delete” icon, , if displayed or the “Delete Competitors” menu item.

Be careful as this will delete the competitors without further warning and there is no “Undo” capability from this action.

You’ll be shown a brief message of the competitors that are deleted.

## 6.14. Competitor Controls

Many of the fields on the competitor rows on the Race Sheet can be tapped and have specific functions.

Hcap	Laser Vortex	591	4	19:50:26	Lap	<input type="checkbox"/>
Hcap	Laser EPS	2509	5	19:50:26	Lap	<input type="checkbox"/>

In order you have:

- The Fleet (this is omitted on smaller screen sizes).
- The Class of boat.
- The Sail Number.
- The number of Laps.
- The Time the most recent lap was completed.
- A Lap button.
- A Selection box than can be ticked or unticked.

If the device is held in landscape rather than portrait then the helm and crew names are shown also.

As a boat completes a lap and crosses the line either to finish or start a new lap, tap the “Lap” button. **Sailboat Results** updates the “Time” to when you tapped the button and, if sound is on, makes a beep noise. It also adds one to the number of “Laps”. Because the display is in predicted time order, that competitor is then shifted to the bottom of the list or near the bottom.

The selection box can be tapped to select that competitor. Multiple competitors can be selected. When competitors are selected the top action bar changes to show competitor specific controls such as scoring codes, delete, edit, notes which will operate on the selected competitor(s). Scoring codes, delete and notes will operate on multiple selected competitors in one go. Edit operates on each selected competitor individually and cycles through all the selected competitors.

The “Class”, “Sail Number”, “Laps”, and “Time” fields can also be tapped to provide different functions.

- The “Class” field invokes QuickEdit for that competitor as explained in “Editing with QuickEdit”.
- The “Sail Number” field escalates that competitor. See “Escalation and the “Sail Number” field”.
- The “Laps” field invokes the Lap Times editor. See “Editing the Lap Times”.
- If the timestamp row is not displayed, the “Time” field invokes an edit time dialog explained earlier in “Editing Times”. Otherwise see “Timestamps and the “Time” field”.



## 7. Managing Congestion at the Line

### 7.1. Timestamps and the “Time” field

Sometimes a number of boats will be approaching the line close together and you can't distinguish their sail numbers. Timestamping assists here. Tapping the main lap button as each boat crosses the line logs the times to a row of timestamp buttons and you subsequently allocate the times to the boats according to your spotter's order.

Consider this example:

Race Sheet							
2016 Wednesday Eve Race 14							
STOP				20:30:14		LAP	
Hcap	RS Vareo	641	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	Laser	81296	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	Solo	4355	0	00:00:00	LAP	<input type="checkbox"/>	

The Vareo, Laser and Solo are approaching the line. As you see each boat's bow cross the line you tap the main lap button.

Race Sheet							
STOP				20:30:14		LAP	
20:42:33		20:42:35		20:42:39			
Hcap	RS Vareo	641	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	Laser	81296	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	Solo	4355	0	00:00:00	LAP	<input type="checkbox"/>	

The three timestamps have been added to a timestamp row. This is a horizontal scrollable row of buttons. One of the timestamps will show a coloured highlight to indicate that is the selected timestamp. You can change which is the selected timestamp by tapping one of the others.

Your spotter says the order was Laser, Vareo, Solo. You tap the time on the Laser's row.

Race Sheet							
STOP				20:30:14		LAP	
20:42:35		20:42:39					
Hcap	RS Vareo	641	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	Solo	4355	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	Laser	81296	1	20:42:33	LAP	<input type="checkbox"/>	

Notice that the timestamp time has been logged for the Laser and the first button has gone. Now

repeat the tapping of the time field on the row for the Vareo and then the Solo.

<b>STOP</b>					20:30:14	LAP
<b>20:42:39</b>						
Hcap	Solo	4355	0	00:00:00	LAP	<input type="checkbox"/>
Hcap	Laser	81296	1	20:42:33	LAP	<input type="checkbox"/>
Hcap	RS Vareo	641	1	20:42:35	LAP	<input type="checkbox"/>

<b>STOP</b>					20:30:14	LAP
Hcap	Laser	81296	1	20:42:33	LAP	<input type="checkbox"/>
Hcap	RS Vareo	641	1	20:42:35	LAP	<input type="checkbox"/>
Hcap	Solo	4355	1	20:42:39	LAP	<input type="checkbox"/>

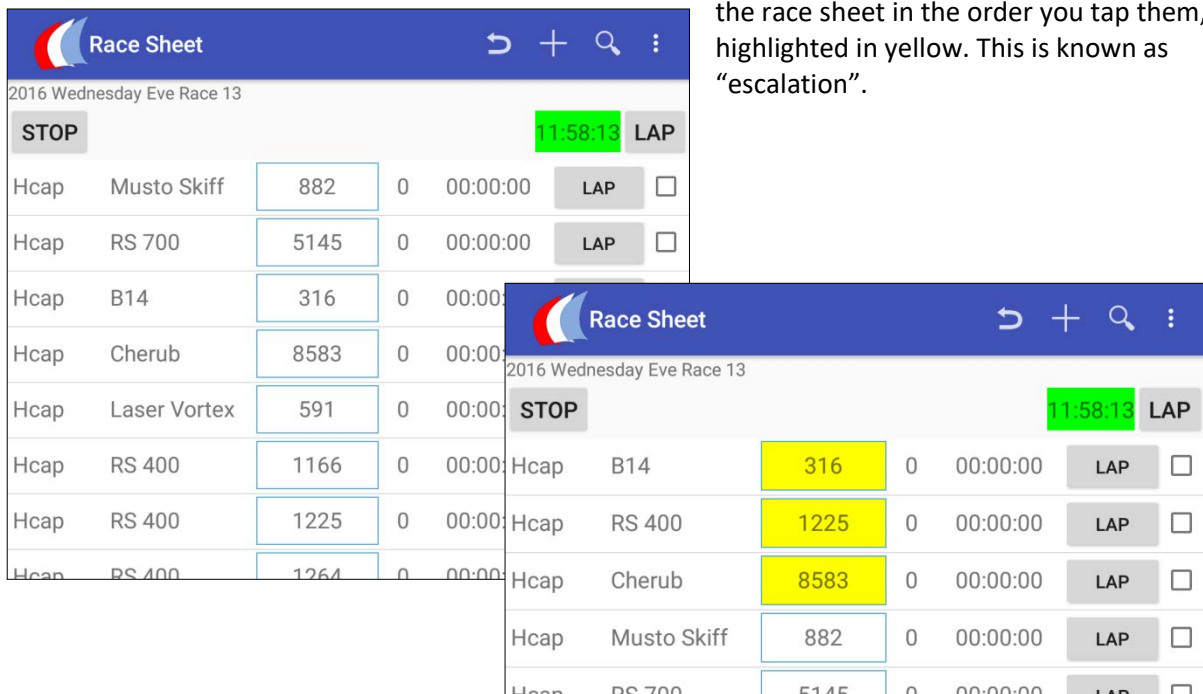
Each time has been logged against the correct boat.

## 7.2. Escalation and the “Sail Number” field.

A different scenario: You can see several boats coming to the line and you can tell the sail numbers but realise they are very close together. Logging them via their lap buttons will be tricky as you have to find the competitors on the list to tap their lap buttons. This method puts the sail numbers you want in an accessible ordered list.

In the example below, you can see B14 316, RS400 1225 and Cherub 8583 are approaching the line in that order.

You tap their sail numbers. Notice that as you tap each boats sail number, it appears at the top of the race sheet in the order you tap them, highlighted in yellow. This is known as “escalation”.




Then as each boat crosses the line, you tap its “Lap” as usual. The time is logged against the boat, and the escalation is removed. Even if the order changes close to the line, the competitors are in an easily accessible position on the Race Sheet. This can be a useful feature even when the competitors are not close together, but just to anticipate the competitor arrival order.

The escalation can be manually removed by just tapping the sail number in the yellow box again and the competitor reverts to its normal predicted time place in the list.

If you have many competitors, you can search for their sail number.

### 7.3. Search for Sail Number

With larger numbers of race competitors, it can be time-consuming to scroll to find a particular competitor. The Race Sheet has a search facility. When you tap the Search icon, , the icon row turns into a search entry field saying "Enter Sail No.". As you type a sail number into the entry field a



dropdown list of matching numbers with their classes appears which reduces as you type more numbers.

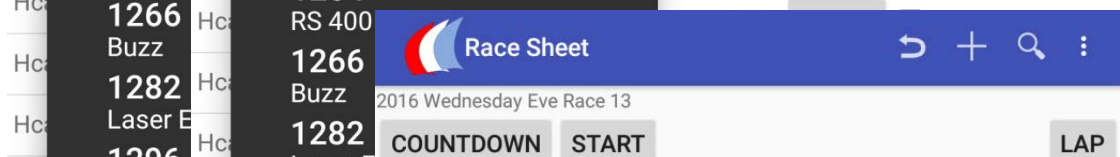
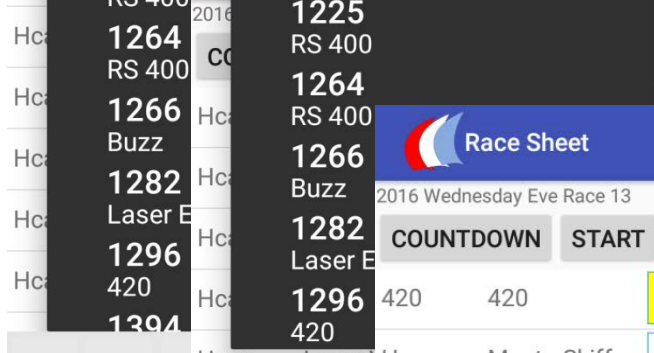


Tapping in the list on the sail number

Hcap



you want, in this case 1296, escalates that competitor to the top of the list.



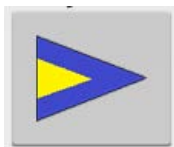
2016 Wednesday Eve Race 13									
Race Sheet									
2016 Wednesday Eve Race 13									
COUNTDOWN START LAP									
Hcap	Laser E	420	420	1296	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	Musto Skiff			882	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	RS 400			5145	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	RS 400			316	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	RS 400			8583	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	Laser Vortex			591	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	RS 400			1166	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	RS 400			1225	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	RS 400			1264	0	00:00:00	LAP	<input type="checkbox"/>	
Hcap	Buzz			1170	0	00:00:00	LAP	<input type="checkbox"/>	

You can then do whatever you need to that competitor, tap their "LAP" button, select it by tapping the checkbox or whatever. As before, tapping the yellow background sail number removes the escalation and the competitor returns to the normal place in the list.

## 8. Extended Race Control Functions

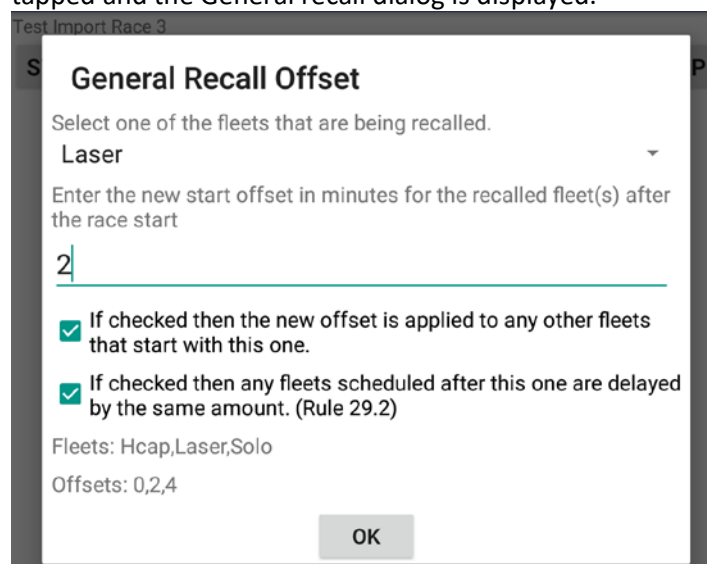
These are not enabled by default but can be enabled from the “Additional Race Buttons” setting.

### 8.1. General Recall button



The General Recall button (code flag “1<sup>st</sup> Sub”) is displayed until a preset time after the last start. This period is defined in “Settings”.

If you’ve decided a general recall is necessary for a fleet, tapping this button brings up the General Recall dialog. The principle is to adjust the fleet offsets to reflect the new fleet start time. For example, if the race has been defined with three fleets, “Hcap,Laser,Solo” starting at offsets “0,2,4”. The race started at 15:00:02 and the Laser fleet was over the line. The General Recall button is tapped and the General recall dialog is displayed.



The dialog selects the fleet that has just started, the Laser fleet, and initialises a dropdown selector and the current start offset for that fleet. If this is not the fleet for the general recall you can select a different fleet from the selector.

You then change the start offset for the fleet to the new start. For example, we could decide the fleet will start 6 minutes after its scheduled time and change the offset to 8, and tap “OK”. We would have raised the General Recall flag as well with sound signals. When we drop the flag, say one minute after the scheduled start time, then the warning flag should be one minute after that. In this example we are running a 4,2,0 sequence, so the start will be 6 minutes later than originally planned, so we change the “2” to “8”.

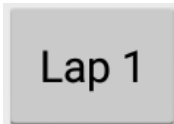
We may have multiple fleets starting at the same time as Laser, so presumably the General Recall applies to all of them, so those other fleets starting at the same time as the one chosen on the General Recall dialog will automatically have their start times adjusted by the same amount. If we only want the General Recall to apply to one of the fleets on this start time, we uncheck the first checkbox.

The racing rules with respect to General Recalls restart the recalled fleet(s) as the next start and subsequent fleets are delayed by the same amount. This is done automatically. If you don’t want the same delay (6 minutes in this example) to be applied to the subsequent fleets, “Solo”, then uncheck the second checkbox and their start offsets will be left unchanged. Some clubs modify their sailing

instructions to put recalled fleets to the back of the start sequence and let other fleets start at their original set times. If we did this in our example here, then we'd uncheck the second box, so Solo would still start at 4 minutes offset, and Laser would start at 6 minutes offset.

In the dialog you can see the changes to the offsets made by changing the fleet offset and the checkboxes shown in the offset display just above the OK button.

## 8.2. First Lap Complete button



The "Lap 1" button should be tapped after all the competing boats have completed their first lap. When it is tapped all the boats that haven't either registered a lap or been assigned a scoring code are highlighted. You can either delete them in bulk or assign them all a DNC scoring code.

This is useful if you've imported series competitors or a competitor list and a number of competitors on the race sheet aren't actually sailing. A similar function happens when you stop the race after the last competitor has finished, but using the "Lap 1" facility avoids non-competing boats cluttering up the top of the race sheet.

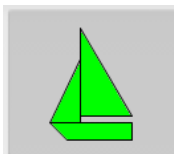
## 8.3. Shorten Course button



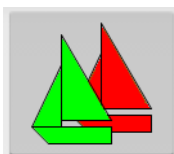
The Shorten Course button (code flag "S") is displayed after the "Lap 1" button is tapped. You use this when you've signalled Shorten Course and you intend that ALL boats will complete their race next time their lap is recorded. At that time they will be flagged as finished and therefore not racing.

If the Race Sheet is only showing competitors that are currently racing, after they completed their last lap they will disappear from the sheet until the race is stopped. Thus you can easily see who is still racing.

## 8.4. Display "Racing" / "All" Competitors



A boat is considered to be racing if it has not been assigned a non-racing scoring code. A non-racing scoring is one where you no longer need to record lap and finish times for the boat, e.g. "RET" or "OK" ("OK" means that boat is recorded as finished). Codes such as "OCS" where the boat may continue racing and dispute the assigned code are NOT considered non-racing codes.



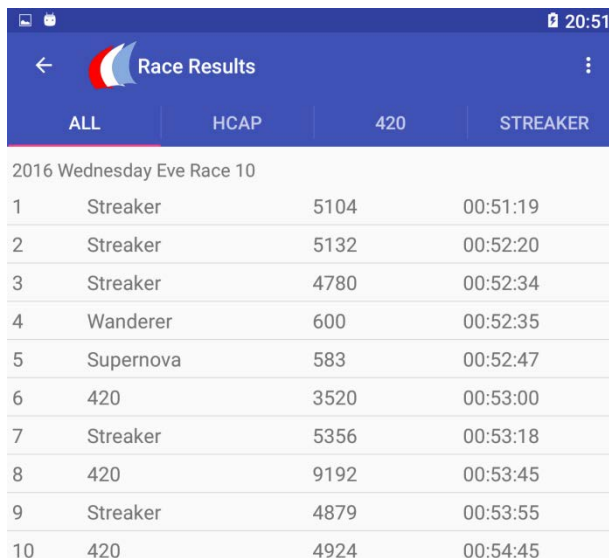
If this button shows the green boat image, then non-racing boats will not be displayed. If both green and red images are on the button then it displays all competitors on the race sheet whether flagged as racing or not. The button acts as a toggle to switch between the two display environments.

## 9. Race Results

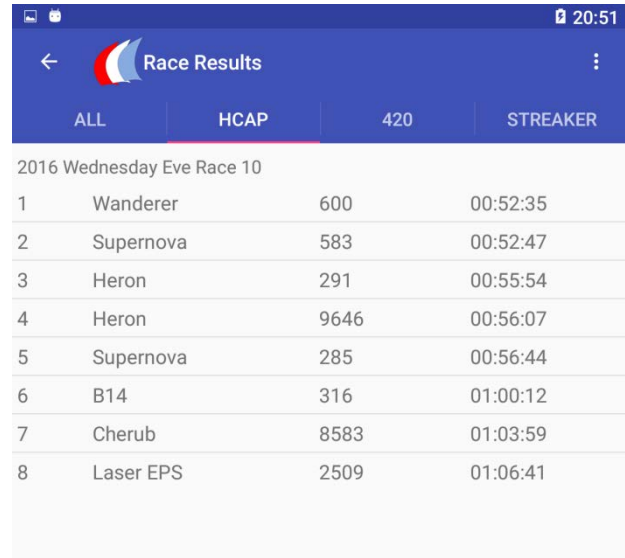
The Race Results shows the competitors in ranking order. The first column is their position, then class and sail number, finally the corrected time.

The corrected time is calculated by multiplying the elapsed time up to what it would have been for the maximum laps seen, then multiplying by 1000 and dividing by the PY number.

The results as shown have all the boats racing on one sheet, but the dropdown after “Race Results” on the top row allows you to select the fleet. This will then display the results for just that fleet.

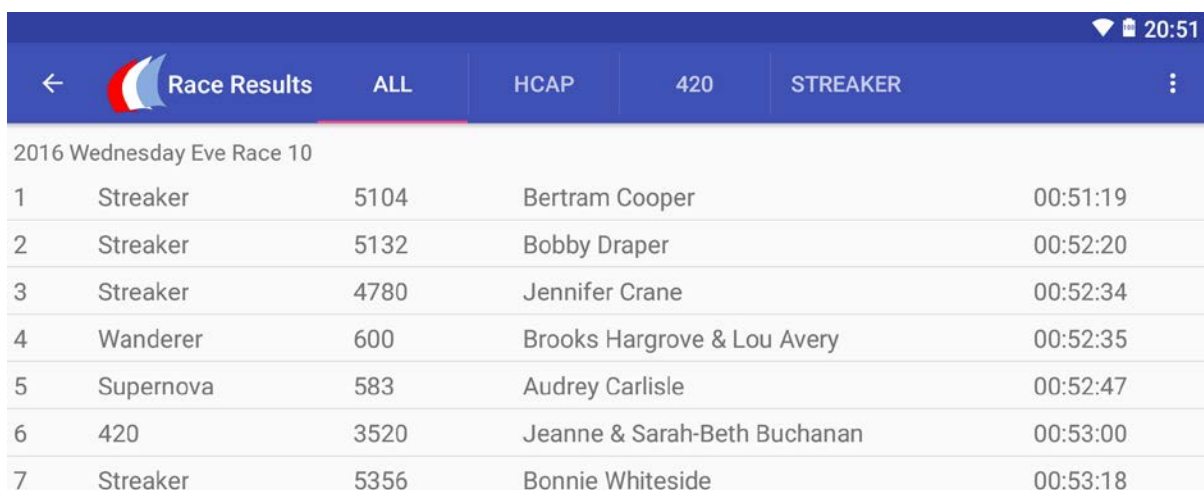


2016 Wednesday Eve Race 10			
1	Streaker	5104	00:51:19
2	Streaker	5132	00:52:20
3	Streaker	4780	00:52:34
4	Wanderer	600	00:52:35
5	Supernova	583	00:52:47
6	420	3520	00:53:00
7	Streaker	5356	00:53:18
8	420	9192	00:53:45
9	Streaker	4879	00:53:55
10	420	4924	00:54:45



2016 Wednesday Eve Race 10			
1	Wanderer	600	00:52:35
2	Supernova	583	00:52:47
3	Heron	291	00:55:54
4	Heron	9646	00:56:07
5	Supernova	285	00:56:44
6	B14	316	01:00:12
7	Cherub	8583	01:03:59
8	Laser EPS	2509	01:06:41

If you view the Race Results in landscape mode, the helm and crew names are displayed alongside class and sail number.



2016 Wednesday Eve Race 10				
1	Streaker	5104	Bertram Cooper	00:51:19
2	Streaker	5132	Bobby Draper	00:52:20
3	Streaker	4780	Jennifer Crane	00:52:34
4	Wanderer	600	Brooks Hargrove & Lou Avery	00:52:35
5	Supernova	583	Audrey Carlisle	00:52:47
6	420	3520	Jeanne & Sarah-Beth Buchanan	00:53:00
7	Streaker	5356	Bonnie Whiteside	00:53:18

If “Notes” have been applied to a competitor, you’ll see these notes on this screen underneath that competitor.

## 10. PY

The Portsmouth Yardstick table shows the following columns:

- a filter that can have following values:
  - “0” – this is the scratch value for computing corrected times, there should only be one of these in the table,
  - “9” – exclude this class/alias from the those available in dropdown lists,
  - Any other positive numeric value that can be used to change the order shown in this table,
- the class as shown by the RYA,
- the alias used by **Sailboat Results**,
- its rating,
- a type code that, by default, is
  - “D” – dinghy,
  - “K” – keelboat,
  - “M” – multihull,
  - “X” – experimental,
  - “H” – historical and
  - “Z” to indicate the “Scratch” PY value,
- And a checkbox to select one or more PY records.

ID	Class	Alias	Rating	Type	Checkbox
0	SCRATCH	Scratch	1000	Z	<input type="checkbox"/>
1	420	420	1105	D	<input type="checkbox"/>
1	505	505	912	D	<input type="checkbox"/>
1	2000	2000	1100	D	<input type="checkbox"/>
1	29ER	29er	922	D	<input type="checkbox"/>
1	49ER	49er	726	D	<input type="checkbox"/>
1	ALBACORE	Albacore	1045	D	<input type="checkbox"/>
1	ALTO	Alto	912	D	<input type="checkbox"/>
1	B14	B14	872	D	<input type="checkbox"/>
1	BLAZE	Blaze	1021	D	<input type="checkbox"/>
1	BRITISH MOTH	British Moth	1160	D	<input type="checkbox"/>
1	BUZZ	Buzz	1015	D	<input type="checkbox"/>
1	BYTE CII	Byte CII	1150	D	<input type="checkbox"/>
1	CADET	Cadet	1435	D	<input type="checkbox"/>
1	CANOE INTERNATIONAL (ASY)	Canoe Int. (Asy)	870	D	<input type="checkbox"/>
1	CANOE INTERNATIONAL	Canoe Int.	893	D	<input type="checkbox"/>
1	COMET	Comet	1200	D	<input type="checkbox"/>
1	COMET TRIO	Comet Trio	1085	D	<input type="checkbox"/>
1	CONTENDER	Contender	976	D	<input type="checkbox"/>
1	DEVOTI D-ONE	Devoti D-One	959	D	<input type="checkbox"/>
1	ENTERPRISE	Enterprise	1115	D	<input type="checkbox"/>
1	EUROPE	Europe	1148	D	<input type="checkbox"/>
1	FINN	Finn	1042	D	<input type="checkbox"/>
1	FIREBALL	Fireball	970	D	<input type="checkbox"/>

The “+” in the action bar at the top shows a dialog whereby you can add records to the table.

The menu button to its right (three dots) display a menu from which you can select “Import PY Table” or “Help”.

If you select records by the checkboxes

← 2 selected					
ID	Class	Alias	Rating	Type	Checkbox
0	SCRATCH	Scratch	1000	Z	<input type="checkbox"/>
1	420	420	1105	D	<input checked="" type="checkbox"/>
1	505	505	912	D	<input checked="" type="checkbox"/>
1	2000	2000	1100	D	<input type="checkbox"/>
1	29ER	29er	922	D	<input type="checkbox"/>

the action bar changes to a “pencil” to edit the records selected, or a “trashcan” to delete the selected records.

### 10.1. The “Alias”

The official class name can be quite long, e.g. “CANOE INTERNATIONAL (ASY)” and this would take up a lot of space on the screen. Therefore **Sailboat Results** uses a short form of the name, the alias. In

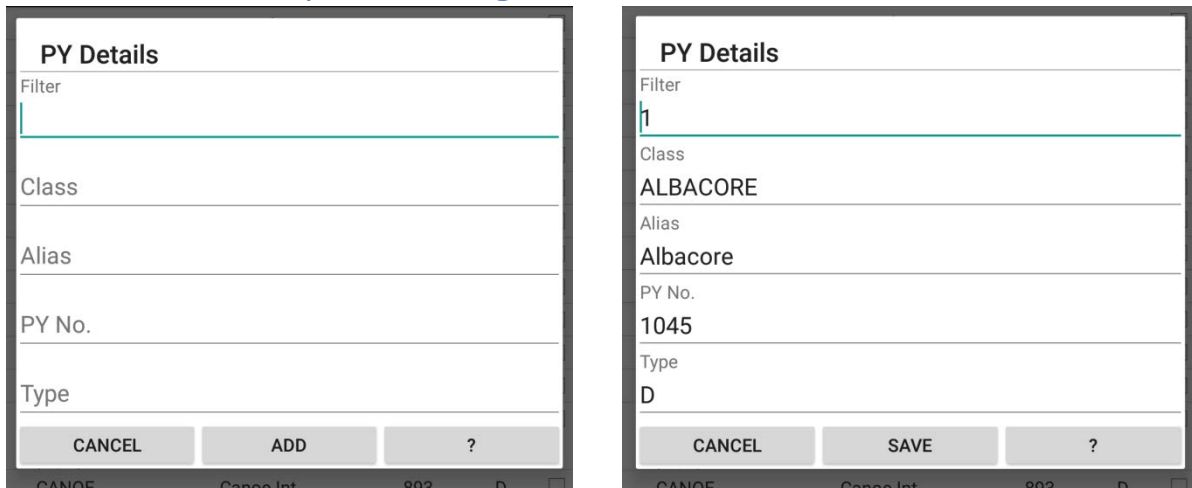


In addition to being shorter than the official class name, it is also in mixed case rather than all capitals as studies show this is easier to read.

## 10.2. “SCRATCH” Class

The “SCRATCH” class is used to set the value to normalise ratings against. In the current Portsmouth Yardstick system this is 1000. To calculate a corrected time, you take the elapsed time and multiply by 1000 and divide by the PY.

## 10.3. The Add/Edit PY Dialog



The same dialog is used for both add and edit, the difference being the “ADD” button is replaced by a “SAVE” button and the Edit dialog is populated with the details.

## 10.4. Import PY Table

The “Import PY Table” menu item will reload the internal PY table from tblPY.csv in the SailboatResults folder. You should do this if you have edited tblPY.csv to incorporate changed ratings or added classes.

The format of the CSV file is

- `_id` – a row identifier that is an ascending numeric value. A semi-colon here will treat this record as a comment. It will not be imported to the database.
- Filter – code that is currently unused.
- Class – From the RYA in uppercase.
- Code – Class name as shown in **Sailboat Results**.
- PYNo – the rating.
- Type – Dinghy, Keelboat, Multihull, eXperimental or Historical.

## 10.5. tblPY.csv Example

This is an example of the first few rows of the in-built file:

```
_id,Filter,Class,Alias,PYNo,Type
; , ,Source,RYA,2016 PN List & Historic PN List,Z
0,0,SCRATCH,Scratch,1000,Z
```

```
1,1,420,420,1105,D
2,1,2000,2000,1101,D
3,1,29ER,29er,919,D
4,1,49ER,49er,720,D
5,1,505,505,912,D
6,1,ALBACORE,Albacore,1045,D
7,1,ALTO,Alto,912,D
8,1,BLAZE,Blaze,1021,D
9,1,BRITISH MOTH,British Moth,1158,D
10,1,BYTE CII,Byte CII,1148,D
. . .
```

If you wish to modify the existing table using an external editor such as Excel or Notepad, then on the main Screen, “Backup to CSV”. You’ll find tblPY.csv in the SailboatResults folder. Make the changes you want to this file. Then, from the Portsmouth Yardstick screen’s menu, select “Import PY Table”.

## 11. Fleet Definition Table

The Fleet Definition Table provides a mechanism to automatically detect the appropriate fleet for a class and saves having to choose the fleet when adding competitors. Like other tables, it exists as a CSV file, "tblFD.csv", than can be edited and implemented by "Restore from CSV".

The Fleet Definition Table consists of field definition records (FDRs). A competitor's class of boat is matched to the field definition records and the last to match gives the fleet that competitor is in. FDRs are of three types:

- Match over class name.
- Match the class PY rating to a given range.
- Match the class's Type from the PY table.

The FDRs are organised into categories. In the add/edit series dialog, if one or more categories is defined in the Field Definition table, a category selector is displayed. If you select the top blank entry from the drop-down, the categories are ignored the fleets and offsets are initialised from the app settings (see the "Settings" section). If you choose one of the defined categories, then the fleets and offsets in the series dialog are initialised to the fleets defined in the chosen category.

Thus you could have a category for club racing and separate ones for open meetings or regattas.

The fields in the FDR are as follows:

_id	A numerical record number assigned automatically.
Sequence	Indicates the order in which the FDR records will be processed.
Configuration	Identifies the configuration to which the FDR belongs.
Title	The long name of the fleet. This is not used by Sailboat Results.
Fleet	The short name for the fleet displayed in Sailboat Results.
CODE	The type of fdr, "C" for class name, "R" for PY rating, "T" for class type, "M" for manual selection.
Criteria	The matching criteria and is FDR type dependent.
Flag	This is the code flag for the fleet. It is currently unused.
Offset	This is the fleet start offset.

### 11.1. "C" - Class Name FDR

Match the class alias to one of those specified in a comma separated list in the criteria field. An "\*" matches to any class. E.g.

1	1	Club	General Handicap	Hcap	C	*	G	0
2	2	Club	Laser Singlehanders	Lasers	C	"Laser,Laser 4.7,Laser Radial"	L	2
3	3	Club	Solo Fleet	Solo	C	Solo	T	4

All classes will be assigned to the "Hcap" fleet, apart from Laser, Laser 4.7 and Laser Radial which will be in the "Lasers" fleet, and Solo which will be in the "Solo" fleet.

### 11.2. "R" - PY Rating FDR

The classes PY rating will be tested against the criteria field, which can be "<nnnn", ">nnnn" or ">nnnn,<nnnn" where ">" is greater than, "<" is less than and "nnnn" is a rating value. E.g.

4	1	Omtg	Fast Handicap	FHcap	R	<1000	F	0
---	---	------	---------------	-------	---	-------	---	---

5	2	Omtg	Medium Handicap	MHcap	R	">999,<1200"	M	2
6	3	Omtg	Slow Handicap	SHcap	R	>1199	R	4

Those with ratings less than 1000 will go in the "FHcap" fleet, those with ratings of 1000 or more but less than 1200 will go in the "MHcap" fleet, and those with ratings of 1200 or more will go in the "FHcap" fleet.

### 11.3. "T" - Class Type FDR

The Type field in the PY field is tested against the criteria. By default, the Type field will have "D" for dinghies, "M" for multihulls, "K" for keelboats, "X" for Experimental and "H" for Historical. However you can change the type field to categorise as you want. For example, putting an "A" for asymmetric dinghies. E.g.

7	4	Omtg	Asymmetric	Asym	T	A	A	6
---	---	------	------------	------	---	---	---	---

### 11.4. "M" - Manual FDR

The manual FDR does no automatic fleet assignment. However it will add the specified fleet to the series definition. This can be useful if you want to have a fleet that can't be differentiated by the class. For example you may have a "Junior" fleet that sail some of the same classes as the adults. You will have to assign competitors to this fleet manually but it will figure in the fleet drop-down. E.g.

8	5	Omtg	Junior	Jnr	M		J	8
---	---	------	--------	-----	---	--	---	---

### 11.5. Example tblFD.csv

```
1,1,Club,General Handicap,Hcap,C,* ,G,0
2,2,Club,Laser Singlehanders,Lasers,C,"Laser,Laser 4.7,Laser Radial",L,2
3,3,Club,Solo Fleet,Solo,C,Solo,T,4
4,1,Omtg,Fast Handicap,FHcap,R,<1000,F,0
5,2,Omtg,Medium Handicap,MHcap,R,">999,<1200",M,2
6,3,Omtg,Slow Handicap,SHcap,R,>1199,R,4
7,4,Omtg,Asymmetric,Asym,T,A,A,6
8,5,Omtg,Junior,Jnr,M,,J,8
```

Note that where a field includes a comma it is enclosed in double quotes. The above assumes that in club racing the default fleets will be Hcap, Lasers and Solo starting at 2 minute intervals, and with Laser, Laser 4.7 and Laser Radial in the Lasers fleet. In an open meeting the fleets will be FHCap, MHcap, SHcap, Asy and Jnr also at 2 minute intervals. You would expect to define multiple open meeting and regatta configurations.

## 12. Settings

Club name	Not currently used but may be in the future.
Fleets	The default fleet setting (see “Adding/Editing a Series”).
Starts offsets (mins)	The default offsets setting (see “Adding/Editing a Series”).
Numeric Entry Keyboard	Select whether a numeric keypad or full keyboard is shown for inputting start offsets. Some numeric keypads do not show the comma needed as a separator.
Countdown to start (mm:ss)	The period before the first start (see Race Sheet”).
Lap Time Display	Choose whether to show actual time for the boats or the elapsed time.
Sound	If checked a beep is sounded when each lap time is recorded. It serves as a quick notification that the tap has been recognised.
Additional Race Buttons	If checked, displays the following buttons on the Race Sheet: <ul style="list-style-type: none"> <li>o Lap 1</li> <li>o General Recall (1<sup>st</sup> Sub flag)</li> <li>o Shorten Course (“S” flag)</li> <li>o Racing/All Competitor display</li> </ul>
Display General Recall (mm:ss)	The amount of time after the last fleet has started to display the General Recall button. If left at zero the button is not displayed at all.
Scratch Lap time (mm:ss)	The estimated lap time of a boat sailing with a PY of 1000. This is defaulted to 10 mins.
Competitor Import Race Ratio	The value to determine whether to include a competitor when importing previous competitors in the series. See the Series Import section for a discussion on how this works.
Competitor filename	The filename to be used for loading a race sheet with competitors.
Sailwave Class Field Source	Determines the content of the “Class” field in the Sailwave output CSV file. If “Alias” then the content that is displayed in app as Class. If “Class” then the equivalent from the “Class” field of the PY table.
Share Sailwave data	If checked then when a Sailwave results file has been produced, the app will initiate file sharing which will pop up all the options for processing that file, e.g. email it, NFC it.
Share to Email	If Share Sailwave data is checked and Share to Email is completed with an email address, the sharing will automatically generate a populated email with the Sailwave data file attached.

### 13. Predicted Time Algorithm

The order that competitors are displayed on the race sheet is in ascending predicted arrival time completing their next lap. For laps after the competitor's first, this is simply the actual time when the previous lap was completed plus the time taken to complete that lap. For a competitor's first lap, the predicted time is calculated by adding an estimated lap time to the competitor's fleet's start time. This estimated lap time is the setting "Scratch Lap Time" adjusted by the competitor's handicap rating.

Example:

- The race starts at 19:00:00.
- The Tasar fleet (PY 1023) starts 2 minutes after the first start.
- The Scratch Lap Time is 10 minutes, and the Scratch PY is 1000.
- The Tasar's predicted arrival time at the end of the first lap is therefore 19:12:14.

Practice has shown that varying the default scratch boat's time is not significant in affecting the sequence in normal handicap racing.

## 14. Android Device Variations

**Sailboat Results** can be run on a wide range of Android devices and versions of the Android operating system. These can have different screen sizes. The main benefit of using a tablet rather than a phone is that you can see more competitors on the screen before you need to scroll. In addition, devices allow you to hold the device in either portrait or landscape orientation. **Sailboat Results** adjusts to the orientation so that in landscape mode you can see more information about the competitor, helm and sometimes crew names, but you see fewer competitors. In portrait mode you see more competitors, but lose the helm and crew names.

More importantly, there are a number of actions that can be performed by tapping menu items. Menu items can be a top row icon or a text phrase. The number of menu items represented by icons varies according to the device and these icons are at the top of the screen. The menu items that can't be represented by icons are represented by their text phrases. The menu text phrases are shown by tapping the menu button. The menu button can either be a software button represented by three vertical dots or short lines on the top right of the screen like on my Nexus 7, or a physical device button. On my old Samsung Note 3 this is a capacitive button bottom left, though on Android v5.0 it also has the software button top right.

<p><b>Nexus 7</b></p>	<p><b>Samsung Galaxy Note 3</b></p>
<p>Software menu button top right</p>	<p>Hardware menu button bottom left and software menu button top right.</p>