



# Race Officer's Manual - 2018

## 1 Overview

The Race Team, under the authority of the Race Officer, is responsible for organising the weekend's racing.

If a designated Race Officer cannot fulfil an assigned duty, we ask that swaps should be made *only with other designated Race Officers*.

The Race Team's fundamental objective is to provide a series of *safe* and *enjoyable* races. This implies that the organisation should be efficient, the courses well chosen, and the results accurate.

The safety of competitors and the Race Team is the paramount consideration.

- If conditions are too wild to permit safe racing do not hesitate to postpone or abandon racing.
- If conditions become unsafe during the race do not hesitate to abandon it and recall the competitors.

**NOTE: Safety cover must be maintained until all competitors are safely ashore, including from all Keelboats. This is particularly important following an abandonment.**

NO PERSONS UNDER THE AGE OF 16 WILL BE ALLOWED TO CREW ON BOARD ANY SAFETY CRAFT - THERE CAN BE NO EXCEPTIONS TO THIS RULE

Members of the Race Team may exchange functions with one another but the *responsibility* for a given task remains with the designated individual.

This document provides guidance but does not form part of the LLSC Sailing Instructions.

\*\*\*\*\*

**The main changes this year (2018) are:**

- 1. Keelboats must go through Gate at intermediate point on GH courses.**
- 2. Achilles no longer separate class, but part of Keelboat Handicap fleet.**
- 3. Revision of Class Flags: KB H'cap NP1, MH NP2, FH NP3, FF NP4, SH NP5.**
- 4. FFs may enter either Dinghy Points or Keelboat Points races, with latter result as part of Keelboat Handicap fleet.**
- 5. Finishing times of ALL boats must be recorded.**

## 2 Equipment

Equipment for taking afloat:

Start Flag-bag:

Club burgee, Flags Orange, Blue, NP1, NP2, NP3, NP4, NP5, P, X, 1<sup>st</sup> Sub, S, N, AP, H, L

Mory Flag-bag:

Club burgee, Flags Orange, Blue, NP1, NP2, NP3, NP4, NP5, S, N, AP

Start Boat Bag (blue):

Race Officer's Manual (includes Sailing Instructions, Course Charts, Duty Crew manual, Radio Notes, Ceardach Manual, Mory Manual), Spare horn, Whistle, Anemometer, Compass, Clip board, Biro and Pencils, Paper

Course Boards – there are 2 complete sets of Course boards. One set can remain in Ceardach, and one in Mory.

Primary RIB Bag (black):

Duty crew manual, RIB Manuals, Course Charts, Powerboat Speed Restrictions, Radio Notes, Clip board, Biro and Pencils, Paper

Secondary RIB Bag (black):

Duty Crew Manual, RIB Manuals, Course Charts, Powerboat Speed Restrictions, Radio Notes, Clip board, Biro and Pencils, Paper

## 3 Preparation

### 3.1 General

*In the two weeks prior to your duty* - please contact all the members of your duty team (including the Tea Person). Ensure that they know they are on duty and will turn up on time. Also remind RIB coxes that they should be able to lay marks using GPS on Points day.

*On Duty day* - please arrive at the club in good time (suggest no later than midday), armed with a weather forecast. Discuss the coming day's racing with your duty team.

*On arrival at the Club:*

Flags: Hoist the club burgee to the top of the flagpole and the Red Ensign from the gaff.

Pontoon bridge: Lower the bridge (See separate instructions).

Sheds: Open sheds.



*At least an hour and a half before the start* - prepare the entry sheets, taking care to fill in all the headers, and place them on the table outside the Race Office. Prepare the DUTY TEAM SIGN IN SHEET and print your own details on the sheet. Synchronise your watch with the radio clock in the Race Office. Ensure that safety boat preparation is on schedule.

*At least 1 hour before the start* –

- Give your coxswains clear instructions about safety cover and procedures. Best to hold a briefing for all your support crews. Lomond Yellow, Red and Blue are the preferred RIBs as they have protective rubber sheets to minimise wear when laying and recovering marks. Either Ceardach or Mory may be used as Committee Boat.
- Ensure that all duty crews have read and understood the Safety Notes.
- Ensure safety/escort vessels are launched/alongside.
- Perform radio check with all safety/escort boats. Ensure all radios are operating on Lo Power, 1 watt for hand sets, minimum setting for fixed radios
- Make sure the keys for the tea person are hanging up behind the kitchen counter. Contact a member of the House Committee if they are not.

### 3.1.1 General Handicap Series

Load Committee Boat with the necessary equipment:

- Blue Start Flag-bag
- Start Boat Bag
- At least 2 Timers
- Course boards

Handheld radio – RO may prefer to use handheld radio - improved visibility of race course.

Ensure that the Primary RIB is equipped with:

- Primary RIB Bag
- Two orange dumpy marks for the windward and wing marks – stored in cage next to garage doors.

Ensure that the Secondary RIB is equipped with:

- Secondary RIB Bag
- One orange dumpy mark for leeward mark - stored in cage next to garage doors.
- Dan buoy to lay the start line

### 3.1.2 Island Days

Examine the wind direction and strength and decide whether you will start the race from mark M (the default) or from the clubhouse. If you are not starting from mark M, fly flag C from the club flagpole, and arrange for a Dan buoy to be laid for the starting line.

Unless you are starting from the clubhouse, load Committee Boat with the necessary equipment:

- Blue Start Flag-bag
- Start Boat Bag
- At least 2 Timers
- Course boards
- Handheld radio – RO may prefer to use handheld radio - improved visibility of race course.



Ensure Primary RIB is equipped with:

- Primary RIB Bag
- Dan buoy to lay the Start Line

Ensure Secondary RIB is equipped with:

- Secondary RIB Bag

### 3.1.3 Points Days

Load Committee Boat with the necessary equipment:

- Blue Start Flag-bag
- Start Boat Bag
- At least 3 Timers
- Course boards
- Handheld radio – RO may prefer to use handheld radio - improved visibility of race course.

Ensure that the Primary RIB is equipped with:

- Primary RIB Bag
- Two orange dumpy marks for windward and wing marks – stored in cage next to garage doors.
- Dan buoy to lay the start line

Ensure that the Secondary RIB is equipped with:

- Secondary RIB Bag
- One orange and one yellow dumpy mark for 2 leeward marks - stored in cage next to garage doors.

## 3.2 Safety Boat Allocation

The RIBs act as Safety boats for dinghies and Flying Fifteens. Lomond Yellow, Red and Blue are the preferred RIBs as they have protective rubber sheets to minimise wear when laying and recovering marks.

### 3.2.1 General Handicap Series

**COMMITTEE BOAT** – The Race Officer should station Committee Boat at M. He/she will remain on Committee Boat until the racing is complete. The ARO should monitor the progress of the Dinghy and Keelboat fleets and assist the Race Officer with starts, timing of rounds and finishes of the dinghy and Flying Fifteen fleets. He/she should also assist with the start and finish of the Keelboat fleets.

#### **PRIMARY RIB**

- The Primary RIB should lay the windward mark (orange Dumpy mark) before the first race.
- She should maintain effective safety cover of the dinghy and Flying Fifteen fleet for the duration of the racing.
- Between the first and second race, under the direction of the Race Officer, she should lay the wing mark for the second race.



## **SECONDARY RIB**

- The Secondary RIB should lay the leeward mark (orange Dumpy mark) and the Dan buoy for the start line.
- She should maintain effective safety cover for the dinghy and Flying Fifteen fleets for the duration of the racing.
- The Secondary RIB Cox may also be required to finish the Keelboats at the Race Office or at a Mark, but only if the conditions do not require the Secondary RIB to be covering the dinghies. The Crew may be left on Committee Boat with the Race Officer if this occurs.

**At all times safety is paramount and if the Secondary RIB is required to attend a safety incident then all other responsibilities cease.**

### **3.2.2 Island Days**

**COMMITTEE BOAT** – The Race Officer should station Committee Boat at M. Committee Boat should leave the “M” mark after the last fleet has started and monitor the progress of all fleets in conjunction with the RIBs. The RO and ARO must proceed to the Race Office in time to finish all fleets (be aware that a Foiling Moth will not take long to sail the course).

**PRIMARY RIB** – The Primary RIB should lay the Dan buoy for the start line and provide effective safety cover for the dinghy and Flying Fifteen fleets, maintaining contact with the front of the dinghy fleet.

**SECONDARY RIB** – The Secondary RIB should provide effective safety cover for the dinghy and Flying Fifteen fleets from the back of the fleet.

One of the RIBs may be required to finish the races if shortened but only if the conditions do not require the RIBs to be covering the dinghies.

**At all times safety is paramount.**

### **3.2.3 Points Days**

**COMMITTEE BOAT** – The Race Officer should station Committee Boat at M. He/she should remain on Committee Boat at M until all racing is complete (all courses finish at the Gate). The ARO should monitor the progress of the Dinghy and Keelboat fleets and assist the Race Officer with starts, timing of rounds and finishes of the dinghy and Flying Fifteen fleets. He/she should also assist with the start and finish of the Keelboat fleets.

#### **PRIMARY RIB**

- She should lay the Dan buoy for the start line and lay the windward mark (orange Dumpy mark) and the wing mark (orange Dumpy mark) for the dinghies and Flying Fifteens.
- She should maintain effective safety cover of the dinghy and Flying Fifteen fleets for the duration of the racing.

#### **SECONDARY RIB**

- She should lay the 2 leeward marks (one orange Dumpy mark and one yellow Dumpy mark)
- She should maintain effective safety cover of the dinghy and Flying Fifteen fleets for the duration of the racing.

**At all times safety is paramount.**



## 3.3 Choosing a course

### 3.3.1 Course Charts

The courses are detailed on the club course charts in this manual. Marks which are underlined are left to Port. There are 4 separate course charts:

- General Handicap Chart – used by Dinghies and Flying Fifteens for ‘Average Lap’ General Handicap races, and for Keelboat General Handicap races.
- Keelboat Course Chart – Islands Races – used by Keelboat Handicap class for Islands Days.
- Keelboat Course Chart – Points Races – used by Keelboat Handicap class for Points Days.
- Dinghy and Flying Fifteen Course Chart – used by Fast Handicap, Medium Handicap and Slow Handicap Dinghy and Flying Fifteen classes for Islands and Points Days.

**General Handicap:** For Keelboat Handicap there are two courses for each wind direction. Any of the courses may be used at the Race Officer’s discretion.

The Dinghy/Flying Fifteen Points course does not need to be chosen as the first race will always be a windward/leeward course and the second a triangle course.

**Keelboat Islands and Points Courses:** There are course options for each wind direction for each series, one of which is a shorter course or a course with more shortening options, designed for lower wind days.

**Dinghy and Flying Fifteen Islands Courses:** Options for wind directions as for Keelboat courses.

**Dinghy and Flying Fifteen Points Courses:** The Dinghy Points course does not need to be chosen as it is always a Triangle-Sausage course for FFs and Medium Handicap and Windward/Leeward for Fast Handicap, and only requires the wind direction to be determined.

**For all courses the first leg should be chosen to be as near as possible a true beat.**

### 3.3.2 Courses sailed by each fleet

Keelboat Handicap sail:

- Keelboat General Handicap courses for the General Handicap races.
- Keelboat Islands courses on Islands days (Saturday and Sunday series).
- Keelboat Points courses on Points days (Saturday and Sunday Series).
- Special courses for Head of the Loch and Lomond Isles races.

Fast and Medium Handicap Dinghies and Flying Fifteens sail:

- Dinghy and FF General Handicap courses for the General Handicap series
- Dinghy and FF Islands courses on Island days (Saturday and Sunday series).
- Dinghy and FF Points courses on Points days (Saturday and Sunday series). Note that FFs may enter either FF Points races or Keelboat Handicap races.
- Special courses for Lomond Isles race.

Slow Handicap dinghies sail:

- Dinghy and FF General Handicap courses for the General Handicap series
- Dinghy and FF Points courses on Points days.



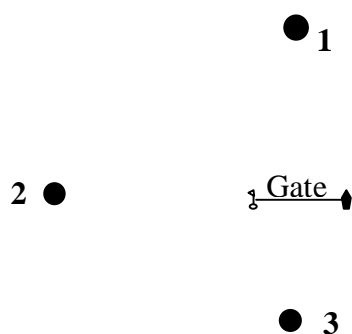
NOTES:

1. The Slow Handicap Dinghy class does not participate in Islands races.
2. The Fast Handicap Dinghy class sails an extra loop at the end of Islands races. No sound signals should be made for them until they have completed their course, unless the course is to be shortened.

## 3.4 Dinghy General Handicap and Points Courses

### 3.4.1 General Handicap Course

The Dinghy General Handicap course is always:



Race 1 will be a windward/leeward course and Race 2 a triangle. Mark 2 is not used in Race 1 should not be laid until completion of Race 1.

**Race 1:** Start 1 3 Gate  
**Race 2:** Start 1 2 3 Gate

**Note:** The Gate **must** be passed through on each beat (mark 3 to 1) and **may** be passed through on downwind legs.

As boats pass through the Gate, take the number of laps completed (essential) and time of every boat (if possible). The of laps number and time should be recorded in the appropriate column in the race entry sheet.

The race should be shortened after about 40 minutes. All boats finish as they pass through the Gate after the first boat has finished. NB. Every lap for every competitor must be recorded and the time taken as this information is used to work the 'Average Lap' time and race result.

**IMPORTANT:**

The Dinghy General Handicap races have a Target race time of **40 minutes** for the first boat and **60 minutes** for the last boat.



### 3.4.2 Laying the GH course

The course should be set in the same way as for Points series (see 0 and 0) except that the wing mark (2) is not used during Race 1. The size of course should be similar to that set for Points Series, i.e. windward, leeward and wing marks 400 metres from M. The position of the marks is the responsibility of the Race Officer who can choose to set them by GPS (as with Points Series) or by sight depending on the wind strength and direction.

### 3.4.3 Points Course

Course diagram is on next page.

The Fast Handicap course is **1 3a Gate** continuing until the Race Officer finishes the fleets. This allows Average Lap race results.

The Flying Fifteens course is **1 2 3a Gate 1 3a Gate** continuing until the Race Officer finishes the fleets.

The Medium and Slow Handicap course is **1 2 3 Gate 1 3 Gate** continuing until the Race Officer finishes the fleets.

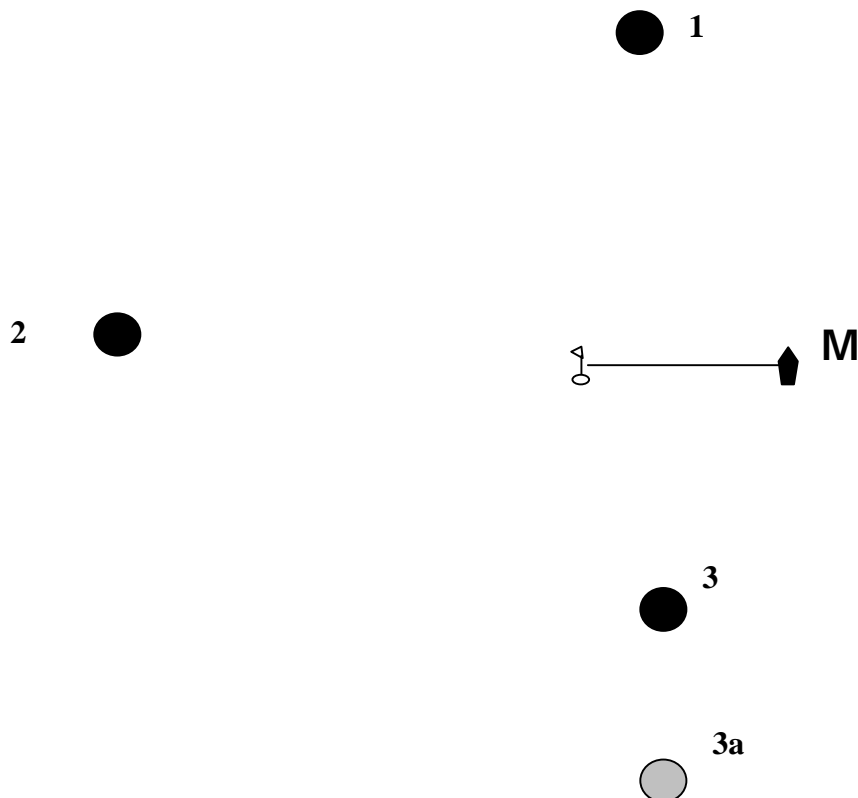
**Note:** The Gate **must** be passed through on each beat (mark 3/3a to 1) and **may** be passed through on downwind legs.

As the boats pass through the Gate, tally the number of laps completed in the appropriate column on the Lap Record Sheet. This will help ensure that all competitors in Medium Handicap and FF classes are finished after an equal number of laps. NB. Every lap for the Fast Handicap must be recorded and the time taken as this information is used to work the 'Average Lap' time and race result.

#### **IMPORTANT**

The Dinghy/FF Points races have a Target race time of **40 minutes** for the first boat and **60 minutes** for the last boat. Remember to anticipate the need to Shorten course by timing the boats mid-fleet rather than the leader.





**Figure 1 - Dinghy Race and Series Weekend Points Course**

Marks 1, 2 3 are in set positions 400 metres from Mark M. Mark 3a is approx. 200 metres downwind from Mark 3.

### **3.4.4 Setting the Points Course (GH and Points days)**

The course is marked by 3 orange and 1 yellow inflatable dumpy marks.

There are 12 positions centred on M for marks 1, 2 and 3 (orange dumpy marks), as shown on the chart below. Each mark position is 400 metres from M. Mark 3a (yellow dumpy) will be laid 200 metres downwind of Mark 3 (not required for GH).





### 3.4.5 To lay the Points Course

The RIBs are equipped with GPS units, ready programmed with the mark positions, and instructions on how to use them. Refer to Duty crew Manual 3.3.4.

**If the RIB crews have not used the GPS systems instruct them to go out 20 minutes early to familiarise themselves with its use.**

Having identified the mark positions required for the course, instruct the Primary RIB to lay the windward mark (Mark 1) by giving them the name of the most windward position (e.g. NNE). Similarly for the wing mark (Mark 2).

Instruct the Secondary RIB to lay the leeward mark (Mark 3) in a similar manner.

Instruct the Secondary RIB to lay yellow dumpy (Mark 3a) in position 3a, 200 metres downwind from Mark 3 (not required for GH).

#### 3.4.5.1 Example course

For example, **if the wind is from NNE**, the mark positions would be:

- Windward Mark: NNE
- Wing Mark: WNW
- Leeward Mark: SSW
- Mark 3a: 200m beyond SSW

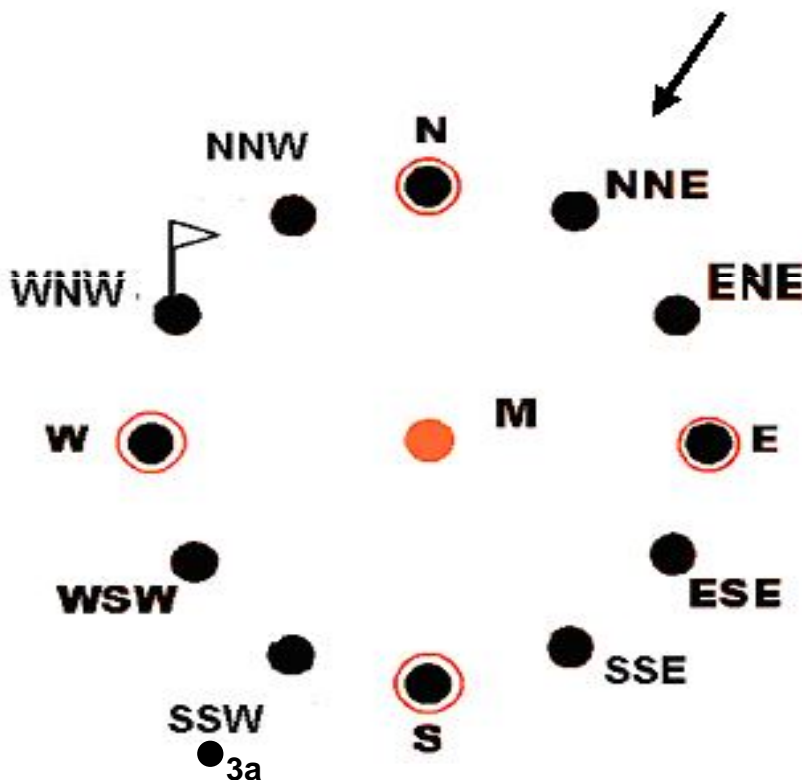


Figure 3 - NNE Dinghy Points Course



### 3.4.6 Dinghy Points Mark Position Calculator

<b>Wind Direction</b>			
<b>Windward Mark</b>	<b>Wing Mark</b>	<b>Leeward Mark</b>	<b>Yellow Dumpy</b>
<b>N</b>	<b>W</b>	<b>S</b>	<b>3a, 200 m beyond S</b>
<b>NNE</b>	<b>WNW</b>	<b>SSW</b>	<b>3a, 200 m beyond SSW</b>
<b>ENE</b>	<b>NNW</b>	<b>WSW</b>	<b>3a, 200 m beyond WSW</b>
<b>E</b>	<b>N</b>	<b>W</b>	<b>3a, 200 m beyond W</b>
<b>ESE</b>	<b>NNE</b>	<b>WNW</b>	<b>3a, 200 m beyond WNW</b>
<b>SSE</b>	<b>ENE</b>	<b>NNW</b>	<b>3a, 200 m beyond NNW</b>
<b>S</b>	<b>E</b>	<b>N</b>	<b>3a, 200 m beyond N</b>
<b>SSW</b>	<b>ESE</b>	<b>NNE</b>	<b>3a, 200 m beyond NNE</b>
<b>WSW</b>	<b>SSE</b>	<b>ENE</b>	<b>3a, 200 m beyond ENE</b>
<b>W</b>	<b>S</b>	<b>E</b>	<b>3a, 200 m beyond E</b>
<b>WNW</b>	<b>SSW</b>	<b>ESE</b>	<b>3a, 200 m beyond ESE</b>
<b>NNW</b>	<b>WSW</b>	<b>SSE</b>	<b>3a, 200 m beyond SSE</b>

### 3.4.7 Special Events

An individual course for the day will be set for Special Events, e.g. Lomond Isles and Head of the Loch races. If the RO is any doubt advice should be sought from the Sailing captain or another member of the Sailing committee.



## 4 Starting the Race

**\*\*\* IMPORTANT NOTE: The Dinghy and Flying Fifteen Fleets start 6 minutes after the keelboats. \*\*\***

### 4.1 General Handicap Series.

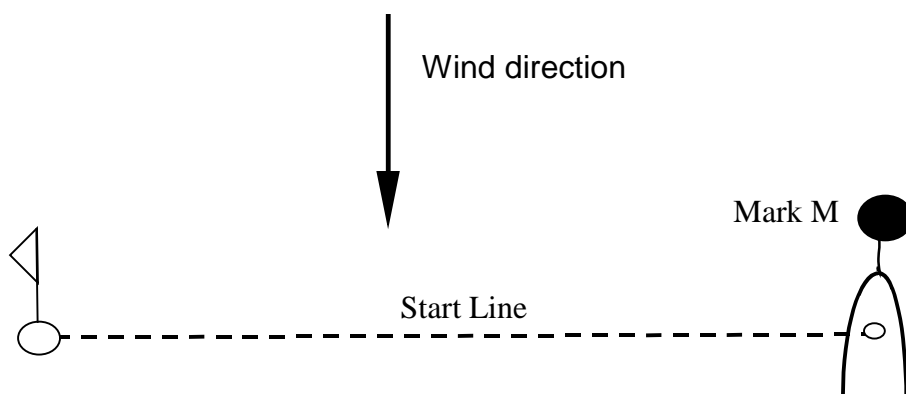
In the General Handicap series the Flying Fifteen and Dinghy classes have two ‘back to back’ races around Dumpy marks and the Keelboats one race around fixed club marks. These races are started at M, using Committee Boat as the Start Boat.

The Race Officer should secure Committee Boat to M. Choose Keelboat course for the prevailing wind direction.

Confirm that the first mark is a reasonable beat for Keelboats.

Lay dumpy marks (see 3.4.1 et seq.).

Instruct the RIB to lay the Dan buoy so as to create a start line about 100m long on the *port* side of the committee boat as shown below. Remember the water is deep, so the Dan may deploy some way to leeward of its anchor. The line should be at right angles to the wind.



Confirm that the dinghy marks are laid in the correct positions.

Fly the club burgee on the side of the wheelhouse roof furthest from the line.

Mount the chosen course number (49-64) for Keelboat Handicap on the Committee Boat’s display board.

Follow the start sequence tables for General Handicap Races (see 4.4).

Start 1 timer for the Keelboats. This should be kept on Committee Boat.

Start 2 timers for the dinghies and keep both on Committee Boat – the second timer is in case of failure of the first.

### 4.2 Islands Races

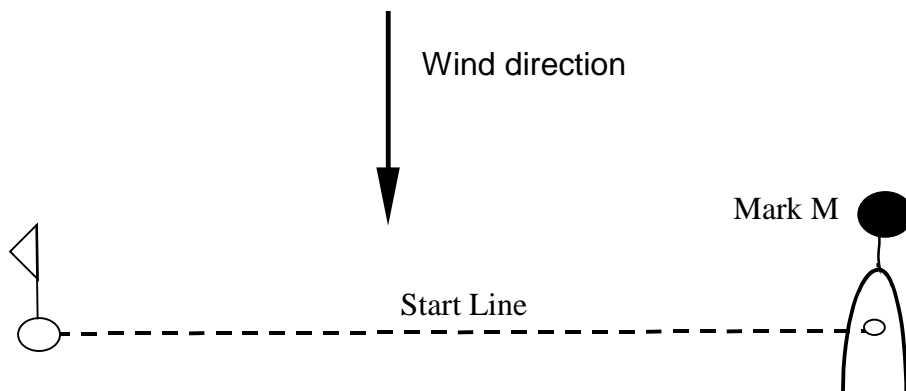
On Islands days all boats sail an Islands course. These races are started at M, using Committee Boat as the Start Boat.

The Race Officer should secure Committee Boat to M. Choose course for the prevailing wind direction.

Confirm that the first mark is a reasonable beat for Keelboat and dinghy fleets.



Instruct the RIB to lay the Dan buoy so as to create a start line about 100m long on the *port* side of the committee boat as shown below. Remember the water is deep, so the Dan will deploy some way to leeward of its anchor. The line should be at right angles to the wind.



Fly the club burgee on the side of the wheelhouse roof furthest from the line.  
 Mount the chosen course number (1-24) on the Committee Boat's display board.  
 Follow the start sequence tables for Islands Races (see 4.5).  
 Start 1 timer for the Keelboats.  
 Start 2 timers for the dinghies – the second timer is in case of failure of the first.  
 Note that there is no Slow Handicap Class for Island races.

## 4.3 Points Races

On Points days keelboats sail a Keelboat Points course. Each course will be started by the RO in Committee Boat at Mark M, and then finished at the Gate. Dinghies and Flying Fifteens will sail 3 'back to back' races each day around dummy marks laid on the day by the RIBs.

The Race Officer should secure Committee Boat to M. Choose Keelboat course for the prevailing wind direction.

Lay dummy marks as in 0.

Confirm that the first mark is a reasonable beat for Keelboat and dinghy fleets.

Instruct the RIB to lay the Dan buoy so as to create a start line about 100m long on the *port* side of the committee boat as shown below. Remember the water is deep, so the Dan will deploy some way to leeward of its anchor. The line should be at right angles to the wind.

Confirm that the dinghy marks are laid in the correct positions.

Fly the club burgee on the side of the wheelhouse roof furthest from the line.

Mount your chosen course number (25-48) for the Keelboats on the committee boat's display board.

Follow the start sequence tables for Points Races (see 4.6).

Start 2 timers for the Keelboats. Start 2 timers for Dinghy sequence – the second timer is in case of failure of the first, and to give to a RIB if needed to shorten at a mark.

\*If no Slow Handicap dinghies appear you may omit the final sequence



## 4.4 Start Sequence - General Handicap Series

Time (nominal)	1st Timer Mins	Flags UP	Flags DOWN	Action	Why?	Start
13.55	-5			Start Timers	Got to start somewhere!	
13.56	-4	Orange Flag		Horn	Time Warning	
13.57	-3	NP1		Horn	Class Warning	
13.58	-2	P		Horn	Prep. Signal	
13.59	-1		P	Horn (long toot)	1 min. Warning	
14.00	0		NP1	Horn	Class Start	All Keelboats
14.03	+3	NP2		Horn	Class Warning	
14.04	+4	P		Horn	Prep. Signal	
14.05	+5		P	Horn (long toot)	1 min. Warning	
14.06	+6	NP3*	NP2	Horn	Class Start	All FH/MH Dinghies/FFs
14.07	+7	P*		Horn*	Prep. Signal	
14.08	+8		P*	Horn (long toot)*	1 min. Warning	
14.09	+9		NP3*	Horn*	Class Start	SH Dinghies
After last boat has crossed start line			Orange Flag to remain up for finish.		RO remains at M for dinghy/FF finish and second race. Keelboats also finish at M.	

**\*The starting sequence for the second General Handicap race is the same as for the second Points race (see 4.7 below).**

**\*If no Slow Handicap dinghies appear for a GH race you may omit the final sequence.**

**It is convenient to start Timers at -5 minutes as there is no other action at that time. Set 1 timer for KBs at -5 mins., and 2 for Dinghy/FFs at -11 mins.**



## 4.5 Start Sequence - Islands Races

Time (nominal)	1st Timer Mins	Flags UP	Flags DOWN	Action	Why?	Start
13.55	-5			Start Timer	Got to start somewhere!	
13.56	-4	Orange Flag		Horn	Time Warning	
13.57	-3	NP1		Horn	Class Warning	
13.58	-2	P		Horn	Prep. Signal	
13.59	-1		P	Horn (long toot)	1 min. Warning	
14.00	0		NP1	Horn	Class Start	Keelboat
14.03	+3	NP2/3/4		Horn	Class Warning	
14.04	+4	P		Horn	Prep. Signal	
14.05	+5		P	Horn (long toot)	1 min. Warning	
14.06	+6		NP2/3/4	Horn	Class Start	MH/FH Dinghies and FFs
After last boat has crossed start line			Orange Flag Down		No longer on station as Start Boat. RO makes way to Race Office to finish boats	

**\*NB.** For the Islands races there is no Slow Handicap class.

It is convenient to start Timers at -5 minutes as there is no other action at that time. Set 1 timer for KBs at -5 mins., and 2 for Dinghy/FFs at -11 mins.





## 4.6 Start Sequence - Points Races

Time (nominal)	1st Timer Mins	Flags UP	Flags DOWN	Action	Why?	Start
13.55	-5			Start Timers	Got to start somewhere!	
13.56	-4	Orange Flag		Horn	Time Warning	
13.57	-3	NP1		Horn	Class Warning	
13.58	-2	P		Horn	Prep. Signal	
13.59	-1		P	Horn (long toot)	1 min. Warning	
14.00	0		NP1	Horn	Class Start	Keelboat + maybe FF
14.03	+3	NP2/3/4		Horn	Class Warning	
14.04	+4	P		Horn	Prep. Signal	
14.05	+5		P	Horn (long toot)	1 min. Warning	
14.06	+6	NP5*	NP2/3/4	Horn	Class Start	FH/MH Dinghies and FFs
14.07*	+7	P*		Horn	Prep. Signal	
14.08*	+8		P*	Horn (long toot)	1 min. Warning	
14.09*	+9		NP5*	Horn	Class Start	SH Dinghies
After last boat has crossed start line			Orange Flag to remain up for finish.		RO remains at M for dinghy/FF finish and second & third races. Keelboats also finish at M.	

**\*If no Slow Handicap dinghies appear for a Points race you may omit the final sequence.**

**It is convenient to start Timers at -5 minutes as there is no other action at that time. Set 2 timer for KBs at -5 mins., and 2 for Dinghy/FFs at -11 mins.**

**See 4.7 below for start sequence for second and third dinghy/FF races.**



## 4.7 Start Sequence for 2<sup>nd</sup> and 3<sup>rd</sup> Dinghy/FF GH & Points Races

**Note: For GH races use NP2 and NP3 (2 races). For Series and Race Weekends use NP2/3/4 and NP6 (3 races).**

Time (nominal)	Timer Mins	Flags UP	Flags DOWN	Action	Why?	Start
			Orange Flag down after last boat has finished previous race		Prior to Orange up at -4 mins.	
	-5			Start Timer	Got to start somewhere!	
	-4	Orange Flag		Horn	Time Warning	
	-3	NP2 or 2/3/4		Horn	Class Warning	
	-2	P		Horn	Prep. Signal	
	-1		P	Horn (long toot)	1 min. Warning	
	0	NP2 or NP5*	NP2 or 2/3/4	Horn	Class Start	Dinghy/FF
*	+1	P*		Horn	Prep. Signal	
*	+2		P*	Horn (long toot)	1 min. Warning	
*	+3		NP3 or NP5*	Horn	Class Start	SH Dinghies
After last boat has crossed start line			Orange Flag to remain up for finish.		RO remains at M to finish all boats.	

**\*If no Slow Handicap dinghies appear for a Points race you may omit the final sequence.**

**# For GH and Points races keelboats finish at M.**

**It is convenient to start Timers at -5 minutes as there is no other action at that time. Set 2 timer at -5 mins.**



## 4.8 Start Sequence - Lomond Isles

Time (nominal)	1st Timer Mins	Flags UP	Flags DOWN	Action	Why?	Start
12.55	-5			Start Timer	Got to start somewhere!	
12.56	-4	Orange Flag		Horn	Time Warning	
12.57	-3	NP1		Horn	Class Warning	
12.58	-2	P		Horn	Prep. Signal	
12.59	-1		P	Horn (long toot)	1 min. Warning	
13.00	0		NP1	Horn	Class Start	All Keelboats
13.03	+3	NP2		Horn	Class Warning	
13.04	+4	P		Horn	Prep. Signal	
13.05	+5		P	Horn (long toot)	1 min. Warning	
13.06	+6		NP2	Horn	Class Start	All FH/MH Dinghies/FF
After last boat has crossed start line			Orange Flag Down		No longer on station as Start Boat. RO makes way to Race Office to finish boats.	

**\*NB. For the Lomond Isles there is no Slow Handicap class.**

**It is convenient to start Timers at -5 minutes as there is no other action at that time. Set 1 timer for KBs at -5 mins., and 2 for Dinghy/FFs at -11 mins.**



## 5 Recalls, postponements and abandonments, changes of course.

**Individual recalls.** Premature starters will be notified by the display of Flag X accompanied by one sound. The flag should be removed when the last premature starter returns to the pre-start side of the line *or at the 1 minute signal for the next race* (whichever is sooner).

A general recall is only needed if premature starters cannot be identified or there was a fatal fault in the start sequence. It is signalled by the First Substitute and two sounds. Recalled Classes will start at 3-minute intervals 3 minutes after the last scheduled start and in their original order.

To postpone races not yet started, display the Answering Pennant (Flag AP) and give two sounds. At the end of the postponement give one sound and remove the Answering Pennant. The sequence recommences one minute later with the Warning Signal (Class Flag) at –3 minutes. If not already displayed, Orange flag is displayed at the same time as AP is removed.

To change the course from the committee boat before the start, postpone the race as above but give five short hoots, change the course number on the side of the committee boat and start the race after removing the AP as above. If not already displayed, Orange flag is displayed at the same time as AP is removed.

To abandon the current race after the start and prepare for a new start shortly, display flag N (with class flags as appropriate) and give three sounds. This instructs the selected classes that the race is abandoned and will be re-started. Lower flag N with one sound signal 1 minute before commencing the countdown sequence with the Warning Signal (Class flag) at –3 minutes.

To abandon current racing and give further signals ashore, display flag N over flag H and give three sounds. This instructs all vessels racing and waiting to start that racing is abandoned meantime and further signals will be made ashore.

In the event of abandonment, safety cover **must** be maintained until all boats are safely ashore.

To abandon racing for the day display N over A with three sounds.

In the event of abandonment, safety cover **must** be maintained until all boats are safely ashore and all crews ashore from keelboats on moorings.

To abandon a race for 1 class only display N over class flag required with three sounds.

## 6 Monitoring the race

**Safety is the paramount consideration.** You must continuously monitor all fleets for actual or potential safety problems and ensure that your safety cover is effectively deployed.

If safety problems arise you must ensure that they are effectively dealt with. ***Remember that safety of crews takes ABSOLUTE precedence over recovery of boats.***



Regularly assess each fleet's progress and the changing weather conditions. Evaluate the desirability of shortening course and identify places where this is practical. Generally an Islands race should be shortened at a point close to the club to allow ease of returning to moorings/the shore. Courses have been designed to provide suitable shortening points.

**Remember: Points and General Handicap courses for Dinghies and FFs by their nature MUST be shortened.**

## 7 Finishing

### 7.1 Full course

For General Handicap races, all boats finish through the Gate at Mark M.

For Islands races, all boats finish at the shore finishing line between the club mast and Mark A. The Fast Handicap class sails an extra loop as shown on the Dinghy and FF Islands Course Chart: if RO wants to shorten them to finish at Gate first time, then course must be shortened as below. If Shorten Course signal is not made, RO must **NOT** make any sound signals when FH boats pass through Gate first time.

For Points races, all boats finish through the Gate at Mark M.

The Dinghy/FF GH and Dinghy/FF Points courses must be shortened as there is no defined number of laps.

As each boat finishes, sound the horn and record its number and time on the Signing-on sheet or a Lap Record Sheet provided in the Race Office. These sheets should be used for all boats finishing and a time for each must be recorded (Flying Fifteen).

### 7.2 Shortening the race

Remember that handicap fleets often contain a wide range of boat speeds.

Competitors well behind on the water may be ahead on handicap. Nothing irritates competitors more than races in which half the fleet doesn't finish - especially when non-finishers were potential winners.

It is important to anticipate the need for a "shorten course" by timing the boats **mid-fleet** rather than the leader.

*If in doubt, shorten sooner rather than later.*



## 7.2.1 General Handicap Dinghies and FFs

### 7.2.1.1 When to shorten

All races **must be shortened** as there is no defined number of laps. All races **must finish at M** so that complete rounds can be timed for all competitors for Average Lap calculations. Finish times are taken by the Race Officer and ARO.

The target race time is 40 minutes for the first boat, so races should be finished at around 40 minutes. The last boat **must** be finished within 60 minutes.

### 7.2.1.2 How to shorten

Orange flag should have remained displayed after the starts. If it has been lowered display it, preferably as first boat in first class being shortened rounds the 2<sup>nd</sup> last mark.

Display Flag “S” and make two sound signals, preferably just after the first boat rounds the last (leeward) mark.

As each boat finishes, sound the horn and record its number and time on the Signing-on sheet or a Lap Record Sheet provided in the Race Office. These sheets should be used for all boats finishing and a time for each must be recorded.

## 7.2.2 General Handicap Keelboats.

The courses are shorter than Islands courses and should normally be finished at M. In light winds, if the race needs to be shortened, this can be done at a mark on the course (using the Gate at approx. 2/3 distance or the shore finishing line at A is often convenient). Unless shortening at the gate, shortening keelboats should be done by the Secondary Rib. Secondary RIB must be equipped with Flag S and a **must have horn/whistle** to make sound signals.

**The time limit for these races is 2hrs 15minutes for the first boat and 2hrs 45minutes for the remainder.**

To shorten at the Gate, see 7.2.3.2.

To shorten at a Mark:

Select an appropriate mark and deploy Secondary RIB to it.

The RIB must set a finish line. Anchor in a position providing:

as short a finish line as possible (e.g. 50m), to provide as fair a finish as possible.

a finish line perpendicular to course from the last mark

finishing vessel to **outside** of course

Two sounds should be made as the first boat approaches and Flag “S” displayed.

As each boat finishes, make a sound signal and record its number and time on the Signing-on sheet or a Lap Record Sheet. These sheets should be used for all boats finishing and a time for each must be recorded.



## 7.2.3 Dinghy Points

### 7.2.3.1 When to shorten

The Dinghy Points courses **must always be shortened** as there is no defined number of laps. The race should normally be shortened at M with finish times taken by the Race Officer. However, if this is not possible, for example due to low wind, then a RIB should be used to shorten the race at another mark. **Note that all Fast Handicap races must finish at M** so that complete rounds can be timed for all competitors for Average Lap calculations.

**The Dinghy/FF races have a target race time of 40 minutes for the first boat and 60 minutes for the last boat.** Remember to anticipate the need for a “shorten course” by timing the boats mid-fleet as well as the leader.

### 7.2.3.2 To shorten course at the Gate (normal):

Orange flag should have remained displayed after the starts. If it has been lowered display it, preferably as first boat in first class being shortened rounds the 2<sup>nd</sup> last mark.  
Display Flag “S” and sound two horns, preferably just after the first boat in each class being shortened rounds the last (leeward) mark.

If this is not possible, for example, due to low wind or time limit concern, then the race may be shortened at any of the three marks of the course. **Remember that all Fast Handicap races must finish at M** so that complete rounds can be timed for all competitors for Average Lap calculations.

### 7.2.3.3 To shorten course at another mark:

Select an appropriate mark and deploy a RIB to it. RIB must be equipped with Flag S and **must have horn/whistle** to make sound signals.

The finishing vessel must set a finish line. Anchor in a position providing:  
as short a finish line as possible (e.g. 50m), to provide as fair a finish as possible.  
a finish line perpendicular to course from the last mark  
finishing vessel to **outside** of course

Two sounds should be made as the first boat in each class approaches and Flag “S” and the class flag displayed. (If all classes are being shortened the class flags may be omitted).

As each boat finishes, make a sound signal and record its number and time on the Signing-on sheet or a Lap Record Sheet. These sheets should be used for all boats finishing and a time for each must be recorded.

## 7.2.4 All Other Races

### 7.2.4.1 When to shorten

Races often need to be shortened, to ensure that the race is of an appropriate duration. Courses are designed for ideal wind conditions, which don't normally occur. For Island races, keelboats have a time limit of 2½ hours for first boat and 3 hrs 45 minutes for the remainder, dinghies have a time limit of 3 hours for the first boat and 3hrs 45mins for the remainder. The Race Officer is responsible for the decision whether to shorten the race.



## 7.2.4.2 Where to shorten

Where possible, shorten the course at, or close to, the club. Depending on the fleet and course, consider:

GH courses frequently pass A, giving plentiful opportunities for shortening from the Clubhouse. Keelboat courses are designed to take the fleet over large areas of the loch and to avoid short legs. Thus these courses tend not to pass A. However, the courses have still been designed to provide convenient shortening options, for example at marks N, L, or C.

Island courses are often the most difficult to select an appropriate shortening point. Try to anticipate the need to shorten, and use a small island or obvious headland, pier etc on a larger island. Try also to shorten fairly close to the club if possible.

**NOTE THAT YOU CAN ONLY SHORTEN AT A MARK OF THE COURSE, WHICH MAY BE A FIXED RACING MARK OR AN ISLAND, BUT MUST BE SPECIFIED ON THE COURSE CHART.**

## 7.2.4.3 How to shorten

### **To shorten course at mark A from the Clubhouse:**

Display the large Flag “S” board and the class flags on the wire in front of the Clubhouse. You can also display Flag “S” from the club mast, which is beneficial to sailors if approaching the finish from the north.

Sound two horns as the first boat in each class being shortened comes into sight approaching the finish line.

As each boat finishes, make a sound signal and record its number and time on the Signing-on sheet or a Lap Record Sheet. These sheets should be used for all boats finishing and a time for each must be recorded.

### **To shorten course at another mark:**

As for Section 0 – “To Shorten at Another Mark”.

If it is necessary to shorten part way round an island, try to pick an obvious landmark on the island, e.g. a pier or prominent point, and anchor perpendicular to the shore giving as short a line as possible, say 50 – 100 metres. The island selected **MUST** be a mark of the course, and the finishing line set should be at right angles to the course.

Remember that boats will spread out on an Islands course. Be careful not to penalise either side of the course!

Otherwise finish as for Section 0– “To Shorten at Another Mark.”

# 8 Results

## 8.1 Recording

As each boat finishes, sound the horn and record its number and time on Lap Record sheets provided in the Race Office. This sheet should be used for all boats finishing and a time for each





must be recorded including Flying Fifteens (Flying Fifteens give allowance to older Silver and Classic boats, even during fleet racing).

When time permits, transcribe the finishing times to the appropriate Signing-in/Results sheet. This is usually done ashore after racing.

Fill the start time for each race onto the results sheet and calculate the elapsed time for each boat by deducting the start time for its race from its individual finish time if appropriate.

Use the PY Calculator on the Race Office PC and print the results

or

Calculate the corrected time as described below:

## 8.2 Finding the Corrected Time by Calculator

$$\text{Corrected Time} = \text{Elapsed time} \times 1000 / \text{PN}$$

The calculator performs calculations with elapsed time entered as hours, minutes and seconds.

Use a calculator with  $\boxed{D^{\circ}M'S}$  function:

Divide the elapsed time by the Portsmouth Number and multiply it by 1000, the normal base number.

EXAMPLE Elapsed time 2 hour 15 min and 32sec Find corrected time for PY=919.

### PROCEDURE

2  $\boxed{DMS}$  15  $\boxed{DMS}$  32  $\boxed{DMS}$

÷919

x 1000

=

### REGISTER DISPLAY

2°15'32.00

(elapsed time in hours)

(CHECK YOUR INPUT IS CORRECT)

919

(Portsmouth Number)

1000

(Base number)

2°27'28.75

(Corrected time)

Round off seconds to a whole number: 2h 27m 29s.

Determine the race placings and write them on the Signing-in/Results sheet and place on the table outside the Race Office. This should be your first priority and should be done quickly, remember you are also responsible for organising the cleaning up as well.

### 8.2.1 Calculating results for General Handicap and Fast Handicap Points Average Lap racing:

$$\text{Corrected Time/Lap} = \frac{\text{Elapsed Time} \times 1000}{\text{Actual Laps} \times \text{Portsmouth Number}}$$

where Actual Laps is the actual number of laps sailed by each boat.



Calculate Average Time per Lap = Elapsed Time / Actual Laps

Calculate Corrected Time per Lap as at 9.2 above.

For Example:

A Topper completes 3 laps in 34 minutes.

A 505 completes 5 laps in 40 minutes.

Topper's Elapsed time per lap	= 34 x 60 / 3 = 680 seconds
Topper's Corrected Time per Lap	= Elapsed Time per Lap x 1000 / PN
	= 680 x 1000 / 1313 = 518 seconds (8 min. 38 sec.)
505's Elapsed Time per Lap	= 40 x 60 / 5 = 480 seconds
505's Corrected Time per lap	= 480 x 1000 / 902 = 532 seconds (8 min. 52 sec.)

### **Boats with same PN but different number of laps.**

If the wind is dying it is possible for a boat which sails more laps than another of the same PN to have a worse corrected time due to its slow last lap. In this case a modifying calculation should be applied to any boat which has sailed fewer laps as follows:

Modified time = Corrected time x Multiplier

Multiplier =  $(T_S \times (L_F - 1)) / (T_1 \times L_F)$

Where  $L_F$  is the number of Laps completed by the fastest boat in the group with the same PN,  $T_S$  is the Elapsed Time of the slowest boat in the group to complete  $L_F$  laps, and  $T_1$  is the Elapsed Time of the first boat to be finished in that race. The Multiplier will be greater than 1.

NB this is only applied to a group of boats with the same PN where one or more have been affected by sailing differing number of laps and the corrected times do not reflect a fair outcome.

If confused, seek advice!

## **8.3 Results by Sailwave**

Feed the results straight into Sailwave on the PC in the Race Office and copy the results back on to the results sheets.

If unsure about result calculation procedure, please find a member or the Sailing Committee or experienced hand.

Write results on the Signing-in/Results sheet and place on the table outside the Race Office. This should be your first priority and should be done quickly so that competitors can see their results before they leave the club. Remember you are also responsible for organising the cleaning up as well.



## 9 Protests

Protests must be lodged, on the appropriate form available from the cabinet outside the Race Office, within half an hour of the last boat coming ashore.

On receipt of a Protest Form you should check that the form contains the protestor's and protestee's names, the date, time and race concerned, and the rule alleged to have been infringed. Once you have received the written protest you should mark the results sheet for the race concerned 'subject to protest' and transmit the Protest to the Sailing Captain by hand if possible and mail if necessary.

## 10 After racing has finished

Make sure that safety craft helms note any defects or damage in the appropriate Log Book and inform the Bo'sun (Steve Leeper for Mory & Ceardach, Susie Edmond for RIBs) or the Sailing Captain.

Make sure that safety craft fuel cans are returned to the fuel store and are refilled.

### 10.1 Cleaning

When the racing is finished, the Race Team is also responsible for tidying the clubhouse and securing the club premises. The tea person is responsible for clearing away tea cups and leaving the kitchen area tidy, the tea towels to be washed and returned on next visit. It is the Race Officer's responsibility to ensure that the club premises are left secure, and to make sure the clubhouse including the Ladies and Gents toilets and changing rooms are left tidy. The contract cleaners will clean the toilet areas but members should keep these areas tidy and stocked with the necessary items such as toilet rolls, hand towels and soap etc.

### 10.2 Rubbish

At the end of the weekend all rubbish bins in the clubhouse are to be emptied into the wheelie bins, which should be taken up and left outside the gate in the designated area.

### 10.3 Security

It is the Race Officer's responsibility to ensure that ALL club equipment is properly stowed. If setting the burglar alarm, please ensure that you FIRMLY close each of the 5 internal doors.

At the end of the weekend, the Race Officer should ensure that remaining full members are aware that the last full member to leave is responsible for ensuring that the Clubhouse and all external stores and sheds are secured before leaving.



## 10.4 Radios, Flags & Pontoon Bridge

Radios should be switched off and portable sets put on charge in the Race Office.  
Take down Flags, club burgee and ensign.  
Raise and secure Pontoon Bridge (See separate instruction sheet).

## 11 And Finally!

At the end of your Duty Weekend:

Please remember that you are expected to be the **last** of the Duty Team to leave the Club and as a final check think:

Flags

Pontoon

Race Office

RIBs

Rubbish

and

Clubhouse security.

We hope you enjoyed the experience, please inform the Sailing Captain of anything that you feel may improve the lot of the RO in the future.

Thank you very much to you and your team on behalf of the members of the Club.