



Club Race Officers' Manual (For Sunday Club Racing)

Last Updated October 2009

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Race Management Guidelines for Club Race Officers (CROs)

Sunday series sailing - summary of the essentials

Before the day

Phone your race team members to make sure they are available and have remembered their duty. Tuesday is really the latest day to do this so that they and/or the office have time to find substitutes.

Since Thames Water has installed aerators, it takes much longer to set up the course than it used to. So, remind your team that they need to arrive by 0900 and that they need to bring life jackets and suitable clothing. You also need to be sure that the safety coxswain will have the safety boat on the water before 9:30.

Check whether there is an Open Meeting as well as club racing; if there is; phone the Open Meeting PRO to find out what arrangements have already been made.

You need to know how to handle the committee boats, their equipment and the radios.

Make sure that the contents of the Race Officer's box and the flag box are complete.

Prepare to bring with you provisions (water, thermals/sun cream) and a watch with a digital display.

On the day, in the clubroom

Introduce yourself to the OOD and ask for a weather forecast to be published and check the weather station is working. Meet the PRO of the open meeting (if any) and agree how to manage the racing comfortably.


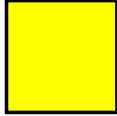
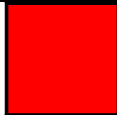
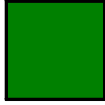
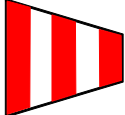

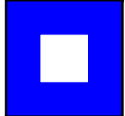
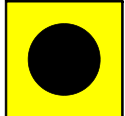


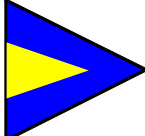
Meet the Safety Coxswain, talk about safety if necessary (the coxswain is responsible for safety). Agree the correct flags for the flag pole and, if necessary, warn sailors what they mean. Allocate one of your team to help load the patrol boat with buoys, weights and their gear. They will be needed again at the end of racing to help to put away the buoys etc.

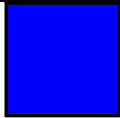
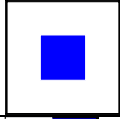
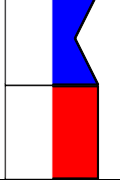
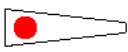





Prepare and post the signing on sheets on the notice board.

Set your race team to checking the race officer's box, flag crate and to the folder describing the start sequence/flags etc so that they know what is in them and can

find what they need on the water. If you are using OSMO make sure you have a horn with you.

	<h1 style="margin: 0;">Datchet Water</h1> <p style="margin: 0; font-size: small;">Sailing Club</p>
Sunday Racing Flag set	

<i>Slot number</i>	<i>Flag image</i>	<i>Flag meaning</i>
1		Club burgee
2		On station at start
3	 	Red – leave marks to port Green – leave marks to starboard
4		Postponement (flag AP)
5		Abandon (flag N)
6		Preparatory signal (flag P)
7		Round the ends starting penalty (Flag I)
8		Black flag starting penalty
9		Individual recall (flag X)
10		General recall (flag 1 st substitute)

11		On station at finish (all blue flag)
12		Shorten course (flag S)
13		Flag A Flag H
Start sequence flags		
14		Start 1 (Numeral 1 flag) Laser 1, Radial, 4.7, Byte
15		Start 2 (Numeral 2 flag) <i>Flying Fifteen</i>
16		Start 3 (Numeral 3 flag) Dinghies with a PY less than 1099 and a symmetric spinnaker or no spinnaker (e.g. Wayfarer, Fireball & Contender)
17		Start 4 (Numeral 4 flag) Asymmetric spinnaker Dinghies with a PY less than 1099 (e.g. RS 500, RS 400, RS 200, RS 700, RS 800, 49er, Laser 2000)
18		Start 5 (Numeral 5 flag) <i>Catamaran H/C</i>
19		Start 6 (Numeral 6 flag) Youth sailors and Dinghies with a PY greater than 1099

Getting afloat

Get afloat and off to the committee boat by 09:40 - it takes a long time, particularly if there is an open meeting, to get everything in order for the start of the sequence at 10:20. Take the committee boat ignition key (and for OSMO the electric isolator key) with you! Also, take a hand held radio (more useful than having to go into the cabin to use the fixed radio), a hand horn and the dictaphone. See Appendix 1 for details of operation for Lilibet and Appendix 2 for OSMO.

Setting up the course

Check the wind and decide on your course. Shackle the committee boat to one of the yellow buoys around the circumference of the reservoir. If you expect to have to delay the start sequence, use the postponement flag. (See Appendix 5)

With the coxswain, set up the start/ finishing line and put the course marks in position. (See Appendix 3 and the Sailing Instructions for start and finish line, course and buoy details). Setting up the course can take a long time if there is some wind because the coxswain has a lot to do and may be interrupted by having to rescue sailors in trouble.

Preparing for the racing

Start the on board computer and synchronise your watch with it. It times the start sequence for you, warning of each sound signal/ flag movement in plenty of time and counting down. Very useful. (See Appendix 4 for the computer operating instructions)

Discuss with your team the race management sequence and decide who does what. Tasks: time keeping, recording, and someone to call attention to anything that needs your attention - CROs often have to do 2/3 things at once.

Bend on the start sequence flags for the first start and have the 2nd, 3rd, 4th, 5th and 6th start flags ready (See the sheet depicting the start sequence and the flags in Appendix 6). Also, bend on the individual recall and general recall flags (see Appendix 7)

Managing the racing

Record the time at which you begin the start sequence in 24 hour notation.

Carry out the start sequence.

Record the order of boats, start by start, as they round the leeward mark.

You can keep track of what is going on and it can be useful when finishing knowing which boat to expect next – and to know that you have not missed one – or that you have!

During the race, you may need to shorten the course either to end racing when the wind is increasing or to finish before it dies away altogether or because you started very late or even because boats are becoming widely separated (which leads to complaints about a long wait for the start of the second race). See Appendix 8 for the shorten course procedure. You may also be faced with abandoning the race – see Appendix 8.

Prepare the finishing line by lowering the starting flag and replacing it with the finishing flag.

As boats finish, sound the horn briefly and record the order of finishing (class and full sail number), **together with the finishing time of each boat in real time using 24hr clock notation**) on paper. In most circumstance it should be possible to note the full sail number of each boat – if not please remember that Sailwave recognises numbers from the front so leave out the last digits if necessary. If using the computer it records the actual time every time you sound the horn. Speak it all into a dictaphone – very useful later if there is any confusion or challenge from sailors. Make a continuous record – the computer software on shore sorts out which boat belongs to which start.

Coming off the water

Make a fair copy of the finishing order and immediately post it on the race notice board. Hand the master copy of the race records and the dictaphone to the person entering your finish records into the results program. If necessary, please help with interpreting your records.

Other responsibilities of the Race Officer

Race team members, particularly first timers, learn a great deal about sailing as well as race management.

A key part of the race officer's role is to train future race officers.

Guidance on Combining Starts

On Sundays when there is a low attendance the Race Officer can at his own discretion combine starts to shorten the overall start sequence. The committee recommendations for this are

1. If there are 3 or less boats on Start 2 (Flying Fifteen) AND 3 or less boats on Start 3 (fast handicap) these two starts can be combined. If the Flying Fifteens get 3 or more boats on the water the fleet is keen to retain their own start and the Committee wish to support this. The procedure for doing this is to hoist start flags 2 and 3 simultaneously.
2. If there are 3 or less boats on Start 5 (Cats) this can be combined with Start 4 (Asymmetrics). The procedure for doing this is to hoist both start flags 4 and 5 simultaneously.

As far as the results are concerned and the application of any rules the starts will technically remain separate even though they are started simultaneously. Combining starts in this way is purely a recommendation and is totally at the discretion of the Race Officer on the day.

Appendix 1 – Lilibet (call sign “Lilibet”)

Switch the electrics on. The electrical isolators on Lilibet are below the helm’s seat. To switch-on the electrics turn the two isolators through 90 degrees. (Vertical on)



Off



On

Switch the radio on and set to channel M (it defaults to channel 16) and establish communication with the Safety Boat Coxswain (call sign “Safety 1” and the Club Office (call sign “Base”). The radio on Lilibet sits just under the steering wheel.



Radio

The radio usually comes on when you switch on the electric isolators. If it doesn't, put the radio switch on the control panel to the right of the steering wheel to the on position.

The LCD display should be showing an M. If the display is showing anything else use the rotary knob on the front of the radio until an M only is showing.



It is easy, unfortunately, to change channel when you hold the microphone in your hand, so if you are unable to contact Datchet Base or the patrol boat, check that the radio display is showing an M only.

Call the Duty Safety Coxswain (press the button on the side and speak; when you have finished speaking, release the button on the side of the microphone). The club radio call signs are listed in Appendix 3, but the two key call signs are: Datchet Base – the club office and Safety One – the duty patrol boat coxswain.

If you are going to be using the on-board computer system you need to insert an isolator key, which is usually kept in the ‘pocket’ just behind the throttle lever, and turn it 90 degrees.



Starting Engines

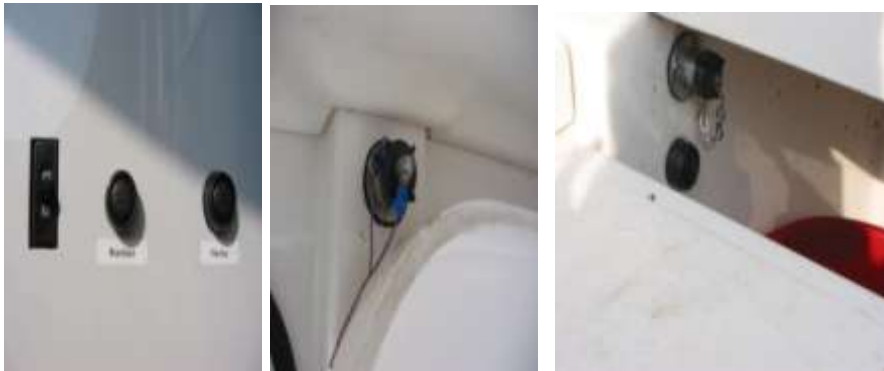
One lever controls the throttle & gearbox. To engage neutral, pull it to port and push forward a bit for some engine speed. Pull up the black T-handle to engage the choke. Turn the ignition key to the first key position and wait for the red light to go out. (Pre ignition heaters) then turn ignition key – using short bursts – until the engine starts. Warm up a bit.



Cleaning

Lillibet has an on-board deck wash pump; this helps with cleaning the bird droppings off the boat. The switch labelled 'Deck Wash' on the console at the side of the steering wheel starts the pump. It is best to prime the pump with out the hose being attached **BUT**, the pump fires a jet of water into the cabin if the door is open! The hose can be used with either a pistol jet or a brush with a hollow handle.

Horns



There are 3 horn points permanently installed on Lillibet, one in the cabin, one above the cabin door and one on the transom. There is a horn extension lead to plug into one of them. If you are using the rear mast as one end of the start/finish line – the usual option – use the one on the transom. Check that they are working.

Leaving the Mooring

Before leaving the mooring please note which mooring the boat you are using is attached to and return to it the end of your duty.

When moving slowly forward, steer to bring the mooring buoy down the Starboard side, unhook the mooring warps and attach them to the rope stop on the starboard side. Do not allow one of the team to go forward and lean out over the guard rail to unhook.

Appendix 2 – OSMO

The electrics isolator is on the starboard side at the rear of the cockpit and a rubber cap usually covers the opening. To switch-on insert the red isolator and turn through 90 degrees.

Insert photograph of OSMO console here

Starting the engine

To engage neutral press down till the lever is horizontal and pull sideways to port. Push it down a bit for some engine speed and pull out the choke (black T-handle). Turn the ignition key – using short bursts – until the engine starts and warm it up a bit.

Cleaning

Unfortunately, OSMO does not have an on-board deck wash pump. So it is down to a bucket over the side and the brush.

Horns

The horns are not permanently installed on OSMO. Electric air horns are kept in the club office and are attached to a black plastic box. Inside the box are a battery, the compressor, the electrical connections and a coiled lead with a button at the end.

Attach the box to the roof by a strap just in front of the mast. Attach the lead to the socket on the side of the box. Turn on the switch on the side of the box; it will show a light when switched on.

Rudder

Fit the rudder!

Moving off

Move forward to bring the mooring buoy down the port side, undo the mooring warps and attach them to the shroud wire just aft of the cuddy on the port side.

Appendix 3 – Start line, courses and buoys

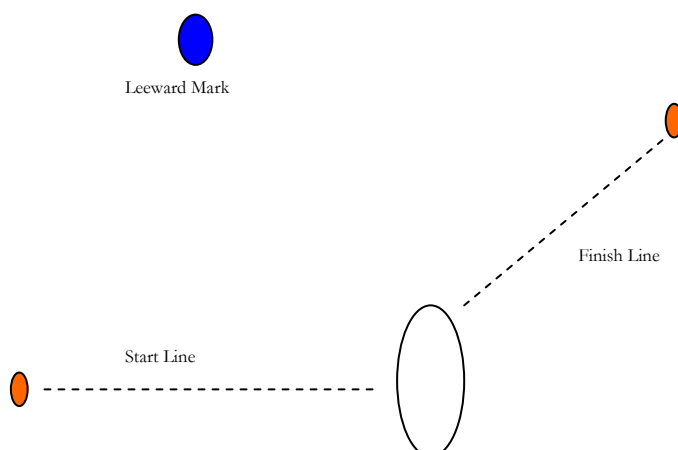
Start lines

How long should the start line be? You probably won't know how many entries there will be for each start when you set up the line. Recent race records suggest that you should allow for space on the line for 15 lasers. If all the boats on a start arranged end to end will fit within the start line, you probably have it right. A slight port bias is recommended.

Courses and buoys

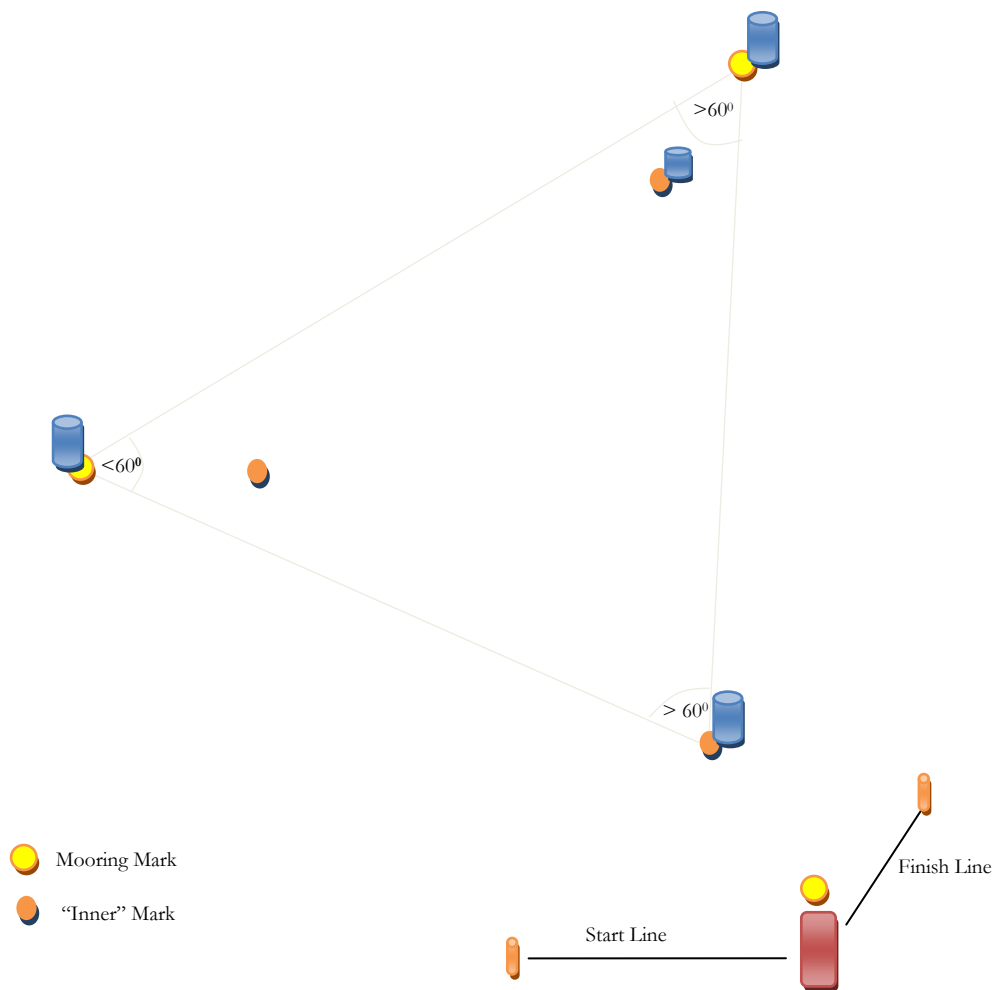
All boats sail triangles or windward/leeward courses or some combination of the two, so three rounding marks are always needed. Around the rim of the reservoir are some small yellow buoys to which you can attach the committee boat and the outer course rounding marks. (See the map in Appendix 4: Recommended Courses) The course rounding marks are blue upright cylinders. **For the windward buoy you also need an inner mark for the lasers only;** it is a dumpy – also blue and you attach it to a convenient red buoy. All classes use the same windward and leeward marks. You can attach the leeward mark to any convenient yellow or red buoy. The coxswain attaches the marks for you.

Having chosen the yellow marks for the committee boat and windward buoys you can set up the start line and finish lines. The diagram below shows roughly where the start and finish lines might be in relation to the leeward mark. The position of your committee boat is fixed on the permanent yellow buoy so you have to guide the coxswain to position the outer end marks which are tall slim bright orange buoys without a flag.

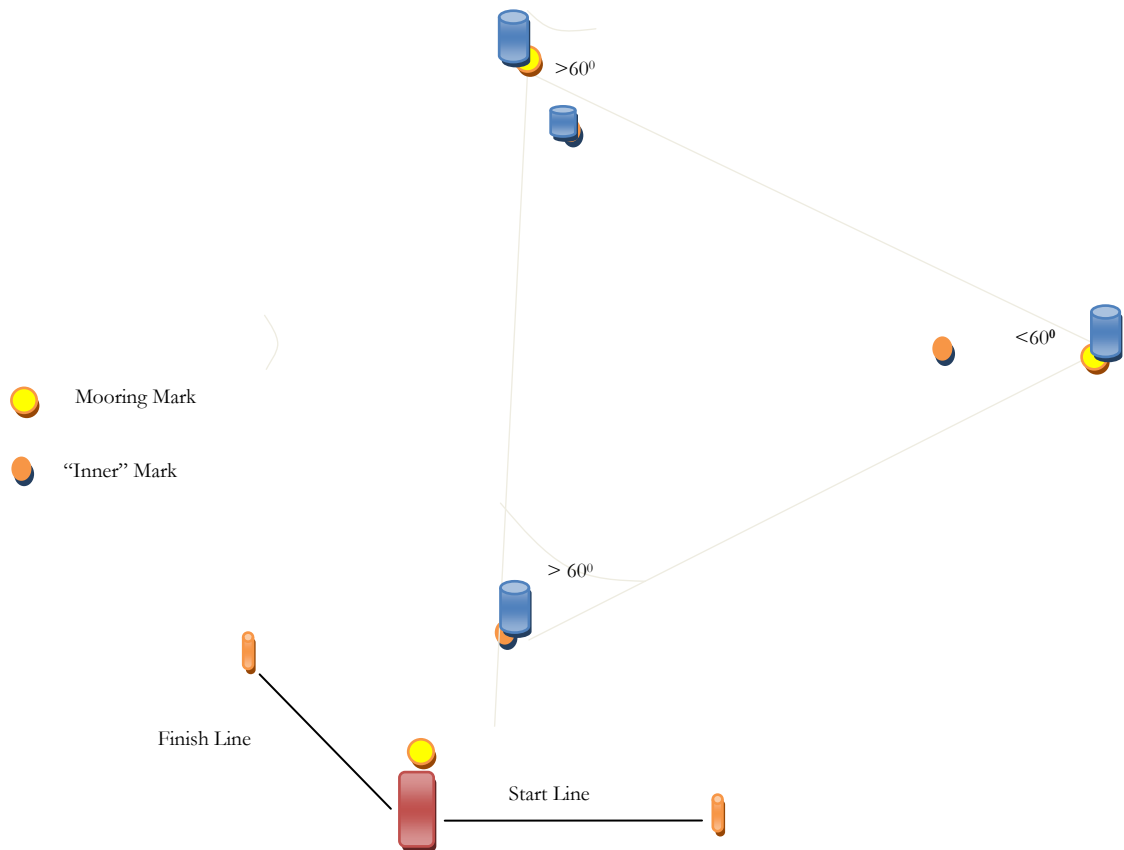


When finishing, boats must round the leeward mark before going through the finish line.

The diagram below illustrates the standard course configuration and includes the recommended angles of the reaching legs. It can be set for a starboard hand course by changing the position of the dumpy mark and reversing the positions of the start and finish line (as shown in the second diagram). If a suitable set of fixed marks cannot be found for clipping on the inflatable buoys it is possible to position these inflatable marks anywhere on the reservoir by using weighted bags. This is recommended when you want to reduce the size of the course in light winds or when you are restricted in space due to an open meeting.



Schematic of course (Port Hand Rounding)



Schematic of course (Starboard Hand Rounding)

Course flags and the lap board

You need to fly the yellow start line flag on the after mast of the committee boat. The club burgee goes on the after halyard and the red or green (for port or starboard hand courses) go on the rear mast halyard. No other course flags are needed.

On the lap board show the number of laps for each start – normally: start 1-3; start 2-3; start 3-3; start 4-3; start 5-4; Start 6-2. If any slow handicap boats sign on they are start 6 and normally do 2 laps. These lap numbers are for middle range wind speeds and you will need to change them if conditions require..

Appendix 4 – Recommended Courses

By reference to the table below, once the true wind bearing has been found either by the club wind direction gauge or by the wind vane, the course to be used is as suggested in the table. The positions of the marks are indicated on the chart on the following page.

Note. This is only a guide, and individual race officers should make their own decisions as appropriate on the day; not only with regard to the existing wind but also any forecast change, allowance for wind drift on the marks and any ‘gut feeling’ you may have! Club courses will need to be varied when there is an open meeting in order to fit into the available space.

Approximate Direction of Wind	Approximate Bearing of Beat	Mooring Mark for Committee Boat	Hand (Rounding Direction)	Windward Mark	Small Buoy (Laser Windward Mark)	Wing Mark	Leeward Mark
N	10	R	Port	D	InD	L	InR
NNE	30	P	Port	H	InH	K	InP (Q)
NE	55	N	Starboard	D	InD	R	InL
ENE to E	70	K	Starboard	H	InH	P	InK
E to ESE	100	L	Port	R	InR	D	InL
SE	130	K	Port	P	InP	H	InP
S	170	D	Starboard	R	InR	L	InD
SSW	210	H	Starboard	P	InP (Q)	K	InH
SW	230	D	Port	L	InL	R	InD
WSW to W	255	H	Port	K	InK	P	InH
W to WNW	295	R	Starboard	K	InL	D	InR
NW	305	P	Starboard	K	InK	H	InP
NNW	355	Q	Starboard	J	InJ	G	R

Appendix 5 - Operating the on board computer

1. Switch on and bring up the Race Management Programme.

On the shelf on the right of the seat is a red key. Put it in the inverter under the seat and switch on. Windows 98 will appear – not at once – it isn't a fast chip. Wait until "The Prolog Race Management System" announces itself.

2. Create a new race log.

Click on "file" and then "New log sheet". It asks whether you want to delete the current log sheet "Yes". An empty log sheet appears.

3. Synchronise watches

You need the CRO's and the programme's watches to be synchronised. Click "Options" and then "Synchronise time" and use the dialogue box instructions to adjust the programme time.

4. Test count down

Click on "Options". Select "Test count down" and click and you will hear a 10 second count down on the loudspeaker.

5. Test guns

Go to "Options" and select "Test gun" and click and you will hear the horn sound. Now you know everything is working and you can:

6. Set up the race start schedule

Press F5. A dialogue box appears.

Set the time of the first gun – which will be either the time you want to bring down a postponement flag or the time you want the Start 1 warning flag to go up.

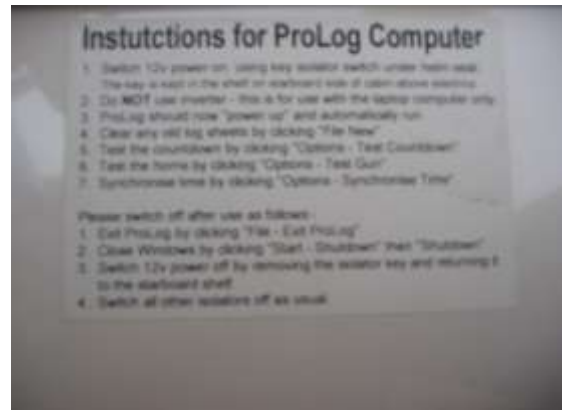
Select "Multiple start race sequence"

Select "Postponement flag" if you are using it

Select your preparatory flag – usually Flag P.

Accept the entries.

7. Your Schedule



The programme now reverts to the “Prolog Race Management System” (PRMS) but this time it shows, on the right, the start sequence you have specified. It may show the wrong number of starts. The default is 5. If you need to add/reduce the number of starts, press F5 again. A dialogue box asks you to add or reduce the number of starts. You can select where in the sequence to add a start and, if reducing, which start to eliminate. You need to be sure that (after you have finished your changes) the sequence shows the correct number of starts with the correct flags for each.

Accept your entries and the programme reverts to the PRMS and you can view your new sequence.

It shows the time the sequence will begin and the first action (it displays either lower the postponement flag or raise Start 1 warning flag) and, at 30 seconds before the first event, it starts the count down. It sounds the horn for you and you have to raise/lower flags. After each event it displays the next flag movement. This cycle repeats through to the end of the sequence.

8. Recording other events

If you see something you want to remember, click “silent gun” – F7. The computer will record the time and you can type in a reminder.

9. General recall

If you have a general recall, you will make 2 extra sound signals manually and you must tell the computer – press F6. A dialogue box asks you when you want to restart that fleet. Enter the order in the sequence and accept. It will insert the additional sequence for that start in the right place.

10. Abandon

To abandon all starts (or remaining starts) press F8. It warns you what it will do. Select "Yes". The screen then shows all events which have taken place so far and deletes those you have abandoned.

To restart a sequence, go back to the beginning (F5) and set up a new sequence as described in para 6 above.

11. The Finish

If you use Lilibet's own horns for the finish, the computer will record the time whenever you sound the horn. This can be very useful if you have a mass of boats finishing together – the human recorders don't need to record times as well as boat numbers.

Remember to save the results; they may be needed later.

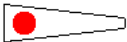
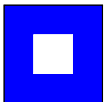



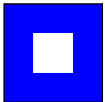
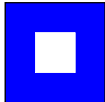


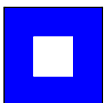



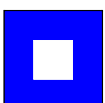
Don't forget to log off!

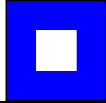


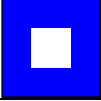
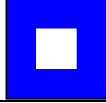


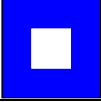
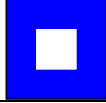

File – exit – and the usual Microsoft windows 98 procedure.

Switch off the inverter and put the key in the tray.

Appendix 6 – Start Sequence and flags

The attached sheet shows the flags, sound signals and timing of the standard start sequence.

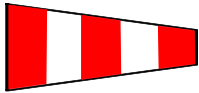
Time	Preparatory Flag Classes/Fleets	Hoist	Classes/Fleets Starting	Lower	Comments
0	Laser Start Laser 1, Radial, 4.7, Byte				
1	Preparatory				On separate halyards. Can use I, X or Black Flag
4	Preparatory Down				
5	Flying Fifteen Start		Laser Start Laser 1, Radial, 4.7, Byte		
6	Preparatory				
9	Preparatory Down				
10	Fast Handicap Start Dinghies with a PY less than 1099 and a symmetric spinnaker or no spinnaker (e.g. Wayfarer & Contender)		Flying Fifteen Start		
11	Preparatory				
14	Preparatory Down				
15	Asymmetric Start Asymmetric spinnaker Dinghies with a PY less than 1099 (e.g. RS 500, RS 400, RS 200, RS 700, RS 800, 49er, Laser 2000)		Fast Handicap Start Dinghies with a PY less than 1099 and a symmetric spinnaker or no spinnaker (e.g. Wayfarer & Contender)		
16	Preparatory				

19	Preparatory Down				
20	Catamaran Start		Asymmetric Start Asymmetric spinnaker Dinghies with a PY less than 1099 (e.g. RS 500, RS 400, RS 200, RS 700, RS 800, 49er, Laser 2000)		
21	Preparatory				
24	Preparatory Down				
25	Youth Start Youth sailors and Dinghies with a PY greater than 1099		Catamaran Start		
26	Preparatory				
29	Preparatory Down				
30			Youth Start Youth sailors and Dinghies with a PY greater than 1099		

Appendix 7 – Postponements

If you are not ready to start the sequence at the appointed time (usually 10:20), postpone.

Give 2 sound signals on the horn when you put up the postponement flag and sound the horn once when you lower it.



The start sequence begins one minute after the postponement flag comes down.

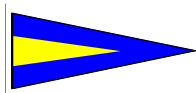
Appendix 8 – Individual and general recalls

If boats are over the line at the start (OCS = on course side) and you can identify all those which are, an individual recall is correct. Sound the horn once immediately, raise the individual recall flag and shout out the boat numbers.



The flag comes down as soon as all recalled boats have turned back or, at the latest, four minutes into the next start sequence. If a boat does not return and restart you mark the finishing sheet OCS which disqualifies it.

If boats are over the line at the start and you cannot identify them all, a general recall is correct. Immediately sound the horn twice and raise the general recall flag.



The flag comes down four minutes into the next start sequence.

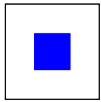
You can restart the recalled fleet at any time in the sequence – you are not required to do it at the end of the sequence. Note that a restart at the end of the sequence of, for example, start 1 is likely to lead to a shorten course for start one in order not to keep all the other starts waiting for the beginning of the second race.

Appendix 9 – Shorten course and Abandon racing

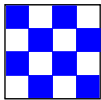
You can shorten courses for all boats or for any start.

For an all boat course shortening, you have to signal the shorten course as the lead boat of the fleet is approaching the leeward mark. Raise the shorten course flag (flag S), the “shape” and sound the horn twice.

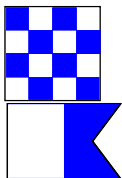
If you wish to shorten course for a single start the procedure is similar – do it as the leading boat of that start approaches the leeward mark, raise the flag and the “shape”, sound the horn and, in addition, raise the relevant start flag.



If you have to abandon the race, but anticipate restarting shortly, fly flag N and sound the horn three times. The sequence will restart 1 minute after flag comes down with 1 sound signal then send the patrol boat to tell the sailors what will happen next.



If you abandon racing for the day, fly flag N over A



Appendix 10: Instructions for use of Wind Vane

Take 3 wind bearings, from the front of the Committee Boat to avoid the effect of the windage from the superstructure (the boat should be stationary!). Take readings on at least 3 occasions over a 6 minute period.

Obtain the average of the readings obtained, this we will call the true wind bearing. With the Committee Boat at the starboard end of the start line or finish line subtract 90', 85' or 80' depending on the amount line bias required. For the Committee Boat at the Port end, add 90', 85' or 80'.

The tables reproduced here are for those who do not like maths or use the computer card attached to the lid of the Race Box.

To Use the Table

Obtain true wind bearing, look under main heading in relation to which end of the line the Committee Boat is anchored. Decide how much, and which end bias is required. Read off bearing in appropriate column in line with true wind bearing.

To Use Computer Card

Obtain true wind bearing. Move outer disc to the corresponding bearing, at the windward leg arrow (you have to place a zero on the figure shown on the disc). Now set the inner disc so that the mean (average) wind direction - inner disc, wind bearing (outer disc) and windward leg arrow are all aligned. Imagine you are on the Committee Boat in the centre of the disc. The bearing of the pin end will be shown at either end of the black horizontal starting line. For line bias, (+) indicates the pin end is favoured and (-) indicates the Committee Boat end is favoured.

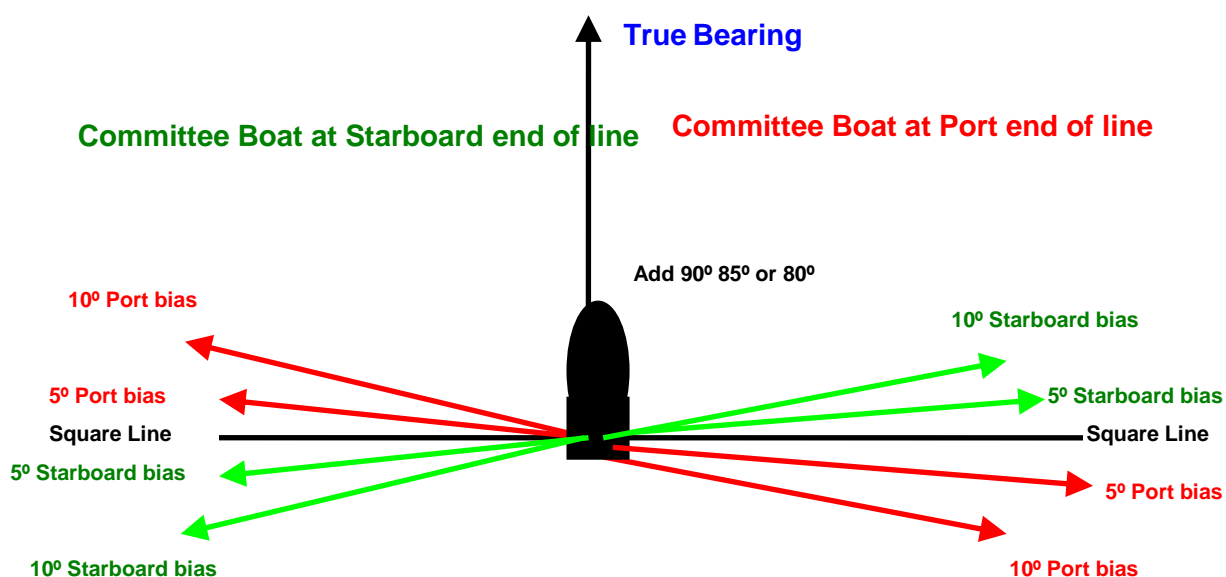


Table for use with Wind Vane & Compass

Committee Boat on <i>Starboard</i> end of Line											Committee Boat on <i>Port</i> end of Line			
5 Port Bias	10 Port Bias	5 Star'd Bias	10 Star'd Bias	Square	True Wind	Square	5 Star'd Bias	10 Star'd Bias	5 Port Bias	10 Port Bias				
275	280	265	260	270	000 N	90	85	80	95	100				
285	290	275	270	280	010	100	95	90	105	110				
295	300	285	280	290	020	110	105	100	115	120				
305	310	295	290	300	030	120	115	110	125	130				
315	320	305	300	310	040	130	125	120	135	140				
325	330	315	310	320	050	140	135	130	145	150				
335	340	325	320	330	060	150	145	140	155	160				
345	350	335	330	340	070	160	155	150	165	170				
355	360	345	340	350	080	170	165	160	175	180				
005	010	355	350	000/360	090 E	180	175	170	185	190				
015	020	005	000/360	010	100	190	185	180	195	200				
025	030	015	010	020	110	200	195	190	205	210				
035	040	025	020	030	120	210	205	200	215	220				
045	050	035	030	040	130	220	215	210	225	230				
055	060	045	040	050	140	230	225	220	235	240				
065	070	055	050	060	150	240	235	230	245	250				
075	080	065	060	070	160	250	245	240	255	260				
085	090	075	070	080	170	260	255	250	265	270				
095	100	085	080	090	180 S	270	265	260	275	280				
105	110	095	090	100	190	280	275	270	285	290				
115	120	105	100	110	200	290	285	280	295	300				
125	130	115	110	120	210	300	295	290	305	310				
135	140	125	120	130	220	310	305	300	315	320				
145	150	135	130	140	230	320	315	310	325	330				
155	160	145	140	150	240	330	325	320	335	340				
165	170	155	150	160	250	340	335	330	345	350				
175	180	165	160	170	260	350	345	340	355	000/360				
185	190	175	170	180	270 W	000/360	355	350	005	010				
195	200	185	180	190	280	010	005	000/360	015	020				
205	210	195	190	200	290	020	015	010	025	030				
215	220	205	200	210	300	030	025	020	035	040				
225	230	215	210	220	310	040	035	030	045	050				
235	240	225	220	230	320	050	045	040	055	060				
245	250	235	230	240	330	060	055	050	065	070				
255	260	245	240	250	340	070	065	060	075	080				
265	270	255	250	260	350	080	075	070	085	090				

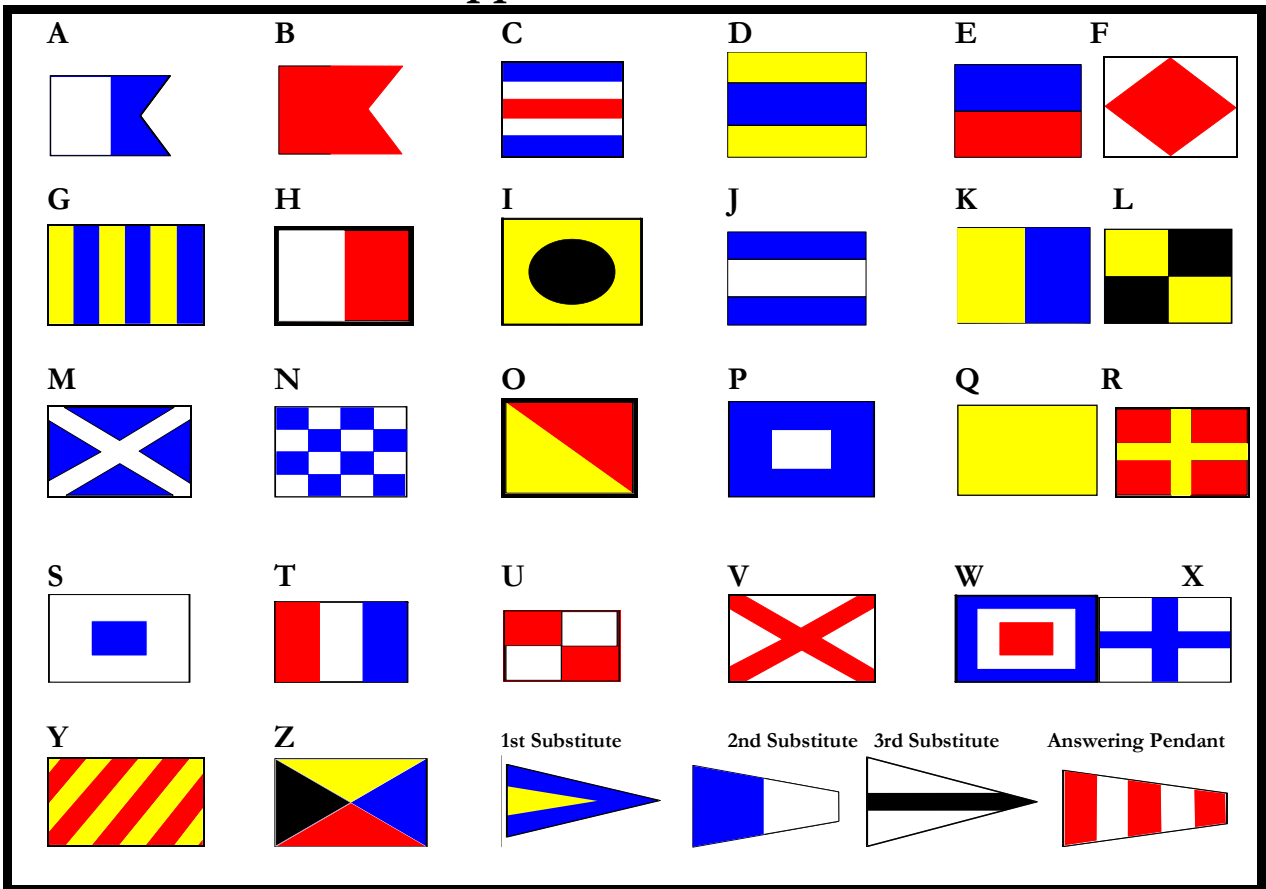
Appendix 11: Guidance on Combining Starts

On Sundays when there is a low attendance the Race Officer can at his own discretion combine starts to shorten the overall start sequence. The committee recommendations for this are

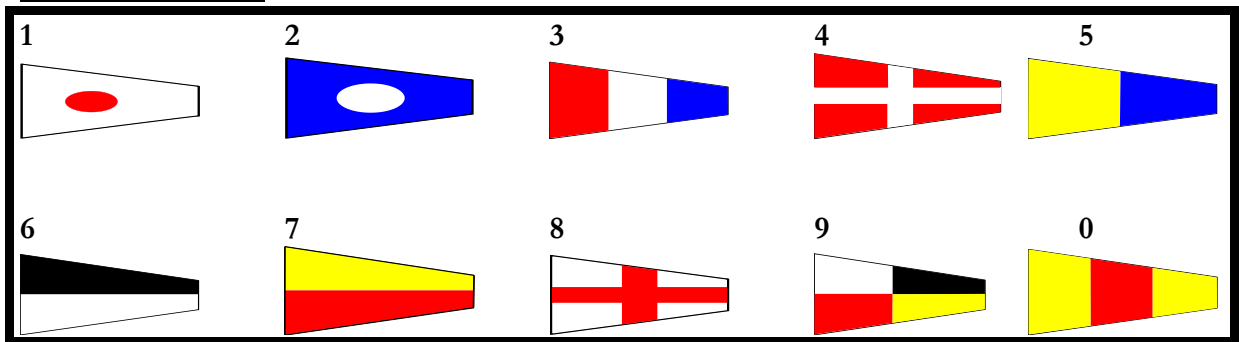
3. If there are 3 or less boats on Start 2 (Flying Fifteen) AND 3 or less boats on Start 3 (fast handicap) these two starts can be combined. If the Flying Fifteens get 3 or more boats on the water the fleet is keen to retain their own start and the Committee wish to support this. The procedure for doing this is to hoist start flags 2 and 3 simultaneously.
4. If there are 3 or less boats on Start 5 (Cats) this can be combined with Start 4 (Asymmetrics). The procedure for doing this is to hoist both start flags 4 and 5 simultaneously.

As far as the results are concerned and the application of any rules the starts will technically remain separate even though they are started simultaneously. Combining starts in this way is purely a recommendation and is totally at the discretion of the Race Officer on the day.

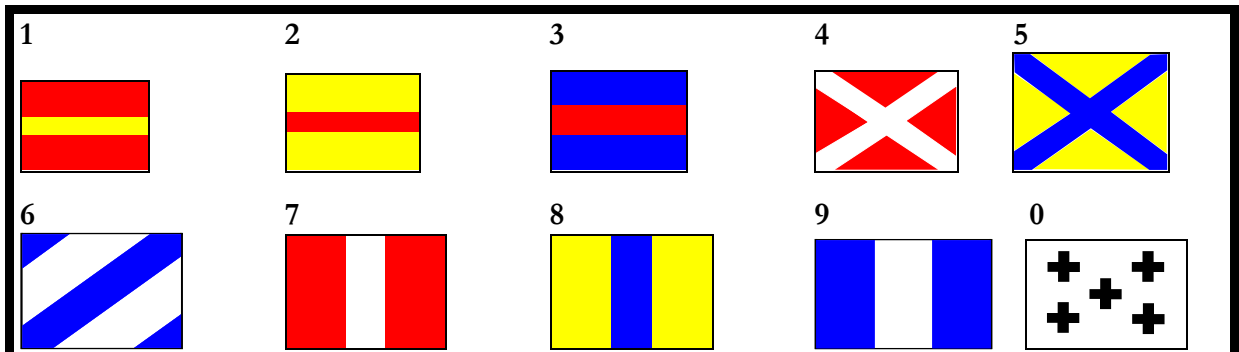
Appendix 12: FLAGS

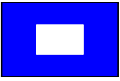

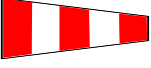
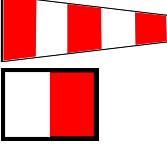

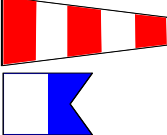




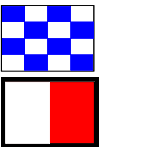


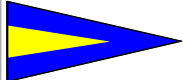


NUMERALS



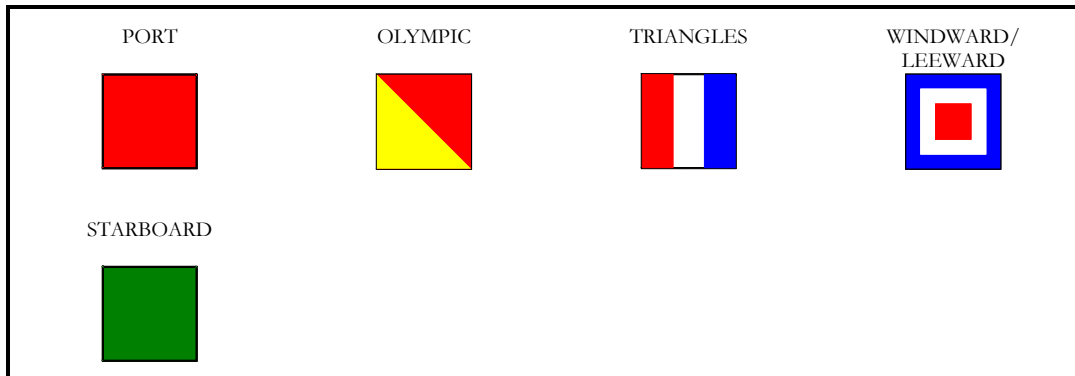
NAVAL NUMERALS



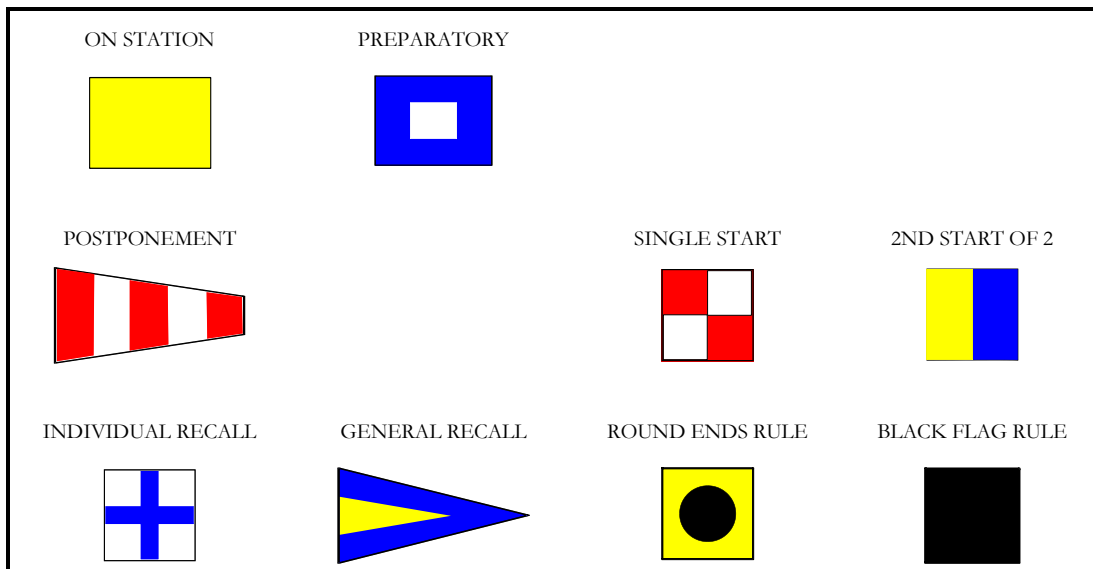
	Flag Letter	Meaning		Gun Signal
	P	Blue Peter 4 min Preparatory Signal		1 gun
	Y	At DWSC 1/5 to 31/10 Winter Garments MUST be worn. Coastal clubs Personal Buoyancy MUST be worn.		-----
	AP	Races not started are postponed. The warning or other signal will be made 1 minute after removal.	A postponed race is one that is not started at its scheduled time and can be sailed at any time	2 guns on hoisting 1 gun on lowering
	AP H	Races not started are postponed. Further signals made ashore.		2 guns
 NUMERAL 1-6	AP over Numera 11-6	Postponement of 1-6 hours from the scheduled starting time.		2 guns
	AP A	Races not started are postponed. No more racing today.		2 guns
	X	Individual Recall, one or more yachts are recalled to restart correctly.		1 gun after start gun.
	L	ASHORE - Changes to sailing instructions. AFLOAT - Come within hail or follow me.		1 gun
	M	Replaces missing mark. Round this mark instead of missing mark.		Intermittent sound signal
	N	All races are abandoned. Return to the starting area. The warning or other signal will be made 1 minute after removal.	A race can be abandoned at any time. An abandoned race may be resailed	3 guns
	N H	All races are abandoned. Further signals ashore..		3 guns
	N A	All races are abandoned. No more racing today.		
	B or Red	Protest flag		-----
	1st Sub	General Recall. The preparatory signal will be made 1 minute after removal.		2 guns after starting gun

Flags Flown from Committee Boat

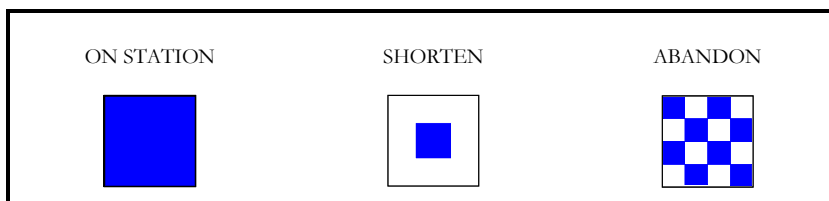
COURSE FLAGS



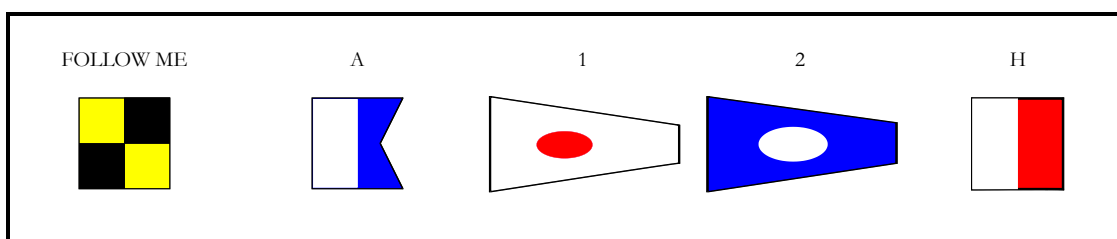
STARTING FLAGS



FINISHING FLAGS



MISCELLANEOUS FLAGS



Club Flag Set

1. Club Burgee
2. Red
3. Green
4. On station start (Yellow Flag)
5. Postpone (Answering Pendant)
6. Abandon (Flag “N”)
7. Individual Recall (Flag “X”)
8. Black
9. Round the Ends Rule (Flag “I”)
10. General Recall (Flag “1st Sub”)
11. Preparatory (Flag “P”)
12. On Station Finish (all blue flag)
13. Shorten Course (Flag “S”)
14. Flag “H”

Start Sequence Flags

15. Numeral 1
16. Numeral 2
17. Numeral 3
18. Numeral 4
19. Numeral 5
20. Numeral 6

Wednesday Night Flag Set

1. Club Burgee
2. On station start (Yellow Flag)
3. Single start
4. 2nd start of 2
5. Preparatory (Flag “P”)
6. Postpone (Answering Pendant)
7. Individual Recall (Flag “X”)
8. General Recall (Flag “1st Sub”)
9. Abandon (Flag “N”)
10. On Station Finish (all blue flag)
11. Shorten Course (Flag “S”)

Open Meeting Flag Set

Relevant class flags will also be required

1. Club Burgee
2. Orange
3. Orange/Black
4. Olympic Course (Flag "O")
5. Red
6. Green
7. On station start (Yellow Flag)
8. Postpone (Answering Pendant)
9. Abandon (Flag "N")
10. Individual Recall (Flag "X")
11. Black
12. Round the Ends (Flag "T")
13. General Recall (Flag "1st Sub")
14. Preparatory (Flag "P")
15. On Station Finish (all blue flag)
16. Shorten Course (Flag "S")
17. Flag "L"
18. Flag "A"
19. Numeral 1
20. Numeral 2
21. Flag "M"
22. extra red
23. extra green
24. Flag "C"
25. Flag "H"
26. Windward/Leeward Course Flag ("W")

Additional Set for other end of line

1. Club Burgee
2. On station start (Yellow Flag)
3. On Station Finish (all blue flag)
4. Shorten Course (Flag "S")
5. Numeral 2