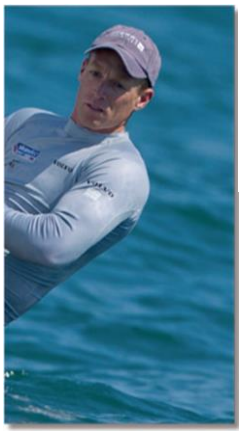

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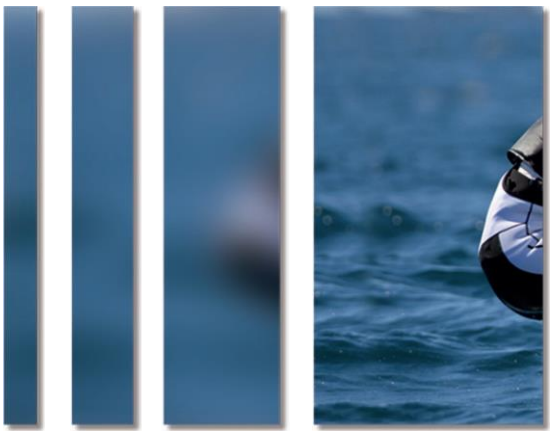


Race Management Guide

RYA
Racing
Department

2017–2020

CONTENTS

1. INTRODUCTION

1.1 Scope

This guide attempts to highlight best practice, accommodate many of World Sailing Race Management Policies and interpret the rules accordingly. It is not intended to be a fully comprehensive manual of race management but rather an aide memoire for race officers and those wanting to know more. It may also be appropriate to vary the practices described in this guide for smaller events when there are other constraints on the race management to be taken onto account. The World Sailing Race Management Manual should also be referred to and is available on the World Sailing website, as are the World Sailing Race Management Policies. Race Officers running MYA events should refer to the MYA Race Management Manual.

1.2 Abbreviations

Throughout this document some phrases are used a lot and so are abbreviated in many instances:

	abbreviated to:
Race Officer	RO
Racing Rules of Sailing	RRS
Notice of Race	NOR
Sailing Instructions	SI

1.3 Racing Rules of Sailing

The race officials' bible is the rule book - the Racing Rules of Sailing. We are duty bound to know the rules and so be very familiar with the rule book. Racing is governed according to the Rules as defined in the RRS (see definition 'Rule'). The rules that are contained within the RRS book are defined as the Definitions, the Race Signals, the Introduction, the preambles and the relevant appendices, some of which are now in separate electronic form.

Through its prescriptions to the RRS, a Member National Authority (the RYA for the UK) states how certain of these rules are to be interpreted or applied at its own events or those organised by an organising authority affiliated to that MNA (see 'Authority to Run Racing', page 6).

1.4 Terminology

Terms used in the preamble to 'Race Signals':

A visual signal is always *DISPLAYED* (🡅)

A visual signal that is displayed is at some time *REMOVED* (🡇)

● means a sound signal
- - - - - means repetitive sounds
_____ means a long sound signal

'Shall' - mandatory action
'Will' - intended action
'Should' - best endeavours
'May' - optional action

Use these terms at all times!

2. RYA RACING CHARTER

As RYA race officials we must be familiar with it and uphold its principles:

Objectives

- To provide the framework for everyone to enjoy the sport of sailboat racing in whatever capacity and to whatever level the individual desires.
- To ensure that the sport of sailboat racing welcomes all people and treats them equally.
- To ensure that those who experience sailboat racing are encouraged to continue

Principles and Practices

- The sport welcomes all participants; it relies largely on self-compliance and self- policing. Those that deliberately take unfair advantage of this or behave in an inappropriate manner, either on or off the water, can expect action to be taken against them.

- Competitors agree to compete in compliance with the rules and behave in accordance with accepted standards of sailboat racing. When involved in a genuine dispute, all parties to the dispute and those deciding the matter will use the established procedures for achieving resolution.

- Foul or abusive language, intimidation, aggressive behaviour or lack of respect for others and their property will not be tolerated.

- Organisers, officials and other providers of sailboat racing agree to provide the fairest racing possible. This includes encouraging feed-back and facilitating the resolution of genuine disputes (including protests) in a timely and proper manner.

- Coaches and other advisers agree to encourage their competitors to compete, and behave in compliance with the above principles and practices.

This Charter applies equally to those who organise, manage, coach, advise, judge, provide services and compete (including those who support competitors) in sailboat racing.

The RYA encourages the adoption and implementation of this Charter, and provides guidance and support to individuals and organisations to assist implementation. This guidance and support is consistent with the practices of the International Sailing Federation.

For further information visit www.rya.org.uk/racingrules

3. APPLICATION OF RYA RACING CHARTER

Through the Racing Charter, the RYA seeks to promote fair and enjoyable racing for all.

What competitors should expect:

- racing that, as far as possible, is fair, enjoyable and safe.
- shore facilities, administration and race management to acceptable standards and appropriate to the event.
- a way to complain or make a suggestion, and a response to complaints and suggestions.
- prompt resolution of any disputes.

What is expected of competitors:

- courtesy and respect to other competitors, officials, and other users of the water, both afloat and ashore.
- compliance with the rules, and take a penalty when required by the rules.
- use of the provided services to resolve any disputes.

3.1 Resolution of Racing Disputes

The RYA encourages the adoption of the Exoneration Penalty, Advisory Hearings and RYA Arbitration in addition to protest hearings to improve the understanding of and compliance with the Racing Rules of Sailing.

See www.rya.org.uk/general/rulesdisputes

3.2 Unacceptable Behaviour

The RYA encourages the use of rule 69 and rule 2 to penalise and deter unacceptable behaviour both on and off the water. Guidelines on their application in the UK are included on the RYA website.

See www.rya.org.uk/racingrules

4. RYA GUIDANCE

4.1 Race Officials' Code of Conduct

RYA race officials (race officers, mark layers, equipment inspectors, judges and umpires) are among the most exposed officials of the sport. It is therefore essential that they behave with the highest degree of competence, propriety and integrity. At no time can or should a race official do anything to bring the sport into disrepute.

RYA Race Officials who breach this Code of Conduct may face disciplinary action by the RYA.

Specifically, RYA race officials are expected to:

1. Maintain a good level of understanding and application of the racing rules and any additional rules relevant to their discipline as well as RYA procedures and policies.

2. Ensure that decisions are based upon the rules and principles of fairness and objectivity and are made with care without prejudice.

3. Uphold the confidentiality of race official deliberations during and after the regatta.

4. Be polite, open-minded and patient with colleagues, competitors, regatta officials, team officials, coaches and hosts, and deal with dissent in a fair and courteous manner.

5. Declare any conflict of interest before accepting a race official invitation or when one becomes apparent at an event (a conflict of interest exists when an RYA race official has, or reasonably appears to have, a personal or financial interest which could affect the official's ability to be impartial).

6. Plan to arrive at an event on time and remain until relevant issues are resolved.

7. Incur only expenses that are necessary and when expenses are reimbursed claim only legitimate and essential out-of-pocket costs. This may include sharing a room with another race official if requested.

8. Be on time and wear appropriate clothing on the water and ashore.

9. Abstain from consuming alcohol until duties are over for the day. Race officials must never become inappropriately inebriated during an event. Race officials should also refrain from smoking indoors or whilst carrying out their duties.

4.2 Race Management Principles: What should underpin the race management team's approach

The Race Management principles have been developed by the RYA to help Race Management Teams deliver high quality racing for competitors, within an environment where everyone involved – whether competitors, volunteer officials and helpers, or paid staff, whether on shore or on the water – all feel valued, feel involved, and feel that they have had an opportunity to grow and develop their own skills and experience.

Being able to understand the need for the following 7 principles is important for the race official. Developing a personal attitude and approach that keeps these principles to the forefront in our involvement in the race management aspects of our sport will help us to deliver excellent, race management, with an attitude of continuing improvement.

The 7 principles are:

- **Fairness for all**. Racing needs to be run so that all those involved feel fairly and equitably treated, whatever their role, whether that is as a competitor, a member of the race management team on the water, or a tea bar volunteer ashore.

- **Challenging competition**. Racing should be run so that the competition is appropriately challenging for competitors – clearly the degree of challenge that is appropriate will be influenced by the nature of the event and the experience levels of the competitors.

- **Repeatable processes**. A core of good performance is to have well planned, well tested and well executed processes that allow both experienced and new members of race management teams to understand and maximise their personal contribution.

- **Flexibility of approach**. The race management team need to recognise that circumstances or the weather can change unexpectedly, or that competitors may not be satisfied by what had been planned, and be prepared and able to respond accordingly to continue to deliver high quality for the competitors.

- **Timely delivery**. As far as possible within external constraints (such as weather) events should follow the announced timings, including briefings, on and off water times, start times, race duration, etc.

- **Learn from experience**. Race management teams need to review and assess what they are doing, both during and after racing and events, applying the lessons that can be learned and looking to identify and apply any improvements as soon as possible.

- **Personal development**. Individual race officers and other members of race management teams need to assess their own skills and experience, and gaps in this, and actively seek ways of continuously improving their ability to deliver high quality racing.

5. REQUIREMENTS FOR RACING

World Sailing revises and publishes every four years the Racing Rules of Sailing under which racing will be conducted. World Sailing owns the copyright of the RRS.

The MNA for the United Kingdom (abbreviated to GBR by World Sailing) is the Royal Yachting Association.

Clubs, classes and other organisations are deemed to be 'affiliated' when affiliated to the MNA of the venue at which the event is taking part. So, at an event in the UK, the organisation concerned is only 'affiliated' when it is affiliated to the RYA. However, an organisation may also be 'affiliated' when it is affiliated to the MNA of just one port of call when boats pass through the waters of more than one MNA whilst racing.

5.1 Authority to Run Racing

Racing may only be conducted under the RRS if there is an organising authority and this can only be:

World Sailing

It also appoints the Race Officials for some of the major events listed in its own regulations. These events include the Olympic Games, Olympic Classes' World Championships and the Sailing World Cup.

A Member National Authority (MNA)

Authority through the RRS is given to member national authorities (MNA) of World Sailing. It may coordinate the dates and venues of national regattas, and may approve key regatta personnel such as the Regatta Chairman, the (Principal) Race Officer(s), and the Protest Committee Chairman.

A Club Affiliated to an MNA

All clubs in the UK that organise racing should be affiliated to the RYA and as such can then act as an Organising Authority.

A Class Association

A Class Association, whether affiliated to the RYA or not, may be an organising authority in the UK. When unaffiliated the class association must either have the approval of the MNA or be in conjunction with an affiliated club. Any Class Association will want to ensure that their class rules, both in terms of measurement and their established practice for regatta organisation, are observed.

Another Organisation Affiliated to an MNA

An organisation other than a club, such as a private company, that is affiliated to the RYA may act as an Organising Authority.

An Unaffiliated Body

An unaffiliated body may only be recognised as an Organising Authority when it acts in conjunction with an affiliated club and where that body is owned and controlled by the club. The MNA may prescribe that its approval is required (the RYA does not). Furthermore, if approved by World Sailing and the MNA of the club, an unaffiliated body may be granted licence to act as an Organising Authority where that body is not owned and controlled by the club.

Two or more of the World Sailing, the RYA, an affiliated club, a class association or an affiliated organisation may act jointly as the organising authority for an event.

> *An organisation which is not an organising authority as defined above may not run racing using the RRS. If it does so it is in breach of World Sailing copyright and acting unlawfully. Race officials working on behalf of such organisations may face serious consequences, as may competitors.*

Officials must declare a Conflict of Interest
A person has a *conflict of interest* if he

(a) may gain or lose as a result of a decision to which he contributes,
(b) may reasonably appear to have a personal or financial interest which could affect his ability to be impartial, or
(c) has a close personal interest in a decision.

However, there are conditions under which participants may reach agreement over a conflict. See RRS 63.4.

Support Person
Any person who

(a) provides, or may provide, physical or advisory support to a competitor, including any coach, trainer, manager, team staff, medic, paramedic or any other person working with, treating or assisting a competitor in or preparing for the competition, or
(b) is the parent or guardian of a competitor.
(c) can be party to a hearing under RRS 60.3d including a RO.

A Support Person is subject to the RRS and the competitor they are supporting is liable to penalties for infringements by the Support Person,

5.2 Organising Authority

One or more of the bodies listed above may be the 'Organising Authority' and as such is initially responsible for all aspects of the event (ultimate responsibility for a few areas can only then be delegated to appropriate bodies eg the Protest Committee or International Jury have ultimate responsibility on hearings). The Organising Authority will set up or appoint both the:

1. Regatta Organising Committee (Event Committee)
The Regatta Organising Committee will accept responsibility, usually through a number of sub-committees, for all aspects of the regatta, such as measurement, social events, press and sponsor contacts. One of these committees is the:

2. Race Committee
The Organising Authority is required by the RRS 89.2(b) to appoint the Race Committee. It is delegated with all the powers required to conduct the racing. *It can only be appointed by the Organising Authority.*

3. Technical Committee
The Technical Committee is empowered to conduct equipment inspection and event measurement and responsible for discretionary penalties. It has similar options to a Race Committee in its ability to protest a boat.

The *Organising Authority also has sole responsibility to publish the NoR*. This should be published in a manner appropriate to the event concerned. For many events this would be the host authority's website (and/or class website). If there is a closing date for entry this should be as close to the regatta as possible whilst allowing sufficient time to plan for the number of entries received. Such planning will cover all areas of the event including safety management.

The organising authority may appoint the Protest Committee or delegate that task to the Race Committee.

If an International Jury is to be in place at an event it can only be appointed by the Organising Authority (when this may require the approval of the appropriate MNA). An exception to this is when World Sailing appoints an International Jury at the Olympics, its events (including World Sailing Worlds, World Sailing Sailing World Cup and World Sailing Youth Worlds) or other major events as listed in World Sailing Regulation 25 - these include the America's Cup, Olympic Classes World Championships and the Volvo Ocean Race.

It is essential that the Organising Authority complies with the requirements of the RRS otherwise competitors will not have the protection of the RRS or the appeal procedures provided by the National Authority.

Throughout the organising and running of a regatta the Organising Authority, through its subcommittees and particularly the Race Committee, should remember that its prime objectives are to:

- provide fair competition for all competitors;
- ensure the regatta is run in accordance with the RRS and the rules of other relevant authorities when they apply; in the UK the event should also comply with the RYA Racing Charter;
- ensure that all competitors can, and do, conform to the rules of the regatta;
- as far as possible give satisfaction to all competitors;
- ensure that the NoR and SIs are produced which follow the RRS Appendix J1 and J2.

5.3 Event Organisation

Good organisation is the key to a successful regatta.

There are three types of event:

- Championships - International, National, Regional. The organising authority will negotiate with the Class involved as to the number of competitors to be allowed, the number of races involved, the types of courses to be used, the type of start (eg line or gate), etc.
- Open Meetings to which visitors outside of that club are invited to take part. There is generally no negotiation with the Classes involved but the event is organised using the same checklist used for championships.
- Club Events - these may prescribe that only members of that club can participate. No negotiation with Classes is needed.

5.4 Pre-Evaluation of the Event

The committee structure will vary according to the needs of the event, its size and its status. Before it is set up it is important that the Organising Authority goes through a process to determine the appropriateness of the host club to manage the proposed event. It is important that an evaluation is carried out prior to accepting the role of Organising Authority. Can the host club match all the requirements requested by the class association or other body proposing the event?

Facilities

Can the club cope with the number of boats expected?

Are the catering and bar arrangements sufficient to meet the demands of hungry and thirsty sailors? Are there enough changing facilities with showers and toilets?

Personnel

Does the club or venue, have sufficient experienced personnel to man all the duties required for the proposed event? Will it be necessary to arrange for training sessions with club members for different aspects of the event? Will the club have to look for assistance from outside its own organisation?

Risk Assessment

It is most important that the venue assesses the risks involved in running the regatta. Are the weather conditions suitable at the proposed dates? Are there tidal conditions that can create

hazards in the racing area and its approaches? Is there likely to be commercial traffic movements that will restrict the ROs ability to set courses?

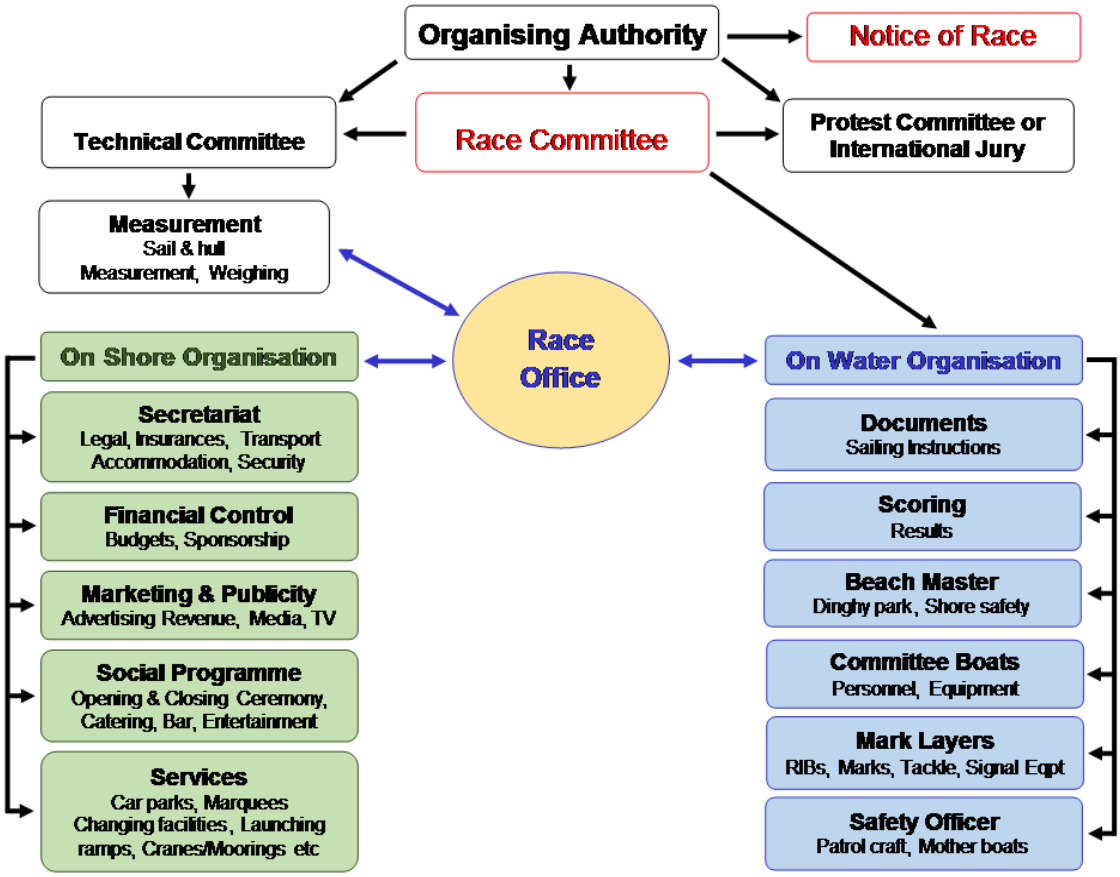
On shore, are there any hazards such as overhead electricity and telephone cables which could cause problems? Is the venue able to be secured from access by the general public? Is it necessary to employ a security company to patrol the venue?

Once the club has answered the above questions, and other questions which may be venue specific, then a decision whether or not to proceed with the event can be made. Do not say ‘YES’ to an event simply to host a prestigious event. If there is any doubt about the ability of the venue to fulfil the expectations of the competitors, now is the time to stop the process and say ‘NO, we cannot host this event’. If the answer is 'YES' then planning can start.

5.5 Organising Committee

The Organising Committee is responsible for all aspects of the event. It will appoint several sub-committees to oversee particular aspects of the event. For many smaller regattas, some of the functions will be combined into one sub-committee.

The following plan includes sub-committees suggested as a basis from which a good management structure can be evolved:

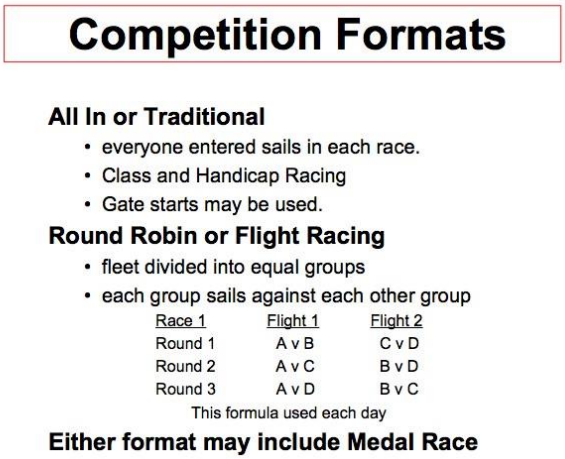


The Organising Authority *shall* appoint the Race Committee, publish the NoR and appoint an International Jury and Technical Committee if required. In the absence of an International Jury it *may* appoint a Protest Committee or delegate that responsibility to the Race Committee. All of the on-the-water organisation falls to the Race Committee. The Race Office is the link to all areas of the regatta.

5.6 Format of Racing

Fleet racing is the most frequent and "classic" competition in sailboat racing with several different formats. They are:

Handicap racing – Boats of different classes race together using one of several handicapping systems. The elapsed time (how long it has taken the boat to complete the course) is adjusted using one of the handicapping formulas, to provide a 'corrected time'. The boat with the fastest 'corrected time' is the winner.



Class racing – All boats of the same class race together. First across the line is the winner

Flight racing – This is normally used in class racing when the fleet is large. It is an attempt to reduce the number of boats on the start line by dividing the total fleet into smaller groups and racing is continued in those groups for several days. Each group races against every other group in a 'round robin' before the scores are merged. This produces overall positions. In some events this is when the winner is declared; in other events 'Gold, Silver, Bronze and maybe Emerald' fleets are created for a final series.

Group Racing – Used when the fleet is large but is manageable, usually in 2 Groups (yellow and blue). Based on a seeding list from previous events the 1st boat on that list is allocated to Group 1 (yellow), 2nd and 3rd go to Group 2 (blue), 4th and 5th go to Group 1 (yellow) and so on. After the first day's completed racing series scores are calculated and the Groups are re-formed with the assignment based on the series score rather than the pre-event seeding list. Groups are re-formed after each day's racing until Gold and Silver Groups are established after a predetermined number of races. An advantage of this system is that a group does not need to wait for another group to finish before getting on with the next race, as is the case with Flight racing above.

It is important to appreciate that the terms 'fleet', 'flight' and 'group' are interchangeable by many!

The Medal Race

Under rule 86.2 World Sailing has approved the use of Addendum Q as an addendum to the SIs in World Championship Grade, Grade 1 and Grade C1 events, World Sailing World Cup events and the Olympics (and Test Event) for umpired fleet racing in the last race of each series for the Olympic classes. Similar events are also encouraged to use the addendum. This can be done under rule 86.3 if the national authority prescribes that rule changes are allowed for the purpose of development and testing. The approval of the RYA is required in order to do this in the UK.

Races may be sailed under the rules in this addendum only if the NoR so states and the addendum is included in the SIs. Each discipline will have traditional fleet racing until the last race. It is usual for the SIs to stipulate that the top ten boats in the fleet racing are to sail in the medal race which is scored double points and that on-the-water judging shall apply. There should be one umpire boat for every three or four boats in the fleet.

5.7 Race Office

The race office is the administrative centre of the regatta. It should be well equipped to deal with any necessary administration. The race office should have all the necessary items found in any efficient office. The race office is best split into the 'front' office and the 'back' office.

Front Office

The 'Front' Office will be the point of contact between the competitors and the organisation. It will deal with SIs, tickets for social events, first aid, etc. This will also be the point of contact for the press and media from where they will receive all the information they require. For very large events a separate Media and Press centre will be provided. The front office should also have instant access to the emergency services.

Back Office
The ‘Back' office should have access restricted to a few key personnel. This is where the Race Committees and the Class Association representatives can meet as required. The results will be processed here.

Official Notice Board (ONB)
The race office must also provide an Official Notice Board with the following sections:

- Race Committee
- Protest Committee
- Technical Committee
- Results

The board(s) must be located close to the Race Office (although it is becoming increasingly common to have the official notice board solely on the event website). Posting of notices should be limited exclusively to Race Office personnel and the Secretary to the Protest Committee.

Auxiliary Notice Board
A second information board will serve to post: meteorological information; social programme; map of the facilities; town map indicating services as well as locations of the social events, etc.

A designated section of this board may also be used by competitors to put up their advertisements. This will preclude the posting of numerous "for sale" messages in undesired areas.

Official Mast
One of the responsibilities of the staff in the race office is to display visual signals, and make the appropriate sound signals, on the official flagpole on shore. All these signals should be authorised by the RO. In many large regattas, this job is allocated to the beach master. Only one person should operate these signals so that a standard practice is followed.

The location of the official flagpole should be in proximity to the official notice board - the position of both must be described in the SIs. A full set of flags or other appropriate visual signals should be available at the Race Office, to include flags "A", "H", "L", "N", "Y", "AP“, numeral pennants 1- 6 and appropriate class flags. A sound signal device (horn) is also necessary here.

5.8 Race Committee

The Race Committee is delegated with all the powers required to conduct the racing. It is responsible for what does or does not take place on the water. It runs the races.

Race Committee (RRS 90)

- Shall publish the Sailing Instructions in accordance with RRS J2 (See also App L, SI Guide).
- Shall run the regatta in accordance with RRS and the directions of the Organising Authority.
- Shall score the regatta in accordance with the rules.
- Shall appoint a Protest Committee if appropriate.

The Race Committee is responsible for the safety of all competitors and others involved in the event; it should adopt the principles of the RYA Racing Charter and recognise that success is measured. It is a team of individuals who have specific roles to play:

Chair of the Race Committee or Event Director

The Chairman of the Race Committee may, but preferably not for a major event, be the Principal Race Officer (PRO). This person liaises closely with the RO(s), supports and directs them off the water and authorizes changes to the SIs.

Principal Race Officer

If there are multiple courses being used at the same time, the overall on-the-water management of the regatta is the responsibility of the PRO who liaises with the RO on each course. If there is only one course, it is managed by the Race Officer and there is no PRO. The PRO keeps an overview of all courses and is the ultimate decision maker on the overall conduct of the event. The PRO also supervises the onshore aspects of race management, ensures that signals are displayed correctly and that notices are placed on the official notice board. The PRO liaises closely with the Chairman of the Race Committee/Event Director.

Race Officer

The RO is responsible for the actual conduct of the racing on their course. Ideally, the RO is an on-the-water manager, who lets the team get on with their jobs whilst keeping an overview of what goes on around the entire race course. The RO will liaise closely with the Principal Race Officer. The RO and key assistants should record all their actions on recorders for later reference. The recorders should be left on during all start, recall and finishing procedures. As the responsible person on a race course, the RO will usually represent the Race Committee at protest hearings and hearings for redress requests, although, exceptionally, this role may be delegated.

Deputy Race Officer

The Deputy Race Officer (DRO) works on the main committee vessel with the RO, and would be capable of taking over as RO in an emergency. Under normal operating conditions this person would organise the committee vessel personnel to ensure that everyone is in position and ready to proceed. The DRO ensures that all systems on the race committee vessel are ready and operational.

Assistant Race Officer

The Assistant Race Officer (ARO) is on the Pin End line boat and/or the Finish boat and is in charge of the procedures on that boat. Close liaison with the RO is essential.

Timekeeper

This is, after the RO, the most important position on the Race Committee. More starts have been spoiled by the Timekeeper being distracted than any other single cause. It is a position that requires single-minded concentration and a good clear voice.

Visual Signals Officer

The Visual Signals Officer will be responsible for ensuring the visual signals are ready for display and removal at the appropriate time. All timings are taken from the Timekeeper.

Gunner

The Gunner works closely with the Visual Signals Officer. They have responsibility for all the sound signals that accompany the visual signals.

The tasks of Gunner and Timekeeper may be combined if the sound equipment allows.

Recorders

The Recorders are responsible for the paper work on the water. They record:

- the competitors that report at the start;
- a log of actions and communications;

- wind direction and strength;
- the course(s) used;
- all the boats identified as being OCS;
- the sail numbers of the boats incurring penalties;
- the sail numbers of boats correcting errors;
- the sail numbers of boats retiring from the race (this requires an input from the Course Safety Leader)
- the finish boats being finished on the course area (where the SI's allow for a W or Whisky finishing)

A back-up Recorder is advisable on the pin-end boat and the finish boat.

A good Recorder compiles a diary of the whole race day after leaving the dock.

Tape or digital recorders should also be used to record finishing positions as they are called while actually crossing the finishing line. Where a lot of boats finish in a close group this equipment is essential for sorting out conflicts in the results.

Pin End boat crew

The person in charge of the pin end line boat is normally an Assistant Race Officer (ARO).

The ARO is required to judge the starting line and to very quickly communicate with the RO what has been recorded relating to boats 'On The Course Side' (OCS) at the start. It is important to

emphasize that the ARO acts in an advisory capacity only. The decision as to which boats are over, or if the line is 'clear' (no boats over), rests solely with the RO. Communication with the RO is best by mobile telephone but if this is impossible, by VHF.

Mark Layers

A good mark layer is as good as an additional ARO, providing the RO with wind information at various points on the course. Mark layers must be able to measure the wind strength and angle at any time and report this to the RO, working from a boat which should be a fast power boat equipped with a GPS. Many ROs prefer more than one mark laying boat. This facilitates the fast adjustment of the course to a new wind. Should the equipment and personnel be available, one mark laying boat per mark is desirable.

Between starting and finishing, the mark layers may also be used as a patrol/safety boat, although its main task is to stand by for alterations to the course in the event of a wind change.

Beach Master

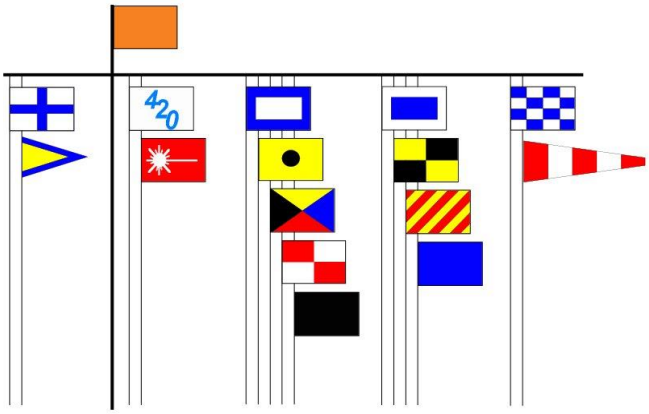
A Beach Master (appropriate to dinghy and board racing) ensures the orderly and systematic launching of boats and retrieval on their return. Important safety checks such as noting who has and has not gone afloat, and similarly, who is still to return must be completed by the Beach Master. A system of signing in and signing out (or a tally system) is adopted. The Beach Master communicates, usually by VHF, with the RO giving the time that the last boat left the beach and the expected number of boats in the starting area.

Safety Officer

In dinghy and board racing the Safety Officer deals with safety and rescue operations under the guidance of the RO. In practice, they both work together very closely although the RO is ultimately responsible for the safety of the event. The Safety Officer must be familiar with the regatta venue, the characteristics of the class(es) competing, the class rules and, of course, the SIs. Cooperation with local Rescue organizations is highly recommended.

5.9 Race Committee Equipment

Signal Vessel



Minimum flag size 3'x2' (90cm x 60cm)

The Starting vessel should be of a size sufficient to accommodate the Race Committee personnel. Depending on the type of course, it may also act as Finishing Vessel. It should be appropriate for the conditions likely to be encountered and have adequate cover against too much sun, wind, rain or other inclement weather. It should have a GPS and appropriate charts and, of course, a toilet. It should be manoeuvrable, visible and clearly identified in accordance with the SIs.

A full set of visual signals should be carried and, if flags, attached to the halyards as indicated. Visual signals attached to poles is an alternative system. Since a visual signal is 'displayed' as soon as it becomes conspicuous, thought needs to be given so that this occurs at the correct time. Poles achieve this better than a halyard system unless shock cord is the material used for the halyard or the flag is 'broken out'. The latter involves hoisting the wrapped flag before a tug on the halyard unfurls it.

The mast which is to be used as the Committee Vessel end of the start line should be tall and clearly visible. A system to produce sound signals is also required.

Marks

Marks should be large and bright with ground tackle which is heavy and long enough. A weight directly under the mark will keep it upright. Marks should be identified by numbers for speedy and clear communication within the team.

5.10 Personal Equipment

Most ROs will have their own equipment which may include: wind direction indicator; hand bearing compass; anemometer; course laying aids; stop watch; tape/digital recorder; VHF radio; handheld GPS; adequate all weather clothing; mobile phone; range finder; binoculars.

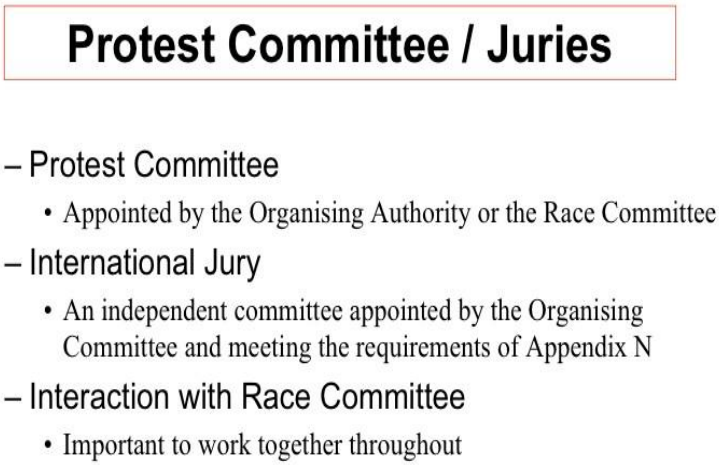
5.11 The Protest Committee or International Jury - Judging

The term "judging" is used to include protest and request for redress hearings; questions of eligibility and boat measurement compliance; on the water observance/judging - rule infringements (especially the illegal propulsion rules).

The degree to which an organiser should provide a full range of judging services to competitors very much depends on the type of event being conducted.

Protest Committee

A Protest Committee may be appointed by the Organising Authority or the Race Committee to hear protests and requests for redress. This type of Protest Committee is very suitable for club level racing.



International Jury

An International Jury *shall* be appointed by the Organising Authority in accordance with the RRS Appendix N. This appendix specifies in detail, the composition and authority of an International Jury and cannot be altered by a Sailing Instruction or a MNA Prescription.

Interaction between the Protest Committee and Regatta Organising Committee

A draft of the SIs should be sent to the Chair of the Protest Committee or International Jury for interpretation and if necessary, wording alteration. This will then avoid confusion between the Race Committee and the Protest Committee during the event. The Protest Committee should limit its comments to interpretation. The method of working, as described in the SIs, is strictly the province of the Race Committee.

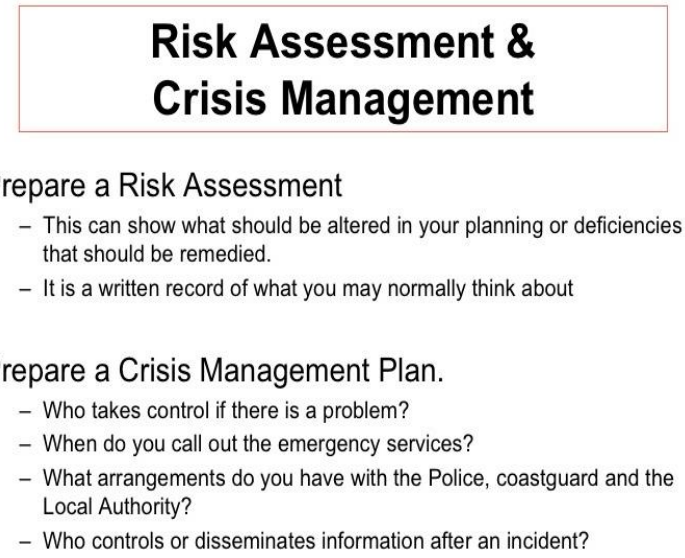
It is important to schedule a meeting between the Protest Committee, the PRO, ROs and any other key personnel prior to the first competitor/coach meeting to discuss:

- on-the-water procedures (course changes, limitations on racing, 'O' and 'R' procedure, etc.);
- the procedure for processing the protests;
- SIs and any changes to them;
- any reports of the Race Committee to the Protest Committee;

Protest Committee / Race Committee relations

Most Protest Committee members go out to the race course to familiarise themselves with the courses, the types of boats sailed and to observe the weather conditions in which the races are conducted. Depending on their policy they may want to actively monitor rule infringements on the water.

5.12 Safety



Whilst the boats are entirely responsible for their own safety (RRS 1, RRS 4 and standard safety SIs) the RO has ultimate responsibility whilst on the water for the duty of care held by the Organising Authority.

Prior to the event taking place it is important to carry out a risk assessment and to produce a 'Crisis Management Plan'

The safety management adopted differs according to the nature of the event. Factors influencing the type and amount of safety cover provided include:

- Boat types - the requirements of keelboats, dinghies, boards and model boats are very different from those of each other. Mixed fleets often pose complex problems of safety.
- Number of boats - both the type and the amount of safety cover is often determined by the number of boats and/or competitors.
- Location of racing - the safety requirements of ocean racing differ from offshore racing, racing inland or in an estuary.
- Ability of the competitors - it is often the ability of the less able sailors in the fleet that determines the level and type of safety cover necessary.
- Age of competitors - both the young and old have greater requirements when compared to fit adults.

Medical facilities must be available either through the event itself with a doctor onsite, or through the emergency services and local hospitals. All boats involved in the management of an event should be equipped with a first aid kit as a minimum requirement.

Dinghy and Board Events

A Safety Officer will deal with safety issues under the direction of the RO. Reporting to the Safety Officer will be a team of individuals in RIBS who are experienced in safety on the water and have patrol boats that are appropriately equipped. As an extension to this aspect of race management the provision of a Mothership may be appropriate.

A system, such as a conventional tally system, should be in place so that the number of sailors afloat is known at any one time (including the extended Race committee such as Patrol Boat Crews).

The following issues also need to be considered:

- a system with which to identify boats with crews removed such as marking with streamers.
- contingency plans for a change in conditions including the onset of fog.
- a method understood by all safety crews to patrol effectively when boats sail out to the race area, race and return to the dinghy park.
- a policy for identifying and assisting crew at a capsize and when to intervene.
- knowledge of the boats racing and how to right a capsized boat of this type (often best obtained from coaches of the class concerned).
- methods for effective communication between patrol boats and also with the RO using VHF (especially when conditions make this difficult such as strong winds).

- liaison with shore-side facilities and emergency services to cope with medical emergencies and injuries including a designated point for landing such incidents.
- a method understood by all safety crews to patrol effectively when boats sail out to the race area, race and return to the dinghy park.
- a policy for identifying and assisting crew at a capsize and when to intervene.
- knowledge of the boats racing and how to right a capsized boat of this type (often best obtained from coaches of the class concerned).
- methods for effective communication between patrol boats and also with the RO using VHF (especially when conditions make this difficult such as strong winds).

Size and Location of the Race Area
Racing in coastal waters and estuaries is often monitored by VHF on the main committee vesse itself. Inland races can be monitored perhaps from the club office with visual contact through a window. A means of communication with the safety fleet will still be required.

Number of Race Areas
The requirement for a centralised system of communication and coordination of cover is determined by the number of race areas. At a major event with multiple course areas the most efficient management of the safety systems will be effected through a centralised base. Again, this could be afloat, as in the case of an event safety leader on a boat, or ashore in an office. Communication from the safety fleets to the central base is usually via VHF radio but may also be made with mobile telephones.

When racing is on a single course it is often not necessary to have a base other than the RO or Safety Officer.

Mode of Assistance
Dinghies and boats that are likely to capsize are best assisted by RIBs or similar small boats. A patrol plan for the RIBs is essential to effect good safety monitoring and cover. This plan must be defined and understood by all safety crews to patrol effectively. Each safety boat will have designated area to patrol during the race and during transit of boats to and from the racing area. During the races safety boats will move to a pre-allotted patrol zone. Generally 1 or 2 boats would cover each leg of the course with overlapping areas around the marks. Boats should also be stationed at gybe marks as these are often problem areas. In the event of bad visibility, heavy sea, strong wind, etc, boats should also be stationed at the leeward aspect of the course to 'mop up' - this is especially important if the wind is offshore. If more safety boats are available some can have a roving role.

Patrol Boats
The number of patrol boats at an event depends on the competition level, age, ability and number of competitors, anticipated conditions, etc. There is no recommended ratio as there are too many variables to consider - so it's a matter of common sense and judgement. The patrol boats should be of a design and size appropriate to the task - RIBs are commonly used.

Patrol Boat Crews
All patrol boats should normally have a minimum of two adults aboard, one of whom must be competent and ready to enter the water to help rescue if necessary and to be dressed appropriately for that responsibility. It would be unusual to have more than three people aboard. It is essential that the boat carries enough fuel to cope with any emergency. The driver must use the kill cord at all times when under way.

Patrol Boat Equipment
Equipment should be carried by all patrol boats appropriate to the water on which racing is held - a harbour, offshore or an inland waterway. This may include: a fully functional VHF radio; a whistle

or fog horn; a compass; an anchor and warp suitable for the race area; a sharp knife (preferably serrated); a kill cord and an easily accessible spare; personal buoyancy for the crew (to be worn at all times); distinctive tape with which to identify abandoned boats; paddles and bailer; drinking water; a tow rope (preferably made of floating line) and towing bridle; distress flares; a waterproof first aid kit and survival bag or thermal protective aid.

The following equipment should also be carried by a proportion of the Patrol Boats on each course, the number being dependent on the size and type of event: wire cutters to cut away rigging and trapeze wires; a tool kit; a GPS; a torch; spare radios.

Mothership
In most instances the mothership is best anchored to leeward of the race area. The patrol boats will bring rescued boats and competitors to this boat, thus allowing the patrol boats to stay in the race area. The mothership may also have appropriate equipment to compliment that of the patrol boats. The competitors will be very happy if there is a toilet and the facility to serve hot drinks.

Emergency Guidelines
In the event of an emergency occurring (including severe injury to a sailor or event personnel or structural damage endangering the safety of a boat in the event), the first boat on the scene at a dinghy event, should inform all stations using a predetermined code (such as 'Code Red') and the location of the incident. The code itself is to be defined in the safety plan and emphasized at the briefings. An immediate assessment of the situation by the race officer is made and if appropriate the incident plan then becomes active.

If the situation is considered to be hazardous to the rest of the fleet the race officer may elect to stop racing by either shortening course or executing an abandonment as appropriate.

An emergency is only declared closed when the situation has been resolved. The race officer will only then inform all stations that 'Code Red' is cleared.

Ocean, Offshore and Yacht Racing Events

The basic concepts of safety remain the same as with dinghies and boards but there are other issues to take into account.

Size and location of the race area
Course areas are extended and may be out of sight of land. Offshore racing requires a 'base' that is responsible for monitoring the location and progress of those boats involved using all technology available - tracking devices and satellite communication systems when boats are likely to be far apart; VHF monitoring both by the competitors themselves and/or a 'base' when racing is likely to be relatively compact. The base will be either afloat, as in the case of a mothership, or on land. Whatever system is used it must have the ability to communicate with both the competitors and land based rescue services. Clearly this type of monitoring must exist at all times whilst racing is taking place so is likely to be a 24 hour watch from the start and until all boats have reached a harbour or other safe haven.

Mode of assistance
The delivery of assistance to competitors is determined by the types of boats racing. Large yachts are self sufficient to a certain extent until they require the services of specialist rescue services such as is offered by coastguard agencies. In the case of injury to competitors on such yachts, they are often safer and more comfortable remaining on the yacht than being transferred to another boat or RIB. Urgent attention is best effected by helicopter transfer.

Intention to Race and Declarations
This is a requirement of the SIs that enables the race officer to know who is on the water and who is on land or in harbour. Again, it is dependent on the type of boat involved. Yachts - common policy is a requirement that boats sail close to the main committee vessel in the pre-start period and call the race committee by VHF when retiring from a race or returning to harbour prematurely. Prompt submission of paper declarations after racing is a common addition in offshore racing.

Personnel
Fewer personnel are involved in safety for yacht and ocean racing. The skills of those involved are different, the main ability being communication and organisation - to alert the rescue services as is appropriate and coordinate activity where necessary whilst maintaining contact with the competitor and keeping them informed as to progress being made.

Equipment
The equipment required for ocean racing is limited to tracking devices, satellite communication systems and VHF radios. VHF radios and mobile telephones are necessary for inshore yacht racing.

Communication
Good communication is essential between all involved in any safety plan and, of course, the competitors themselves. Good briefings should be made by the race officer to the competitors before racing takes place. This is sometimes in the form of 'competitors' notes' when boats are not located in the same place and arrive at the race area form many different locations.

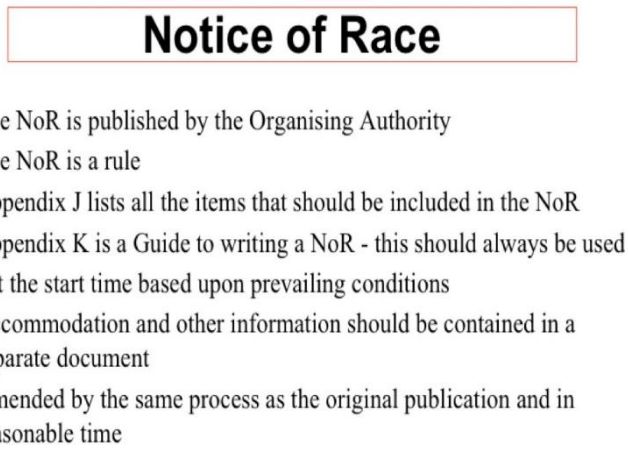
Emergency Guidelines
In the event of an emergency occurring, the competing yacht should inform all stations using a predetermined code (such as 'Code Red') with incident details including its location.

5.13 Notice of Race and Sailing Instructions

Notice of Race

The NoR is published by the Organising Authority and *shall* conform to RRS Appendix J1.

In legal terms, it is a formal offer of contract to a potential competitor with the conditions under which they will be allowed to participate in the regatta. The competitor must be assured that these conditions will not vary significantly and that participating in this regatta will not produce any conflict with World Sailing eligibility code.



Drafting the NoR must be done with great accuracy. Appendix J1 lists five items that *shall* appear in the NoR and a further fifteen which *shall* be included if it will help the competitor to decide to enter.

Appendix K is the 'NoR Guide'. It should be the basis of every NoR. Using it has two advantages:

1. The words used are those approved by the World Sailing Racing Rules Committee. This provides a standard terminology.

2. The Guide provides alternatives, that is, a 'pick and mix' system with marginal notes. This enables the Organising Authority to tailor the NoR to the event.

Because the NoR is a rule (see the Definitions in the RRS), it should not contain information about accommodation, the social programme, car parking, etc. This information is vital to competitors and should be published in a separate document.

The NoR can only be amended by using the same process as the original publication and in reasonable time. Any boats that have entered before the amendment must be notified directly.

Sailing Instructions

The SIs are published by the Race Committee and *shall* conform to RRS Appendix J2.

When writing the SIs reference to the NoR should be made. This will ensure that statements made in the NoR are compatible with the SIs.

The SIs are extremely important and must be prepared with great care. The effective operation of the regatta, the responsibility and authority of the officials, the link to the Racing Rules, and the Appeal Authority are all governed by these instructions. All officials associated with the actual conduct of the regatta must be thoroughly conversant with them.

Sailing Instructions
Published by Race Committee
Sailing Instructions are Rules
Appendix J lists all items that should be included in the SI
Appendix L is a guide to writing SI's
Appendix LE is downloadable from World Sailing
Appendix S has Standard Sailing Instructions
Amendments must be posted on Official Notice Board

Appendix J2 lists the nine items that all

SIs *shall* contain. There are a further 40 items which may apply depending on the regatta. If they do apply then they *shall* be included in the SIs.

Appendix L is the 'Sailing Instructions Guide' and should be the basis of all SIs. Using it has two advantages:

1. The words used are those approved by the World Sailing Racing Rules Committee. This provides a standard terminology.

2. The Guide provides alternatives, that is, a 'pick and mix' system with marginal notes. This enables the Race Committee to tailor the SIs to the event.

Appendix S is a "standard" set of SI containing nearly everything needed to run many Club and other smaller events and can be used as a template.

The standard instructions should be used unless there is good reason for deviating from them. Local harbour by-laws and Class Rules may have to be considered. The use of standard SIs is a valuable service to competitors worldwide, who should not then be confused by each Race Committee confronting them with its own version.

Send the draft to the Chair of the Jury or Protest Committee, for comment. Because this document describes the working method of the RC, it is essential that when the Jury check the document they check the language and its interpretation only and do not alter the working method.

For top-level regattas, there is an Appendix LE to be found on the World Sailing website. This is an expanded version of Appendix L containing provisions for even the largest and most complicated multi-class events. This version includes SIs for The Medal Race concept.

SIs may only be changed by following the process outlined in the RRS: in writing and posted on the Official Notice Board within the required time limits or verbally on the water according to procedures described in the SIs.

Relationship between Notice of Race and Sailing Instructions

These are preferably written together. If this is not feasible then write the SIs with a copy of the NoR in front of you. Always have Appendices K, L and S for reference. The NoR is always published first. Copies of NoR and SIs shall be be posted on the Official Notice Board (ONB) and may be made available at registration (*To avoid wasting paper and duplication events are often now advising competitors to download and print their requirements prior to the event*). The NoR and SIs are part of the Rules. Any conflict between NoR and SIs is dealt with by RRS 63.7 when the protest committee applies the fairest interpretation of the conflict.

Changing Rules within the RRS

A Member National Authority (the RYA in the UK) may change some rules within the RRS if considered appropriate (subject to the RRS allowing this - some rules cannot be changed). These are known as Prescriptions and they apply to any event organised by that Organising Authority or an authority affiliated to that MNA. Prescriptions can be changed by the SIs unless ISAF have given authority that they cannot be changed, as is the case in the UK with the RYA Prescriptions.

Both NoR and SIs may change some racing rules (in the RRS). Rules that cannot be changed are rules listed in 86.1(a), rule 76.1, 76.2 and Appendix R. Changes are made by referring specifically to the rule and stating the change. The words used to state the change are important: do not say ‘Amend’, ‘Vary’, ‘Add’ etc, but always say 'Change' (e.g. "……..This changes RRS 40."). It is a good idea to highlight those rules that cannot be changed in your RRS book for reference whilst writing your NoR andSIs.

Without changing the RRS, SIs may:

(a) vary the interval between the warning and preparatory signals (RRS 26);
(b) permit the use of an engine (RRS 42.3(i)); implement the use of penalties other than turns (RRS 44.1);
(c) vary the Protest Time Limit (RRS 61.3);
(d) deny the right to appeal against Protest Committee decisions if this is also stated in the Notice of Race (RRS 70.5);
(e) vary the number of discards in a series (RRS A2).

Class Rules may change only rules 42, 49, 50, 51, 52, 53 and 54.

6. PREPARING TO RUN RACING

6.1 Working Plan

Most ROs develop a working plan without realising that they have done so. When a team of people operate together over a number of years at major events, many of the actions become automatic. They have worked together so often that they can predict the ROs requests and are in position ready to carry out the request as soon as it is received.

Race Team Daily Timetable

– 0815 Meet at Race Office
– 0830 Race Officers Conference with;
Assistant Race Officer; Safety Officer; Mark Layers; Organising Secretary
– 0845 Competitor briefing
– 0900 Race Committee go afloat
– 0930 Commence wind checks
– 1030 Commence laying the course
– 1100 START
FINISH - patrol boats return when the fleet is safely ashore

Be clear what your parameters are for the conditions to be suitable for racing. It is the extremities that create most problems. Is there enough wind? Is there too much wind? With the class representative if possible, define in your mind the upper and lower wind strengths that allow racing for the class involved. The type of boat, the age and fitness of the crew will have a bearing on the answers to these questions. Is the wind stable enough in direction?

There are many ways of setting the course - your race management team will get to know your preferred method. Be very clear as to who does what in your race management team. Once delegated, let them get on with the job and only step in if you see a major error about to occur.

Ensure that your team are aware of the need for punctuality and your daily timetable, the requirements and timings of which will vary considerably from venue to venue. For example the difference in timings required for an event run from a marina with all its facilities and a beach launched venue can vary tremendously. The deadline is the start of the race and the whole timetable has to be arranged so that this deadline can be met without undue pressure on the race committee. A Postponement because the race committee is not ready is not acceptable!

Operating at a venue outside of your own club brings more challenges. The RO, appointed to an event at a venue they has not used before, has several factors to be aware of:

- There will be someone at that club who feels that they should have been appointed as the RO. Therefore the first skill required is one of diplomacy and team building.
- The race management team will not be aware of the skill level or the working method of the incoming RO.
- The visiting RO will not have the local knowledge that is essential to the success of any event.

The visiting RO will need to adapt their working method to suit the skill level of the local race management team while also gaining as much information about the local conditions as possible.

6.2 Consistency

The RO must make every effort to have consistency during the whole regatta or series. Once you become predictable, as far as the fleet are concerned, the management will become easier and the sailors are less likely to become frustrated.

The following issues should be taken into consideration:

- When races are delayed
- OCS vs General Recall
- Starting penalties
- Length of starting line and finishing line
- Course configuration and procedures for setting the course

6.3 Race Management Briefings

At any event the RO should have a briefing with their team.

In multi course events the PRO should have a pre-regatta meeting with the RO's (and their deputies) to discuss the logistics of the regatta, responsibilities and the line of communications between those concerned.

Each Course RO should then have a team meeting with his/her race officials to confirm each person's responsibilities and answer any of their questions. This meeting should cover all aspects of the event, the policies to be followed and the procedures involved. The aim is for each person to know clearly their own role and who is responsible for all required duties. At this meeting emphasis on timekeeping is essential - it only requires one person to be late and the whole timetable can be delayed. This is unacceptable.

The Principal Race Officer and, in a multi-course regatta, the Course ROs, should also have a meeting with the Chair of the Protest Committee. At this meeting the ROs will outline the mode of operation and how they intend to run the Regatta. Interpretation of the SIs should be clarified. Provided that there has been consultation on the SIs with the Chair of the Protest Committee beforehand, there should be no problems in this area. It is important to try to avoid amendments to the SIs unless absolutely necessary.

6.4 Competitors' Briefing

A briefing for keelboat racing with competitors is not common and is often replaced by 'notes to competitors'. These should cover the same issues as would be covered at a competitors' briefing. For many smaller regattas of any type briefings are not always considered necessary. However, a meeting can be very helpful in building up contact between the RO and the competitors. A briefing is the one occasion when the competitors can put a face to the RO.

A competitors' briefing, particularly with reference to local conditions of wind and tide, can neutralise the advantage gained by local competitors. The briefing usually precedes the practice race or the first race and may be undertaken either by the Chair of the Race Committee (or Event Director) or by the PRO/RO. Subjects which may be covered include:

- a friendly word of welcome (if there has not been a formal opening ceremony)
- an introduction to key officials
- an identification of main shore locations (Race Office, Protest Room, etc.)

- location of the Official Notice Board
- identification of committee vessels, marks, etc
- Weather
- hazards and prohibited areas
- the course area and the time taken to sail to the race area from the marina or beach
- food arrangements
- social arrangements
- prize giving
- specific rules of the host club.

The meeting has no authority in terms of the rules and the SIs. There is a responsibility upon the official conducting the briefing to exercise great caution not to mislead - the same can be said of 'Competitors Notes' often used in keelboat racing. Best practice requires a competitor with a query on the SIs to present the question in writing. The signed written answer is then placed upon the official notice board. This approach allows everyone to read the question and the answer.

Take care not to fall into the trap of saying something that could be misinterpreted. Do not make oral changes to the SIs. See RRS 90.2(c).

Avoid giving grounds for a 'request for redress'. Be confident and project your voice!

6.5 Safety Briefing

Whilst the RO is responsible for safety it is common practice for the safety officer to lead this briefing, but always with the RO present. The implications for safety in keelboat racing are very different as there is a much greater onus on the skipper of each boat and they are much less likely to capsize. So the safety briefing is usually restricted to dinghy and board events. The content of a safety briefing should cover the following issues:

- introductions of the RO and other key people.
- Weather
- any local hazards.
- the ability of the competitors racing.
- the tally system in place.
- the system used to identify boats that have had their crews removed such as marking the dinghy or board with streamers.
- the location of the mothership if one is available.
- the contingency plans for a change in conditions including the onset of fog and the use of GPS.
- the methods for dealing with injuries and medical emergencies.
- the location for landing injuries and medical emergencies.
- the method to be used to patrol effectively whilst sailing out to the race area, during the race and whilst returning to shore.
- the policy for dealing with capsizes and when to intervene.
- the correct method of righting a capsized boat of the type this safety team is responsible for (and those on other course areas if appropriate).
- the VHF channel to be used and backup channels should the main one become blocked.
- the correct method for using a VHF particularly when conditions are poor with strong winds.
- the definition of when and what to transmit on the VHF particularly if there is only one channel for the course area concerned - no chatter particularly during the start sequence.
- the policy for standing down at the end of the day.
- the times of daily briefings and debriefings.
- the collection and distribution of refreshments to take out on the water

6.6 Decision to Race

If it is possible to race with the wind at the time then racing should commence. It is unfair to some competitors to wait for 'better' conditions. Most boats can sail well enough to race in 4 knots of wind and start to get into trouble in winds of 25 knots or more. There are, of course, exceptions to this. Tide and current will influence bottom end wind speeds in that in strong currents a higher wind speed is necessary to achieve fair racing.

In general, it is not considered to be best practice to run racing ahead of schedule. When it is believed that the weather will be unsailable the next day, heavy wind sailors may be disadvantaged should racing be possible. For similar reasons racing should not be postponed for the day too early.

Windsurfers often have guidelines on how many races can be sailed back to back. Particularly in light winds, windsurfing is a tough sport requiring very high levels of fitness and endurance.

Don't be afraid to start in shifty conditions. This is part of racing and the sailors enjoy it. Be aware, however, that if the course becomes unmanageable once started, abandonment or shortening course are tools to be used to ensure fairness.

7. COMMUNICATION

Apart from Competitors' Briefings and the Official Notice Board race management teams communicate with sailors by various means, both official and unofficial, as far as the SIs are concerned.

Official communication on the water is made predominantly by the use of signals and, in the case of many keelboats, VHF transmissions. Visual signals may be made using a flag or other object of similar appearance.

The 'signal', when given as a visual signal accompanied by a sound signal, is the most common method of communicating with competitors. In these instances, the visual signal is the dominant component and the sound signal simply attracts attention to the flag or other object being displayed. So, according to the rules, if a sound signal is absent or late the signal remains valid. There is one exception to this, however, and that is an Individual Recall when 'X' must be displayed with an accompanying sound signal (both promptly) to retain validity.

Ashore, additional information can be given to sailors through a conventional public address system; afloat, through VHF or a loudhailer system from the main committee vessel.

Only when the SIs describe the procedure involved can SIs be amended verbally when afloat.

7.1 Visual Signals

The word flag in this section is synonymous with an object of similar appearance.

It is important to understand how the signalling system operates - it is inherited from the navies of the world. A signal flag when displayed tells you what is going to happen. When it is removed (the executive signal), the fleet carry out the order. The signal must be displayed on time. Two good options include: have the flags on bungee (rubber cord) and tensioned, so that when released they appear at the yardarm instantly; have the flags on stick/poles when, even in heavy conditions, they can be handled by one person and be displayed quickly.

The dimensions of the flag are determined mainly by the position of the flag pole ashore and the size of the fleet when afloat - competitors must be able to identify the flag displayed from a reasonable distance. A flag is displayed when it first becomes conspicuous, so not necessarily when it reaches the top of the hoist.

The sound signal is made to draw attention to the visual signal. The visual signal is the governing signal.

Ashore

Flag L has a specific meaning in the RRS Race Signals when displayed ashore with one sound (see Race Signals 'L'):

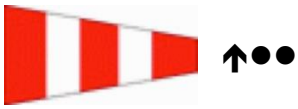
"A notice to competitors has been posted." This is often an amendment to the SIs but does not have to be - it could be an official notice of another kind.

Flag 'L' is removed *without a sound signal* when the displayed notice has become effective. This is at the start of the scheduled race it affects. So for amendments to the SIs, 'L' is removed at the Warning signal of the first race to which the change first applies.

Postponement and abandonment signals can be used ashore as per the Race Signals of the RRS. It is also common practice to include in the SIs other 'Signals Made Ashore', as can be seen in Appendix L Section 4.

In Race Signals it is stated that the warning signal will be made 1 minute after removal of AP. When it is desirable to allow more time for boats to leave the harbour to reach the race area after a postponement, the following alternative SIs from Appendix L are commonly used:

"When flag AP is displayed ashore, '1 minute' is replaced with 'not less than _____ minutes' in the race signal AP. This changes AP in Race Signals". This then allows the timing between removal of AP and the warning signal to be increased.



OR

Flag D with a sound means 'The warning signal will be made not less than _____ minutes after flag D is displayed [Boats are requested not to leave the harbour until this signal is made].

It is also often desirable to ask competitors to wear personal buoyancy whilst afloat rather than just when racing in which case a sailing instruction can be issued:

"When flag Y is displayed ashore, rule 40 applies at all times while afloat.

Afloat

Flags should be 3' x 2' if they are to comply with the World Sailing standard but it is reasonable for committee vessels to display flags of 30" x 20". Using flags any smaller than this introduces a risk that the competitors will be unable to identify the flags displayed.

The majority of these signals are covered in the following sections according to their usage. However, Flag L when displayed afloat has a different meaning to when displayed ashore:

Come within hail or 'follow this vessel'.

This is a very useful signal used to lead the fleet to a better area for racing or to enable the race officer to talk to the fleet. It is good practice to emphasise that a new course is to be used when another has been used for the entire regatta beforehand (e.g., changing the course from a two-lap race to three laps) when simply changing the course displayed, whilst within the rules, may not be noticed by many.

7.2 Course Boards

Course boards and all other signals given as written information, such as lists of boats scored BFD after a general recall under a black flag, must be visible to the competitors from a reasonable distance away from the committee vessel. It is a good idea to ask a mark layer or judge to determine from how far away the signal is still legible. Take a photograph of what has been written for use at Redress Hearings.

7.3 VHF

The radio operator must have a VHF licence and adhere to the regulations and procedures imposed by that licence. It is acceptable for such a person to delegate this role to another unlicensed individual but this must be undertaken with supervision.

It is important that, if this method of communication is to be used in race management at an event, the competitors are advised of this in the NoR (together with a list of the channels required) and the channel used is defined in the SIs.

Race Committees must be aware that other committees may be racing in the same area and that cooperation will be advantageous, including low power transmission whenever possible. In order to avoid confusion, and in order to comply with the regulations of Ofcom, all transmissions must be preceded by the call sign of the committee concerned.

All transmissions should be clear and kept to a minimum. So it is advisable to state clearly in the SIs when courses will be announced, use the phonetic alphabet for course abbreviations and do not talk unnecessarily. It is still possible to remain 'competitor-friendly' without blocking the airwaves with unnecessary chatter.

Finally, remember that communication by VHF is often most difficult when the conditions are difficult with strong winds. Techniques for abolishing wind noise are very important in these situations - face downwind, shield the microphone from wind and avoid shouting. Inserting the VHF into a plastic bag will also help reduce wind noise as do headsets. This also applies to communication between members of the race management and safety teams in dinghy and board racing.

8. COURSES

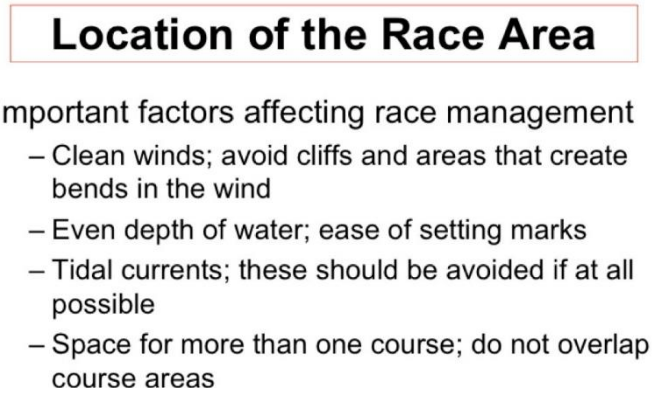
8.1 Location

The course location should be selected to give as fair conditions as possible within the locality having regard for tidal currents, vagaries of wind caused by headlands and buildings, and shallows. However, it is commonplace in keelboat racing to introduce challenges of navigation and varying tide in which case this approach does not hold.

When racing is to take place around fixed harbour buoys or landmarks as in keelboat/cruiser racing, the positions of starting and finishing lines may vary depending on the wind direction.

Some clubs have a designated race area with the result that the Club's RO will always set his course in the same area.

In enclosed waters, the course shape will reveal how much flexibility the RO has in placing its position with regard to the wind direction. It may also indicate to them that a starboard hand course is necessary, although a port hand course is always preferred to avoid issues at the windward mark. In open water, the procedure is simpler.



The use of GPS has simplified the laying of marks, however, care has to be taken when transmitting GPS data on the radio.

8.2 Course Geometry

In the past courses usually provide a combination of beating, reaching and running - each leg testing particular tactical and boat handling skills. Recent developments have shown a preference by many classes for windward-leeward courses removing the long reaching legs where passing opportunities are difficult to find. Exceptions are long-distance passage races, where often changes in weather provide the variations desired.

Some courses have no regular geometry. Race Committees often use harbour beacons and other permanent 'special racing marks' as a convenience and some races use geographical features such as islands.

Before deciding on the course geometry, the RO and the Race Committee should liaise very closely with the Class Association. The officials of the Class will be more familiar with the characteristics of the boat and what type of course geometry is most suitable for their event.

A good RO will not impose his will on the class but should be able to advise them of the effect course selection will have on efficient race management. Knowledge of local conditions which can have an adverse effect on the efficient running of the event should be brought to the attention of the class association at an early stage of the planning.

Whatever the course configuration, convention and common sense should play a part in the course selection. Courses should be consistent and not complicated. Port-hand roundings are preferred at a windward mark because the right-of-way boat does not have to tack at the mark. Therefore, for

many events where there are no geographical constraints, a port hand course is always used (except in match racing, where the organizers look for maximum tactical complexity, and therefore prescribe starboard roundings). Looping around marks should be avoided.

On a beat a fleet tends to spread out - the leading boats have clear air and less interference from other boats. On a run the leading boats may be blanketed and the fleet closes up. Because of this and because an upwind start is the fairest, a race should start with a beat or have a beating leg as soon as possible after the start.

The selection of the type of course to be used for a regatta, and indeed for a particular race within a series, will depend upon such factors as the area of water available, the anticipated wind strength and the speed of the competing boats around the course. Class rules for certain events may prescribe the configuration of the course.

Reference Point

This is usually taken as either the Committee Vessel itself or a laid leeward mark, usually the right-hand gate mark if used, 0.05nm up from the centre of the start line. The Mark layers use this point to lay other marks of the course having been given distance and bearing instructions from the Race Team for the Windward Mark. There are sets of ready reckoner tables available providing bearings to marks for different courses at the following link:

Resource Centre; Trapezoid Reference Tables

Any change of course is done with marks being “rotated” round the Reference Point. The use of GPS must be well understood by the Mark Layers. The following points from the above link should be noted with respect to the reference point system:

- The centre of the mark 4 gate is the REFERENCE POINT for all mark laying
- The REFERENCE POINT is 0.05 nautical miles (nm) to windward of the centre of the start line
- The REFERENCE POINT does not change during a race, all changes of course are rotated on the REFERENCE POINT
- The length of the first reaching leg (mark 1 to 2) is two thirds of the windward leg distance
- The distance from the mark 3 gate to the finish is 0.15 nm
- Start line lengths depend on number of starters, length of boat and conditions
- Distance between gate marks depends on length of boat and conditions
- Start line lengths and gate mark distances can be increased slightly in stronger winds
- Finish line length is 60 metres
- Course angles
    - Spinnaker boats (e.g.420 & 470) have an internal angle at the windward mark of 60 degrees
    - Non spinnaker boats (e.g. Laser, Laser Radial, RSX, Finn) have an internal angle at the windward mark of 70 degrees

Target Times

It is very common for class associations and Organising Authorities to request a certain number of races a day each taking a prescribed length of time. There are a number of tables available in the RYA Race Officials Resources Centre of the website using the following link:

Race Officials Data References, and see Guidance Notes on next page.

Included are Speed Charts for IRC rated boats, Day boats, dinghies and boards (covering both Olympic and RYA Youth/Junior Classes). With the help of these tables a Race Officer can run racing very close to the prescribed times. This information can also be used to determine approximate speed data for other classes using their relative Portsmouth Yardstick numbers.

RYA GUIDANCE

Speed Charts - Using and Customising

On the Resources/Data Reference area for Race Officials on the RYA website are a number of spreadsheets to aid Race Officers and Mark Layers in Setting course size to achieve an agreed race "Target Time". Initially created to cover the Olympic Classes during the lead in to the 2012 Olympics, these have been regularly updated over the years to revise the data and more recently expanded include the Current Olympic Classes. Although the speeds for a number of the classes have been updated over the years based upon user feedback, additional feedback is always welcome. Details on who to send feedback to is included within the header page on the spreadsheet.

More recently, additional spreadsheets have been added to the website that cover the prevalent UK Junior and Youth Classes and the likely course configurations used at major regattas. These include the standard Windward/Leeward and Trapezoid courses. For the Trapezoid configuration, there are both the traditional (Olympic) form using a separate finish vessel and an IX/OX form (which uses a Mark 5 and committee vessel finish). If an OX/IX course configuration is used and an internal angle less than 80^0, the outer loop will become shorter than the inner one. Allowance has been made within the IX/OX spreadsheets for classes where an internal angle different to 80^0 has been assumed. This is provided as an additional item of mark laying data, where the leeward mark on the inner loop is offset to windward of the reference point. For full details, refer to the individual charts, where a short explanation is provided. If required, a user may always adjust the offset by choosing a different scaling factor to account for the required internal angle.

One thing to remember when using the charts is that they are only a guide. Local conditions can have an impact on the actual race duration. The main factors that can affect race duration are tide and wave action, especially for shorter and slower boats. For example the upwind VMG in light winds is relatively low and so a tidal current of 1 knot and greater can stop a slow boat such as an Optimist from sailing upwind in 5 knots and less. Even when the wind speed is up to 8 knots, the VMG upwind is considerably slowed and the course size would have to be reduced to compensate. Again, this can be modelled within a spreadsheet, but is outside of the scope of this guidance note. In inland waters and confined estuaries, wave action will have less of an effect than on the open sea and so course sizes may need to be increased at higher wind speeds (>15 knots) compared to the charts as the VMG is higher due to a shorter distance sailed (especially true for classes such as the Optimist).

Using the charts for different classes

Although the published Speed Charts are for a limited number of classes charts for other classes may be easily created using an adjustment based upon published RYA Portsmouth Yardsticks or PY's. Any such chart should be able to provide an indication of course size to within 5% under most wind conditions.

One potential method of using the PY is to choose a documented class of boat similar to that required for course setting at a specific regatta. For example:

(a) Una Rigged boat (like Optimist, Topper or Laser)
(b) Two sailed monohull (no documented example but decide if it similar to say a Laser or 420)

(c) Spinnaker monohull (like a 420 or 470)
(d) Skiff Asymmetric (like a 29er or 49er)
(e) Sailboard (like Tecno or RSX)
(f) Catamaran (like Spitfire or Nacra 17)
(g) Keelboat (like IRC)

In all cases attempt to use a boat that is closest in PY or rating as that will give you the best overall result. Select the spreadsheet with the most appropriate Class from those published. Now assuming that the course configuration is the same as that required (see next section if not), the individual speeds (Upwind, downwind and reach) need to be adjusted for the PY of the boat in use. Initially copy the "published" boat speeds for each wind range into new cells of the "Speeds" tab. Enter the "New" and "Published" boat PY's as two new cells along with a label showing the boat class alongside. Then, using the following formula, adjust the boat speeds for each wind range in the existing "published speed" cells:

New Speed = Published Speed x (PY of New boat)/(PY of published boat).

Different course configurations

Should the course configuration at an event be different to those used in the published data, existing sheets can be copied and then amended to calculate course sizes. Using combinations of the Upwind, downwind and reaching speeds, a new course configuration may relatively easily be accommodated and times around the course generated. Although this does require an element of spreadsheet knowledge, the method has the capability to cope with many different course configurations, to suit the needs of the event that you are running. A sample spreadsheet "PY Adjusted Trial" has been created to demonstrate the principles and this will be located with the other Speed Charts in the Data Reference Section of the Resource Area (see the link at the beginning of this document)

Smoothing the data

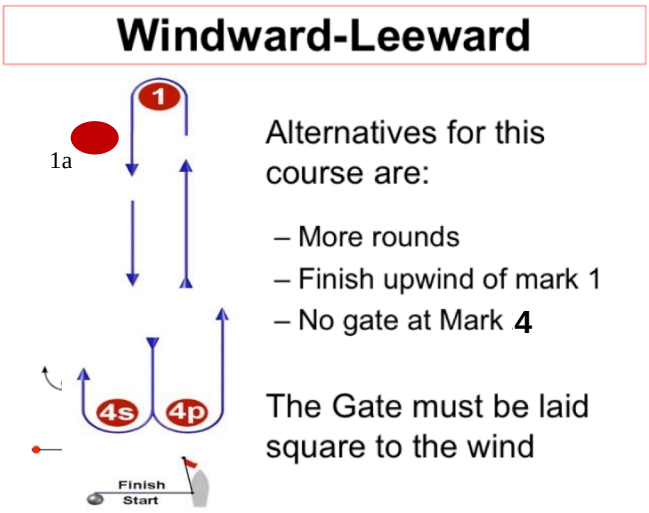
The basic data for a specific target time can also be used to produce a graph of Course size vs wind speed. Using the smoothing function of most spreadsheet packages a smooth graph may be plotted enabling an easier view of the course size for a specific wind. An example of such a graph is included in the sample spreadsheet, although this does not include all of the calculations required.

Times to Marks

The data available as upwind downwind and reaching speeds can also be used to calculate the time it will take a boat to arrive at a specific mark. The calculations required for this, are very specific to both the course configuration and the target time used and the specific boat speed at different wind strengths. An approximation has been used to good effect by using the boat speeds in the range of 8 to 12 knots and 15+ knots as two alternative scenarios. The upwind and downwind speed ratios are quite different at these two wind speeds leading to a good approximation of when a boat might arrive at a specific mark under most wind conditions. Once the time has been calculated a recording sheet may be generated which has the target time and allows for data to be recorded relative to the wind speed and course size set. An example recording sheet is included in the sample chart spreadsheet "PY Adjusted Trial" mentioned above, although this does not include all of the calculations required.

8.3 Windward-Leeward

This is the simplest of courses to set and is used for all types of boat. If there is a large fleet, then an additional mark is required, so that mark 4 can become a gate. A gate gives competitors additional decisions to make by providing the opportunity to choose which side of the next beat to use without having to cross boats running downwind with spinnakers. Mark 1a can also be used as an offset and for safety.

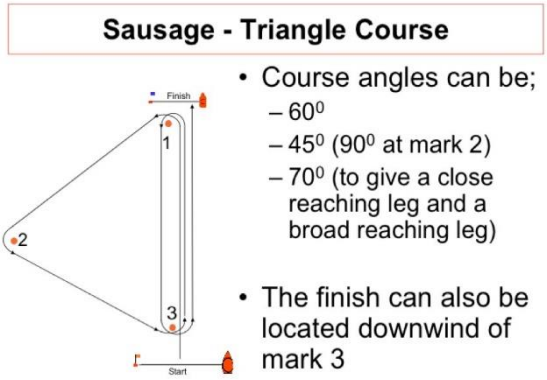


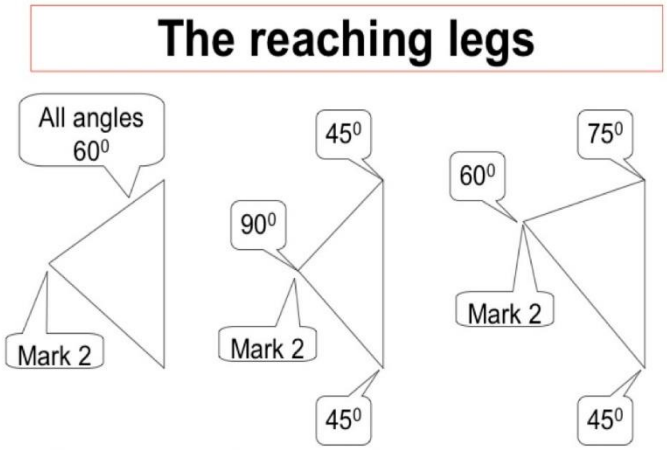
The most usual position for the start line is immediately downwind of mark 4. Some 50 metres is sufficient distance, although 0.05nm (100m) is 11for the reference point tables.

Because the windward-leeward course is frequently used when more than one race per day is scheduled, the start line, reduced in length, becomes the finish line. Some classes vary this by moving the finish line 50 metres upwind of mark 1 for the last race of the day if the windward aspect of the course is close to home.

8.4 Sausage Triangle

This was always known as the 'Olympic' course. The sausage triangle, as it was known, is no longer used in the Olympics because in the context of that Regatta it is no longer an efficient use of resources and time. However, when there is a one class Championship, and the class require reaching legs, then this should be the preferred course. It has the advantage that when mark 2, the gybe mark, is positioned correctly it can give a variety of reaching angles.





The advantage of the triangle is the variety of course angles for the reaching legs

As far as the reaching legs are concerned, some classes prefer an equilateral triangle, giving 60^0 at all marks. Other classes prefer a slightly broader reach and so they have 45^0 between marks 1 and 2 and 90^0 at mark 2. Finally, there are those classes who would like a close reaching leg and a broad reaching leg. This is best achieved by having 70^0 at mark 1, thus giving a close reach from mark 1 to mark 2 and a broad reach between marks 2 and 3.

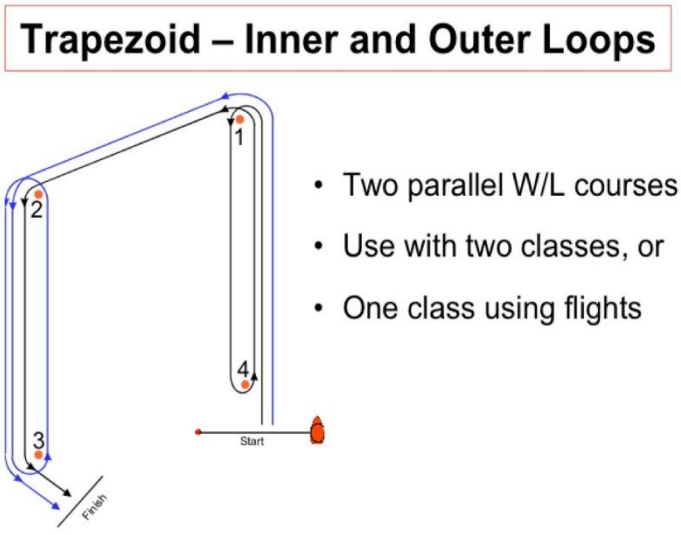
In the initial negotiations, the advice of the class association should be sought as to the most suitable reaching angle for the particular class of boat. The windward-leeward leg covers the other two aspects of racing, the beat to windward and the downwind run.

The most usual position for the start line is immediately downwind of mark 3. Some 100 metres is sufficient distance. Some race committees have set the start line upwind of mark 3. Care should be taken when doing this that there is sufficient distance between the start line and the windward mark to allow the fleet to spread out before reaching mark 1.

The traditional place for the finish line in this course is approximately 50 metres upwind of the windward mark. This allows the fleet to finish on a windward leg and usually makes for easier recording of finishing places on the committee vessel. However, this is not the best place if more than one race per day is to be sailed back-to-back. It creates a delay while the fleet returns to the starting area. To overcome this, the start line is reduced in length, and becomes the finishing line.

Trapezoid

The trapezoid is two windward-leeward courses parallel to each other. It is designed to accommodate two different classes, or flights of the same class on the same course, using the same start and finish lines. The reaching leg between marks 1 and 2 is a 'spacer' between the Inner and Outer Loops. It is usually $^2/_3$ of the distance of the windward legs. The trapezoid requires a greater area of water than the other courses.



It is the most difficult course to set and adjust to a new wind after the race has started. Getting the course length correct, particularly when there are two classes with different boat speeds, is essential, otherwise a faster class can quite easily catch up the slower class.

Another disadvantage of this type of course is that there are times when the wind on the inner loop and the wind on the outer loop differs in strength and/or direction.

Gates are usual at marks 3 and 4. An offset mark is sometimes used at the windward end of the inner loop but this is not usually necessary on the outer loop (as the boats will have already sailed two beats, a run and a reach before reaching this point with separation already achieved). The most usual position for the start line is immediately downwind of mark 4 - 100 metres is sufficient distance. The finishing line is set on a reach from mark 3 to the finish.

If resources allow, it is better to have two course areas (and race committees) sailing windward-leeward courses than one race committee with two classes sailing a trapezoid.

8.5 Round the Cans

Commonly used for keel-boats these courses attempt to emulate the laid courses above but using fixed marks. More varied racing can be provided with no additional resource requirement. Clearly the course will be constrained by the available positions of marks. Laid marks are commonly used in addition to the fixed marks so as to minimise this constraint. A good course will not include too much reaching for handicap racing as this will give an advantage to those boats with the longer waterline length. IRC ratings are based on an assumption that boats will sail at least 50% of the course beating.

Coastal Courses

These courses often provide a challenge to both to sailors and the Race Team. Issues such a tide times and tidal gates can become important and calculating when boats with different speeds might arrive at certain points on the course in the prevailing wind conditions is essential. Having access to good charts and tidal information is necessary.

8.6 The Windward Leg

This is common to all the courses described earlier (the windward-leeward, the sausage triangle and the trapezoid).

The quickest and most efficient way of placing the windward mark (mark 1) in its correct position is as follows:

1. Anchor the committee vessel

2. Mark 1 mark layer comes alongside and using the GPS in his boat, marks the committee vessel position. This is retained throughout the day unless the committee vessel is moved.

3. The mark layer then proceeds on the compass bearing and distance from either the reference point or the committee vessel, whichever method is used, using the GPS, until he reaches the required position.

4. At this point the mark layer ‘holds station’, that is, does not anchor nor place the mark in the water until requested to lay the mark.

5. In this period they will be sending reports of any variations in wind direction and strength back to the RO.

Getting the leg length correct is important and requires several factors to be taken into account:

- Race duration – many SIs now have a target time for the first boat to finish the race. Calculating how long the legs need to be to achieve this target time is of prime importance.

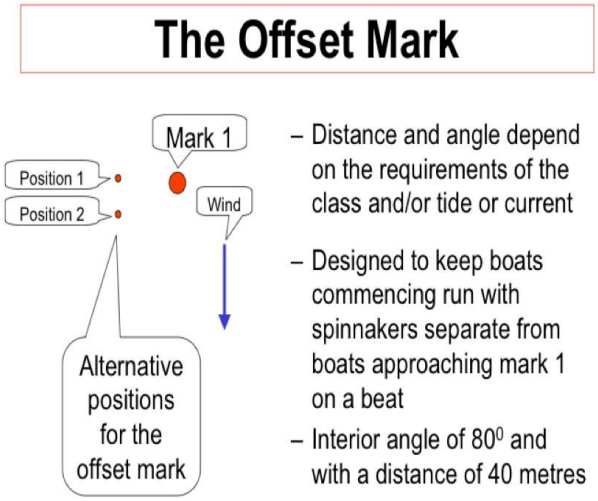
- Boat speed in different wind and wave conditions.

- The good RO will always keep a record of wind speeds, time on each leg of the course, for each of the classes he works with. This bank of information is invaluable in being able to achieve the correct size of course.

To aid all race officers and especially those with limited experience of a wide range of classes, speed data is available on the Race Officials section of the RYA website. Information is provided on the Olympic and common Junior and Youth classes in use in the UK. This information can also be used to determine approximate speed data for other classes using their relative Portsmouth Yardstick numbers.

8.7 Off-Set Mark

This is the term applied to a mark (mark 1A) which is usually set 40 metres on the port side of the windward mark (mark 1). It is designed to take the fleet away from mark 1 before the boats set off on the run and hoist spinnakers. Its location in terms of distance and angle from mark 1 are very class specific and the advice of the class should be sought. The mark is usually smaller than mark 1 - a dan buoy is frequently used. However, if both Mark 1 and the offset mark are the same size and shape, then a quick adjustment of the downwind leg can be made by moving one of the marks only.



8.8 The Downwind Leg

The accuracy of this leg to the wind is important. To give boats the opportunity to sail down wind tactically and have the chance of passing other boats, the ability to carry spinnakers on either gybe is essential.

This can only be achieved if the downwind leg is within 5° of the wind direction (sailing wind). Anything greater will cause all the boats to sail predominately on the same gybe and reduce passing opportunities dramatically. This is particularly true with increasing wind speeds when boats will sail much deeper.

Gates

A gate is usually set at the leeward mark. The width of the gate will depend on the zone, the size of the boats, their speed and the sea conditions. The zone is 3 boat lengths so the minimum width should be seven boat lengths, thus allowing one boat length between each of the three boat length zones round each mark. The maximum recommended width is 10 boat lengths. It is normal practice to make the gate between 8 and 10 boat lengths in this situation. The gate should see a 50:50 split in the fleet rounding either mark. This is usually achieved by setting the gate at right angles to the *sailing wind* (see below).

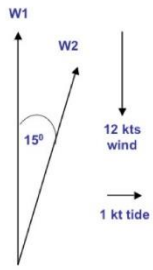
8.9 Tidal Compensation

Fortunately many venues do not have this problem. However, it is essential that ROs understand the issues created by tidal currents within the course area. The guidance offered here is very much a rough guide, a 'rule of thumb', to adjusting the course to compensate for a tidal current. The reason why it is only a rough guide is that no two venues are the same. Sometimes the start can be in an area with very little current but the windward mark may be exactly opposite with anything up to 4 or 5 knots of current.

Tidal Compensation - Windward Leg

A rule of thumb guide is:

- in >10kts wind, for every knot of tide set the windward mark downtide 15^0
- in <8kts wind, the offset is 20^0 or more
- for tides diagonal to the wind, halve the allowance
- for 2kts tide double the allowance

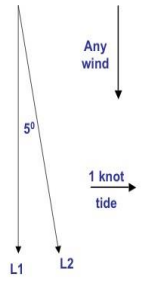


In some areas trying to work out the compensation is extremely difficult. For winds of 10 knots or more with a 1 knot tide at 90^0 to the wind, set the windward mark downtide by approximately 15^o. With winds of 8 knots or less then the offset should be 20^0 or more. As far as the leeward mark is concerned, the offset for all winds is approximately 5°. For tides diagonal to the wind, halve the allowance and for tide of 2 knots double the offset.

Tidal Compensation - Leeward Leg

The adjustment of the running leg to the tide is critical for a good race

No matter what the wind strength, set the leeward mark 5^o downtide of the ground wind



8.10 Assessing the Tide and the 'Sailing Wind'

There are methods to assess the tide which influences the 'Ground Wind' and produces the 'Sailing Wind'. Ground Wind is that experience by an object that is fixed to the earth, such as an anchored committee vessel. Sailing Wind is the wind experienced by a free-floating object or boat. Apart from 'guesstimating' the sailing wind it can be more accurately assessed by:

1. the wind as measured by a RIB that is completely stationary in the water (engine off) but floating with the tide.

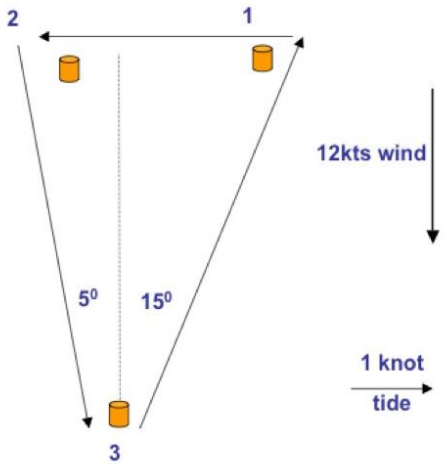
2. observe boats sailing close hauled upwind of the start line and assess the wind angle they sail in - they are sailing to the Sailing Wind. This is a method that requires experience and practice.

3. Send a RIB, at the speed the boats are sailing at, along the bearing of the ground wind and this will give the overall angle of the Sailing Wind for that leg (as the drift will usually vary over its length).

8.11 Compromise for Tide

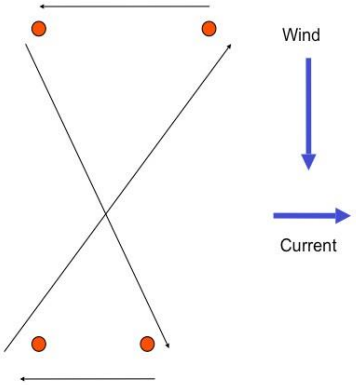
Unfortunately, when there is a cross-course current, it is impossible to set perfect beats and runs when only using two marks on a windward-leeward course. The RO has to make compromises:

1. On a windward-leeward course using 2 marks the best compromise is to set the course on the Sailing Wind. In this situation the course will be equally skewed upwind and downwind with boats spending 60 seconds on the long tack/gybe and 26 seconds (43%) on the short tack/gybe.



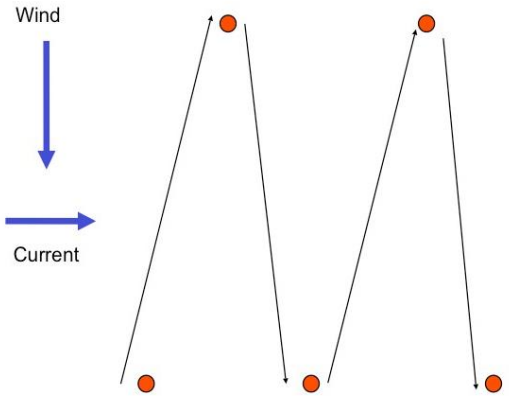
2. By using a third mark on a windward/leeward course (ie including an offset mark) an increase in the distance between the windward mark and the offset mark will result in a perfect beat and a perfect run. The leg between the windward mark and the offset mark in this situation may be referred to as a 'tidal correction leg'. The limitation of this manoeuvre is that it will only work if the tide is flowing from left to right across the course. When in the opposite direction starboard roundings at the marks are required. This is unpopular with some classes who would prefer option 1 above.

3. When more marks are available the X course can be used:

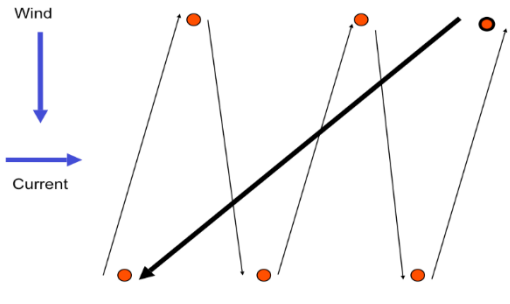


The 'X' course

4. When the course is set over a very large area as is often the case in keelboat racing, a further technique can be used, often referred to as a 'Tidal Cascade'. Note that all the upwind legs are parallel to each other as are the downwind legs. The downwind legs have the appropriate tidal offset as do the upwind legs. When using laid marks rather than fixed or permanent special marks, this course requires an extremely skilful mark laying team. One advantage is that each mark can be laid just before the fleet arrive at the previous mark. This will allow the RO to calculate the tidal strength and the wind strength accurately for each leg of the course.



The 'zigzag' course



If the boats need to be returned to the area of the start for finishing or to have a second lap, a tidal correction leg has to be used again. Rather than use a white sail reach for the tidal correction leg as in 2 above, a downwind (shy spinnaker reach) can often provide the competitors with more technical challenges and exhilarating sailing (as well as simply having to decide whether or not to fly the spinna ker).

8.12 Course Description

In keelboat racing the course is often announced on the VHF radio. Course boards are commonplace in that type of racing and the norm in dinghy and board racing. It is important to describe courses in SIs in the same way everywhere to avoid confusion.

The letter indicates the type of course - 'I' for trapezoid inner loop; 'O' for trapezoid outer loop; 'L' for windward/leeward with the finish at the leeward end of the course.

If a suffix 'A' is used after the initial letter, then an offset mark (1A) is part of the course. So 'LA' is a windward/leeward with an offset mark at mark 1 and a finish at the leeward end of the course.

If 'S' is the suffix then a slalom is used at the leeward end of the course prior to the finish. The figure next to the letter indicates the total number of *beats* to complete.

The current convention is to number the marks in the same way whatever the course, as is the case in a Trapezoid course. So on a W/L course the windward mark is '1' and the leeward mark is '4.

Type of Course	Symbol	Roundings
Windward/leeward, finish at leeward end	L2	Start - 1p - 4s/4p - 1p - Finish
	L3	Start - 1p - 4s/4p - 1p - 4s/4p - 1p - Finish
Trapezoid, inner loop	I2	Start - 1p - 4s/4p - 1p - 2p - 3p - Finish
	I3	Start - 1p - 4s/4p - 1p - 4s/4p - 1p - 2p - 3p - Finish
Trapezoid, outer loop	O2	Start - 1p - 2p - 3p/3s - 2p - 3p - Finish
	O3	Start - 1p - 2p - 3p/3s - 2p - 3p/3s - 2 - 3p - Finish
Trapezoid, outer loop, slalom finish	OS2	Start - 1p - 2p - 3p/3s - 2p - 3p - S1s - S2p - S3s - Finish
Trapezoid, inner loop, slalom finish	IS2	Start - 1p - 4s/4p - 1p - 2p - 3p - S1s - S2p - S3s - Finish
Windward/leeward, finish at leeward end, offset mark	LA2	Start - 1p - 1Ap - 4s/4p - 1p - IAp - Finish

8.13 The Start Line

Laying the Start Line

The RO needs to know the condition of the seabed (whether or not it is good 'holding ground') and the depth of the water. This may place constraints upon where the committee vessel may be anchored.

Once the current mean wind has been established, the RO has to decide which way the wind is likely to move during the period when racing is to take place. This is one of the first judgments that the RO makes. Local knowledge of the micro-climate of the race area is an essential element in making this judgement. This is particularly difficult if the RO is not a local person. Having someone with good local knowledge on the committee vessel is essential.

To save time and energy, a good RO will position the committee vessel within their designated race area, to take into account any likely future wind shifts, thus allowing them to pivot the course on the position of the committee vessel.

When anchoring the committee vessel extra line should be paid out. Apart from ensuring that the anchor does not drag it allows the RO to adjust the start line by either paying out more line (making the pin end favoured), or taking some in without disturbing the anchor on the seabed (making the committee vessel end favoured).

The Pin End can take two forms:

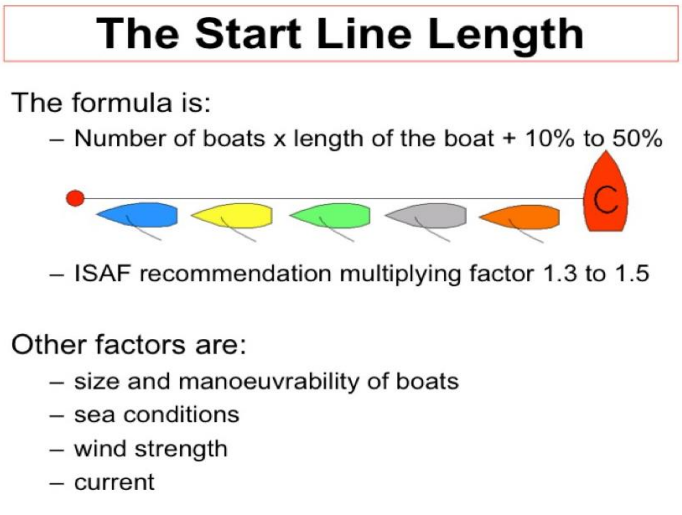
1. It can be a boat with a mast designating the start line. The same principles apply to this boat as those applying to the committee vessel. A good anchor and a long line make for easier adjustment of the start line.

2. The alternative is to use a buoy with or without a flag displayed, as the other end of the start line. Using a buoy has the one disadvantage of only allowing the 'fine tuning' of the start line to be made from the committee vessel. It could be argued that placing this buoy in the correct position also takes considerably more effort and skill, by the crew of the mark laying boat. This is best achieved by the mark laying boat moving downwind of the pin end position, streaming the buoy (towing the buoy behind the boat) with the full anchor line out and just the anchor in the mark laying boat. The mark layer then motors parallel to the main committee vessel (so taking into account the combined effect of both the wind and the tide). When the boat approaches the intended position of the pin end, the instruction to 'standby' is given. The boat continues to move slowly forward until the pin end buoy is in position when the order to drop the anchor is given. Provided the anchor line on the pin end buoy is not too short the pin end buoy will stay in the correct position.

In all this manoeuvring of the boats the object should be to set a start line at 90^0 to the sailing wind. It can be adjusted using the methods described above.

Start Line Length

The start line needs to be of the required length and where possible laser range finders should be used to establish this accurately. The formula is: the number of boats x length of the boat plus 10% to 50%. Some ROs regard this as too generous but the formula is designed to allow boats at the start to 'manoeuvre in a seaman-like manner'.



The wind and sea conditions as well as the manoeuvrability of the racing boats should be considered. There is a considerable difference between an Optimist dinghy and a

20 metre offshore boat in their requirements for space to manoeuvre. This is where the judgement of the RO is crucial to a good start.

The quality and experience of the fleet is also a crucial factor. In the Olympic Regatta and in those classes who reduce fleet size for their final rounds in their major championships, almost every boat will require a space on the start line. Therefore the above formula in calculating the length of the line is correct. However, where every boat that enters the competition is allowed to start at the same time, then it is inevitable that the less experienced sailors will be in a second or third rank behind the start line, at the start. This makes the start line, using the above formula, too long.

A very long start line presents difficulties for the RO. Frequently the wind is different at either end and clear identification of boats that are OCS is difficult.

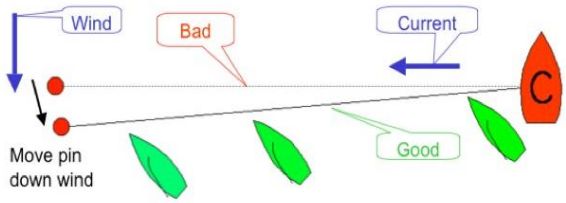
Reducing the length of a long start line to a manageable length gives the competitors a better chance of a 'fair' start, and also gives the RO a better chance of getting the fleet away first time without having to resort to penalty flags.

Start Line Bias

It was customary to lay a starting line with approximately 5^{o} - 10^{o} of bias favouring the port end. This is no longer the case. ROs are advised to set a square start line. That is a start line that is at 90^{0} to the average wind direction (sailing wind) that has already been established. Once laid this start line can be 'fine tuned' by moving either end of the start line by paying out or taking in the anchor line. The RO should watch the fleet as they test the line for any advantage. If the fleet starts to favour one end over the other, then, if there is time, they may adjust the line.

When there is a current running parallel with the start line it will push boats to one end or the other. If the current is pushing the boats to the pin end, the pin end is moved downwind by a small amount to enable boats to clear the pin end easily. This is starboard bias. The converse happens when the current is in the opposite direction. In effect the line is being set at right angles, and so square, to the Sailing Wind.

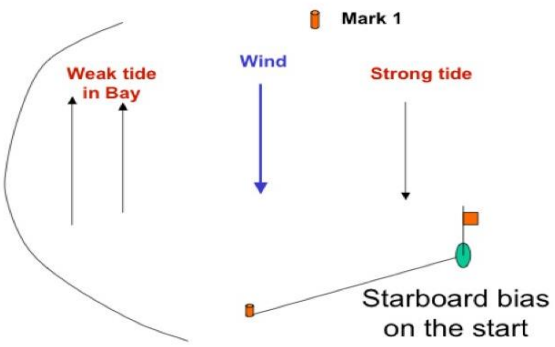
Bias for Tidal Effect



Boats are carried towards the pin by the current,

By moving the pin as shown, boats can now clear the pin

Bias for Tactics



When one side of the course is favoured by the fleet, using bias will help spread the boats along the line. Reasons for one side of the course to be favoured include unbalanced tides and wind angle and/or wind speed variations across the course area. Failure to recognise this by setting a start line at right angles (90^{0}) to the sailing wind seen at this location will result in the fleet all trying to start from the pin end and probably causing a general recall.

Whatever happens the line must be fixed by the preparatory signal. No further adjustments may be made after this signal is displayed.

As with all start lines, regardless of the tidal influences and tactical wishes of the competitors, the aim is to achieve a balance of boats spread along the entire length of the line. The RO may believe that they have set a square line and taken all issues into consideration, but it is the perception of the sailors that is important - if they are all bunched at one end then the line is not square!

Inner Limit Mark

This mark protects the Starting vessel from competitors because it must be left on the required side as boats approach the start line. An Inner Limit Mark should be set as near as possible to the line. To protect the Committee Vessel an alternative is to attach the mark to the Committee Vessel on a short line. This is a deliberate attachment and is considered part of the mark (the Committee Vessel). Since the start line must be in place before the preparatory signal any attachments to the committee vessel must be in place from that time and until after all boats have started. It also keeps boats away from a stern anchor warp if one is used.

Gate Start

The Gate Start was developed to help manage large fleets of boats (100+) but it can be used for smaller fleets, and it can be a very fair way of starting races.

The principal is that a Pathfinder is selected from the leading boats in the fleet, she sails from a fixed mark on port tack and all other boats sail on starboard tack starting behind her. There is usually a gate launch (rib) that follows close astern of the Pathfinder with an ARO and recorder on board, and a Guard launch to protect the Pathfinder.

The wind needs to be stable in both direction and velocity and the tidal flow even in the starting area so that the Pathfinder can sail a true course.

A Starting Mark is laid about 20m to windward of the Committee vessel from where all signals are made. The Gate is open for a set time (in the SI) and a “starboard” indicator mark can be laid after a “practice” run for that time which when the Pathfinder reaches is allowed to tack on to Starboard if required. About 15 seconds before the Starting Signal the Pathfinder prepares to “Open” the line.

There is a guide to Line Length (time gate is open) on the RYA Resources page of the website.

9. STARTING PROCEDURES

9.1 Laying the Course

Apart from the start line there is no requirement in the RRS to have any marks in place at the start of a race when P or I are the preparatory signals. It is good practice, however, to have at least the 1st mark laid at that time. When Z or the black flag are used as the preparatory signals, in order to conform with RRS 30.2 and 30.3, the first mark must be in place before the preparatory signal.

9.2 Flag 'Y'

If 'Y' is to be displayed it *shall* be at or before the warning signal. Wearing personal floatation devices is required as per RRS 40 or as stated in the SIs. The signal is displayed with one sound.

9.3 Displaying the Course

There are many ways to let the competitors know which course they are to sail: standard courses with a designated letter for each course; described in an appendix to the SIs when a signal lets the competitors know which course to use; course information announced over the VHF radio - usually offshore fleets, when racing ‘round the cans’.

Whatever method is used, the course *shall* be displayed at or before the warning signal.

Once the warning signal has been displayed/announced the only way a RO can change the course is to Postpone before the start or signal a General Recall or Abandon after the start.

9.4 Starting

The standard starting sequence is described in the RRS. It is based on a 5 minute sequence commencing with the warning signal and ending with the Start of the race (5-4-1-Go). The preparatory signal incorporates different penalties, which can be applied, as required.

This system has one major advantage over previous systems: the sequence of signals is exactly the same irrespective of whether it is the first start of the day or a restart after a Postponement, a General Recall or an Abandonment.

In the standard starting sequence there is one minute between the warning and preparatory signals. Under some circumstances this period is insufficient but it can be extended. A simple SI extending this period will suffice. This is not a change to the RRS - see RRS 26. However, changing the timings of subsequent signals relative to the start would be a rule change.

It is good practice to give competitors some warning that a new start sequence is about to begin. It tells the competitors that the race committee is ready and the start sequence is imminent, so they can prepare accordingly. It is recommended that a SI is used as follows: ‘To alert boats that a race or sequence of races will begin soon, the orange starting line flag will be displayed (with one sound) for at least five minutes before a warning signal is made.’

Only in exceptional circumstances shall races be sailed ‘ahead of schedule’.

9.5 Postponement Signals

This group of four signals can only be used before the start of a race but for any reason, including:

- no wind or insufficient wind to start the race.
- a shifty wind - it is not possible to set a course because the wind is moving round the compass.
- a major wind shift is expected later according to a known pattern or other information (eg sea breeze to establish).
- too much wind - it is not safe for that particular class to sail.
- Race Committee not ready - a totally unacceptable reason but one which does occur sometimes.
- outside bodies interfering with the racing - this could be anything including commercial shipping, cruising yachts, VIP's, TV, etc.
- a drifting mark.
- a significant error in the timing of signals.

One of the main uses of the postponement signal is to stop the starting sequence immediately before the start. This is important when the fleet bunch at one end of the start line with the potential for a general recall, particularly when a penalty flag has been displayed as the preparatory signal. A good RO will always be ready to display AP just before the start. Use this when your line is not fair (for whatever reason, including shifty winds). Do not penalise the sailors when it is not their fault!

Do not postpone for competitors to reach the race area if they could have arrived with reasonable diligence.

The four signals are as follows:

1. Indefinite Postponement

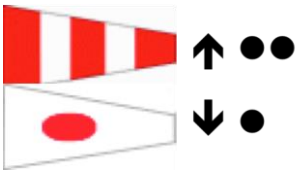
(flag AP accompanied by two sound signals).
The flag AP is displayed on its own. There is no time limit on this signal, but there is a recommendation that this should not be displayed for longer than 1 hour. This is not always possible and there are many occasions when the signal has to be displayed for longer.

When displayed ashore, this signal requires a SI extending the time between its removal and the next signal. This SI can be found in the standard SIs guide (Appendix L).

This signal requires one sound signal when it is removed.

2. Specific Time Postponement

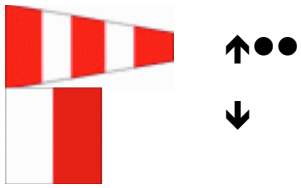
(AP over a numeral accompanied by two sound signals). When it is obvious from the weather conditions and the forecast that racing is going to be delayed, it is better to signal a one or two hour postponement *from the scheduled start time*. It is recommended that a maximum of two hours is signalled at any time and this can always be extended. A longer duration cannot be reduced once the signal has been displayed. This signal can only be used when the starting time of the race is scheduled precisely.



This signal requires one sound signal when it is removed.

3. Races Postponed – Further Signals Ashore

(AP over H accompanied by two sound signals).

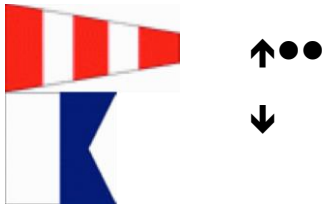


This signal is displayed when the RO decides that for safety or any other reason, the fleet would be better off ashore. Technically, the only way the fleet can find out what the RO's intentions are for the rest of the day's programme, is to go ashore and look at the shore based flagpole and/or the official notice board (many ROs will display flag 'L' on the official flagpole and then put a written notice on the official notice board detailing the race committee's intentions).

There is no sound signal when this signal is removed.

4. Races Postponed to Another Day

(AP over A accompanied by two sound signals).



When there is insufficient time to complete the day's racing programme, or conditions are such that this is impossible, AP over A is displayed. This signal should only be used if there is time within the overall race programme to re-schedule racing on another day. AP over A should not be displayed too early. The entire day should be used if necessary to complete the schedule.

There is no sound signal when this signal is removed.

9.6 The Attention Signal

Whilst not part of the RRS, many SIs now refer to an 'attention signal'. In recent years it has become commonplace to display the orange starting line flag (and on the pin-end boat if used) 5 minutes before the warning signal of a race or sequence of races. It is particularly useful when running more than one race in a day.

It tells the competitors that you are about to start racing and to get ready. So, amongst other things, dinghies pack away food and drinks and give this to their coaches, keel boats start to hoist the sails chosen for the conditions, board sailors start to loosen up again. It is a valuable technique applicable to all forms of racing. For keel boats, this is an ideal time to announce the course to be sailed on the VHF if the course is not pre-set and defined in the SIs.

An appropriate choice of words for a sailing instruction to implement this can be found in Appendix L in the RRS.

9.7 The Warning Signal

The class flag, as prescribed in the SIs, is used as the warning signal. It is the first signal in the starting sequence and the one from which the fleet will start their stopwatches.

If the RO and timekeeper have not already synchronised their watches the RO should also start a stopwatch at this signal. Referring to this watch achieves three objectives;

1. It is a check that the timekeeper is calling the time correctly.
2. There is a second watch running in case the first one fails.
3. The RO does not need to keep asking how the time is running thus distracting the timekeeper.

Every effort should be made by the race committee to display this signal at the time stated in the SIs.

It is accompanied by one sound signal.

9.8 The Preparatory Signals

There are six preparatory signals. It is important to remember that imposing penalties on the fleet puts as much pressure on the race committee as it puts on to the fleet.

With good race management and careful planning, the use of penalty signals can be greatly reduced. The competition format used can help reduce the length of the start line and the number of boats starting to more manageable proportions. The larger the fleet, the longer is the line and the greater the use of penalty signals. Poor line management sometimes results in an inappropriate use of penalty flags.

It is good practice and fair to the competitors not to use a penalty flag for the first attempt to start a race. If they haven't done anything wrong then why should they be penalised? Furthermore, if, because of an unfair start line, a start is postponed or was subject to a general recall, the competitors were not at fault and so should not be subjected to a penalty flag on the next attempted start. Only when they are the cause of a general recall on a good line should a penalty flag be used at the re-start.

Preparatory signals are accompanied by one sound signal at 'display' and one *long* sound signal on 'removal'. The removal of the preparatory signal is an executive signal which means that whatever signal was displayed as the preparatory signal is now activated. The appropriate rule applies from this point until the start signal.

1. Flag ‘P’ - No Penalty

Within the present context of the rules, this signal effectively is the ‘no penalty’ signal. Boats that are OCS can ‘dip’ back over the start line.

With a good start line and a reasonable sized fleet, it should be possible to use this flag for the majority of the starts. The RO should always use flag ‘P’ at the first attempt of a start.

Flag X is displayed after the start signal for boats that are judged to be OCS.

2. Flag ‘I’ – Round the Ends Rule

The penalty area is the course side of the start line and its extensions. Boats that are in this area in the minute before the start (after flag 'I' has been removed) must return to the pre-course side of the line around either end of that line before starting.

Disadvantages:

- It penalises a boat that is on the course side in the middle of a long start line more than a boat at either end. This can cause the fleet bunch at both ends while leaving space in the middle.
- ROs should display flag 'X' after the start signal if any boat is on the course side of the start line or its extensions or, having been there, has failed to return to the pre-course side of the line around the ends. This may cause confusion - and the RO has to have eyes in the back of the head!
- All boats infringing this rule must be monitored to verify that they subsequently start correctly. This is onerous and usually requires more man power.
- This penalty may create a dangerous situation with boats reaching across the oncoming fleet in their attempt to return to the pre-course side of the line via its ends.

Flag 'X' is displayed after the start signal for boats that are judged to be OCS and/or have failed to return to the pre-course side of the line around its ends.

3. Flag 'Z' – 20% Scoring Penalty

The penalty area is the triangle formed by the start line and the first mark of the course. Boats that are in this area in the minute before the start (after flag 'Z' has been removed) may return to the pre-course side of the start line by re-crossing, ie 'dip' back. If the boat subsequently starts correctly it is subject to a 20% scoring penalty (of the boats entered, rounding 0.5 upwards) otherwise it will be scored OCS. If a boat again infringes the penalty area at a restart following a General Recall or an Abandonment, it is subject to an additional 20% penalty. The penalties remain separate and do not become cumulative so two penalties are 20% + 20%, not 40%. However, the boats score can be no more than the score DNF.

Disadvantages:

- If there is a general recall or abandonment *after* the start, the penalty is kept by the boat even if the race is restarted. This is not the case with postponement or abandonment *before* the start. So the RO is obliged to AP the start if the line is not square or fair, thus avoiding the likelihood of penalising an innocent competitor.

Advantages:

- Should there be a general recall, there is no requirement to display the offending boat's sail numbers on the committee vessel as is the case when using the black flag.

Flag 'X' is displayed after the start signal for boats that are judged to be OCS at the start but not for those that dipped back and then started correctly.

4. Flags 'I' and 'Z' - Round the Ends Rule + 20% Scoring Penalty

The penalty area is the course side of the start line or its extensions. Boats that are in this area in the minute before the start (after flag 'I + Z' have been removed) must return to the pre-course side of the line around either end, but in doing so still incur a 20% scoring penalty.

All of the disadvantages of both the I flag and the Z flag apply.

Flag 'X' is displayed after the start signal for boats that are judged to be OCS and/or have failed to return to the pre-course side of the line around its ends.

This preparatory signal is rarely used.

5. The 'Black' Flag – BFD (Black Flag Disqualified)

The penalty area is the triangle formed by the start line and the first mark of the course. Boats that are in this area in the minute before the start (after the black flag has been removed) are scored, without a hearing, BFD (Black Flag Disqualified).

Disadvantages:

- As with the 'Z' flag, if there is a general recall or the race is abandoned *after* the start, the penalty (BFD) is kept by the boat even if the race is restarted. This is not the case with a postponement or abandonment *before* the start. So the RO is obliged to AP the start if the line is not square or fair, thus avoiding the likelihood of penalising an innocent competitor.

- Unlike the case of a general recall or abandonment after the start using a 'Z' flag, the Black Flag penalty says that the penalised boats (BFD) are not allowed to sail in the re-started race and that the sail numbers of those boats *shall* be displayed on the committee vessel before the warning signal of the restart. Before publishing the numbers, the recorders should check carefully that all the sail numbers called as being BFD appear on the start sheet (so are valid numbers) and if not, are removed from the list displayed on the committee vessel. So the effort of this procedure as far as the race committee is concerned is considerable.

It is recommended that a very late postponement should be made no later than 5 seconds before the start, although some have run down to 2 seconds when they have called for the AP.

It is most important that the RO is aware that once the start signal has been made and there are boats OCS, they have to be BFD.

The Individual Recall (flag 'X') does not apply to a black flag start.

6. Flag 'U' --UFD (U Flag Disqualified)

It is essentially the same as a black flag except that after a general recall or abandonment after the start the penalty is not retained by the boat and the slate is wiped clean for that race.

Disadvantages:

- May not prevent ill discipline by allowing for a "push" to the line and prompting a General Recall without fear of DSQ.

Advantages:

- A soft "black flag" choice that while allowing for identified boats to be disqualified does let them back for a subsequent start should another General Recall take place.

9.9 One Minute to the Start

The penalty period if any commences.

To cover the events during the starting sequence, each person sighting the line should use a recording device and record continuously from at least 90 seconds before the starting signal and to include anything of interest after the start. In this period they should describe what they see as if they were commentating on the radio. In this manner a picture is painted of the wind and sea state, of the location of boats relative to the start line, noting boat numbers and any boat that might be getting too close to the line. An important element is to record the distance, in boat lengths, that boat are

behind the line. Note also if they are spreading evenly along the line or if the boats are bunching at one end. The signalling of flag 'X' or the '1st substitute' will be included.

Always endeavour to record the timekeeper as he counts down to the start. Sound signals will also be recorded.

At the start signal the RO should call 'Line clear' or alternatively record boats that are OCS. This latter recording is the most important recording to be made. It is difficult to record boat numbers immediately the start is made, therefore start recording boats that might be over in the 2 to 3 seconds before the start signal, or as soon as they cross the start line early. This way there is a good chance that every boat that is OCS will be correctly identified.

Recordings should be labelled and not erased until after the conclusion of the entire event. You never know when a Protest Committee might require that particular piece of evidence.

9.10 Sighting and Calling the Line

This is more difficult than it seems. It is recommended that you stand 1 metre behind the mast on the transit of the line.

If a yacht is used as the committee vessel it will have a tall mast. The taller the mast the thicker it is at the bottom. To judge the line accurately it is recommended that the RO takes up a position one metre away from the mast with the leading edge of the mast in line with the pin end. The next best position is for the RO to stand forward of the mast with his left shoulder firmly against the mast. This places his eyes some 30 cm on the upwind side of the start line. Therefore any boat that is sighted over the line is most definitely over! A third position on a yacht, is to stand looking at the pin end with your head firmly resting on the mast behind you. The latter two positions have the advantage that there is an unobstructed view of the whole start line.

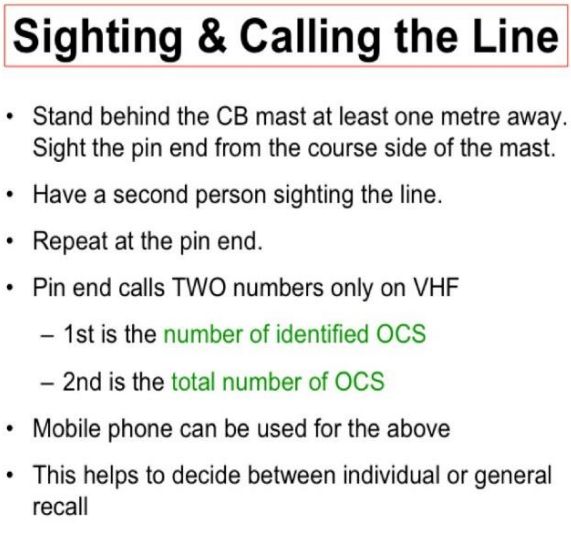
A motor boat usually has a temporary mast fixed to the guardrail. Standing one metre away and sighting on the pin end is therefore quite practical. Because the pole is usually much thinner than a yachts mast, it does not obstruct the view of the RO in the same way.

When a boat is used as the pin end then the positions described above apply to that end of the line. When a buoy is used then the person sighting the line has to anchor their boat on the extension of the start line, lining the pin end buoy with the mast on the committee vessel. When anchoring they must leave sufficient room between the boat and the buoy so that a boat may pass between the pin end boat and the pin end buoy when flag 'I' has been displayed.

Always have a second pair of eyes on each end of the start line. This will help in the correct identification of the boats.

The RO has to make an instant decision at the start signal. They have one of three choices to make:

1. It is a good start – 'Line Clear'
2. There are one or more clearly identified OCS boats – 'Flag X, Individual Recall'
3. There are too many unidentified boats – '1st Sub, General Recall'



To assistin the decision-making process information is required from other race committee members sighting the line, in particular the Assistant Race Officer at the pin end. At this stage the RO does not require boat sail numbers. The information required is:

1. How many boats identified?
2. How many boats in total over the line?

This information is transmitted to the RO as two numbers (e.g. 2 and 3; two boats identified, three boats over in total). The smaller number can only be the number of identified boats, the bigger is the total number over the line.

This information, added to their own observations, allows the RO to decide between an Individual Recall and a General Recall.

Whilst, the final decision is that of the RO, it is recommended that they and the pin end Assistant Race Officer agree the total number of *identified* OCS (or BFD) boats and the total number considered OCS (or BFD).

9.11 Individual Recall - Flag 'X'

When there are clearly identified boats OCS, flag 'X' is displayed with a sound signal as soon as possible after the start.

Case law states that this sound signal and the visual signal must be made at the same time and within 5 seconds. So the recommendation to all ROs is to make this signal within 4 seconds of the start signal. If there is delay making the signal for an individual recall, it is best to abandon the race and start again, rather than to allow an OCS boat to start unfairly and with the likelihood of being awarded redress (when scored OCS) for an error in procedure by the race committee.

Flag 'X' remains displayed until;

- All the boats clearly identified have returned to the pre-start side of the start line or one of its extensions and have complied with RRS 30.1 (I flag rule), or
- For 4 minutes after the Start, or
- Until 1 minute before the next start signal.

It is removed without a sound signal.

The RO will make every effort to identify all OCS boats. This can be quite difficult at times, particularly when some boats are obscured from view by boats nearer to either end of the line. The RO should not permit a race to continue if they are satisfied that unidentified boats were over early.

It is normal practice to use the sail number of the boat for identification purposes. This immediately causes many problems for ROs where:

- Numbers extend into 6 digits (as in the Laser Class).
- Transparent sail material allows the number on the reverse side to be seen especially with digitised numbers where a 5 and a 2 on opposite sides of the sail cause confusion.
- Numbers are set back near the leech of the sail.
- Reefing of sails obscure the number.

To overcome this, the experienced RO will note on a tape recorder other identifying features, such as the colours of the hull, foredeck or clothing.

The RO will also have someone to follow a boat with their eyes until they are able to clearly identify it. In many major competitions, a special competition number is allocated for the event which is fixed on both sides of the bow where it can be clearly seen.

In many starts there can be one or more boats that cannot be clearly identified from either end of the line in which case signal a General Recall. It is undesirable to signal an individual recall and then a general recall.

9.12 General Recall – 1st Sub

A General Recall should be used when the RO is not satisfied that all boats over early have been identified. It shall be displayed with two sound signals.

The RO must always ask themselves what caused many boats to be over the line at the start? There can be a variety of reasons including:

- a wind shift causing an unexpected surge of boats at one end of the line.
- a tidal current pushing boats onto the course side of the line.
- a short start line on which the boats have difficulty finding a space. This usually creates a bunch in the middle of the line.
- a poorly defined start line. If the masts are not tall enough or the flags on the masts are not big enough sailors have difficulty knowing where the start line is.

In case of any problems with the line (length, or angle to the wind etc) AP instead of General Recall is to be used just before the start. In case of a race committee error discovered *after* the starting signal (eg. timing), the race should be Abandoned (use N) rather than signalling a General Recall. The rules do allow a 1st Substitute to be used in these circumstances but it is considered better to abandon. This is on the basis that best practice tells the sailors that a General Recall is used when the problem was caused by them; when the problem is ours we AP if it is recognised before the start or Abandoned when realised afterwards.

With the exception of the Black flag penalty, all boats are allowed to re-start the race after a General Recall (but some may carry a 20% penalty if flag 'Z' was displayed). ROs should be very wary of allowing a start to take place on a bad line in which there is likely to be a large number of boats over the line followed by a General recall, especially when a penalty flag was used as the preparatory signal. As stated above, a good RO will use a very late postponement signal under these circumstances.

Flag '1st sub' is left on display until one minute before the next signal, usually the warning signal for a re-start of the race (or it may be changed to one of the postponement signals). If there is no alteration to the course or any other delay, the RO should prepare for a new warning signal as soon as the fleet are back in the starting area. To facilitate this, many ROs will have a fast boat sail across the bows of the fleet displaying flag '1st Sub' as a means of making sure that the whole fleet return to the starting area as quickly as possible.

When the race committee is ready and the fleet is back in the starting area, flag '1st sub' can be removed with one sound signal. The new warning signal is displayed precisely one minute later commencing the new starting sequence.

10. DURING THE RACE

10.1 Race Control after the Start

Once the fleet is progressing up the first leg, the RO now has to switch their mind to other matters. There are several situations that can develop during a race and spoil it. With careful observation and a supply of information from the mark laying boats around the course area, the good RO will be able to anticipate any problems before they reach a critical stage. Some issues that can spoil what started as a good race are:

- collapse of wind speed making the time limit impossible to achieve and therefore losing the race.
- increase in wind speed resulting in danger to life, turning the race into a survival course.
- change in wind direction. This may mean adjusting the course to a new wind.
- marks moving (perhaps due to anchors not holding on a rising tide).

Other duties include recording the positions of boats as the race progresses. In many events this duty is carried out at each rounding mark.

There are various techniques that the RO can use to ensure that the race reaches a satisfactory conclusion, including:

- shorten the course – S.
- adjust the course to a new wind.
- replace a missing mark.
- abandon the race – this is the very last resort!

Careful monitoring and early decisive action can improve or save many races.

In addition, some classes allow Rule 42 to be turned on or off depending on wind speed. This has to be signalled to the competitors.

10.2 Changing the Course

Wind shifts are a part of racing that competitors enjoy. However, if a shift becomes permanent affecting an entire leg or more, the course may become too one-sided and a change of course is required. Some course configurations make this difficult; short races may make it impossible.

As a guideline:

Change in Wind Direction

- With a wind shift of 10° or less the course should not be changed unless it is necessary to adjust for current or to provide a square run.
- Between 10° and 15° consideration should be given to adjusting the course to the new wind provided that the RO is confident that the change is permanent.
- With a wind shift in excess of 15° the course should be adjusted to the new wind.
- With a wind shift in excess of 45°, the RO should consider the stability of the shift and its influence on the race.
- Frequent and violent wind shifts: under these circumstances the race committee may not be able to adjust the course sufficiently or quickly enough to maintain a race of the required standard. The race should be abandoned.
- Changes in current or a difference in the angle of the current relative to the wind may justify changes outside of these guidelines.

Variation in Wind Speed

- A change in the length of a leg is appropriate to ensure that time limits and/or target times are met.
- Change in leg lengths should result in no less than 50% or no more than 150% of original leg length.
- Do not make too many changes in length just to achieve target time.
- Changes in current may justify changes outside these same guidelines.

Changing the Next Leg of the Course for Wind Angle

This requires flag 'C' to be displayed with a repetitive sound signal with one or both of the following:

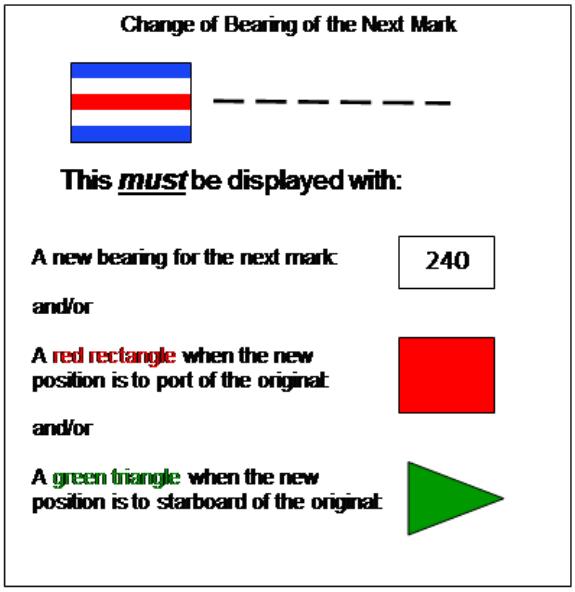
- The magnetic bearing of the new position of the next mark.

and/or

- A red rectangle when the new mark is to port of the original mark.

and/or

- A green triangle when the new mark is to starboard of the original mark.



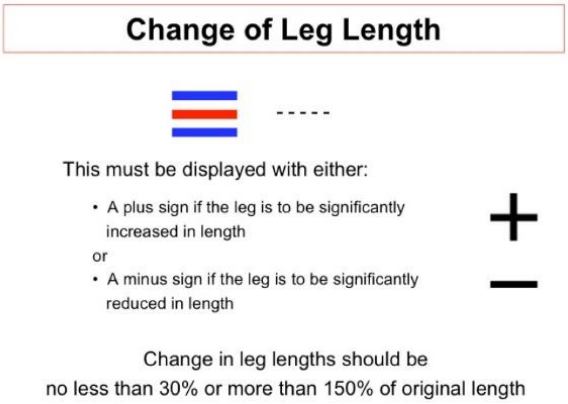
Changing the Next Leg of the Course for Wind Speed

This requires flag 'C' to be displayed with a repetitive sound signal with:

- A plus sign when the leg has been significantly increased in length

or

- A minus sign when the leg has been significantly decreased in length



Not infrequently the course needs to be changed for both wind angle and speed in which case the above signals are appropriately combined. The new mark does not need to be in position when this signal is made. Every effort should be made to maintain proper configuration of the course.

There are two methods used to achieve a change to the position of the next mark:

1. When resources are low, it may be necessary to lift the original mark and move it to a new position. This can be a slow process and impossible if the tail end have yet to round the mark to be moved but the leading boats are ready to sail the 'new' leg.

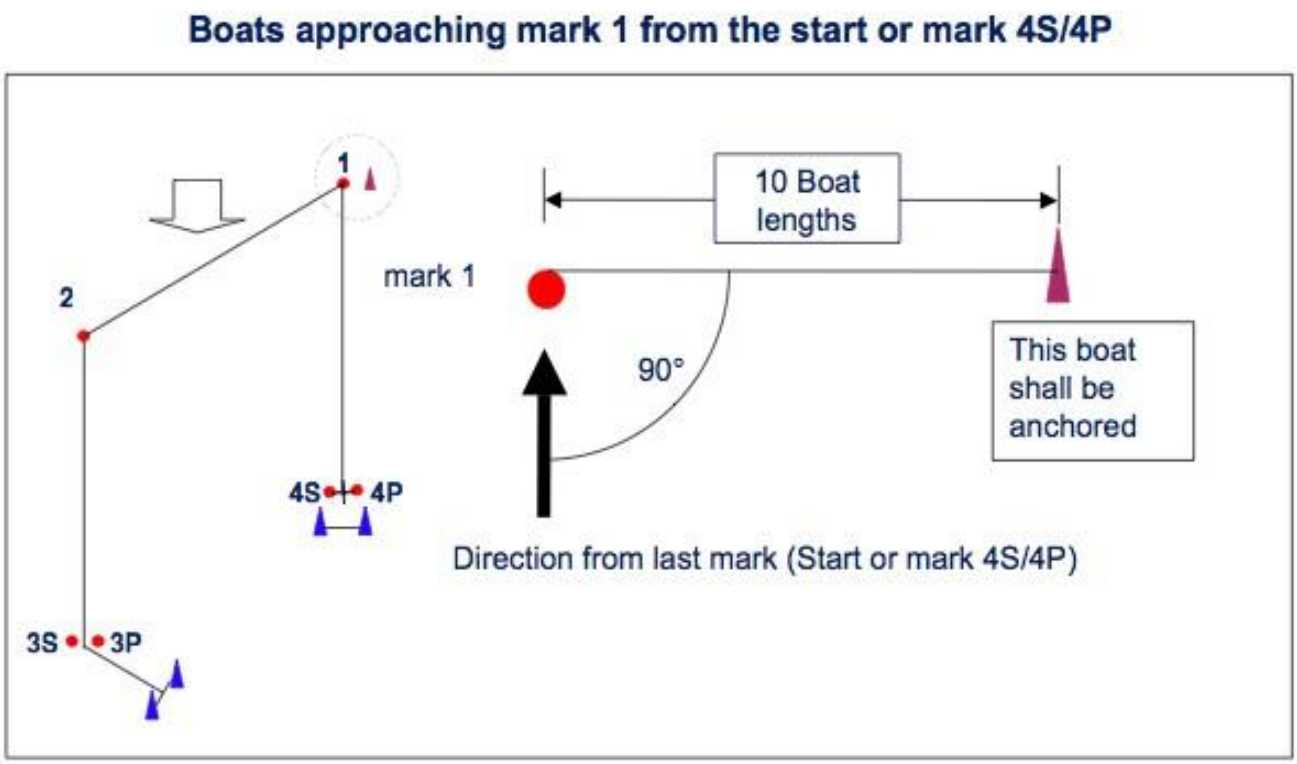
2. A new mark is laid in the new position and then the old mark is removed. To distinguish the new mark from the old, the new mark is a different colour or has other distinguishing features. Tail-enders can still sail to the 'old' mark whilst the leaders sail to the new one.

Suitable SIs can be found in the SIs guide (RRS Appendix L).

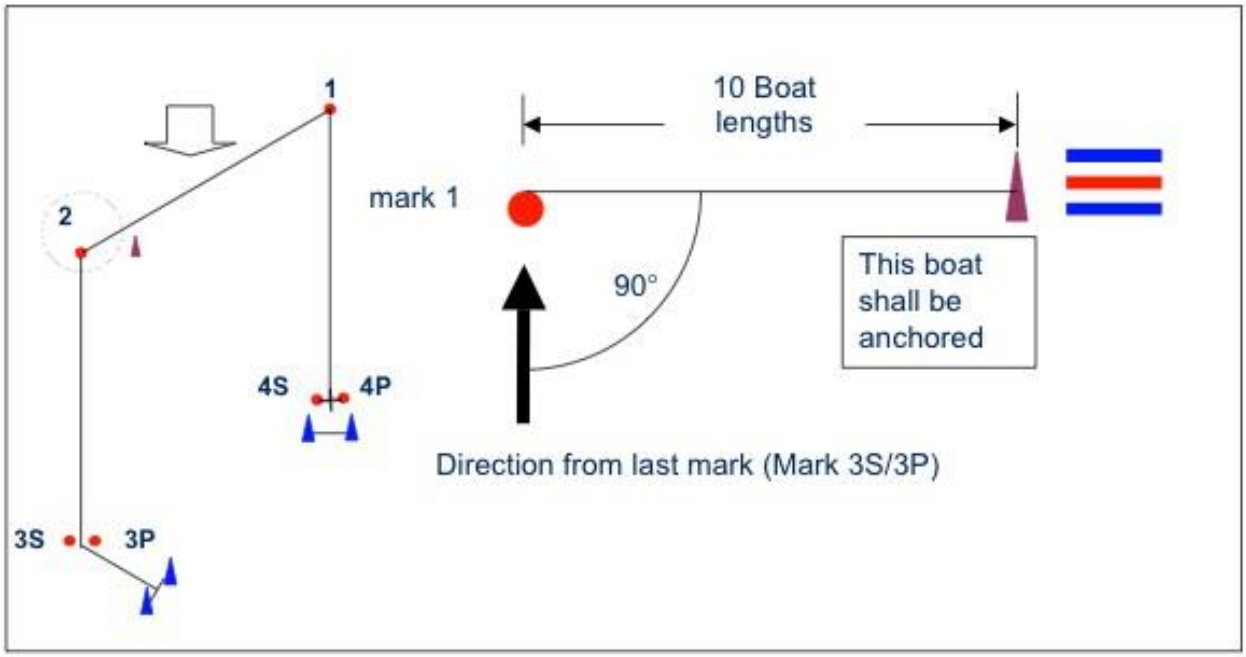
Boat Position to Signal a Mark Change

Use the signal boat to form a gate on the approach side of the previous mark. It must be above the lay-line of the approaching boats, so 90^{o} or above the mark that precedes the mark to be moved. The signal must be made to each boat as it passes through the gate so that it receives it before it commences the new leg.

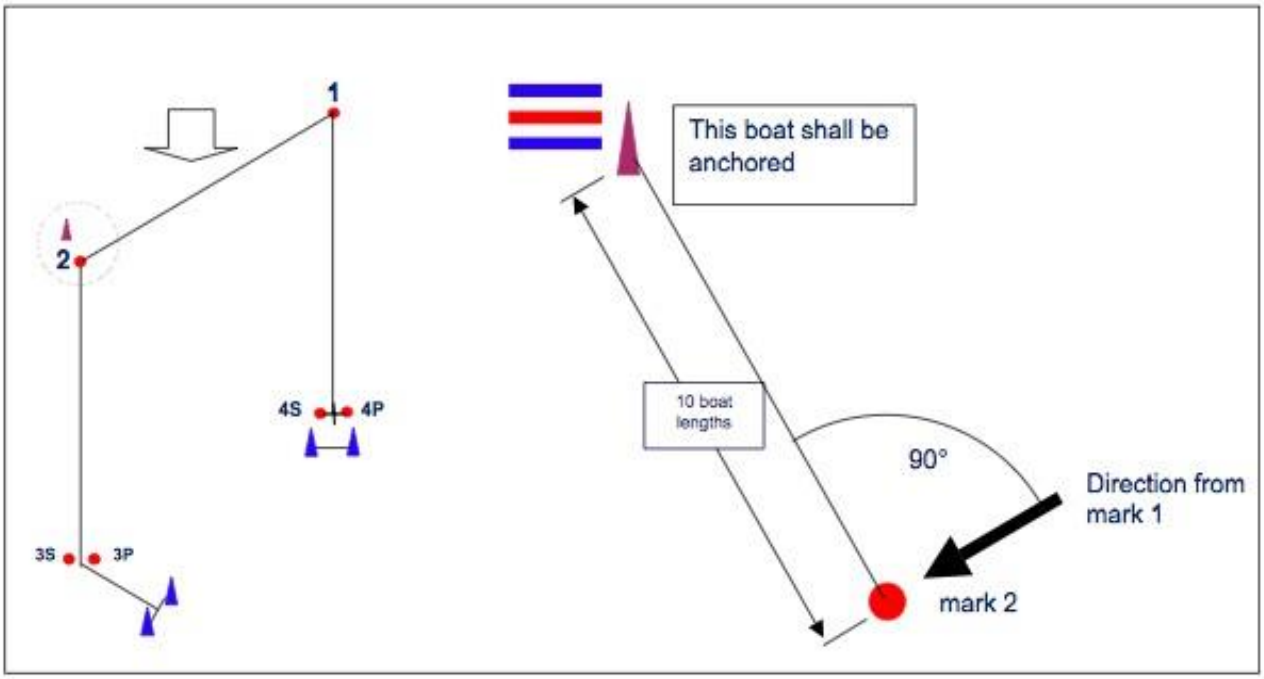
Suggested positions for the signal to be made on a Trapezoid course are:

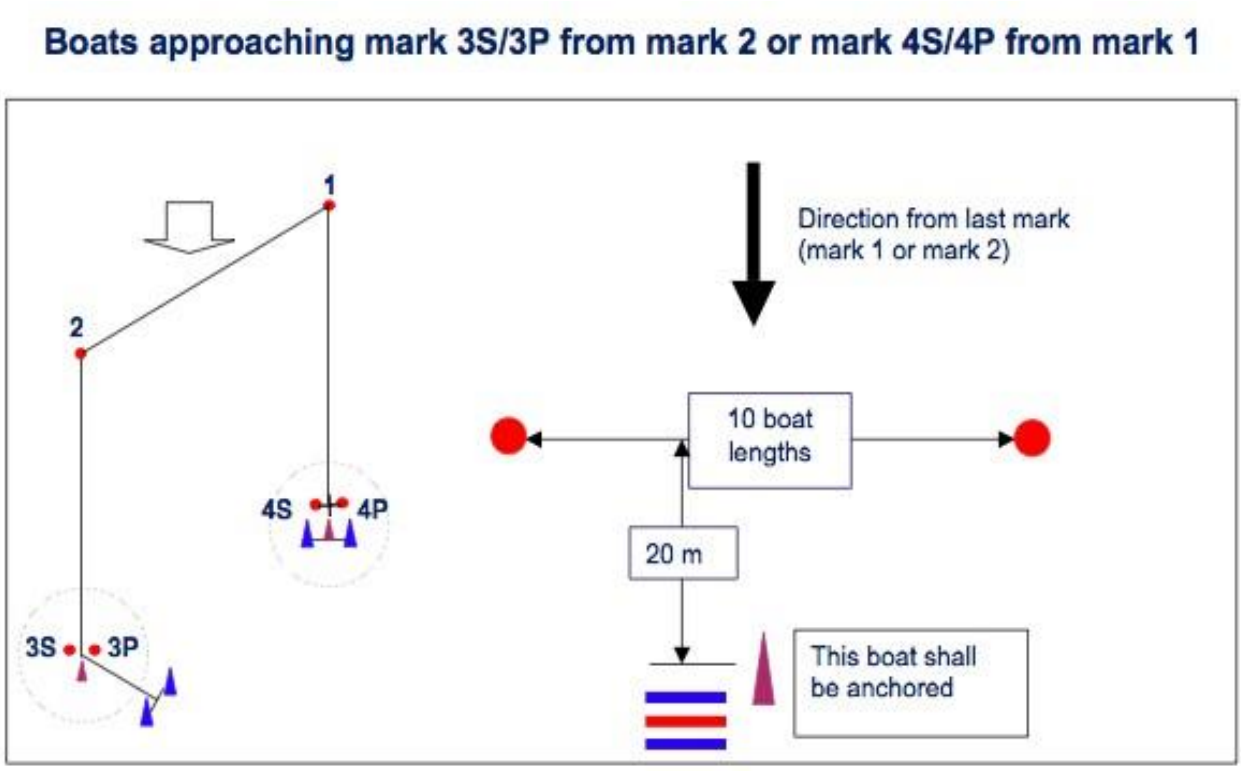


Boats approaching mark 2 from mark 3S/3P



Boats approaching mark 2 from mark 1





10.3 Mark Missing

The reasons for marks going adrift include incorrectly laid anchors or short anchor lines on a rising tide.

The action of the race committee will depend on the particular circumstances at the time the mark moves off station. If there is time it should be 'captured' and towed back into the correct position with extra line attached. However, there are times when a replacement mark is required. All good race management teams will have spare marks at sea ready for use. If it is not possible to do either, then a boat should be anchored in the position of the mark, display flag 'M' and make a repetitive sound signal. This boat is then a replacement mark.

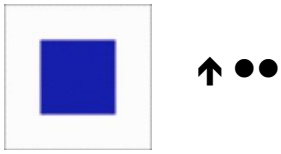
The very last resort is to Abandon the race. If the race becomes unfair, the unfairness being caused by the mark having moved while the fleet is still rounding it making some boats sail a greater distance than others, then the only course of action is to Abandon.

10.4 Shorten Course – Flag 'S'

When this signal is displayed, with two sound signals, the course is shortened. This means that the course which was displayed at the warning signal has one or more legs cut off.

Displaying the Signal

The leading boat in the race expects to sail the course as displayed at the warning signal. He will sail tactically with this in mind. When the course is shortened by removing one or more legs, the tactics employed by any competing boat may change.

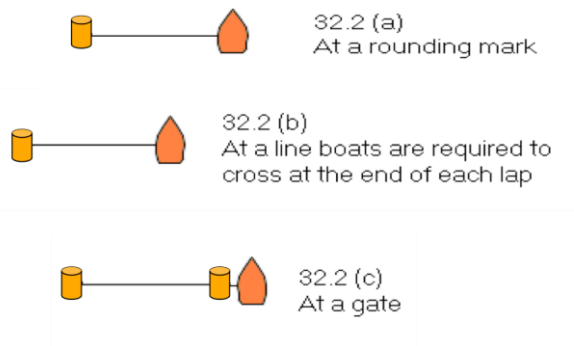


For this reason, the decision must not be taken lightly and when made, it is important that the signal is both seen and heard as early as possible, although it might be some considerable distance upwind of the fleet's position. If possible, display the signal as soon as the leading boat commences the leg to the shorten course finishing line (although the RRS states that the course shall be signalled before the first boat crosses the finishing line, thus allowing this to be a late signal).

The Shorten Course Finish Line

This is:

- At a rounding mark, between the mark and a staff displaying flag 'S'
- At a line boats are required to cross at the end of each lap.
- At a gate, between the gate marks.



Some events do not allow this signal to be used (when a SI will dictate this). No specific SI is required to allow shortening of a course because this is already covered in the RRS (RRS 32).

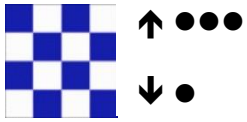
Shortening a leg rather than the course, even the final leg, is allowed by using a minus sign as specified in rule 33.

10.5 Abandon

Care must be taken with these signals because when displayed alone they apply to all classes. It may be necessary to qualify them with a class flag.

All Races are Abandoned - Return to the Start Area

(Flag 'N' accompanied by three sound signals)



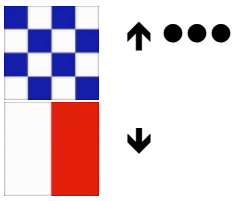
When displayed alone, flag 'N' can *only* be used after the start.

It means that the race is abandoned, competitors should return

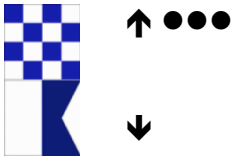
to the start area and a new start will be made as soon as practical.

Removal is accompanied by a single sound signal and followed one minute later by the warning signal of the restart.

All Races are Abandoned - Further Signals Ashore
(Flags ‘N over H' accompanied by three sound signals) May be displayed at any time - before or after the start.



All Races are Abandoned - No More Racing Today
(Flags ‘N over A' accompanied by three sound signals) May be displayed at any time - before or after the start.



10.6 The Last Resort

When using flag ‘N’ (or ‘N/H’ or ‘N/A’) after the start of a race, that race is stopped. This presents the RO with many problems because, immediately the race starts, a boat will very quickly establish a lead over its opponents and, equally, someone will very quickly become the last boat in the fleet. When the race is stopped by this signal, the leader will not be very happy, whereas the boat at the back will probably welcome the decision. It is a ‘no-win situation’ for the RO.

The rule that allows a RO to abandon a race once a boat has finished requires him to ‘consider the consequences for all boats in the race or series’ before he abandons.

It is very important to study the rule (RRS 32) that authorises the use of the abandon signal. This rule lists five reasons for abandonment:

1. an error in the starting procedure (this includes an invalid signal for an Individual Recall).
2. foul weather.
3. insufficient wind.
4. a mark that is missing or out of position.
5. any reason directly affecting the safety or fairness of the race.

It is strongly recommended that the following policies are followed with respect to the use of this signal:

1. On the first half of the first leg, abandon in the event of a major wind shift (more than 25 degrees) or the wind dying. After that, let the race continue and change the course.
2. Collapse of wind. It is appropriate to abandon the race when the situation is such that the leading boat would be unlikely to reach Mark 1 within the Mark 1 time limit or complete the course within the overall time limit, even if a new wind were to arrive. It has to be considered whether a new wind is likely. The further into the race, the more unlikely it is to be appropriate to abandon.
3. Increase of wind speed; danger to life. When there is a danger to life, the race should be abandoned immediately. The number of boats available for rescue (not currently involved in rescue) should be considered. The decision should also be based on the wind speed upper limits in the class rules or previously agreed with the class and the organising authority.
4. Unusual occurrence making the race unfair. This can happen when there is some outside influence that has an adverse effect upon the fairness of the race.
5. Frequent and violent wind shifts. Under these circumstances the race committee may not be able to adjust the course sufficiently or quickly enough to maintain a race of the required standard. The race should be abandoned.

For Windsurfing events: If pumping becomes the main method of propulsion, the race shall be abandoned.

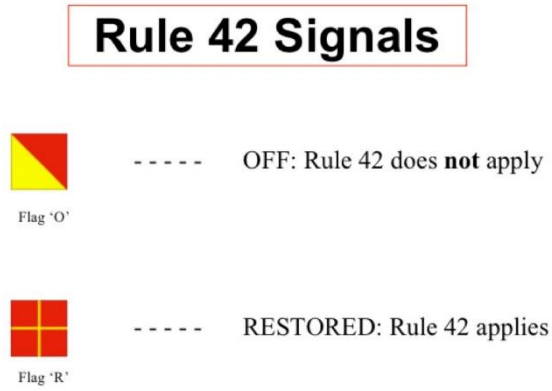
10.7 Rule 42 Management

The Flags 'O' and 'R' Rule

The following rules (RRS Appendix P5) shall apply if the SIs so state:

(a) If the class rules permit pumping, rocking and ooching when the wind speed exceeds a specified limit, the race committee may signal that those actions are permitted, as specified in the class rules, by displaying flag 'O' before or with the warning signal. The flag will be removed at the starting signal.

(b) If the wind speed exceeds the specified limit after the starting signal, the race committee may display flag 'O' with repetitive sounds at a rounding mark to signal that the actions are permitted, as specified in the class rules, to a boat after she has passed the mark.



(c) If the wind speed becomes less than the specified limit after flag 'O' was displayed, the race committee may display flag 'R' with repetitive sounds at a rounding mark to signal that rule 42, as changed by the class rules, applies to a boat after she has passed the mark.

Only certain classes allow this system to operate. The wind speed at which this rule is switched off or on is very important and defined in the class rules. This can be very critical if two classes using the same course area require different wind speeds. ROs are advised to argue strongly in favour classes using this system to race on different course areas or to establish a wind speed that is acceptable to both classes.

The Race Committee has sole responsibility for implementing the system. The information on wind speed and direction that is provided by the mark laying boats at each mark must continue to flow to the RO throughout the race so that he/she is aware of wind speeds across the entire course.

To avoid constantly turning off and restoring rule 42 the race committee should be certain that the increase or decrease in wind speed is going to remain constant over the course area. The wind speed should be consistently above or below the limiting speed before any change is implemented. If there is any doubt that the wind speed is not reliable and that it will consistently be flickering around the designated wind speed then do not make a change.

It is at this stage that consultation with the umpires is vital to the success of this system. Umpires on the water have to monitor this rule very carefully, therefore if it is a marginal decision that has to be made ask them for their opinion.

It is essential that umpire boats are kept fully informed at all times of the race committee's intentions and actions. To avoid confusion the RO should use the following terms when informing the umpires of changes concerning Rule 42 management; "Negative Oscar" or "Oscar displayed" at the warning signal; "Oscar displayed" or "Romeo displayed" during the race.

The position of the boat that signals 'O' or 'R' follows the same principles as those for signalling a change of course.

11. THE FINISH

11.1 Location of the Finish Line

The finishing line should be set before the first boat starts the final leg.

The location of the finish line in relation to the course can be critical and affects the efficiency of the race management when more than one race is to be sailed back-to-back. The ability to read sail numbers or other means of identification can also be affected.

Upwind – at the end of a beat

The final beat may be extended by positioning the finishing mark some distance to windward of Mark 1. This was the traditional place for the race committee to locate the finish line, laying it some 50 to 70 metres upwind of mark 1. This leaves Mark 1 clear of finishing boats. Mark 1 is not included as a mark of the course for boats sailing the final beat to the finish.

This type of finishing line makes it easy for the person calling the boat's number over the finish line. Usually the numbers are clearly visible on the sail.

The disadvantage of this position relative to the course is that the boats then have to sail back to the starting area for the next start. This takes time and slows up the process of starting the next race.

Downwind – a running finish

This is probably the most difficult position in which to record boats over the finish line. The mainsail number is frequently difficult to see. Numbers displayed on spinnakers are sometimes absent but will, when present, assist in identification. It may help to have a boat downwind of the finishing line looking up the course, to identify boats.

When racing back-to-back, this location allows the race committee to operate a quick turn round.

Reaching Finish

A recent development has seen the finish line set off the bow of the start vessel so that the last leg of the course is a short reach from the leeward mark to the finish. This has the advantage of the fleet finishing in the vicinity of the start line ready for a quick turn round, while the sail numbers are easier to read than in a direct down wind finish.

On a trapezoid course the distance from mark 3 (3p) to the finishing line should be no longer than 0.2NM.

11.2 Laying the Finish Line

The finishing line is not set until the race is well on its way, however it should be set before the leading boat starts the final leg.

A finishing line at the windward end of the course should be set so that it is at 90 degrees to the wind direction. On all other legs of the course, the finishing line is set at 90 degrees to the last leg of the course.

The Finishing line should be 50 to 60 metres long for most fleets but perhaps a little longer for large offshore keelboats.

Shorten Course Finish Line

The same rules apply to laying a shorten course finish line except that, in many instances, the shorten course finish line uses a rounding mark as the pin end. To reduce confusion amongst competitors the finish boat should be placed at 90^0 to the previous mark (or the wind on a windward leg) and on the side of the shorten course mark such that boats would cross the finish line as if they were to continue racing and round the mark. When finishing through a gate the finishing boat then has to be positioned outside the gate, so that the person sighting the finish can line up the gate marks to form a finish line.

11.3 The Blue Flag

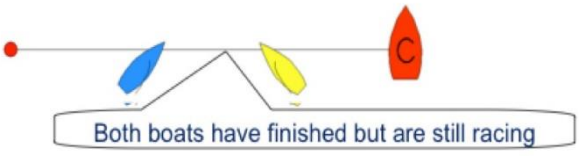
When displayed at the finish of a race, the Blue flag indicates to the competitors that the race committee vessel recording the finish is 'on station' at the finish. It does not define the finish line. This should be described separately in the SIs.

The Blue flag should be displayed, without a sound signal, when the first boat commences the last leg to the finish line. This is particularly useful to the competitors when there are more than two laps of a course being sailed. It helps them to keep track of how many rounds they have done.

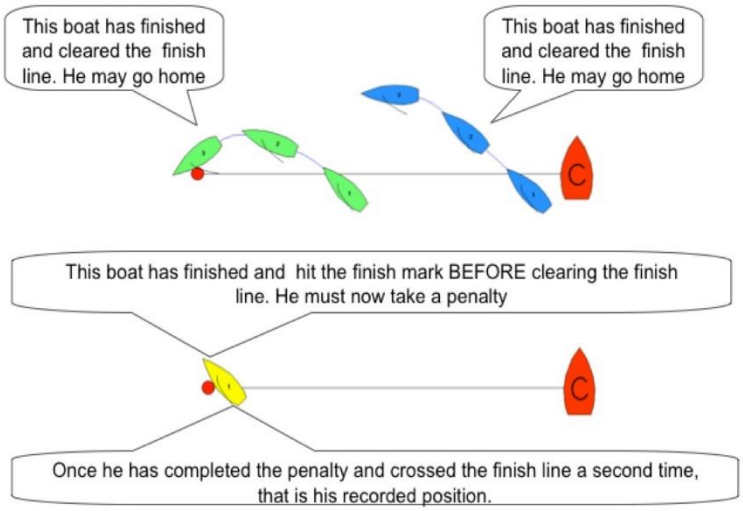
Remove the Blue flag without a sound either at the expiration of the time limit, or 1 minute after the last boat finishes, whichever is the sooner.

11.4 The Finish of the Race

The definitions of finishing and racing should be clearly understood by the RO sighting the finish line. Once any part of a boat, its hull, crew or equipment in its normal position breaks the plane of the finish line from the course side, that is its finishing time or position. The whole boat does not have to cross the line. However, a boat has not finished if after crossing the finish line it corrects an error under RRS 28.2 (the string rule) made at the line or continues to sail the course (as it would in lap racing when the start/finish line is crossed at the end of each lap).



If a boat still racing hits a finish mark it must then complete the penalty turn and sail completely onto the course side of the line before crossing the line for a second time - it is then that it has finished correctly. The same applies to a boat that infringes a rule of Part 2 whilst still racing.



A boat stops racing when it has finished *and* cleared the finish line and its marks. It can clear the line by sailing forward until its transom is clear of the line or by falling back onto the course side of the line. Immediately its bow drops below the line it is clear of the line. However it is still subject to the *RRS* because it must keep clear of boats that are racing.

11.5 Recording the Finish

It is essential to have an accurate record of all boats that cross the finish line. When a boat sails outside the finish line but across it's extensions, a note should also be kept of where it would have finished if it had crossed the finish line. This is just in case there is a request for redress.

Recording teams should consist of two or three people. For non-handicap racing when the time of finishing is irrelevant (apart from the first and last finisher) one person sights the line and calls the numbers of the boats as they cross whilst the second person records those numbers in the order called. For handicap racing the finish time is important so one person sights the line and calls sail numbers whilst the two recorders note both the sail number and the time of that finish. If boats cross the line close together then one recorder concentrates on the sail numbers whilst the other concentrates on the finish times - the two records are then married.

The line caller also records on a recorder.

It is very important that all boats are recorded as they cross the line, in particular:

1. If a class is divided into fleets – do not try to see to which fleet the boat belongs. If the fleets are mixed then recording them as such will be too difficult. Results programmes can usually deal with this problem.

2. If a boat does it more than once – this boat may have taken a penalty for hitting a finishing mark and then crossed the finish line again. Both positions should be recorded and the decision as to which one is the boat's final position made later.

Always have more than one recording team. The second team should be independent of the first and sat at a slightly different angle to the finish line. This will give a good check on the accuracy of the main reader (the person calling the line). If there is a close finish, then this team may finish up with boat in a different order to the main recording team. It is the main recording team's position that is taken as the boat's position. Once all boats have finished, then the main recording team's results record should be checked against the set from the second team to minimise any errors (missing boats or dyslexia). Call from the main set and verify using the second set - verify any discrepancies by referring to the entry list or using a spotters sheet if available.

For an accurate record the use of a recording machine is essential. The modern digital recorders time-stamp the recording so finish times can be worked out retrospectively if required. They also allow each race to be placed in its own folder making it easier to find the recording.

A boat that is known to be OCS cannot trigger the time limit. Its time and position should be recorded but the first boat that started correctly is the one that triggers the time limit, although this boat may cross the finishing line 3rd or 4th.

A boat that misses out a mark of the course, hits a mark etc. cannot be scored DSQ by the race committee. Its time and place should be recorded and then a protest should be lodged by the race committee if they are certain that an infringement occurred.

Remember that unlike the start which can be done over and over, the race committee gets only one chance to record the finish! So have as much backup as is practical and record *every* boat that crosses the finishing line and its extensions, making notes as appropriate.

Record the finish times of the first and last boats.

The definition 'Finish' states that a boat may go back and correct an error made at the finishing line (under RRS 28.2, the string rule) even if she has already crossed the finishing line beforehand.

11.6 Sound Signals at the Finish

The instant the first boat that started properly finishes sound a clearly recognizable signal so that the other competitors have a time reference to the first finish. This time must be recorded (the hour, minutes and seconds) and the time limit calculated. It should be remembered, however, that an OCS boat that was the first to cross the finish line may request redress and be reinstated, thus influencing the time limit.

No other sound signals should be made. There is no reference to a sound signal being required in the *RRS*, when a boat finishes. Making a sound signal for every boat is a nuisance when the RO is recording the finishing positions on a dictaphone.

12. POST-RACE TASKS

12.1 Accounting for All Boats

In association with mark boats, patrol boats and the Race Office, the RO satisfies him/herself that all competitors and RC boats are accounted for. Especially in difficult conditions the “all clear” is not given until all competitors and RC boats are ashore, on moorings or at least in sheltered water. The tally system, if used, should be carefully checked to ensure that all the regulations have been complied with.

12.2 Scoring

All boats that entered the race and sailed in the vicinity of the start line rank as starters. Each boat should appear on the finishing list with either a race position or one of the acronyms used to designate their score, e.g. OCS or BFD. Appendix A deals with scoring.

It is the Race Committee’s responsibility to score the race and so the RO must at least check the scoring and sign the results sheet(s) showing the scores. This may be delegated to a senior member of the team. In the event of a competitor questioning the scoring (when it is believed to be incorrect) the RO must check the records and if there is a mistake the results must be corrected. This can be at any time.

Unless specified to the contrary in the SIs:

1. The Low Points System is the default system and this includes one discard within a series of races.
2. If one boat finishes within the time limit but subsequently retires or is DSQ, the race is still valid for all other boats finishing.
3. The Race Committee can only score:
    a. Finishers - they are allocated the appropriate number of points according to their position
    b. Boats that did not start - DNC & DNS
    c. OCS
    d. Did not comply with RRS 30.2 (one or more separate 20% penalties applied to her finish place) - ZFP
    e. Did not comply with RRS 30.3 - UFD or RRS 30.4 BFD
    f. Did not finish - DNF
    g. Takes a scoring penalty under 44.3 – SCP 20% if not amended by SI.
    h. Boats that retire – RET
    i. Boats that do not comply with RRS 78.2 - DSQ
4. Only the Protest Committee can take other scoring actions that worsen a boat's score.. It can only protest the boat if it believes it infringed a rule (eg failing to sail the proper course or hitting a mark without taking a penalty).
5. Race ties are scored the points that would have been awarded to those boats had they finished separately divided by the number of boats involved in the dead heat.
6. Series ties are broken by a process of count back. If this fails to separate the boats then the result of the last race is the deciding factor.
7. For a Regatta DNC, DNS, OCS, BFD, DNF, RET, DSQ are all scored the points for the number of boats entered in the series +1.
8. For a Series longer than a regatta, as often happens in club racing over a period of weeks, DNS, OCS, BFD, DNF, RET, DSQ are all scored the points for the number of boats that came to the

start area +1 (so not entries). DNC is awarded the number of boats entered in the series +1. ZFP is still calculated on the number of boats entered.

12.3 Results Service

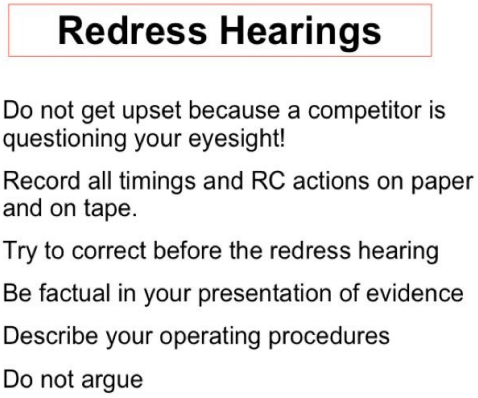
The results should be transmitted ashore as soon as possible by the recorders onboard the committee vessel. This may even be before they have been fully checked for accuracy as this can be undertaken soon afterwards with corrections made at that time. Once processed, a copy of the provisional results should be placed on the official notice board so that they are available as soon as the competitors come ashore. Provisional results remain as such until after all protests and requests for redress have been heard. Even then, corrections can be made to the results until the end of the regatta, and, in some cases, even after this time.

12.4 Protest Time

The Protest Committee Secretary will require the time that controls the period in which protests have to be submitted. This will depend on what is written in the SIs. This time limit has to be posted on the official notice board.

12.5 Redress Hearings

If it is possible, try to correct the reason for the redress hearing before you reach the protest room. Allow competitors to listen to your tapes at any time during the regatta - many will be entirely satisfied that they are wrong if that is what your tape(s) demonstrate; if they are correct then you should score them appropriately without the need to for a sailor to continue with their submission requesting redress.



Prepare thoroughly for a request for redress. Before entering the protest room, have your evidence prepared in strict order of action, with any tapes you expect to use re-wound to start at the correct place.

Always state your normal procedures, the conditions at the time of the incident and what happened. Be factual in your evidence. Always be positive in your statements to the Protest Committee or International Jury. Because you are presenting factual evidence you should avoid being drawn into arguments.

12.6 Race Committee Protests

Since the primary responsibility for protesting breaches of the rules rests with competitors, the race committee will not normally protest a competitor. However, the race committee is obliged to protest a boat when it receives a report from an event measurer for an infringement concerning measurement. Outside of this, it is considered best practice to only protest a boat for a blatant breach of the rules that affects the fairness of a race such as failing to take a penalty after knowingly touching a mark or failing to sail the course. The race committee would also normally protest a competitor for a breach of good sportsmanship.

12.7 Debrief and Evaluation

Get the opinions of others. Be prepared for criticism. Listen to it; it may be useful. Talk to the competitors and their coaches (who are not usually shy when it comes to giving feedback). Talk to

the Protest Committee Chairman. The Protest Committee, particularly if they have been on the water, may have some comments to make about the way the race has been managed.

Talk about the day's activities with the rest of the team, highlight things that went well and things that were not so good. Discuss how to improve on any deficiencies.

RYA Racing Department

Under the umbrella of its Racing Charter, the RYA produces a range of guidance booklets and notes on the Racing Rules of Sailing and the organisation of racing.

The documents shown here will be available early 2017 and will be updated and additional notes will be published as required. The guidance offered is the opinion of experts and is not a binding interpretation of the rules, nor will it be appropriate for all racing.

The latest versions of these documents can be obtained from the RYA website at www.rya.org.uk/racingrules.