

### THE RYA PORTSMOUTH YARDSTICK SCHEME



### 60 Years of fairer racing

#### Scoring a race

In order to score a handicap race corrected times need to be calculated from a boats elapsed time (time taken to sail the course). This is achieved by using the formula below.

Calculation of corrected times for race results;

$$\text{Corrected Time (C)} = \frac{\text{Elapsed Time (E)}}{\text{Portsmouth Number (N)}} \times 1000$$

(All times in seconds, any decimals are rounded to the nearest whole figure with a decimal of 0.5 and above rounded up and less than 0.5 down)

An example as to the application of the corrected times:

There are two boats, a Foiling Moth (assumed handicap of 600) and a Laser (assumed handicap of 1085) that finished 1<sup>st</sup> and 2<sup>nd</sup> on the water (the Moth with an elapsed time of 700s and the Laser 1200s) the calculations would bring the corrected times to be 1167s for the Moth and 1105s for the Laser, the Laser actually beat the Moth once the handicaps are taken into consideration as its corrected time is less than the Moth.

#### Standard Definitions

The following are standard definitions that are used throughout the documentation.

##### Portsmouth Numbers (PN)

These are the handicap numbers allocated to each class/ configuration. These represent times

over a common but unspecified distance, expressed as whole numbers of either 3 or 4 digits long.

#### RYA National List

A list of PNs published by the RYA annually to be used as recommendations to clubs as a starting point for their own lists.

#### Club List

A list of PN's published by a club either annually or on a regular basis. These will apply to that club specifically and these may include any of the numbers on the national list and or numbers that give fairer racing for that club based on the general ability of sailors and types of boat being raced.

#### Experimental List

Portsmouth Numbers published by the RYA based on a new design or development class with a relatively low amount of return data. These numbers are less likely to be suitable for all clubs than the RYA list however may give an appropriate starting point for boats to get onto a club list.

#### Trial Number

A number allocated by a club for a new class/ configuration that is yet to establish itself within the club. This number is to be periodically reviewed by the club until any number adjustment calculations give a stable number, at which point the trial number can join the club list.

#### Annual Return

A club's submission of race data held using the Portsmouth Yardstick scheme to which the RYA will use to publish the RYA list.

#### Configuration

The method of separating boats of the same class being sailed with a differing number of crew or sail set up. These are expressed as a code as seen in the chart below:

| <b>Dinghy</b>    |            |                     |               |             |
|------------------|------------|---------------------|---------------|-------------|
| <b>People</b>    | <b>Rig</b> | <b>Spinnaker</b>    | <b>Engine</b> | <b>Keel</b> |
| 1                | U (Una)    | 0 (No Spin)         | N/A           | N/A         |
| 2                | S (Sloop)  | A (Asymmetric)      |               |             |
| 3                | M (Multi)  | C<br>(Conventional) |               |             |
| <b>Keelboat</b>  |            |                     |               |             |
|                  |            | 0                   | N/A           | N/A         |
| 1                | U          | A                   |               |             |
| 2                | S          | C                   |               |             |
| 3                | M          |                     |               |             |
| 4                |            |                     |               |             |
| <b>Multihull</b> |            |                     |               |             |
| 1                | U          | 0                   | N/A           | N/A         |

|                |   |   |  |  |
|----------------|---|---|--|--|
| 2              | S | A   |  |  |
| 3              | M | C   |  |  |
| <b>Cruiser</b> |   |   |  |  |
| Not Available  | U | 0   | OB (Outboard)  | F (Fixed)                                |
|                | S | A   | IB2 (In board engine with a 2 blade fixed propeller) | D (Drop)                                 |
|                | M | C   | IB3 (In board engine 3 blade fixed propeller)        | 2K (2 keels/ bilge keel)                 |
|                |   | CA (Boat able to fly either Conventional or Asymmetric) | IBF (In board folding propeller)                     | 3K (3 keel/ bilge keel with centre keel) |

For example a standard Laser would normally be expressed as Laser 1U0 (1 person, Una rig, No spinnaker) and a Merlin Rocket 2SC (2 people, Sloop Rig, conventional spinnaker).

Personal Handicap

A PN allocated to a specific boat and crew by the club. This PN will take into account the Crew Skill Factor and the configuration of that boat. It is up to the club to decide if they wish to give individual boats personal handicaps or not.

Crew Skill Factor (CSF)

The influence on the performance of the boat that is caused by the efforts of the people racing the boat. This influence can be found in tuning, sailing ability and tactical skills. This is a subjective judgement by the club. A boat with a below average crew will be allocated a Personal PN higher than that of the standard and a boat with an above average crew will be allocated a Personal PN lower than that of the standard. A club may also wish to adjust a local handicap based on the average CSF of a particular class i.e. if there are a group of national champions all sailing a laser then the average CSF of that class will be much higher than the average of other fleets.

## **Making your return**

All clubs that race using the Portsmouth yardstick scheme MUST return their Portsmouth yardstick data to the RYA to ensure that the RYA national list is as accurate as it can be. Clubs are invited to make their return towards the end of the year typically between the start of September and the end of November each year. The club can make a return by one of two methods.

Either by using an electronic return form or using the RYA race results website ([www.pys.org.uk](http://www.pys.org.uk)). Within the return form a club will be asked some basic information such as the type of water the club races on, the handicap officer, how the club make adjustments to PN's etc. Along with this they are required to tell the RYA which classes they race, the PN used for each class and the PN they would suggest is most suited to each of those classes.

One of the most important elements for a club to ensure is correct within their return form is to ensure that the club records the configuration for each boat. This is so that the RYA receives an accurate record of what is actually being sailed at each club, so that the proposed PN data is amalgamated with the correct data from other clubs.

**One advantage of a club actively using the PYS website is that they do not need to make a separate return, the RYA will pull data from the clubs account. For more information please visit the PYS website directly.**