



# THE RYA PORTSMOUTH YARDSTICK SCHEME 2007

## Appendices

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## APPENDICES

### APPENDIX I

#### STANDARD NOTICE OF RACE AND SAILING INSTRUCTIONS

A club which intends to run a race under the Portsmouth Yardstick Scheme should include in the Notice of Race and Sailing Instructions information derived from the following:

- 1 The RYA Portsmouth Yardstick Scheme as set out in the current YR2 will be used.
- 2 Portsmouth Numbers will be those published in the current YR2 for each class, adjusted as necessary for variations from Base Rig.  
**or**
- 2 Portsmouth Numbers will be those published by the Race Committee n minutes prior to the start of the first\*/each\* race.  
**or**
- 2 Portsmouth Numbers will be those listed hereunder:
- 3 Boats without Portsmouth Numbers published in the current YR2 will be allocated Numbers by use of the Trial Number method described in paragraph 7.3 of the current YR2.  
**or**
- 3 Boats without Portsmouth Numbers published in the current YR2 will be allocated Numbers by use of the method described in Specimen Race Four of the current YR2.
- 4 Portsmouth Numbers will not be adjusted during the series.  
**or**
- 4 Portsmouth Numbers will be adjusted by the method set out in the current YR2 after every nth race of the boat\*/class\*/series\*.

n = Enter number

\* = Delete as appropriate

### APPENDIX II

#### PORTSMOUTH CERTIFICATES

Clubs are advised to issue Portsmouth Certificates as follows:

Boat \_\_\_\_\_  
Class \_\_\_\_\_  
Owner's Name & Address \_\_\_\_\_  
\_\_\_\_\_  
Sail No. \_\_\_\_\_  
Class *Base Rig Number* (if any) \_\_\_\_\_

#### ALLOWANCES FOR VARIATIONS FROM BASE RIG

- (i) Boat with inboard engine with feathering/folding propeller \_\_\_\_\_
- (ii) Boat with inboard engine with fixed two blade propeller \_\_\_\_\_
- (iii) Boat with inboard engine with fixed three blade propeller \_\_\_\_\_
- (iv) Boat with outboard or detachable inboard engine \_\_\_\_\_
- (v) Boat with no headsail larger than working headsail \_\_\_\_\_
- (vi) Boat with no standard spinnaker \_\_\_\_\_
- (vii) Boat with cruising chute and no standard spinnaker \_\_\_\_\_
- (viii) Boat with mainsail not Bermudan, i.e. gaff, sprit or Gunter \_\_\_\_\_
- (ix) Other \_\_\_\_\_

CLUB NUMBER \_\_\_\_\_

Signed \_\_\_\_\_ Date \_\_\_\_\_

Club \_\_\_\_\_

Type of Water \_\_\_\_\_

Any special local conditions \_\_\_\_\_

Note: This certificate shall be invalidated if any alterations are made which would affect the Number.

### APPENDIX III

#### PARTICULARS REQUIRED FROM RACE ENTRANTS (MONOHULLS)

Boat's Name \_\_\_\_\_  
Owner's Name \_\_\_\_\_  
Class of Boat \_\_\_\_\_

Hull Construction: Wood/Steel/Alloy/Glassfibre \_\_\_\_\_

Colour of Hull \_\_\_\_\_

Sail No. \_\_\_\_\_

Racing Flag \_\_\_\_\_

L.O.A. \_\_\_\_\_ L.W.L. \_\_\_\_\_ Max. Beam \_\_\_\_\_

Max. Draft \_\_\_\_\_ (C.B. down) \_\_\_\_\_ Type of Rig \_\_\_\_\_

Keel Configuration: Drop Keel (1)/Fixed Keel, central (1)/Twin Bilge  
Keels (2)/Central and Twin Bilge Keels (3)

If Class Boat is (a) Ballast Standard? YES/NO

(b) Sail Plan Standard? YES/NO

If NO, give details of variation from standard \_\_\_\_\_

Does the Boat carry (a) a Headsail with overlap? YES/NO

If YES, give percentage overlap, taking fore triangle base as 100.

(b) a Spinnaker? YES/NO

If YES, give approx. dimensions.

(c) an Engine? YES/NO

If YES, indicate type of installation:

Outboard or detachable inboard fitted in well;

Inboard with feathering or folding propeller;

Inboard with fixed propeller.

Number of blades \_\_\_\_\_

Does the boat comply in all respects with the Safety Regulations locally in force? YES/NO

Has the boat been given a Number by any other race organisation? YES/NO

If YES, please attach (or obtain and forward) Portsmouth Certificate.

Has the boat an IRC Rating? YES/NO

If YES, please state:

IRC Rating \_\_\_\_\_ Date \_\_\_\_\_

Signed \_\_\_\_\_ Date \_\_\_\_\_

Name & Address \_\_\_\_\_

### APPENDIX IV

#### THE MILLEDGE DL SYSTEM

It has long been known that considerable inequities in both results and analysis of performance are introduced when a fleet becomes so extended that faster boats sail under conditions different from those experienced by slower ones, e.g. when winds lighten leaving back markers becalmed, or tidal changes occur adversely affecting slower boats. Research has demonstrated that inequitable conditions, far from being an exceptional problem, often produce serious distorted relationships in performances, even in apparently normal races. A solution is to use a post-race statistical system.

With the Milledge DL System, statistical methods of race analyses are within easy reach of Club officers and can be applied by the use of pocket calculators (or computers if available). Only simple arithmetic is called for, and the calculations take about four minutes per finisher. The average performance under prevailing conditions is calculated for each *Portsmouth Number*, and a boat is assessed according to how far its actual performance varies from its *Portsmouth Number*. Trials with past records - some chosen for their intractability - have given consistently fair results for races having 5 or more different *Portsmouth Numbers* whose finishing times are known. In this form of analysis it is important to use the same method to analyse the whole series and not to mix it with the method described in YR2.

Rules for the Milledge DL System (and the similar D system for use with IRC ratings) are available from the RYA Technical Department.



## SPECIMEN RACE FOUR

The same as Specimen Race Three but with retrospective Number calculation and application for boats with **TNs**.

### Steps 1 to 5 produce corrected times (except for TN boats)

1. Enter the boats in the order in which they finish in columns *a*, *b*, *c*, *d*, and their Elapsed Times (**E**), in seconds, in column *g* and any relevant information, e.g. how many races boats with Trial Numbers have completed, in column *k*.
2. Enter in column *e* for each boat the Portsmouth Number (**N**), which is to be used for calculating the race results. (This Number can be an RYA published Number, or a Club or Trial Number allocated by the race organiser in accordance with the Sailing Instructions.)

Boat 1 is an unlisted boat in her first race and is required to race without a Portsmouth Number. This will be calculated after the race and applied retrospectively. (7.3 page 5)

Steps 3 to 17 should be undertaken using the same method as illustrated in Specimen Race Three.

### Steps 18 and 19 are the review of Numbers

A review and adjustment of **TN** boats should be undertaken after every race.

A periodic review and, if appropriate, adjustment of **PY**, **SY**, **RN** and **CN** boats should be undertaken at periods determined by the club and as specified in Sailing Instructions (7.4 page 5).

In this specimen race it is assumed that the club undertakes a periodic review of Numbers after every fourth race in which a class is adequately represented.

Note: When adjusting any Portsmouth Numbers, great care should be exercised. The proposed change should only, and truly, reflect the performance of that design of boat on your club's sailing waters and not be because the class has better (or worse) sailors than the club average. Additionally, Primary Yardsticks are Portsmouth Numbers well attested over many years and should not require adjustment. However it is possible that, in your club on your sailing waters, small changes may be necessary to a Primary Yardstick in order to maintain fair relationships between classes. Secondary Yardsticks are also well attested though not as well as Primary Yardsticks, so the same recommendation applies though changes may be made with less reluctance.

### 18 Review of **TN** boats undertaken boat by boat

For **TN** boats a review and adjustment of Number, should be undertaken after every race.

The Number Change (**NC**) for each boat should be calculated and entered in column *r*. The **NC** is the **PC** in this race divided by 1 i.e. the  $\sum PC$  as entered in the top left hand side of boxes in column *q* divided by the  $\sum R$  as entered in the bottom right hand side of the same box.

The (new) **N**, to be entered in column *s*, is the (old) **N** for this race in column *e*, with **NC** applied. If **NC** is positive then this should be added to the old **N**. If **NC** is negative it should be taken away from the old **N**.

#### Q.P.R. - One boat without a Number in her first race

For this boat the **NC** is  $10/1 = 10$ . As the boat had no (old) **N** for this race her **NC** is applied to the **P** in column *l*. The (new) **N**, in column *s*, is  $1006 + 10 = 1016$  which is used as a **TN** for this race which can now be entered in column *e* and applied retrospectively to give a **C** of 13361 which is now entered in column *h* (see step 4).

#### Etap 30 - One boat with a TN of 1069 in her second race

The **NC** is  $-61/1 = -61$  and the new **N** =  $1069 - 61 = 1008$ .

#### Chance 24 - One boat with a TN of 1079 in her third race

The **NC** is  $-21/1 = -21$  and the new **N** =  $1079 - 21 = 1058$ . As this is the third race in which this boat has finished without being a 'poor performer', her new **N** should be sufficiently stable to warrant a status change to a **CN** with the  $\sum PC/\sum R$  in column *q* cancelled (returned to zero) ready for the next race calculation. However, if a club considers appropriate, it would not be wrong to keep the Number as a **TN** and to continue to review after every race.

#### One-Off (boat S) - One boat with a TN of 1069 in her second race

The **NC** is  $41/1 = 41$  and the new **N** =  $1069 + 41 = 1110$ .

Step 19 should be undertaken using the same method as illustrated in Specimen Race Three.

20 Finally from the **Cs** in column *h*, place all boats in order (1 to 24 in the example) in column *i*.

**This is the race result**