



TSC Handicap System

Introduction

The following is an explanation of the handicap scoring system currently in use at Trimpey Sailing Club for Sunday Series Racing.

Sunday Series Racing runs during each of the four seasons, namely;

- Spring Series (The Hare)
- Summer Series (The Dragonfly)
- Autumn Frostbite Series (The Bear)
- Winter Icicle Series (The Polar Bear)

Each quarter there are four races most Sundays that count towards one of the above series. There are a minimum number of races to be completed in order to qualify for inclusion in the series results.

Fleets

The results are broken down into three fleets, namely;

- Main Fleet: No adjustments made. Simply the elapsed times and finishing order.
- Handicap Fleet: The elapsed times are corrected based on assigned personal handicaps.
- Menagerie Fleet: The elapsed times are corrected for both the class of boat and personal handicap.

NB: OODs & AODs, please note that the recording of competitors elapsed times to complete the race are crucial for calculating handicap/menagerie results

Handicap Fleet Corrections

The elapsed times are corrected using a Time Correction Factor (TCF)

$$c = e \times r$$

where: c = corrected time , e = elapsed time , r = rating (TCF)

The TCF is fundamentally a ratio of the average speeds of the rated competitor and a scratch sailor (i.e. a sailor with no handicap allowance).

The Rear Commodore, in conjunction with the fleet captains, assigns a personal handicap (PH) to individual sailors for a specific class of dinghy. If an individual sails more than one class of dinghy, it is possible to have a different personal handicap assigned for the different dinghy types.

The assigned PH is in mins, and is the estimated amount of additional time that a competitor would take to complete the same course as a scratch competitor completing it in 60mins. Worked example below :-

Competitor A:

A very good sailor with no personal handicap assigned (i.e. PH = 0 min and TCF = 1)

Competitor B:

A sailor who takes 66mins to complete the same course distance that it takes Competitor A to do in 60mins.

PH = 6 min and TCF = $60 / (60 + PH) = 60 / 66 = 0.909$

∴ for an elapsed time of 66mins, $C = E \times R = 66 \times 0.909 = 60m$

∴ for an elapsed time of 60mins, $C = E \times R = 60 \times 0.909 = 54m\ 32s$

∴ for an elapsed time of 50mins, $C = E \times R = 50 \times 0.909 = 45m\ 27s$

∴ for an elapsed time of 40mins, $C = E \times R = 40 \times 0.909 = 36m\ 21s$ etc.



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Portsmouth Yardstick

The RYA Portsmouth Yardstick Scheme has enabled boats of different classes to race competitively against each other for over 70 years. TSC are currently using the RYA Portsmouth Number List 2024 which is the national base list based on the typical performance of each boat across a variety of clubs and locations.

$$c = \frac{e \times 1000}{r} \quad eqn(1)$$

Where c = corrected time (s), e = elapsed time (s), r = Portsmouth Yardstick rating

Menagerie Fleet Corrections

For the Menagerie Fleet we apply a combination of both the Personal Handicap (PH in mins) and Portsmouth Yardstick Number (PN), to end up with a modified PY number (PN_{mod}) for use as the rating (r) in the above eqn(1) as used in Sailwave.

$$PN_{mod} = \frac{(3600 + (PH \times 60)) \times 1000}{\frac{(3600 \times 1000)}{PN}} = PN + 0.016\dot{6} \times PH \times PN$$

Pursuit Race Start Time Calculator (Excel)

There is an excel spreadsheet available which calculates pursuit race start times. The competitors and class of dinghy are entered into the input table and respectively allow the personal handicaps and Portsmouth Yardstick numbers to be derived and thence the menagerie corrections to be calculated. These values then allow the slowest boat/handicap combo to be determined from the list of entrants.

A race duration is then set for the slowest boat/handicap combo and this is used to derive a ratio which is then used to calculate each entrants corrected race durations and hence their start times.

The start times are rounded to the nearest half minute. The race duration may be easily varied and the entrants start times automatically re-adjust. A macro button may then be used to sort the entrants into their starting order.

Using this excel calculator allows for easy race running and race timing, as the race duration simply starts from the zero in the normal 5,4,1,0 start pattern. It also removes the long waiting times at the start if having to use a fixed datum as we do when using the manual sheets on the wall in the race hut.