

## Calculating Starting Times for Pursuit-Fastnet Races

Here's how to use these forms for Pursuit-Fastnet races:

1. Determine the course distance in nautical miles:

The course distance for common courses are shown on the page entitled "Course Distances." Use the following key:

- R1 Red can closest to the causeway.
- R2 Red can second from the causeway.
- R3 Red can third from the causeway.
- G1 Green can closest to the causeway.
- G2 Green can second from the causeway.
- G3 Green can third from the causeway.
- LGL Lower Gunterville Light- Mile 356.5 on the Tennessee River.
- G-A Green can closest to the bridge (entering Alred's channel).
- UGL Upper Gunterville Light- Mile 359.6 on the Tennessee River.
- SCL Short Creek Light- Mile 361.7 on the Tennessee River.
- SBL Seibold Light- Mile 363.4 on the Tennessee River.

A common course for the Pursuit-Fastnet races has been from R3 to R2 to LGL to UGL, back to LGL, and finish at R2, leaving marks to starboard on the way out and LGL to port on the way back. This distance is 7.9 nautical miles.

2. Find the "Fastnet Relative Time" sheet for a distance of 7.9 nautical miles. Using the Portsmouth Handicap number for each boat, look up their relative times (wind adjustments are not normally considered since winds on the course are not known before the race). Headsail and spinnaker allowances are used in the calculation of a boat's handicap.

Example:

Three boats are competing.

Boat	Handicap	Relative time
A	75.4	16:07
B	82.1	21:25
C	97.5	33:35

Since the Boat C has the greatest relative time, she will start first. That is, she will start at 0:0. Other start times are determined by subtracting the relative times from that of the boat starting first (Boat C). Start times for this example are as follows:

Boat	Handicap	Relative time	Start time
A	75.4	16:07	17:28
B	82.1	21:25	12:10
C	97.5	33:35	0

In theory, all boats should finish at the same time so the first one to cross the finish line is the winner.

### Distances between selected aids to navigation in the vicinity of Brown's Creek Sailing Marina

Distance in Statute Miles												
	Marina	R1	R2	R3	G1	G2	G3	LGL	G-A	UGL	SCL	SBL
Marina	0	0.76	0.90	1.10	0.90	1.00	1.30	1.90	2.33			
R1	0.76	0	0.34	0.70	0.20	0.40	0.73	1.57	2.12			
R2	0.90	0.34	0	0.35	0.31	0.18	0.42	1.24	1.82			
R3	1.10	0.70	0.35	0	0.65	0.34	0.18	.088	1.49			
G1	0.90	0.20	0.31	0.65	0	0.35	0.68	1.58	2.06			
G2	1.00	0.40	0.18	0.34	0.35	0	0.32	1.21	1.70			
G3	1.30	0.73	0.42	0.18	0.68	0.32	0	0.89	1.41			
LGL	1.90	1.57	1.24	0.88	1.58	1.21	0.89	0	0.73	2.90	4.90	6.80
G-A	2.33	2.12	1.82	1.49	2.06	1.70	1.41	0.73	0			
UGL								2.90		0	2.10	4.06
SCL								4.90		2.10	0	1.96
SBL								6.80		4.06	1.96	0

**Key:**

- Marina            Brown's Creek Marina
- R1            Red can closest to the causeway.
- R2            Red can second from the causeway.
- R3            Red can third from the causeway.
- G1            Green can closest to the causeway.
- G2            Green can second from the causeway.
- G3            Green can third from the causeway.
- LGL          Lower Guntersville Light- Mile 356.5 on the Tennessee River.
- G-A          Green can closest to the bridge (entering Alred's channel).
- UGL          Upper Guntersville Light- Mile 359.6 on the Tennessee River.
- SCL          Short Creek Light- Mile 361.7 on the Tennessee River.
- SBL          Seibold Light- Mile 363.4 on the Tennessee River.

## Course Distances

Course distances for selected courses

Course: R3 to R2 to LGL to R2		
	Statute miles	Nautical miles
R3 to R2	0.3	0.3
R2 to LGL	1.3	1.1
LGL to R2	1.3	1.1
Total	2.9	2.5

Course: R3 to R2 to LGL to G-A to LGL to R2		
	Statute miles	Nautical miles
R3 to R2	0.3	0.3
R2 to LGL	1.3	1.1
LGL to G-A	1.3	1.1
G-A to LGL	1.3	1.1
LGL to R2	1.3	1.1
Total	5.5	4.8

Course: R3 to R2 to LGL to UGL to LGL to R2		
	Statute miles	Nautical miles
R3 to R2	0.3	0.3
R2 to LGL	1.3	1.1
LGL to UGL	3.1	2.7
UGL to LGL	3.1	2.7
LGL to R2	1.3	1.1
Total	9.1	7.9

Course: R3 to R2 to LGL to SCL to LGL to R2		
	Statute miles	Nautical miles
R3 to R2	0.3	0.3
R2 to LGL	1.3	1.1
LGL to SCL	5.2	4.5
SCL to LGL	5.2	4.5
LGL to R2	1.3	1.1
Total	13.3	11.5

Course: R3 to R2 to LGL to SBL to LGL to R2		
	Statute miles	Nautical miles
R3 to R2	0.3	0.3
R2 to LGL	1.3	1.1
LGL to SBL	6.9	6.0
SBL to LGL	6.9	6.0
LGL to R2	1.3	1.1
Total	16.7	14.5

The relative time for any distance for any Portsmouth number is given by the following formula:

$$RT = (D * (PN * 6 - 330)) / 60$$

Where:

RT = relative time in decimal minutes

D = course distance in nautical miles

PN = Portsmouth handicap for the boat

Remember to convert decimal minutes to minutes:seconds.

Example:

D = 4.8 nautical miles

PN = 93.1

$$RT = (4.8 * (93.1 * 6 - 330)) / 60$$

$$RT = (4.8 * (558.6 - 330)) / 60$$

$$RT = (4.8 * 228.6) / 60$$

$$RT = 1097.28 / 60$$

$$RT = 18.2 \text{ minutes}$$

18.29 minutes = 18 minutes 17 seconds.

The relative time for the boat for this course length is 18:17.