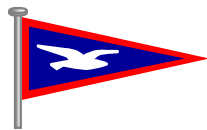


# Thorpe Bay Yacht Club

Club Race Officer Training 2016



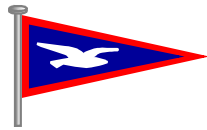
**THORPE BAY YACHT CLUB**

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# What do our customers want?

- Race participants want
  - Safe and fair competition
  - Fun
- Beginners want:
  - Encouragement to race
  - An environment that boosts their confidence
  - The opportunity to develop their skills
- Intermediates want:
  - Competitive sailing against others at their level
- Experts want:
  - An opportunity to practice and develop their skills
- And everyone wants something to talk about in the bar afterwards



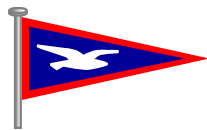
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# What do you want?

- Not to c\*\*k-up
- Maybe learn something that will improve your racing

- Contribute to TBYC's sailing activities
- Gain the satisfaction that comes from a job well done



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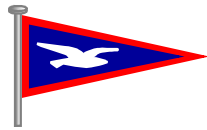
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# Agenda

- Preparation
- Setting up
- Setting course
- Start
- Recording
- Finish
- Clear up
- Differences for Mass & Shore Box start
- Problem solving

For Committee  
Boat start

The key  
information will be  
in the green boxes

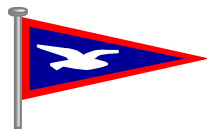


# Preparation – week before

- Check Dutyman to see what races are on & who else is on duty
- Contact Duty Officer to get updates, e.g. marks missing
- Contact Assistant RO
- Try to find a third person to help

- Watch the videos at

<http://www.tbyc.org/committee-boat-start>

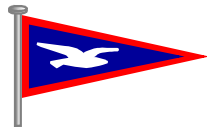


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# Preparation – day before & on the day

- Check weather
- Think about likely courses
- Check your equipment: Hand bearing compass, watch, binoculars, clipboard, pens & paper, SIs
- Synch watch to speaking clock (123)



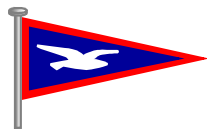
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# T-75: arrive at slipway

- Meet Duty Officer & Assistant RO
  - Get Committee Boat keys
  - Get Recording sheets from Shore Box briefcase
- 
- Put out Declaration sheets in Bosun's hut
  - Write on blackboard:
    - Date and event name
    - Time of High Water
  - Make sure inflatables are on Guard Boats (with ground tackle):
    1. Start line pin-end mark
    2. Cadet windward mark if there's a cadet race



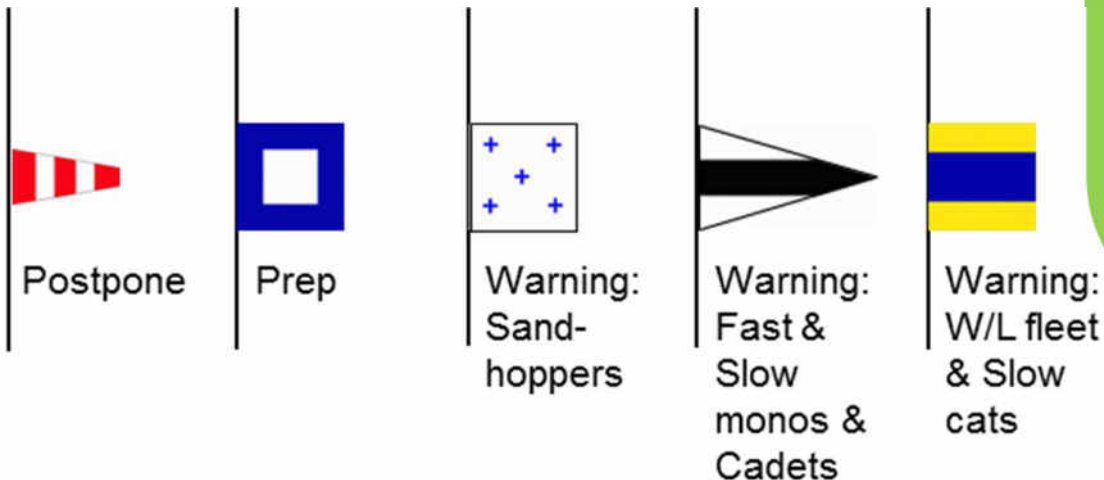
# T-60: board Committee Boat

## Race Officer

- Switch on electrics
- Check radio (Ch37 = M1)
- Set up windex on bow
- Check wind and decide whether to move CB

## Assistant

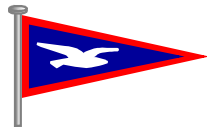
- Course board holders out
- Attach flags to cross-trees halyard but don't raise:
  - Burgee, Orange, J, Red or Green
- Put flags on gantry:
  - AP, P, NN0, 3rd Sub, D
- Locate X & 1<sup>st</sup> Sub
- Plug in the horn





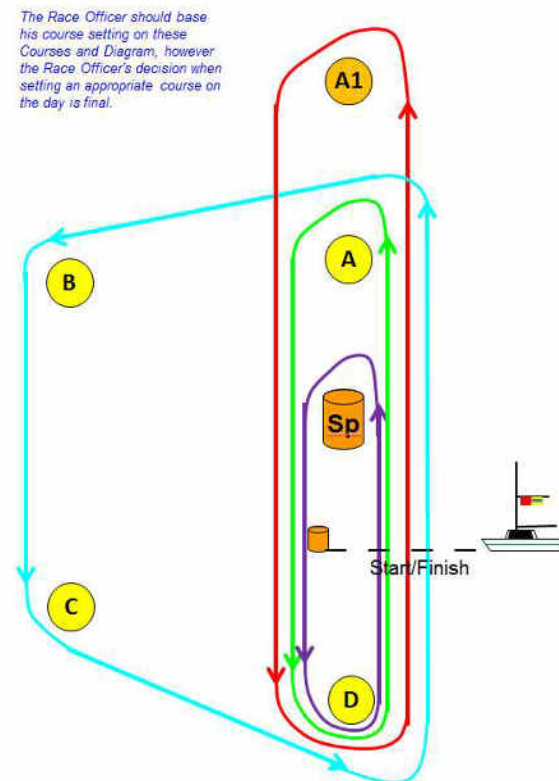
# Setting the course - 1

- Basic requirements for a decent course:
  - A true beat: within  $\pm 15^\circ$
  - Start line at  $90^\circ$  to the average wind direction
  - Short enough for at least 2 laps
  - Long enough that 1 lap takes the fastest boat more than 10 minutes (otherwise they will be completing their 1<sup>st</sup> lap while you are still starting the last group)
- If you're really good you can compensate for the tide:
  - Offset each mark  $10^\circ$  down tide for every knot of tide
  - Tide diagonal to wind – halve the offset



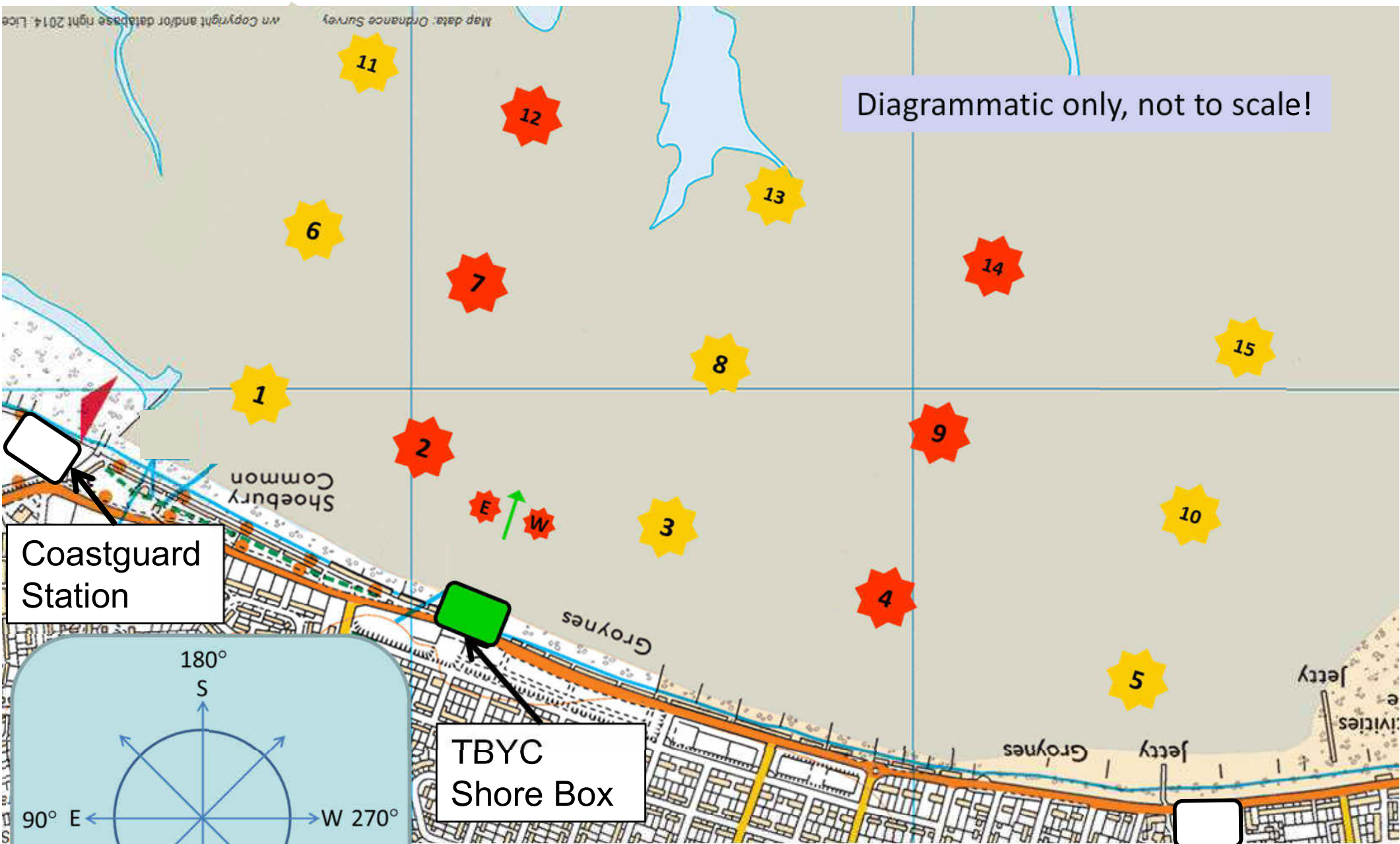
# Setting the course - 2

- Take several wind bearings at 3 minute intervals.
- Work out the rough average to get mean wind direction.
- Position the CB so there are two club marks more-or-less directly upwind:
  - The furthest will be Mark A1 of the course
  - The nearest Mark A of the course
- Choose other club permanent marks to make the desired course configurations
- If there's a Cadet race, lay the Cadet buoy (Sp) inside of Mark A



Start Published start time (T)	Class	Course Displayed on the FRONT or BACK of the committee boat	Flag
First Start, T	Windward Leeward →	A1 D FRONT	D
	Slow Catamaran →	A B C D BACK	
Second Start, T + 3	Fast Monohull →	A B C D BACK	3 <sup>rd</sup> Sub
	Slow Monohull →	A B C D BACK	
	Cadet →	Sp D BACK	
Third Start, T + 6	Sandhopper →	A D BACK	NNO

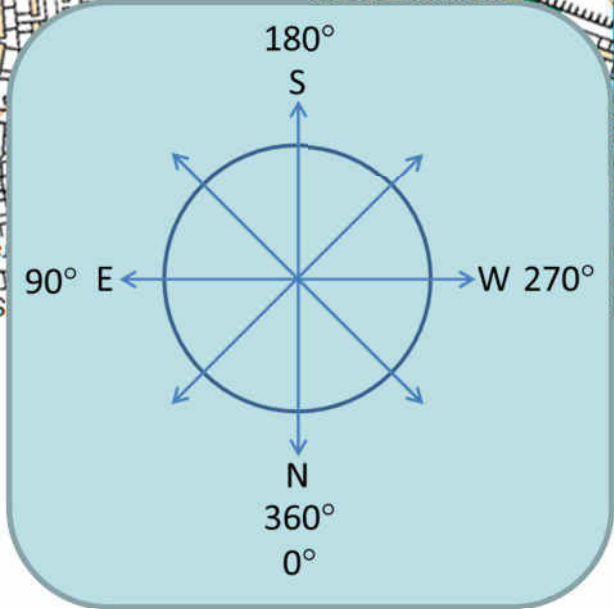
Diagrammatic only, not to scale!



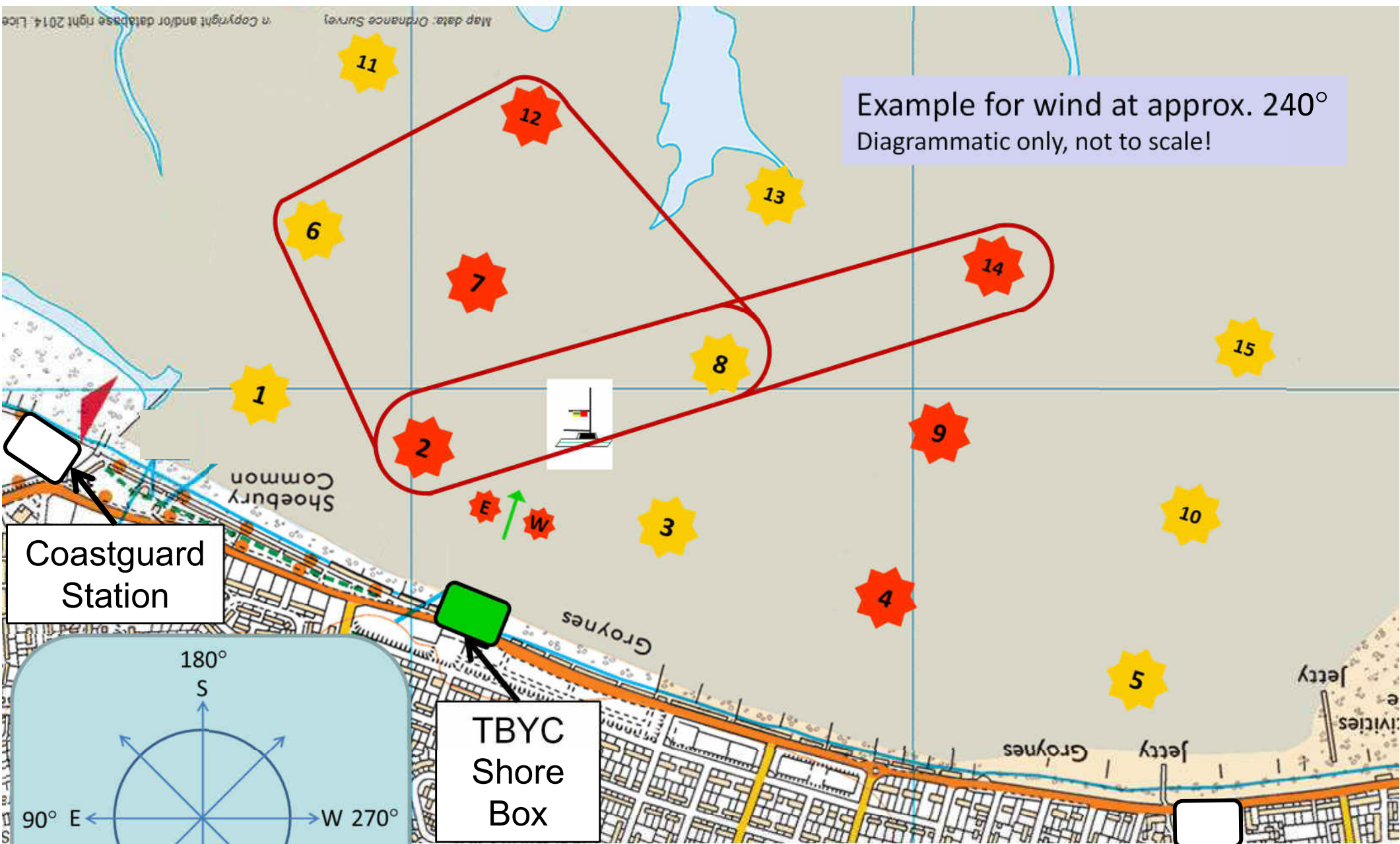
Coastguard Station

TBYC Shore Box

Halfway House



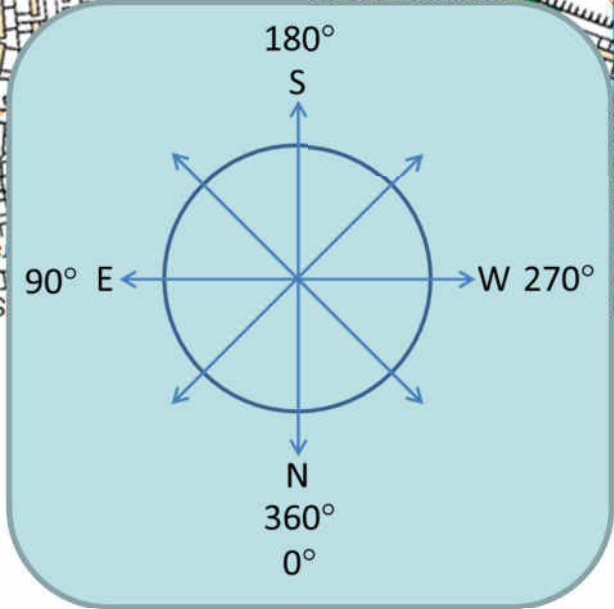
Example for wind at approx. 240°  
Diagrammatic only, not to scale!



Coastguard Station

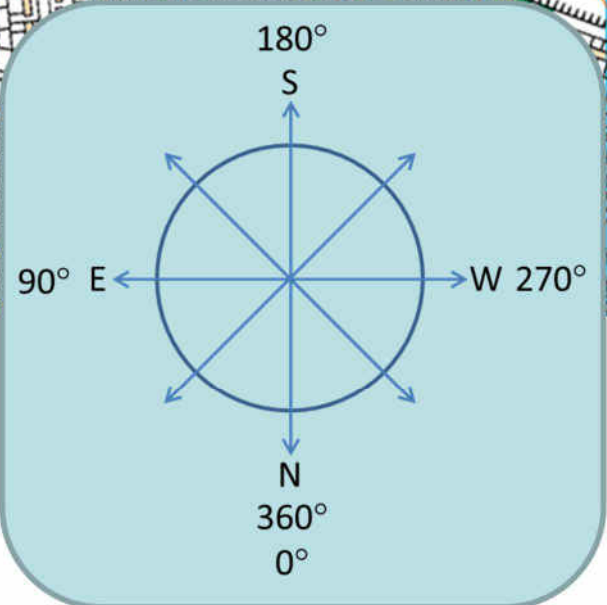
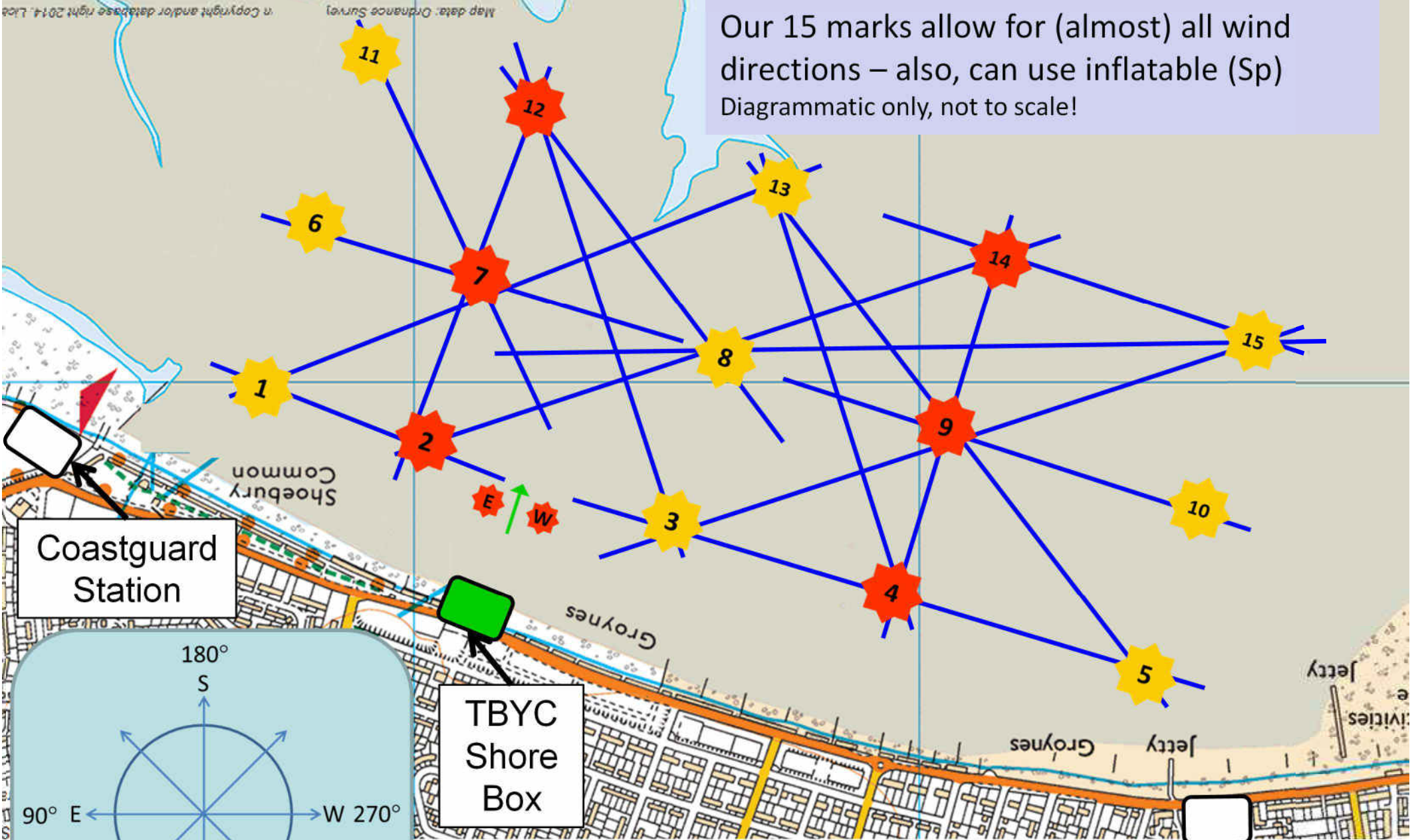
TBYC Shore Box

Halfway House





Our 15 marks allow for (almost) all wind directions – also, can use inflatable (Sp)  
Diagrammatic only, not to scale!

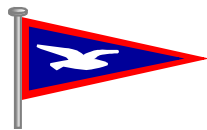


TBYC  
Shore  
Box

Halfway House

# Setting the course - 3

- Display courses by sliding numbered boards into holders
  - Holder at bow: Marks A1 & D for Windward/Leeward fleet
  - Holder at stern: Marks A, B, C & D for the rest of the boats
  - Marks read left to right as viewed from the water
  - Use “SP” for any inflatable marks & D for the distance mark
- Make sure the red (port) or green (stb) flag is showing to indicate which way marks are to be rounded

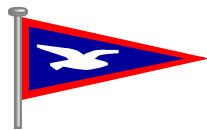


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# T-30: CB on station and course decided

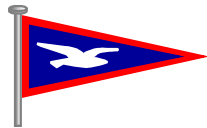
- Raise the flags on the cross-trees halyard
    - Burgee, orange, J &
      - Red (marks to port) or
      - Green (marks to stb)
  - Re-check average wind direction
  - Lay start line
- 
- Write bearing of windward mark on chalk board and display at front of CB



# Setting the course - 4

Lay the start line, normally on the port side facing into the wind

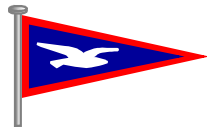
- Re-check average wind direction
- Start line from the CB mast must be 90° to wind
  - The radio can be used but hand signals are often more effective
- Length should be 1 boat lengths for every boat starting
  - Lay it for the number of boats in the largest fleet
- Adjust by paying out or taking in anchor warp
- This will also be finish line
  - Reduce the length immediately after the start





# Setting the course - 5

- Now take a pause to check all is OK:
  - Windward marks still to windward?
  - Course boards correct?
  - Orange flag on main mast?
  - Red or green flag raised?
  - “J” flag raised (if using club marks)?
  - Starting flags on halyards?
  - Horn connected and tested?
  - Rescue boats on station?
  - Record sheets and working pens / pencils to hand
  - Watch ready?
- You’re ready to go!




























# T-15: prepare for the start

- Write down start times

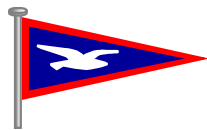
Time of first start, T =			All flags have one sound signal	
Offset	Time	Display	Remove	Comment
T-4			AP	Only if start delayed
T-3		D		
T-2		P		
T-1			P	
T		3 <sup>rd</sup> Sub	D	Windward/Leeward & Slow Cat start
T+1		P		
T+2			P	Lower X if raised
T+3		NN0	3 <sup>rd</sup> Sub	Fast & Slow monohull and Cadet start
T+4		P		
T+5			P	Lower X if raised
T+6			NN0	Sandhopper start

# T-15: prepare for the start

Time of first start, T =		All normal flags have one sound signal		
	Time	Display	Remove	Comment
T-4			AP ↓ 	Only if start delayed
T-3		D ↑ 		
T-2		P ↑ 		
T-1			P ↓ 	
T		3 <sup>rd</sup> Sub ↑ 	D ↓ 	Start: W/L & Slow Cat fleets
Overs?		↑  OR 		 1 sound  2 sounds
T+1		P ↑ 		
T+2			P ↓ 	Remove X or 1 <sup>st</sup> Sub if raised
T+3		NN0 ↑ 	3 <sup>rd</sup> Sub ↓ 	Start: F&S monohull+ Cadets
Overs?		↑  OR 		 1 sound  2 sounds
T+4		P ↑ 		
T+5			P ↓ 	Remove X or 1 <sup>st</sup> Sub if raised
T+6			NN0 ↓ 	Start: Sandhopper fleet
Overs?		↑  OR 		 1 sound  2 sounds
				Remove X or 1 <sup>st</sup> Sub if raised

# The start - basics

- Starting sequence is signalled by flags
    - Sounds are optional (but highly desirable), to call attention to the flags
  - Flags are DISPLAYED and REMOVED
  - Timing must be to the second
- 
- ISAF Guidance ruling G010 of 2010:
    - A visual signal is made when a flag is displayed. The flag is displayed when it is conspicuously visible. This can be before the flag reaches the top of the hoist.



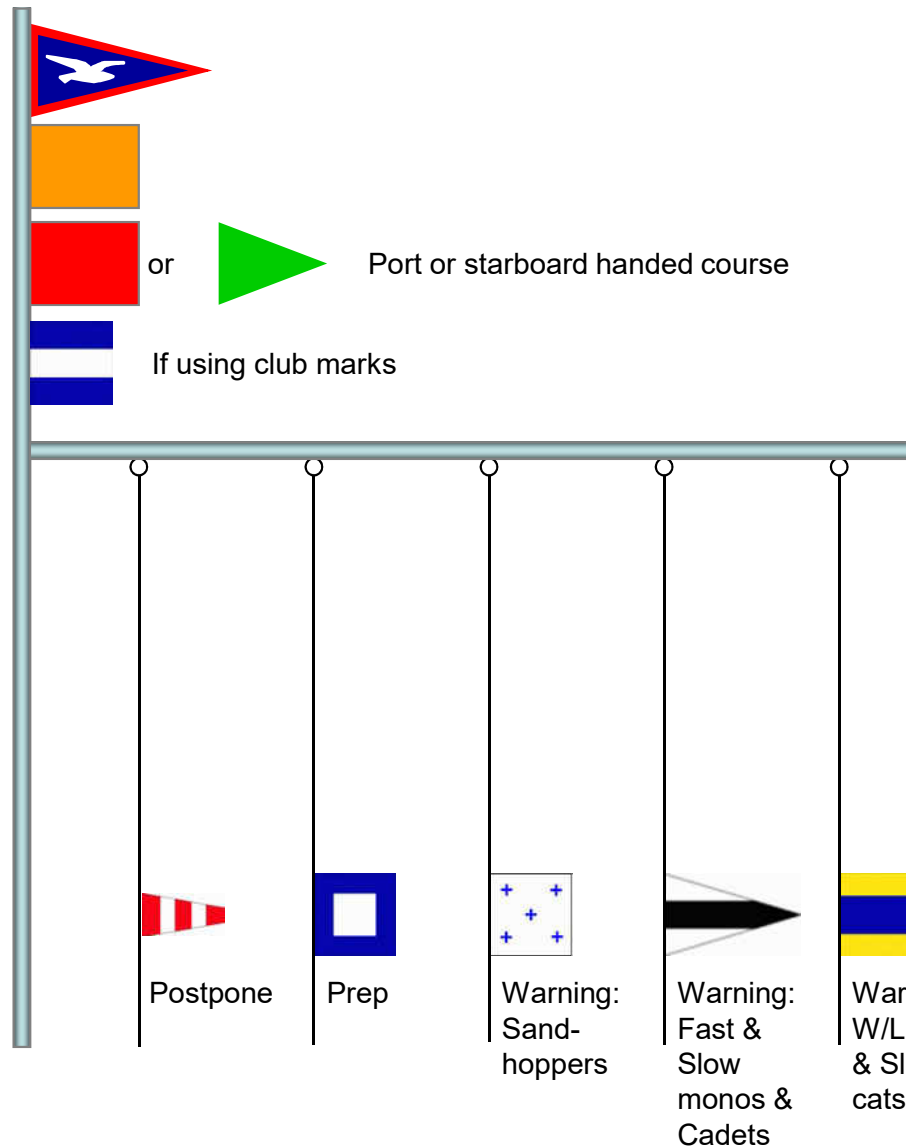
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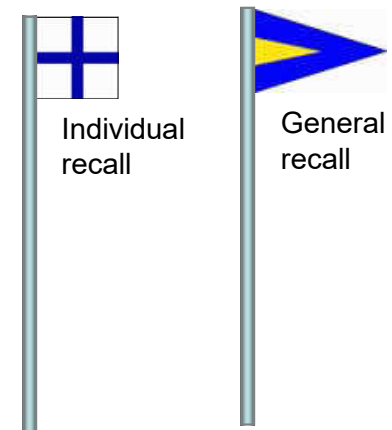


# Flags

- Flags needed for a class start



There are 2 poles, one with individual recall and one with general recall

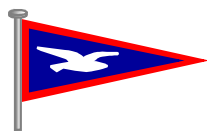


Note: when the flags are not in use they should be rolled up and tucked away so they don't show.

# T-5: the starting sequence

- Call everyone to attention & no chatting
- Position yourself so you can sight down the start line
- Count down to each flag
  - “50 seconds to D up and a sound signal”
  - “30 seconds to D up”
  - “15 seconds to D up”
  - “10 seconds to D up and one sound signal”
  - “5, 4, 3, 2, 1, now”

Time of first start, T =			All flags have one sound signal	
Offset	Time	Display	Remove	Comment
T-4			AP	Only if start delayed
T-3		D		
T-2		P		
T-1			P	
T		3 <sup>rd</sup> Sub	D	Windward/Leeward & Slow Cat start
T+1		P		
T+2			P	Lower X if raised
T+3		NN0	3 <sup>rd</sup> Sub	Fast & Slow monohull and cadet start
T+4		P		
T+5			P	Lower X if raised
T+6			NN0	Sandhopper start

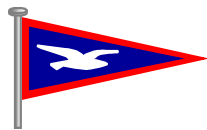


# T: the start

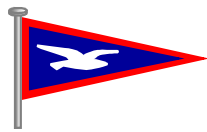
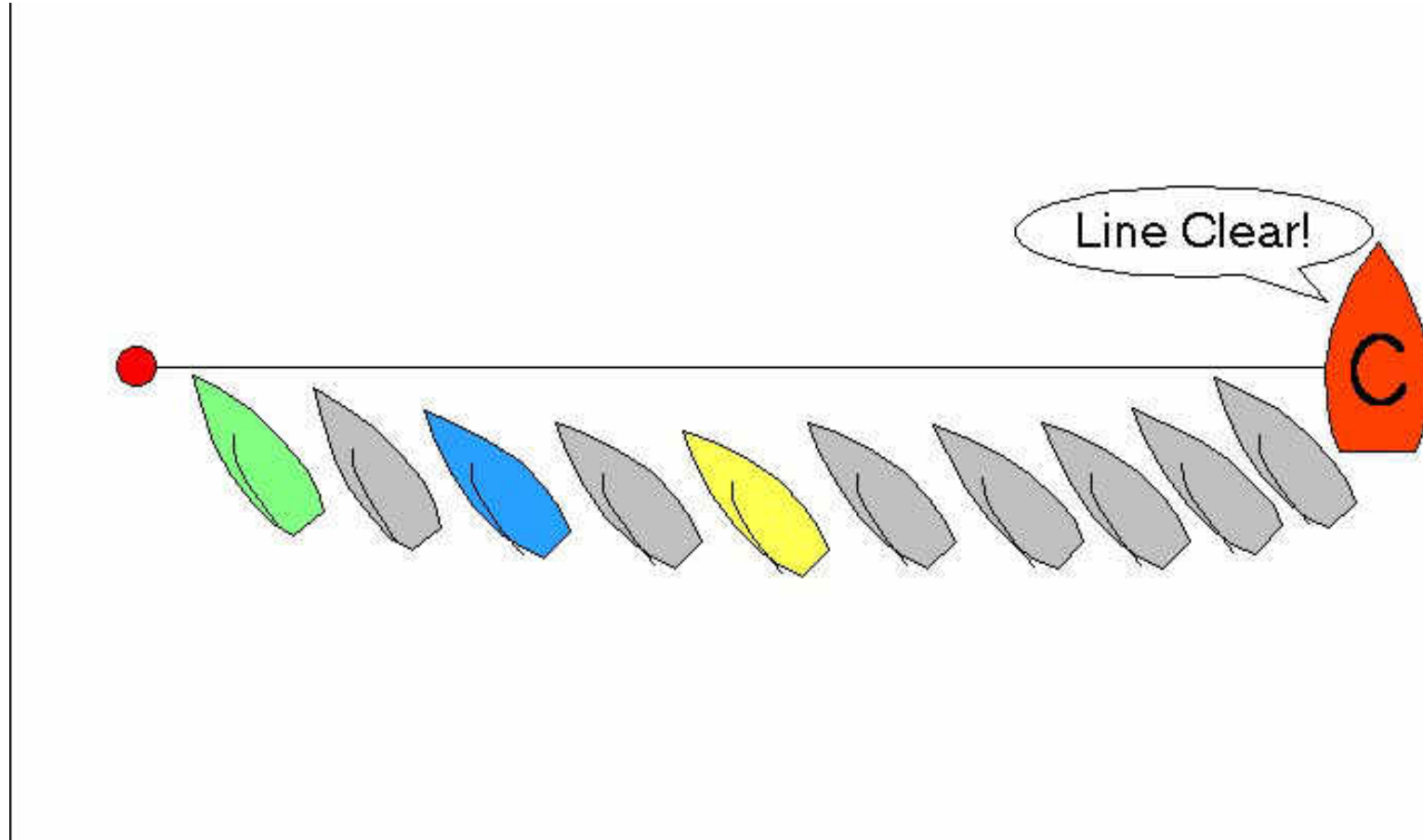
## View down the line

- No boats over – move on to next start
- If boats are over at the start, signal a recall
- When all boats started, shorten start line

Time of first start, T =			All flags have one sound signal	
Offset	Time	Display	Remove	Comment
T-4			AP	Only if start delayed
T-3		D		
T-2		P		
T-1			P	
T		3 <sup>rd</sup> Sub	D	Windward/Leeward & Slow Cat start
T+1		P		
T+2			P	Lower X if raised
T+3		NN0	3 <sup>rd</sup> Sub	Fast & Slow monohull and cadet start
T+4		P		
T+5			P	Lower X if raised
T+6			NN0	Sandhopper start



# The start – clear start

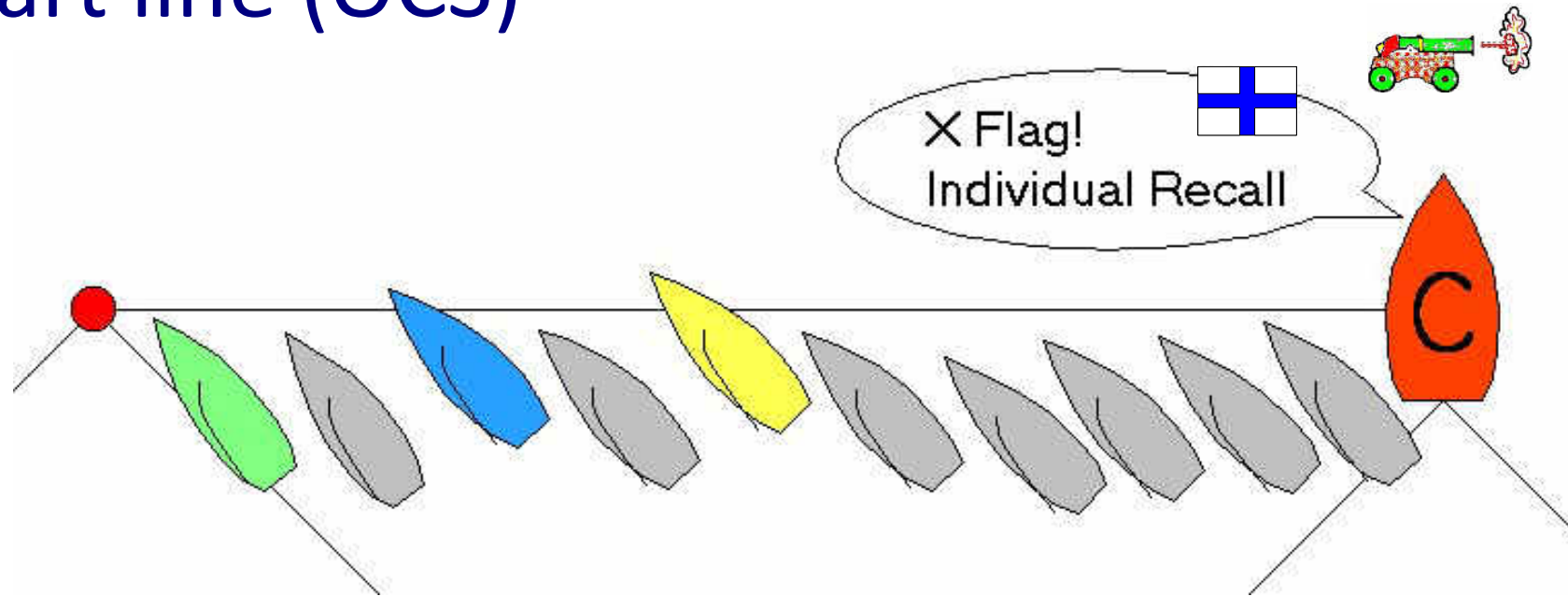


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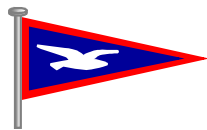




# The start – boats On the Course Side of the start line (OCS)



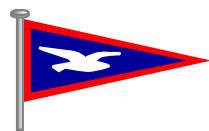
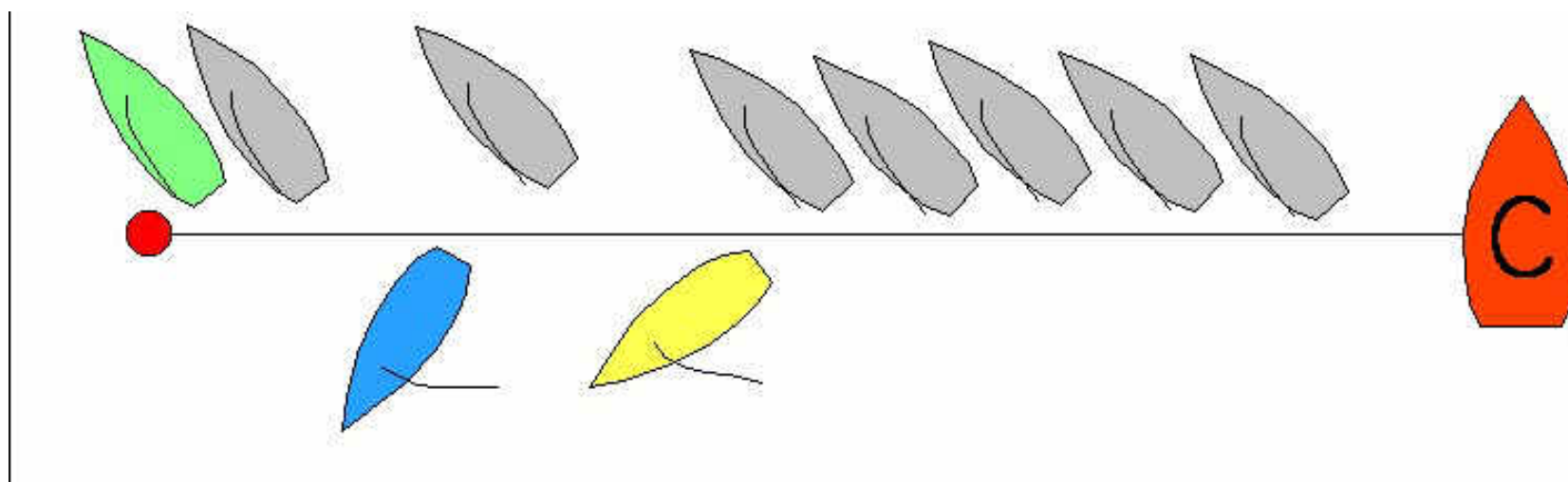
1. Raise “X” with 1 sound
2. Note sail numbers of OCS boats
3. When they have all returned to the non-course side of the line lower X
4. If a boat or boats fail to return lower X after 2 minutes
5. Record boats that failed to return as OCS
6. Still record lap times for them, “just in case”



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# The start – OCS boats restarting

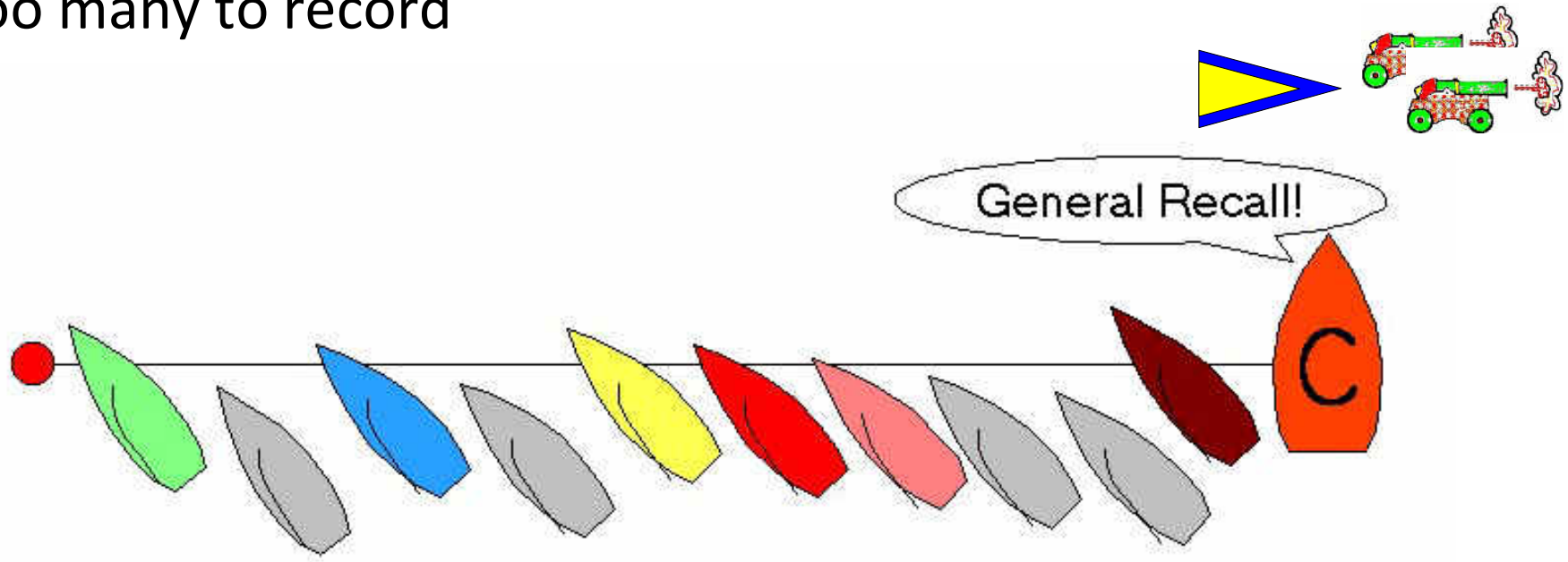
- OCS boats must return fully to the non-course side of the line before re-starting



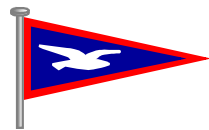
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# The start – general recall

- If you are unable to see how many boats are OCS, or there are too many to record



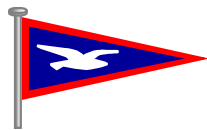
- Raise 1<sup>st</sup> Sub with 2 sound signals
- Gather your thoughts and start the sequence again



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# Recording

- Record all boats for every lap
  - Record actual time, to the second, every lap so that...
    - If race is abandoned we can get a result using the last lap completed
    - You have lap times to help you decide when to finish the race
- 
- Record boats in the order they come round for the 1<sup>st</sup> lap, then keep the same boat in the same row
  - New column for each lap



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EXAMPLE

THORPE BAY YACHT CLUB

				START TIME	COURSE	No of ROUNDS
DATE	12/3/06	RACE No	Multi-Hulls	10.30	11P, 4P, 3P, 1P, <del>6P</del> GATE	
EVENT	CIRCLE 4		Asymmetric FAST	10.33	6P, 4P, 1P, GATE	
RACE OFFICER			Non-Asymmetric SLOW	10.36	- " -	
Guard Boat No 2			Sandhoppers	10.39	- " -	
Guard Boat No 3						
Rib			Time Shortened Course Flag S Raised 12.00		Wind Direction	Wind Speed

CLASS	ROUND 1				ROUND 2				ROUND 3				ROUND 4				ROUND 5					
	SAIL NO	TIME			SAIL NO	TIME			SAIL NO	TIME			SAIL NO	TIME			SAIL NO	TIME				
		H	M	S		H	M	S		H	M	S		H	M	S		H	M	S		
1 SPITFIRE *	62	10	57	15	62*	11	27	28	62*	11	53	32	<del>62</del>	12	23	17	✓	OCS				
2 HURRICANE	457	10	59	32	457	11	25	09	457	11	50	10	457	12	17	03	✓					
3 SHADOW	40	11	01	21	40	11	26	32	40	11	51	13	40	12	19	32	✓					
4 HURRICANE	309	11	01	45	309	11	28	10	309	11	58	43	309	12	16	45	✓					
5 SPITFIRE	103	11	02	05	103	11	32	15	103	11	56	10	103	12	20	31	✓					
6 49er	555	11	03	43	555	11	30	43	555	11	59	01	555	12	25	42	✓					
7 CONTENDER *	303	11	05	39	303*	11	45	15	303*	12	10	10	OCS									
8 29er	939	11	08	17	939	11	44	10	939	12	15	12										
9 N12	3432	11	10	20	3432	11	51	22	3432	12	17	21										
10 DART 16	243	11	10	40	243	11	55	32	243	12	20	47										
11 FIN	517	11	11	53	517	11	58	24	517	12	30	55	✓									
12 SANDHOPPER	25	11	15	23	25	12	01	20	✓													
13 LASER	168725	11	17	45	168725	12	15	42	✓													
14 SANDHOPPER	46	11	25	13	46	12	10	33	✓													
15 SANDHOPPER	151	11	37	18	151	12	23	20	✓													
16 PICO	2	11	50	06	2	12	30	45	✓													
17																						
18																					* OCS	
19																						
20																						
21																						
22																						
23																						

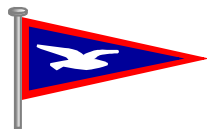
Notes: Please enter actual times using the 24 hour format (eg 16.00.00 = 4.00 pm). Do not use stop watch times as these have to be converted to actual times.

# Finishing

- Aim is to finish the race after approx:
  - One race day: 90 – 120 minutes
  - Two race day: 45 – 60 minutes
- Signal the finish by raising code flag “S” with 2 sounds

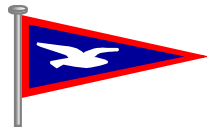


- Then all boats finish when they pass through the finish line, except that:
- Single class fleets (Sandhoppers) finish when they have done the same number of rounds as the leading boat of their fleet

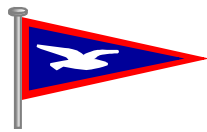
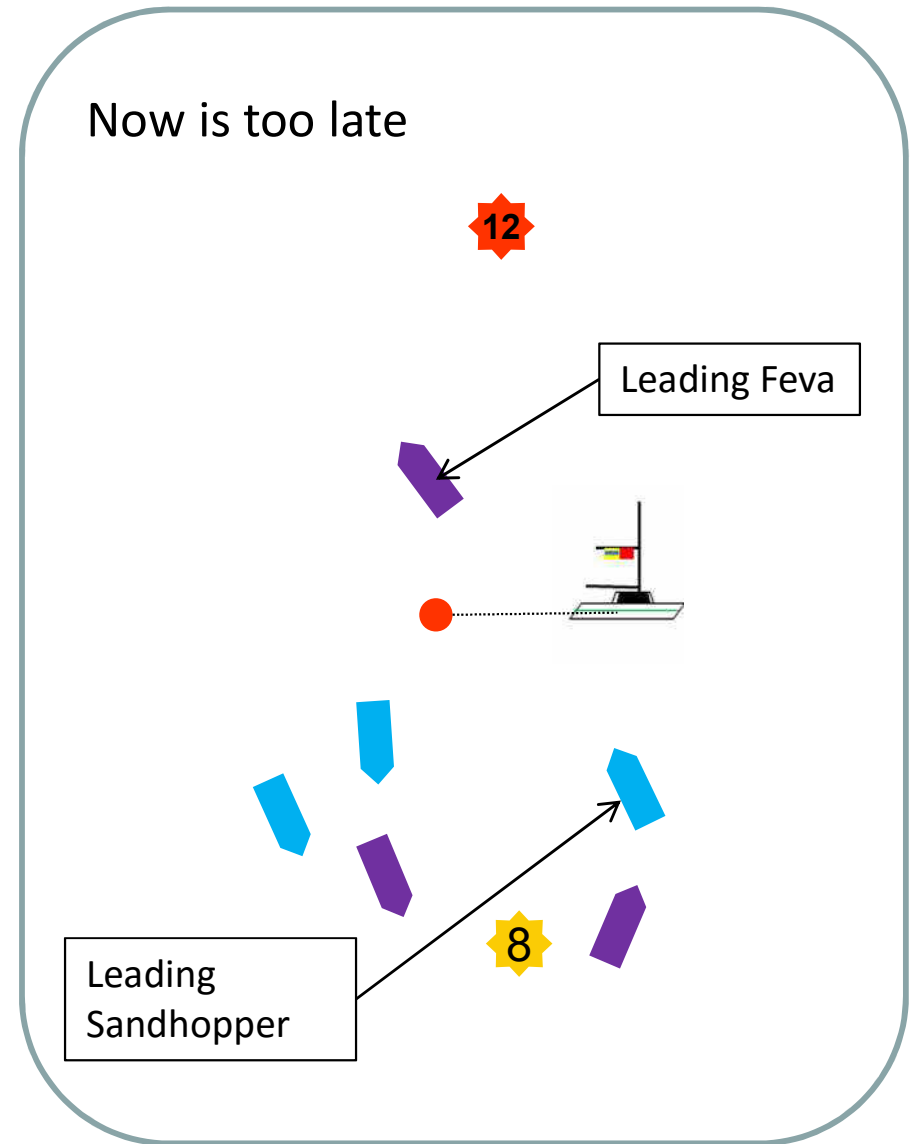
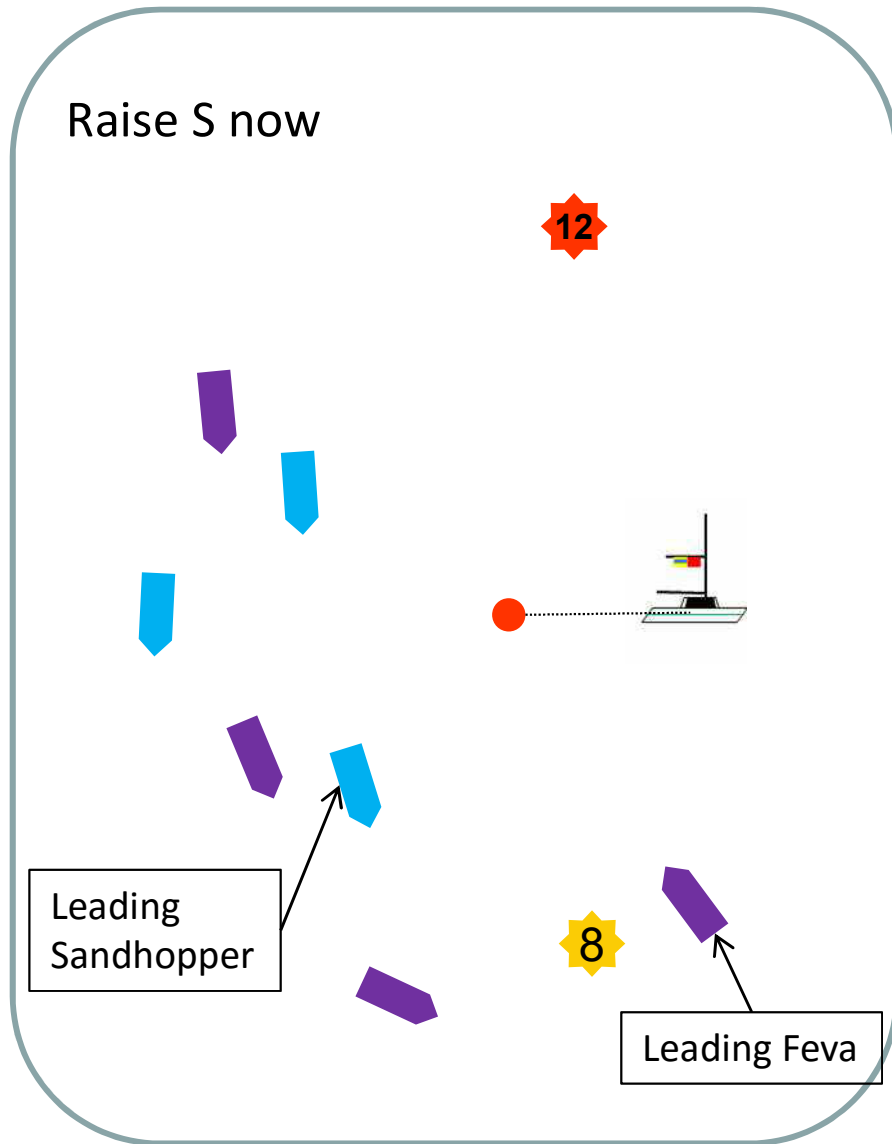


# Finishing – deciding the moment

- Watch the slowest boats, e.g. Sandhoppers or Lasers – these are your benchmark boats
- As the leading benchmark boat approaches the leeward mark, ask yourself:
  - If I let it complete this lap and start another, when will it next approach the start/finish line?
  - Is this comfortably within the desired race duration?
  - If ‘yes’, let it continue for another lap
  - If ‘no’, raise S
- Can display “S” any time, so look for a “break in the traffic” where you can raise “S” without splitting up other same-class boats



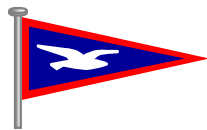
# Finding a break in the traffic



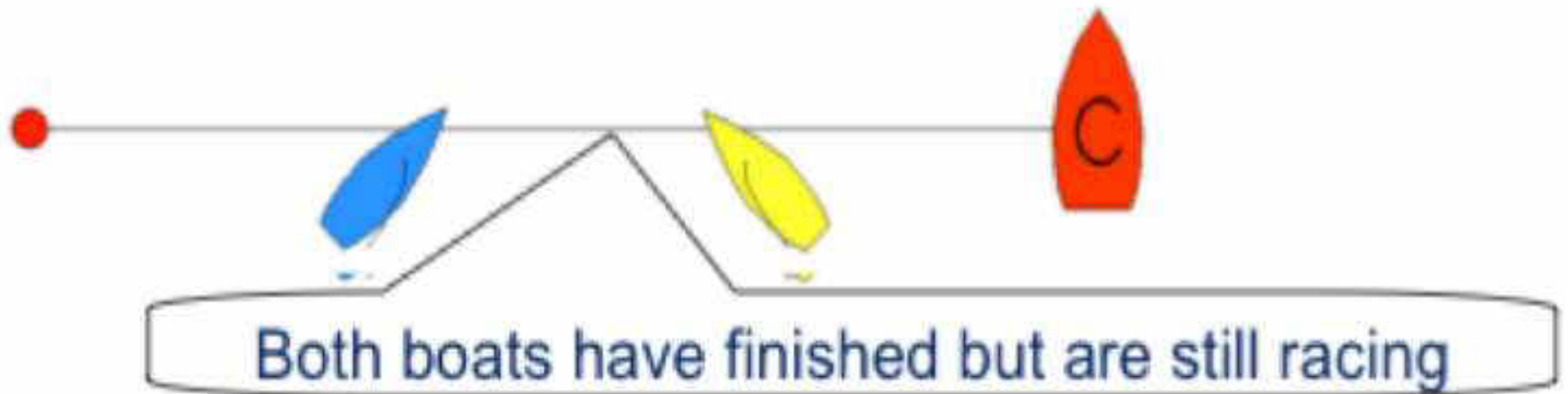


# Finishing – after ‘S’ has been raised

- Handicap fleets
  - Finish when they next cross the line
- Single class fleets (just the Sandhoppers at present)
  - Finish when they have done the same number of rounds as leading boat of the fleet
- All boats get sound signal
- Record the finish time of each boat
- Boats that do not finish within 30 minutes of the first boat of their class can be shown as DNF
  - except for Trophy Races , where it is 4 hours from start

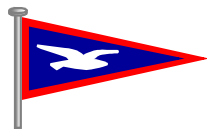


# When has a boat finished?



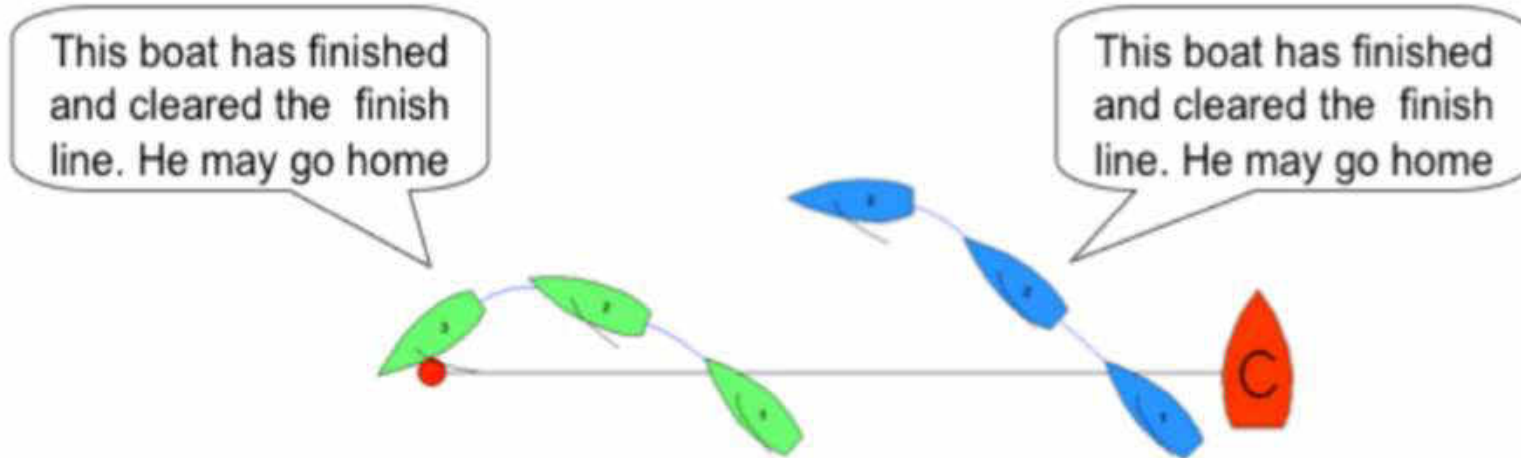
Once any part of a boat, its hull, crew or equipment in its normal position breaks the plane of the finish line from the course side, that is its finishing time or position. The whole boat does not have to cross the line.

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).



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# What if it hits a finish mark?



This boat has finished and hit the finish mark BEFORE clearing the finish line. He must now take a penalty



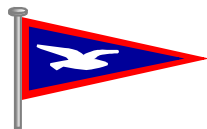
Once he has completed the penalty and crossed the finish line a second time, that is his recorded position.

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.

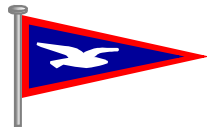
A boat stops racing when it has finished *and* cleared the finish line and its marks.

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.



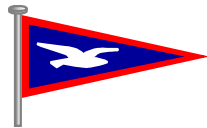
# Clearing up - afloat

- When all boats have finished or gone ashore:
  - Check on any boats still out, in case they are in trouble
  - Get Patrol Boats to lift all the inflatable marks
  - Pack away the Committee Boat equipment
  - Turn off the radio
  - Thank your Rescue Boats and Committee Boat helpers
  - Go ashore



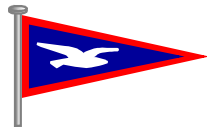
# Clearing up - ashore

- Ashore:
  - Check everyone is safely ashore
  - Check all boats have signed off on the Declaration Sheet
  - Return any equipment borrowed from the Race Box
  - Give keys to the Duty Officer
  - Report any equipment problems to Duty Officer
  - Get Record Sheets and Declaration Sheets to the Results Officer – usually they're left behind the bar



# Finished!

- WELL DONE !
- Have a well-earned drink



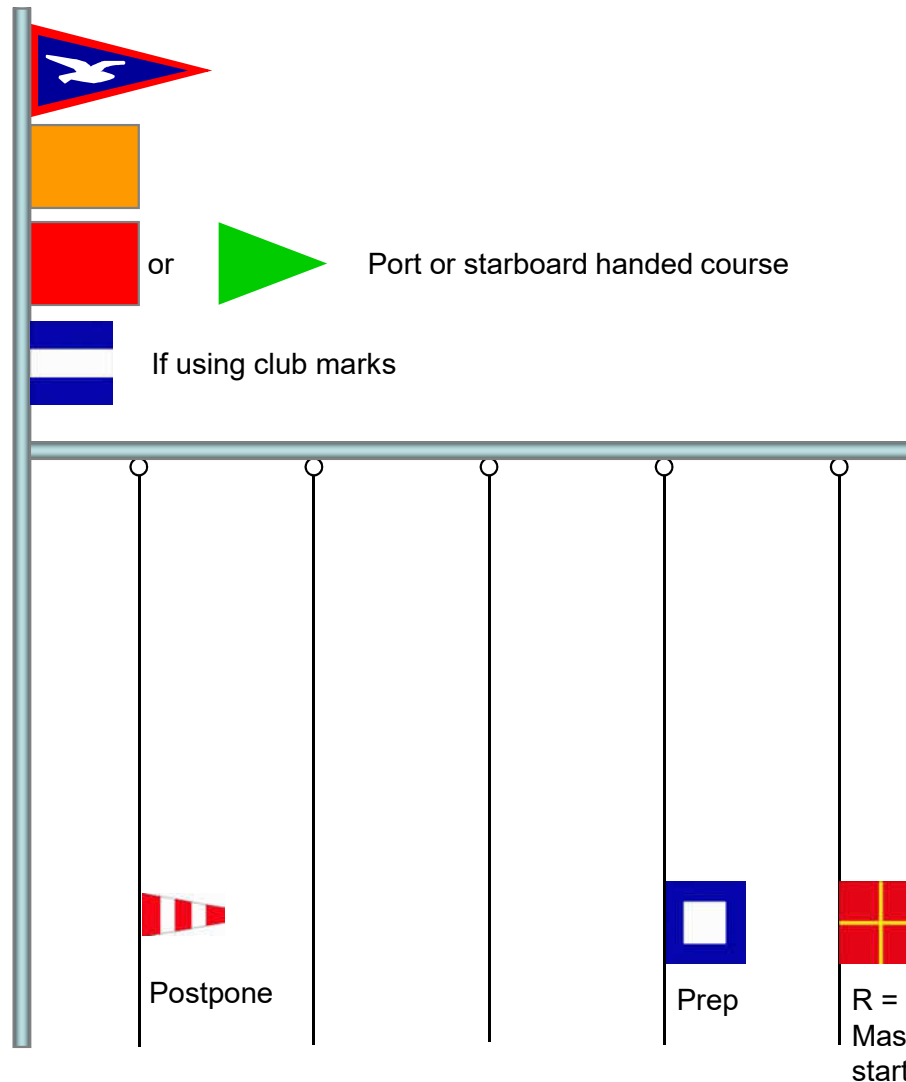
**T H O R P E   B A Y   Y A C H T   C L U B**

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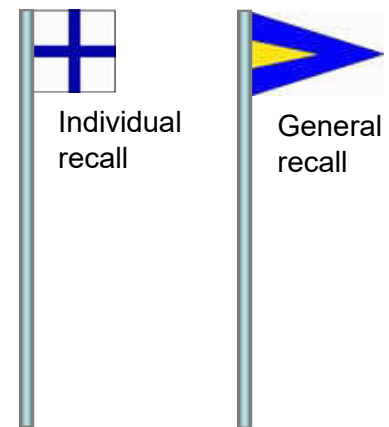
# Mass start differences

- Only one start



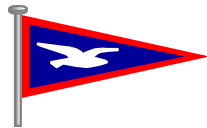
Note: when the flags are not in use they should be rolled up and tucked away so they don't show.

There are 2 poles, one with individual recall and one with general recall



# Shore Box differences

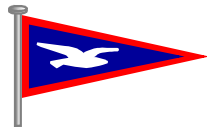
- Course:
  - Always use club marks
  - Designate courses on blackboard, so can set a totally different course for each fleet if desired
  - Fixed start line, so may not be able to start on a beat – make sure there is a good beat somewhere on the course
- Starting
  - No change





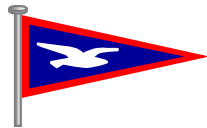
# Conclusions

- The Race Officer's job is important:
  - Prepare
  - Bring a friend – you really need 3 people on the Committee Boat
  - If in doubt, ask the Duty Officer
- And don't forget:
  - It's supposed to be fun



# Useful references

- RYA Race Management Guide:  
<http://www.rya.org.uk/SiteCollectionDocuments/Racing/RacingInformation/RaceOfficials/Resource%20Centre/Best%20Practice%20Guidelines%20Policies/Race%20Management%20Guide.pdf>
- RYA Club Race Officer Course:  
<http://www.rya.org.uk/racing/raceofficials/wanttobearaceofficial/courses/Pages/Courses.aspx>
- Using the TBYC Committee Boat: <http://www.tbyc.org/committee-boat-start/> but note:
  - Horn is now connected with a plug
  - Courses have changed so ignore what they say about courses



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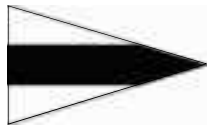
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# Flags – what do they all mean?

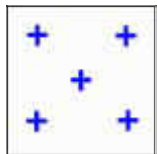
- Warning flags – raised 3 mins before the start of...



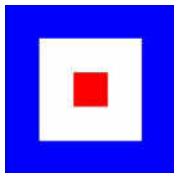
D = Windward/Leeward fleet & Slow Cats



3<sup>rd</sup>  
Sub = Fast & Slow Mono-hull & Cadet Handicap



NN0 = Sandhopper



W = Cruisers



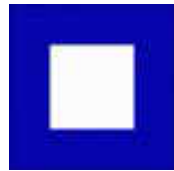
R = General Handicap mass start (typically for trophy races)

# Flags – what do they all mean?

- Other flags



AP = Postpone



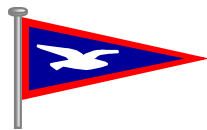
P = Preparatory



X = Individual Recall



1<sup>st</sup> Sub = General Recall



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# Flags – what do they all mean?

- Coloured flags



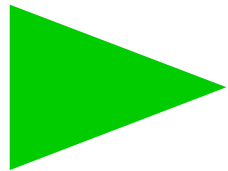
Orange = Start line



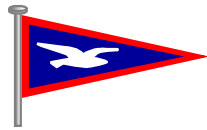
J = Using club permanent marks



Red = Port handed course

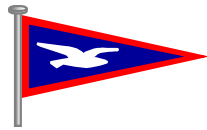


Green = Starboard handed course



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# Problem solving



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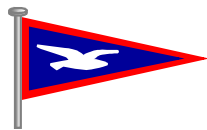


# Abandon racing

- May abandon racing if:
  - Conditions are dangerous
  - No wind

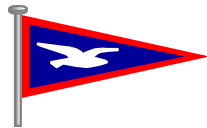
<b>Before the race has started</b>	<b>After racing has started</b>
Postpone	Abandon
AP over A	N over A
2 sound signals	3 sound signals

- If race hasn't started can sail another day
- If race has started:
  - Liaise with Patrol Boats to make sure everyone gets ashore safely
  - Can produce a result based on the last time boats passed through line



# Major incident

- Use Channel 16 on VHF or call 999 on mobile and ask for Coastguard
- On VHF
  - Urgent but not immediately life threatening:
    - Pan Pan Pan
    - This is Seasafe 4, Seasafe 4, Seasafe4
    - Location: Thames Estuary off Southend-on-Sea
    - (Nature of emergency)
    - (What you intend to do & what help you need)
    - Over
  - Urgent and life threatening, as above but
    - Mayday Mayday Mayday instead of Pan

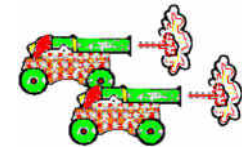




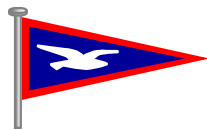
# The start – problem solving

- Late starting the sequence?
  - Before the due time for the first signal, display AP with 2 sounds
  - This postpones the start
  - When you are ready to start the sequence, remove AP with 1 sound
  - Display the first Warning flag exactly 1 minute after you removed AP

Display AP



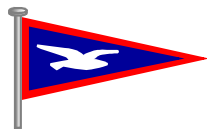
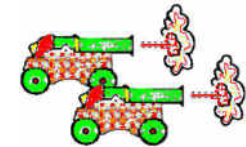
Remove AP



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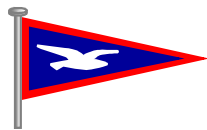
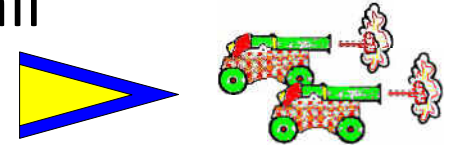
# The start – problem solving

- Mistake during the sequence?
  - Display AP + 2 sounds – postpone the start for all groups not yet started
  - Any groups already started carry on
  - Gather your thoughts, re-time the sequence, then when you are ready...
  - Remove AP with 1 sound
  - Display the Warning flag exactly 1 minute after you removed AP
- Continue with the sequence normally



# The start – problem solving

- Mistake with the actual start of a group
  - e.g. you have removed the Warning flag and realised that you did it 20 seconds too soon
  - Display 1<sup>st</sup> Sub with 2 sounds – General Recall
  - Get all the boats of this group back
  - Gather your thoughts, re-time the sequence, then when you are ready...
  - Remove 1<sup>st</sup> Sub with 1 sound
  - Display the Warning flag exactly 1 minute after you removed 1<sup>st</sup> Sub
- Restart the sequence for the group you called back, and start following groups normally



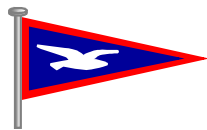
# Boats over the line at the start

## View down the line

- If boats are over at the start signal:

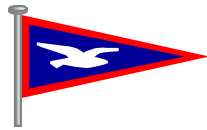
<b>Less than 5 boats and can see numbers</b>	<b>More than 5 boats or can't see numbers</b>
Individual recall	General recall
Raise X 	Raise 1 <sup>st</sup> Sub 
1 sound signal 	2 sound signals 

- Your assistant can raise the flag & leave the pole in the tube at side of cockpit



# Actions after recall signalled

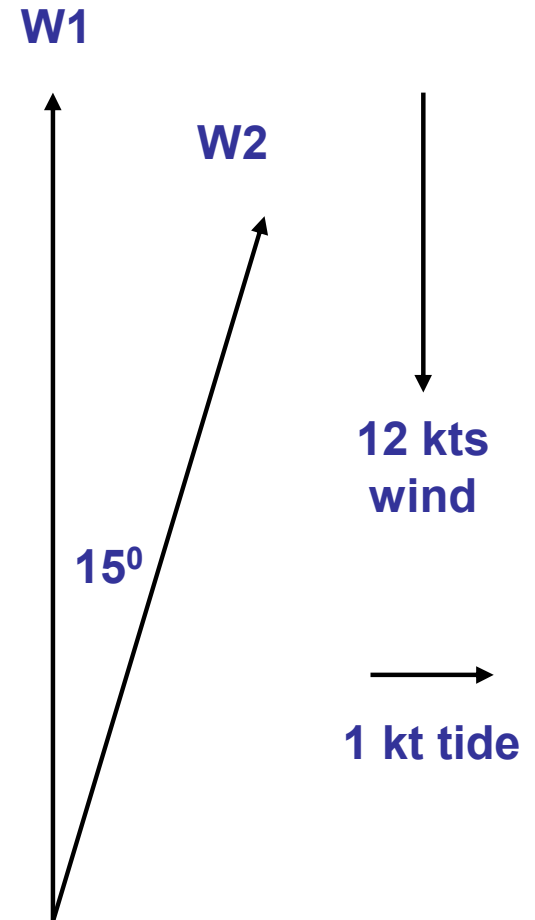
<b>Individual recall</b>	<b>General recall</b>
Watch for boats re-crossing the line	Halt the start sequence
If all OCS boats re-cross, lower X	If necessary, send Guard Boats to get the fleet back
If some don't re-cross, mark them as OCS on recording sheet	Any fleets already started can continue
Lower X 2 minutes after start in any case	Re-plan the remaining starts



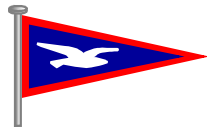
# Tidal compensation – windward leg

A **rule of thumb** guide is:

- in >10kts wind & 1kt of tide set the windward mark downtide  $15^\circ$  of the ground wind
- in <8kts wind & 1kt of tide, the offset is  $20^\circ$  or more
- for tides diagonal to the wind, halve the allowance
- for 2kts tide double the allowance



This slide courtesy RYA Club Race Officer course



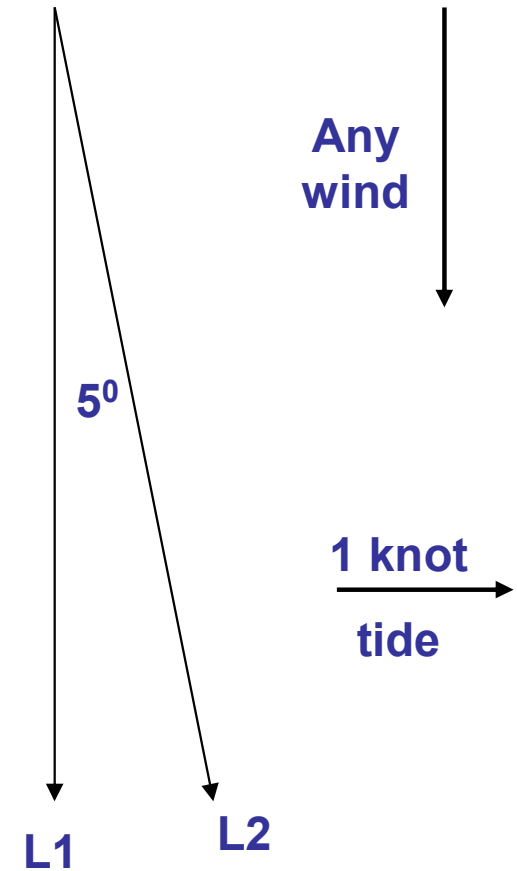
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# Tidal compensation – leeward leg

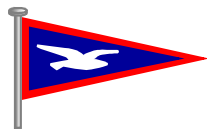
The adjustment of the running leg to the tide is critical for a good race

## Rule of thumb:

No matter what the wind strength, set the leeward mark  $5^\circ$  downtide of the ground wind for every 1 knot of cross tide



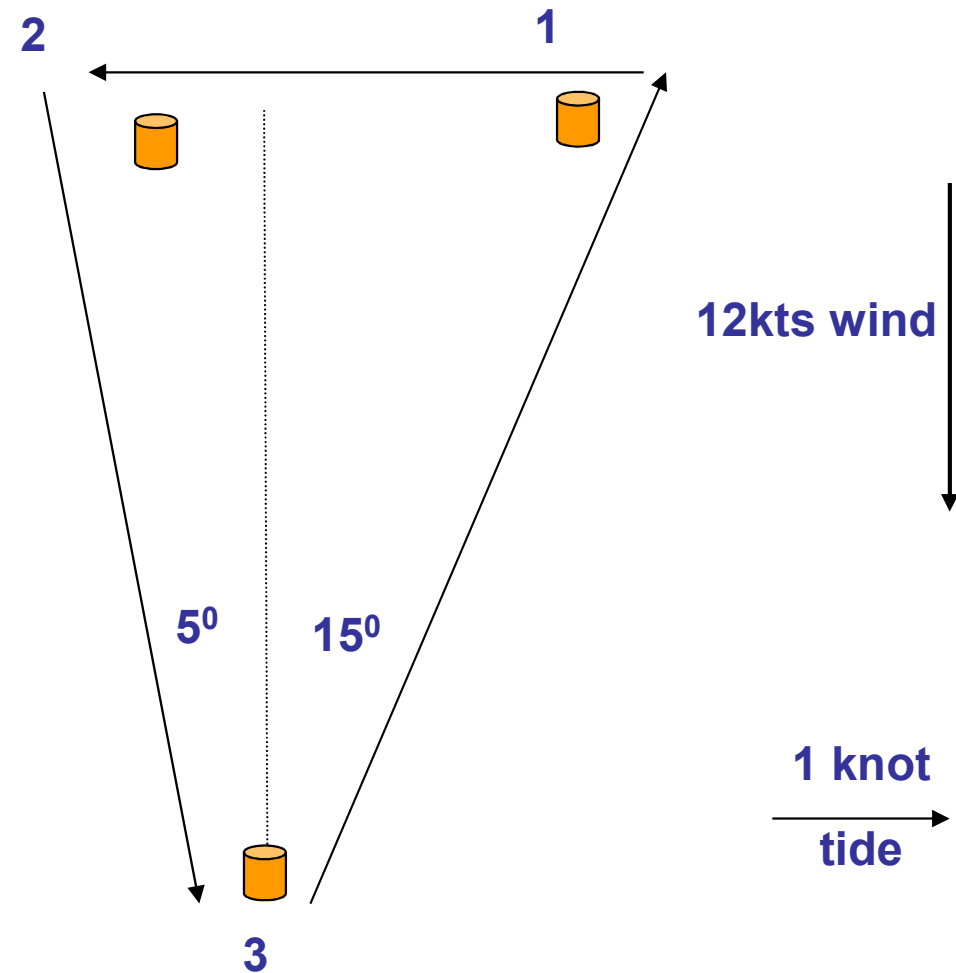
This slide courtesy RYA Club Race Officer course



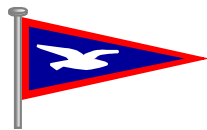
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# Tidal compensation – solutions

Use an offset mark to create a 'tidal correction' leg



This slide courtesy RYA Club Race Officer course



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# Tidal compensation – solutions

When you only have 2 marks:

## Set up on the Sailing Wind

Equally skewed upwind and downwind

