

Race Starting Clinic

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Fleet Captain – DCYC

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Goals of Today's Clinic

1. Review Rules
2. Preparing For a Start
3. How Starts Work
4. Strategies

Then on the water practice!!!!

Fundamentals

- We will discuss basic rules of racing that apply to starts. This is not exhaustive.
- Read the rules!! Buy the book* or download
 - International rules:
 - <http://www.sailing.org/20348.php>
 - US adjustments to the international rules:
 - <http://www.sailing.org/28527.php>



* The book conveniently includes the US adjustments to the International Rules

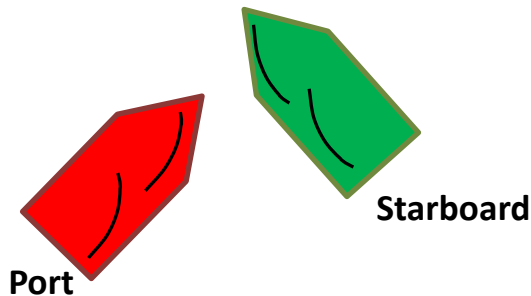
Fundamentals

- Rules 1 – 44 (about 16 pages) are critical
- Most important related to starting are:
 - 1.1 Helping those in danger
 - 1.2 Carry adequate life-saving equipment
 - 4 Decision to race is yours
 - 10, 11 and 12: When boats meet
 - 14 Avoid contact
 - 16.1 Changing course
 - When a right of way boat changes course, she shall give the other boat room to keep clear
 - 26 Starting Races

When Boats Meet

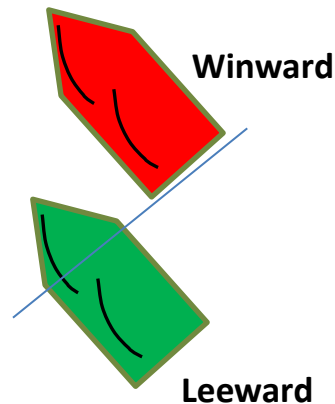
Rule 10

Opposite tacks: Port tack shall keep clear of starboard



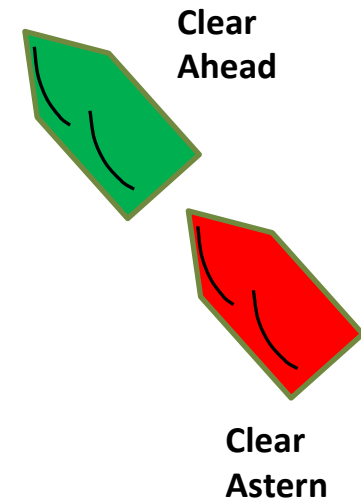
Rule 11

Same Tack, Overlapped: Windward keeps clear of leeward



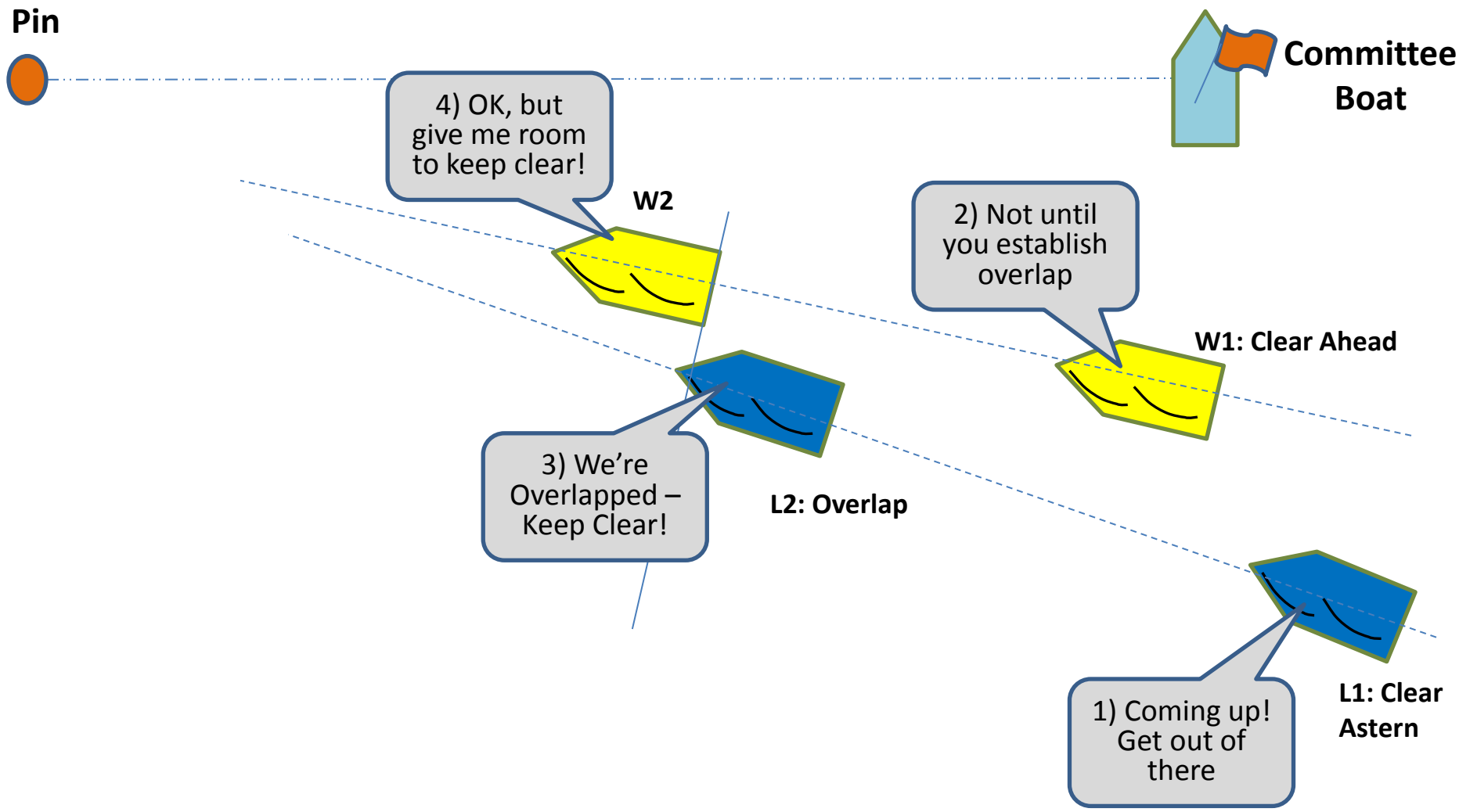
Rule 12

Same Tack, No Overlap: Boat clear astern keeps clear of boat clear ahead

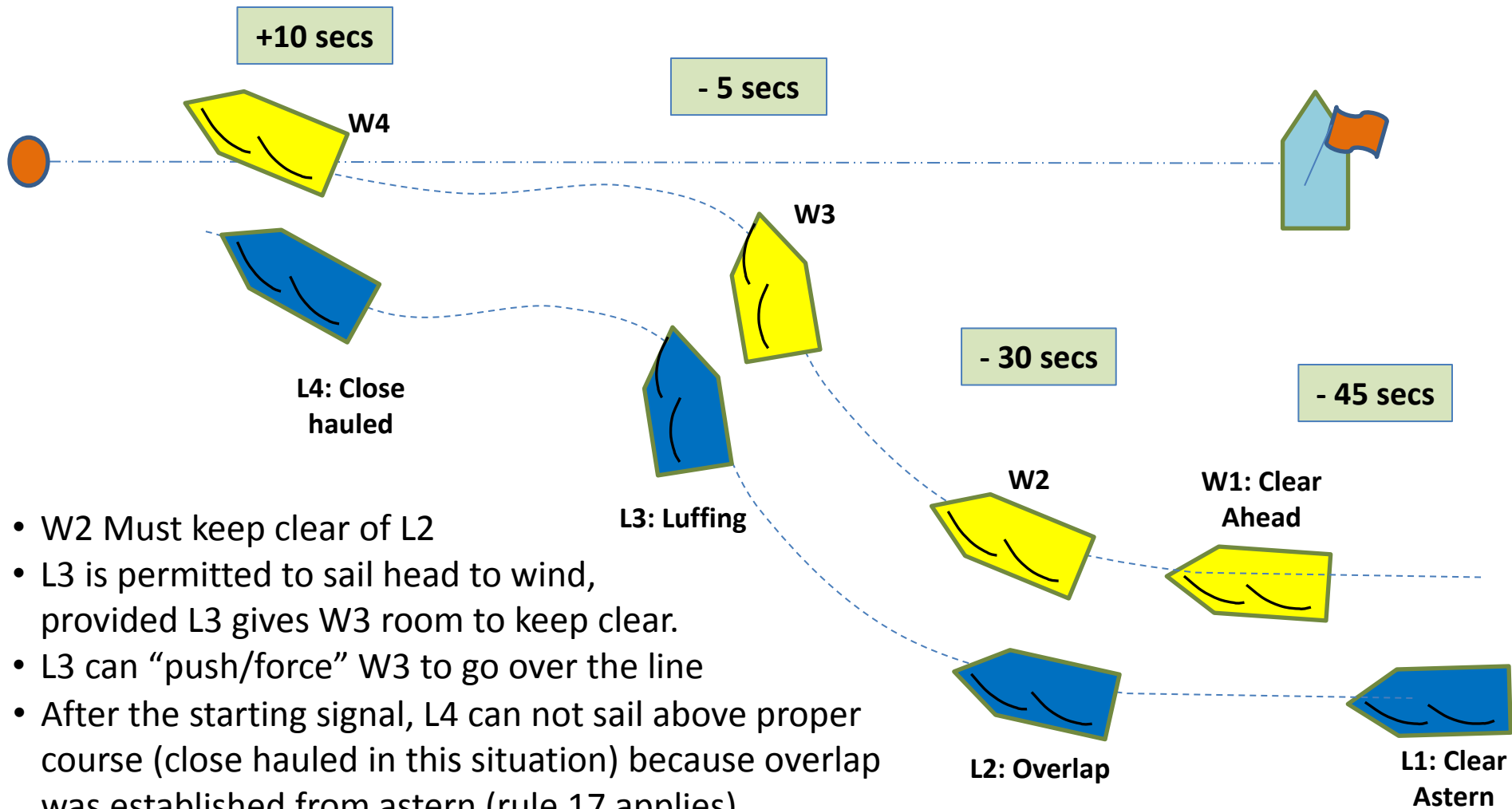


Green has right of way
Red must keep clear

Overlapped From Astern (Simple)

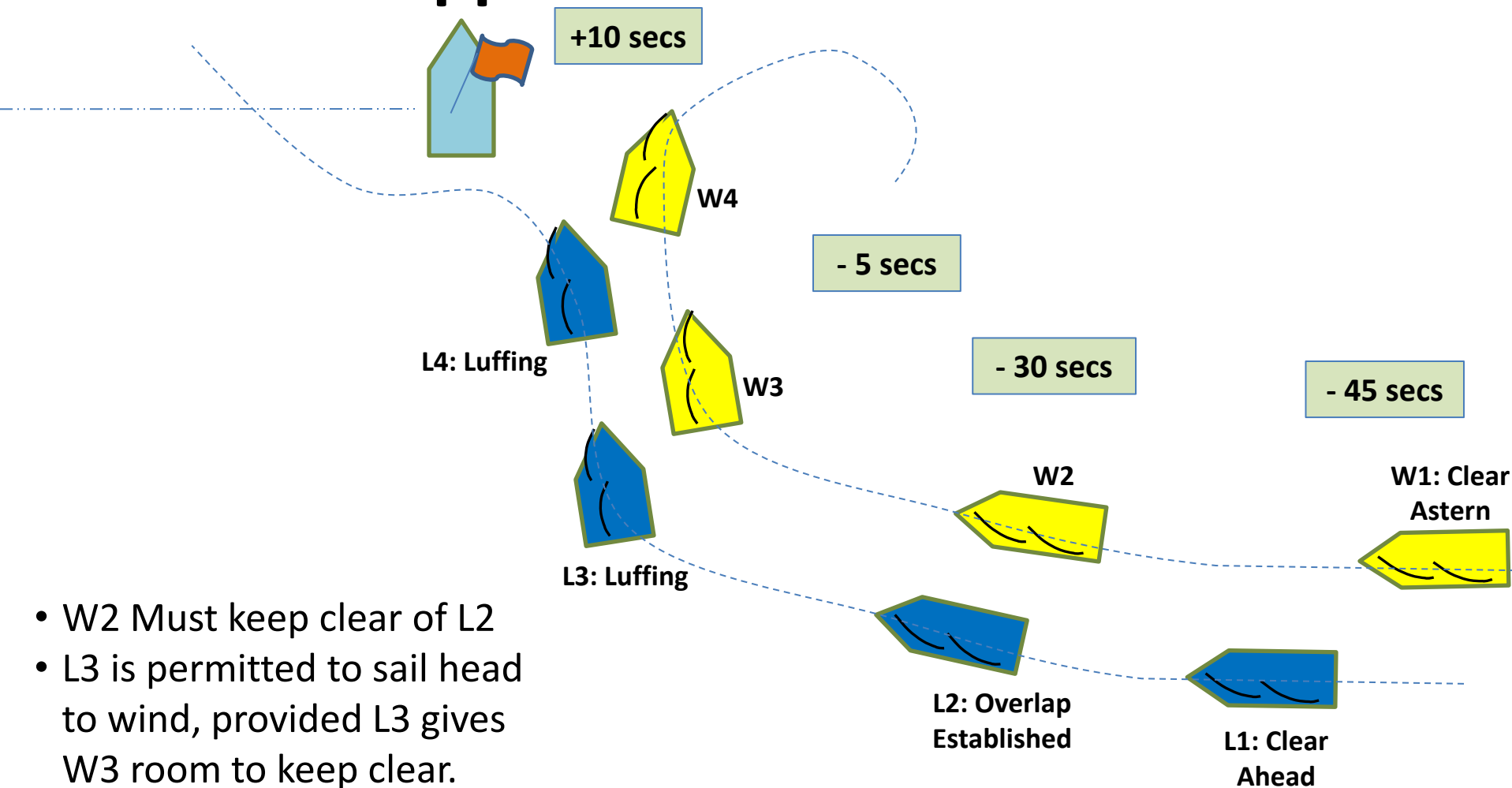


Overlapped From Astern (Luffing)



- W2 Must keep clear of L2
- L3 is permitted to sail head to wind, provided L3 gives W3 room to keep clear.
- L3 can “push/force” W3 to go over the line
- After the starting signal, L4 can not sail above proper course (close hauled in this situation) because overlap was established from astern (rule 17 applies)
- W4 does not have the right to dip below the line to start if it means interfering with L4
- L4 can sail temporarily above close hauled to “make the mark” as this would be considered a proper course for the situation

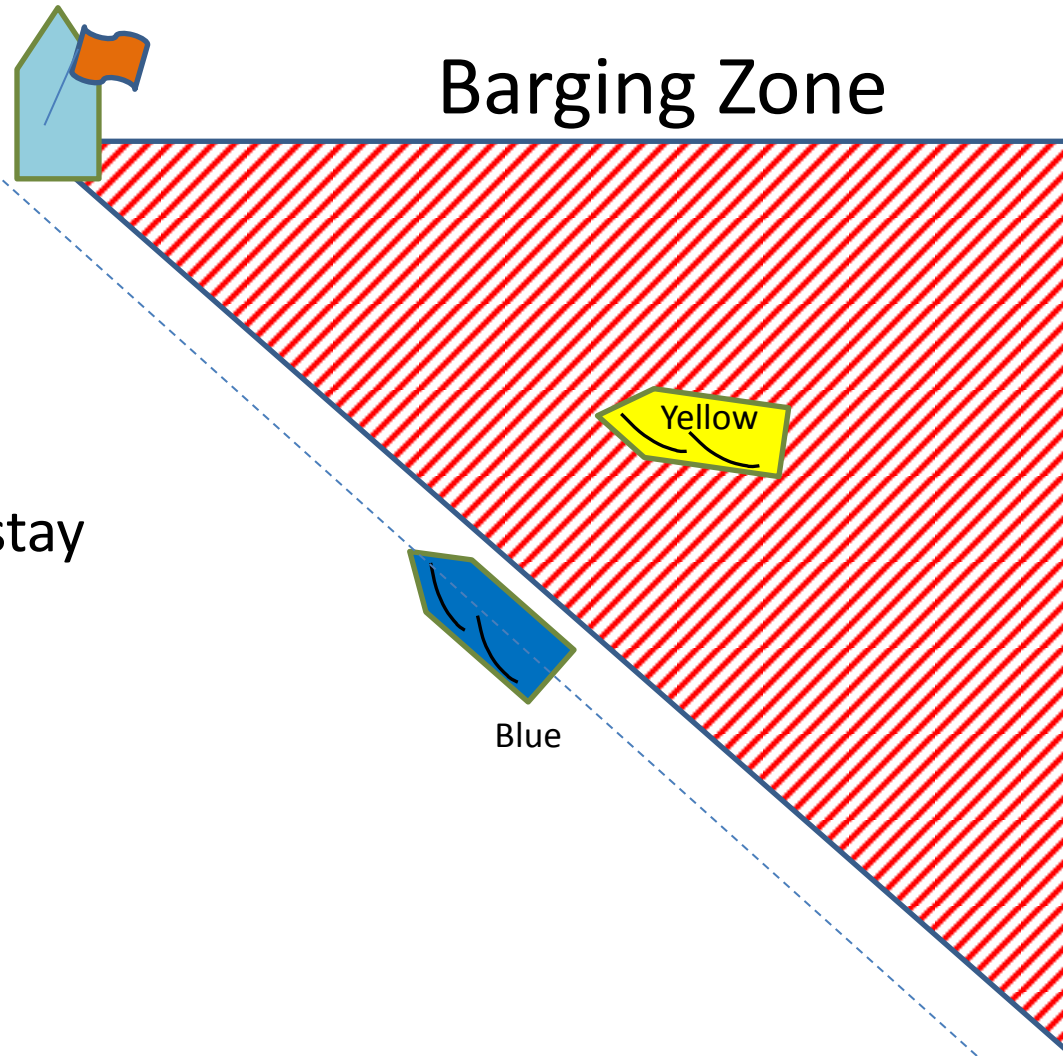
Not Overlapped From Astern



- W2 Must keep clear of L2
- L3 is permitted to sail head to wind, provided L3 gives W3 room to keep clear.
- After the starting signal, L4 can continue to sail above proper course (close hauled in this situation) because L did not become overlapped from being in a clear astern position (rule 17 does not apply). W was the clear astern boat. Hence, W4 does not get “mark room”.

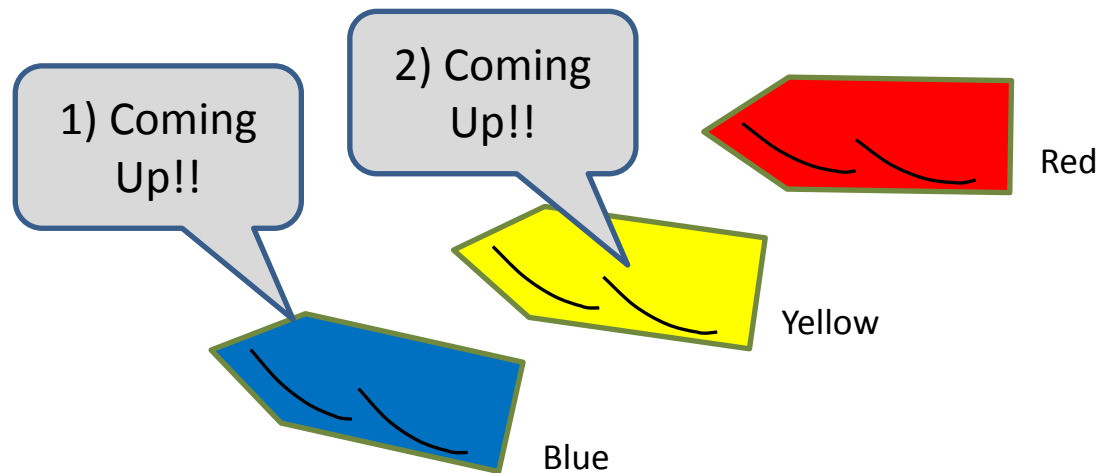
Barging (probably the #1 starting offense)

- Previous two pages are examples of barging
- “Bargers” do not get room at the mark (intro to section C if RRS)



- Yellow must stay clear of Blue

The sandwich:

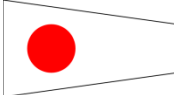
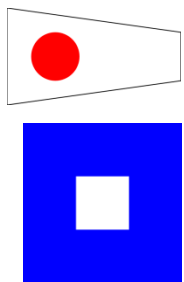
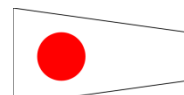
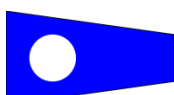
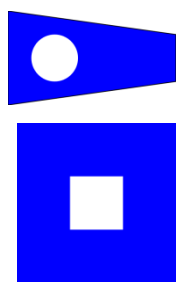
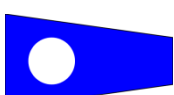


- Red is overlapped with blue because red is overlapped with yellow which is overlapped with blue (transitive property of overlap – See definitions section of the RRS.
- Blue has to give time for yellow to stay clear, yellow has to give time for red to stay clear
- If red does not respond then only red has to do a penalty. Yellow does not since red becomes an obstruction

Prepare for the Start:

- Prior to leaving the dock
 - Read/learn about racing (lots of great recourses on the web)
 - Read the NOR and SI
 - Equipment check
 - Assign tasks
 - Timer
 - Bowman
 - Flag watcher
 - Who is handling the main, jib, etc...
- Get out there early
 - Practice tacks
 - Do a practice start (get timing down)
 - Get a feel for the wind and wind shifts
- Check in with committee
- Get the course, compass bearing to first mark – write it down!!

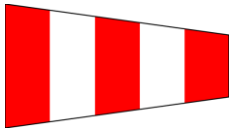
How Starts Work:

	Fleet 1 (Sport Boats)					Fleet 2 (Non Sport Boats)		
Clock	12:59	1:00pm	1:01pm	1:04pm	1:05pm	1:06pm	1:09pm	1:10pm
Time to Start	6 min	5 min to 4 min	4min to 1min	1 min to the start	Start Fleet 1 5 min to Fleet 2	4 min to 1 min	1 min to start	Start Fleet 2
Flags Up/down	None	Class Flag 1 Up at 5 min to go	P flag up at 4 min to go	P Flag down at 1 min to go	Class Flag 1 down Class Flag 2 Up at start	P flag up with 4 min to go	P Flag Down at one min to go	Class Flag 2 down At start
Flags showing	None							
Sound	3 short blasts	1 blast	1 blast	1 long blast	1 blast	1 blast	1 long blast	1 blast

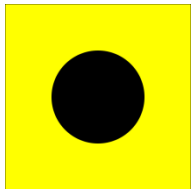
- What counts in starting are the flags – sound is optional. If sound is not given or is slightly off the race sequence will continue
- Orange flag indicates the starting line. It is up for the duration of the race.

Additional flags you may see during the start

Prior to the Start



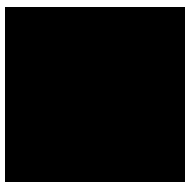
- Racing on hold



- I flag rule (30.1)
- Round the end rule in effect
- Put up 4 min prior to start



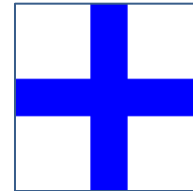
- Z flag (30.2)
- 20% penalty for over early
- Put up 4 min prior to start



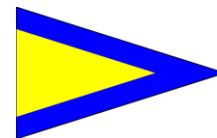
- Black flag (30.3)
- Over early is disqualified
- Put up 4 min prior to start

Rarely Used at DCYC

Immediately after starting gun, if needed



- One or more boats are over early
- Displayed until the earlier of all boats have started correctly or 4 min after start
- Race committee will yell sail numbers of boats over early and/or announce on VHF but not hearing your sail number does not exonerate you from starting properly



- General Recall
- Two horns

Flag decoders

- Good idea to have on your boat (stickers)
- Available at most sailing retail stores



Successful Starts:

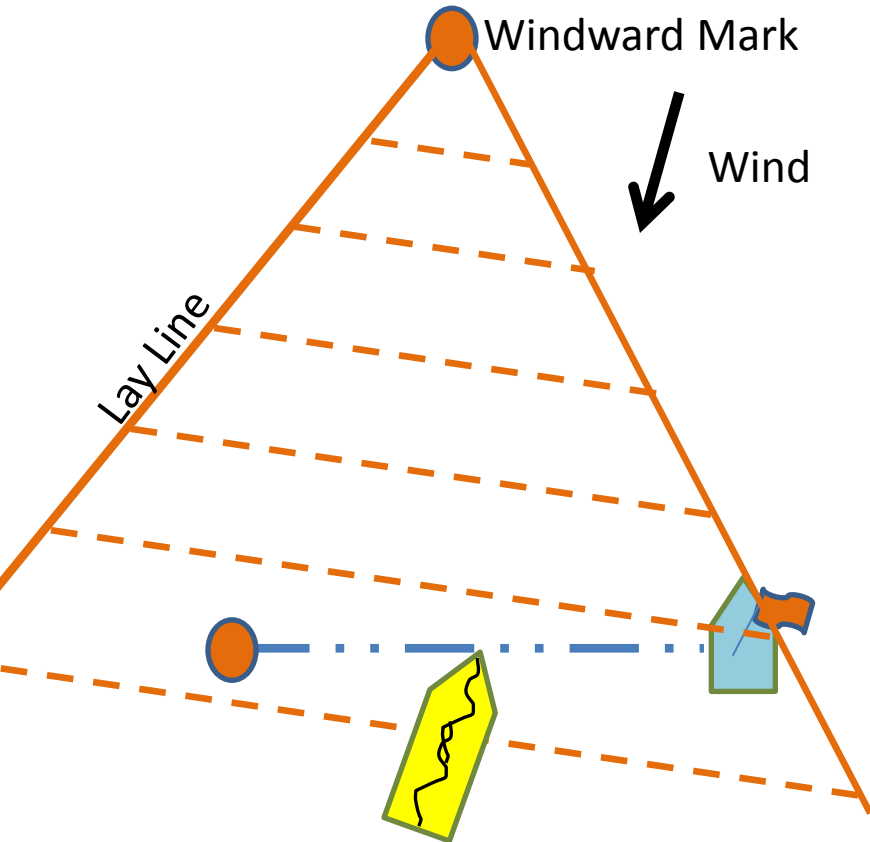
- At the line at the starting gun
- Full speed
- Clean air (and likely to keep it)
- Favored part of line
 - Pin, middle, or committee boat depending on conditions

Which end to start?

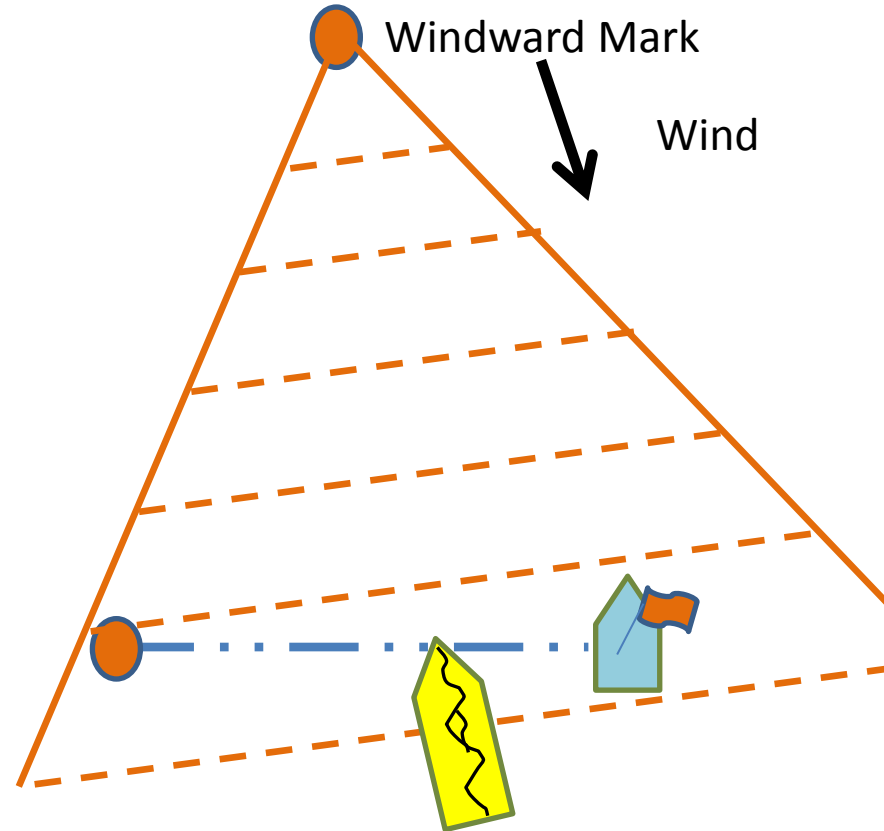
- It depends!
- With a fair line (perpendicular to the wind) and even wind across the course – first boat at committee boat end is usually considered “best”
 - Gives you “right hand advantage”
 - Clear air (especially if you are a high handicap boat)
 - Can tack at any time
- You may want to start at the pin end if:
 - If the pin is closer to the first mark
 - You expect better air on the left side
 - You are a low handicap boat and not concerned with other boats passing you to windward
- You need to balance being close-to-the-windward mark vs which side of course you want vs how likely you are to have clear air (and for how long) vs being in a crowd

Determining which end is favored

Committee Favored



Pin Favored

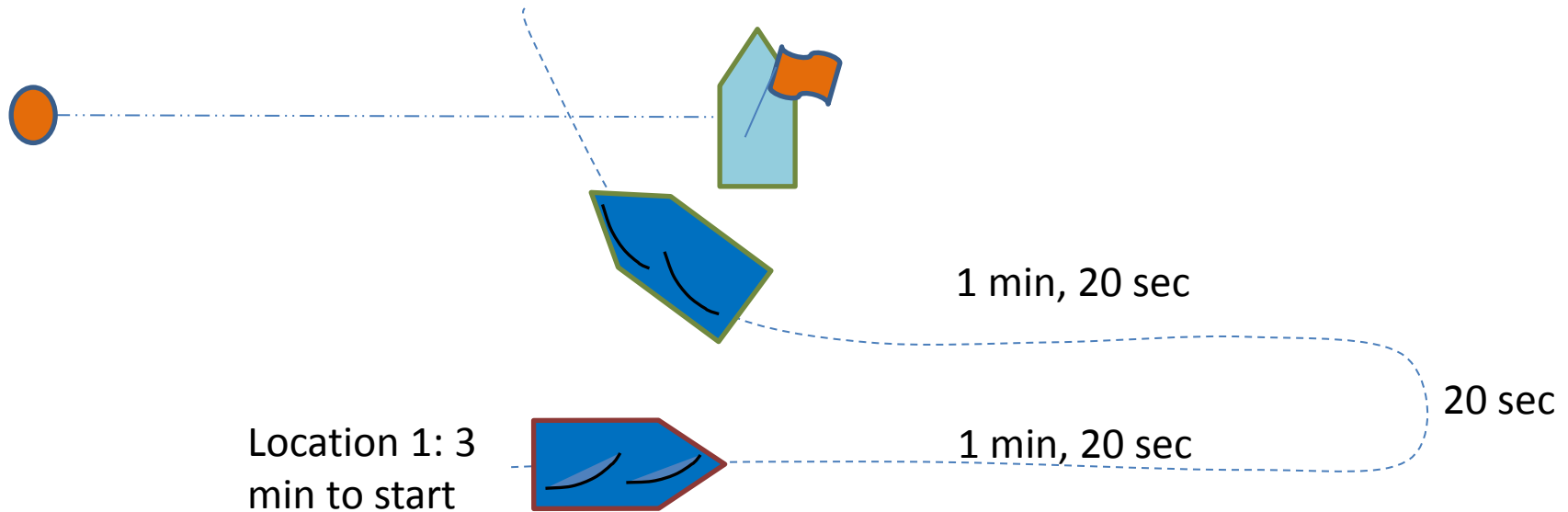


- Point into the wind – which ever way the boat is pointing (closer to committee or pin is the favored end)
- Conditions can change with wind shifts - favored ends can reverse - be aware!!¹⁷

Once you've decided which end, you need to decide your starting strategy

- Reach out and back
- Triangle
- Port tack
- Luffing
- Vanderbilt start
- Port start

Strategies: Reach out and back

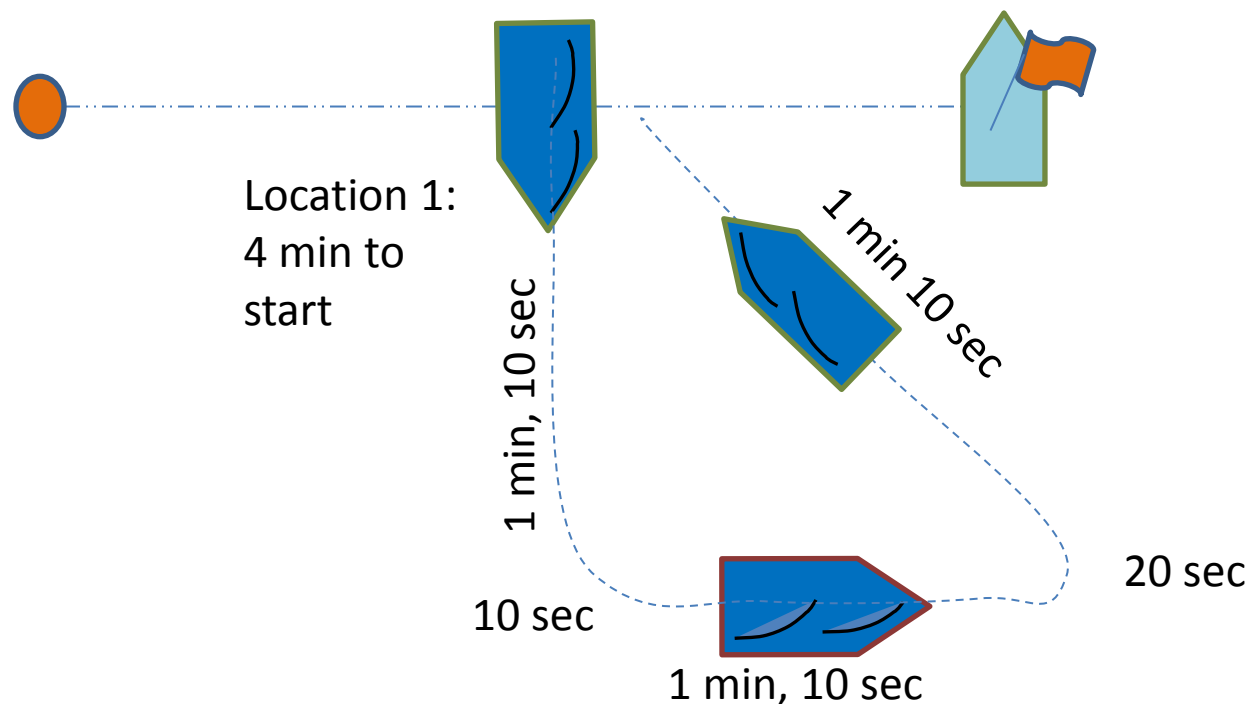


- Go to a point 2-3 boat lengths downwind of the location you want to start
- Subtract time to tack from time remaining to start, sail out for half the time remaining minus tacking time
- Example: Say you have 3 min to start at location 1, and it take 30 seconds to tack. Sail 1:15 out, tack and sail 1:15 back and you should be at the line at the gun.

Strategies: Reach out and back

- Simple, easy to execute
- Can be very effective
- Works anywhere along the line
- Wind shifts have minimal effect
- You will likely “barge” at some point
- Changing wind speeds can make you late or early
- Best with smaller fleets (< 8 boats) in constant wind speed

Strategies: Triangle Approach

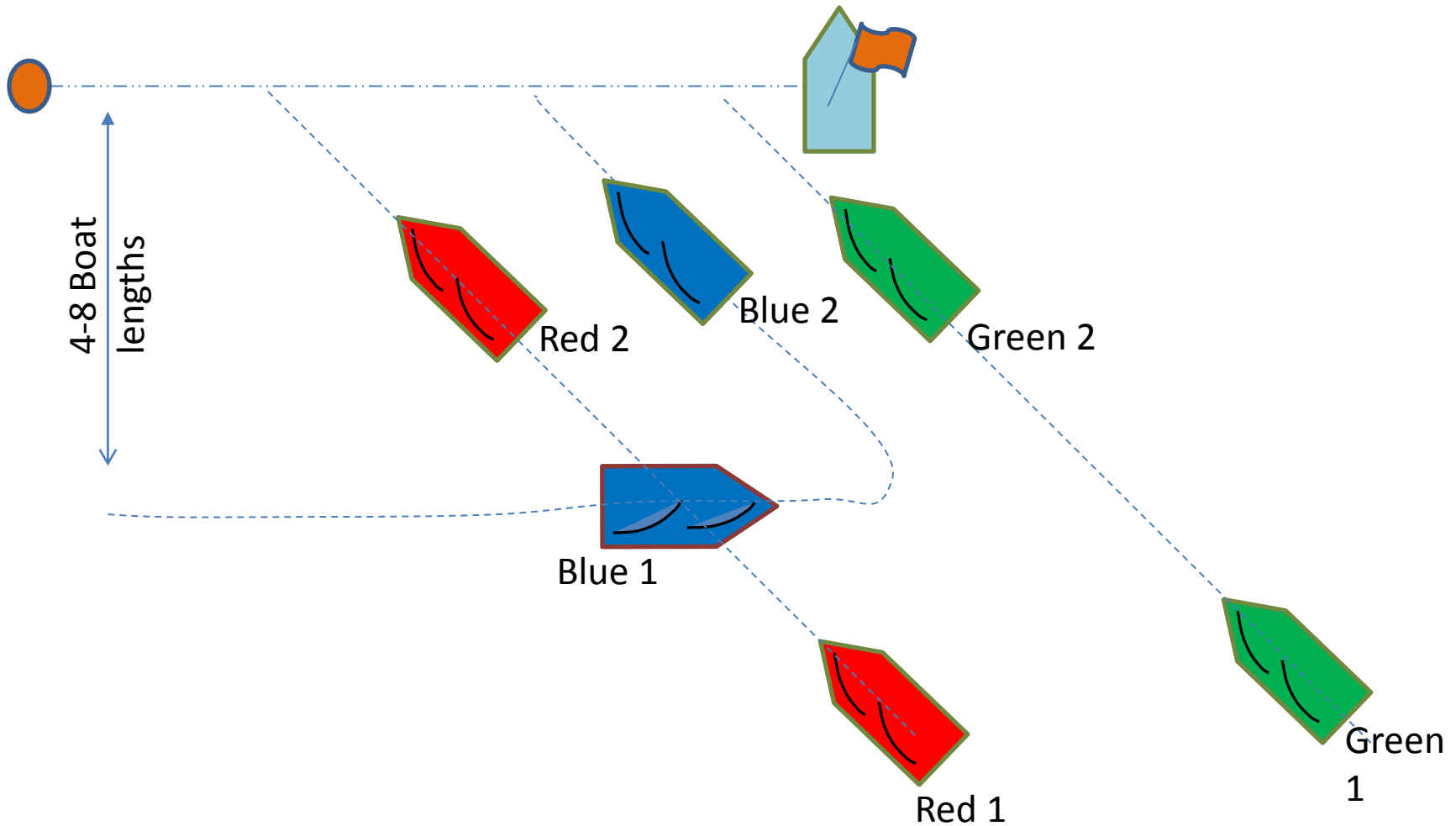


- Go to where you want to start
- Divide time into downwind, reach and close hauled legs (see diagram) after taking out time to gybe/tack.
- Example: Say you have 4 min to start at location 1, and it take 10 seconds to do a 90 degree turn and 20 secs to tack. Sail downwind for 1min 10 sec, then parallel to the line for 1:10 then close hauled 1:10 and you should be at the line at the gun.

Strategies: Triangle Approach

- Moderately complicated to execute
- Works anywhere along the line
- Avoids the problems associated with “barging”
- Need to know your boat’s speed on the three legs of the triangle to ensure you are back at the line in time, this can vary by wind speed
- Other boats can mess this up
- Changing wind speeds and shifts can make you early or late
- Best in constant wind speed

Strategies: Port Approach

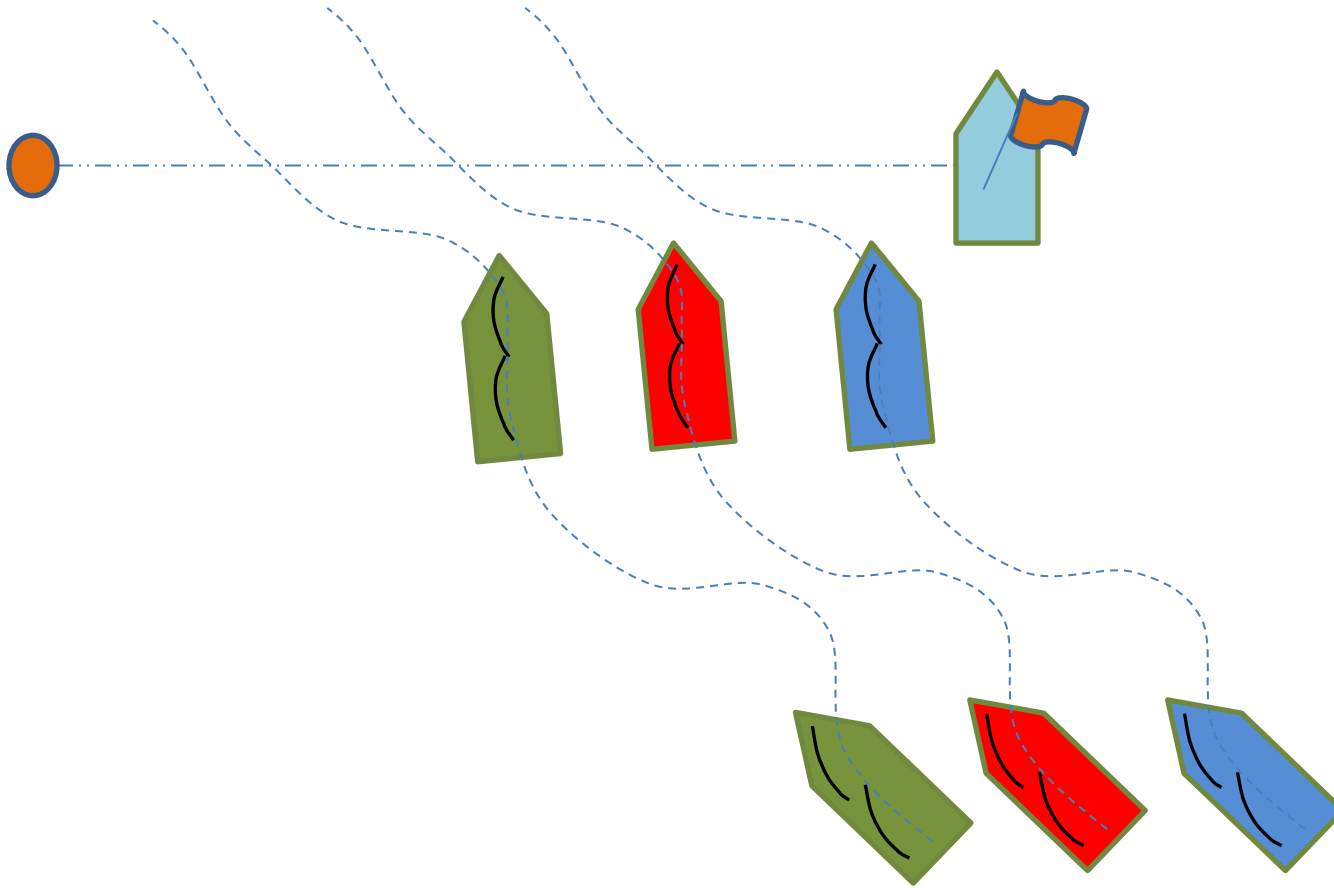


- Swim upstream and pick your spot

Strategies: Port Tack Approach

- Opportunistic
- Good when you want the pin end
- Requires working “against the grain” and “threading a needle”
- May not be able to find a spot
- Avoids the problems associated with “barging”
- Timing the turn can be tricky
- Not good for very large fleets

Strategies: Luffing Approach

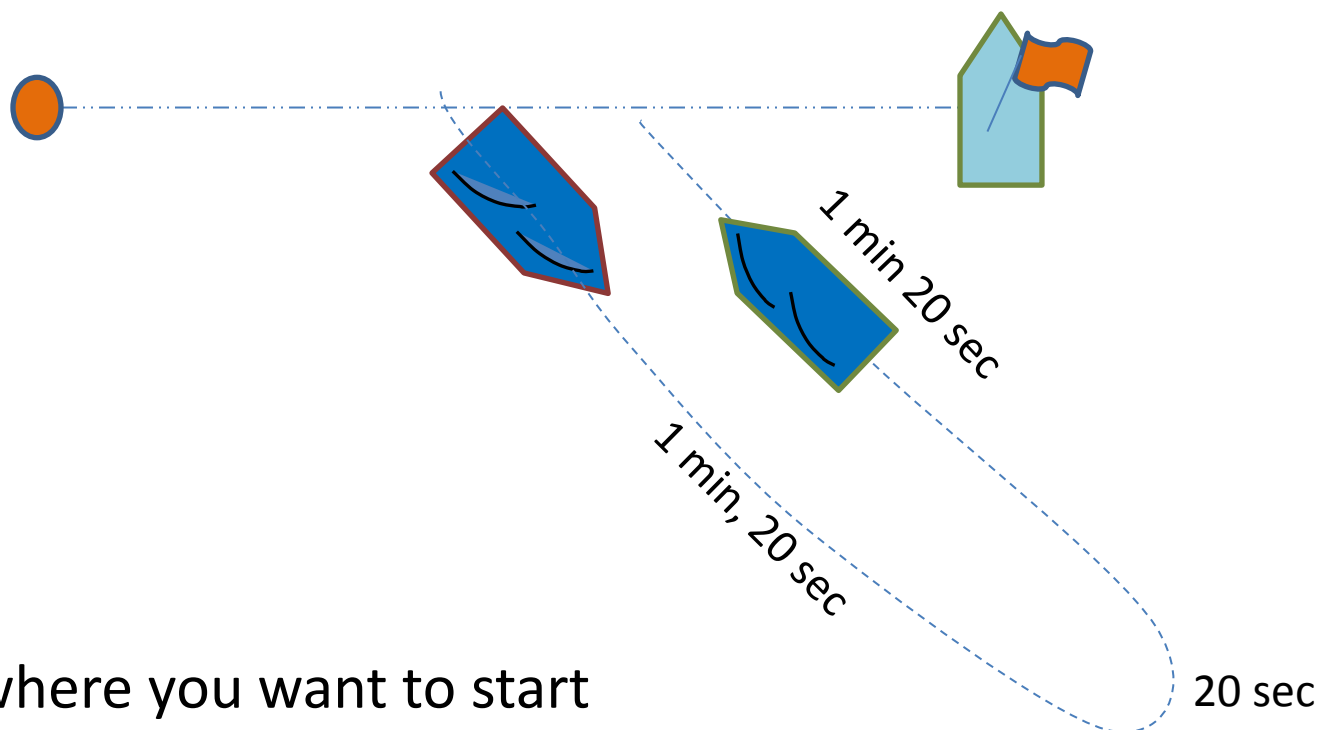


- Get close to the line and stall
- Hold position
- Take off at starting gun

Strategies: Luffing Start

- Good if your boat accelerates quickly without needing a lot of leeway
- Good for crowded starting lines
- Requires good boat handling skills
- May not be practical for big, heavy boats
- Good for variable winds and wind shifts (hard to be late)

Strategies: Vanderbilt Start

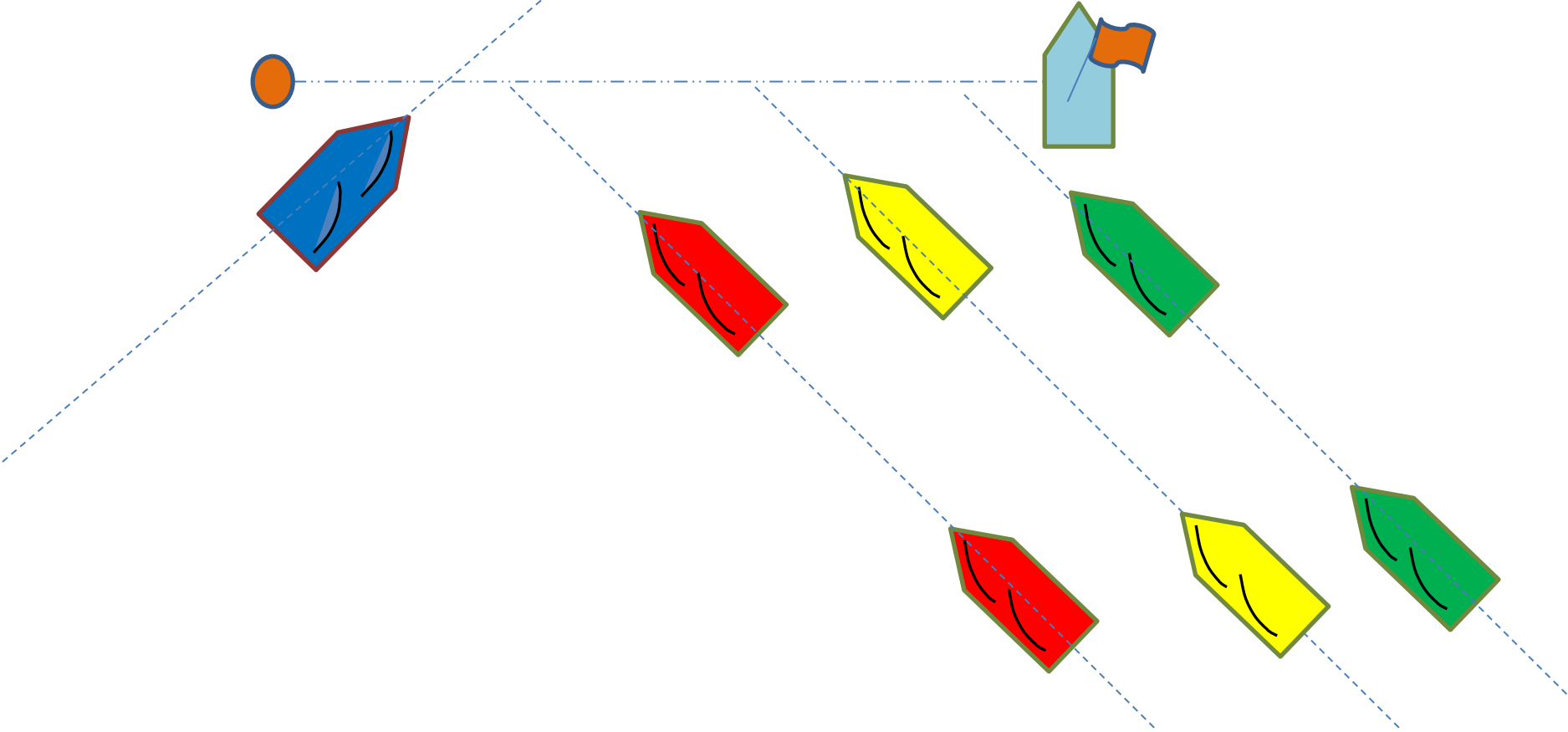


- Go to where you want to start
- Subtract time to tack from time remaining to start, sail out on a run for half the time remaining minus tacking time then sail back close hauled
- Example: Say you have 3 min to start at location 1, and it take 20 seconds to tack. Sail 1:20 out, tack (20 secs) and sail 1:20 back and you should be at the line at the gun

Strategies: Vanderbilt Start

- Relatively easy to execute
- Avoids the problems associated with “barging”
- Variable wind and shifts can make you early, late
- Other boats coming in on starboard can cause problems for the run and tack
- Good for heavy boats as you have time to accelerate

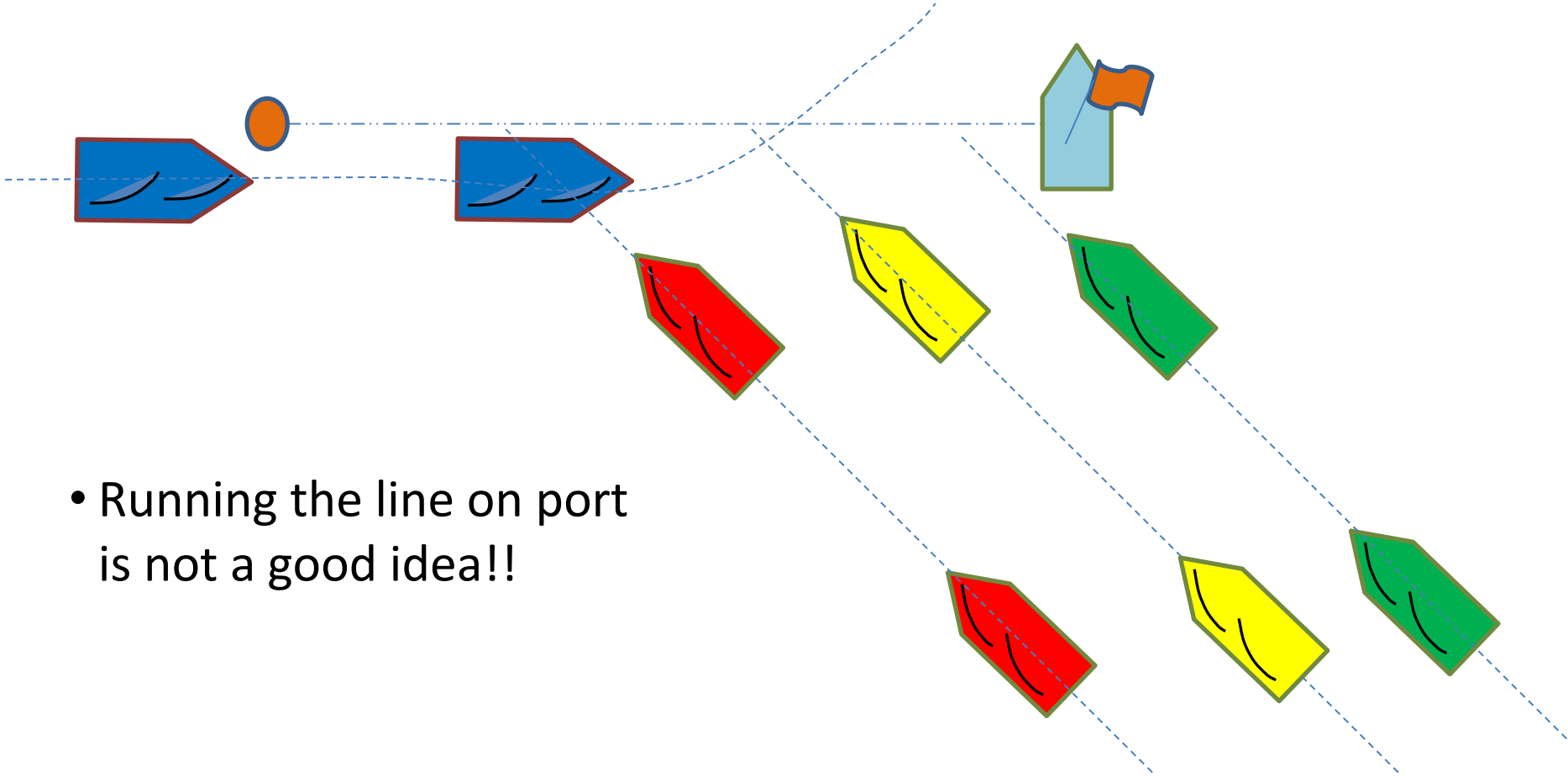
Strategies: Port Start



Strategies: Port Start

- Takes guts and good insurance
- Full speed on the line at the gun is critical
- Left shifts at start make this work, right shifts don't
- Can pay-off big time as you can choose course side
 - If you want right then go for it
 - If you want left then tack on top of the lead boat (force to tack away to unfavored side)
- Downside is you have to tack onto starboard and end up in dirty air from other boats. You may be pinned to the left side.
- More likely to work in shifty conditions, smaller fleets
- Better for low handicap boats

Strategies: What not to do



- Running the line on port is not a good idea!!

Strategies: High vs Low handicap

High Handicap (Smaller, Slower Boats)

- Usually faster to slow down, accelerate
- Must lead back to the line ahead of the big boats
- Can dictate if a big boat goes over or under
- Clear air is a priority

Low Handicap (Larger, Faster Boats)

- Take longer to accelerate
- Have to pick there way through the smaller boats
- Can dictate if a big boat goes over or under
- Full speed is more of a priority

What to do when you screw up (not if) because we all do eventually

- If you are over early: You have to stay clear of everyone else until you are back on the pre start side of the line (21.1)
- Slow down and/or head off or up as needed to stay clear, bear away or tack back at first chance, but watch for other boats
- Sometimes is best to go over early then circle the committee boat and start again (watch the anchor rode)
- You do not have to go around the pin or committee boat to restart, you just have to dip the line (unless the I flag is flying). Your entire boat must be on the pre start side before restarting.
- If you aren't over early or fouling once in a while you are probably not aggressive enough and/or not learning
- Try and practice different approaches and combinations of approaches, keep notes, ask others for advice
- If you foul someone – exonerate yourself by doing a 720. You must stay clear of other boats and do your “turns” as soon as practical. Rule 44.

Other:

- You are racing at the prep signal (4 min) (rule xxx)
- Engines must be off at 4 min to your start
- Stay clear of the starting area until your fleet is within 5 min of starting (rule 23.1)

Resources:

Racing Rules of Sailing for 2009-2012, US Sailing

Many books racing rules and racing strategy are available

US sailing has many videos:

<http://www.racing.sailingcourse.com/>

http://www.sailingcourse.com/racing_rules.htm

Other resources:

<http://www.ilyc.org/documents/JointheRaceCommitteeTeam.pdf>

Rabbit Start

Selection of Rabbit ;The race committee chairperson on the course shall designate the rabbit. If no official is present, then the rabbit shall be the boat with the largest (slowest) handicap rating.

Sequence: The rabbit shall start the sequence by being in position near the starting mark and shall make ONE LONG sound signal.

- Approximately one minute prior to starting, the rabbit shall be in position adjacent to the starting mark at Position 5. She shall sound FIVE signals and run directly downwind on starboard tack for TWO MINUTES to Position 4.
- At Position 4 the rabbit shall sound FOUR signals and harden up to a close hauled starboard tack course until she slightly overspends the starting mark at Position 3.
- At Position 3, the rabbit shall sound THREE signals prior to tacking onto a close hauled port tack, and set a course so as to leave the starting mark on her PORT side at Position 2.
- At Position 2 the rabbit shall sound TWO signals as she passes the mark and shall continue sailing close hauled on the wind while the fleet starts by crossing under her stern on starboard tack.
- The time spent on port tack by the rabbit after she has passed the starting mark shall be equal to the number of probable starters times six seconds (not including the rabbit).
- If, at the expiration of time, all boats have started the rabbit shall tack immediately to starboard and sound one signal. If, however, all boats have not started, the rabbit shall continue on port tack for fifteen additional seconds and then tack immediately onto Starboard.
- If a boat has failed to start when the rabbit tacks on to starboard tack, that yacht may legally start after she has sailed to the approximate point at which the Rabbit tacked and make a 360 degree turn.
- After she has started a yacht must remain on starboard tack UNTIL THE RABBIT HAS TACKED TO STARBOARD. Once the rabbit has tacked onto Starboard all boats (including the Rabbit) are free to tack subject to the Racing Rules of Sailing
- All boats must stay clear of the rabbit until the rabbit has tacked onto starboard at position 1. A yacht that collides with the rabbit is automatically disqualified and must retire without recourse to the 720 Rule.

