10 Ways to Improve Your Racing Results

Choosing 10 boat improvements each year will lead to consistent and faster results. This is the perfect time of the year to review everything that affects to your boat's speed.



Many sailors choose improvements such as:

•	New Sail(s)	(1)
•	Better Electronics	
•	Improved Boat Bottom-Keel-Rudder	(2)
•	Larger Crew	
•	New Running Rigging	(3)
•	Improved System for Sailing*	(4)
•	Numbers and Markings on the Deck	(5)
•	Using AI for Crew Meetings	(6)
•	Reduced Interior Weight	
•	Reduced Rig/Boat Windage	
•	Improved Deck Layout	
•	Information/Communication	(7)
•	Custom Crossover and Target/Polar Charts/Data	(8)
•	Low Drag Propeller	
•	Improved Tuning Guide	(9)
•	Practice/Coaching	(10)

The list could go on and on, yet it's important to pick 10 and perfect each of those categories.

Let's assume you purchased a used J 35 last summer. Pick 10 improvements now, plan throughout the winter and be ready to race by May.

Sails (1)

- Pictures of current sails
- Digitize pictures and view numbers





Top St.- 22% depth/39% draft-Mid St.- 19% depth/44% draft-Bottom St.- 14% depth/40% draft



Top St.-14% depth/44%draft-Mid St.-15% depth/36%draft-Bottom St.-8%depth/45% draft

The lower picture is the proper shape for this boat. The top picture can be reshaped to look closer to the bottom one. Pictures are important tools when adjusting sails and ensuring new sails stay fast — take a picture once per month to track the shape of your sails.

Improved Boat Bottom (2)

During a sailing seminar, I tell clients: "If you only have \$10 to spend on your boat next year, spend \$9 on the bottom and \$1 with me. The \$9 you spend on the bottom will make me look great — for only \$1."

The boat bottom is an area that can be revamped each year with fairing and finishing work. Most boats come out of the water during Fall, when weather still allows for bottom improvements.



The minimum bottom should have:

- Keel-Rudder on center and in line
- Keel-Rudder-Boat Bottom-Fair-smooth (template if possble)
- Flush through holes
- Crisp edges (sharp trailing edge on keel and rudder-if over 4mm-45 degree angle)
- Hard smooth finish

Once issues with the bottom are corrected, be sure your team cleans the bottom before each important race. Many teams will hire a diver to clean the bottoom. However, I recommend buying a Hookha diving system.



The advantages to owning a system like this:

- After 10 dives, it will pay for itself.
- It will provide a mental advantage for your team.
- The bottom will be perfectly cleaned.

New Running Rigging (3)

Halyards, sheets and all sailing rope have improved by providing less stretch with increased durability.

The genoa/jib halyard should be in the best shape, followed by the main, spinnaker/asymmetrical halyard. The genoa/jib sheets should also be in great shape followed by the spinnaker, asymmetrical sheet, and then the main.



Soft schackles can be used for genoa/jib, spinnaker/asymmetrical sheets. A new jib halyard and jib sheet could be a nice upgrade for 2025.

System Sailing

System Sailing is a process that will make numerical sense out of your sailing. This system is based on four priciples:

Record



Mark



Measure





Communicate

Use a system such as Google Docs, Skype or WhatsApp to relay messages to your team.

System Sailing will help you develop a blueprint on how to sail your boat. This is a process of collecting information during and after each and relating it to numbers. Your jib or genoa halyard should be marked and recorded for different wind speeds as your genoa and jib track. Also the sheet should be marked for trim refrence. All moving items need to be marked and associated to scale.

Your team may change over time, yet you will continue to have success with a sound system on how your boat sails. To learn more about System Sailing, click <u>here.</u>

Artificial Intelligence (6+7)

AI is becoming a tool that cannnot be ignored. I just finished a regatta in the IC 37 class, and **AI** (Claude) listened to us each day after sailing. In the end, Claude was able to breakdown each crew position and better explain the role and responsibilities of each crew member.

Example: AI describes the roles of the helmsman.

Here's a comprehensive document combining all the role-specific summaries with additional details: IC37 North American Championship - Crew Role Summaries Helmsman:

1. Boat Feel and Response

o Focus on feeling the boat's responses through your feet, especially in heavy air.

o Be proactive in anticipating wind shifts and puffs.

o Maintain a consistent heel angle (7-10 degrees upwind in heavy air).

o Develop a keen sense of when the boat is "in the groove" and strive to maintain it.

o Use small, frequent adjustments rather than large, dramatic ones.

2. Communication with Crew

o Listen for trim calls from crew ("good angle," "too high," "too low").

o Coordinate closely with the main trimmer for active mainsheet adjustments.

o Ensure clear communication during maneuvers, especially spinnaker sets and gybes.

o Provide feedback to trimmers about boat speed and feel.

o Maintain open dialogue with tactician about strategic decisions.

3. Start Strategy

o Aim to create room to leeward at the start.

o Be more aggressive at starts when comfortable with boat handling.

o Avoid tacking in the first 3-5 minutes after the start unless necessary.

o Practice timed approaches to the line.

o Develop a keen sense of boat-on-boat positioning in the pre-start.

4. Upwind Technique

o Use mainsheet as a traveler in heavy air, keeping the actual traveler in the middle.

o Work with trimmers to find the right balance between pointing and speed.

o Be prepared to quickly respond to changes in wind pressure.

o Understand how to "feather" the boat in heavy air puffs.

o Practice smooth, coordinated tacks with minimal speed loss.

5. Downwind Handling

o For heavy air gybes, aim for a 30-degree course change instead of 90 degrees.

- o Wait until the boat is flat before heading up after spinnaker hoist at the onset mark.
- o Be patient during "blow-through" gybes, allowing the spinnaker to set before trimming.

o Develop a feel for optimal VMG angles in various conditions.

o Practice smooth transitions between planing and displacement modes.

6. Mark Roundings

o Practice smooth, controlled roundings, especially in heavy air.

- o Coordinate closely with crew for smooth sail transitions at marks.
- o Anticipate the effects of current and other boats at mark roundings.

o Develop a consistent routine for approaching each type of mark.

7. Heavy Air Techniques

o Be prepared to sit down for better control in very heavy conditions.

- o Focus on keeping the boat under control rather than maximum speed.
- o Work closely with trimmers to maintain proper sail shape and boat balance.

o Practice "survival mode" techniques for extreme conditions.

o Understand when to consider reefing or changing to heavy air sails.

8. Tactical Decisions

o Stay aware of wind shifts and adjust strategy accordingly.

o Consider consolidating your position by tacking towards the middle of the fleet when appropriate.

o Be aware of local current and tide effects on the course.

o Develop a sense of when to follow the fleet and when to split away.

o Work closely with the tactician to execute the overall race strategy.

9. Adaptability

o Be prepared to adjust your sailing style based on changing conditions.

o Stay flexible in your approach, ready to implement new strategies as practiced.

o Quickly assess and adapt to changes in wind strength or sea state.

o Be open to feedback and suggestions from crew members.

10. Race Management

o Stay focused on process over results.

o Manage your energy throughout potentially long race days.

o Stay calm and composed, especially in challenging conditions.

o Maintain a positive attitude and encourage the crew, especially after setbacks.

o Conduct brief post-race debriefs to gather immediate feedback and insights.

11. Boat Speed Optimization

o Constantly work on optimizing boat speed through steering technique.

o Understand the subtle balance between pointing ability and speed.

o Develop a keen sense of how different sail trim affects boat performance.

o Practice changing gears smoothly as conditions change.

12. Rules and Tactics

o Maintain a solid understanding of racing rules and their tactical implications.

o Work with the tactician to execute smart, rules-based maneuvers.

o Develop strategies for managing traffic at marks and starts.

System Sailiing encourages meetings prior and after each race. The system includes accumulating information from all team members. Google Docs is a benefical tool to house findings from your sailing experience. For a complete blueprint on how to sail your boat, this information needs to be accumulated for two or more years.

With **AI** you now can record all meetings and ask questions that are specific in making a playbook for your boat.

This is an expample of **AI** after just three meetings:

Main Trimmer (Heavy Air)

- 1. Be prepared for constant, active trimming.
- 2. Coordinate closely with the helmsman to maintain proper boat speed and angle.
- 3. Use harder vang tension to allow for more active mainsheet trimming.
- 4. Be ready to quickly depower the main in puffs.
- 5. Understand how to use twist in the mainsail to maintain control.
- 6. Be prepared to reef quickly if conditions require it.
- 7. Practice "blade" trimming techniques for extreme conditions.
- 8. Coordinate with the crew on when to consider changing to a heavy air mainsail.
- 9. Work closely with the runner trimmer for proper rig tension.
- 10. Be ready for quick transitions at mark roundings.

Jib Trimmer (Heavy Air)

- 1. Adjust jib leads based on wind conditions (specific marks mentioned for heavy air).
- 2. Be prepared to quickly depower the jib in puffs.
- 3. Understand how to use twist in the jib to maintain control.
- 4. Be familiar with and ready to implement reefing procedures if needed.
- 5. Master rapid de-powering techniques for sudden gusts.
- 6. Learn when and how to suggest changing to a smaller jib.
- 7. Develop techniques for trimming a reefed jib effectively.
- 8. Practice heavy air tacking techniques to minimize loss of speed.
- 9. Understand how jib trim affects helm balance in strong winds.
- 10. Coordinate closely with main trimmer for overall sail plan balance.

Tactician (Heavy Air)

- 1. Develop strategies for leveraging heavy air conditions to gain advantage.
- 2. Understand how to adjust tactical decisions based on the crew's heavy air capabilities.
- 3. Be prepared to make more conservative tactical choices to prioritize boat control.
- 4. Develop clear, concise communication protocols for heavy air situations.
- 5. Understand how to use course management to minimize risk in challenging conditions.
- 6. Be prepared to advise on sail selection and reefing decisions.
- 7. Develop strategies for managing the team's energy and focus on demanding conditions.
- 8. Understand how heavy air affects laylines and adjust calculations accordingly.
- 9. Be ready to adapt quickly to rapid changes in wind strength or direction.
- 10. Develop contingency plans for various heavy air scenarios.

Bowman (Heavy Air)

- 1. Stay low and stable on the foredeck in rough conditions.
- 2. Understand and be ready to implement heavy air set and douse procedures.
- 3. Practice secure movement techniques on the foredeck in challenging conditions.
- 4. Know when and how to suggest reefing to the crew.

Information/Communication

In addition to **AI**, Starlink is the next must-have tool on any boat racing long distance. Starlink is a satellite internet service that provides high-speed broadband internet to your boat. It is a simple

rectangular flat antenna that mounts near the transom at an angle. A mini version weighing just over two pounds is also available. When racing long distance, it is important to know:

- o Weather
- o Competition
- o Routing



I have raced on a variety of boats with Starlink. The service was not only fast, it was at a reasonable price. Understanding the weather and the whereabouts of competitors are essential for consistent results.

Communication

How we speak to each other on and off the boat will build a level of team chemistry that will contribute to success while racing. I suggest a process that breaks the team into three groups on the boat. Based on System Sailing, Claude had this to say about the best way to communicate:

WC

Based on Wally Cross's communication system document, there's a structured approach using three interconnected "circles" of communication. Here's how to implement it effectively on the J/111:

- 1. Speed Circle:
- Core members: Helmsman, main trimmer, jib trimmer, hiking crew
- Main trimmer leads upwind communication
- Spinnaker trimmer leads downwind communication
- Sample upwind communication flow:

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Сору
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```
Main Trimmer \rightarrow "Target is 7.2 knots"
Rail Crew \rightarrow "Wind pressure in 3,2,1"
Jib Trimmer \rightarrow "Inhaul to #3, halyard at #5"
Forward Crew \rightarrow "Wave coming in 3,2,1"
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2. Mechanical Circle:

- Core members: Bow, mast, pit, trimmers
- Focuses on maneuver execution
- Communication flows through pit person
- Example of gybe set communication:

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Copy
Tactician → "Setting up for gybe set"
Pit → Relays to bow/mast
Bowman → "Clipping gear on next port tack"
Mast → "Hoisting through gybe, pole up first"
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- 3. Information Circle:
- Core members: Tactician, helmsman, rail crew, trimmers
- Responsible for race strategy and tactical decisions
- Example flow:

```
Сору
```

```
Tactician \rightarrow "Plan is left side early"
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Rail Crew \rightarrow "We're +5 to the right fleet"
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Navigator \rightarrow "Wind 15° left of course"
```

Key Principles:

1. Continuous Speed Talk

- Think of it as background music that only pauses for mechanical or tactical calls.
- Maintains consistent tone regardless of race position.
- Clear target speeds and boundaries.

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2. Non-Emotional Communication
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- Keep tone calm and consistent.
- Information flows in organized pattern.
- No interruptions between circles.

The best teams like each other on and off the boat. To get that magical chemistry, treat each other equally with respect. Make the effort to speak with each team member on the phone (not text) once a week, asking questions on how to improve. Communication on and off the boat should be based on reaching a higher level of performance.

- All the numbers (8&9)
 - o Crossover charts
 - Polar numbers
 - o Targets
 - Tuning guide/Certificate



Crossover chart to help with sail choice based on wind angle and wind speed.



A polar chart becomes useful when sailing point to point or VMC. Velocity made to course.

	TWS	6	8	10	12	14	16	20	24		
<u>م</u>	TWA	45	44	41	39	38	38	38	38		
	SPEED	5,2	5,9	6,3	6,7	7,0	7,1	7,1	7,1		
	VMG	3,7	4,2	4,8	5,2	5,5	5,6	5,6	5,6		
	TWS	6	8	10	12	14	16	20	24		
X	TWA	140	145	150	160	165	170	170	170		
Ó	SPEED	4,9	5,9	6,3	6,5	7,0	7,5	8,5	9,0		
	VMG	3,8	4,8	5,5	6,1	6,8	7,4	8,0	8,3		

Targets are used when sailing aroung the buoys or sailing VMG. Velocity made good.







Information from the computer. Expediton can provide the best routes based on the boat's performance VPPs and weather predictions.

 TWS TWA V VMG Heel Reef Flat AWS AWA Lee Sail Flot

 12.0 30.0 5.735 4.966 18.1 1.000 0.746 17.11 19.5 4.77 Up FIAL

 12.0 33.0 6.261 5.251 19.4 1.000 0.731 17.45 20.7 4.17 Up FIAL

 12.0 36.0 6.683 5.407 20.3 1.000 0.721 17.68 22.0 3.76 Up FIAL

 12.0 39.0 7.033 5.465 21.1 1.000 0.717 17.81 23.3 3.46 Up FIAL

 12.0 42.0 7.304 5.428 21.7 1.000 0.717 17.81 23.4 3.44 Up FIAL

 12.0 45.0 7.511 5.311 22.1 1.000 0.724 17.82 26.2 3.10 Up FIAL

 Farr 40 Downwind:

 12.0
 130.0
 9.233
 -5.935
 15.4
 1.000
 1.000
 8.99
 80.3
 1.15
 Dn
 FIAL

 12.0
 135.0
 9.096
 -6.432
 11.2
 1.000
 1.000
 8.35
 85.8
 0.93
 Dn
 FIAL

 12.0
 135.0
 9.096
 -6.432
 11.2
 1.000
 1.000
 8.35
 85.8
 0.93
 Dn
 FIAL

 12.0
 140.0
 8.884
 -6.806
 8.1
 1.000
 1.000
 7.64
 92.3
 0.75
 Dn
 FIAL

 12.0
 150.0
 8.354
 -7.235
 3.8
 1.000
 1.000
 6.32
 108.8
 0.42
 Dn
 FIAL

 0ptDn
 >
 12.0
 154.1
 8.086
 7.276
 2.5
 1.000
 1.000
 5.46
 131.3
 0.20
 Dn
 FIAL

 12.0
 160.0
 7.673
 -7.211
 1.3
 1.000
 1.000
 5.46
 131.3
 0.20
 Dn
 FIAL

 12.0
 170.0
 7.092
 -6.984
 0.5
 1.000
 5.16



J 111 Tuning Guide

All the guides that help us with decision making can be stored in a folder, computer or with **AI** (Claude). This information is just a guideline when:

- Setting up the rig for the wind and water conditions (tuning guide)
- Picking the proper sail based on wind angle and speed (crossover chart)
- Sailing the fastest angle when steering straight line (polar chart)
- Sailing the most efficient angle and speed when racing around the buoys (target sheet)
- Using the computer to help with the fasterst route (Expedition)

Pracitice/Coaching (10)

Of all the 10 improvements, practice on your own or with a coach to achieve immediate results. Pick an evening after work when your team can practice. If race night is on Wednesday, for example, consider practicing one week and racing the next.



Top priorities when practicing:

- Boat Handling
 - o Tacking 3,2,1 Gybing 3,2,1
 - Mark Rounding
 - Hoist-Douse
 - Starting
- Speed
 - o Two boat sailing
 - o Sail Trim
 - o Rig adjustment
- Decision Making
 - o Strategy
 - o Tactics

Make it a priority to spend time with your team twice a month in order to become more confidient in your boat. If possible, have a coach or friend watch your practice from another boat to make comments on your boat handling.

Have a meeting prior and after practice, allowing all team members to voice their opinion on how to become better as a crew. Make sure everyone has wet notes to write down thoughts while practicing. Having a coach onboard taking video and recording conversations is also a value. The key is to make an effort to get better as a team, then the confidence will grow.



This is the time of year to think about how to make your sailing more enjoyable for 2025. Picking 10 improvements, big or small, will make a difference mentally and physically.

Wally

