



JOIN THE RACE COMMITTEE TEAM!



An entry-level training manual
for Race Committees



The Racing Rules of Sailing... ...Anytime, Anywhere



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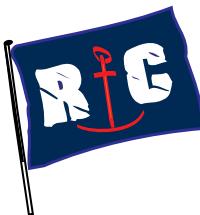
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for Race Committees



Race Management Committee
United States Sailing Association
www.ussailing.org

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*“You haven’t won the race,
if in winning the race you
have lost the respect of
your competitors.”*

—Paul Elvstrøm

Read me first

Join the Race Committee Team! is designed to help people get started as members of a race committee. It is a part of US Sailing's Race Management Committee's efforts to improve the quality of race management throughout the country. Most sailboat racing is run by yacht clubs and other local sailing organizations. These organizations rely almost entirely on volunteers to provide their race management. We hope that this booklet will provide an easy way for new volunteers to learn the basics and to overcome any reluctance they might have about serving as a part of their local race management team. It can also serve as a quick refresher course in race management best practices for more experienced RC members.

JTRCT! is one of the texts for US Sailing's Basic Race Management Seminar. That seminar is part of our race officer training and certification program, and is offered around the country. The US Sailing website (www.ussailing.org) includes the schedule of these seminars.

This ninth edition is based on *The Racing Rules of Sailing* for 2021-2024.

For those of you who would like more detailed information about running sailboat races, the *US Sailing Race Management Handbook* is an invaluable reference.

We are indebted to those who contributed to the update of this book. If you have suggestions for improvement, please send them to US Sailing via email: raceadmin@ussailing.org.

Thank you for volunteering on the Race Committee!

Taran Teague, Chair
Race Management Committee

The Race Management Team

No one person can run a good race or series.

It takes a good team. Each member of the race committee team has an important role to play.

When you join a race committee, you eat, drink and breathe TEAM! You should focus hard on your particular job responsibilities, follow the direction of your team leader (the Principal Race Officer) and keep an eye out for the needs of the rest of your team members.

Principal Race Officer (PRO)

Chief executive of the race committee team.

Makes the major race management decisions

...see page 19

Mark Setter

Positions, sets and relocates marks of the course. Relays changes in wind to the race committee

...see page 16

Wind Reader

Observes and records wind direction at regular intervals

...see page 30



Spotter/Recorder

Identifies and records all boats starting and finishing, including competitors who do not start or complete the race

...see page 24

Signaller

Signals information to competitors through visual signals from the race committee vessel or station

...see page 20

Line Sighter

Sights starting line to identify boats "on the course side" and tracks boats returning to the start. Sights finish line to determine order and moment of finish

...see page 14

Sounder

In charge of sound signals that draw competitors' attention to visual signals

...see page 22

Scorer

Tabulates points and finishing times for finishers and calculates handicaps if required

...see page 26



Timer

Calls the time sequence aloud so the start and finish can be properly run. The heartbeat of the committee

...see page 27

Committee Boat Operator

Responsible for equipping and operating the race committee boat

...see page 13

A race committee in action

**"Five, four,
three, two, one!"
The timer calls
out the final
countdown while
everyone hangs
on the next
syllable.**

Before going out on the race committee boat, you will be asked to volunteer for (or be assigned to) one or more of the roles described on the following pages. This ideally happens at some point days or weeks ahead of time, but not always! The person who assigns the roles is the Principal Race Officer (PRO), or the race committee chairman. In most cases, he or she will try to assign you a job with which you will be comfortable. But in case you get something different, you should be familiar with each of the responsibilities on the team.

There's another reason to become familiar with all the team roles. The most efficient race committees often have a relatively small group of members, with people performing several team functions. You will find that trying different roles is the best way to learn more and become a better overall race management team member.

"Five, Four, Three, Two, One...!" The timer calls out the final countdown, while everyone hangs on the next syllable. Carole sights intently down the starting line, noting the sail numbers of two boats that are on the course side of the starting line, and starts to pick up her megaphone. You take one last look at the class flag as you get ready to remove it smartly. *"Mark!"* calls the timer as the flag comes down, the horn sounds and the fleet surges across the starting line.

For the sailors, the race is just beginning, but for everyone on the race committee activities began on shore several hours before.

Back at the dock

"Welcome aboard," says a woman with sunglasses. "My name is Carole and I'm the Principal Race Officer today. I see that we have some new faces on the team."

"Good," you think. "I'm not the only rookie!" After all, you had been "volunteered" for today's duty by a friend, and for the past two weeks you've been worried about looking stupid in front of the whole fleet. Now, D-Day is at hand.

A race committee in action

"I don't want any of you first-timers to get worried," explains Carole.

"We have plenty of time before the start of the race. The warning is scheduled to be at 12 o'clock. In the meantime, let's all set our watches to the GPS time, and then I'll spend some time with each of you reviewing your jobs."

In spite of Carole's low-key tone, you can feel an air of excitement aboard the committee boat. Even though you're a confirmed cruising sailor, you're starting to get intrigued by this racing business.

"I hope everyone has had a chance to leaf through the training manual," says Carole, holding out a copy of the booklet you were given earlier. If you have any questions, please let me know. The race committee boat is scheduled to leave the dock at 10:30." When you look up from the manual, the dock lines are being dropped right on time. Near the harbor entrance, Carole looks at Tom and asks him to make one long horn sound as she hoists a yellow and black flag. In the harbor, you can see dozens of sailboats getting rigged and starting to make their way out to the racing area.

Heading out to sea

"What's your job today?" The woman sitting next to you is starting up a conversation.

"Signaller," you answer.

"I've done that before," she says. "It's not too tough. Just pay close attention to the timer and remember to display the flags so they're clearly visible just as the timer calls *Mark!*"

You soon learn that your new friend is the timer, one of the most challenging jobs on the race committee.

As the chatter continues, you learn that others on board have never helped run a race before, but a couple are race committee "regulars."

As the chatter continues, you learn that others on board have never helped run a race before, but a couple are race committee "regulars."

A race committee in action

"Let's go over your job as signaller," says Carole, sitting down next to you.

"First of all, you should know that the signaller is a critical function because the flags are our only official means of communicating with the sailors on the water. You'll be working closely with Judy, our timer, and me."

You can see Carole starting to get a little intense. She's standing with a radio in one hand and a clipboard in the other. Through the static, you hear a muffled voice from Carole's radio: "The starting mark is dragging!"

"What if I goof up?" you ask.

"Don't worry," says Carole. "Just do your best. There are procedures for taking care of mistakes and don't be shy about letting me know if you have any questions or problems."

You start looking through the training manual one more time. The committee boat reaches the starting area. The anticipation builds.

While Tom is busy with his wind vane and anemometer, you start to check over all the equipment you will need for the day. Using the checklist in the training manual, you locate the necessary flags and figure out how to attach them to the poles. You start to feel a bit more comfortable.

After several minutes of steady wind readings, the anchor is dropped, and the on-board pace picks up a notch.

"It's 11:30, 30 minutes to warning signal!" announces Judy.

The pace quickens

Up on the bow, Tom, who has been doing the job of wind reader, now double checks the settings on the automated starting system.

"Fifteen minutes to warning!" calls out Judy. You can see Carole starting to get a little intense. She's standing with a radio in one hand and a clipboard in the other.

Through the static, you hear a muffled voice from Carole's radio: "The starting mark is dragging!" You recognize the voice as Larry, a retired pilot, who is operating the mark boat today.

A race committee in action

"Add more anchor line," says Carole into the radio.

"And go farther to windward before you drop the anchor again." Carole is intensely focused. Still, she remembers to check up on you.

"Maridell, are your flags all ready?"

"Yes they are," you reply (thanks to some advice from the gang). The class and preparatory flags are attached to two different poles. Other poles hold the individual and general recall flags and the postponement flag.

"11:55, five minutes to class flag and sound signal!"

The start is approaching fast. Carole posts the course signals.

"Tom, are you ready with the sound signal?"

"Yes, ma'am!" he says with a grin.

"Maridell, signals all set?"

"Yup."

"Judy, how much time?"

"Two minutes to warning!"

This is it. In two minutes you will display the class flag as fast as possible. It didn't seem like such a big deal before, but now you are anxious about messing up. You sense the feeling of teamwork among the committee members. You just want to do your job right for everyone else. You also realize that the entire fleet has their eyes on you and the pole you're holding in your hands.

Judy calls out: *"One minute thirty seconds to class flag and sound signal."*

"One minute to class flag and sound signal."

"Thirty seconds."

"Twenty seconds."

"Ten seconds to class flag – Five, Four, Three Two, One – Mark!"

You also realize that the entire fleet has their eyes on you and the pole you're holding in your hands.

A race committee in action

As Judy says "Mark," you snap the pole up smartly, the horn honks as Tom presses the "on" button, and the starting sequence is underway!

Grace under pressure

**"Oh great!
OK, everyone,
be ready to
postpone,
but don't do
anything yet."**

The sailboats, which had been scattered around the race course, are now swarming around the committee boat. You start to get caught up in the action.

"*Thirty seconds to prep!*" That was Judy getting your attention.

"*Twenty seconds.*"

"*Ten seconds to prep – Five, Four, Three Two,
One – Mark!*"

As you go through another countdown sequence and the horn sounds, you display the prep flag – four minutes to go. The starting line is now more crowded than ever, and hardly anyone says a word on board the committee boat.

Sue moves into position where she can sight the starting line. She gets ready to call the numbers of any boats that are over the line early. You notice that Sue and Carole are now both holding digital voice recorders.

"*One minute to drop of the prep flag with long sound!*" The fleet is now on final approach to the start. The line is getting crowded, and you hear spirited yelling from the fleet.

"*Ready – Drop!*"

The horn sounds, you remove the prep flag and grab the pole with the class flag. One minute to go.

"Carole, the wind has shifted 10 degrees to the right." It's Tom with another wind report.

"Oh great!" comes her reply. "OK, everyone, be ready to postpone." You reach for the pole with the red and white postponement flag. "But don't do anything yet," she adds.

A race committee in action

"Wind's back five degrees to the left!" updates Tom. "OK!" says Carole to everyone. "Let's hang with it – we'll go with this start. Let's make it good."

A couple of boats are now within inches of the committee boat transom. It's hard to concentrate on what you need to do next! The sound level grows to a din as most of the boats let their sails luff in the breeze. Sue realizes that the blue boat at the far end is going to be over early and speaks quietly to her voice recorder.

"1394," says Carole to the recorder. "Better note that number."

"This green guy is also getting close!"

"Ten seconds to start ..." warns Judy.

The fleet presses up to the line.

"Five, Four, Three, Two, One – Mark!" The horn sounds, the class flag is down, and in an audible rush, the fleet bursts across the line.

"X-ray, X-ray, X-ray!" shouts Carole. You immediately raise the pole with the "X" flag, and Tom sounds the horn once.

"1394," says Carole, "and 2557," as the recorder writes down the numbers.

As the fleet charges away from the line, you see two boats turn back and return to the starting line. You hear Carole say, "1394 – clear; 2557 – clear. All boats are now clear. Maridell, drop the "X" flag." Carole is finally smiling. You're pretty pleased with yourself, too, and definitely feeling more confident.

The committee's job is far from over, but you feel like you've already accomplished a lot. You could really get into this!

"X-ray, X-ray, X-ray!" shouts Carole. You immediately raise the pole with the "X" flag, and Tom sounds the horn once.

Is race management for you?

Welcome to the world of the race committee. The story in the previous chapter shows just how exciting it can get on the race committee boat when you're running a race.

Sailboat racing is like a game of chess. It's easy to learn the basic moves, but you can spend the rest of your life improving your game. A race management volunteer only needs to learn the basics to begin.

If you are reading this booklet, you must already have a certain amount of interest in serving as a race committee volunteer. That's great!

Let's start by answering some questions commonly asked by people like you who are considering getting involved.

Just what is a race committee?

The term "race committee" includes any person or group that is in charge of "managing" a sailboat race. This includes everything from writing the sailing instructions (SIs) to conducting the race. This book will describe the specific jobs needed to run a race. Our opening story, however, illustrated how these jobs can be combined for only three or four volunteers.

What skills are required?

Teamwork

Ability to focus on a specific role or task

Ability to follow instructions

Ability to adjust quickly to changes

Do I need to know anything about sailboat racing?

No, but it makes it more interesting if you do!

What are the rewards?

Satisfaction of a job well done

Working as part of a team

An important role in an exciting event

Being out on the water

Action, fun, new friends

Is race management for you?

How important is race management in sailboat racing?

It's hard to overstate the importance or value of the race committee. In fact, good race management is so important for successful racing that US Sailing administers a national program of race management training and certification. It even awards a prestigious annual trophy for excellence in race management.

What are the race committee's goals?

The prime goal of the race committee is to offer fair competition to all. A good race committee starts on time, delivers clear racing instructions and signals, sets a precise course and adjusts promptly to changing wind and weather. A well-organized race committee does a lot to set the tone for fair competition.

Perhaps the most important objective is giving satisfaction to competitors by setting a good starting line, setting a good course and finish line, and providing a racing event that is safe, fair and fun, ashore and afloat. It requires foresight, detailed planning, and above all, teamwork!

These objectives apply to any event, large or small. The scale of the event and its importance will determine the size and complexity of the race management challenge, but the objectives (and the rewards) remain the same.

Perhaps the
most important
objective
is giving
satisfaction to
competitors.

How does a sailboat race work?

A sailboat race is made up of several parts, including a start, a course sailed around marks or buoys, and a finish.

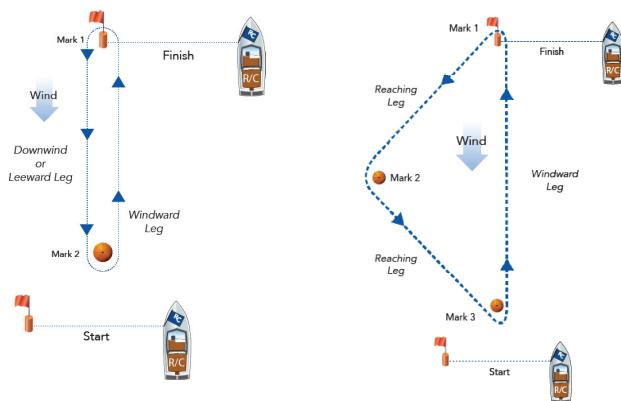
A start is typically broken down into a sequence of timed intervals. The race committee indicates this sequence to the competitors with the use of visual and sound signals.

The timing is:

- Warning – 5 minutes before the start
- Preparatory – 4 minutes before the start
- Preparatory removed – 1 minute before start
- Start – the boats cross the starting line and proceed around the course

Other timing intervals are sometimes used for windsurfing, dinghy racing and other types of sailboat racing.

Competitors start the race by crossing an imaginary line between the starting flag on the committee boat and a nearby starting mark. The course may be made up of several different "legs." The first leg is usually into the wind (to windward), followed by a leg with the wind from the side (a reach), and/or a leg with the wind from behind (a downwind leg, sometimes called a leeward leg). Competitors finish the race by crossing an imaginary line between the flag on the race committee finishing boat and the nearby finishing mark. Below are examples of basic courses, and although varied courses are used in sailboat racing, the race committee's duties will remain similar.



Committee boat operator

Before the start

Prepare the race committee boat (often called the "signal boat") for departure from the dock at the scheduled time!

Have more than enough fuel on board before you depart.

Stop the committee boat and let it drift in the starting area so the wind reader can get accurate wind readings.

At the direction of the PRO, anchor the committee boat with plenty of scope in the proper position for the starting line.

During the race

Maintain radio contact with other race committee and support craft as instructed by the PRO.

When underway, stay clear of boats that are racing. Be careful about your boat's wind shadow and wake.

Follow instructions of PRO about where to position the RC boat. During a race you may also be serving one or more of the following functions:

- Finish boat
- Change of course signal boat
- Safety and support boat

Equipment checklist

Even though the PRO is responsible overall, the boat operator takes responsibility for the equipment that is normally stored on the race committee boat. Even if another person is responsible for a given item, the boat operator should still be responsible for checking items off on the master list. Be sure the entire list is reviewed with the PRO.

Experience/Skills

Motorboat experience and knowledge of marine "Rules of the Road."

The boat operator runs the race committee boat and handles radio communications if directed by the PRO.

- **Know your boat**
- **Be familiar with anchoring your boat in adverse conditions**
- **Know your navigation equipment and how to use it**
- **Remember, every decision is based on overall safety**

Line sighter

The line sighter sights the starting line to identify premature starters and tracks boats returning to start. He also sights the finish line to determine the moment and order of finishers.

Before the start

The line sighter should establish a comfortable and safe position with a clear view directly along the starting line.

About 90 seconds before the starting signal is displayed, the line sighter begins spotting and recording the sail numbers of boats that look like they might cross the line prior to the starting signal. The line sighter can also note sail numbers that might be obscured at the actual start of the race.

At the start

Call out and/or record the sail numbers of each boat that is "OCS" (On the Course Side). A boat is OCS when any part of her hull crosses the starting line before her starting signal.

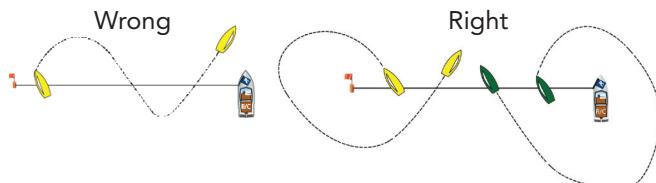
Loudly hail to the competitors, if allowed by the sailing instructions, the sail numbers of the OCS boats and watch for those boats to return and start correctly.

If there are many OCS boats and it is impossible to identify all of them, don't panic. Just get the ones you can and inform the PRO, who will then decide whether to signal a general recall (restart the entire fleet).

Tip: When there is one line sighter on the race committee end of the line and another on a vessel at the mark end of the line, the line sighter on the race committee end of the line is considered to be senior.

Tip: If rule 30.1 ("I" flag) is in effect for that start, any boat over the starting line or one of its extensions during the minute before the starting signal shall sail across an extension so that her hull is completely on the pre-start side before she starts. The line sighter must watch carefully to confirm that boats start correctly.

Rule 30.1 ("I" flag)



Tip: The sailing instructions should define the start/finish lines as "between the staff displaying an orange flag on the signal boat and the course side of the nearby mark." Even if the SIs do not describe the start/finish lines in this way, you should consistently sight the lines in this manner.



At the finish

Identifies boats to the recorder as they approach the finish line and communicates by sound or the word "Mark!" the exact moment the hull crosses the finish line.

The line sighter also notes any flags being flown by competitors as they cross the finish line, such as protest flags or scoring penalty flags.

Tip: Boat identification can be done in any number of ways. Sail numbers is preferred, but if not visible, use any other identification possible, such as far side, near side, boat name, color, etc.

Tip: Sort out any questions of finishing as soon as possible when there is a lull in the action. Task other RC members not occupied at the moment with identifying and reporting boats whose identity was obscured when they crossed the line.

Experience/Skills

Good distance vision and the ability to use binoculars.

Equipment

- Clipboard, paper and pencils
- Binoculars
- Voice recorder
- Loud hailer

To learn more

The Racing Rules of Sailing, Part 3 and "Race Signals"
US Sailing Race Management Handbook

- Clear and comfortable view of lines
- Spots and records potential OCS boats
- Spots and records restarters
- Spots and records flags at nearby mark roundings
- Spots and records finishers and any flags
- Coordinates information with PRO and scorers

Mark setter

Operating from the mark boat, the mark setter works with the race committee signal boat to position, set and relocate marks of the course. He also reports changes in wind to the PRO.

Setting the starting line mark(s)

Review the sailing instructions with the PRO for descriptions of starting line, course and the types of marks or buoys to be used.

As instructed by the PRO, position the mark end of the starting line so that the starting line (between the mark and the starting flag on the committee boat) is square to the wind direction. The PRO will be in constant communication with the mark setter when positioning the mark end of the line.

Tip: Some committees anchor the committee boat and adjust the angle of the line with the buoy end. Other committees set the buoy end of the starting line first and adjust the angle of the line by lengthening or shortening the anchor line on the committee boat.

Tip: A handy way to estimate the length of the starting line is to multiply the number of starters in the largest class or fleet by 1.25 and multiply again by the length of the average boat in that class or fleet. Wind and sea conditions, the types and sizes of boats, and the number of boats in a class or division will all affect this length. Rely on the PRO to make this decision.

Setting the marks

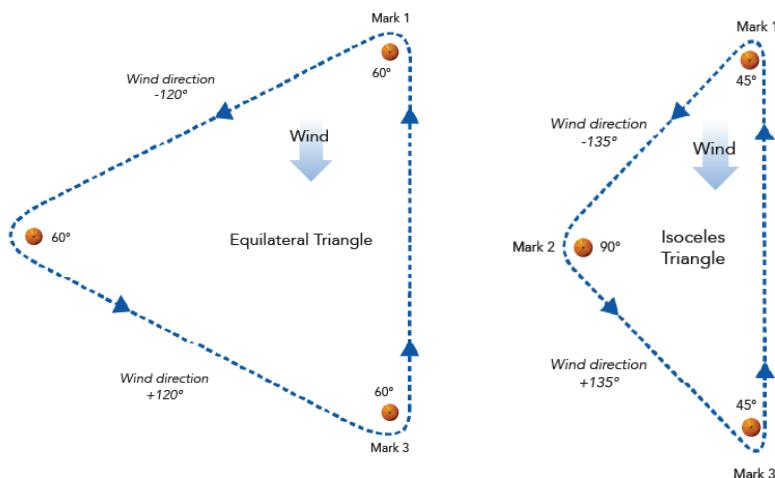
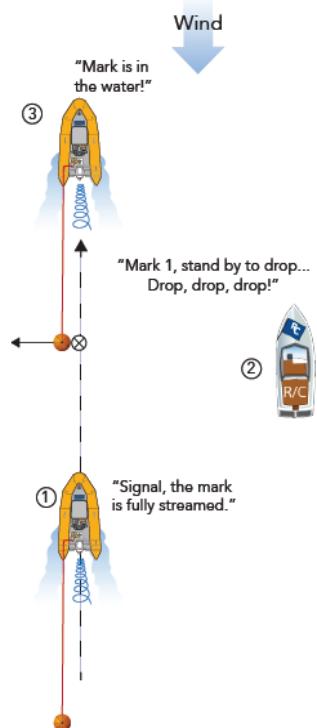
The PRO will give you the location of each mark, typically using distance and bearing from the signal boat or GPS coordinates. She may ask you to motor to the desired location and wait for further direction before dropping the mark(s).

After setting the marks, return to your assigned area, stand by outside the course and wait for further communications from the PRO concerning wind readings and course changes. Do not anchor unless directed to do so by the PRO.

Setting the finish line

At the direction of the PRO, set or adjust the mark end of the finish line like the starting line, only shorter. The finish line should be set at right angles to the last leg of the course. A distance of 5 or 6 times the length of the largest racing boat is commonly used.

Tip: “Streaming the mark” is the best way to set a mark at a precise distance and bearing relative to the signal boat. The mark-set boat begins downwind of the desired location and proceeds on an upwind course that will place the mark at the proper distance from the signal boat. While the boat heads slowly upwind, the crew member pays out the mark and all of its anchor line so that both are being towed behind the mark boat while the crew holds the anchor. Someone on board the signal boat sights the desired mark location and prepares to “call the drop” as the mark boat proceeds straight upwind toward the spot. When the mark (not the anchor) is in the desired location, the spotter on the signal boat calls “Drop, drop, drop!” and the crew member drops the anchor overboard. The anchor will swing down to the bottom and the mark will remain in the desired spot. The mark boat should remain near the mark until it settles and the signal boat confirms that it is in the correct location.



Tip: The diagrams above illustrate the angles between marks in two commonly used triangle courses.

Mark setter

Other duties

When the course is set, at the direction of the PRO, the mark boat may also act as a safety boat. The mark setter may also be asked to record mark roundings and wind readings or to change the course.

Tip: The mark setter should anchor a mark sufficiently upwind of the desired location to allow for downwind drift due to the length of the anchor line. The length of the anchor line should be approximately 2-4 times the water depth. This will vary depending on the wind, sea conditions and bottom type.

Experience/Skills

Motorboat experience, ability to read a compass, anchoring and knot tying. Strength and endurance helpful. GPS knowledge very helpful.

To learn more

US Sailing Race Management Handbook

US Powerboating website – www.uspowerboating.com

Mark boat checklist

Fuel	Charts
Lunches and drinks	Emergency plans
Anchor and line	Binoculars
Mount, poles for flags	Life jackets
Sailing instructions	Electrical tape
Pencils and pens	Clipboard
Forms	Rubberized gear twist ties

Signal Flags

"A" flag	"S" flag
"C" flag	"RC" flag
"M" flag	Blue flag
"N" flag	Orange flag

Hand bearing compass	Air horn and whistle
Marks with anchors	Wind telltale
Inflater	Course change boards (+/-, red/green)

The Racing Rules of Sailing

Course flags or white board and dry erase markers
VHF radio (spare batteries, if handheld)
GPS (spare batteries, if handheld)
All required U.S. Coast Guard equipment

Principal Race Officer (PRO)

General responsibilities

Write or review the sailing instructions.

Post notices to competitors.

Conduct competitors' meeting (if required).

Assume direction and responsibility for race committee personnel, equipment and assignments.

Determine course location within the limits of the sailing instructions and the course selection within that racing area.

Respond to changes in weather conditions.

Assure race committee compliance with sailing instructions and racing rules.

Make or approve all race committee decisions.

Act as the communications link to competitors, regatta organizers and the protest committee.

The PRO is the chief executive of the race committee team. He or she makes the major race management decisions.

Experience/Skills

Experience as a racing sailor

Navigation and piloting skills

Comfort in a leadership role

Decision-making skills

Knowledge of *The Racing Rules of Sailing*, especially Part 3

Ability to adjust to changes and challenges

Calm under pressure

To learn more

The Racing Rules of Sailing, Definitions, Parts 3-7, and "Race Signals"

US Sailing Race Management Handbook

Signaller

The signaller signals information to competitors from the race committee boat. Visual starting signals are the official communication to competitors, and are in effect even if sound signals are not heard.

- **Display and remove starting flags on timer's countdown**
- **Display and remove other flags on line sighter's and PRO's commands**
- **Display finish flags**

Before the start

Study the flag diagram and other racing signals at the back of this book.

Make sure all flags, pennants, number boards, halyards or poles, etc., are on board and ready for use. Signals must be displayed so that they can be clearly seen by the competitors. Practice using the flags so there will be no hesitation when needed. Store signals neatly for quick use.

Tip: Make sure, if using halyards, that they run free and that the clips for flags are in good condition.

At the start

At the timer's call, display or remove the flags at the appropriate time.

Signaller responds to the commands of the timer. When the timer says, "Mark!" the signal should be clearly visible.

Signaller continues to listen to the timer after the display as each succeeding minute is called off and stands by for the timer's count of "30 seconds to the drop!" At the end of the timer's 30 second count, remove the flag as fast as possible at the command "Drop!"

The signaller continues to listen to the timer as the next sequence minutes are called off and prepares to display the next flag. For a chart describing the visual signal procedure during a typical starting sequence, see page 28 and the Signals Appendix.

The signaller listens to the PRO and line sighter for other signals which are to be displayed on their commands. See the Signals Appendix.

Experience/Skills

Quickness and dexterity. Not colorblind. Three arms!

Equipment

- Sailing instructions
- Flags, pennants, number boards and poles
- Electrical tape
- Rubberized wire twist ties
- Spare clips and/or short lines
- Signal flag decoder

To learn more

The Racing Rules of Sailing, Part 3 and "Race Signals"

US Sailing Race Management Handbook

Signaller's starting sequence

Time	Action
Before the start	Display pre-race flags at PRO's instructions
At 5 minute signal	Display class flag (warning signal) at timer's cue
At 4 minutes to start	Display preparatory flag at timer's cue
At 1 minute signal	Remove preparatory flag at timer's cue
At starting signal	Remove class flag at timer's cue
After the start	Display flag "X" only at PRO's cue
	Remove flag "X" only at PRO's or timer's cue
	Display "First Substitute" only at PRO's cue
	Remove at PRO's cue
During the race	Display signals at PRO's cue
At the finish	Display signals at PRO or line sighter's cue
After the race	Organize, secure and store all equipment

Sounder

The sounder is in charge of sound signals (horn, whistle or automated start system) that draw the competitors' attention to the flag signals.

- **Know the operation of the sound equipment**
- **Give starting sounds at timer's command**
- **Give other sounds on command from line sighter or PRO**
- **Give finish sounds on line sighter's command**
- **Secure equipment after use**

Before the start

Be prepared to make two (postponement) or three (abandonment) sounds in succession at the direction of the PRO or line sighter.

Tip: When making starting sound signals, the sounder takes his or her cue from the timer.

Prior to the starting sequence

Many race committees use an automated start system – a battery-powered controller with an air compressor and horns that times the sequence and makes the sounds for you. Some models have multiple options such as the standard RRS 26 start, “rolling RRS 26” (the start of one class serves as the warning of the next), three-minute Appendix U “dinghy start” system, and others.

Verify that the correct sequence is selected. Also, know how to initiate the sequence; some systems need to be turned on from 5 to 20 seconds before the first sound signal, while others make the sound signal immediately. It's a good idea to have a dry run while the signal boat is on its way to the starting line so everyone is familiar with its operation. (Put a wad of tissue in the horns to muffle the sound during tests.) The system will have a manual button for sounds made independently of the program, but it's crucial to have a back-up horn ready. If you are going to use manual horns, have them easily accessible and be sure to have extra canisters on hand.

During the starting sequence

Sounds are made at the warning (5 minutes), preparatory (4 minutes), removal of the preparatory (1 minute – LONG sound) and at the start. Sometimes the race committee needs to call attention to other signals being hoisted. Remain aware of the PRO's intentions and be prepared to make sound signals at his or her direction.

After the start

If there are boats “on course side” (OCS) of the line at the start, the PRO will call for an individual recall with ONE sound signal or a general recall with TWO sounds signals. Listen for instructions. It’s a good practice to use a sound different from the starting signal to prevent confusion.

At the finish

In a one-design fleet, a sound is usually made only for the first finisher. In handicap fleet racing with time allowances, a sound signal for every finisher is appropriate so the boats are aware of the finish times of their competitors.

Equipment

- Horn with extra canisters
- Whistles
- Automated start system
- Ear protection

To learn more

*The Racing Rules of Sailing, Part 3 and “Race Signals”
US Sailing Race Management Handbook*

Sounder’s starting sequence

Time	Action
Before leaving harbor	Sound harbor warning signal (if required) at PRO’s cue
Before the start	Sound signals at PRO’s cue
At 5 minute signal	Sound signal (warning signal) at timer’s cue
At 4 minutes before start	Sound signal (preparatory signal) at timer’s cue
At 1 minute before start	Long sound signal at timer’s cue
At start	Sound signal at timer’s cue
After the start	One sound signal for individual recall at the line sighter’s or PRO’s cue; or Two sound signals for general recall at PRO’s cue
During the race	Sound signals at PRO’s cue
At the finish	Sound signals at line sighter’s cue
After the race	Clean, organize, secure and store all equipment

Spotter/Recorder

Information to record

The recorder should enter the following information on the official sheets:

Date

Time of start for each class

Race number (if in a series)

Wind direction and speed

Number of starters in each class and a combined total
Registered competitors who did not start (DNS) and
did not compete (DNC) or were on the course side
(OCS) and did not start properly.

Competitors who did not finish (DNF)

Rule breaches noted during the race

The finishing position of each boat

The time of the first and last finishers of one-design
boats and all times of handicapped boats

Protest flags, scoring penalty flags or other flags flown
by competitors

Docking time of the race committee boat

Protest information from competitors

Competitors who retired after finishing (RET)

Tip: The recorder should always keep a backup record
either by the use of a second spotter/recorder or by
using a voice recorder.

Tip: Highlighters are very useful for check-ins.

On shore, before the race

Obtain a list of all registered competitors.

On the water, before the start

Record each sail number seen in the vicinity of the race
committee boat.

Keep a record of all missing boats and update this list
as boats appear in the starting area.

At the start

Record information as called for by the PRO and the
line sighter. This will usually include sail numbers of any
OCS boats or any other observed rule breaches. The
line sighter will let you know which breaches have been
corrected.

The spotter or recorder logs all boats starting and finishing, including competitors who do not start or finish the race. For larger fleets, this position may require two or more people.

- **Record all basic information**
- **Record sail numbers of starters and non-starters**
- **Record finishers and non-finishers**
- **Account for all boats**

Verify the sail numbers or the total number of boats starting by counting them. This is often easier when boats are headed to the first mark after the start.

Tip: Write everything down. It is better to scratch it off than miss it.

At the finish

Record sail numbers and finishing order of competitors given by spotter and line sighter.

In handicap classes, also record each finish time as called by the timer.

Record comments from the PRO and the line sighter.

Check list of finishers against starters to identify any missing boats and report any discrepancies to the PRO.

Tip: In large fleets, recording finishes can get complicated. Have two or three recorders take down numbers independently and have a voice recorder running.

Tip: When recording many finishes in a short time, keep your head down and focus on recording what the line sighter says. If you look up and try to figure out where the boats are, it will be easy to lose your place.

Experience/Skills

Resistance to sea sickness, use of binoculars, familiarity with competing boats, ability to resist distractions, strong listening skills

Equipment

- Binoculars
- List of registered sail numbers
- Official recording sheets for start and finish
- Clipboard and paper
- Pencils
- Voice recorder
- Waterproof folders
- Rubber bands and paper clips
- Highlighter

To learn more

The Racing Rules of Sailing, Part 3 and "Race Signals"

Scorer

The scorer tabulates points for finishers and calculates corrected times from finish times, if required.

- **Lists all boats entered**
- **Lists all boats finished**
- **Lists all penalized boats**
- **Tabulates race and regatta results**
- **Passes information on to the PRO**

Before the start

Prepare a list of the sail numbers of all entered boats, their classes and their ratings (if racing with handicap) for the race.

During the race

If aboard the race committee boat, help the spotter/recorder. Help as required with other team positions.

After the finish

Calculate elapsed and corrected times for handicap divisions. Calculate scores for each race. Calculate series standings (if there has been more than one race). Have the PRO check your results. Print the results.

On shore after the race

Post the results on the official notice board (be sure to note if protests are pending). Obtain results of protests from the protest committee and include these in the scores. Print a list of top finishers, with skipper and crew names, for the person who will be handing out the awards.

Tip: Before the RC leaves the dock, establish how scores will be transmitted to a scorer on land. Taking a picture of the score sheet with a smart phone and emailing it to the scorer usually works well. Be sure the picture is legible before sending it!

Tip: You will make the competitors happy by posting scores as soon as possible after the race is complete. Try to do as much of the scoring work as possible on the RC boat before you return to the harbor.

Tip: There are several good computer programs for sailboat race scoring. Thoroughly test any program you plan to use. Many programs are reviewed on the US Sailing website.

Experience/Skills

Computer skills, good concentration

Equipment

- List of registered sail numbers
- Clipboard
- Paper, pencils and erasers
- Latest handicap ratings
- Forms or scoreboard for display
- Computer and scoring program

Timer

The timer takes orders directly from the Principal Race Officer. The timer provides the cues for the signaller and sounder and should not be responsible for any function other than timing.

General duties

Obtain the list of classes and the order of their starts from the sailing instructions.

Become familiar and practice with the timepiece you will be using.

Use GPS time for all race committee actions. Either synchronize your watch with GPS time prior to racing day or read time directly from a GPS device.

Keep the RC team advised of the time remaining before the first signal must be made.

Announce times at the regular intervals shown on pages 28-29.

Count loudly and clearly with absolute accuracy to the second.

Report any timing errors to the PRO immediately.

Announce after each start the next class to start.

During the race

The timer is available for other duties.

At the finish

There are two types of finishes: one-design and handicapped. For one design, call out the time only for the first and last boat. For handicap racing, call out the finish time in seconds and minutes for each boat as the line sighter says "Mark!"

Experience/Skills

Concentration, strong clear voice

Equipment

- Sailing instructions
- Timepieces (at least two) synchronized to GPS
- Clipboard
- Paper and pencils
- Timer's worksheet (form)
- Handheld or ship's GPS

To learn more

The Racing Rules of Sailing, Part 3
US Sailing Race Management Handbook

The timer is the heartbeat of the race management team. He or she calls aloud the time sequence so the start and finish can be properly run.

- Know and practice with timing equipment
- Call out starting sequence times precisely to the second
- Announce each class to start
- Call out finish times precisely to the second

A typical starting sequence

Time	Cue
Before start	Timer begins the countdown for the starting sequence at the direction of the PRO and makes eye contact with signaller and sounder to be sure they are ready. Tip: Signaller may say "Flag ready" and sounder may say "Sound ready" in response to the timer at one minute before a signal.
Count down to warning signal	Tip: Team members who will be busy at the warning signal may want a countdown to "one minute before the warning signal" to start their watches. At one minute, 30 seconds timer calls "Stand by for class flag and sound!" to RC. Calls countdown time as follows: <i>"One minute to class flag and sound!" "30 seconds to class flag and sound!" "20 seconds!" "10 seconds!" "5, 4, 3, 2, 1, Mark!"</i>
Warning signal	Class flag is displayed by signaller and sounder makes one sound. Timer continues countdown to the preparatory signal.
Countdown to preparatory signal	<i>"Less than one minute to preparatory flag!" "30 seconds to preparatory flag and sound!" "20 seconds!" "10 seconds!" "5, 4, 3, 2, 1, Mark!"</i>
Preparatory signal	Preparatory flag is displayed by signaller and sounder makes one sound.

A typical starting sequence

Time

Countdown to drop of preparatory signal

Cue

Timer continues countdown:
"Less than 3 minutes to drop!"
"2 minutes!"
"1 minute!"
"30 seconds to drop of preparatory signal and long sound!"
"20 seconds!"
"10 seconds, ready..."

Timer again makes eye contact with signaller and sounder to be sure they are ready.

"5, 4, 3, 2, 1, Drop!"

Preparatory signal is removed by signaller and sounder makes one long sound.

When the race committee is using a starting penalty, the timer may announce, "Beginning of the penalty phase!" at the drop. Discuss this with the PRO.

Countdown to start

"Less than one minute to drop of class flag with sound!"

"30 seconds!"
"20 seconds!"
"10 seconds!"
"5, 4, 3, 2, 1, Drop!"

Class flag is removed by signaller and sounder makes one sound.

Wind reader

The wind reader observes and records wind direction and velocity before the start and during the race as specified by the PRO.

- **Get used to the compass**
- **Record wind directions, times and velocity often**
- **Notify the PRO of persistant shifts**

Before the start

Observes direction and velocity of the wind and records them at intervals as directed by the PRO. Notes changes in the wind direction or velocity.

Tip: There are two basic kinds of changes in wind direction. The first is an oscillation, when the wind swings back and forth within a consistent range. The second is a persistent shift, when the wind continues to change in a particular direction over a period of time.

Tip: To record wind direction, wait until the boat is stopped in the starting area and move as far forward in the boat as possible, clear of all obstacles. Face into the wind and hold out a pencil, stick or pointer with 8-10 inches of thread, yarn or cassette tape attached. Place a hand-bearing compass between your eyes and sight the direction indicated by the thread or yarn. The most accurate wind readings are a continual observation and recording during a 10-20 minute period.

Tip: Another way to determine wind direction is to aim the bow of the committee boat directly into the wind using a flag or pennant on the bow as a guide. Record the boat's compass heading when the flag is flowing directly back on the center line of the boat.

Tip: Plot your wind readings on a wind log.

During the race

Continue to observe and record changes in wind direction and velocity, particularly persistent shifts, and report them to the PRO.

Experience/Skills

Familiarity with reading a compass and anemometer

Equipment

- Compass
- Wind vane
- Anemometer
- Paper & Pencil
- Clipboard

To learn more

US Sailing Race Management Handbook

What else do I need to know?

If becoming a part of a race management team sounds good to you, there are some additional sources of information that you may find helpful.

US Sailing Race Management Handbook

Regarded as “the encyclopedia” of race management, a publication you’ll end up owning eventually if you want to develop your skills or become certified.

The Racing Rules of Sailing

Basic rules knowledge is helpful for race management personnel, but not required. There are sections of the rule book that apply directly to race management.

Some of these are:

Definitions

Fundamental Rules, Part 3, Part 6 and Part 7

Rules 41, 60.2, 61.1(b)

Appendix A – Scoring

Appendix J – Notice of Race and Sailing Instructions

Appendix LG – Sailing Instructions Guide (available on US Sailing website)

Remember, race management should be fun!

What to bring

Remember that the work of a race committee often lasts all day and it is usually cooler and wetter on the water than on shore.

Personal gear should include:

- Warm clothing and foul weather gear
- A hat with visor
- Sunglasses with lanyard
- Drinks and food (may be supplied)
- Seasick medication (if necessary)
- Life jacket (if you prefer your own)
- Sunscreen

Personal conduct

To avoid prejudice, spoken communications with competitors will be handled by the PRO. In most cases, you should not answer questions from competitors.

It is also best to avoid extraneous conversations and activities so that everybody on the race committee team can concentrate on his or her job.

Appendix Visual and sound signals

Time	Visual flag signals		Sound signals
	Up	Down	
Pre-race signals		"RC"	
		"L"	
		Line flag	
		Course flag or board	
Other signals used during this time period		"AP"	
		"AP" over "A"	
		"AP" over "H"	
		"Y"	
		"N" over "A"	
		"N" over "H"	
Note: Other sound signals may be substituted for those suggested here.			

Their meanings



= Horn



= Whistle

Distinguishes race committee signal boat from all other auxiliary race committee boats.

Ashore: A notice to competitors has been posted on the official notice board.
Afloat: Come within hail or follow this boat.

Used to define the starting line described in the sailing instructions.

Display course to be sailed by course flag or course board as defined by the sailing instructions before or with the warning signal.

All races not started are postponed. AP over a numeral pennant:
Postponement of the specified number of hours from the scheduled starting time. Numeral pennants are shown on the back cover.

All races not started are postponed. No more racing today.

All races not started are postponed. Further signals will be made ashore.

All competitors are required to wear personal buoyancy while racing.

All races are abandoned. No more racing today.

All races are abandoned. Further signals will be made ashore.

Appendix Visual and sound signals

Time	Visual flag signals		Sound signals
	Up	Down	
One minute before warning or other signal		 "AP"  "N"  "First Substitute"	 or 
Warning signal	  	Class flag Course flag or board "Y"	
Preparatory signal	    	"P" or "I" or "Z" or "U" or Black	    
Other signals possible during the starting sequence	  	"AP" "AP" over "A" "AP" over "H"	  

Their meanings



= Horn



= Whistle

Postponement is over. The warning or other signal will be displayed in one minute.

The warning or other signal will be displayed in one minute.

The warning or other signal will be displayed in one minute.

Warning signal. This class will start in five minutes.

Display course to be sailed by course flag or course board as defined by the sailing instructions before or with the warning signal.

All competitors are required to wear personal buoyancy while racing.

Preparatory signal: This class will start in four minutes.

Preparatory signal: This class will start in four minutes. Rule 30.1 is in effect for this start.

Preparatory signal: This class will start in four minutes. Rule 30.2 is in effect for this start. Note: "I" and "Z" may be displayed together, in which case both Rules 30.1 and 30.2 are in effect for this start.

Preparatory signal: This class will start in four minutes. Rule 30.3 is in effect for this start.

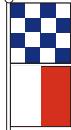
Preparatory signal: This class will start in four minutes. Rule 30.4 is in effect for this start.

All races not started are postponed.

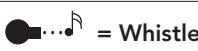
All races not started are postponed. No more racing today.

All races not started are postponed. Further signals will be made ashore.

Appendix Visual and sound signals

Time	Visual flag signals		Sound signals										
	Up	Down											
Other signals possible during the starting sequence (continued)		"N" over "A"											
		"N" over "H"											
One minute before start			"P" or  or 		or "I"  or 		or "Z"  or 		or "U"  or 		or Black  or 		Class flag 
Other signals possible after the starting signal		"X"	 or 	"First Substitute"	 or 		"X"						
		"First Substitute"	 or  <p>36</p>										

Their meanings



All races are abandoned. No more racing today.

All races are abandoned. Further signals will be made ashore.

This class will start in one minute.

The one minute period of rule 30.1 has begun.

The one minute period of rule 30.2 has begun. Note: If "I" and "Z" have both been displayed, both signals are lowered at the same time. The one minute period of both rules has begun.

The one minute period of rule 30.3 has begun.

The one minute period of rule 30.4 has begun.

Start!

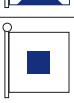
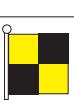
Individual recall: one or more boats are recalled because they were on the course side of the starting line at the starting signal or they must comply with rule 30.1.

General recall: The class is recalled for a new start because there were unidentified boats on the course side at the starting signal or to which rule 30 applies, or there was an error in the starting procedure.

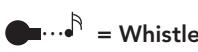
All boats that were on the course side before the start have restarted correctly (including those with obligations under rule 30.1) or, four minutes have passed since the starting signal.

A new warning or other signal will be made one minute after this signal is removed.

Appendix Visual and sound signals

Time	Visual flag signals		Sound signals
	Up	Down	
Other signals possible after the starting signal (continued)		"N"	
		"N" over "A"	
		"N" over "H"	
		"C"	
		Green	 or 
		Red	
		+ or -	
		"M"	 or 
Finish		"S"	
		Line flag	
		"L"	
		"V"	 or 

Their meanings



All races are abandoned. Return to the starting area. The warning or other signal will be made one minute after removal.

All races are abandoned. No more racing today.

All races are abandoned. Further signals will be made ashore.

The position of the next mark has been changed.

With "C," the next mark has been moved to starboard.

With "C," the next mark has been moved to port.

With "C," the next leg of the course has been lengthened or shortened.

The object displaying this signal replaces a missing mark.

Finish as described in rule 32.2.

Used to define the finishing line described in the sailing instructions.

Ashore: A notice to competitors has been posted on the Official Notice Board.
Afloat: Come within hail or follow this boat.

All vessels shall monitor the race committee channel for search and rescue instructions. See rule 37.

Appendix VHF radio communications

Radio communication with the race committee team

Good radio communication is clear and concise. The person broadcasting should frame their thoughts and formulate their words before starting the transmission. Many radios need a moment to power up the transmit mode, so the speaker should pause a beat after pressing the transmit button before beginning to speak. Speak slowly and use common words. Be aware that wind noise can be an issue. Placing the radio in a plastic bag or putting cloth medical tape over the microphone is a good practice. Persons receiving a radio broadcast should reply and repeat the message to confirm receipt to the original sender.

Example:

PRO: "Mark 1, go to 0.8 mile at 235 degrees, stand by and give me wind readings.

Mark 1: "Roger signal, 0.8 mile at 235, stand by and report wind.

PRO: "Thank you, Mark 1."

Courtesy radio broadcasts

Current best practices include communicating to the competitors by VHF radio. Because this is information that would help competitors decide whether to attend the event and conveys other information they will need before the sailing instructions become available, the race committee's intention to communicate via VHF must be in the notice of race. The sailing instructions should specify that information provided via broadcasts is a courtesy to the competitors and does not alter the competitors' responsibility to observe the race committee's visual signals. The sailing instructions may also provide that errors or omissions in courtesy broadcasts will not be considered grounds for granting redress.

A designated race committee member may be assigned to broadcast information that will be useful to the competitors. Examples include the time the race committee boats leave the harbor, postponements, a countdown to warning signals, change of course information, or other information that will make the competitors' experience more enjoyable. Care must be taken to avoid anything that could be construed as outside help.

Although hailing of OCS boats by radio can be very useful to competitors, it is crucial that the procedure for doing so is carefully established and practiced by the race committee. A well-thought-out procedure should be devised to relay OCS information from the line boat to the signal boat quickly and accurately. The use of private channel radios or cellular telephones between the race committee boats followed by VHF transmission to the competitors affords an effective means of communication among all parties. Whatever method is used, it is critical that communications be clear, accurate, useful and delivered to competitors in an even-handed manner.

Training and Certification

The goals of the Race Officer Training and Certification program are:

- To improve the quality of race management
- To standardize race management practices
- To provide structured training and continuing education for race officers
- To help event organizers find qualified active race officers

The program has three levels: Club, Regional and National Race Officer. In addition to providing evidence of practical experience, candidates must participate in approved educational offerings and demonstrate their knowledge of race management rules and procedures by passing an objective test at least once every four years.

Club Race Officers are expected to be able to properly run any race normally conducted at their local sailing organization, including organizing the race committee, writing sailing instructions and scoring the event.

Regional Race Officers are expected to be able to go anywhere in their Area and serve as the principal race officer with any race committee to properly run any race or regatta normally conducted in that Area, including regional championship events. This includes organizing the event and the race committee, writing sailing instructions and scoring the event.

National Race Officers are expected to be able to go anywhere in the country and serve as the principal race officer or race management consultant with any race committee to properly run any race or regatta, including national championship events. This includes organizing the event and the race committee, writing notices of race and sailing instructions and scoring the event.

Seminars: A complete listing of Race Officer Seminars and other educational offerings can be found on the Race Officer Seminar Calendar.

SOARS: Applicants for certification and all certified race officers must record their race management activities in SOARS, the US Sailing on-line reporting system.

Applications for all race officer appointments are available on the US Sailing website.

For more information, please visit the US Sailing Race Officers web page.

Glossary

Terms in italic type are definitions. See page 4 of the RRS for complete definition.

Abandon – A race that is abandoned is declared void but may be resailed.

Anemometer – Device for measuring wind speed.

Audible signal – A sound, usually a horn or whistle, made to call attention to a visual signal.

BFD – Black Flag Disqualification (rule 30.4)

Committee boat; also called the signal boat – The boat from which the race management team operates while running a race.

Course – A sequence of marks that must be rounded in a race.

CRO – Club Race Officer. See US Sailing website for a complete list of qualifications.

Current – The horizontal flow of water relative to the bottom.

DNC – Did Not Compete. The score given to a boat that is entered in a race but does not show up in the starting area.

DNE – Disqualification Not Excludable. A score that may be given to a boat disqualified under the Fair Sailing rule and some others and that cannot be excluded from her series score.

DNF – Did Not Finish. The score given to a boat that starts the race but does not finish.

DNS – Did Not Start. The score given to a boat that was in the starting area but did not start the race properly.

DPI – Discretionary Penalty Imposed

DSQ – Disqualified. The score of a boat that, after a protest hearing, is given a penalty of disqualification by the protest committee.

Finish – A boat finishes when any part of her hull crosses the finish line from the course side.

Finish line – An imaginary line between a flag on the committee boat and a nearby mark or boat.

General recall – When many unidentified boats are over the starting line at the starting signal and the entire fleet is recalled for a new start.

Gybe – To change a boat's direction by heading away from the source of the wind until the sails swing across the boat.

Halyard – Any line or tackle for hoisting a spar, sail, flag or shape into position for use.

Harbor signal – An optional sound signal, usually one long or loud signal, given as the committee boat clears the harbor. This notifies the sailors that the committee boat has departed for the race area.

Individual recall – When one or more boats are over the line at the start, and each is recalled to start properly.

Jury – A panel of judges appointed to hear protests.

Knot – A measure of velocity; one nautical mile (6,076 feet) per hour.

Line sighter – The person in charge of sighting the line at the start and finish. At the start, identifies the OCS boats, at the finish identifies finishers and any flags.

Low-Point System – The default scoring system; see Appendix A of *The Racing Rules of Sailing*.

Mark – Any object that racing boats must round or pass to sail the course.

NRO – National Race Officer. See US Sailing website for a complete list of qualifications.

Navigator – The person who is responsible for plotting the location of the course and marks.

NSC – Did not *sail the course*.

OCS – “On course side.” The score given to a boat that crossed the starting line before the starting signal and did not return to start properly.

PHRF – Performance Handicap Racing Fleet. The most popular form of handicap racing in North America.

Postpone – A postponed race is one delayed before its scheduled start.

Preparatory signal – The signal that is made four minutes before the start.

PRO – Principal Race Officer. The leader of the race management team.

Protest – A written allegation that another boat has broken a rule.

Protest committee – A jury, or group of people appointed to hear protests.

Protest flag – A red flag displayed by a competitor to signal his or her intent to protest.

Glossary

Racing – A boat is racing from her preparatory signal until she finishes.

Race committee – A team of people who run the race.

Recall – The act of calling back one or more OCS boats to start properly.

RET – Retired. The score given to a boat that retires after finishing.

RDG – Redress given. The score of a boat that is given redress under rule 62 after a hearing.

RRO – Regional Race Officer. See US Sailing website for a complete list of qualifications.

Sailing instructions – A set of additional rules for a specific race or series.

Scorer – The person who calculates the score of each boat after the race.

Scoring penalty – An alternative penalty to disqualification. See rule 44.3.

SCP – Scoring Penalty applied

Signaller – The person in charge of making visual signals.

Sounder – The person who makes sound signals that call attention to the flag signals.

Spotter/Recorder – The person who writes down sail numbers, finish positions and other observations by the race committee.

Start – A boat starts when any part of her hull crosses the starting line in the direction of the first mark after the starting signal.

Starting line – An imaginary line between a flag on the committee boat and the starting mark.

Time limit – Maximum time allowed for the first boat to finish.

Timer – The person who is in charge of timing the countdown for the start.

UFD – U Flag Disqualification (rule 30.3)

United States Sailing Association or US Sailing – The national governing body for the sport of sailing in the United States.

Visual signal – A flag displayed or lowered as a signal to the competitors.

Warning signal – The signal that is made five minutes before that start.

Glossary

Wind direction – The compass bearing from which the wind is blowing.

Wind reader – The person in charge of observing and recording the direction and velocity of the wind and keeping the PRO informed.

Wind velocity – The speed of the wind, usually expressed in knots.

World Sailing – The international governing body for the sport of sailing.

ZFD – Z flag Penalty (rule 30.2)

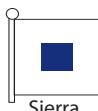
International Signal Flags



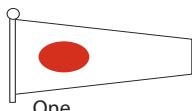
Alpha



Juliet



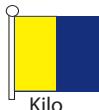
Sierra



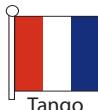
One



Bravo



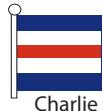
Kilo



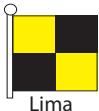
Tango



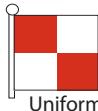
Two



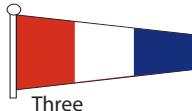
Charlie



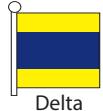
Lima



Uniform



Three



Delta



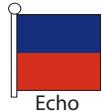
Mike



Victor



Four



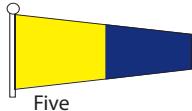
Echo



November



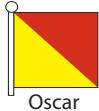
Whiskey



Five



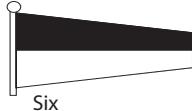
Foxtrot



Oscar



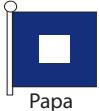
Xray



Six



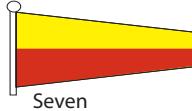
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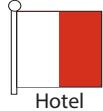
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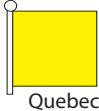
Yankee



Seven



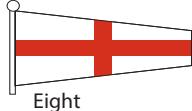
Hotel



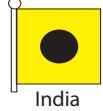
Quebec



Zulu



Eight



India



Romeo



Answering Pennant



Nine



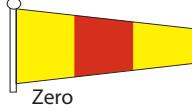
First Substitute



Second Substitute



Third Substitute



Zero



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