

Sailing Instructions

I. RATING SYSTEM * First time racers should notify the Vice Commodore prior to racing. A Handicapping Committee will make ratings decisions.

The basic PHRF rating for a specific boat assumes the boat is a standard production boat with a 146%-155% genoa, a spinnaker, and a folding prop or retractable outboard. It also provides that a boat with a spinnaker may also use other headsails along with it, such as a staysail and/or a blooper. Spinnaker boats may also carry two headsails when the spinnaker is not in use, such as a genoa and a staysail. Boats racing non-spinnaker may only use one headsail at a time.

Variations in basic rating may be made according to the guidelines outlined on the YRA of LIS website.

1. **Non-standard features** (tall rig, non-folding prop, hull modifications, etc.) may result in rating adjustments. Adjustments will follow YRALIS guidelines.
2. It is preferred that racers obtain a PHRF certificate from the YRA of LIS; the YRA's ratings will be honored by the MSSA, with some exceptions to assure consistency with MSSA issued ratings.
3. It is the responsibility of the skipper to inform the Vice Commodore of any changes that may affect rating.
4. PHRF ratings of each boat will be posted on the MSSA web site.

II. RACING RULES

A. US SAILING Racing Rules: All racing will be conducted under the International Yacht Racing Rules as adopted by US Sailing for 2021- 2024 (including US Prescriptions). Appendix T, V1 and V2 (as amended by MSSA) will also be used. It is the skipper's responsibility to become familiar with these rules.

1. Skippers should have a copy of the current Rules as well as a protest flag and form on board at all times.
2. Each competitor is individually responsible for operating a safe, seaworthy and Coast Guard compliant vessel.
3. MSSA urges competitors to adhere to the YRA of LIS minimum equipment and safety recommendations.
4. **PENALTIES AT THE TIME OF THE INCIDENT** (Appendix V1) From RRS 2021- 2024:
The first two sentences of rule 44.1 are changed to: 'A boat may take a One-Turn Penalty when she may have broken a rule of Part 2 or rule 31 while racing. However, when she may have broken a rule of Part 2 while in the zone around a mark other than a starting mark, her penalty shall be a Two-Turns Penalty.'
5. **PENALTIES TAKEN AFTER A RACE** (Appendix V2) From RRS 2021- 2024):

- a. After a race, a boat that may have broken one or more rules of Part 2 or rule 31 in an incident while racing may take a Post-Race Penalty for that incident. A boat takes a Post-Race Penalty by informing the Vice Commodore in writing and identifying the race number and when and where the incident occurred. The penalty shall be a Scoring Penalty, calculated as stated in rule 44.3(c). However, rules 44.1(a) and (b) apply.
 - b. The last 2 sentences of V2 are replaced by: The Post-Race Penalty shall be **(Bold added by MSSA)(a) 20% of starting boats or 1 boat position, whichever is greater but not worse than DNF**, if taken before the protest time limit, or (b) 30% of starting boats or **2 boat positions, whichever is greater but not worse than DNF**, if taken after the protest time limit but before the beginning of a hearing involving the incident.
6. **ARBITRATION** (please see Appendix T: Penalties are as listed in Rule V2 as amended by the MSSA Sailing Instructions.
7. **Protests:** The following sections apply to all MSSA races, with the exception of the American Cancer Society Regatta.

Protest filing:

- a. Protest should be filed on the official U.S. Sailing protest form, or on a separate sheet of paper providing that all the information required by Racing Rules of Sailing 2021-2024 is provided.
- b. Protest shall be filed by 10:00 AM the day following the finish of the race.

Protesting yachts shall:

- 1. E-mail the Vice Commodore AND
- 2. Call the Vice Commodore. If there is no answer, then you must leave a message. NOTE: BOTH OF THESE REQUIREMENTS MUST BE DONE BY 10:00 AM, THE DAY FOLLOWING THE RACE. THE VICE COMMODORE WILL NOTIFY THE COMMODORE IN ACCORDANCE WITH THE ABOVE GUIDELINES IF THE VICE COMMODORE IS FILING THE PROTEST.
- 3. At the discretion of the Vice Commodore, resolution of filed Protests and Redress may be conducted by e-mail and other electronic communications in lieu of a physical hearing.

Location and Time of Protest Hearing:

The Yacht filing the protest must provide the venue for that protest. An unwillingness to do so can be considered grounds for disallowing the protest. This modifies RRS (63.2, 63.5).

Penalties: The Protest Committee may impose a time or position penalty in lieu of disqualification if it determines that to be more appropriate. This modifies RRS (64.1)

B. Specific Club Rules

- 1. **Race Committee Duty Requirement-** All yachts racing last year must serve as committee boat this year. Once you have a committee boat assignment, you are obligated to fill that responsibility. You must run your race. If you are unable to do so, **YOU MUST FIND A SUBSTITUTE** committee boat, or trade assignments with another member. The Vice Commodore shall be notified of changes as soon as they have been made. If you do not meet your committee boat responsibilities or find a suitable replacement, the bridge may choose to revoke your ability to race for the remainder of

the year and/or revoke any club trophies you may have earned for the season. If you are committee boat, it is your responsibility to read and understand the section entitled "Committee Boat Responsibilities" in this yearbook. In the event a Committee Boat is not present a Volunteer Committee can run the race. The Volunteer Committee will be scored as per section V. paragraph B. section 2.b of the sailing instructions.

2. **Whisker poles** may be used on jibs and genoas. Non-Spinnaker boats have a whisker pole length restriction equal to your rated "LP" dimension and must be attached to the foremost mast when in use.
3. **Sail numbers:** All boats participating in racing should have a sail number, at least on the main sail.
4. **Communications:** Those yachts having a VHF radio should monitor Channel 72 prior to, during and shortly after a race for information from the committee boat or other racing yachts. This information can contain race starting time changes, course shortenings/changes and abandonment. A VHF radio is strongly advised.
5. **A workable engine** capable of propelling the boat at or near hull speed must be on board for all PHRF races. Sufficient fuel to enable the boat to return to a safe port must be on board as well.
6. **Identification:** When checking in, before the start of the race, all yachts racing shall notify the committee boat as to the name of their yacht, sail number and their division.
7. **Abandoned:** Races can be abandoned due to weather at the discretion of the Race Committee, Commodore or the Vice-Commodore. In such a case, a meeting may be held just prior to leaving the docks in Mount Sinai, at the Dock Master's tower. Abandoned races should be announced on Channel 72 as soon as possible after the decision has been made and up until 15 minutes after when the race was to start.
8. **Changing Divisions/Fleets:** A yacht may not sail in two (2) divisions during the same series. After notifying the Vice Commodore a yacht may change divisions only once and only between series. This includes a yacht moving to a faster division. *Moving to a slower division than you are rated for is not allowed. Sailing in two (2) divisions during a series disqualifies the yacht for that series and risks forfeiture of awards and racing privileges for the entire season and/or other sanctions as determined appropriate by the Bridge. See paragraph 9.
9. **Spinnaker/Non-Spinnaker:** For races that do not count for the High Point Trophy, a yacht may decide to change fleets, from Spinnaker to Non-Spinnaker or Non-Spinnaker to Spinnaker. To change fleets, a boat must indicate her intention by flying the 'C' (Charlie) flag from her backstay. The flag must be flown prior to the first warning of the race and remain flying until the yacht has finished or withdrawn. In addition to flying the 'C' flag, the yacht must check in with the race committee and clearly hail their intention. Changing fleets in this manner is non-permanent. Notify the Vice Commodore to make permanent changes. See paragraph 8.
10. **Division Breakdown:** Divisions will be additionally scored separately for High Point races. At the conclusion of the Spring Series, the Vice Commodore will look at the results of the spring races and decide if a different division breakdown is appropriate. If the divisions are altered, scores for the spring races will be recalculated to reflect new division splits and the fleet will compete in this new format for the remainder of the season.
11. **Use of Autopilots** - autopilots will be permitted in any MSSA race where there are only 1 or 2 people on board.
12. **General Procedure for Self-Starts:** This procedure is applicable whenever a race must be self-started and a procedure has not been specifically defined in the sailing instructions. Start behind an imaginary line that intersects the starting mark at 0, 90, 180, or 270 degrees magnetic, whichever is closest to perpendicular to the first mark. (The start line should be perpendicular to the first mark.) If the first mark is to

be rounded to port, the starting mark should also be to port. Similarly, if the first mark is to be rounded to starboard, the starting mark should be to starboard. Boats must start within 20 of their boat lengths of the starting mark.

III. RACING PROCEDURE

A. All Starts are between the committee boat and one of the MSSA race marks, fixed or portable, unless otherwise stipulated in this Yearbook or by Newsletter.

B. Check in by hail or VHF with the committee boat before the race, giving your boat name, sail number and fleet (Spinnaker or Non-Spinnaker). It is the racing skipper's responsibility to assure that his boat is correctly checked in for the race.

C. Starting Sequence. This sequence will apply for all Thursday night races and all weekend races unless otherwise noted in the race instructions. *Participants in the double handed series are expected to be prepared for a 7:00 start sequence. Two class starts may be employed at the discretion of the RC if participation at a single race merits it.*

Non Spinnaker Fleet will be Class 1. The Class Flag will be the number 1 pennant.

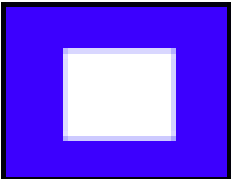


Spinnaker Fleet will be Class 2. The Class Flag will be the number 2 pennant.

| Signal | ACTION | RUNNING TIME (Mins.) | TIME | Non Spinnaker | Spinnaker |
|--|--------|----------------------|-------|---------------|-----------|
| Class Flag 1 | RAISE | As Listed | 00:00 | Warning | |
| Preparatory | RAISE | Plus 1 | 00:01 | Prep | |
| Preparatory | LOWER | Plus 4 | 00:04 | | |
| Class Flag 1 | LOWER | Plus 5 | 00:05 | Start | |
| <ul style="list-style-type: none"> Not a rolling start - please note this intentional 5 minute delay - | | | | | |
| Class Flag 2 | RAISE | As Listed | 00:10 | | Warning |
| Preparatory | RAISE | Plus 1 | 00:11 | | Prep |
| Preparatory | LOWER | Plus 4 | 00:14 | | |
| Class Flag 2 | LOWER | Plus 5 | 00:15 | | Start |

NOTES:

1. A sound signal will be made with each visual signal, but if the audible signal is late or early, the visual signal determines the time.
2. At the committee boat's discretion the second class's sequence may be delayed.

D. Class Flags

| Preparatory Flag | Class One Non-Spinnaker | Class Two Spinnaker |
|---|---|--|
|  |  |  |

E. Spinnaker/Non Spinnaker: As a general rule we encourage starting the fleets separately. During the season, however, there may be times when only 1 or 2 starting boats represent a fleet. At these times joint starts should take place. The Committee Boat should start both fleets together (Spinnaker with Non-Spinnaker). When this occurs, the results will be calculated on the standard division breakdown and awards made to all divisions racing as described in Section V of the yearbook. In the case of a joint start **there will only be ONE starting sequence**. This sequence shall start at the announced race time plus **00:10**, unless postponed.

When the fleets are starting together, the Committee Boat will attempt to notify all affected yachts by voice and radio, Channel 72 VHF, and by **five (5) long horn blasts** well prior to the first gun, and fly the **"AP" code flag** from its backstay (see section IV,). It is the responsibility of all yachts to check with the Committee Boat in these special cases.

F. Recalls

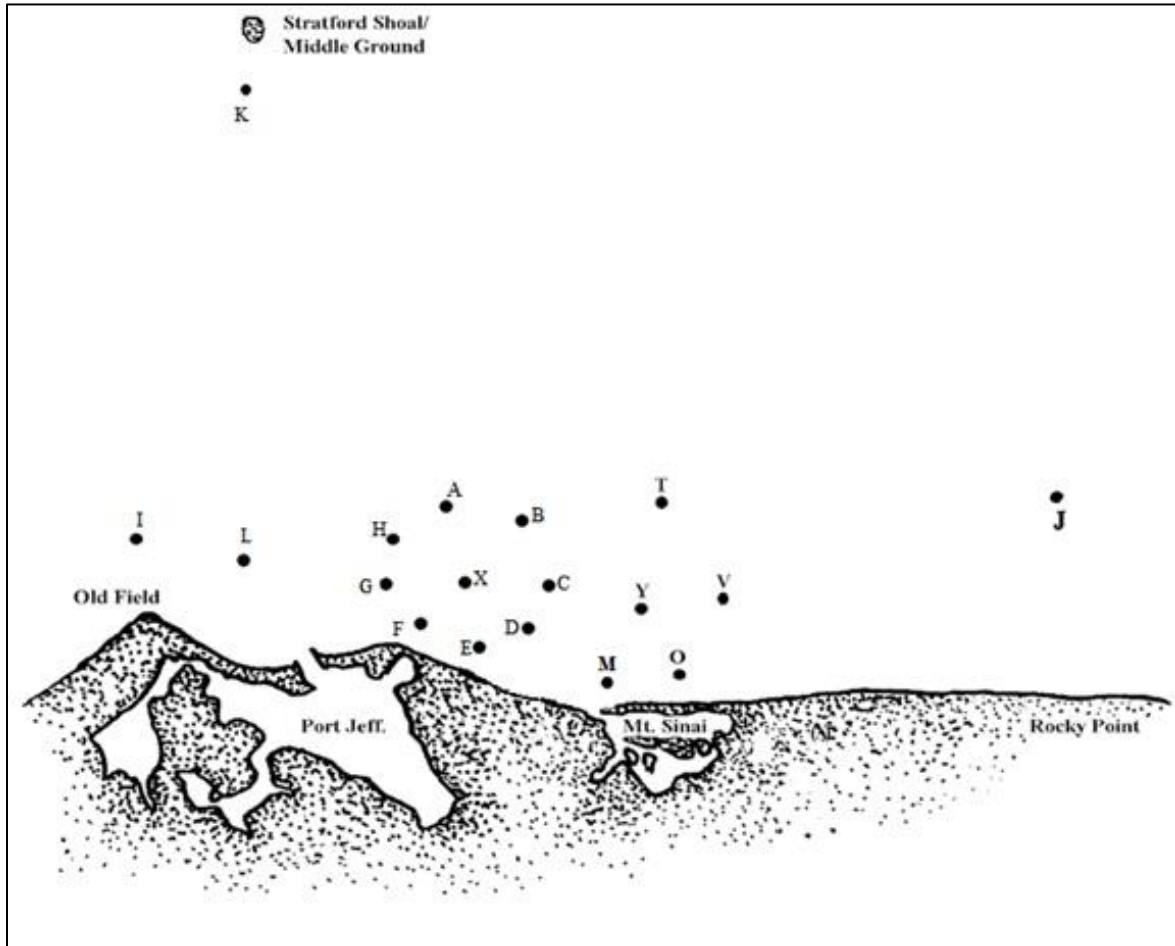
1. **Individual Recall.** If any boats are over early, the committee boat will sound one (1) long blast on the horn or one (1) gun, display code flag "X", and if possible, hail sail numbers. See flag illustration in this yearbook.
2. **General Recall. Two (2) long blasts** on the horn or two (2) guns accompanying the hoisting of the First Substitute flag means all boats in that division must start again. Their sequence will begin after the last division starts. See flag illustration in this yearbook.

G. Marks *See page 79 for coordinates

Display. The committee boat will display course signals referring to the following marks:

| Mark | Description |
|------|---|
| "M" | MSSA Club Mark- Approx 0.3 nautical miles to east of Mt. Sinai Harbor entrance |
| "H" | C"11" off Mt. Misery Point |
| "L" | RW Mo (A) Bell, Port Jefferson |
| "I" | "11A" Gong off Old field Point |
| "K" | R"2" F1 4 sec. Gong, Middle Ground |
| "S" | "S" is "M" as a finishing mark when the Committee boat is NOT on station, and specifically indicated in the course selection. "S" (M) is to be passed within two boat lengths keeping the mark to the north. Your boat is considered finished when any part of your hull or rig crosses an imaginary line 180 degrees from the mark. To be scored as finishing she shall note her finishing time and should note her relative finishing position to any nearby boats and report them to the club scorer, scoring@mssa.org , as soon as reasonably possible in addition to announcing on VHF CH-72. This changes RRS 34 of the US Sailing Prescriptions 2021-2024. |
| "J" | C"9" - off Rocky Point |
| "O" | MSSA Club Mark - Approx 0.7 nautical miles on a heading of 96 degrees from "M" |
| "T" | MSSA Club Mark - Approx. 1.75 nautical miles on a heading of 30 degrees from "M" |
| "V" | MSSA Club Mark - Approx. 1.5 nautical miles on a heading of 60 degrees from "M" |
| "W" | MSSA Club Mark - Temporary (portable) mark to be placed 1 nautical mile directly windward of the starting line. |
| "Y" | MSSA Club Mark - located half-way between "M" and "T" approximately 0.85 nautical miles from A on a heading of 30 degrees from "M". |
| "Z" | MSSA Club Mark - Z will be a temporary portable mark placed principally for the start to be directly to leeward of the first mark so that the first mark is dead into the wind. Distance to the first mark will be 3/4 of a mile unless otherwise specified |
| "A" | PJYC Club Mark, NW of Mt Sinai. See back page for coordinates. |
| "B" | PJYC Club Mark, NW of Mt Sinai. See back page for coordinates. |
| "C" | PJYC Club Mark, W of Mt Sinai. See back page for coordinates. |
| "D" | PJYC Club Mark, W of Mt Sinai. See back page for coordinates. |
| "E" | PJYC Club Mark, W of Mt Sinai. See back page for coordinates. |
| "F" | PJYC Club Mark, W of Mt Sinai. See back page for coordinates. |
| "G" | PJYC Club Mark, W of Mt Sinai. See back page for coordinates. |

Map of Club Race Mark Locations *See page 79 for coordinates



Not to Scale
Locations are Approximate

- H. The course to be sailed will be signaled in one of the following ways:
1. The committee boat will display a series of letters and a red or green sign before a race. The letters represent marks. The red sign represents marks to port and the green sign represents marks to starboard. Any combination of letters constitutes the course of the race. The starting mark will not be posted. Courses should be selected to assure a windward first leg and overall a windward leeward course. The Vice Commodore or his/her designee can be consulted.
 2. The committee boat may display a course code, which will refer to a specific course (see yearbook suggestions). When using such a course the committee boat need **NOT** display the red (port) or green (starboard) sign with the racecourse.

Note: For any courses, "Z", the temporary portable mark may be used for the start in place of the starting mark shown in parentheses by placing it 0.75 to 1.0 NM from the upwind mark. The turning marks will remain the same.

I. Dropping Out - Boats dropping out of races must make a positive effort to notify the committee boat. (Hail them on the way in, contact them on VHF 72, or ask another boat to relay the message)

J. When Maneuvering to Start – Boats whose warning signal has not been made shall avoid the starting area. Boats shall not hinder boats starting in fleets ahead of them and must keep clear of all boats in their prep sequence.

K. In the event the committee boat is not on station at the finish. The finish mark as designated in the COURSE shall be defined as "S" (See III.G)

L. Time limit. Be aware that there are time limits listed for most races. The time limit is measured from the start of a class. If the time limit expires the Race Committee will abandon the race. All boats that have not finished within the time limit will be scored DNF. The Race Committee should provide notification of abandonment on VHF Channel 72. This amends R.R.S. 35

M. Race results will be computed by the Club Scorers and will be posted on the web site WWW.MSSA.ORG within a few days of the race. Each committee boat must get the finish times to the club scorers within 24 hours. Results should be emailed to our club scorers at **scoring@mssa.org**. Leave the originals on the bulletin board in the MSSA club shed at Old Man's Boatyard. * Please keep a backup copy.

N. Changes to a race start time or course. If the wind is 3 knots or less and variable the race should be postponed or possibly canceled after waiting an appropriate length of time past the designated start time. If the race has started, you should attempt to shorten the race by moving your boat to one of the course rounding marks (see note 4). You should abandon the race if the wind is light and even if you've shortened the race, no boats would finish. An illustration of the relevant signals is provided at the end of this section. Also see the US Sailing 2021- 2024 Racing Rules.

- 1. Postponements:** The Committee Boat should postpone the start of any race when wind conditions are such that a class that has previously started cannot clear the starting area prior to the subsequent class's start (usually 5 minutes). Hoisting the code flag "AP" and two (2) sound signals a postponement. The "AP" flag will be lowered and one (1) gun will signal the end of postponement and that the warning for the next fleet's starting sequence will be in one (1) minute.
- 2. Cancellations:** The Committee Boat that has postponed a race due to lack of wind should wait a minimum of 1/2 hour (for night races) and one hour (for all other races) before considering abandoning. Just prior to abandoning the race, the Committee Boat should assure itself that there are no signs of a filling breeze (flags on the beach, wind lines, smoke from the Port Jefferson stacks etc.). If no signs of a filling breeze are visible, and the minimum time has been waited, the Committee Boat should then abandon the race.
- 3. Abandonment:** An abandoned race is one that is declared void at any time. A race should be abandoned when no boat from its respective fleet has rounded the first mark within half of the time limit; no boat from its respective fleet has crossed the

finish line within the time limit (these times are taken from each fleet's start), as stated in paragraph L, or because of a missing mark, etc. A code flag "N" and three (3) sound signals will communicate that all races are abandoned with further signals and instructions (i.e. - new course, cancellation, etc.) to be made in the starting area. If the race is to be re-sailed that day, the "N" flag will be lowered and one (1) sound signal will communicate the end of abandonment and the warning for the first class's starting sequence will begin in one (1) minute. Only those boats that sailed in the abandoned race can sail in the re-sailed race.

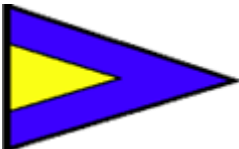
4. **Shortened Course:** The racecourse can be shortened by placing the committee boat at any turning mark and signaled by the code flag "S". Two horn blasts should also be sounded and the committee boat should notify the racers via Channel 72. Only one leg cannot be considered a finished race. Shortening a race should be considered if all boats (or a majority) will not finish before the race's time limit, unsafe conditions, etc.

IV. MAJOR FLAGS FOR RACE CHANGES

RECALLS

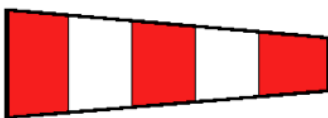


Individual Recall - attempts to hail each yacht over early will be made, hoisting the code flag "X" and **sounding one long blast of the horn.**



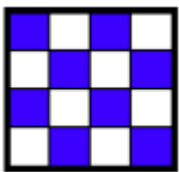
General Recall - hoisting the First Substitute flag and firing **two guns (horn).** The obligation to start properly rests with the skippers. The recalled division will restart 5 minutes after all other Divisions have started.

POSTPONEMENTS



Postponement will be signaled by code flag "AP" and **2 guns (horns).** The "AP" flag will be lowered and 1 gun will signal the end of postponement and that the warning for the next division's starting sequence will be in one (1) minute.

ABANDONMENT



Race abandonment will be signaled by Code flag "N" and **3 guns (horns).** Races can be re-sailed - return to starting area for instructions. Ends with 1 gun and lowering of "N" @ 1 min. to first restart. Only boats in abandoned race can restart.

SHORTENING COURSE



The race course can be shortened by placing a committee boat at any turning mark and signaled by the "S" flag. The committee boat should also sound two horn blasts and hail the fleet on channel 72. Shortening to only one leg cannot be considered a finished race.

JOINT DIVISION START



All Divisions Starting Together: will be signaled by a code flag "A" and **5 guns (horns)** before the first gun of the race. Boats must come within hailing distance for instructions.

V. SCORING/TROPHIES

A. Scoring: The MSSA has no series pre-registration requirements. A boat is considered competing in a race if she checks in with the Race Committee. If a boat competes in at least one race in a series, she is entered in the series. This, and the scoring notes below change the Racing Rules of Sailing Appendix A Scoring.

DNC: Boats that did not come to the starting area will be scored DNC (Did Not Compete). DNC scores will be adjusted at the end of the race series to account for all boats that entered the series in each division and/or fleet. DNC boats receive a score of the number of boats entered in the series plus 1.

DNF: A boat that did not finish (DNF) will receive a finishing position of the number of boats competing in the race plus 1.

DNS: A boat that did not start (DNS) is defined as a boat that came to the starting area and was checked in by the Race Committee but did not start the race. DNS boats will receive a score of the number of boats competing in the race plus 1.

OCS: Boats that were On Course Side (aka: "over early") will receive a score of the number of boats competing in the race plus 1.

DSQ: A boat that is disqualified (DSQ) will receive a score of the number of boats competing in the race plus 2.

RET/RAF: A boat that retires (during the race or after finishing) will receive a score of the number of boats competing in the race plus 1.

B. Trophies

- 1. Individual Races** - First, second and third place will be awarded in each fleet. This can be modified during the season by the Vice Commodore.

- 2. Series Races** - First, second, and third place awards will be given in each division for the entire series. If there are twelve (12) or more boats in the series, first, second, third, fourth and fifth place will be awarded for that division.
- In deciding the winner of a series, boats will be scored in individual races as follows: First = 1 point; second = 2 points; third = 3 points; fourth = 4 points, etc.
 - A boat serving as committee boat in a series race will be awarded average points for the race in which she served and all calculations will be as if she raced. Average points will be considered the average of all races for the current series. Should the boat serving as Race Committee not be racing in the series but her skipper(s) are campaigning a different boat in that series, the average points will be awarded to the boat that is racing, provided it is not racing in the same race as the Race Committee duties are performed. In the case where a boat is campaigned by multiple persons, only the first Race Committee duty can be awarded the average points in that series.
 - Of the races conducted (not abandoned) the lowest 25% will be excluded. An integer value will be determined by truncating the value to the next lower whole number. (Example: $7 - 25\% = 5.25$ truncated to 5.) Whenever a series has 2 or fewer conducted races, these races will be scored and awards given as individual races. (**See table below 3.c.**)
- 3. High-Point Races** - A trophy will be awarded in each division to the boat with the best season record under the following formula:
- A modified Cox-Sprague Scoring System will be used *(see the table at the end of section IV.)
 - Boats will be scored according to their division position.
 - 75% of the races conducted (not abandoned) will be the minimum number of races necessary to qualify for the high point trophy. An integer value will be determined by truncating the value to the next lower whole number. (Example: 75% of 15 = 11.25 truncated to 11.) A DNF or DSQ may be counted towards the trophy if necessary to fulfill the minimum. If no boats qualify for “High Point” in a division, the MSSA Bridge reserves the right to determine the winner.

| | | | | | | | | | | | | | | | | | | | | |
|-----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|
| # Races Sailed | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 |
| # Races Counted | 16 | 15 | 15 | 14 | 13 | 12 | 12 | 11 | 10 | 9 | 9 | 8 | 7 | 6 | 6 | 5 | 4 | 3 | 3 | 2 |

- The races to be counted towards this trophy are the Spring, Summer and Fall Series Races, plus the Middle Ground Night Race.
- A boat serving as committee boat in a High Point Series race will be awarded average points for the race in which she served and all calculations will be as if she raced. Average points will be considered as follows:
 - A boat’s RC average will be calculated from the average score of the minimum number of races that boat will use to qualify for the series.
 - The boat’s best finishing scores will be used to calculate the average.
 - If the boat needs the RC score to qualify, the minimum number of races minus one will calculate the average.
 - If a boat does not have enough races to qualify for the series, their average will be calculated using as many DNC scores as it would take to equal the minimum number of races needed to qualify for the series minus one.

- For the Middle Ground Night Race, average points will be considered the average of all her previously sailed High Point Races for the current sailing season.
- f. In the event that there is only one boat for a division start, that boat must start and will be scored with the other boats in their respective fleet (spinnaker or non-spinnaker). When the total number of boats in a fleet is three or more (ex. One from A and two from B), the scores for the boats within the division that has multiple entries will not be affected by the additional entry. The single division boat will be scored with the fleet results, the other boats will be scored with no consideration for the additional entry. However, if there is only one boat in each division (ex. One from A and one from B), both boats will be scored with Fleet results. One will receive a first, and the other a second. Non High Point scoring will not be affected.

4. **Race Trophies** will be at the discretion of the Vice Commodore. Typically, there is High Point 'A' Division, 'B' Division, 'C' Division, 'D' Division. Division breakdowns occur after the Spring Series (see Section II. B. 10.)

Awarding of Trophies - Trophies will be awarded at the annual awards ceremony. Time and place to be announced.

| Cox-Sprague Scoring System | | | | | | | | | | | | | | | | | | | | |
|----------------------------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------------|-------|
| # of Starters | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 or more | Place |
| | 10 | 31 | 43 | 52 | 60 | 66 | 72 | 76 | 80 | 84 | 87 | 90 | 92 | 94 | 96 | 97 | 98 | 99 | 100 | 1 |
| | 7 | 25 | 37 | 46 | 54 | 60 | 66 | 70 | 74 | 78 | 81 | 84 | 86 | 88 | 90 | 91 | 92 | 93 | 94 | 2 |
| | (4) | 21 | 33 | 42 | 50 | 56 | 62 | 66 | 70 | 74 | 77 | 80 | 82 | 84 | 86 | 87 | 88 | 89 | 90 | 3 |
| | | (17) | 29 | 38 | 46 | 52 | 58 | 62 | 66 | 70 | 73 | 76 | 78 | 80 | 82 | 83 | 84 | 85 | 86 | 4 |
| | | | (26) | 35 | 43 | 49 | 55 | 59 | 63 | 67 | 70 | 73 | 75 | 77 | 78 | 80 | 81 | 82 | 83 | 5 |
| | | | | (32) | 40 | 46 | 52 | 56 | 60 | 64 | 67 | 70 | 72 | 74 | 76 | 77 | 78 | 79 | 80 | 6 |
| | | | | | (38) | 44 | 50 | 54 | 58 | 62 | 65 | 68 | 70 | 72 | 74 | 75 | 76 | 77 | 78 | 7 |
| | | | | | | (42) | 48 | 52 | 56 | 60 | 63 | 66 | 68 | 70 | 72 | 73 | 74 | 75 | 76 | 8 |
| | | | | | | | (46) | 50 | 54 | 58 | 61 | 64 | 66 | 68 | 70 | 71 | 72 | 73 | 74 | 9 |
| | | | | | | | | (48) | 52 | 56 | 59 | 62 | 64 | 66 | 68 | 69 | 70 | 71 | 72 | 10 |
| | | | | | | | | | (50) | 54 | 57 | 60 | 62 | 64 | 66 | 67 | 68 | 69 | 70 | 11 |
| | | | | | | | | | | (52) | 55 | 58 | 60 | 62 | 64 | 65 | 66 | 67 | 68 | 12 |
| | | | | | | | | | | | (53) | 56 | 58 | 60 | 62 | 63 | 64 | 65 | 66 | 13 |
| | | | | | | | | | | | | (55) | 57 | 59 | 61 | 62 | 63 | 64 | 65 | 14 |
| | | | | | | | | | | | | | (56) | 58 | 60 | 61 | 62 | 63 | 64 | 15 |
| | | | | | | | | | | | | | | (57) | 59 | 60 | 61 | 62 | 63 | 16 |
| | | | | | | | | | | | | | | | (58) | 59 | 60 | 61 | 62 | 17 |
| | | | | | | | | | | | | | | | | (58) | 59 | 60 | 61 | 18 |
| | | | | | | | | | | | | | | | | | (58) | 59 | 60 | 19 |
| | | | | | | | | | | | | | | | | | | (58) | 59 | 20 |
| | | | | | | | | | | | | | | | | | | | 58 | 21 |
| | | | | | | | | | | | | | | | | | | | 57 | 22 |
| | | | | | | | | | | | | | | | | | | | 56 | 23 |
| | | | | | | | | | | | | | | | | | | | 55 | 24 |
| | | | | | | | | | | | | | | | | | | | 54 | 25 |
| | | | | | | | | | | | | | | | | | | | 53 | 26 |

Points in () are for DNF & DSQ

Cox-Sprague Scoring System: In each race the number of starters will determine the column to be used in the table above, and each yacht will be credited with the number of points indicated for her finishing place. A yacht's series score shall be her "Percentage of Perfection", calculated by dividing her Total Points Scored by the total points she would have had if she had won every race in which she started.

VI. Weekend and Middle Ground Race Courses: Consulting with the Vice Commodore or his/her designee about course selections is recommended.

A. Barrister Cup

Courses for the Barrister Cup race are as follows. Barrister Cup is a one division self-start. See note 8 regarding self-starts.

| COURSE | MARKS | COMMENTS |
|--------|---------|---|
| "A" | (M)JKLS | all marks to port |
| "B" | (Y)MKLS | Pass "Y" and "M" to starboard/all other marks to port |
| "C" | (M)LKJS | all marks to starboard |
| "D" | (M)TLKS | Pass 1st "M" and "T" to port/all other marks to starboard |

Note: () indicates starting mark

For Barrister Cup (Course "A") - Boats will be positioned such that they are WEST of club mark "M" and are behind an imaginary line 180 degrees magnetic (south of mark) that intersects the club mark "M".

For Barrister Cup (Course "B") - boats will be positioned such that they are NORTH of club mark "Y" and are behind an imaginary line 270 degrees magnetic (west of mark) that intersects the club mark "Y".

For Barrister Cup (Course "C") - Boats will be positioned such that they are EAST of club mark "M" and are behind an imaginary line 180 degrees magnetic (south of mark) that intersects the club mark "M".

For Barrister Cup (Course "D") - boats will be positioned such that they are SOUTH of club mark "M" and are behind an imaginary line 270 degrees magnetic (west of mark) that intersects the club mark "M".

B. Middle Ground Night Race

Suggested courses for the Middle Ground Night Race are designated below. Any other course used must include "K" mark. Middle Ground Race is a self-start. See note 8 regarding self-starts.

| COURSE CODE | DIVISIONS | MARKS | NOTES |
|-------------|-----------|---------|--|
| "A" | All Div. | (Y)DKS | all marks to port/ "D" to starboard |
| "B" | All Div. | (Y)MKLS | all marks to port/ "Y", "M" to starboard |
| "C" | All Div. | (Y)MLKS | all marks to starboard / "S" to port |
| "D" | All Div. | (Y)OLKS | all marks to starboard / "S" to Port |

Note: () indicates starting mark, see section III.G for definition of the MARKS

For the Middle Ground Night Race (Course "A") - boats will be positioned such that they are EAST of club mark "Y" and are behind an imaginary line 0 degree magnetic (north of mark) that intersects the club mark "Y".

For the Middle Ground Night Race (Course “B”, “C”, “D”) - boats will be positioned such that they are NORTH of club mark “Y” and are behind an imaginary line 270 degrees magnetic (west of mark) that intersects the club mark “Y”.

C. Single Handed Race

Course should be in the 3-7 mile range. See Section VII. for possible courses.

D. Long Distance Race

The Long Distance Race is a self-start. See note 8 regarding self-starts. The course should be in the 10-20 mile range. Boats will be positioned, to the EAST or WEST of club mark “M”, and are behind an imaginary line 180 degrees magnetic (south of mark) that intersects the club mark “M”. Whichever side is on the opposite side of the first mark.

E. Father’s Day Race

Course should be in the 3-7 mile range. See Section VII. for possible courses.

VII. Weeknight Race Courses (3 to 7 mile range)

- A. The weeknight races will rely on the MSSA club marks, PJYC club marks, local government marks, and/or our club's portable/temporary mark taken out with the committee boat (Z).
- B. If the marks M, D, T, Y, O and V are not suitable for a starting line (providing a first leg directly into the wind), you should consider placing one portable mark approximately 0.75 mile windward of one of the start marks. Because of the use of the portable mark, specific courses and distances for these races are flexible. The examples listed on the next page use the fixed marks.
- C. A shorter first leg can be achieved by use of Z. See Section III-G for mark relative locations. If you need help in selecting a suitable course, talk to the Vice Commodore or his/her designee. If portable mark “Z” is used the Committee Boat must record her position with a GPS. This position should be noted on the score sheet.

**SUGGESTED Thursday Night/Double-Handed/Single Handed/Father's Day
RACE COURSES**

| WIND DIRECTION | COURSE CODE | COURSES | DISTANCE / nm | SUGGESTED WIND RANGE |
|----------------|-------------|----------|---------------|----------------------|
| SOUTH EAST | SE1 | (Y)OYOY | 3.2 | 3-8 KTS |
| | SE2 | (Y)OBOY | 5.6 | 8-12 KTS |
| | SE3 | (Y)OBYBY | 6.4 | 12+ KTS |
| SOUTH WEST | SW1 | (Y)MYMY | 3.6 | 3-8 KTS |
| | SW2 | (Y)MTYTY | 5.3 | 8-12 KTS |
| | SW3 | (Y)MTMYM | 6.3 | 12+ KTS |
| WEST | W1 | (Y)CYCY | 3.4 | 3-8 KTS |
| | W2 | (Y)CVCVY | 6.3 | 8+ KTS |
| NORTH WEST | NW1 | (O)COYO | 4.4 | 3-10 KTS |
| | NW2 | (O)COCO | 5.5 | 10+ KTS |
| NORTH | N1 | (M)YMYM | 3.6 | 3-8 KTS |
| | N2 | (M)TMTM | 6.9 | 8+ KTS |
| NORTH EAST | NE1 | (M)VMVM | 5.8 | 3-12 KTS |
| | NE2 | (M)VDVM | 6.3 | 12+ KTS |
| EAST | E1 | (Y)VYVY | 3.0 | 3-8 KTS |
| | E2 | (Y)VVCVY | 6.3 | 8+ KTS |

Notes:

All marks are to PORT, **except FINISH where the RRS rules apply (28.2.c) “pass between the marks of a gate from the direction of the previous mark”**. Starting mark is shown in parentheses "()".

1. In light or shifting winds, it may be appropriate to go to Y and wait for a consistent wind direction. Listen to the forecast.
2. Consider the following when picking the course: Wind strength (light wind/short course, heavy wind/long course), wind forecast and the amount of daylight remaining.
3. The light wind courses are listed first in each wind direction category. Most courses are designed with the possibility of shortening in mind. Please consider shortening the courses in order to adapt to light and changing wind conditions.
4. These are suggested courses only and although they should be used whenever possible situations may arise when the Race Committee may be better off creating their own course. When in doubt please consult with the Vice Commodore or his/her designee.
5. Distances are approximate.

VIII. JACKRABBIT RACE/ FALL SERIES

A. Start

These races will be self-starts. See note 8 regarding self-starts. Boats will start according to the start timetables that follow. There are two sets of tables depending on the course selected. There will be a race officer from within the fleet who chooses and announces the course and synchronizes official time at 10:00AM (GPS Time) via VHF channel 72. A boat is considered *RACING* from a period of 4 minutes prior to their published start time as listed in the appropriate table below until they finish or retire. RRS Rules on Propulsion will apply.

For Courses “A”, “E” - Boats will be positioned such that they are WEST of club mark “M” and are behind an imaginary line 180 degrees magnetic (south of mark) that intersects the club mark “M”.

For Course “B”, “C”, “D”, “F”- Boats will be positioned such that they are EAST of club mark “M” and are behind an imaginary line 180 degrees magnetic (south of mark) that intersects the club mark “M”.

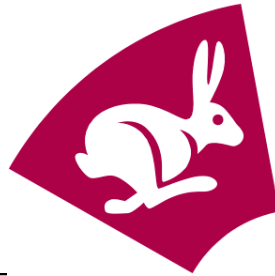
For Course “G” - boats will be positioned such that they are SOUTH of club mark “M” and are behind an imaginary line 90 degrees magnetic (east of mark) that intersects the club mark “M”

B. Finish

There is no time limit. Record your own time, announce your time on VHF 72 and email your time to our club scorer within 24 hours.

C. Awards

1st, 2nd & 3rd place in each division.



D. Courses

| Course Code | Distance | Course | | Start Table |
|-------------|-----------|---------|---|-------------|
| “A” | 13 miles | (M)JLS | Marks to port | 1 |
| “B” | 13 miles | (M)LJS | Marks to starboard | 1 |
| “C” | 13 miles | (M)HKLS | M, H to starboard / all others to port | 1 |
| “D” | 13 miles | (M)LKHS | M, L and K to starboard / H and S to port | 1 |
| “E” | 6.8 miles | (M)JS | S to starboard / all other marks to port | 2 |
| “F” | 6.8 miles | (M)LS | M to starboard / all other marks to port | 2 |
| “G”* | 6.8 miles | (M)TMTS | Marks to port | 2 |

- Note: () indicates starting mark. (Start times on next page)
- See section III.G for definition of the MARKS.
- Prior to setting course “G” the Race Official must ensure that mark “T” is on station. This is especially important during the late season.

| JACKRABBIT Start Table 1 COURSES "A", "B", "C", "D" | | | | | | | |
|---|-------------|------|-------------|------|-------------|------|-------------|
| PHRF | FIRST GUN + | PHRF | FIRST GUN + | PHRF | FIRST GUN + | PHRF | FIRST GUN + |
| 310 | 0:00:00 | 270 | 0:08:40 | 230 | 0:17:20 | 190 | 0:26:00 |
| 309 | 0:00:13 | 269 | 0:08:53 | 229 | 0:17:33 | 189 | 0:26:13 |
| 308 | 0:00:26 | 268 | 0:09:06 | 228 | 0:17:46 | 188 | 0:26:26 |
| 307 | 0:00:39 | 267 | 0:09:19 | 227 | 0:17:59 | 187 | 0:26:39 |
| 306 | 0:00:52 | 266 | 0:09:32 | 226 | 0:18:12 | 186 | 0:26:52 |
| 305 | 0:01:05 | 265 | 0:09:45 | 225 | 0:18:25 | 185 | 0:27:05 |
| 304 | 0:01:18 | 264 | 0:09:58 | 224 | 0:18:38 | 184 | 0:27:18 |
| 303 | 0:01:31 | 263 | 0:10:11 | 223 | 0:18:51 | 183 | 0:27:31 |
| 302 | 0:01:44 | 262 | 0:10:24 | 222 | 0:19:04 | 182 | 0:27:44 |
| 301 | 0:01:57 | 261 | 0:10:37 | 221 | 0:19:17 | 181 | 0:27:57 |
| 300 | 0:02:10 | 260 | 0:10:50 | 220 | 0:19:30 | 180 | 0:28:10 |
| 299 | 0:02:23 | 259 | 0:11:03 | 219 | 0:19:43 | 179 | 0:28:23 |
| 298 | 0:02:36 | 258 | 0:11:16 | 218 | 0:19:56 | 178 | 0:28:36 |
| 297 | 0:02:49 | 257 | 0:11:29 | 217 | 0:20:09 | 177 | 0:28:49 |
| 296 | 0:03:02 | 256 | 0:11:42 | 216 | 0:20:22 | 176 | 0:29:02 |
| 295 | 0:03:15 | 255 | 0:11:55 | 215 | 0:20:35 | 175 | 0:29:15 |
| 294 | 0:03:28 | 254 | 0:12:08 | 214 | 0:20:48 | 174 | 0:29:28 |
| 293 | 0:03:41 | 253 | 0:12:21 | 213 | 0:21:01 | 173 | 0:29:41 |
| 292 | 0:03:54 | 252 | 0:12:34 | 212 | 0:21:14 | 172 | 0:29:54 |
| 291 | 0:04:07 | 251 | 0:12:47 | 211 | 0:21:27 | 171 | 0:30:07 |
| 290 | 0:04:20 | 250 | 0:13:00 | 210 | 0:21:40 | 170 | 0:30:20 |
| 289 | 0:04:33 | 249 | 0:13:13 | 209 | 0:21:53 | 169 | 0:30:33 |
| 288 | 0:04:46 | 248 | 0:13:26 | 208 | 0:22:06 | 168 | 0:30:46 |
| 287 | 0:04:59 | 247 | 0:13:39 | 207 | 0:22:19 | 167 | 0:30:59 |
| 286 | 0:05:12 | 246 | 0:13:52 | 206 | 0:22:32 | 166 | 0:31:12 |
| 285 | 0:05:25 | 245 | 0:14:05 | 205 | 0:22:45 | 165 | 0:31:25 |
| 284 | 0:05:38 | 244 | 0:14:18 | 204 | 0:22:58 | 164 | 0:31:38 |
| 283 | 0:05:51 | 243 | 0:14:31 | 203 | 0:23:11 | 163 | 0:31:51 |
| 282 | 0:06:04 | 242 | 0:14:44 | 202 | 0:23:24 | 162 | 0:32:04 |
| 281 | 0:06:17 | 241 | 0:14:57 | 201 | 0:23:37 | 161 | 0:32:17 |
| 280 | 0:06:30 | 240 | 0:15:10 | 200 | 0:23:50 | 160 | 0:32:30 |
| 279 | 0:06:43 | 239 | 0:15:23 | 199 | 0:24:03 | 159 | 0:32:43 |
| 278 | 0:06:56 | 238 | 0:15:36 | 198 | 0:24:16 | 158 | 0:32:56 |
| 277 | 0:07:09 | 237 | 0:15:49 | 197 | 0:24:29 | 157 | 0:33:09 |
| 276 | 0:07:22 | 236 | 0:16:02 | 196 | 0:24:42 | 156 | 0:33:22 |
| 275 | 0:07:35 | 235 | 0:16:15 | 195 | 0:24:55 | 155 | 0:33:35 |
| 274 | 0:07:48 | 234 | 0:16:28 | 194 | 0:25:08 | 154 | 0:33:48 |
| 273 | 0:08:01 | 233 | 0:16:41 | 193 | 0:25:21 | 153 | 0:34:01 |
| 272 | 0:08:14 | 232 | 0:16:54 | 192 | 0:25:34 | 152 | 0:34:14 |
| 271 | 0:08:27 | 231 | 0:17:07 | 191 | 0:25:47 | 151 | 0:34:27 |

| JACKRABBIT Start Table 1 COURSES "A", "B", "C", "D" | | | | | | | |
|---|-------------|------|-------------|------|-------------|------|-------------|
| PHRF | FIRST GUN + | PHRF | FIRST GUN + | PHRF | FIRST GUN + | PHRF | FIRST GUN + |
| 150 | 0:34:40 | 111 | 0:43:07 | 72 | 0:51:34 | 33 | 1:00:01 |
| 149 | 0:34:53 | 110 | 0:43:20 | 71 | 0:51:47 | 32 | 1:00:14 |
| 148 | 0:35:06 | 109 | 0:43:33 | 70 | 0:52:00 | 31 | 1:00:27 |
| 147 | 0:35:19 | 108 | 0:43:46 | 69 | 0:52:13 | 30 | 1:00:40 |
| 146 | 0:35:32 | 107 | 0:43:59 | 68 | 0:52:26 | 29 | 1:00:53 |
| 145 | 0:35:45 | 106 | 0:44:12 | 67 | 0:52:39 | 28 | 1:01:06 |
| 144 | 0:35:58 | 105 | 0:44:25 | 66 | 0:52:52 | 27 | 1:01:19 |
| 143 | 0:36:11 | 104 | 0:44:38 | 65 | 0:53:05 | 26 | 1:01:32 |
| 142 | 0:36:24 | 103 | 0:44:51 | 64 | 0:53:18 | 25 | 1:01:45 |
| 141 | 0:36:37 | 102 | 0:45:04 | 63 | 0:53:31 | 24 | 1:01:58 |
| 140 | 0:36:50 | 101 | 0:45:17 | 62 | 0:53:44 | 23 | 1:02:11 |
| 139 | 0:37:03 | 100 | 0:45:30 | 61 | 0:53:57 | 22 | 1:02:24 |
| 138 | 0:37:16 | 99 | 0:45:43 | 60 | 0:54:10 | 21 | 1:02:37 |
| 137 | 0:37:29 | 98 | 0:45:56 | 59 | 0:54:23 | 20 | 1:02:50 |
| 136 | 0:37:42 | 97 | 0:46:09 | 58 | 0:54:36 | 19 | 1:03:03 |
| 135 | 0:37:55 | 96 | 0:46:22 | 57 | 0:54:49 | 18 | 1:03:16 |
| 134 | 0:38:08 | 95 | 0:46:35 | 56 | 0:55:02 | 17 | 1:03:29 |
| 133 | 0:38:21 | 94 | 0:46:48 | 55 | 0:55:15 | 16 | 1:03:42 |
| 132 | 0:38:34 | 93 | 0:47:01 | 54 | 0:55:28 | 15 | 1:03:55 |
| 131 | 0:38:47 | 92 | 0:47:14 | 53 | 0:55:41 | 14 | 1:04:08 |
| 130 | 0:39:00 | 91 | 0:47:27 | 52 | 0:55:54 | 13 | 1:04:21 |
| 129 | 0:39:13 | 90 | 0:47:40 | 51 | 0:56:07 | 12 | 1:04:34 |
| 128 | 0:39:26 | 89 | 0:47:53 | 50 | 0:56:20 | 11 | 1:04:47 |
| 127 | 0:39:39 | 88 | 0:48:06 | 49 | 0:56:33 | 10 | 1:05:00 |
| 126 | 0:39:52 | 87 | 0:48:19 | 48 | 0:56:46 | 9 | 1:05:13 |
| 125 | 0:40:05 | 86 | 0:48:32 | 47 | 0:56:59 | 8 | 1:05:26 |
| 124 | 0:40:18 | 85 | 0:48:45 | 46 | 0:57:12 | 7 | 1:05:39 |
| 123 | 0:40:31 | 84 | 0:48:58 | 45 | 0:57:25 | 6 | 1:05:52 |
| 122 | 0:40:44 | 83 | 0:49:11 | 44 | 0:57:38 | 5 | 1:06:05 |
| 121 | 0:40:57 | 82 | 0:49:24 | 43 | 0:57:51 | 4 | 1:06:18 |
| 120 | 0:41:10 | 81 | 0:49:37 | 42 | 0:58:04 | 3 | 1:06:31 |
| 119 | 0:41:23 | 80 | 0:49:50 | 41 | 0:58:17 | 2 | 1:06:44 |
| 118 | 0:41:36 | 79 | 0:50:03 | 40 | 0:58:30 | 1 | 1:06:57 |
| 117 | 0:41:49 | 78 | 0:50:16 | 39 | 0:58:43 | 0 | 1:07:10 |
| 116 | 0:42:02 | 77 | 0:50:29 | 38 | 0:58:56 | -1 | 1:07:23 |
| 115 | 0:42:15 | 76 | 0:50:42 | 37 | 0:59:09 | -2 | 1:07:36 |
| 114 | 0:42:28 | 75 | 0:50:55 | 36 | 0:59:22 | -3 | 1:07:49 |
| 113 | 0:42:41 | 74 | 0:51:08 | 35 | 0:59:35 | -4 | 1:08:02 |
| 112 | 0:42:54 | 73 | 0:51:21 | 34 | 0:59:48 | -5 | 1:08:15 |

Look up your PHRF rating on the above list and add the associated minutes to the time of first gun in order to determine your start time. If you do not have a PHRF rating, contact the Vice Commodore.

| JACKRABBIT Start Table 2 COURSES "E", "F", "G" | | | | | | | |
|--|-------------|------|-------------|------|-------------|------|-------------|
| PHRF | FIRST GUN + | PHRF | FIRST GUN + | PHRF | FIRST GUN + | PHRF | FIRST GUN + |
| 310 | 0:00:00 | 265 | 0:05:08 | 220 | 0:10:16 | 175 | 0:15:24 |
| 309 | 0:00:06 | 264 | 0:05:15 | 219 | 0:10:23 | 174 | 0:15:31 |
| 308 | 0:00:13 | 263 | 0:05:21 | 218 | 0:10:30 | 173 | 0:15:38 |
| 307 | 0:00:20 | 262 | 0:05:28 | 217 | 0:10:37 | 172 | 0:15:45 |
| 306 | 0:00:27 | 261 | 0:05:35 | 216 | 0:10:43 | 171 | 0:15:52 |
| 305 | 0:00:34 | 260 | 0:05:42 | 215 | 0:10:50 | 170 | 0:15:59 |
| 304 | 0:00:41 | 259 | 0:05:49 | 214 | 0:10:57 | 169 | 0:16:05 |
| 303 | 0:00:47 | 258 | 0:05:56 | 213 | 0:11:04 | 168 | 0:16:12 |
| 302 | 0:00:54 | 257 | 0:06:03 | 212 | 0:11:11 | 167 | 0:16:19 |
| 301 | 0:01:01 | 256 | 0:06:09 | 211 | 0:11:18 | 166 | 0:16:26 |
| 300 | 0:01:08 | 255 | 0:06:16 | 210 | 0:11:25 | 165 | 0:16:33 |
| 299 | 0:01:15 | 254 | 0:06:23 | 209 | 0:11:31 | 164 | 0:16:40 |
| 298 | 0:01:22 | 253 | 0:06:30 | 208 | 0:11:38 | 163 | 0:16:46 |
| 297 | 0:01:29 | 252 | 0:06:37 | 207 | 0:11:45 | 162 | 0:16:53 |
| 296 | 0:01:35 | 251 | 0:06:44 | 206 | 0:11:52 | 161 | 0:17:00 |
| 295 | 0:01:42 | 250 | 0:06:51 | 205 | 0:11:59 | 160 | 0:17:07 |
| 294 | 0:01:49 | 249 | 0:06:57 | 204 | 0:12:06 | 159 | 0:17:14 |
| 293 | 0:01:56 | 248 | 0:07:04 | 203 | 0:12:12 | 158 | 0:17:21 |
| 292 | 0:02:03 | 247 | 0:07:11 | 202 | 0:12:19 | 157 | 0:17:28 |
| 291 | 0:02:10 | 246 | 0:07:18 | 201 | 0:12:26 | 156 | 0:17:34 |
| 290 | 0:02:17 | 245 | 0:07:25 | 200 | 0:12:33 | 155 | 0:17:41 |
| 289 | 0:02:23 | 244 | 0:07:32 | 199 | 0:12:40 | 154 | 0:17:48 |
| 288 | 0:02:30 | 243 | 0:07:38 | 198 | 0:12:47 | 153 | 0:17:55 |
| 287 | 0:02:37 | 242 | 0:07:45 | 197 | 0:12:54 | 152 | 0:18:02 |
| 286 | 0:02:44 | 241 | 0:07:52 | 196 | 0:13:00 | 151 | 0:18:09 |
| 285 | 0:02:51 | 240 | 0:07:59 | 195 | 0:13:07 | 150 | 0:18:16 |
| 284 | 0:02:58 | 239 | 0:08:06 | 194 | 0:13:14 | 149 | 0:18:22 |
| 283 | 0:03:04 | 238 | 0:08:13 | 193 | 0:13:21 | 148 | 0:18:29 |
| 282 | 0:03:11 | 237 | 0:08:20 | 192 | 0:13:28 | 147 | 0:18:36 |
| 281 | 0:03:18 | 236 | 0:08:26 | 191 | 0:13:35 | 146 | 0:18:43 |
| 280 | 0:03:25 | 235 | 0:08:33 | 190 | 0:13:42 | 145 | 0:18:50 |
| 279 | 0:03:32 | 234 | 0:08:40 | 189 | 0:13:48 | 144 | 0:18:57 |
| 278 | 0:03:39 | 233 | 0:08:47 | 188 | 0:13:55 | 143 | 0:19:03 |
| 277 | 0:03:46 | 232 | 0:08:54 | 187 | 0:14:02 | 142 | 0:19:10 |
| 276 | 0:03:52 | 231 | 0:09:01 | 186 | 0:14:09 | 141 | 0:19:17 |
| 275 | 0:03:59 | 230 | 0:09:08 | 185 | 0:14:16 | 140 | 0:19:24 |
| 274 | 0:04:06 | 229 | 0:09:14 | 184 | 0:14:23 | 139 | 0:19:31 |
| 273 | 0:04:13 | 228 | 0:09:21 | 183 | 0:14:29 | 138 | 0:19:38 |
| 272 | 0:04:20 | 227 | 0:09:28 | 182 | 0:14:36 | 137 | 0:19:45 |
| 271 | 0:04:27 | 226 | 0:09:35 | 181 | 0:14:43 | 136 | 0:19:51 |
| 270 | 0:04:34 | 225 | 0:09:42 | 180 | 0:14:50 | 135 | 0:19:58 |
| 269 | 0:04:40 | 224 | 0:09:49 | 179 | 0:14:57 | 134 | 0:20:05 |
| 268 | 0:04:47 | 223 | 0:09:55 | 178 | 0:15:04 | 133 | 0:20:12 |
| 267 | 0:04:54 | 222 | 0:10:02 | 177 | 0:15:11 | 132 | 0:20:19 |
| 266 | 0:05:01 | 221 | 0:10:09 | 176 | 0:15:17 | 131 | 0:20:26 |

| JACKRABBIT Start Table 2 COURSES "E", "F", "G" | | | | | | | |
|--|-------------|------|-------------|------|-------------|------|-------------|
| PHRF | FIRST GUN + | PHRF | FIRST GUN + | PHRF | FIRST GUN + | PHRF | FIRST GUN + |
| 130 | 0:20:33 | 96 | 0:24:25 | 62 | 0:28:18 | 28 | 0:32:11 |
| 129 | 0:20:39 | 95 | 0:24:32 | 61 | 0:28:25 | 27 | 0:32:18 |
| 128 | 0:20:46 | 94 | 0:24:39 | 60 | 0:28:32 | 26 | 0:32:25 |
| 127 | 0:20:53 | 93 | 0:24:46 | 59 | 0:28:39 | 25 | 0:32:32 |
| 126 | 0:21:00 | 92 | 0:24:53 | 58 | 0:28:46 | 24 | 0:32:39 |
| 125 | 0:21:07 | 91 | 0:25:00 | 57 | 0:28:53 | 23 | 0:32:45 |
| 124 | 0:21:14 | 90 | 0:25:07 | 56 | 0:28:59 | 22 | 0:32:52 |
| 123 | 0:21:20 | 89 | 0:25:13 | 55 | 0:29:06 | 21 | 0:32:59 |
| 122 | 0:21:27 | 88 | 0:25:20 | 54 | 0:29:13 | 20 | 0:33:06 |
| 121 | 0:21:34 | 87 | 0:25:27 | 53 | 0:29:20 | 19 | 0:33:13 |
| 120 | 0:21:41 | 86 | 0:25:34 | 52 | 0:29:27 | 18 | 0:33:20 |
| 119 | 0:21:48 | 85 | 0:25:41 | 51 | 0:29:34 | 17 | 0:33:27 |
| 118 | 0:21:55 | 84 | 0:25:48 | 50 | 0:29:41 | 16 | 0:33:33 |
| 117 | 0:22:02 | 83 | 0:25:54 | 49 | 0:29:47 | 15 | 0:33:40 |
| 116 | 0:22:08 | 82 | 0:26:01 | 48 | 0:29:54 | 14 | 0:33:47 |
| 115 | 0:22:15 | 81 | 0:26:08 | 47 | 0:30:01 | 13 | 0:33:54 |
| 114 | 0:22:22 | 80 | 0:26:15 | 46 | 0:30:08 | 12 | 0:34:01 |
| 113 | 0:22:29 | 79 | 0:26:22 | 45 | 0:30:15 | 11 | 0:34:08 |
| 112 | 0:22:36 | 78 | 0:26:29 | 44 | 0:30:22 | 10 | 0:34:15 |
| 111 | 0:22:43 | 77 | 0:26:36 | 43 | 0:30:28 | 9 | 0:34:21 |
| 110 | 0:22:50 | 76 | 0:26:42 | 42 | 0:30:35 | 8 | 0:34:28 |
| 109 | 0:22:56 | 75 | 0:26:49 | 41 | 0:30:42 | 7 | 0:34:35 |
| 108 | 0:23:03 | 74 | 0:26:56 | 40 | 0:30:49 | 6 | 0:34:42 |
| 107 | 0:23:10 | 73 | 0:27:03 | 39 | 0:30:56 | 5 | 0:34:49 |
| 106 | 0:23:17 | 72 | 0:27:10 | 38 | 0:31:03 | 4 | 0:34:56 |
| 105 | 0:23:24 | 71 | 0:27:17 | 37 | 0:31:10 | 3 | 0:35:02 |
| 104 | 0:23:31 | 70 | 0:27:24 | 36 | 0:31:16 | 2 | 0:35:09 |
| 103 | 0:23:37 | 69 | 0:27:30 | 35 | 0:31:23 | 1 | 0:35:16 |
| 102 | 0:23:44 | 68 | 0:27:37 | 34 | 0:31:30 | 0 | 0:35:23 |
| 101 | 0:23:51 | 67 | 0:27:44 | 33 | 0:31:37 | -1 | 0:35:30 |
| 100 | 0:23:58 | 66 | 0:27:51 | 32 | 0:31:44 | -2 | 0:35:37 |
| 99 | 0:24:05 | 65 | 0:27:58 | 31 | 0:31:51 | -3 | 0:35:44 |
| 98 | 0:24:12 | 64 | 0:28:05 | 30 | 0:31:58 | -4 | 0:35:50 |
| 97 | 0:24:19 | 63 | 0:28:11 | 29 | 0:32:04 | -5 | 0:35:57 |

Look up your PHRF rating on the above list and add the associated minutes to the time of first gun in order to determine your start time. If you do not have a PHRF rating, contact the Vice Commodore.