

**Revised March 2007**

**NORTHERN CALIFORNIA**

**PERFORMANCE  
HANDICAP  
RACING  
FLEET  
(NCPHRF)**

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**PART 1  
RULES AND GUIDELINES  
FOR HANDICAPPING**

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**PART 2  
ASSISTANCE IN FILLING OUT AN  
APPLICATION FOR HANDICAP**

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# PART 1

*changes from previous versions are underlined*

## Rules & Guidelines

### I. DEFINITION

The NCPHRF Committee is a Standing Committee of the Yacht Racing Association of San Francisco Bay. Its sole function is to determine the speed potential of yachts that meet the criteria of Section II below. It will assign rating values to yachts for which a rating application is filed. Such values will be in seconds per mile and assume a mixture of Around the Buoy and Windward Leeward racing on San Francisco Bay and the surrounding area. The NCPHRF Committee recognizes that the handicaps will be used in a variety of races ranging from protected bays, estuaries and lakes to open oceans. Therefore, the Committee has no responsibility for the seaworthiness or safety of yachts rated, but cites the US SAILING Fundamental Rule 4 part 1: "It shall be the sole responsibility of each yacht to decide whether or not to start or to continue to race."

A variety of conditions are encountered ranging from typical late spring and summer afternoon conditions with a 15 to 25 knot wind range to the milder winds often encountered in the fall, winter and early spring ranging from 5 to 15 knots. Windward/Leeward courses and racing in the seasons of lighter winds have become more popular. Assigned ratings attempt to reflect average performance over this broad range; but will necessarily be influenced by the venues in which the yacht is typically expected to sail.

It is to be expected therefore that the conditions prevalent on any given race day may favor one yacht over another and hence the silver is likely to be spread around a bit, not at all a bad thing for the less than Grand Prix arena that NCPHRF strives to satisfy.

### II. CRITERIA

The NCPHRF Committee shall establish performance ratings for sailboats which:

- A. Have ballast and are single hulled;
- B. Have a canoe body of nineteen feet or greater;
- C. Have minimum solid ballast of 400 pounds, unless grandfathered in prior to 1998.
- D. Have submitted a properly completed application and supporting information to enable the Committee to understand the shape, size and speed-producing factors of the boat.
- E. Any custom/non-production boat must provide current measurement certificates (IMS, Americap II, MORC); and a VPP for the exact configuration it will be sailed.

The Committee may decline to handicap any yacht for which it feels unable to determine a potential speed. For boats new and or unfamiliar to the committee initial ratings will be considered provisional in nature, and may be reviewed and perhaps changed after one season or a series of races has transpired.

**It is NCPHRF Committee policy that all documentation must be submitted to the YRA office prior to issuance of a rating. No ratings shall be given over the phone or without full documentation having been made available to the entire committee.**

The Committee may invalidate a certificate at anytime, where cause is in evidence such as incorrect dimensions or other than declared equipment is used. Due process will be exercised to allow the owner to be heard and corrections made if the owner in the view of the Committee provides justification. Further recourse resides in U S Sailing's appeals process.

### III. RATINGS

The Committee shall assign ratings to yachts based on their potential boat speeds as supported by IMS, MORC ratings, and geometric data such as D, SA/D, LWL, D/L, and other configuration parameters. From time to time the Committee will review performance data and make adjustments it deems necessary. Production boats are assigned base ratings, which may be modified if the boats are changed from stock. Some of the tools used in assigning ratings are detailed below:

- A. Similarity to boats with established ratings.
- B. Ratings from National PHRF Handicaps Manual (for the current year) for other areas around the country.

- C. Pictures and drawings - Out of water pictures of hull, rig, etc.
- D. Ballast Ratio: Ballast/Displacement in lbs. (most suspect of all brochure parameters)
- E. PHRF = GP1997 IMS - 555 +/- 15 SEC/MI (very approximate)
- F. SA/D = SA / ((D/64)^.667)
- G. PHRF = 6DPN-390
- H. D/L = (D/2240) / ((LWL/100)^3)
- I. Prismatic Coefficient = [Actual Hull Vol. (in cubic feet less keel)]/(LWL \* mid-ship cross sectional area)

**A yacht may have only one rating at any time. A copy of the current valid rating certificate must be on board while she is racing under these rules.**

Normally base ratings are established at six seconds per mile intervals, *i.e.*, 162 or 168 or 174 or 180, etc. In exceptional circumstances a deviation of three seconds per mile may be adopted for the base rating of a particular class or yacht.

#### IV. RACE RESULTS

Race results for Time-on-Distance races are calculated in the following manner:

For each boat:

(1) Multiply its PHRF rating times the race course distance (in Nautical miles) to get its TIME ALLOWANCE. Note that the TIME ALLOWANCE is in seconds, because the rating is in seconds per mile. The course distance should be specified in "rhumb line" distance.

(2) Subtract the TIME ALLOWANCE from the elapsed time required to finish the racecourse to get its CORRECTED FINISH TIME.

Now sort all the boats in the class on CORRECTED FINISH TIME. The boat with the lowest CORRECTED FINISH TIME is the winner.

Race results for Time on Time are calculated as follows:

For each boat:

(1) Calculate its Time Correction Factor (TCF) = 650 / (550 + PHRF rating)

(2) Corrected time = TCF \* Elapsed time. Elapsed time can be in Seconds, Minutes, or Hours.

Now sort all the boats in the class on CORRECTED FINISH TIME. The boat with the lowest CORRECTED FINISH TIME is the winner.

#### V. ONE-DESIGN RATING (i.e. ODR)

If requested, the Committee may provide ODR ratings to one-design classes that have their rules on file in the YRA office. All boats with ODR ratings while sailing in YRA/HDA or other NCPHRF races are to sail in conformation with their one design class rules within the following modifications:

A. Strict interpretation of limitations to hull, rig and sail dimensions.

B. No limitation on:

(1) sail material,

(2) number of sails carried on board while racing (so long as they are class legal size),

(3) who may steer,

(4) weight or number of crew members.

C. In the case where class rules prohibit spinnakers, use of spinnakers is permitted while racing NCPHRF, but I and J strictly limit the spinnaker size.

Note that the NCPHRF committee feels that most classes attempt to equalize the speed of their boats with the imposition of the class rules, and if you choose to not use an ODR rating, the Committee may assign you a different rating than a sister-ship that agrees to an ODR. In either case, this does not relieve you of filling out a proper application.

**Boats designed to utilize trapezes and/or hiking straps or whose class rules allow such devices may use them, but it must be specifically stated on their application for rating.**

## VI. ASSUMPTIONS

As noted previously Certificate ratings are based on sailing courses consisting of beating, reaching and running as well as those of approximately equal amounts of upwind and off-the-wind sailing on San Francisco Bay and surrounding areas. They should not be used for predominately downwind racing. Suggestions for modifying the ratings for downwind races are provided in Article VII

Wind Ranges can be extremely varied as noted in Article 1 with an occasional 30+ knots gear-buster. As noted in Article 1 and repeated here for emphasis, the ability of a yacht to achieve her best performance in other than the average conditions may be taken into account when there is a significant difference observed in the yachts design parameters that would better suit her to either of the extremes of conditions.

The NCPHRF Base Rating assumes that yachts:

- A. Are in optimum racing trim with all normal equipment on board;
- B. Have hull bottoms that are fair and clean;
- C. Have sails in good condition;
- D. Have a folding/feathering propeller or a stored or raised outboard;
- E. Have no jib LP greater than 155% of J; **For some yachts the manufacturer delivered configuration may differ and will be so annotated in the NCPHRF Base Rating Report;**
- F. Have mainsail girths not to exceed the maximums for MGU and MGM as prescribed in Article 7;
- G. Have spinnaker, either symmetrical or asymmetrical
- H. Have spinnaker maximum girth of 180% of J or 180% of SPL (spinnaker pole length) whichever is greater;
- I. Have spinnaker maximum luff of  $.95 * [(the\ greater\ of\ I\ or\ ISP) 2 + (the\ greater\ of\ J\ or\ SPL) 2]^{1/2}$ ; **For some yachts the manufacturer delivered configuration may differ and will be so noted in the NCPHRF Base Rating Report;**
- J. Are well sailed;
- K. Are not 'stripped out.' The intent of this rule is that the boat be sailed with all the equipment on board that she had when the committee assigned the handicap. This means that all the doors, drawers; tables and systems are in place. If it is a production boat, all the items that are considered stock by the builder are still on board. If it is a custom boat, it should be as the drawings and photographs presented to the committee. If a rating certificate (IOR, IMS, IRC or MORC) was presented to help assess the boat's speed potential, she should have everything onboard that was present at the measurement. If items have been removed, depending on the weight involved, the committee may adjust the NCPHRF rating of the boat. An exception to the above stated guideline is that cushions may be removed;
- L. All sails must conform to IMS sail dimension limitations, except as may be modified by these Rules and Guidelines. Boats do not need to meet these guidelines. However, if they do not, the committee must be notified of such changes as a rating adjustment may be made.
- M. The NCPHRF Committee will review cases where the same class may have outboard or inboard engines and, where appropriate, establish a different base rating for each type of engine.

## VII. ADJUSTMENTS TO BASE RATINGS

STANDARD BASE RATINGS ARE GIVEN BASED ON THE ASSUMPTIONS IN SECTION VI. DEVIATIONS ARE CREDITED OR PENALIZED AS FOLLOWS:

PROPELLERS (does not apply to outboard engines)

2 blade fixed propeller: + 3 seconds

3 blade fixed propeller: + 6 seconds

JIBS

Largest Headsail LP of 125% of J or less: + 3 seconds

Largest Headsail LP of greater than 155% of J but less than 170% of J: - 3 seconds

Largest Headsail LP of 170% of J or greater: - 6 seconds

MAINSAILS

An additional handicap may be applied if these girths are exceeded.

$MGU = The\ greater\ of:\ 0.28 * E + 0.016 * P + .85\ ft\ or\ 0.38 * E$

MGM = The greater of:  $0.5 * E + 0.022 * P + 1.2 \text{ ft}$  or  $0.65 * E$   
 A + 3 sec/mi credit will be given for an in-mast furling main.  
 A + 3 sec/mi credit will be given where the MGM is less than 50% of E.

**SYMMETRIC SPINNAKERS**

Spinnaker pole greater than 100% of J but less than 110% of J  
 or SMW > 180% of J but < 198% of J - 6 seconds  
 Spinnaker pole from 110% of J to 115% of J: or SMW =>198% J to 207% J -9 seconds  
 Spinnaker pole greater than 115% of J: or SMW > 207% J - 12 seconds or more.

**ASYMMETRIC SPINNAKERS (INCLUDES CRUISING SPINNAKERS AND GENNAKERS)**

Modifications in size will be dealt with on a boat-by-boat basis. Any ability to move the tack off centerline is likely to incur a penalty.

ISP greater than I will be dealt with on a boat by boat basis.

**CARRYING BOTH SYMMETRIC AND ASYMMETRIC SPINNAKERS AT THE SAME TIME**

Since 1996 boats may be rated carrying both symmetric and asymmetric spinnakers at the same time. The NCPHRF application must clearly state your intention to carry both types of sails, and an adjustment to the rating will be made on a boat-by-boat basis. If a yacht's NCPHRF certificate allows both symmetric and asymmetric spinnakers, then the asymmetric may be tacked to the spinnaker pole, which may be brought aft, squared back from the centerline.

No additional credit is given for:

- A. Sail inventories with the headsail LP less than 125% of J.
- B. Absence of a spinnaker; (although it is strongly recommended the boats sail in separate divisions from spinnaker equipped boats;)
- C. Excess weight in the form of optional equipment and gear.

Special rigs and changes in I, J, P and E will be dealt with on a boat-by-boat basis.

Modifications involving changes in (but not limited to) structural configuration, optional materials, ballast and ballast location, engine location, keel, and rudder will be dealt with on a boat-by-boat basis.

Custom or one-off boats will be given "as sailed" or "custom" ratings. (Also see II.E)

When a production boat comes standard with an oversized spinnaker and/or spinnaker pole, the Committee at its discretion may issue an "as sailed" rating. Such rating may or may not be reduced if the spinnaker is cut down to standard dimensions of Section VI.

**FOR THE PURPOSE OF RACING IN A NON-SPINNAKER FLEET, NCPHRF RECOMMENDS THE CERTIFICATE RATING BE MODIFIED USING THE FOLLOWING TABLE:**

If the largest headsail has an LP of	change the rating by
105% or less	+6 seconds per mile
125% to 106%	+3 spm
126% or greater	+0 spm (no change)
If the boat uses a roller furling jib with the tack attached to the top of the drum and the drum entirely above the deck	+3 spm

Sail handling restrictions:

- Only one headsail may be flown at a time.
- Headsail changes must be done with one halyard ("bald headed" changes).
- Whisker pole may be of any length.

Boat restrictions:

Some boats are rated as if they carried a spinnaker even though they do not. They should therefore be racing in spinnaker class starts.

Examples of such boats are:

- Cat boats in general, including

- Nonsuch class boats
- Wyliecat class boats
- Star class boats
- Knarr class boats

There are other boats which should be treated similarly.

Clarifications:

- It is intended that the race administrators apply these changes to the rating listed on the NCPHRF Certificate presented by the contestant.
- NCPHRF does not intend these rating modifications to be used in handicapping non-spinnaker boats vs. spinnaker boats. These are intended to be used when all the boats in a start/fleet are racing without spinnakers. (At this point we do not feel we have an equitable way to handicap the two fleets together.)
- A contestant may not use any headsail larger than what is recorded on his NCPHRF Certificate.
- “Cruising spinnakers” and “bloopers” are to be considered spinnakers.
- These rating changes reflect speed differences which are the result of using jibs of limited size on all points of sail.

**FOR PREDOMINATELY DOWNWIND RACES THE NCPHRF RECOMMENDS THE CERTIFICATE RATING BE ADJUSTED USING THE COMPUTATIONS SHOWN BELOW.**

Given that Effective Length:  $L = LWL + 0.35 * (LOA - LWL)$  and that

Displacement/Length Ratio:  $DLR = (Disp/2240) / ((L/100)^3)$

Displacement/Length Factor (DLF):

For DLR less than 75,  $DLF = 0$

For DLR from 75 to 150,  $DLF = (DLR - 75) / 3$

For DLR from 150 to 200,  $DLF = 25 + (DLR - 150) * 0.10$

For DLR greater than 200,  $DLF = 30$ ;

DLF is rounded up to the next larger integer.

Length Factor (LF):

$LF = 0.5 * (375 - (3600 / (1.34 * \text{sqrt}(L)))) + PHRF$

If  $LF < 0$  then  $LF = 0$

LF is rounded up to the next greater integer.

DLF and LF are added to the rating on the NCPHRF certificate.

**VIII. APPEALS**

A yacht’s rating or a competitor's rating may be appealed to the Committee. There shall be a fee for filing an appeal to cover the administrative costs and committee time to review. When the rating of another yacht is being appealed, a copy of the form will be sent to the owner of that yacht, who will not pay a fee but will be asked to fill out the same form prior to the meeting at which the appeal will be heard. Such an appeal shall be in writing on Appeals Forms that are available from the YRA office.

**IX. VISITOR POLICY OF NCPHRF COMMITTEE**

- If an owner or owner's representative does not believe he or she can communicate to the committee the significant characteristics of his or her boat through the written application or appeal; the NCPHRF Committee will entertain a request to provide an audience, limited to 15 minutes, for the owner or owner's representative at the beginning of the subsequent scheduled meeting. Requests for such an audience should be requested of the Chairman. The committee will endeavor to honor such requests as much as practical.
- Committee members may ask clarifying questions only during item “A” audience. No discussions/arguments will be allowed.
- From time to time the NCPHRF Committee will invite a guest to sit in on an entire meeting. Recent examples are the multi-hull handicapper and other volunteers.
- Visitors to the YRA office may review on site the official, approved minutes of any meeting showing the results of boats reviewed.

# PART 2

## ASSISTANCE IN FILLING OUT AN APPLICATION FOR HANDICAP

### SAIL NUMBER

This should be a number that the YRA office has assigned to your boat. Please call the YRA office for more information. Sail Prefix is a country code. This space can be blank or it might say USA or IRL.

### CLASS/TYPE

We are looking for the type of boat you have, like a Cal 20, or Islander 36. If your boat is custom made, or one-of-a-kind, please indicate. If it was designed under some rule, please tell us what rule; e.g.: 6 meter, IOR 1/4 ton, etc. In this case, if you have any measurement certificate, no matter how old, please include a copy of it with your application for rating.

### ONE DESIGN RATING

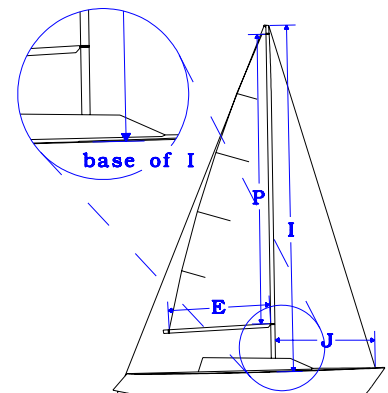
Read Section V above to find out if this applies to you at all. It is anticipated that other members in your class who know and understand your rules and limitations, as modified by Section V, will monitor the ODR ratings.

## RIG AND SAIL MEASUREMENTS

**What is the source of the information provided?** We are looking for where you obtained the information on your certificate. Please indicate by circling which sources apply.

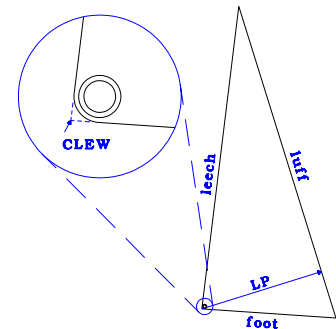
### Foretriangle

- I Vertical distance from upper point of "I" to lower point of "I"  
Upper point of "I" is the highest of:
1. Intersection of mast and highest jibstay.
  2. Highest sheave for jib halyard drawn horizontal to mast.
- Lower point of "I" is the sheerline abreast the mast (not the cabin top). The sheerline is the intersection of the deck and the hull.
- J Horizontal distance from mast to where the forward most jibstay intersects the deck, or jib tack. Note that 'JC' is no longer on this form.



### Largest Headsail

Largest Headsail percent is  $LP/J * 100$ . The LP (Luff Perpendicular) of your jibs is determined by measuring the distance from the clew to the nearest point on the luff. This is done by holding the zero end of a tape measure at the clew (defined as the intersection of the leech and the foot), removing the wrinkles from the area to be measured, and swinging an arc up and down the luff, recording the minimum distance, then dividing by J and multiplying by 100. For example, suppose you measure an LP of 15.5 feet on your biggest headsail, and your J is 10 feet. Your largest headsail is  $15.5/10 * 100=155\%$ , which happens to be the largest non-penalty headsail allowed under PHRF for a 10' J. Your sailmaker is also a source of information on sail dimensions.



### ISP ("I" for the spinnaker)

ISP = spinnaker hoist - measured from the underside of the spinnaker halyard, when drawn horizontally forward from mast, to the level of the sheerline abreast the mast. The sheerline is the intersection of the deck and the hull.

Note: in most cases “I” and “ISP” are the same. It is common for “sport boats” like Melges 24’s, and most J-Boats with a bow pole to have an ISP. If your spinnaker halyard exits the mast above the upper point of “I” as described above, then you need to fill in your ISP.

JSP (for boats with sprits and asymmetric spinnakers only)

JSP = spinnaker “J” Horizontal distance from mast to the forward most attachment point for the spinnaker tack. If this location is adjustable, as with an adjustable bow pole, then measure with the bow pole fully extended.

Type of Rig

Sloops come in two varieties: ‘masthead,’ where the forestay goes to the top of the mast, and ‘fractional,’ where the forestay is anchored to the mast somewhere below the top of the mast. Other types of rigs include Ketch, Yawl, Cutter or Catboat.

Mast Material

What is your mast made of? Common materials are Aluminum, Wood, Carbon, Fiberglass, and ‘other.’

Standing Rigging Material

What material are your shrouds made of? In part, we are looking for boats that have changed their standing rigging.

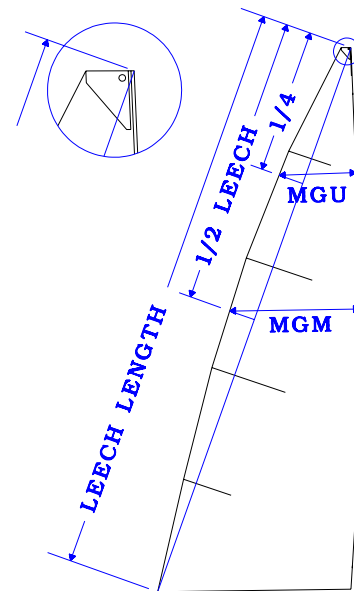
## Mainsail

P = Mainsail Hoist (distance between bands).

E = Mainsail Foot (distance from aft edge of mast to the inner edge of the band on the boom)

MGU and MGM

MGU (Main Girth Upper) and MGM (Main Girth Middle) are girths measured on your mainsail. These girths measure the width of mainsails  $1/4$  and  $1/2$  the distance down the leech from the head. Measure your girths by folding the head (front corner of headboard) to the clew, smoothing the leech and marking the fold at the leech (MGM starting point). Next fold the head to the mid-leech point and mark this new fold on the leech (MGU starting point). Now lay the sail out flat. Hold the zero end of a tape measure at the MGM starting point on the leech. Swinging an arc up and down the luff, record the minimum distance measured as your MGM. Remove the wrinkles from the area to be measured. Repeat this process for measuring your MGU.



Py and Ey are similar to P and E dimensions for the aft sail on ketches, yawls and schooners.

## Symmetric Spinnaker

Symmetric spinnakers have the following characteristics: (a) luffs are of equal length; (b) the sail is symmetric about its vertical centerline.

SL = Spinnaker Luff (See Part 1 Section VI "Assumptions" Paragraph I for the non-penalty limit.)

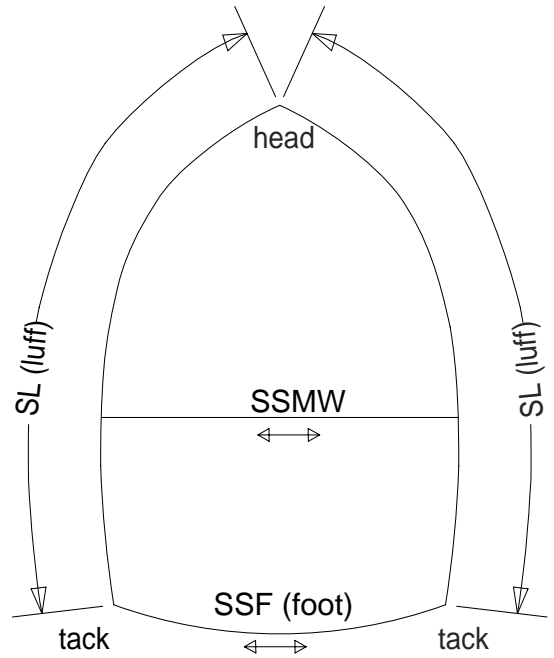
SSMG (Symmetric Spinnaker Maximum Girth)

SSMG is determined by measuring the width of your sail at various locations equidistant down the luffs from the head. It would be common to find several of these widths to be close to the same maximum value. Write down the largest number you measure.

SSF = spinnaker foot length

SPL = Spinnaker Pole Length

Spinnaker Pole Length is the length of the spinnaker pole when set in position on the mast; measured from the front face of the mast to the extreme outboard end of the pole. Please note the distinction between a whisker pole and a spinnaker pole: A whisker pole may be used to pole out any jib (but may NOT attach to any type of spinnaker), may be of any length, and may be adjustable. Information on your whisker pole is not required by PHRF, and should not be used as an answer for the spinnaker pole length, as it will often draw an unnecessary penalty.



## Asymmetric/Cruising Spinnakers

Non-Penalty Area Limits

Cruising /Asymmetric Spinnakers are limited in area not to exceed the area of I and J (or ISP and SPL) based 180% symmetric spinnakers for that boat. To calculate the actual area for the symmetric spinnaker, use the formula for "Area" below, substituting SL (symmetric spinnaker luff) for SLU and SLE.

The formula for determining the actual area of all types of spinnakers is as follows:

$$\text{Area} = (\text{SLU} + \text{SLE}) \times .25 \times \text{ASF} + (\text{ASMG} - .5\text{ASF}) \times (\text{SLU} + \text{SLE}) / 3$$

In the case of Symmetric Spinnakers, replace SLU and SLE with SL, ASMG with SSMW, and ASF with SSF.

SLU = spinnaker luff length

SLE = spinnaker leech length

ASMG = spinnaker mid girth measured between the mid-points of the

spinnaker luff and spinnaker leech

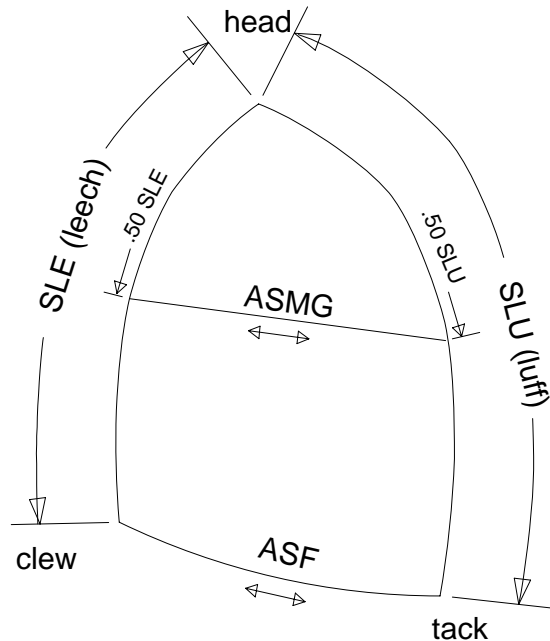
ASF = spinnaker foot length

Note on ASMG:

ASMG less than .75\*ASF is not allowed.

Sprit Length:

We want to know how far in front of your **forestay** you can tack your asymmetric or cruising spinnaker. If you have a bow sprit that is adjustable in length, we want the distance from the forestay to the block at the front of the sprit when the sprit is fully extended. If you tack the sail to the stem, but the stem extends in front of the forestay, use the distance from the stem to the forestay. If you tack the sail to the stem and the forestay connects to the deck at the stem, enter zero for sprit length.



How far aft can you articulate your spinnaker tack?

0 degs (fixed)

\_\_\_ degrees

We want to know if you plan on setting the tack of your cruising or asymmetric spinnaker on a pole that can be squared aft. Sails set from the bow of the boat, or from a non-rotating pole (bow sprit), are of the zero degree category. If the tack of the sail is set on a pole that can be rotated while sailing, we want to know the maximum angle of rotation, measured at the mast between the centerline of the yacht and the pole.

Please fill out the following two fields in the “Foretriangle” box:

ISP = spinnaker hoist, measured from the underside of the spinnaker halyard, when drawn horizontally forward from mast, to the level of the sheerline abreast the mast.

JSP = farthest distance from front of mast to asymmetric spinnaker tack location. Note that this can be much greater than J on sprit boats.

Setting and Sheeting Limits: For Asymmetric spinnakers

**TACK:** Sail may be tacked to the deck or to a pole. PHRF Application must state if the pole can be articulated to move the tack off hull centerline and how many degrees it can move. JSP must be recorded if greater than J.

**HEAD:** Halyard location may be at any height on the mast. If the dimension ISP is greater than I, then ISP must be recorded on the application.

**CLEW:** Sail may be sheeted to any location on the deck: and may be led through a pole with a length less than or equal to J. When in use, the pole must be attached to the mast.

The performance of Cruising/Asymmetric Spinnakers is not yet completely defined. Boats with excessive JSP's or ISP's and boats with the ability to move the tack of the sail off centerline may incur some rating adjustment. The PHRF Committee will be studying the performance of these various arrangements, and if considered necessary by this committee, this rule and/or its limits may change.

## HULL MEASUREMENTS

Drawings and photos are not required for well-documented production boats. However, if the boat is relatively rare, or not common in the Bay Area, drawings and/or photos are a must. We cannot rate an unknown boat using only the information on the application form. Measurements below are for the boats in “measured trim,” not “sailing trim,” using IMS wording. Your boat is equipped as it would be for racing, but without crew, sea bags, or consumable supplies, and with all tanks empty.

### Hull

#### LENGTH OVERALL

How long is your boat? If it has a bowsprit, please give the length of the hull and the bowsprit separately.

#### WATERLINE LENGTH

How long is the part of the boat in the water? Ignore the rudder.

#### MAXIMUM BEAM

What is the width of your hull at its widest point?

#### MAXIMUM DRAFT

What is the depth of the lowest point of the keel or board below the waterline. If the boat has a lifting board or keel of any type, draft is measured with this device fully lowered. Give the change in draft with the board raised separately.

### Displacement

#### Total

This is the weight of your boat ready to race as described above.

#### Ballast

We are looking for the weight of your keel. Section II-C states PHRF requires minimum ballast of 400 pounds. If your boat has ‘internal ballast’, it should be included. Internal ballast is typically in the form of lead ingots bolted to the hull, and is

NOT in the form of usable equipment or supplies. If your boat has been measured under some rating rule, and you have subsequently removed the internal ballast, this change must be reported in writing to the PHRF Committee.

#### Ballast Material

Typical answers here are lead or iron, and sometimes water.

#### Trapeze/Hiking Strap

These are allowed in One-Design Classes where the class rules clearly state that the hiking aids are allowed. They may not be used unless your PRHF application so indicates.

#### Movable Ballast

Does your boat have ballast that can be moved while sailing? The possibilities include

- (a) water ballast which can be moved from side to side, or discharged for runs, and restored for beating.
- (b) keels which can be inclined or canted.
- (c) and others.

Moveable ballast presents several difficulties. The biggest is in US Sailing / Racing Rules of Sailing (2005-2008) Rule #51 (MOVING BALLAST), which states quite clearly that moveable ballast is not legal when racing under the US Sailing rules. There are a (very) few races where the race instructions alter the RRS, and specifically allow moveable ballast, which is why this is on the PHRF form at all. If you use moveable ballast, it is your responsibility to be sure that it is legal in the races in which you are sailing. JUST BECAUSE IT IS ON YOUR PHRF CERTIFICATE DOES NOT MEAN YOU CAN RACE WITH MOVEABLE BALLAST.

#### Keel Type

##### Fixed

If your keel cannot be moved while you are sailing, then we consider it fixed.

##### Movable

If your keel can be moved while you are sailing, then we consider it moveable, and we need to know about it. This includes keels that move up and down, pivot around a pin ("swing keel"), or cant from side to side.

##### Keel/centerboard

This is really a sub-class of moveable keels, where the boat has a conventional keel, but also has a foil that can extend down below the bottom of the keel.

#### Engine

Do you have an inboard, outboard, or no engine at all?

#### Propeller

We need to know the number of blades on the propeller, and whether they are fixed blades, or folding/feathering. If the engine is an outboard, we assume the propeller is not in the water while you are racing, so in the case of outboards, we do not consider what type of propeller you have.

#### Modifications

##### Unmodified class boat

Check this box if your boat is a serially produced yacht that has not been altered.

##### Modified class boat

Check this box if your boat was originally a production yacht, but has undergone changes since its original manufacture. Examples include: a new keel, change in ballast, new rudder, new mast made of different material than the original, different number of spreaders on the mast, change in hull shape, etc. Include anything that would make you "unwelcome" racing against your unmodified sisterships.

##### Non-Class custom boat

Check this box if your boat is essentially a one-of-a-kind custom boat. If your boat is of this type, please read Part 1, Section II, Paragraph E about information we will need to handicap your boat.

## Describe modifications

Please explain modifications, moveable ballast, hiking aids here. Please feel free to write on the back of the form if you need more space.

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## RATING FEES

There are various categories of people who use Northern California PHRF certificates:

People who don't race in the YRA summer series.

This includes people who are racing in various club sponsored events such as 'Beer Can Series', Friday Night Races, the various Mid-Winter series, the South Bay Yacht Racing Association, the Singlehanded Sailing Society's single- and double-handed races, the Coastal races from San Francisco Bay to Santa Cruz, Santa Barbara, Ventura, or Catalina, or the Pacific Cup from here to Kaneohe, Hawaii, and many, many others. In this category, a new certificate is \$40.00, and a renewal from the previous year is \$30.00. There is a \$30.00 fee to change a certificate. The fee for a person who resides outside U S Sailing Area G is \$60.00. U S Sailing Area G is Northern California from San Louis Obispo north and Northern Nevada.

People who race in the YRA summer series.

This includes HDA (Handicap Divisions Associations), and OYRA (Ocean Yacht Racing Association). To race in YRA you need to be:

(a) Member of YRA, which is \$40.00 a year, and

(b) have a PHRF Certificate

In this category, a new certificate is \$40.00, and a renewal from the previous year is \$30.00. There is a \$30.00 fee to change a certificate.

## US SAILING

US SAILING is our national sailing organization, which maintains the racing rules and appeals. By joining US SAILING you help support administration of the rules, appeals, national championships, handicap systems, Certified Race Officer programs, and many other aspects of our sport. You may reach them at 800-US SAIL 1, or [www.ussailing.org](http://www.ussailing.org).

## WHAT THE YACHT RACING ASSOCIATION DOES FOR YOU

Even if you never sail in a YRA race, a number of important services are provided by the YRA:

- A. YRA maintains the racing marks! Nearly all racers use this system of permanent buoys.
- B. YRA administers the PHRF (Performance Handicap Racing Fleet) rating system. PHRF certificates have made it possible for many different types of boats to race together competitively in all the special events, HDA, OYRA, Friday night races, midwinters, and entry-level events.
- C. YRA coordinates the racing schedule. The master schedule helps avoid conflicts among all racing events, big, little or growing.
- D. YRA administers the US Sailing District Appeals Committee. It's your first level of redress if a protest committee has "done you wrong", regardless of whether or not it was a YRA event.
- E. YRA provides a liaison with the Coast Guard and local government organizations. It can organize lobbying efforts as necessary in the interest of all racing sailors. There is no other regional organization that can fill this role.
- F. YRA coordinates the US Coast Guard blanket permit process for all member yacht clubs. This entails the recording, coordinating, and scheduling of over 800 individual races on the San Francisco Bay.