



PHRF Rating Application Form

Owner's Name	Boat Vendor/Model
Address	Sail Number
	Yacht Name
Phone No.	Rig (Standard, Tall)

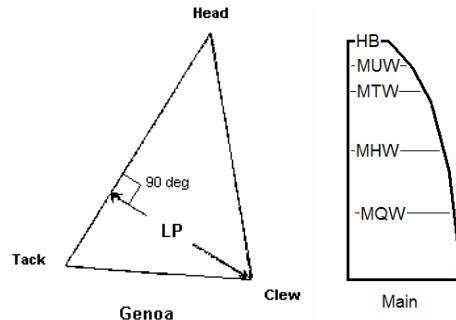
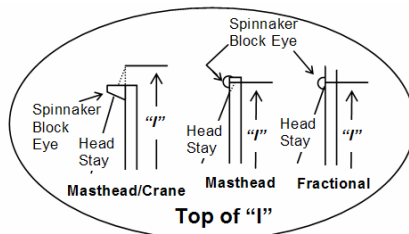
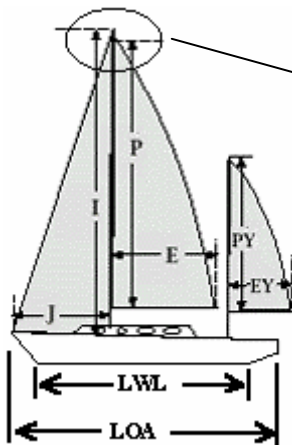
YACHT DATA AND MEASUREMENT (IN DECIMAL FEET)

I	HB	PY	Spinnaker Girth
J	MUW	EY	Spinnaker Leach
P	MTW	LOA - Length Overall	Spinnaker Pole
E	MHW	LWL - Length at Waterline	Draft
LP (Largest Headsail)	MQW	Beam	Displacement

VARIABLES

RIG	KEEL	RUDDER	ENGINE	PROP INSTALL	PROP TYPE
<input type="checkbox"/> Masthead	<input type="checkbox"/> Fin	<input type="checkbox"/> Attached	<input type="checkbox"/> Inboard	<input type="checkbox"/> In Aperture	<input type="checkbox"/> Folding
<input type="checkbox"/> Fractional	<input type="checkbox"/> Wing	<input type="checkbox"/> Skeg	<input type="checkbox"/> Outboard	<input type="checkbox"/> Exposed Shaft	<input type="checkbox"/> Feathering
<input type="checkbox"/> Other	<input type="checkbox"/> Full	<input type="checkbox"/> Spade	<input type="checkbox"/> None	<input type="checkbox"/> Strut Drive	<input type="checkbox"/> Solid 2-blade
<input type="checkbox"/> Roller Furled Jib	<input type="checkbox"/> Center Board	<input type="checkbox"/> Outboard			<input type="checkbox"/> Solid 3-blade
<input type="checkbox"/> Dacron Main/Jib	<input type="checkbox"/> Drop				

OTHER MODIFICATIONS: _____



\$10 RATING FEE, payable to ECSA.
 Deliver to ECSA PHRF Rating Chairman:
 Jim Miller
 348 South Lakeside Drive
 Satellite Beach, FL 32937
 Phone: 321-777-7011

I hereby grant permission to the Measurer duly appointed under ECSA Bylaws to measure and/or inspect my boat in my presence if deemed necessary by the Rating Committee.

OWNER'S SIGNATURE: _____
 (you must also sign and attach the 'Liability Waiver' on Page 2)



East Coast Sailing Association
P.O. Box 372054 Satellite Beach, FL 32937-0054



PHRF Rating Application Form

LIABILITY WAIVER

I recognize that the ECSA Rating Committee's sole purpose in issuing a PHRF Handicap for my boat is to estimate the relative speed between boats and assign Handicaps accordingly.

I understand that the assignment of a Handicap for my boat by the Rating Committee does not in any way constitute a representation or warranty by the Rating Committee that my boat is designed, rigged, equipped, maintained, crewed, or operated in a manner that is safe and seaworthy for the races that I may enter using this Handicap. I acknowledge and agree that it is my sole responsibility for the safety of my boat and crew in the wind, sea, and other environmental circumstances encountered while using the boat.

In consideration of my being granted a rating by the ECSA Rating Committee, and recognizing that the Rating Committee may not have the opportunity to either measure or inspect boats prior to issuing handicaps, I hereby affirm that I have examined all of the available information relating to the design and equipment of my boat and certify that it is seaworthy and meets all other requirements of the ECSA 'General Racing Rules' and 'Safety Equipment Recommendations'. In the event that I have not examined the available information on my boat, equipment and maintenance and am unable to make the above affirmation, I hereby waive any right I may have for myself, my heirs and assigns, now or in the future to assert that the Rating Committee has assumed any obligations to assure that my boat, equipment or maintenance meets the above requirements. I, my heirs, successors, and assigns hereby hold harmless the ECSA Rating Committee members from any liability or responsibility which may flow from or be caused by any defect in design, equipment or use of my boat while being sailed by me or others.

Signature _____ Date _____



PHRF Rating Application Form Policies and Procedures

Introduction

The ECSA Rating Committee has adopted the US-PHRF System to provide handicap ratings for sailboats which participate in racing events sponsored by ECSA or other yacht clubs in the area.

Rating Committee Organization

The ECSA Rating Committee is a semi-autonomous body whose Chairman is appointed by the ECSA Rear Commodore taking into account the recommendation of the Rating Committee members. Duties and responsibilities of the Chairman provide that he shall organize a Rating Committee which by invitation shall include one voting Representative from each local yacht club. Representatives on the ECSA Rating Committee are required to belong to United States Sailing Association. If a Representative is unavailable a qualified Alternate may be named. Yacht Clubs represented as of this date are:

**East Coast Sailing Association
Melbourne Yacht Club
Eau Gallie Yacht Club**

**Indian River Yacht Club
Port Canaveral Yacht Club**

**Kennedy Point Yacht Club
Titusville Yacht Club**

The Chairman may designate a Chief Measurer, whose duties shall include the issuance of temporary ratings, which shall be valid until the next meeting. In addition, at the request of the Committee, The Chief Measurer shall inspect and measure any boat when required to provide the Committee with data required to establish or correct a rating.

All representatives shall be voting members. The Chairman shall vote only to break a tie vote by the Committee. Any organization failing to send a representative to three consecutive Rating Committee meetings may no longer be represented on the Committee. When a club or organization has missed two consecutive meetings the Commodore of the organization shall be notified by the Rating Chairman, in writing, of the impending dismissal of their organization from the Rating Committee.

Performance Handicapping

The PHRF method of rating cruising sailboats was developed in Southern California and has been in use for three decades. As the result of its spread to other areas of the United States, the USSA has now recognized PHRF as a subcommittee (US-PHRF) under its Offshore Racing Committee.

US-PHRF acts as a coordinating agency for PHRF organizations located around the United States. Each local PHRF organization is autonomous and establishes its own operating procedures and ratings. Base boat ratings established by the local organizations are published by US-PHRF and distributed annually (with monthly updates) to the local organizations.

PHRF Ratings are boat performance ratings. They are based on the speed potential of the boat, based as far as possible on observations of previous racing experience. It is the intent of PHRF handicapping that any well equipped, well maintained and well sailed boat has a good chance to win; and that any boat that wins a PHRF race is indeed well equipped, well maintained and well sailed.

PHRF ratings are not intended to reflect the skipper and crew capability. Hence, PHRF racing is primarily a test of skipper and crew skill. Ratings are not adjusted to permit a poor and careless skipper to score in the upper third of the fleet.

Doing well in a race, therefore, requires the exercise of skill and ability. Consistently poor performance, sloppy maintenance or deliberately holding back will not normally result in a more favorable rating. Conversely, if a skipper and crew sail the boat well and consistently place high, this of itself will not lead to a rating lower than that of the actual



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performance potential of the boat. Assuring that the rating is based on the performance of the boat, rather than sailing skill, is an important factor in preserving high morale and wholesome competition within the fleet.

Boat Design

The PHRF is an open rule. Hull design, sail area and cut, the length of spars or battens, the number of sails, etc., are each unrestricted. Class restrictions do apply to PHRF when a One Design Rating is utilized. There are no limitations on ingenuity other than those contained in the USSA rules. Therefore, the responsibility of the skipper to ensure that all modifications are reported to the PHRF Rating Committee for assessment is paramount to the health of the fleet.

Well designed and constructed boats are not expected to be obsoleted by newer designs under PHRF. PHRF does not use a formula to determine base boat handicaps, because any formula once established can be circumvented by a clever design or skipper. As faster designs appear, they are handicapped accordingly. As a result, one of the major attractions of the PHRF system is that older boats can race competitively with the latest designs.

PHRF discourages "rule beating". If a skipper modifies his boat to go faster, PHRF will attempt to compensate for the faster speed potential. The use of taller masts, longer spinnaker poles, extra ballast, gutted interiors or other modifications intended to increase the speed is compensated for in the rating in order to nullify any advantage.

Requirements [May not be deleted from the yacht during racing.]

To be eligible to obtain a ECSA-PHRF Certificate a boat must either be already listed in the USSA PHRF Rating Book or:

1. Comply with the ECSA cruising boat requirements as follows:

The hull of the boat shall:

- A. Be minimum length of 20 feet overall with a cabin.
 - B. Be completely strong and water-tight and capable of withstanding solid water and knock-down without significant leakage.
 - C. Have hatches, companionways and ports which are essentially water-tight and capable of being closed securely with strong hardware.
 - D. Have structurally strong, essentially water-tight self-bailing cockpit permanently incorporated as a structural part of the hull.
 - E. Have at least two berths 72 inches by 18 inches with suitable cushions
 - F. Have a suitable marine head.
2. Be self-righting per MORC Minimum Standards [paragraph 22]. (If questionable, mainsail and largest genoa are attached to mast head, yacht is hauled over until mast touches water, then released. If yacht returns to upright position without outside influence it is considered self-righting.) Should this test be required, it shall be performed by the owner or his delegate.
 3. Have auxiliary power capable of propelling the boat at three knots in calm air and water. The propulsion capability must be on board during racing.



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Base Boat Ratings

A base boat rating (time allowance in sec/mi.) is established for each "standard class boat". A standard class boat is a design which the manufacturer has made (or intends to make) a number of copies with essentially identical hulls and rigs. A standard class boat which has had modifications to its hull or rig is no longer a standard class boat.

For rating purposes, a base boat is assumed to have:

- A. A mainsail which when racing is set so as not to exceed Class (P) and (E) dimensions.
- B. A genoa with **LP = 1.55J**
- C. A spinnaker with: Girth = **1.8J**: **Leech = $.95(l^2 + J^2)^{1/2}$**
- D. A spinnaker stay-sail.
- E. A spinnaker pole equal in length to (J).
- F. An outboard motor or an inboard with a folding prop.

Individual Boat Ratings

The rating (time allowance) for an individual boat is determined by the following equation:

Rating = Base Boat Rating + Mainsail Correction Factor + Genoa Correction Factor + Spinnaker Correction Factor + Correction Factor for Hull/Rig/Unusual Sail Configuration + Miscellaneous Correction Factors

Appendix A sets forth the details of the base boat rating procedures and the correction factors.

Rating Committee Operation

The Rating Committee shall meet quarterly to act upon all pending requests and conduct business as required. If no rating requests are pending, a monthly meeting may be canceled. A polling of committee members may be taken in place of a physical meeting at the discretion of the Chairman. A summary of actions taken by the Rating Committee shall be posted for general information.

A quorum shall be three of the Sailing Organizations currently represented on the Committee.

The changing of the base boat rating of a boat shall require the vote of the majority of those present.

The Chairman shall maintain records of each yacht rated. These records include all data used to establish the PHRF rating of the yacht. He shall maintain the Minutes of the Meetings of the Committee as well as all data used as reference during rating discussions. He shall maintain contact with US-PHRF to obtain copies of all pertinent information they publish. Applicable copies of this data will be furnished to each representative.

A master list of all boats rated shall be published. The list shall contain at least the yacht owner's name, boat class, rated sail inventory and the assigned rating. Copies of the list shall be supplied to each yacht club represented. Once each quarter, the updated list shall be supplied to each yacht club represented. Once each year, the updated list shall be published in the ECSA Newsletter.



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The Rating Committee Members, in addition to the Chief Measurer, may assign temporary ratings based on a completed application which will be acted on by the full committee at the next regularly scheduled meeting.

The Committee shall establish a rating fee. The fee shall be based on the estimated annual cost of operating the PHRF System. The fee shall be \$10 per rating payable to the individual yacht clubs who will forward the fee to the ECSA Rating Chairman.

During April & May of each year, all ratings must be renewed. Each rated boat owner shall be advised that the renewal is due. The June publication of the master list in the ECSA Newsletter will establish the list of those who have renewed their ratings.

Procedure for Establishing Ratings or Changes to Ratings

Requests for initial ratings for a yacht shall be by submission of the ECSA PHRF Application Form to the Rating Committee Chairman. Routine rating applications may be assigned by the Rating Committee Chairman and rating committee members. The Rating Committee Members may assign temporary ratings based on a completed application which will be acted upon by the full committee at the next regularly scheduled meeting. Requests for changes to published ratings shall be submitted to the Rating Committee Chairman and shall include all data/information intended to support the requested change. All applications and requests for changes will be acted on at the next scheduled meeting. Applicants and requesters are invited to attend the meeting.

Owner's Responsibility

Each yacht owner is responsible that all measurements and data supplied are adequate and valid. The ECSA Rating Committee assigns a PHRF handicap to a boat assuming that it is sailed in showroom condition. That is, with all equipment on board, and with no changes made to the hull and its appendages, rig (spars and standing rigging), and sails. Any change (modification) made to the boat must be reported, in writing, to the ECSA Rating Chairman immediately. **Owners should be aware that the moment a change is made to a boat without proper notification to the Rating Committee, the current certificate is no longer valid.** Failure to report a change may result in severe penalty or in the suspension or revocation of a certificate.

If it is the opinion of the Committee that insufficient data has been supplied by the Owner, the Committee may withhold the issuance of a Rating Certificate.

Review of Ratings

A yacht owner may ask for a review of his or any other boat's rating if he feels it is unfair. Yacht owners who are Rating Committee members and who ask for a review of a rating shall not participate in any action or decision resulting from the review procedure.

The ECSA "Rating Review" form shall be used to petition reviews. Completion of the race data section is not mandatory. Changes to rating resulting from review action shall be limited to 6 sec/mi. once each 12 months. Rating reviews will be acted on at the next scheduled rating meeting if received prior to distribution of the meeting agenda to committee members. All parties affected by the review are invited to participate at the meeting.

Protests

Protests involving a question of whether a yacht is being sailed in a PHRF event in conformance with its Rating Certificate configuration shall be processed in accordance with the Racing Rules of Sailing in effect at the time of the existence of the protested circumstances.



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APPENDIX A BASE BOAT RATING AND CORRECTION FACTORS

I. BASE BOAT RATING

A. Initial ECSA Rating:

Established as follows:

1. Class Boat: Listed in US-PHRF Handicaps Book

The base boat rating will be established by consideration of the US-PHRF data, comparison with similar boats, IOR and MORC data, discussion with other handicappers at the locations shown and any other pertinent data available.

2. Class Boat: Not listed in US-PHRF Handicaps Book

Established by comparison with similar boats, IOR and MORC data, discussion with manufacturers and using any other data available

3. One of a Kind Boat: Same as above.

B. Changing Established Base Boat Ratings:

Once a base boat rating has been established, it can only be changed by:

1. A Review (See Review of Rating) or,
2. The Rating Committee when it feels available data and information warrants a change, or,
3. The Rating Committee voting to establish a periodic review of all ratings. (Re-compute all Ratings per procedures noted above)

II. MAINSAIL CORRECTION FACTOR (MCF)

Each class boat has a mainsail hoist (P) and foot (E) dimension. When racing, the mainsail shall be set so as not to exceed these dimensions. The mainsail girth measurements, when measured in accordance with IRC measurement methods, shall not exceed the following values:

Measurement Location	Limit
Headboard (HB)	The greater of 0.04 * E or 0.50 Ft
Mainsail Upper (7/8) Width (MUW)	0.22 * E
Mainsail Top (3/4) Width (MTW)	0.38 * E
Mainsail Half (1/2) Width (MHW)	0.65 * E
Mainsail Quarter (1/4) Width (MQW)	0.90 * E

Any increase in (P) or (E) shall incur a penalty of -1 seconds-per-mile for each whole or part of a percent that the measurement exceeds the class (P) or (E) respectively.



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If any girth measurement exceeds the limit specified above a penalty shall be assessed as follows:

1. The girth limits for each measurement location, HB, MUW, MTW, MHW, MQW shall be summed.
2. The actual measurement for each measurement location shall summed.
3. A penalty of -1 seconds-per-mile shall be incurred for each whole or part of a percent that the sum of the actual measurements in 2. above exceeds the sum of the limits in 1. above.
4. No adjustment is made if the sum of the actual measurements in 2. above does not exceed the sum of the limits in 1. above.

Full battened mainsails are permitted without penalty.

III. GENOA CORRECTION FACTOR (GCF)

Definition of a Jib Sail: To be rated as a jib sail, at any distance from the head, the ratio of the girth to the foot length shall be no greater than the girth's proportionate distance from the head, i.e. mid-girth no greater than 50% of the foot length, girth at 25% from the head no greater than 25% of the foot length.

The Genoa Correction Factor formula is as follows:

6 Sec/Mile for 135% or less and 12 Sec/Mile for 110% or less.

Adjustment for genoas larger than 1.55J shall be assessed for all yachts.

No adjustment is assessed for double headsail configurations.

If a blooper is used, it shall be considered as a genoa for purposes of determining the largest genoa in the sail inventory.

IV. SPINNAKER CORRECTION FACTOR (SCF)

If no spinnaker is included in the sail inventory, an adjustment in seconds-per-mile shall be added to the base boat rating for that boat where the value to add is calculated as follows:

Symmetrical Spinnaker Adjustment:

$(0.028 * (0.95 * \text{Square Root of } (I \text{ squared} + J \text{ squared})) * J * (\text{Base PHRF Rating} + 546)) / \text{Rated Sail Area}$

Asymmetrical Spinnaker Adjustment:

$(0.028 * (1.15 * \text{Square Root of } (Ic \text{ squared} + Jc \text{ squared})) * Jc * (\text{Base PHRF Rating} + 546)) / \text{Rated Sail Area}$

Except that the adjustment for a Catalina 22 shall be +12 sec/mi instead of the value calculated in accordance with the formula.

If the largest spinnaker girth is greater than 1.8J, the base boat rating shall be corrected as follows:

$\text{Girth Correction} = \frac{30(1.8J - \text{Girth})}{1.8J} \text{ sec/mi.}$

The Girth Correction derived from this formula shall be rounded to the nearest integer.



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If the largest spinnaker leech is longer than $.95(I^2 + J^2)^{1/2}$, the base boat rating shall be adjusted as follows:

$$\text{Leech Correction} = 60 \frac{.95(I^2 + J^2)^{1/2} - \text{Leech}}{.95(I^2 + J^2)^{1/2}} \text{ sec/mi.}$$

The Leech Correction derived from this formula shall be rounded to the nearest integer.

SCF = (Girth Correction plus Leech Correction) sec/mi.

No correction shall be made for girths less than 1.8J or leeches shorter than $.95(I^2 + J^2)^{1/2}$.

Spinnaker poles or whisker poles shall not exceed J by more than three inches. The correction for oversized poles is as follows:

$$\text{Spinnaker Pole Correction} = 30 \left(1 - \frac{\text{SPL}}{J}\right) \text{ sec/mi.}$$

The Spinnaker Pole Correction derived from this formula shall be rounded to the nearest integer.

If an adjustment for an oversized girth has been assessed, the larger of spinnaker pole or girth adjustment will be applied (no correction will be made for a matching spinnaker pole).

Spinnaker poles which are parallel to the centerline when in use and do not articulate to either side shall receive a correction factor according to the following formula:

$$\text{Bow Pole Correction} = 18 \left(1 - \frac{\text{BPL}}{J}\right) \text{ sec/mi.}$$

The zero data point for determining BPL shall be the forward face of the mast.

The Spinnaker Pole Correction derived from this formula shall be rounded to the nearest integer.

Boats with ODR classification resulting from factory equipped bow poles shall not be assessed any additional penalty using this formula.

V. CORRECTION FOR HULL MODIFICATIONS

A standard class boat which has a hull modification which significantly changes its performance shall be established as a nonstandard boat and assigned a unique base boat rating or an adjustment shall be assigned by the Rating Committee.

VI. CORRECTION FOR RIG MODIFICATIONS

A. For class boats with a non-standard rig adjustments will be considered on a case by case basis.

B. A deduction for any rig change [modification] in the topmost 25% of the rig shall be considered on a case by case basis.



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VII. MISCELLANEOUS CORRECTION FACTORS

- A. Class boats with fixed prop installations shall be given an adjustment of +21 sec/mi. for two blade and +30 sec/mi. for three blade, if the boat can be driven at $1.0 * \text{SQRT LWL}$ (in knots) in smooth water with that propeller.
- B. For class boats originally equipped with an outboard, a +3 sec/mi. allowance shall apply if an inboard is installed.
- C. Boats with roller furling genoas shall receive an adjustment of +6 sec/mi.
- D. Boats with Dacron sails (main & jib) shall receive an adjustment of +6 sec/mi
- E. Boats with modified cruising interiors (extra weight) from original design weight may receive an adjustment of +12 sec/mi

NOTES

1. The effective date of a rating is the date shown on the rating certificate. However, the use of the new rating in any sailing event shall be the prerogative of the race chairman.
2. Once a rating has been issued to a boat owner of a specific boat, changes to the rating resulting from rated configuration changes may be made at additional charge.
3. Once a yacht has been rated, the declared headsail (genoa) configuration can only be changed once each year at renewal time (April-May), except that, if during the year the declared genoa is retired and replaced by one of a different size, the rating will be revised to reflect the new sail.