

INTERNATIONAL RC MARBLEHEAD CLASS RULES

Authority: International Model Yacht Racing Union (IMYRU)

1. GENERAL

The RC Marblehead Class is a Development RC (Remote Control) Racing Class of monohull yachts with the following basic restrictions: The overall length of the hull shall be minimum 1276mm and maximum 1289 mm and the measured sail area shall not exceed 0.5161m². The original rules were devised by Roy L Clough in 1932.

2. ADMINISTRATION

2.1 LANGUAGE

The official language of the class is English and the English text shall prevail in the event of a dispute over translation. In translating and interpreting these rules, it shall be understood that the word "shall" is mandatory and the words "can" and "may" are permissive.

2.2 CLASS RULES, MEASUREMENT DIAGRAMS AND MEASUREMENT FORM

- .1 These rules are complementary to the measurement diagrams and the measurement form. Any interpretation shall be made by the IMYRU in consultation with the international class association, if this exists.
- .2 In the event of discrepancy between these rules, the measurement diagrams and/or the measurement form, the matter shall be referred to the IMYRU.

2.3 NATIONAL AUTHORITIES

A National Authority for Model Yachting (NA) may delegate the administration of the class, as stated in these rules, to a national class association which shall be affiliated to the international class association, if this exists.

2.4 LIABILITY

Neither the IMYRU nor the international class association, if this exists, accept any legal responsibility in respect of these rules or any claim arising therefrom.

2.5 BUILDERS

The RC Marblehead Class is a Free Construction Class and no licence is required to become a builder. No building fee is due to the IMYRU.

2.6 REGISTRATION AND MEASUREMENT CERTIFICATE

- .1 No yacht shall take part in class races unless it has a valid measurement certificate in the owner's name. The certificate is obtained as follows:
 - (a) The owner or the builder shall apply to the appropriate NA for a sail number. Any required registration fee shall be forwarded with the application.
 - (b) Each country shall issue sail numbers and only one yacht in each country shall have the same sail number.
 - (c) The owner shall send the completed measurement form to his NA. On receipt of this a certificate may be issued to the owner.
- .2 Change of ownership invalidates the certificate and the old certificate shall be returned to the NA with a written application containing the name and address of the new owner and any re-registration fee that may be required. A certificate shall then be issued to the new owner.

2.7 MEASUREMENT

- .1 The yacht shall be measured in accordance with the rules current when she was first measured, except that spars, rigging and sails shall comply with the current rules.
- .2 Only a measurer officially recognised by a NA shall measure a yacht, its spars, sails and equipment and sign measurement forms.
- .3 A measurer shall not measure a yacht, spars, sails or equipment owned or built by himself, or in which he is an interested party or has a vested interest.
- .4 If a measurer is in any doubt as to the legality of any part of the yacht, spars, sails or equipment, he shall report accordingly on the measurement form.
- .5 Alterations, replacements or repairs to the yacht shall be made in accordance with these rules and shall be checked by an official measurer where such items are required to be measured.
- .6 New or substantially altered sails shall be checked by an official measurer and dated and stamped or signed by the measurer near the tack.

2.8 IDENTIFICATION MARKS

- .1 The hull shall carry, either painted, engraved or moulded in, the yacht's national letter(s) and sail number.
- .2 The mainsails shall carry the class insignia, national letter(s) and sail number in accordance with rule 3.7.

3. CONSTRUCTION AND MEASUREMENT RULES

3.1 GENERAL

The yacht shall be measured in accordance with the current IYRU Measurement Instructions, except where varied herein.

3.2 HULL

- .1 The hull shall be a monohull and the overall length, including the bow bumper, shall be minimum 1276mm and maximum 1289mm.
- .2 The bow bumper shall be made of resilient material and shall project approximately 13mm forward of the foremost part of the hull shell.
- .3 Tunnel hulls are prohibited. On no section of the hull below the maximum width, shall any point be more than 3mm below any point closer to the centreline.
- .4 The deck shall not be artificially raised in the region of the mast.

3.3 FINS/KEELS AND BALLAST

- .1 Fins/keels that can be moved in any direction or by rotation are prohibited. A fin/keel that can be removed and refitted in only one position is permitted.
- .2 Centreboards, leeboards and bilge boards are prohibited.
- .3 Ballast material shall not have a higher density than lead (11.3 kg/dm³).

3.4 RUDDERS

No part of a rudder shall extend beyond the limits of the hull overall length measurement.

3.5 RIGS AND SAIL PLANS

- .1 The sail plan shall not consist of more than one jib and one main and all sails shall be basically triangular.
- .2 The dimensions of not more than three rigs may be recorded on the certificate. These recorded rigs shall be designated "A", "B" and "C".
- .3 Smaller rigs are permitted if they do not exceed the dimensions of the recorded rig and comply with all other restrictions.
- .4 The height of the sail plan "H" shall not exceed 2159mm, measured from the deck at the mast to the lower edge of the upper mast band.
- .5 The jib hoist "I" shall not exceed 80% of "H", measured from the deck at the mast to the lower edge of the middle mast band. A line taken through the jib tack and head, shall not cut the forward edge of the mast higher than the lower edge of the "I" measurement mast band when the jib is held on the centreline of the hull.
- .6 No part of a rig shall extend beyond the limits of the hull overall length measurement when the sails are held on the centreline of the hull.

3.6 SPARS

.1 General

- (a) No spars shall exceed 19mm in diameter.
- (b) Measurement bands on spars shall be of a colour which contrasts with the colour of the spar and shall not be less than 3mm wide.

.2 Masts

Three measurement bands shall be placed on each mast to conform with the measurement diagram. The upper and middle bands may be excluded on masts of smaller rigs if the length of the mast makes it impossible to exceed the recorded "H" and "I" measurements. The lower band shall not be placed lower on masts of smaller rigs than on the recorded rig.

.3 Booms

- (a) A sail is set on a boom when the foot is attached to the boom along part or all of its length.
- (b) When a mainsail is set on a boom, the "B" measurement shall be taken as the length of the foot and a measurement band shall be placed on the boom to limit this measurement with the inner edge. If the boom is adjustable fore and aft, the band shall be placed with the boom in the fully aft position.
- (c) When a jib is set on a boom, two bands shall be placed on the boom to limit the length of the foot with the inner edges.
- (d) When a sail is set on a boom, any curvature of the upper edge of the boom, achieved by a permanent set or mechanical means other than sheet and kicking strap, shall be measured as shown in the measurement diagrams.

3.7 SAILS

.1 General

- (a) Sails shall be constructed and measured according to the current IYRU Sail Measurement Instructions, except where varied herein.
- (b) Sails shall be capable of being rolled without permanent damage. Sails may be made of non-woven material and sizes of reinforcements are not restricted. Battens shall not be removed when measuring.

- (c) Battens shall not exceed 102mm in length and 19mm in width. Battens shall be so placed that their centrelines divide the leech into parts where the maximum inequality does not exceed 25mm.
- (d) The foot round on a loose-footed sail shall not exceed 25mm measured to a line from tack to clew. The round shall be an approximately fair even curve so that when tack and clew are folded to an arbitrary point on the foot and with the foot as flat as possible, the edges shall nowhere be more than 3mm apart.
- (e) All sails shall be clearly marked at the clew with the designated rig letter. Sails of one rig may be used on another if they are marked accordingly and comply with the recorded rig measurements.
- (f) The class insignia shall be the letter "M" of the following minimum dimensions: Height and width 25mm and thickness 6mm.
- (g) The national letter(s) and sail number shall not be less than the following dimensions: Height 60mm, width 40mm (except number "1" and letter "I"), thickness 9mm. Minimum space between adjoining letters and numbers shall be 9mm.
- (h) The class insignia, national letter(s) and sail number shall be placed as laid down in the International RC Yacht Racing Rules. If it is not possible to comply with these rules, even if the national letters are placed above the sail number, the numbers shall be placed as high as possible.

.2 Mainsails

- (a) Mainsails shall comply with the measurement diagram.
- (b) There shall not be more than 4 battens, which shall comply with rule 3.7.1(c).

.3 Jibs

- (a) Jibs shall comply with the measurement diagram.
- (b) There shall not be more than 3 battens, which shall comply with rule 3.7.1(c).

.4 Sail Area

- (a) The measured sail area shall not exceed 0.5161m^2 and shall be calculated with 6 decimals and corrected to 4.
- (b) The measured sail area shall consist of the sum of the triangular areas of the mainsail and the jib and any additional areas.

4. ADDITIONAL RULES WHICH APPLY WHEN RACING

4.1 EQUIPMENT

- .1 Only 3 rigs of each designated rig letter and 1 set of fin/keels, ballasts and rudders shall be used during a race or series of races, except in cases of authentic damage or loss. All replacements shall be authorized by the race committee. Only 1 rig shall be used at any one time.
- .2 Self steering devices or electronic equipment for automatic steering or rig trimming are prohibited.

4.2 CONTROL MEASUREMENT

When control measured, the yacht shall comply with the measurements entered on the certificate and larger measurements are not permitted, even if they would comply with the restrictions in these rules.

4.3 CLASS RULES

- .1 These rules shall not be varied by a race committee.

- .2 The body to which a protest committee shall refer a measurement protest concerning doubt over the interpretation or application of these rules, shall be the NA which issues certificates in the country organizing the race.

4.4 RACING RULES

Class races shall be sailed under the International RC Yacht Racing Rules. At World, Continental or Regional Championships these rules shall be varied only with the agreement of the NA and the IMYRU.

4.5 OWNER TO BE A MEMBER OF THE CLASS ASSOCIATION

The owner shall be a member of the national class association where this exists.

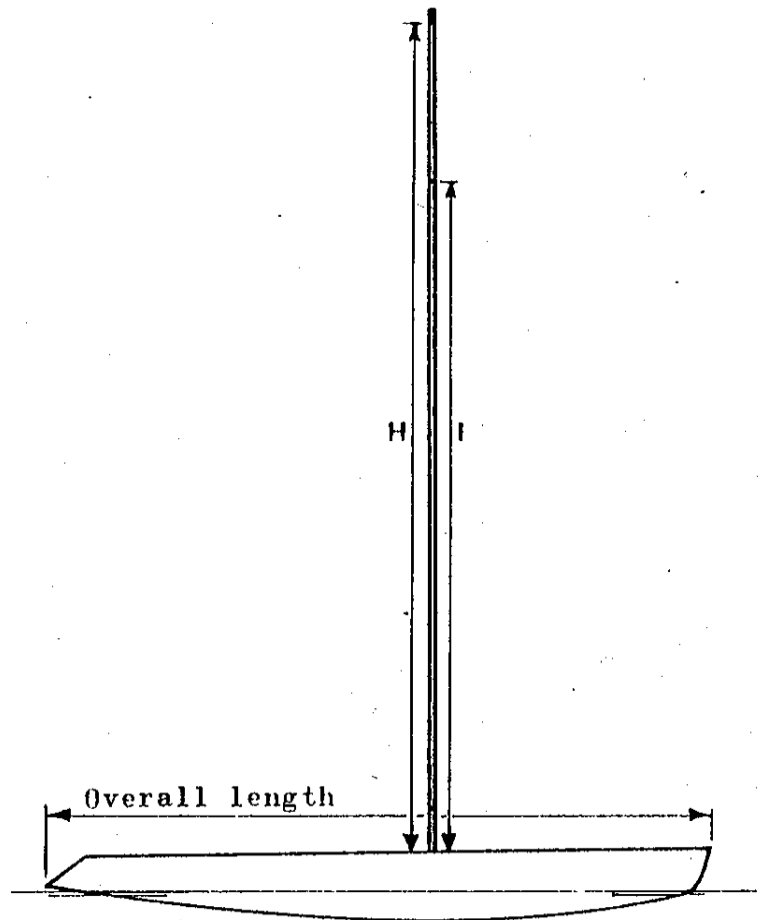
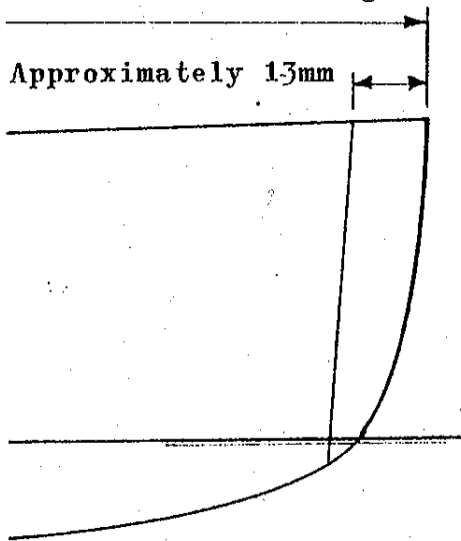
This edition effective from: 1 January 1988
Previous edition: 1 December 1984

MEASUREMENT DIAGRAMS

BUMPER

Overall measured length

Approximately 13mm



DEFINITIONS OF MEASUREMENT POINTS

Clew: The intersection of the leech and the foot.

Tack: The intersection of the foot and the luff.

Head: The highest point of the sail projected perpendicular to the luff or its extension.

Aft point at the head: The intersection of the leech and a line through the head perpendicular to the luff or its extension.

MEASUREMENT BANDS

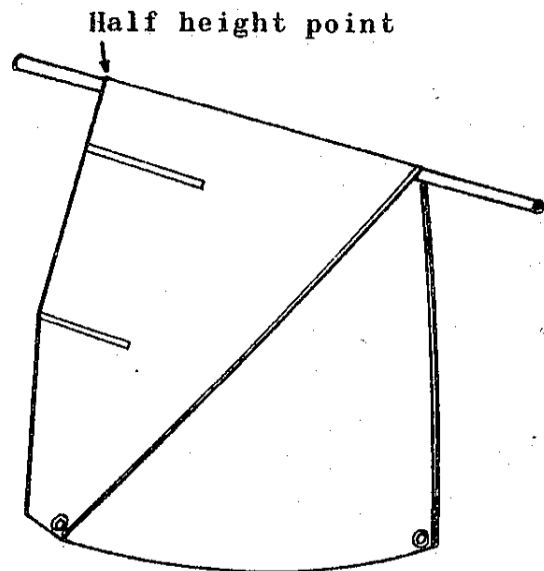
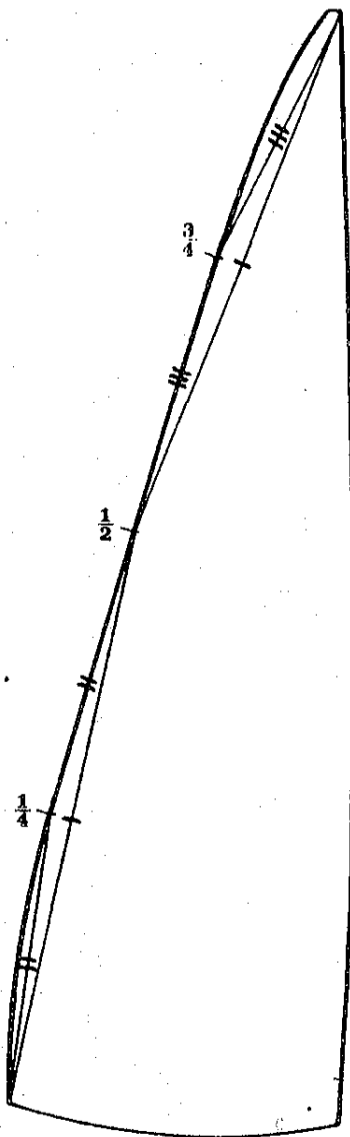
When measurements are taken to measurement bands, the sail shall not be set with the corresponding measurement point beyond the inner edge of such band.

CROSS WIDTH MEASUREMENT POINTS

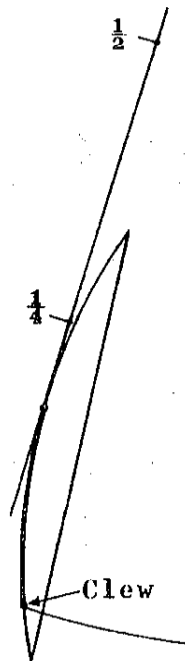
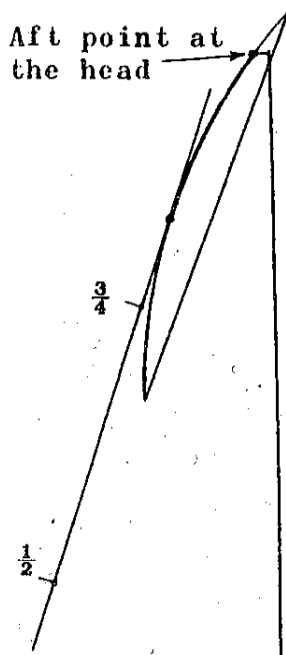
If a sail is permanently attached to the spars, the cross width measurement points on the leech can be found by measuring equal distances as shown to the left.

Any hollows in the leech and the luff shall be bridged when measuring the cross widths.

If the cross width measurement points are determined by folding the sail, as prescribed in the IYRU Sail Measurement Instructions, this can be done over a rod to avoid creases.



CONTROL OF THE UPPER AND LOWER PART OF THE LEECH



A pattern consisting of a circle segment of 900mm radius shall be used for this purpose.

At the head, the pattern shall be placed to touch the aft point at the head and a straight line through the two nearest cross width measurement points.

At the clew, the pattern shall be placed to touch the clew and a straight line through the two nearest cross width measurement points.

If a cross width measurement point, and/or a point where the centreline of a batten intersects the leech, falls outside the pattern between the positioning points, the pattern shall be repositioned to either point so that no point appears outside the pattern.

When the pattern is positioned according to the instructions above, the leech shall not project outside the pattern between the points of positioning.

EXCESSES IN CROSS WIDTHS

Any excesses in cross widths shall be entered in one of the following formulas and the resulting additional sail area shall be added to the triangular sail area.

Mainsails: $\frac{A(2x + y + 2z)}{6}$

Where: x is the excess at $\frac{1}{4}$ -height

y is the excess at $\frac{1}{2}$ -height

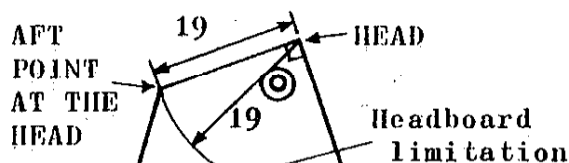
z is the excess at $\frac{3}{4}$ -height

Jibs: $\frac{Q(2x + y + 2z)}{6}$

WIRE SUPPORTING THE TOP OF A SAIL

Parts of a wire supporting the top of a sail, which are not more than 2mm in diameter and not covered with sail material, shall not be taken as parts of the sail.

JIBS



TRIANGULAR SAIL AREA

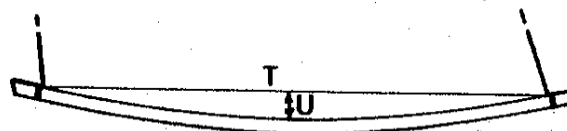
$$\frac{Q \times R}{2}$$

SAIL SET ON A LUFF SPAR

If the sail is set on a luff spar (headfoil), the R measurement and the cross widths shall be taken to the fore edge of the luff spar and the width at the head to the aft edge of the spar.

SAILS SET ON A BOOM

T shall be taken as the distance between the inner edges of the boom bands and U shall be taken as any curvature of the upper edge of the boom according to rule 3.6.3.

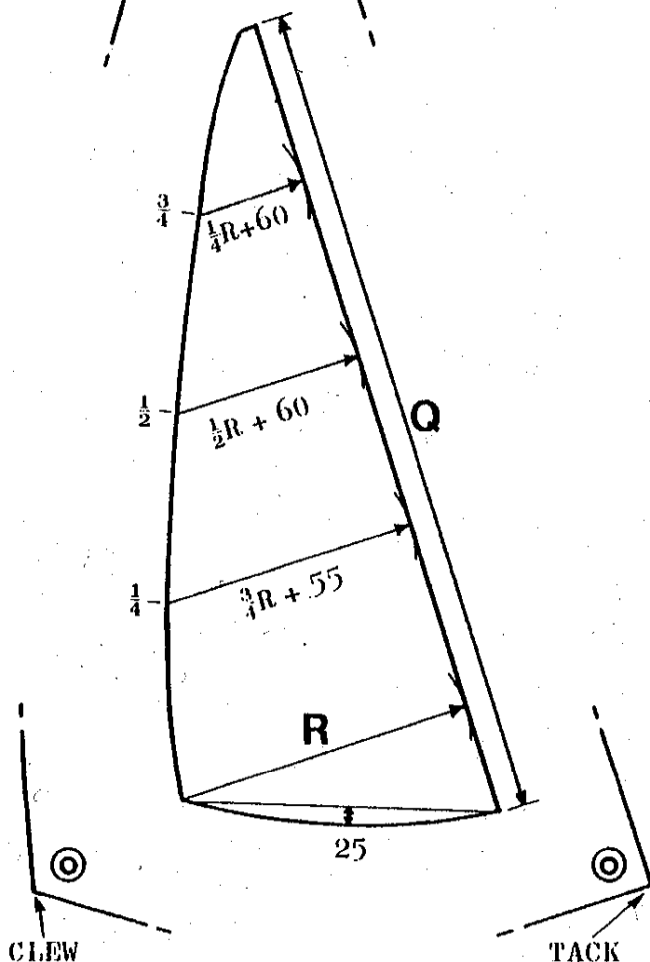


Additional sail area:

$$\frac{2(T \times U)}{3}$$

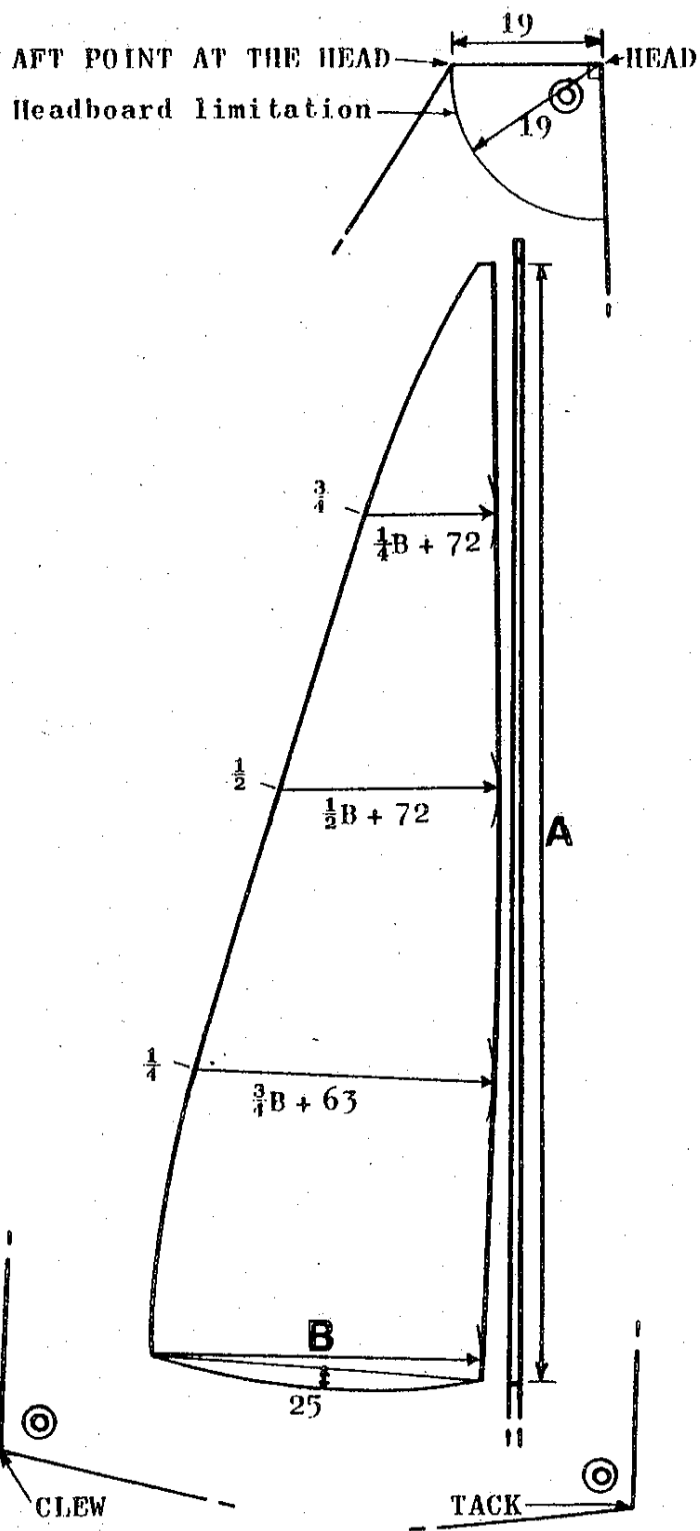
CROSS WIDTHS

Cross widths to be measured as for mainsails.



All measurements in mm and maximum permitted.

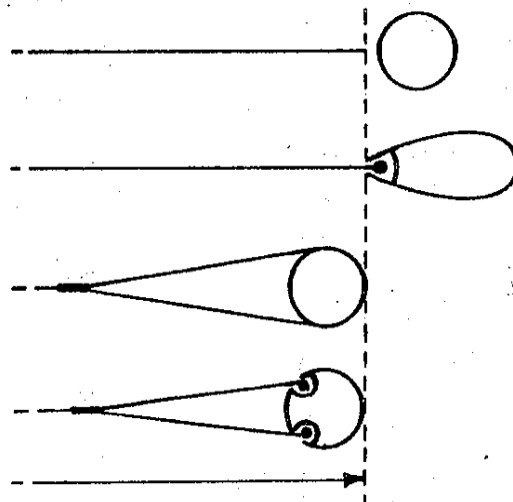
MAINSAILS



TRIANGULAR SAIL AREA

$$\frac{A \times B}{2}$$

MEASUREMENT POINTS ON THE LUFF



If the luff is set in a luff groove, the width at the head, the B measurement and the cross widths, shall be taken to the aft edge of the mast.

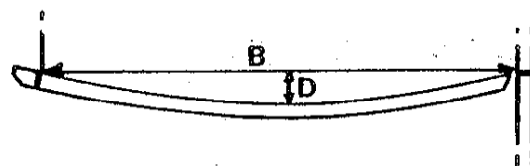
If the sail is double-luffed, the B measurement and the cross widths shall be taken to the fore edge of the mast and the width at the head shall be taken to the aft edge of the mast

MAINSAIL SET ON A BOOM

The B measurement shall be taken as the length of the foot.

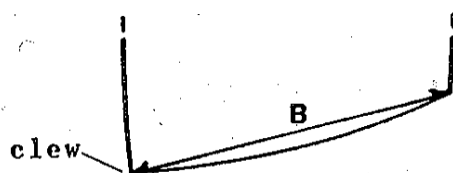
Additional sail area:

$$\frac{2(B \times D)}{3}$$



D is any curvature according to rule 3.6.3.

DROPPED FOOT ON A LOOSE-FOOTED SAIL



All measurements in mm and maximum permitted.

INTERNATIONAL FS MARBLEHEAD CLASS RULES

Authority: International Model Yacht Racing Union (IMYRU)

Date of International Status: 3 August 1937

1. GENERAL

The FS Marblehead Class is open to Free Sailing (FS) Marblehead yachts. The RC Marblehead Class Rules shall apply with the following amendments.

2. MOVABLE AND SHIFTING BALLAST

No ballast or dead weight shall be used as shifting ballast or for altering the trim of the yacht. No ballast shall be shipped, unshipped or shifted during a race or series of races. Water shall not be taken in or discharged during a race or series of races, except that bilge water may be removed at any time.

3. VANE STEERING GEAR

- 3.1 The axis of the main spindle of the vane gear shall be inboard, but any other part of the gear may overproject the hull. Underdeck gear is permitted provided that such gear is easily and readily accessible for inspection.
- 3.2 The counter weight may be removed or adjusted without being construed as shifting or movable ballast.

4. EQUIPMENT

Rule 4.1.2 in the RC Marblehead Class Rules shall not apply.

5. SPINNAKERS

- 5.1 The sail plan may include a spinnaker, the area of which is not measured.
- 5.2 Headboards shall be totally within a distance of 19mm from the highest point of the sail at the head.
- 5.3 The spinnaker hoist shall not exceed 1727mm, measured from the deck at the mast.
- 5.4 The spinnaker boom shall not exceed 381mm, measured from the centre of the mast to the outer end of the boom.
- 5.5 The spinnaker, its rigging and boom, may extend beyond the forward hull length limit.

6. CLASS RULES

- 6.1 These rules shall not be varied by a race committee.
- 6.2 The body to which a protest committee shall refer a measurement protest concerning doubt over the interpretation or application of these rules, shall be the NA which issues certificates in the country organizing the race.

7. RACING RULES

Class races shall be sailed under the IMYRU Vane Controlled Racing Rules. At World and Regional Championships these rules shall be varied only with the agreement of the NA and the IMYRU.