

MINI 40

CLASS

40

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Fédération Française de Voile
British Model Multihull Association

1996 MINI40 CLASS RULES

These rules are supplemented by the following documents:

IYRU Model Yacht Racing Division "*International Class Administrative Rules 1994*",
 IYRU Model Yacht Racing Division "*Sail Identification Mark Rules 1994*",
 IYRU Model Yacht Racing Division "*Resolution, Error and Accuracy of Measurements*".

1 GENERAL

1.1 Purpose of the Measurement Rules

1.1.1 The MINI 40 is a multihull development RC (Remote Control) Class with limitations.

1.1.2 The intention of these rules is to give the designer and builder the freedom in design and construction, within the scope of these rules, to build and produce competitive multihulls with the following measurement limitations:

the maximum overall length is 1220 mm

the maximum width is 1220 mm

the maximum sail area is 0.9 m².

1.1.3 Anything not specifically prohibited by these rules is permitted.

1.1.4 The Mini 40 class is a "Category B" class under IYRU definitions. Boat decoration is allowed, and can be derived from real multihulls.

The following paragraphs of the *International Class Administrative Rules* are changed:

1.3.1 The Fédération Française de Voile (F.F.V.), Secteur Voile Radiocommandée, Measurement Committee, is the current authority for this class.

1.3.2 The F.F.V. shall not accept any legal responsibility in respect of these class rules.

1.4.2 In the event of a discrepancy between these rules and the measurement form, the matter shall be referred to the F.F.V.

1.4.3 Change MYRD by FFV in the text.

1.4.4 Not applicable.

1.5.1 Unless specified to a greater number of decimal places, measurements and calculated values shall be taken and recorded as follows:

Item	Units	Decimal places Measurement	Decimal Places Calculation
Length	millimetres (mm)	0	0
Area	square metre (m ²)	6	6
Final total area	square metre (m ²)	4	6

2 ADMINISTRATION

The following paragraphs of the *International Class Administrative Rules* are changed:

2.2.1 The class is administered by the Fédération Française de Voile.

2.2.2 Not applicable.

2.3.1 The Mini 40 Class is a Free Construction Class and no licence is required to become a builder. No building fee is due to FFV.

3 HULL(S) / FLOAT(S)

3.1 Definition

- 3.1.1 The boat shall be a multihull made of more than one hull or float linked by one or more cross beam(s).

A hull or float is made of the floating structure, the deck, the rudder(s), the appendage(s), the bow bumper, but does not include the rig(s).

A catamaran is made of two hulls. A trimaran is made of a central hull and two floats. A prao is made of a hull and a float. Any other kind of multihull is permitted, as long as there are a minimum of one hull and one float.

3.2 Identification Marks

- 3.2.1 Each hull/float shall carry in an easily visible location, on the external surface of the hulls or decks, either painted, engraved or moulded in, the boat's national letters and registration number, with a minimum height of 20 mm.
- 3.2.2 When a multihull has several sets of floats, each set shall be registered on the measurement certificate. The set registration number shall be the registration number suffixed by a letter (ex: 123/A).

3.3 Construction

- 3.3.1 a) The multihull shall not be longer than 1220 mm, and shall not be wider than 1220 mm.

The length is measured along the centreline of the multihull, between lines drawn at 90° of the centreline, tangent to the most forward stem(s) and to the most backward stern(s). For the measurement, the multihull water line should be held as parallel as possible to the surface plan used as a reference basis. The two lines define the overall length measurement lines.

The width is measured at the widest point of the multihull, at a 90° angle from the centreline.

b) The forward 12 mm of a hull or float shall be made of elastomeric material. The minimum thickness of the elastomeric material at a point located at 25 % from the lower part of the bow profile shall be 6 mm.

4 APPENDAGES AND BALLAST

4.1 Ballast

- 4.1.1 Moveable ballasts shall not extend beyond the multihull.
- 4.1.2 Ballast shall not be made of a material of higher density than lead (11,3 Kg/dm³).
- 4.1.3 Liquid ballast are permitted and shall be fresh water, or water taken from the sailing area.
- 4.1.4 Solid and/or liquid ballast may be added, removed or moved at any time during a race or series of races.

5 RIG

5.1 Masts

- 5.1.1 The mast area is included in the total sail area when the average width is greater than 20 mm (see Appendix 1).
- 5.1.2 Only one mast shall be measured, the profile of alternative masts used with alternative suits shall fall entirely within the profile of the largest measured mast.
- 5.1.3 Swing rig(s) and wing mast(s) are permitted.

5.2 Booms

- 5.2.1 The booms and the spars shall not exceed 20 mm in diameter.
- 5.2.2 Outriggers are permitted.

5.3 Other Rigging Rules

- 5.3.1 No part of a rig shall extend beyond the overall length measurement lines when the sails are held along the centerline of the multihull.

5.4 Measurement Bands

- 5.4.1 Measurement bands shall be of a colour which contrasts strongly with the colour of the mast and shall be of uniform width between 2 mm and 6 mm wide.

6 SAILS

6.1 General

- 6.1.1 The number of sails, the material, the construction and the shape are free.
- 6.1.2 Solid sails are permitted.
- 6.1.3 A genoa or a spinnaker is allowed only for speed runs done on one tack. The sail area is not limited for these sails.
- 6.1.4 The sail plan shall consist of not more than one mainsail and either a headsail and or a spinnaker.
- 6.1.5 The largest suit of sails shall be measured. All smaller suits shall fall entirely within the profile of the measured one.

6.2 Identification Marks

- 6.2.1 Sails shall carry identification marks in accordance with the IYRR.
- 6.2.2 The class insignia shall be the logo defined on the front page of this document, that is a number "4" overlapping a number "0". The minimum size for the logo is to fit in a 50 mm square, the minimum thickness being 5 mm, with the horizontal bar of the "4" having a 35 mm length, located at 14 mm from the bottom side of the square, the vertical bar of the "4" starting at 20 mm from the left side of the square. The vertical bar of the "4" overlaps the vertical left bar of the "0".
- 6.2.3 Spinnakers need not carry such marks.

6.3 Construction

- 6.3.1 Sails shall be made and measured in accordance with the current *IYRU Sail Measurement Instructions*, except where varied herein and in Appendix 1. When a term defined or a measurement given in the IYRU Sail Measurement Rules is used in these rules, it is printed in '*italic*' type.
- 6.3.2 The maximum dimension of any headboard shall not exceed 20 mm.

6.4 Headsails

- 6.4.1 The mid girth of a headsail, measured between the mid point of the *luff* and the *half leech point*, may exceed 50% of the length of the *foot*.
- 6.4.2 Forestays and jib tacks need not be fixed approximately in the centreline of the boat.

6.5 Measurement

- 6.5.1 The total measured sail area shall not exceed 0.9000 m².
- 6.5.2 Discontinuous attachments on a sail *luff* shall be disregarded for the purpose of measurement provided their total length, measured along the *luff*, does not exceed 10% of the length of the *luff*.

Effective: 1 January 1996

(Word version with corrected paragraph numbering. RN 01/2004)

Appendix 1

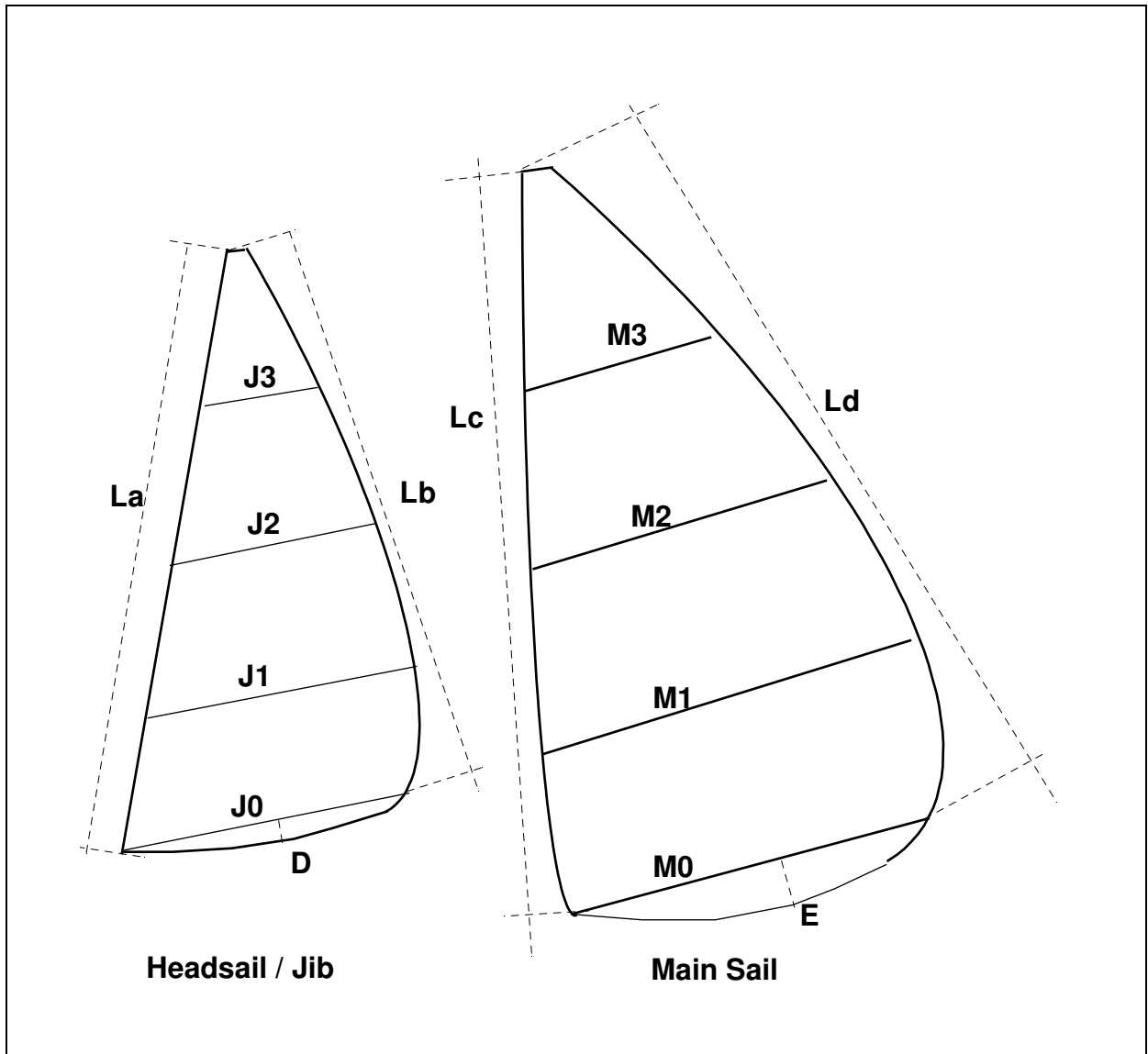
7 Sail Area Measurement

7.1 Sail Area

7.1.1 The total measured area is defined as:

$$S = S_{ms} + S_j + S_m$$

where S_{ms} is the mainsail area, S_j is the jib sail area, S_m is the mast area.



7.2 Mainsail Area (S_{ms})

7.2.1 The mainsail area is computed by the following formula:

$$S_{ms} = L \times (M_0 + 4 M_1 + 2 M_2 + 4 M_3) / 12 + 2 \times (M_0 \times E) / 3$$

where L is the smaller of L_c & L_d

M_0 is the *foot* length

M_1 , M_2 & M_3 are girths measured from the quarter, half & three quarter *leech* points to the corresponding points found by dividing the *luff*.

7.3 Jib Area (S_j)

7.3.1 The jib area is computed by a similar formula:

$$S_j = Lx(J_0 + 4 J_1 + 2 J_2 + 4 J_3) / 12 + 2x(J_0 \times D) / 3$$

where L is the smaller of La & Lb

J0 is the *foot* length

J1, J2 & J3 are girths measured from the quarter, half & three quarter *leech* points to the corresponding points found by dividing the *luff*.

7.4 Mast Area (*Sm*)

7.4.1 The mast area is computed by the following formula:

$$S_m = H \times E$$

where:

'H' is the distance between the lower mark and the upper mark as defined in 7.4.3.

'E' is the average width of the mast, as defined in 7.4.3

7.4.2 The mast area shall be measured only when the average width of the mast exceeds 20mm.

7.4.3 The average width of the mast is the average value of 5 measurements taken the following way:

- a) One measurement is done at the lower point determined by the crossing of a line extending the lower part of the main boom with the mast.
- b) If the boom is curved, then the line is a tangent to the lower part of the main boom in the tack area.
- c) If the line does not cross the mast, then the bottom end of the mast is taken, and a measurement band. is not required.
- d) The upper measurement is determined by the top of the mast if it exceed 20 mm, or by the first point where the mast exceeds 20mm, downward from the top.
- e) Three other width measurements taken at equal distance between the upper and lower marks.

When the mast area is measured, the upper and lower measurement points shall be identified with a measurement band, with the exception of 7.4.3.c.