

# MODEL YACHTING ASSOCIATION

## INTERNATIONAL 10 RATER CLASS RATING RULES

(Subject also to the MYA Competition Rules and Rating Regulations)

### 1 THE FORMULA

$$\frac{L \times SA}{7500} = 10$$

**10<sub>r</sub>**  
**CLASS**

Where L = Length on Load Water Line in Fresh Water. SA = Sail Area

### 2 UNITS OF MEASUREMENT

Linear - inches and decimal fractions of an inch. Square - square inches and decimal fractions of a square inch.

ALL measurements shall be correct to one place of decimals.

### 3 LOAD WATER LINE MEASUREMENT

Projections, Notches and Hollows in Hull. If any part of the yacht below the lwl (except the rudder) projects beyond the extremities of the lwl, such projection or projections shall be added to the measured length.

Any yacht having notches or hollows in the profile, intended or having the effect of reducing the length for measurement, shall be refused a certificate.

No restrictions as to Centre-boards, Bilge-boards or Lee-boards and Bulb Keels provided that no moving surface is part of the concentrated ballast.

The 10 R class is restricted to monohulls.

### 4 DEFINITIONS

Mast - a basically vertical member on which or from which sail is supported.

Boom - a member which extends the clew of a sail.

Clew - the lower aft corner of a sail.

### 5 SAIL AREA MEASUREMENT

The total area of the largest sail plan will be measured and used in the rating rules. The sail area will include the maximum profile area of sail or sails (except spinnakers) masts, spars (except booms), headboards, projecting battens etc., and any other part of the rig that at any time may propel the boat.

The area of the sail plan is measured by dividing the area into parts for measurement as below:

Areas bounded by convex edges shall be added to the basic triangular area and included in the total area for rating. This also includes any part of the Luff of a sail which projects in front of the mast to which it is set. Should an area be bounded by a concave edge the area of the concavity will be measured as for convex edges and deducted from the triangular area.

#### TRIANGLE MEASUREMENT (Mainsail)

Luff A - measured from the lowest to the highest point of the sail at the after side of the mast.

Diagonal B - measured from the clew to the nearest point on the line of the luff measurement A.

#### TRIANGLE MEASUREMENT (Jib)

Luff A - measured from the lowest to the highest point on the front edge of the sail.

Diagonal B - measured from the clew to the nearest point on the line of luff measurement A.

#### MAST MEASUREMENT

Height H - measured from the deck to the highest point of the mast.

Widths C, D and E - measured from the forward to the after side of the mast at the top and bottom of the mainsail and at a point midway between these two.

#### SAILS BOUNDED BY CURVED EDGES

Base length Q - measured between the points defining the triangular measurements.

Perpendicular P - to be the maximum dimension between the line of edge measurement Q and the edge of the sail.

## AREA CALCULATION

$$\text{Triangle } \frac{A \times B}{2} \quad \text{Mast } \frac{H \times (C+D+E)}{3}$$

Edge  $Q \times P \times \text{constant}$

The constant to be used above depends on the shape of the curved edge and shall be as follows:

Fair even curve between points of measurement - constant  $2/3$ .

Edges other than above - constant  $3/4$ , except where the edge of the sail is parallel to  $Q$  for more than  $1/2 Q$ , or where the edge extends to a point or points within its length. In these cases the areas should be further divided in the most convenient way into triangles and curved edges.

There are no limits on battens or stiffening in the sail plan, except for spinnakers. Alternative sail plans are not allowed except in the case of smaller suits.

The profile of any small suit of sails must not exceed at any point the profile of the measured sail plan.

All sails shall be measured when stretched to their fullest extent.

## 6 SPINNAKER

The area of the spinnaker will not be measured but the length of the boom and the height of the spinnaker hoist will be controlled by the following formula:

$(J \times I) + \text{Area of [(Mainsail + Mast) or Jib, whichever is the larger]} = 1.4 \times SA$   
(SA allowed by rule).

$J$ , the length of the spinnaker boom, shall be the maximum dimension between the point of attachment of the spinnaker on the boom and the centre or axis of the mast.

$I$ , the height above which the spinnaker may not be hoisted, shall be measured from the point of attachment of the spinnaker to the nearest point at the deck and shall be clearly marked on the mast.

The spinnaker shall be set with no more than three points of attachment and any stiffening of a corner is prohibited outside a radius of 3 inches from that corner.

## 7 MASTS AND SPARS

There shall be no restriction on materials, weight, section or diameter of masts, except where mentioned elsewhere in the rule.

Permanently bent, rotating and bipod masts, and double luffed sails are allowed.

The position of the foreside of the mast shall be marked on deck and the limit of movement from this position is not to exceed 1.5 inches fore and aft.

The depth of booms shall not exceed 0.8 inches.

Any moveable part of the rig or steering gear shall not be construed as moving ballast.

## 8 DISTINGUISHING MARKS

Sizes: Class Mark - Height 1 inch, Width  $3/4$  inch (not 1), Thickness  $1/4$  inch Spaced  $1/4$  inch between items.

Registered Numbers - Height 3 inches, Width 2 inches, Thickness  $1/2$  inch, Spaced  $1/2$  inch between figures.

The Registered Numbers shall be preceded by the distinguishing National Letter of similar dimensions. The National Letter for England is "K".

Bar dividing Class Mark and Numbers to be  $1/8$  inch thick.

Example:  $\frac{10r}{K1850}$

Owner's Racing Flag:  $2 \frac{3}{4}$  inches x  $2 \frac{1}{2}$  inches approximately.

## APPENDIX

### RADIO 10 RATER CLASS

The foregoing Rating Rules apply to radio controlled 10 Rater Class yachts in all respects, except that R10r Class yachts shall at all times sail with all radio equipment as measured. Any change in equipment resulting in a change of rating shall render the Rating Certificate invalid.