

# History of the International One Metre Class Rules

## Introduction

Purpose of the document is to provide information on IOM class rule changes from the original version made in 1988. Document should be revised after publishing of each new IOM Class Rules edition.

## 1.1 Origins

1.1.1 An International One Metre class was first adopted by the IMYRU in 1958 after application by France and Italy. The class rules limited length to 1000mm and sail area to 0.4m<sup>2</sup>. There appears to have been much freedom over choice of rig design. No significant international competition appears to have taken place and it is assumed the class effectively died out some time in the 1960's.

1.1.2 In the 1980's there appeared a number of 'one metre' classes i.e. in the US, Japan, France and Germany (Naviga E class rule). The original reasons for interest in this new format are now unclear but it was almost certainly enhanced by the escalating cost of maintaining a Marblehead. This concept clearly appealed to model yachtsmen outside those countries and one metre long yachts to various designs and 'rules' appeared elsewhere.

1.1.3 The various classes had only the hull length in common. The US One Metre had no restrictions on materials or rig proportions; the French class used a One Design hull and rigs; the German class had many restrictions on the hull, foils and RC but permitted much freedom in choice of sail profile.

1.1.4 It was clear that a One Metre boat with tightly restricted rigs and equipment could produce an inexpensive class and close competition for experts and beginners alike. This class would complement the Marblehead class in nature and the lower cost might enable the popularity of the sport as a whole to be maintained or improved by providing a class which would permit mass manufacturers to produce a competitive boat

## 1.2 Original IYRU One Metre - 1988 Class Rules

1.2.1 During the development of the 1988 class rules a clear principal was established under the guidance of the Chairman of the MYRD Technical Committee, that is the boats permitted by the rule would be capable of being built by non-expert builders, either from a kit or from scratch, or inexpensively by a commercial builder, without being at a disadvantage in terms of performance when compared to yachts built using an unlimited amount of time and other resources. In order to achieve this the following policy and intent were employed:

i) Construction materials to be limited to certain inexpensive ones which are commonly available and capable of being used to produce yachts down to weight with no special building skills.

Reasons           a) to encourage simple building methods  
                      b) to limit cost

ii) Other materials would be permitted only in the foils

Reason            a) it would be difficult to test positively for their absence here and their speed

enhancing effect is limited

iii) Fin and ballast would be removable

Reason a) to permit a minimum and maximum weight limit for this unit in order to limit the righting moment provided by the fin and ballast

iv) The range of permitted weight of fin and ballast was chosen large enough to permit yachts built to the Naviga rule to comply without modification

Reason a) to boost class numbers

v) Restrict nature and position of foils.

Reason a) for simplicity

vi) Minimum total weight was set quite high.

Reasons a) to permit relatively crude building quality so that there was minimal emphasis on or benefit from exotic techniques so that builder quality is relatively unimportant  
b) to limit cost

vii) Draft minimum and maximum figures were chosen to accommodate certain existing yachts without modification.

Reason a) to boost class numbers

viii) Range of permitted draft kept small.

Reason a) to keep potential degree of tuning of yachts to specific conditions to a minimum thereby discouraging use of alternative fins/ballasts.

ix) Mast materials limited to wood or aluminium.

Reason a) to limit cost  
b) to limit choice to materials commonly available everywhere

x) Generous minimum mast diameter.

Reason a) to ensure that one pair of shrouds and one set of spreaders would give an adequately stiff mast. This would tend to make each rig simpler to install in the boat and easier to tune thereby maximising similarity of performance between expert and novice.

xi) Mast section limited to round.

Reason a) to prevent shaping or tapering of masts thereby ensuring uniformity and simplicity  
b) to limit cost

xii) In addition the following limitations/restrictions were considered essential:

Mast fittings limited to essential minimum

Booms treated in much the same way as the masts

Standing rigging and other rigging restricted to good 'minimal' current practice  
Number of permitted suits of sails limited to three  
Sail sizes and construction tightly restricted  
RC equipment limited to two channels of control

Reasons      a) to ensure simplicity and uniformity  
                  b) to limit cost

### **1.3 1989 and 1992 Rule Revisions**

1.3.1 Not unnaturally the first few years of use of the class rules uncovered some areas which needed more attention. Principally the changes were:

i) To permit mast heel and mast strut fittings.

Reason      a) the former had been omitted in error  
                  b) the latter enables deck-stepped masts to be used efficiently.

ii) Hull depth was limited to 60mm.

Reason      a) to prevent stability gain by building very deep and light hulls with internal ballast placed low down.

iii) Draft was increased to 370-420mm.

Reasons      a) to improve sailing qualities  
                  b) few of the existing boats expected to join the class had done so.

iv) Permit non-woven sail material.

Reason      a) this had been omitted in error.

v) It was made clear that vacuum formed plastic can be used if it is the only material in that part.

Reason      a) in order to make it clear that the use of plastic foam sheet bonded under vacuum into GRP hulls is not permitted, a method currently considered to be not in keeping with the policy to keep boats simple.

vi) A plastic container would be permitted for the RC containment.

Reason      a) this is a commonly used and simple method of keeping RC equipment dry and there was no need to prohibit it

vii) It was made clear that internal ballast in the hull may be used.

Reason      a) to remove doubt

viii) Weight of the rudder limited to 75 grams.

Reason      a) to prevent possible gain of stability by using ballasted and deep rudders

ix) It was made clear that the kicking strap shall be below the boom and shall work in tension only.

Reason        a) to limit cost  
                  b) for simplicity

x) Checkstays would be permitted.

Reason        a) these permit deck stepped masts to be supported well and are to be used only when the mast is deck stepped. They are prevented from becoming lower shrouds by having their position restricted.

xi) Jib boom counterbalance weights would be permitted.

Reason        a) these are seen as essential for good downwind sailing and in any case many builders were using very heavy jib tack fittings to achieve the same end result. Permitting their use enables all to achieve uniformity with the minimum of effort and cost

## **1.4 1995 Rule Revision**

1.4.1 Major changes made in 1995 Rule revision are:

i) To permit the addition of corrector weights of any material (no denser than lead)

ii) To permit “Formica” type materials to be used in hull construction

iii) To correct several errors and commissions identified in the previous rules:

- a) The rule which was designed to prohibit “tunnel hulls” also prohibited decks with more than 3 mm concavity. Many boats have such hollows, either because the fabric deck sags, or because there is recess for the RC container.
- b) The rule did not permit the use of eyelets in sail clews and tacks.
- c) The rules prevented the use of material denser than lead for the ballast but not for the construction of the fin.

iv) To preserve the characteristic of the class because several areas where previous rules were unclear have been detected:

- a) There was no minimum length limit for booms and no maximum size limit for fittings. This it would have been possible to make very short booms with very long clew and tack fittings of carbon fibre.
  - b) It was unclear to some people whether sail seams could be “butt” jointed to provide a very thin hinge between panels of thicker material.
  - c) An interpretation had been made which indicated only one keel and one rudder were permitted but the rules remained unclear whether other foils, leeboards, centreboard etc were permitted.
- v) The existence of separate International Class Administrative Rules and Sail Identification

Marks Rules which apply to all IYRU MYRD international classes meant it was possible to remove these sections from the text.

## **1.5 2002 Rule Revision**

The new One Metre international class rules came into effect on 1<sup>st</sup> March 2002. ISAF–RSD international class rules are expected to follow ISAF Standard Class Rules (SCR) format. The 2002 edition of the class rules have a common layout which will become increasingly familiar to sailors of boats big and small as time goes on.

Also, The 2002 edition of the class rules make extensive reference to the ISAF Equipment Rules of Sailing (ERS)..

Each class rule based on ISAF Standard Class Rules (SCR) format is divided into the same sections. These are:

- Section A Administration, racing rules, class rules, certification, etc.
- Section B What is needed to be eligible to race
- Section C Rules that apply when racing
- Section D Hull rules
- Section E Hull appendage rules
- Section F Rig rules
- Section G Sail rules (in the Ten Rater class rules, also H, & J)
- Section H Diagrams (in the Ten Rater class rules, section K)

A significant effect of this format is that only rules of Sections D, E, F and G are checked at the time of **fundamental measurement** (defined as 'measurement required to ensure compliance with the class rules' – see note later). Each section is written, as far as possible, in a way that permits the equipment covered in that section to be measured as much as possible without having the equipment in other sections available. Thus a sailmaker can expect to find all he needs to know about the class rules in Section G and he should be able to make and measure sails without needing to know about the spars they are set on. Manufacturers should be principally concerned with Sections D, E, G and G.

Rules which apply to the way in which component parts are brought together, e.g. hull appendages and the hull, or the sails and rig, are placed in Section C. This is done because the way the parts are assembled can determine whether or not the boat complies with the rules when racing. Sailors should be principally concerned with the rules in this section as, even though the equipment may have been certified as being in class as a result of successful fundamental measurement, Section C restricts what he can do with it afterwards and while racing.

This method of splitting the class rules into 'stand alone' sections may make the class rules somewhat longer. The net result though is that many areas are now well defined in writing where in the past there were unwritten conventions that may have varied between countries. Where previously it was very difficult for some sailors to discover these undocumented 'rules', everything should now be accessible.

The format of the class rules, however, does not affect the boats that the classes produce. A very few substantive changes have been made to the effect of the new class rules in order to achieve specific objectives. These changes are detailed later in these notes.

Another significant effect of the SCR format is that sail marks are no longer a measurement matter.

The previous set of class rules has been unchanged for seven years with the exception that permission to use the bent wire mainsail head fitting was granted in 2000.

As far as the boats themselves are concerned, there are few changes that will affect owners this time. The significant points are:

- It will be possible for a hull manufacturer to use ‘non-permitted materials’ if he can negotiate a licence to do so with the RSD and the ICA
- Foam is not a permitted material
- Supports and containers for the remote control equipment shall be made of and joined using only permitted materials for the hull construction – carbon is no longer permitted
- A deck limit mark to which rigs heights are measured is introduced
- There remains no minimum fin thickness limit
- Ball and/or roller bearings remain permitted with no time limit on their use for kicking strap (vang) attachment and gooseneck; mainsail boom sheet blocks; headsail boom sheet blocks; winch running lines on the hull, headsail boom swivel
- Permission to use the bent wire mainsail head fitting remains
- Tolerances on the section dimensions for spars have been introduced
- Standing rigging (headsail stay, backstay, shrouds) shall be of steel (including stainless steel) or polymer (Dacron, Dyneema etc.)
- At an event, each rig may not be raised or lowered more than 5 mm from its ‘normal’ position
- To help with this restriction a deck limit mark is required
- Sail shape indicator stripes (draft stripes) are limited in number and width
- It will be possible for a sailmaker to supply certified sails (sails which do not require further fundamental measurement) if he can negotiate a licence to do so with his ISAF Member National Authority
- Jackstay and headsail stay diameters have been limited to 1 mm to allow the stays to remain in place during measurement, but not create a loophole in so doing
- The mainsail luff tabling may envelop a jackstay
- Grades of permitted aluminium alloys replace the percentage of aluminium for spar materials
- The effects of previous interpretations have been taken into account where necessary

Rules which apply to the boat as a whole unit (as used for racing) are not checked at the time of fundamental measurement. For example, there is no point checking that a jib boom counterbalance weight does not extend beyond the bow in order to issue a certificate because future compliance depends on how the boat is assembled at the race site.

Likewise, because the rules do not require the weight and position of hull corrector weights to be measured and recorded on the certificate, (they do have to be securely fixed during an event – see ERS B.10.1), there is no real need to weigh and float the boat at the time of fundamental measurement. Although the crew may alter the position of these items at any time between events, the important point is that the boat must comply with all the class rules when it races and it is up to the crew to ensure this or face the penalty. There is nothing new in this; the crew was equally liable to maintain his equipment within the class rules and comply with them during racing under the ‘old’ rules.

Excluding from fundamental measurement what appear to be the major limiting factors (length,

draught and weight) in order to get a certificate may seem a little strange at first. In time we will probably become very used to taking greater responsibility for ensuring our boats comply with these aspects of the class rules and accepting the inevitable, but correct, penalty if we fail. If more frequent event measurement is a result this will only raise people's confidence that the rules are being adhered to. In reality, the possession of a valid certificate that might have certified all these items does not in and of itself ensure that they have not been altered. The new rules deliberately adopt a fresh approach to rule observance, perhaps one that is more fitting for our sport.

## **1.6 2003 Rule Revision**

The great majority of the changes are clarifications to the rules, and are consistent with recent interpretations. There are very few actual changes to the boat. There is really only one substantive change, and that involves a thickness limit on the fin to prevent the equivalent of "hulas".

### **New restrictions are as follows:**

- In a GRP (glass fibre reinforced plastic) hull, the glass fibre is restricted to certain types – roving, tape, chopped strand mat, woven cloth. In practice, this covers all the usual kinds of material.
- The material restrictions on the hull apply to fittings if they now contribute to the hull's stiffness, as well as to its strength and/or watertight integrity. Many sailors treat stiffness and strength as similar properties of a material, so this change is probably more of a clarification than a new rule addition.
- The thickness of the keel, except in the region of the bulb, is restricted to 20 mm. This is to prevent the "growth" of fairings, the construction of "hulas", or the provision of extra "hull" volume at the fin attachment point designed to circumvent the canoe body draught restriction of 60 mm. It is very unlikely to affect an existing boat, but one or two boats with substantial fairing at the hull/fin join might need attention.
- The minimum mast diameter is now set at 10.6 mm. This is not really a new restriction, but a result of removing references to an "average" mast diameter in the rules. Previously, the minimum mast diameter was 10.9 mm, but there was a 0.3 mm allowance for differences in mast diameter from the average. In theory, a mast could therefore have had an absolute minimum diameter of 10.6 mm in some places, and this is now recognised in the new value.
- "Discontinuous attachments" at the luff are no longer generally permitted, instead only luff slides are mentioned.

### **Removal of restrictions**

- The requirement for "simultaneous" control of the mainsail and headsail sheets has been deleted. Simply the fact that the sheets must be controlled by one sheet control unit ensures "simultaneous" control. This makes it clearer, for example, that arm winches can have the mainsail and headsail sheets attach to the arm at separate points.
- The mainsail halyard as such is now optional, not mandatory. Of course, in practice the mainsail head still needs supporting somehow, so this has no practical effect.
- If there are luff slides, the longest slide is no longer limited to being no more than twice as long as the shortest.
- Explicit permission is given for luff fittings. Previously, only cringles and eyes were permitted at the luff of a sail. Now a length of wire, for example, can be used at the luff to hold a mainsail attachment ring or loop.
- For booms, the list of permitted alloy grades has been expanded to add 6005 to 2024, 6061,

6063, 6082, 7075, 7068, or 7178. For masts, 6005 has been added to 2024, 6061, 6063, 6082, and 7075. 6005 was left off in error previously.

## Clarifications

- The “keel” is either a fin and bulb arrangement, or an old style “conventional” keel. This helps make it clear that the bulb can be removable as well as the fin.
- More importantly, it also makes it clear that the keel comprises only a “fin” and a “bulb”, and this implies that the “bulb” cannot be a “bulb with winglets”, for example.
- The headsail swivel is to be attached to the hull rather than to the deck. This reverts to pre-2002 class rules terminology and avoids having to interpret what is meant by “the deck”.
- There is clarification of the rule wording that the alignment of the headsail swivel is to be controlled by rigging tension only between the hull and the boom.
- The positioning of the insignia is now controlled by the RRS and not by the class rules.
- The attachment of the mainsail tack, like the headsail tack, shall not be more than 25 mm forward of the forward end of the boom. It is quite difficult to imagine a mainsail tack that could be more than 25 mm forward of the forward end of the boom, but this prevents some enthusiastic inventor going down that path.
- The mainsail jackstay is now systematically called a “mast spar jackstay”, to make it clear that such a jackstay is a mast fitting, not a sail fitting.
- It is now made clear that a hull gel coat is optional, as is hull external paint.
- For fittings which involve sheets and sheet control lines, ball bearings are permitted in pulley blocks only.
- The permitted R/C equipment is more carefully listed. Battery cells can be assembled into more than one pack. And, R/C gear can be attached in the boat using Velcro.
- It is made clear that cord loops as well as rings can attach the mainsail to the mast.
- The mainsail halyard can, as before, have a part that rotates; now all mention of halyard line is removed. No practical change.
- The axis of rotation of the gooseneck must be aft of the mast within a defined, quite limited, region. It allows some tilt of the gooseneck, and more importantly also allows mast bend! Previously, the gooseneck axis had to be aft of the mast, period. Well, if the mast had much bend to it, this axis could eventually intersect the mast some distance away from the gooseneck. So the axis now must be aft of the mast only in the region of the gooseneck, defined as the region between the deck limit mark and the lower mast band.
- It is now made clear that wall thickness restrictions apply to aluminium masts and booms only, not wooden ones.
- Clew and tack control lines are now explicitly permitted. Previously, it wasn’t entirely clear that you could tie your tack to the boom with a line.
- During measurement, it is now explicit that sails can remain attached to the mast and/or the jibstay.
- One of the major clarifications is that the construction of sails is more clearly defined. To start, construction is divided into mandatory and optional components.
- Explicit permission is given for simple openings (holes) in a sail as well as cringles. Previously, it wasn’t absolutely clear that a hole made in the luff of the mainsail to take a ring was permitted.
- Explicit permission is given for primary and secondary reinforcement.
- The permitted sail construction and joining methods are now explicitly listed: welding, gluing, bonding with self-adhesive tape material, and stitching. No practical change here, then.
- It is now clear that methods and materials used for joining two sail panels are not permitted a way from the seam itself, except for stitching.



- Explicit permission is given for luff tabling to envelop a stay for headsail and mainsail.
- There is clarification of the requirement that, if the headsail has luff slides, they must be set on the jibstay.

### **General rephrasing**

- What used to be called “attachments” are now generally called “fitting(s) and/or opening(s)”. Holes are openings, and they are generally permitted. This is done because “attachment” is an ERS defined term. To avoid any confusion, the term is not used in the new class rules.
- There is a general removal of the requirement for an “average” spar diameter or “average” spar thickness. The limits on variation in size are now limits on the difference between largest and smallest dimensions rather than on the difference between the measured dimension and some theoretical “average”.
- Permitted maintenance to hull, sails, and so on is rephrased so it is clear that such maintenance is allowed but it is up to the owner to maintain compliance with the class rules.
- Permitted replacement of lost or damaged equipment is rephrased to make it clear that the Race Committee need not remove or cancel limitation marks on lost equipment. The previous rule seemed to require the Race Committee to cancel a limitation mark on a lost fin, for example, which would have been a rather difficult thing for it to do!
- The permitted reinforced opening on a sail at head, clew, and tack is called a “cringle”. “Eyes” are no longer explicitly mentioned, though they remain permitted at the luff as “luff fittings”.

### **New concepts**

- “Added weight” is what you put on or in your mast below the lower band, and it can be moved or changed at any time in order to keep the whole boat above its weight limit when you change your rig. Such added weights are not “corrector weights”, because corrector weights are ballast, and ballast cannot be changed or moved during an event.
- Permitted hull materials continue as before. But there is now the concept of a GRP (glass fibre reinforced plastic) hull which sees the previously separate components of glass fibre, gel coat, and resin combined together into GRP as a permitted material.
- A limit mark can be formed by a fitting as well as by tape or paint. Not really a new concept, perhaps, but it makes it clear that a mast head fitting can also serve as the limit band if you want (provided it effectively makes a band of a contrasting colour of the right thickness, of course).
- What used to be called a “spar cross section” is now called a “dimension” if the spar does not need to be round. A cross section was, strictly speaking, an area, not a linear dimension.

### **Changes to rule format**

- Rules governing radio control equipment are now placed with rules governing the hull, rather than in their own section.

## **1.7 2007 Rule Revision**

2007 Rule revision has been done for the very first time based on IOM ICA Annual General Meeting resolutions and approval of the ISAF RSD.

According to the ISAF RSD Regulation 14.4, the Sub-committee consisted of Technical Committee Chairman of the ISAF-RSD, Technical Committee Vice-Chairman of the ISAF-RSD and Vice-chairman (Technical) of the IOM ICA has reviewed International One Metre Class Rules changes

passed by the IOM ICA World Council Vote and following class rule changes have been approved:

### *Resolution 2.3*

#### Change C 7.7(c)

From:

"(c) A headsail boom topping lift restraint line attached to, or passing around, the topping lift may be attached to and/or passed around any or all of the following: topping lift; headsail; headsail halyard; headsail stay."

To:

"(c) A headsail boom topping lift restraint line attached to, or passing around, the topping lift may be attached to and/or passed around any or all of the following: topping lift; headsail; headsail halyard; headsail stay; headsail boom."

### *Resolution 2.4*

#### Rule C.7.3(a)

Change to: "Weights may be positioned in or on a mast **spar**. If the weight is to be internal, it shall be installed at the lowest point possible. "

Above original proposal made by the IOM ICA has been changed by IOM ICA - ISAF RSD Sub-committee to:

"Weights of any material may be positioned in and/or on a mast **spar** below the **lower point**. Weights of density greater than 8.000 kg/m<sup>3</sup> may be positioned in and/or on a mast **spar** above the **lower point**."

Reasons for such decision are as follows:

Side effect of the class rule change is that weights no longer have to be placed below the **lower point**. Only internal weights have to be as low as possible. Therefore external weights may be above the **lower point**. It will be possible to use carbon cladding on the mast wherever preferred to add stiffness on the premise that it is **corrector weight**.

The addition of correctors above the **lower point** is acceptable providing the stability penalty is substantially higher compared to any benefit brought about by any increased mast stiffness. The steel and titanium are technically as useful mast materials as aluminium due to their E value being proportional to their density. Thus external sleeving of titanium or steel would be equally attractive. So the lower density limit needs to be set at 8.000 kg/m<sup>3</sup>.

### *Resolution 2.6*

#### Rule G.3

Add to G.3(a)(\*): The luff must be attached to the mast.

Add to G.3(b)(\*): With the exception of a double luff, any method of attachment is allowed.

Remove from G.3(b): Items 4,5,6,7,8.

G.3.3 - Dimensions: Remove luff fitting dimension.

Above original proposal made by the IOM ICA has NOT been approved by IOM ICA - ISAF RSD Sub-committee due to the following reasons:

It is obvious that IOM ICA wants to have the main sail **luff** attachment (apart from double **luff**) free.

Side effect of the proposed class rule change is that it allows methods of mainsail **luff** attachment, including those which may be considered as permitted by proposed class rule, with clear goal to achieve double **luff** mainsail effect.

Some of examples are:

- multiple **luff** rings of thin mylar film, 100 mm deep, overlapping 10 mm with unrestricted width
- a vertical foil of triangular cross section mounted on aft side of mast and rotating around it, 10 mm wide at leading edge, tapering to zero at trailing edge where mainsail luff is attached, rotating around mast with unrestricted width - vertical foil of pear shaped cross section rotating around mast with mainsail luff attached to trailing edge
- vertical strip of film, attached to mast at leading edge, attached to mainsail luff at trailing edge and unrestricted width

All mentioned examples will be permitted mainsail **luff** attachments in accordance with proposed new wording of the class rule G.3 with clear idea to achieve performance close to that of double **luff** mainsail.

Proposed class rule change would lead to a considerable amount of requests for interpretations, and possibly even to equipment protests, which is clearly not of interest to anybody involved.

Also, proposed class rule change does not use the term "**double luff**" as ERS defined term which may cause an additional problem if an interpretation is asked.

#### *Resolution 2.11*

Add to C.4:

##### C.4.4 WATER

Water shall not be used to trim the **boat** and it may be removed at any time.

#### *Resolution 2.12*

Change C.5.3 From:

##### C.5.3 REMOTE CONTROL EQUIPMENT

- (a) The rudder control unit shall control the **rudder** only.
- (b) The sheet control unit shall control the mainsail sheet and headsail sheet only.
- (c) Except for control unit positioning information, no radio transmissions from the **boat** shall be made.

To:

##### C.5.3 REMOTE CONTROL EQUIPMENT

- (a) The rudder control unit shall control the **rudder** only.
- (b) The sheet control unit shall control the mainsail sheet and headsail sheet only.

(c) Except for control unit positioning and radio link information, no radio transmissions from the **boat** shall be made.

*Resolution 2.13*

Add to C.5.3:

(d) Remote control and/or related equipment if temporarily removed and/or replaced:

- (1) shall be refitted in the same position
- (2) shall be replaced by equipment of similar weight.

*Resolution 2.14*

Change C.6.3 From:

USE

- (a) The **keel** shall not move or rotate relative to the **hull**, except by deformation under load.
- (b) The **hull appendages** shall not project outboard of the **hull**.

To:

USE

- (a) The **keel** shall not move or rotate relative to the **hull**, except by deformation under load.
- (b) The **hull appendages** shall not project outboard of the **hull**.
- (c) If removed:
  - (1) The **keel** shall be refitted in the same attitude and position in the **hull**.
  - (2) Parts of the **keel** shall be refitted in the same attitude and position relative to the **keel**.
  - (3) The **rudder** shall be refitted in the same attitude and position relative to the **hull**.

*Resolution 2.15*

Change C.7.4 (b) USE from:

The **spar** stepping position is optional.

To:

The **spar** stepping position and wind indicator position are optional.

*Resolution 2.16*

Change C.8.3 IDENTIFICATION from:

Identification shall comply with the RRS.

To:

Identification shall comply with the RRS. Sails certified before 1st January 2005 shall comply with the sail identification rules in force at that time or at the time of initial certification.

*Resolution 2.17*

Change F.3.3(b)(5) from:

Pair of spreaders and their fittings(s) and/or openings(s).

To:

Pair of **spreaders** and their fittings(s) and/or openings(s).

*Resolution 2.18*

Change F.4.4(a)(3) from:  
Swivel and its fitting(s).

To:

Swivel and/or its fitting(s).

*Resolution 2.20*

Change F.6.1 from:  
Materials of running rigging are unrestricted.

To:

Materials of running **rigging** are unrestricted.

*Resolution 2.21*

Add to rule D.2.1: D.2.1(d)(3): Notwithstanding anything otherwise contained herein, for **hulls** with a date of initial **fundamental measurement** prior to September 1, 2004, it is permissible to use the material "Texalium" in the **hull** molding.

Above original proposal made by the IOM ICA has been changed by IOM ICA - ISAF RSD Sub-committee to:

"A **hull** made with Texalium, and with a date of initial **fundamental measurement**, prior to 1 September 2004, may be certified."

Reasons for such decision are as follows:

Class rules D 2.1 (d) starts off with the words : "Unrestricted by (a) and (b):" and this makes the first five words of the proposed text unnecessary. The wording "... is permissible to use...." gives the impression that this will affect future mouldings and this is not the case.

*Resolution 2.22*

Various changes of ERS defined terms used in IOM Class Rules due to the new 2005-2008 ERS

## **1.8 2009 Rule Revision**

Decisions made on IOM AGM 2008 and 2009 have been entered in the 2009 edition of the IOM Class Rules as well as AGM 2006 Resolution 2.14 which was not added (by mistake) into 2007 Edition of the IOM Class Rules.

*2008 Resolution 2.3 (Receivers)*

Class Rule D.2.4(a)(1) REMOTE CONTROL EQUIPMENT has been changed as follows:

(a) The following is permitted:

(1) One or more receivers.

*2009 Resolution 4.2 (Allowing on board battery indicators)*

Class Rule D.2.4(a)(6) REMOTE CONTROL EQUIPMENT has been changed as follows:

(a) The following is permitted:

(6) One device to indicate the battery voltage. This device may also be included in any of the previous items (1) to (5).

*2009 Resolution 4.3 (Prohibiting the movement of corrector weights during an event)*

Class Rule C.4.3 CORRECTOR WEIGHT(S) has been changed as follows:

**Corrector weight(s)** to achieve compliance with C.4.2, if used, shall be fixed in/on the **hull** and not be altered or moved during an event.

*2009 Resolution 4.4 (Prohibiting the movement of remote control equipment during an event )*

Class Rule C.5.3(d) REMOTE CONTROL EQUIPMENT has been changed as follows:  
USE

(d) During an event remote control and related equipment if temporarily removed and or replaced:

(1) shall be refitted in the same position.

(2) shall be replaced by equipment of similar weight.

## **1.9 2010 Rule Revision**

According to the results of 2010 IOM ICA AGM, resolutions 7.2 to 7.11 related to the IOM Class Rules have been carried out and IRSA formal approval is asked in order to prepare revised edition of the IOM Class Rules.

Note that IOM ICA sent to IRSA all this changes during August 2010 and IRSA Technical Chairperson informed IOM ICA VC Technical that changes may be considered as approved and if no further addition or changes are made will pass with IRSA as a matter of course.

According to the IOM ICA Regulation 8.2: All amendments to *IOM Class Rules* shall be effective from 01 March following the decision of the *World Council*, or such later date that is at least 90 days after the date of the decision, be informed that listed changes of IOM Class Rules will be effective from 13 February 2011. This version will be marked with year 2011 on the cover page of IOM Class Rules.

### **List of changes in IOM CR:**

**7.2 - IOM CR A.3.1 to be deleted** – Submitted by Technical Sub Committee

Current wording:

A.3.1 Where one does not exist, the functions of the ICA, as specified in these class rules, shall be carried out by the ISAF-RSD.

Proposal:

To delete CR A.3.1

Reason:  
IOM ICA exists, so the rule is not needed.

### **7.3 - IOM CR D.2.4(a)(6) to be changed** – Submitted by Technical Sub Committee

Current wording:

#### **D.2.4 REMOTE CONTROL EQUIPMENT**

(a) The following is permitted:

- (1) One or more receivers.
- (2) One rudder control unit.
- (3) One sheet control unit.
- (4) Battery cells assembled in one or more packs.
- (5) Electric cables, connectors and switches.
- (6) One device to indicate the battery voltage. This device may also be included in any of the previous items (1) to (5).

Proposal:

(6) One device to indicate the battery voltage. In addition, items listed under (1) to (5) may have their own built-in battery voltage indication.

Reason:

If we understand the original ESP proposal having in mind idea that it is allowed to have RMG winch (with built-in battery voltage indication) and RMG display (as separate device to indicate battery voltage) it is better to change the wording of the D.2.4(a) (6) as proposed.

### **7.4 - IOM CR C.7.3(a) and IOM CR E.3.1 to be changed**

Current wording:

#### **C.7.3 ADDED WEIGHTS**

(a) Weights of any material may be positioned in and/or on a mast spar below the lower point. Weights of density greater than 8.000 kg/m<sup>3</sup> may be positioned in and/or on a mast spar above the lower point.

#### **E.3.1 MATERIALS**

Materials shall not be of density higher than lead (11.300 kg/m<sup>3</sup>).

Proposal:

Remove “.” in numbers.

Reason:

To avoid confusion. Decimal places may be separated by “comma” or by “dot” depending on convention used in different parts of the world. Both numbers in the IOM Class Rules are not decimal numbers, so instead using “.” as thousands separator it is better to have both numbers as “8 000” and “11 300” to represent eight thousand and eleven thousand three hundred.

### **7.5 IOM CR G.3.1(b)(1) and IOM CR G.4.1(b)(1) to be changed** – Submitted by Technical Sub Committee

Current wording:

G.3.1(b)(1) **Tabling** at the **luff** may form a pocket for a mast **spar** jackstay.

G.4.1(b)(1) **Tabling** at the **luff** may form a pocket for a headsail stay.

Proposal:

Change G.3.1(b)(1) to:

"**Tabling**, which at the **luff** may form a pocket for a mast **spar** jackstay."

Change G.4.1 (b)(1) to:

"**Tabling**, which at the **luff** may form a pocket for a **headsail** stay."

Reason:

To avoid any doubts that **tabling** are permitted on any sail edge. Additionally, tabling at the luff may form a pocket.

#### **7.6 – IOM CR D.2.3(b) to be changed** – Submitted by Technical Sub Committee

Current wording:

#### **D.2 HULL**

##### D.2.3 FITTINGS

Fittings are unrestricted except that:

(b) Ball and/or roller bearings may be used for: sheet control line blocks, mainsail boom sheet blocks, headsail boom sheet blocks.

Proposal:

(b) Ball and/or roller bearings may only be used for: sheet control line blocks, mainsail boom sheet blocks and headsail boom sheet blocks.

Reason:

There is an "only" and "and" missing in (b). If fittings are unrestricted an exception must provide a restriction.

#### **7.7 – IOM CR F.6.2(b) to be changed** – Submitted by Technical Sub Committee

Current:

##### F.6.2 CONSTRUCTION

(b) OPTIONAL

(2) Mainsail **clew** control line.

(3) Mainsail **tack** control line

(5) Headsail **clew** control line.

(6) Headsail **tack** control line.

Proposal:

##### F.6.2 CONSTRUCTION

(b) OPTIONAL

(2) Mainsail **clew** trim line.

(3) Mainsail **tack** trim line

(5) Headsail **clew** trim line.

(6) Headsail **tack** trim line.

Reason:

To avoid misunderstanding and better describe trim lines used to trim/control shape of the sail. Sheet control line in IOM CR C.7.7(a) is a line attached to the winch. Mainsail and headsail sheets are attached to it if drum winch type is used.



## **7.8 – IOM CR F.3.3, F.4.4 and F.6.2 to be changed – Submitted by Technical Sub Committee**

Current:

### **F.3 MAST**

#### **F.3.3 FITTINGS**

##### **(a) MANDATORY**

- (1) Mainsail halyard fitting or opening.
- (2) Shroud fitting(s) or opening(s).

##### **(b) OPTIONAL**

- (3) Headsail stay fitting or opening.
- (4) Headsail halyard fitting or opening.

#### **F.4.3 MAINSAIL BOOM FITTINGS**

##### **(a) MANDATORY**

- (1) Mainsail **clew** fitting(s).
- (2) Mainsail boom sheet fitting(s).
- (3) Kicking strap fitting.

##### **(b) OPTIONAL**

- (1) Mainsail **tack** fitting(s).
- (2) Gooseneck fitting.

#### **F.4.4 HEADSAIL BOOM FITTINGS**

##### **(a) MANDATORY**

- (1) Headsail **tack** and **clew** fittings.
- (2) Headsail boom sheet fitting(s).
- (3) Swivel and/or its fitting(s).

##### **(b) OPTIONAL**

- (1) Headsail stay fitting(s) or opening.
- (2) Topping lift fitting(s) or opening.
- (3) Counterweight and its attachment.

### **F.6 RUNNING RIGGING**

#### **F.6.2 CONSTRUCTION**

##### **(b) OPTIONAL**

- (1) Mainsail halyard.
- (4) Headsail halyard.

Proposal:

### **F.3 MAST**

#### **F.3.3 Fittings**

##### **(a) MANDATORY**

- (1) Mainsail halyard(s) fitting(s) and/or opening(s).
- (2) Shroud fitting(s) and/or opening(s).

- (b) OPTIONAL
- (3) Headsail stay fitting and/or opening.
- (4) Headsail halyard fitting and/or opening.

F.4.3 MAINSAIL BOOM FITTINGS

- (b) OPTIONAL
- (3) Opening(s) for mainsail boom sheet fitting.

F.4.4 HEADSAIL BOOM FITTINGS

- (b) OPTIONAL
- (4) Opening(s) for headsail boom sheet fitting.

**F.6 RUNNING RIGGING**

F.6.2 CONSTRUCTION

- (b) OPTIONAL
- (1) Mainsail halyard(s).
- (4) Headsail halyard(s).

Reason:

Addition of some items and use of plural instead of singular for some items will make clear that many of currently used arrangement/systems are allowed.

**7.9 – IOM CR F.4.5 to be changed** – Submitted by Technical Sub Committee

Current:

F.4.5 DIMENSIONS

	Minimum	Maximum
Spar, ignoring features permitted by F.4.2: largest external dimension		20 mm

Proposal:

F.4.5 DIMENSIONS

	Minimum	Maximum
Spar, ignoring features permitted by F.4.2, between points 10 mm from each end:		
boom spar cross section		20 mm

where the boom spar cross section is the largest dimension taken (at any angle to the vertical) in the vertical plane

Reason:

It is not clear in the current wording of the IOM CR F.4.5 which largest external dimension is restricted—length or cross-section.

**7.10 – Various ERS Definitions in the IOM CR** – Submitted by Technical Sub Committee

ERS definition not in **bold** – mistake in IOM CR 2009:

### C.6.3 USE

The **rudder** shall be refitted in the same attitude and position relative to the **hull**.

### G.2.5 MEASUREMENT

(1) **Luff** slides shall be ignored when measuring **sail** dimensions provided that their total length, measured along the **luff**, does not exceed 10% of the **luff length**.

Following ERS definitions to be used in the ERS defined sense throughout the IOM CR:

**Backstay**

**Checkstay**

**Headsail**

**Mainsail**

**Monohull**

**Running rigging**

**Sheet**

**Shroud**

**Standing rigging**

**Stay**

**Waterplane**

### 7.11 – Name Change for ISAF-RSD → IRSA

On 25 August 2010 the ISAF RSD has changed the name from ISAF RSD to IRSA, International Radio Sailing Association and therefore term ISAF-RSD to be replaced by IRSA throughout the IOM CR.

End of document

12 February 2010

Prepared by Robert Grubisa, IOM ICA VC Technical

Revised on 23 November 2010 by RG

Notes:

Following documents have been used for preparation of the History of the International One Metre Class Rules:

- Original texts of the IOM Class Rules starting from original 1988 edition
- IYRU MYRD Policy for Classes and Intent of the Class Rules, 1995 (ISAF RSD website)
- About the New 2002 ISAF-RSD International Class Rules, 2002 (ISAF RSD website)
- IOM ICA Comments on 2003 Class Rules – Version 1 dated April 20 2003, (IOM ICA document)
- The IOM: Origins and recent history, September 2001, (IOM ICA document)