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 0.4m2. 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 1st 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 aaway 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^3 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/m3.

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 uneccessary. 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/m3 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/m3).

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 represents 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.4.4and 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.

1.10 2011 Rule Revision

According to the results of 2011 IOM ICA AGM, resolution 6 related to the IOM Class Rules have been carried out and IRSA formally approved them.

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, so listed changes of IOM Class Rules will be effective from 30 March 2012. This version will be marked with year 2012 on the cover page of IOM Class Rules.

List of voted changes to the IOM Class Rules:

6.1 Voted changes to CR F.3.1 and F.4.1 dealing with allowed alloys. – Submitted by GER
By checking some sources of aluminium alloys (dealer and manufacturer) we found out that the most easy available standard aluminium alloys in Germany are 5754 and 6060 grade. In fact of this and because both have a normal aluminium density and their mechanical characteristics are below the permitted 7075 alloy we suggest to add these aluminium alloys to the listed in IOM Class Rule(s).

F.3.1 MATERIALS
(a) The spar shall be aluminium alloy of 2024, 5754, 6005, 6060, 6061, 6063, 6082 or 7075 grade, or wood.

and

F.4.1 MATERIALS
(a) Spars shall be aluminium alloy of 2024, 5754, 6005, 6060, 6061, 6063, 6082, 7075, 7068 or 7178 grade, or wood.

6.2 - Changes throughout Section G of the class rules dealing with batten pockets and reinforcement– Submitted by Technical Sub Committee and based on an original request fro interpretation by GBR, an original proposal made by Jan Dejmo and comments received on informal meeting with sailmakers and IOM ICA Exec representatives during European Championship 2010 in France)

Background
Originally the intention was that IOM mainsail roach control should be achieved by regulating the **batten pocket** positions and requiring the **leech** not to extend beyond straight lines between pockets, between the upper pocket and the **aft head point** and the lower pocket and the **clew point**. The same approach used by many ISAF classes.

A possibility for battens without batten pockets was however introduced and the "straight lines" were then to interlink at "batten pocket points" found at the intersection of the **leech** and the centreline of the **batten pocket**, or the batten when no pocket. This forced the **leech** to have a "peak" at each "batten pocket point". But when such a peak becomes "rounded" by tear and wear the sail will become illegal as the **leech** will then project aft of the straight lines meeting at the batten pocket point.

A way to solve the problem is to create "zones" at battens, or batten pockets, where the **leech** is not controlled by the straight lines. Similar to what is achieved when the straight lines are taken "between the pockets" as described in the first paragraph.

Proposed Class Rules Amendments

Goals for the proposed amendments:

- To remove non ERS definitions if possible.
- To amend the current, and in practise impossible, leech requirements.
- To permit batten patches and to treat them equal to batten pockets.
- To permit mainsails without any battens/batten patches
- To simplify the current leech control rules if possible.
- To legalize currently used sails which do not comply with the current rules in regard to leech shape at a batten pocket point and/or have batten patches.

Proposed amendments are included at the end of the document.

Comments on Batten Pockets and Battens without Pockets

There are currently a large numbers of mainsails with battens having one patch at its forward end and another at its aft end. It is not likely that such patches would qualify as a **batten pocket** and in any case only one would be permitted.

If batten patches are to be permitted, then it is difficult to see why the combined total area of patches should be required to be less than what is permitted for a batten pocket. And as a batten pocket may consist of any number and type of additional ply, why not allow the same for batten patches? And in view of what is permitted for batten pockets, why not have the same size restrictions for battens (stiffening) as for batten pockets?

Note: Throughout the listing of the Section G rules that follows, green text is added wording and red text is to be deleted.

Section G – Sails

G.1 PARTS

G.1.1 MANDATORY

(a) **Mainsail**.

(b) **Headsail**.

G.2 GENERAL

G.2.1 RULES

Sails shall comply with the **class rules** in force at the time of their initial **certification control**.

G.2.2 CERTIFICATION

(a) The **official measurer** shall **certify sails** in the **tack** and shall date each with the date of **certification control**.

(b) An MNA may appoint one or more persons at a sailmaker to measure and **certify sails** produced by that manufacturer. A special licence shall be awarded for that purpose.

G.2.3 SAILMAKERS

No licence is required.

G.2.4 DEFINITIONS

Batten Pocket Point

The batten pocket point is defined as the intersection of the **leech and**

(a) the extended centreline of the **batten pocket**, or batten or

(b) a line of minimum length 20 mm marked on the leech if there is no **batten pocket, and the leech.**

G.2.5 Measurement

(a) During measurement:

(1) battens need not be removed,

(2) **mainsails** with the **luff** not set in a mast **spar** track may be attached to **spars**,

(3) a **headsail stay** and **mainsail** mast **spar** jackstay need not be removed.

(b) Where a **mainsail** has a **luff** bolt rope the **luff** shall be taken as the aft edge of the bolt rope.

(c) **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**.

G.3 MAINSAIL

G.3.1 CONSTRUCTION

(a) MANDATORY

(1) The construction shall be: **soft sail**, **single ply sail**.

(2) The **body of the sail** shall consist of the same **ply** throughout and of not more than four parts joined by **seams**.

(3) **Seams** shall not deviate more than 10 mm from a straight line between **luff** and **leech**.

(4) The **sail** shall have three **batten pockets**, or battens at the leech or lines marked on the leech as defined in G.2.4(b) if there are no **battens pockets, at the leech.**

(5) Except within the leech stiffening zones, see H.3, the **leech** shall not extend aft of straight lines between The **leech** shall not extend aft of straight lines between:

(i) the **aft head point** and the nearest batten pocket point,

(ii) adjacent batten pocket points,

(iii) the **clew point** and the nearest batten pocket point where the batten pocket points are to be taken as defined in G.2.4.

(6) The **foot** shall not extend below a straight line between **tack point** and **clew point**.

(7) Class insignia.

(b) OPTIONAL

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

(2) One or two cringles and/or openings at the **head.**

(3) One cringle and/or openings at each of the **clew** and **tack.**

(4) **Luff** openings for mast **spar** rings and/or loops for mast **spar** jackstay fittings.

(5) **Luff** bolt rope.

(6) **Luff** track slides.

(7) **Luff** fittings for mast **spar** rings and/or loops.

(8) **Luff** fittings for mast **spar** jackstay.

(9) **Primary reinforcement** specified at G.3.3.

(10)**Secondary reinforcement** specified at G.3.3.

(11) **Primary reinforcement** and/or **stiffening** within the **leech** stiffening zones defined by templates shown in H.3..

(121) Tell tales.

(132) Not more than three sail shape indicator stripes, applied using paint or ink.

(143) Sailmaker labels.

G.3.2 CONSTRUCTION TECHNIQUES

(a) Only the following construction techniques shall be used where parts are joined or added as permitted in G.3.1 and G.3.3: welding; gluing; bonding with self adhesive tapes/materials; stitching.

(b) Except for stitching, the joining techniques used at **seams** shall not extend beyond the edges of the **seam**.

G.3.3 DIMENSIONS

	minimum	maximum
Leech length:		
mainsail 1	1610 mm	1620 mm
mainsail 2	1200 mm	1210 mm
mainsail 3	910 mm	920 mm

Foot length:
mainsail 1 ..... 350 mm ..... 360 mm
mainsail 2 ..... 340 mm ..... 350 mm
mainsail 3 ..... 310 mm ..... 320 mm

Quarter width:
mainsail 1 ..... 305 mm ..... 315 mm
mainsail 2 ..... 295 mm ..... 305 mm
mainsail 3 ..... 265 mm ..... 275 mm

Half width:
mainsail 1 ..... 235 mm ..... 245 mm
mainsail 2 ..... 225 mm ..... 235 mm
mainsail 3 ..... 205 mm ..... 215 mm

Three-quarter width:
mainsail 1 ..... 135 mm ..... 145 mm
mainsail 2 ..... 130 mm ..... 140 mm
mainsail 3 ..... 115 mm ..... 125 mm
Top width ..... 20 mm

Primary reinforcement:
from nearest **sail corner measurement point** .... 125 mm

Secondary reinforcement:
from nearest **sail corner measurement point** ..... 125 mm
for **flutter patches** ..... 50 mm

at **luff** fittings, **luff** slides and/or **luff** openings .... 20 mm
Tabling width ..... 15 mm
Seam width ..... 15 mm
Seam to nearest **sail corner measurement point** ..... 150 mm
Batten length:
middle and lower ..... 100 mm
upper ..... 75 mm
Batten width ..... 10 mm

Batten pocket length outside:
middle and lower . . . . . 120 mm
upper . . . . . 95 mm

Batten pocket width outside . . . . . 25 mm

Batten pocket point, as defined in G.2.4, to nearest
leech point .... 20 mm
Largest cringle dimension ..... 10 mm
With the exception for **luff** slides, largest **luff** fitting
dimension ..... 10 mm
Sail shape indicator stripe width ..... 30 mm

G.4 HEADSAIL

G.4.1 CONSTRUCTION

(a) MANDATORY

(1) The construction shall be: **soft sail**, **single ply sail**.

(2) The **body of the sail** shall consist of the same **ply** throughout and of not more than three parts joined by **seams**.

(3) **Seams** shall not deviate more than 10 mm from a straight line between **luff** and **leech**.

(4) Except within the leech stiffening zones, see H.3, tThe **leech** shall not extend aft of a straight line between the **aft head point** and the **clew point**.

(5) The **foot** shall not extend below a straight line between **tack point** and **clew point**.

(b) OPTIONAL

(1) **Tabling**, which at the **luff** may form a pocket for a **headsail stay**.

(2) One or two cringles and/or openings at the **head.**

(3) One cringle and/or openings at each of the **clew** and **tack.**

(4) **Headsail stay** slides and/or loops.

(5) **Primary reinforcement** specified at G.4.3.

(6) **Secondary reinforcement** specified at G.4.3.

(7) Not more than two **battens pockets, or battens if there are no batten pockets,** at the **leech**.

(8) Primary reinforcement and/or stiffening within the leech stiffening zones defined by templates as shown in H.3.

(89)Tell tales.

(910) Not more than two sail shape indicator stripes, applied using paint or ink.

(1011) Sailmaker labels.

G.4.2 CONSTRUCTION TECHNIQUES

(a) Only the following construction techniques shall be used where parts are joined or added as permitted in G.4.1 and G.4.3: welding; gluing; bonding with self adhesive tapes/materials; stitching.

(b) Except for stitching, the joining techniques used at **seams** shall not extent beyond the edges of the **seam**.

G.4.3 DIMENSIONS

	minimum	maximum
Luff length:		
headsail 1	1320 mm	1330 mm
headsail 2	980 mm	990 mm
headsail 3	730 mm	740 mm
Leech length:		
headsail 1	1245 mm	1255 mm
headsail 2	900 mm	910 mm
headsail 3	655 mm	665 mm
Foot length:		
headsail 1	375 mm	385 mm
headsail 2	340 mm	350 mm
headsail 3	290 mm	300 mm
Half width:		
headsail 1	185 mm	195 mm
headsail 2	165 mm	175 mm
headsail 3	140 mm	150 mm
Top width		20 mm
Primary reinforcement:		
from nearest **sail corner measurement point**		125 mm

Secondary reinforcement
from nearest **sail corner measurement point** ..... 125 mm
for **flutter patches** ..... 50 mm
at **headsail stay** slides and/or loops ..... 20 mm
Tabling width ..... 15 mm
Seam width ..... 15 mm
Seam to nearest **sail corner measuremen point** ..... 100 mm
Batten length ..... 75 mm
Batten width ..... 10 mm
Batten pocket length outside ..... 95 mm
Batten pocket width outside ..... 25 mm

Clew point to lower batten pocket point as defined in G.2.4:
headsail 1 ..... 400 mm ..... 430 mm
headsail 2 ..... 285 mm ..... 315 mm
headsail 3 ..... 205 mm ..... 235 mm

Clew point to upper batten pocket point as defined in G.2.4:
headsail 1 ..... 820 mm ..... 850 mm
headsail 2 ..... 590 mm ..... 620 mm
headsail 3 ..... 425 mm ..... 455 mm
Largest cringle dimension ..... 10 mm
Sail shape indicator stripe width ..... 30 mm

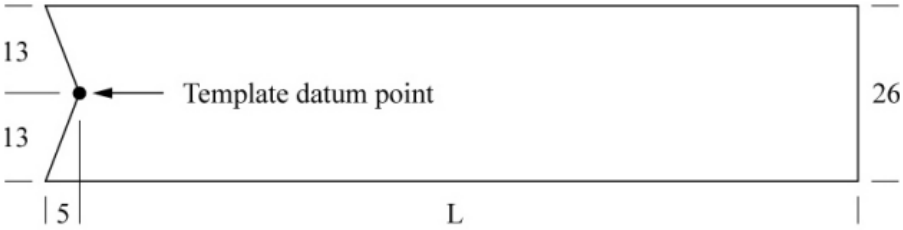
Part III – Appendices

H.3 LEECH STIFFENING ZONE

H.3.1 DEFINITION

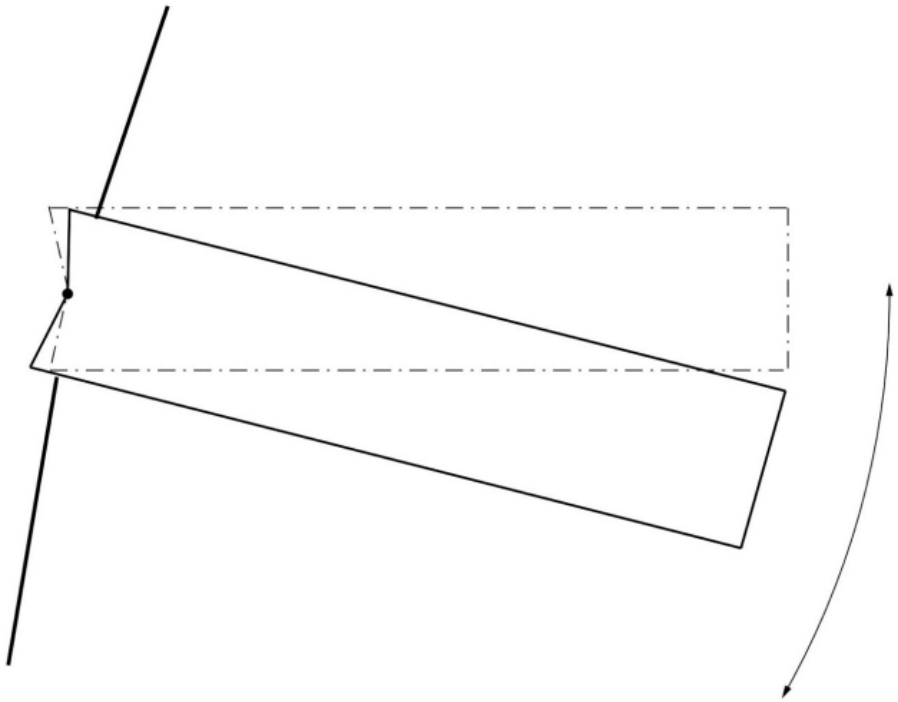
A leech stiffening zone is a part of a **sail** that may be covered by a leech stiffening zone template as described in H.3.2 and positioned as described in H.3.3.

H.3.2 TEMPLATE AND TEMPLATE DATUM POINT



Leech stiffening zone template .....Length, L
Mainsail middle and lower..... 120
Mainsail upper and headsail template..... 95

H.3.3 TEMPLATE POSITIONING



It shall be possible to position the template so that
(1) its datum point is over the relevant batten point,
(2) its long edges cut the **leech** and
(3) it covers any **primary reinforcement** and/or **stiffening**.

6.3 - Changes to CR F.4.5 dealing with maximum boom spar dimension Submitted by CAN

A cross section is not a dimension but has dimensions. Also the current wording is complicated.

Voted revised wording of IOM Class Rule F.4.5

F.4.5 DIMENSIONS

	minimum	maximum

Spar, ignoring features permitted by F.4.2, between points 10 mm from each end:

The boom spar shall pass through a 20 mm ring gauge.

difference between the smallest and largest
value along the spar of any external
dimension .... 0.5 mm

for an aluminium spar, the difference between
the largest and smallest value along the
spar of any wall thickness dimension .... 0.1 mm

NOTE: The VC Measurement will produce a procedure for checking this dimension so that disassembly of booms is not necessary.

1.11 2012 Rule Revision

According to the results of 2012 IOM ICA AGM, resolution 6 related to the IOM Class Rules have been carried out and IRSA formally approved them in order to prepare revised edition of the IOM Class Rules.

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, so listed changes of IOM Class Rules will be effective from 01 March 2013. This version will be marked with year 2013 on the cover page of IOM Class Rules.

6. List of voted changes to the IOM Class Rules

6.1 Changes to Class Rule A.11 and A.14.1 to align rules with current measurement forms and processes. – Submitted by GBR and VC Measurement

Voted revised wording (changes are in blue):

A.11 CERTIFICATION
A.11.1 For a **boat** not previously certified, all items required by the measurement forms to be measured shall be measured by an official measurer and the details of **boat** and owner entered on the **certification control** form.
A.11.2 The **certification control** form and certification fee, if required, shall be sent to the certification authority in the country where the **boat** is to be registered within 4 weeks of completion of certification control.
A.11.3 Upon receipt of a satisfactorily completed **certification control** form and certification fee, if required, within the four-week time limit, the certification authority may issue a certificate.

A.11.4 The certification authority shall retain the original **certification control** form, which shall be transferred to the new certification authority upon request, if the **boat** is exported.

A.14 RE-CERTIFICATION
A.14.1 A **boat** may be issued with a new **certificate**, showing date of initial and new **certification control** as applicable:
(a) WHEN A **CERTIFICATE** BECOMES INVALID UPON CHANGE OF OWNERSHIP
and the new owner applies to the **certification authority** in the country where the **boat** is to be registered. The application shall include the old **certificate** and re-**certification** fee, if required. In the case of an imported **boat**, the **certification authority** shall request the **certification control** form from the previous **certification authority** and a new **boat** registration number shall be issued,
(b) WHEN A **CERTIFICATE** HAS BEEN WITHDRAWN, OR WHEN THE **CERTIFICATE** AND **CERTIFICATION CONTROL** FORM CANNOT BE LOCATED
and **certification control**, as required for initial **certification** has being undertaken.

Discussion:
There is a simple change of wording in the certification clause A.11, because the MFs are no longer sent to the certification authority and are replaced by the Certification Control Form.

6.2 - Changes to Class Rule A.9 to clarify handing of Requests for Interpretation – Submitted by GBR

Background
The question of a time limit for interpretations was mentioned in the introduction to this subject. Whilst it is clear that IOMICA Regulation 9 sets out a perfectly logical and practical procedure for handling class rule interpretations, there is a problem that has muddied the waters.

The problem is created by IOM class rule A.9.1 GENERAL:
“Interpretation of class rules, except as provided by A.9.2 shall be in accordance with the IRSA Regulations.”

The IRSA regulation that applies to interpretations by IOMICA, regulation 6.3 and clause 6.3.1 implies referral back to IOMICA Regulation 9. As IRSA regulation 6.3.1 applies, then 6.3.2 does not apply. The dubious requirement of a two-year maximum lifespan in 6.3.2(e) does not apply either. The

incorporation of non-permissive interpretations in closed rules is not practical as you can only mention in the CR what is permitted. To regularise this situation and to make the question of the status of IOM interpretations clearer, the GBR NCA make a further rule change proposal, with the change shown in blue.

Voted wording for Class Rule A.9.1:

“A.9.1 GENERAL
Interpretation of class rules, except as provided by A.9.2, shall be made in accordance with IOMICA regulations.”

6.3 - Changes to Class Rule C.3.1 to reflect ISAF Regulations – Submitted by IOM ICA Exec
Investigation finds that Category C is not referenced in the ISAF Advertising Code.

Voted wording of Class Rule C.3.1
C.3.1 LIMITATIONS
The boat shall display only such advertising as permitted by the ISAF Advertising Code.

6.4 - Changes to Class Rule C.5.3 to ratify Emergency Rule – Submitted by IOM ICA Executive
An Emergency Rule was passed by the IOM ICA Executive to recognize a change in available radio technology that does not produce any performance advantage.

The wording in the Emergency Rule Change was:
An Emergency International One Metre Class Rule change or interpretation of the current IOM Class Rules has been requested by CAN NCA on 27 February 2012.

The IOM ICA Technical Subcommittee has discussed the matter and the following emergency change of the IOM Class Rules has been agreed:

Current IOM CR C.5.3(c)
“Except for control unit positioning and radio link information, no radio transmissions from the boat shall be made.”
The problem with the current rule is that it is dealing with “transmissions from the boat“. The majority of IOM skippers have no idea what their receivers are transmitting to transmitters. Therefore, the proposal is to declare what the skipper may use while racing.

New voted wording of IOM CR C.5.3(c):

“Crew may use only the following radio transmissions from the boat:
(1) control unit positioning,
(2) radio link information,
(3) monitoring of onboard battery(s) conditions.”

Rule C.5.3 is in Part C so it is used when racing. According to the proposed new wording, it is clear that the transmitter and receiver may exchange more data, links, etc., which may be used while not racing.

To be in compliance with proposed IOM CR C.5.3(c) you may use any radio set but you must shut down features on your transmitter (display, audio message, etc.) which are not permitted by the IOM Class Rules. Battery monitoring is explicitly allowed in the proposed class rule change.

6.5 - Changes to Class Rule D.2.4 to clarify voltage control on board the boat. -
It has become common practice to use batteries configured to supply higher voltage in IOM boats. It is also apparent that some well regarded equipment in use for a long time incorporates circuitry that allows the use of that higher voltage to provide better performance of the sailwinch and also reduces the voltage delivered to the other radio equipment on the boat. Inclusion of this circuitry is not specifically allowed by the Class Rules.
The rules allow, in D.2.4(3) that you may have “One sheet control unit”. However, Class Rule C.5.3(b) sates that “The sheet control unit shall control the mainsail sheet and headsail sheet only.”
To clarify the use of this function and to allow similar control of the voltage delivered to allowed remote control equipment, as defined in these two sections of the rules, it is voted to add Class Rule D.2.4(a)(7) to read:

(7) a device to control downstream voltage delivered to permitted radio control equipment as defined by items listed under (1) to (6) of this rule.

6.7 - Changes to Class Rule D.2.1 (a) (3) to allow pigmented resin in the hull – Submitted by GBR
IOM NCA for GBR propose the following IOM CR change:

D.2.1 (a) (3) is changed to:
(3) Resin, which may be coloured and/or reinforced with glass fibres,
D.2.1 (b) is deleted

Reasons for proposing change
The original concept for the construction of the One Metre hull was that the rule should have a generous hull weight allowance so that it could be made easily by amateurs and economically by professionals, without the use of 'supposedly expensive' materials like carbon, kevlar etc. With this generous weight limit preventing any major performance difference it then wouldn't matter what material the hull is made of, because it will be adequately strong whether in balsa, GRP or any of the specified materials.
Problems have been encountered throughout the life of the rule with construction detail and particularly GRP and inspection of fibres. Interpretation 2010-IOM-1 appears to render this latter requirement to see the fibres redundant by permitting a wooden covering the inside of GRP. Anyone inspecting the inside of a compliant GRP hull will see the colour of the gel coat anyway as the colour permeates into the lay up resin. In this case there should be no reason why IOM GRP construction cannot revert to the GRP moulding industry norm of colour pigment in all the resin layers. This is the basis of our proposal.
It would be a benefit to the class in the future by making the moulding process cheaper, removing the need for double gel coat, painting processes etc and reducing the labour content needed to achieve a good solid, deep scratch tolerant and more durable hull colour. We do not know of any moulder that would not gladly welcome this change.
There was concern that just relying on the Owner's Declaration, that the hull is made of only specified materials, was insufficient to prevent non-permitted fibres being used.
However this is the rule already.
Hull construction is just one of many things covered by the declarations in both Boat and Rig Measurement Forms that the owner and indeed Official Measurers cannot verify. The suppliers of those parts have to be trusted.
Apart from the hull material, these include the density of ballast, the aluminium alloys in mast and booms, the wall thickness of those spars and the density of the rig corrector weights. If manufacturers and suppliers are marketing IOM parts, then these must comply with the IOM class rules to meet trade description requirements, which prevent them misleading consumers as to what they are spending their money on. Any supplier whose IOM parts fail to comply with class rules would immediately lose that business and probably face financial ruin.
The risk of a problem is very small and far outweighed by the greater benefit to be gained from cheaper and better hulls.

1.12 2014 Rule Revision

According to the results of 2014 IOM ICA AGM, resolution 5 related to the IOM Class Rules have been carried out and IRSA formally approved them in order to prepare revised edition of the IOM Class Rules.

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, so listed changes of IOM Class Rules will be effective from 01 March 2015. This version will be marked with year 2015 on the cover page of IOM Class Rules.

5.1 – Ratified Emergency Class Rule changes resulting from Interpretation 2014-IOM-1 and Interpretation 2014-IOM-2 regarding the use of wind indicators and tell tales.

The Emergency Rule Change reads:
Emergency IOM Class Rule changes made after Interpretations 2014-IOM-1 and 2014-IOM-2 have been published. Tell tales and wind indicator on IOM boats are permitted by the IOM Class Rules since the early days of the IOM Class. Tell tales on the mainsail leech have been generally ignored by the measurers during measurement and wind indicator attached to the backstay has been considered as permitted.

USA NCA asked for interpretations regarding tell tales and wind indicator permitted positions and interpretations 2014-IOM-1 and 2014-IOM-2 have been published limiting the position of the wind indicator to the mast spar or its fittings only and prohibiting use of tell tales on mainsail leech In order to allow continuation of using tell tales and wind indicators as they are used by great majority of IOM Owners,
following emergency class rule changes have been voted by IOM ICA Exec on 1 July 2014 allowing use of the wind indicator attached to the mast spar or its fitting and to the backstay as well as positioning of tell tales on any part of the sail:

- Addition of IOM Class Rule F.3.3(c)(3) Permitted fittings shall be attached to the mast spar or its fittings.
- Addition of the word “spar“ at the end of IOM Class Rule F.3.2(a)
- Deletion of IOM Class Rule F.5.2(a)(2)
- Addition of IOM Class Rule F.6.2(a)(5) Backstay
- Addition of IOM Class Rule G.2.5(a)(4) Tell tales shall be ignored.
- Addition of IOM Class Rule F.6.3(d) A wind indicator attached to the backstay

1 July 2014
Robert Grubiša, IOM ICA VC Technical
Approved by IRSA on 8 August 2014.
Valid from 8 August 2014.

5.2 – Ratified Emergency Class Rule changes resulting from Interpretation 2014-IOM-3 regarding the use of multiple topping lift restraints.

The Emergency Rule Change Reads:
Emergency IOM Class Rule changes made after Interpretation 2014-IOM-3 has been published
(Based on proposal for a change to IOM Class Rules to permit more than one topping lift restraint line submitted by MYA acting as NCA for UK)

Introduction
The IOM Class Rules permit a headsail boom topping lift restraint line as optional running rigging in IOM Class Rule F6.2(b)(8).

Class rule C7.7 (c) controls what it may be attached to or passed around while class rule F.6.1 permits any material to be used in its construction.

The intended use of such a device is not defined in the class rules nor the Equipment Rules of Sailing.

Devices that might be considered to be restraint lines are commonly used for two purposes.

1. A line is passed around or attached to the headsail stay and the topping lift, to pull the latter forward away from the mast.
2. A line, which may take many forms, is used to prevent the topping lift from fouling on spreaders.

Interpretation 2014-IOM-3 makes it clear many such devices are restraint lines and it is not unusual to see both types fitted as they have different functions both of which are desirable.

However Interpretation 2014-IOM-3 also points out that the class rules say ‘a topping lift restraint line’ indicating that only one is permitted.

It is proposed to permit more than one with immediate effect (18th September 2014).

Change Class Rule F6.2(b)(8) to read:

(8) Headsail boom topping lift restraint line(s).

Change Class Rule C.7.7(c) to read:

“(c) Headsail boom topping lift restraint line(s) 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.”

16 September 2014
Robert Grubiša, IOM ICA VC Technical
Valid from 18th September 2014

Approved by IRSA on 25 September 2014

1.13 2015 Rule Revision

According to the results of 2015 IOM ICA AGM, resolution 6.1 related to the IOM Class Rules have been carried out and IRSA formally approved them in order to prepare revised edition of the IOM Class Rules.

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, so listed changes of IOM Class Rules will be effective from 01 March 2016. This version will be marked with year 2016 on the cover page of IOM Class Rules.

6.1 - Ratified Emergency Rule Change regarding F.2.4(d) – Submitted by IOM ICA Technical Sub Committee

From IRSA Approved Change:

Proposal Details:
Gooseneck & kicking strap: IOMICA proposal to change class rules

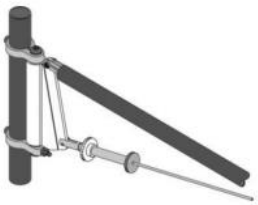
Current situation/Background
According to the Interpretation 2015-IOM-1, it is not permitted to have the gooseneck and kicking strap attached to a plate instead to the mast itself. Therefore, the plate does not meet the requirements of the gooseneck or kicking strap fitting because it extends their function by its size, providing additional 'area' with the potential to add to the driving force. Also, the plate is not a permitted fitting or termination in its own right.

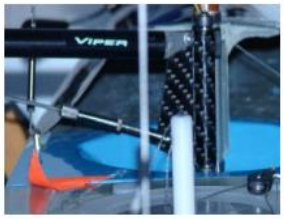
Problem
IOM ICA is aware that great number of fittings, similar to those shown on the photos below (from several manufacturers and amateur builders), have been produced, sold and used in competition over a period of several years without comment.

Proposal
Class rule addition:

IOM Class Rule F.2.4(d):
(d) Where the mast kicking strap fitting and/or gooseneck:
(1) are exposed,
(2) are not of circular cross section, and
(3) rotate,
they shall not exceed 20 mm in any cross section perpendicular to the axis of rotation.

Examples of not permitted plates:






Note: Sketches and photos are shown as examples only. All similar fittings are affected by this Class Rule Change

1.14 2016 Rule Revision

According to the results of 2016 IOM ICA AGM, resolution 5.1 related to the IOM Class Rules have been carried out and IRSA formally approved them in order to prepare revised edition of the IOM Class Rules.

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, so listed changes of IOM Class Rules will be effective from 01 May 2017. This version will be marked with year 2017 on the cover page of IOM Class Rules.

Short explanation why IOM Class Rules has been revised
Revision of the IOM Class Rules proposed by the IOM ICA Exec has been necessary because of:

- Agreement relating to the International One Metre Class between the IRSA and the IOM ICA dated the 1st day October 2014 dealing with the interpretations of the IOM Class Rules
- New edition of the ERS 2017-2020
- Decisions in issued interpretations which needs to be implemented into the wording of the relevant class rules.
- Enhancing of closed class rule nature of the IOM Class Rules
- Name change of ISAF to World Sailing
- Harmonization with cover page outlook, text formatting and wording used in other ISAF classes.
- Using better wording when necessary
- Omissions in the current version of IOM Class Rules.

Influence of changes in the IOM Class Rules to the IOM ICA Regulations

Item 2.4 in the Agreement relating to the International One Metre Class between the IRSA and the IOM ICA dated the 1st day October 2014 has following wording:

“Any amendments to or interpretations of the International One Metre Class Rules shall be carried out in accordance with IRSA Regulation Article 15.2.”

IRSA and World Sailing policy regarding the validity of the interpretations is that they shall remain valid for a maximum period of 2 years or until superseded by a class rule change.

Current IOM ICA Regulation 9.1: “A rule interpretation shall have the status of a Class Rule and shall remain valid until superseded by a Class Rule change” is not in accordance with the signed Agreement.

IOM Class Rules - Question & answers

IRSA has adopted the following principle for handling interpretations/questions about the class rules and it is felt IOMICA should do the same.

From https://www.radiosailing.org/question-answers/rules-2/question/28:
An interpretation is requested when it is not clear (to a designer, builder, measurer, class association or certification authority) how a class rule shall be interpreted. When an interpretation is issued it should be kept in mind that the interpretation is valid until the class rules are changed or for two years maximum only. The purpose of this last rule is that two years gives sufficient time to consider if the effect of the interpretation is a) desirable or b) undesirable. Depending on the decision or choice (a or b, by the IRSA TC or the class depending on whether there is an independent class organisation or not) the class rules can be revised accordingly.
Thus, when drafting any interpretation, it should be kept in mind how the class rules should/could be revised to make the original interpretation request redundant.
It follows that, if no revised class rule can be written, there is no need to issue an interpretation. Where no interpretation is required, but only an explanation of the effect of the class rules, it follows that it would be appropriate to deal with the original request by issuing a Q&A to be published on the IRSA website and elsewhere as appropriate.
This is the guiding principle used by the IRSA Technical Committee when considering any question about the class rules whether it is a formal request for an interpretation or not.

How this proposal is affecting the current IOM fleet
Changes of the IOM Class Rules are not directly affecting any existing IOM boat. However, bear in mind that are **closed class rules** in which anything not specifically permitted by the **class rules** is prohibited and it is possible that a part of equipment currently used may be challenged by asking an interpretation.

Changes in 2017 Edition of the IOM Class Rules

Numerous changes have been marked and explained in the revised text of the IOM Class Rules published on the IOM ICA website.

Changes of the IOM ICA Regulations

IOM ICA Regulation 9.1 to be deleted.

Transferring existing interpretations to Q&A section of the IOM class:
Content of all interpretations on the IOM Class Rules older than two years and not implemented in the proposed changes of the IOM Class Rules is deleted and published on Q&A section of the IOM Class.
For reference see: https://www.radiosailing.org/question-answers/qaall.
The main aim is to allow the radio sailing community interested in the IOM Class to have easy and straight forward use of the latest edition of the IOM Class Rules and limited number of interpretations, if any. All other technical stuff is stored in Q&A section as it is common practice in World Sailing and IRSA.

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12 February 2010
Prepared by Robert Grubisa, IOM ICA VC Technical

Revised on 23 November 2010 by RG
Revised on 21 July 2015 by RG
Revised on 11 April 2017 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)