EFFECTIVE 1st March 2005

INTERNATIONAL 49er CLASS RULES
The 49er is a strict one design, designed in 1995 by Julian Bethwaite.
Section A – Fundamental Rules

A.1 Type of Class Rules
A.1.1. These are closed class rules.
A.1.2 The 49er shall be manufactured in accordance with the construction manual by builders licensed by IRS with the approval of ISAF.
A.1.3. Any alteration of the form or construction of the hull, equipment, fittings, spars, sails or running rigging, as supplied by the builder, unless specifically approved by these rules, is prohibited.

A.2 Abbreviations
A.2.1  ISAF International Sailing Federation
       MNA ISAF Member National Authority
       ICA International 49er Class Association
       NCA National Class Association
       ERS Equipment Rules of Sailing
       RRS Racing Rules of Sailing
       IRS International Racing Sailboats Pty Ltd

A.3 Authority
A.3.1 The international authority of the class is the ISAF, which shall cooperate with the ICA in all matters concerning these class rules.
A.3.2 The ISAF, an MNA, the ICA, an NCA, or an official measurer is under no legal responsibility in respect of these class rules.

A.4 Language
A.4.1 The official language of the class is English and in case of dispute over the translation, the English text shall prevail.
A.4.2 The word “shall” is mandatory and the word “may” is permissive.

A.5 ISAF Rules
A.5.1 These class rules shall be read with ERS and measurements shall be taken in accordance with these unless specified. Where a term is used in its defined sense, it is printed in “bold” type is defined in ERS and in “italic” type is defined in RRA.6.

A.6 Interpretation of Class Rules.
A.6.1 Any interpretation of the class rules, except as provided in A.7, shall be made by ICA Chairman of Technical Committee, subject to ratification by ISAF in cooperation with the ICA.

A.7 Interpretation of the Class Rules at an Event
A.7.1 Interpretations of the class rules at an event shall be made in accordance with the RRS and the race organising authority shall, as soon as practical after the event, inform the ISAF and the ICA of such a ruling.

A.8 Event Measurement
A.8.1 In the case of a measurement dispute on any part or item of the boat, the
following procedure shall be adopted:
A sample of 5 other boats, shall be taken and measured using identical
techniques. The dimensions of the disputed boat shall be equal to, or between, the
maximum and minimum dimensions obtained from these 5 boats. If the boat in question
is outside these dimensions the matter, together with any relevant information, shall be
referred to the ICA, which shall give a final ruling. If any of the dimensions of the
sample are considered to be unusual, all relevant information shall be referred by the
ICA to the ISAF.

Section B – Organisation

B.1 Administration of the Class
B.1.1 The class is administered by the International 49er Class Association.

B.2 International Class Fee and ISAF Plaque
B.2.1 The international Class Fee shall be paid by the licensed hull builder to the ISAF.
B.2.2 All hulls shall bear the ISAF class plaque.

B.3 Measurement Certificate
B.3.1 Measurement certificates are not issued.

B.4 Amendment to Class Rules
B.4.1 Amendments to the class rules shall be proposed by the ICA in accordance with
its constitution and submitted for approval by ISAF.

Section C – Conditions for Racing
The crew and the boat shall comply with the rules in this section when racing.

C.1 Identification of Sails
C.1.1 The national letters and the sail numbers shall be black and shall comply with the
RRS except where specified otherwise.
C.1.2 The national letters and the sail numbers shall be wholly between the 2nd and 3rd
batten pockets from the head point.
C.1.3 The sail number shall be either:
(i) If either of the crew have finished in the top 50 in the preceding
49er world championship their sail number shall be that place, 1st
to 9th single digit, otherwise two digits.
(ii) Otherwise, the sail number shall be that shown on the ISAF
plaque and shall be the last three digits. Boat # 15 = 015 or Boat
# 2345 = 345
(iii) Should there be multiplicity in numbers due to C.1.4. (i) or (ii), a
race committee may make an arrangement suitable for the
duration of the event involved
C.1.4 The base of the national letters and the sail numbers shall be approximately
parallel to the batten pockets.

C.2 Equipment
C.2.1 LIMITATIONS
(a) Apart from what is permitted by C.2.2-4, only equipment listed in the part
list Appendix 1 shall be used.
(b) Apart from what is permitted by C.2.2-5, no function may be extended or added.
(c) No part of a boat shall be replaced during an event, other than to replace equipment damaged beyond repair before the next race. Such replacements may be made only with the approval of the race committee, and no re-substitutions of the original equipment may then be made, except with the approval of the race committee.
(d) Standing rigging shall not be adjusted after the boat starts.
(e) The forestay shall be fitted to the centre hole of the stem head fitting.
(f) Mast spar rake controlled by laying the forestay along the forward face of the mast spar and measuring the extension of the forestay beyond the mast heel. This distance shall be taken between the forward extension of the bottom of heel tenon and the upper bearing surface of the forestay pin and shall be minimum 424mm and maximum 434mm.
(g) With the exception of C.2.2(l), no holes may be made in the hull or deck mouldings, except for the purpose of making repairs – see C2.5.
(h) The weight of the hull including wings, gennaker sock, bowsprit, rudder stock (including tiller), rudder frame and any hull corrector weight, but excluding daggerboard and rudder blade shall not be less than 94kg with all items in dry condition.
(i) A corrector weight with a minimum thickness of 10mm shall be permanently fastened to the top surface of the deck beside the mast step when the hull weight as in C.2.1(h) is less than the minimum requirement.
(j) The total weight of such hull corrector weights shall not exceed 2kg.
(k) The distance between the forward side of the daggerboard slot below the radius at the deck and the forward face of the mast spar, measured along the deck, shall be minimum 285 mm, maximum 295 mm.
(l) The dimension between the centre of the centre hole in the stemhead fitting and the front face of the mast spar at the top of the heel plug, measured in a straight line between these two points shall be minimum 2118 mm, maximum 2128 mm.
(m) The Sail Battens as supplied by IRS may not be altered in stiffness. The length of the battens may be altered to adjust the tension in the batten pocket, provided the batten fits within the original pocket and the sail is not altered other than by cutting and renewing the batten pocket stitching at either end.
(n) The aft sweep of the spreaders, shall be measured with the mast under tension (caps 15, primaries 30, lowers 25, +/- 2, as measured on a new Loos gauge) as follows:
   (i) By the measurement of a straight line joining the two outside edges of the shroud wires:
       Upper spreaders: minimum: 910mm, maximum 920mm
       Lower spreaders: minimum: 895mm, maximum 905mm
   (ii) The minimum dimension from the inside of the mast sail track to a straight edge joining the aft face of the shrouds:
       Lower spreaders: minimum 180mm, maximum 190mm.
       Upper spreaders: minimum 150mm, maximum 160mm.
       The spreaders as supplied may be adjusted by filing or fitting packing between the band and the mast to achieve these dimensions.

C.2.2 OPTIONAL
(a) Timing devices, removable for weighing.
(b) Mechanical wind indicators.
(c) Tuff’s or ribbons in the sails and rigging.
(d) Maximum two compasses with brackets, removable for weighing. Electronic compasses with functions beyond heading and timing are prohibited.
(e) A non-ratchet block for the gennaker sheet with a sheave diameter of 30-40 mm attached to each front inside wing bolt.
(f) Shockcord tails in ropes.
(g) A non-ratchet block, in the gennaker halyard between the sail and the mast spar, with a sheave of not more than 20 mm diameter and attached with a shockcord tail to the mast.
(h) A non-ratchet block, in the gennaker halyard behind the two floor blocks, with a sheave of not more than 20 mm diameter and attached with a shockcord, which may pass through an additional block of not more than 20 mm in diameter.
(i) Maximum 4 foot loops on each wing for which holes may be drilled.
(j) Storage devices within the cockpit.
(k) Non-skid tape or patches provided they are not more than 3 mm thick, made from a flexible material and attached to the deck moulding or the wings.
(l) One tie down loop, bolted through the gunwale flange on each side to be totally within 800 mm to 1000 mm behind the chainplates, to facilitate securing the hull to a trailer or dolly.
(m) A tube of not more than 25 mm in diameter and less than 1000 mm in length may be fitted over the lower part of the forestay.
(n) Wedges and springs may be fitted under jib sheet blocks, vang and cunningham cleats and gennaker halyard cleat.
(o) Safety equipment, tools and spare parts may be carried.
(p) A clip or shackle may be fitted at the end of the jib sheet where it attaches to the clewboard of the jib.
(q) An external elastic gennaker halyard take away on the mast is permitted.
(r) The use of shock cord or adhesive tape is in general unrestricted, except that such material must not be used in such a way as to create a fitting or extend a function which is otherwise prohibited in these rules.
(s) Fittings made from flexible material may be added along the rail forward of the chainplates on each side for the hull for the sole purpose of retaining the spinnaker sheets on the boat.
(t) The removal of the bottom jib hank is permitted.
(u) Main and Jib halyards may not be fitted with more than 1/1 purchase.
(w) The use of shroud plate turnbuckles to adjust rig shroud length is allowed.

C.2.3 MODIFICATIONS
(a) The tiller forward of the rudder stock may be modified.
(b) The hull, wings, daggerboard and rudder blade may be sanded and painted and polished, except that the shape or weight distribution of the items as originally supplied shall not be altered.
That the trailing edges of the daggerboard and rudder must be between 1.5mm and 3mm thickness, 1mm forward of the aft edge of the foils, for their entire length.
(c) The trapeze arrangement may be modified to include a continuous system
and/or adjustable hook height provided that the attachment methods to the mast spar and the wings are not changed.

d) The mainsheet shall be rigged either:
   (i) with a ratchet block as the last block shackled to the boom spar, in which case a fairlead may be attached to the floor plinth; or
   (ii) with a block with a 30-40 mm sheave as the last block shackled to the boom spar and block attached to the floor plinth via a shackle or a swivel base, which may include a cleat.

e) The centreboard and rudder trunk packing may be replaced by any compressible material, defined as being capable of conforming to the pressure of a thumbnail. This packing shall not extend for more than 60mm into the trunk from the top or bottom, or beyond the surface defined by straight edge held perpendicular to the centreline and dragged along the bottom of the hull or rudder trunk.”

(f) Fittings can be bedded in provided they can be removed without damage

C.2.4 REPLACEMENTS FROM OPTIONAL SUPPLIERS
(a) Replacements shall be fitted in the same position as the standard fitting, or as close as is structurally possible.
(b) Any cleat may be replaced with a cleat of any material and of substantially the same size and design.
(c) Any block may be replaced with a block of the same number of sheaves of similar or greater diameter. Ratchet block have no sheave diameter restrictions provided they do not alter the weight distribution of the boat.
(d) The tiller extensions may be replaced without any restrictions as to design and material.
(e) Standing rigging may be replaced and shall then comply with the following:
   (i) The forestay, middle shrouds and lower shrouds shall be 3.0mm - 3.5mm diameter 1 x 7 stainless steel wire.
   (ii) The upper shrouds shall be 2.3 mm – 2.6 mm diameter 1 x 7 stainless steel wire.
   (iii) Only single shroud plates shall be used and may be replaced by Ronstan part no. RF2331 or Holt Allen part no. HA4772
(f) The trapeze wires may be replaced with stainless steel wire of not less than 2.3 mm diameter or by lines of any material of not less than 3.0 mm diameter.
(g) Sheets and lines may be replaced without any restrictions as to length, diameter and taper providing the part is not made of wire. A continuous main and jib sheet is permitted.
(h) Main/jib halyards may be replaced by line wires of any material.
(i) Rig pins may be replaced by quick pins or any other type of pins.
(j) The existing holes in the jib sheet track may be increased in diameter up to a maximum of 6.5mm. Additional holes are not permitted.

C.2.5 REPAIRS
In the event of damage to any part of the boat, necessary repairs may be made provided repairs are made in such a way that the essential shape and function is not materially affected. Fittings shall be attached in the same position as before the repair, or as close as is structurally possible.
C.3 Buoyancy
C.3.1 The watertight integrity of the hull must be maintained.
C.3.2 The breather hole in the centre plinth must remain open and unrestricted.

C.4 Location of Hull Appendages
C.4.1 The daggerboard and rudder blade shall each be secured by shockcord which may have a snap hook. The shockcords may be attached to any existing fitting and it is permitted to drill a hole through the rudder stock flange for this purpose.
C.4.2 The holes in the daggerboard and rudder blade for the lifting handles shall not be below the case top edge.

C.5 Crew
C.5.1 The crew shall consist of two persons.

C.6 Crew Weight Equalisation
C.6.1 The wing position shall be set at maximum width

C.7 Membership
C.7.1 At least one crewmember shall be a current member of the ICA or a member of a regional, national, or district class association duly established in accordance with the class constitution.

Section D – Hull

D.1 Measurement
D.1.1 The hull and wings shall comply with the class rules in force at the time of manufacture. Hull fittings shall comply with the current class rules.

D.2 Builders
D.2.1 Hull and wing builders shall be licensed in accordance with A.1.2.

Section E – Hull Appendages

E.1 Measurement
E.1.1 The hull appendages shall comply with the class rules in force at the time of manufacture.

E.2 Manufacturers
E.2.1 Manufacturers shall be licensed in accordance with A.1.2

Section F - Rig

F.1 Measurement
F.1.1 Spars shall comply with the class rules in force at the time of manufacture. Rigging shall comply with the current class rules.

F.2. Manufacturers
F.2.1 Manufacturers shall be licensed in accordance with A.1.2
Section G – Sails

G.1 Measurement
G.1.1 Sails shall comply with the class rules in force at the time of manufacture.

G.2 Sailmakers
G.2.1 Manufacturers shall be licensed in accordance with A.1.2.
G.2.2 No person may re-cut any sail, except as permitted in G.5.1, or otherwise change or effect any aspect of the sail or pierce the sail for any reason other than effecting necessary repairs or as permitted by these rules.

G.3 Mainsail
G.3.1 CLASS INSIGNIA
The class insignia shall be silk-screened, glued, or sewn onto the sail within 1st and 2nd batten pockets from the head point.
G.3.2 TACK AND FOOT
For the purpose of advertising, the tack shall be taken as the lowest point of the forward edge of the mast sleeve and the length of the foot shall be taken to be 3000 mm.

G.4 Jib
G.4.1 RRS 50.4 – Headsails, shall not apply.

G.5 Gennaker
G.5.1 The gennaker may be modified by having graphics cut in, which shall not extend within 1000 mm of the head point or tack and shall not extend into the two outer panels or the luff, leach or foot. Such actions may not alter the original shape of the sail.
G.5.2 RRS 50.4 – Headsails, shall not apply, except that for the purposes of Appendix G – Advertising, the gennaker shall be deemed a spinnaker.

APPENDIX 1 – PART LIST

<table>
<thead>
<tr>
<th>Standard fittings list</th>
<th>Part No.</th>
<th>Options or restrictions (Where no comment as per class rules.)</th>
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<tbody>
<tr>
<td>Mast</td>
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<tr>
<td>Mast Top Section</td>
<td>49er/Top Sect</td>
<td>IRS Licensed supplier only</td>
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<tr>
<td>Mast Bottom Section</td>
<td>49er/Bot Sect</td>
<td>IRS Licensed supplier only</td>
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<td>Top Spreader</td>
<td>49er/LowSpr</td>
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<td>49er/TopSpr</td>
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<td>Spin Halyard block (top)</td>
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<tr>
<td>Item</td>
<td>Code</td>
<td>Notes</td>
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<tr>
<td>-------------------------------------------</td>
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<tr>
<td>Main Halyard exit box</td>
<td>RF 1985</td>
<td>Min 17mm dia sheave</td>
</tr>
<tr>
<td>Jib Halyard exit box</td>
<td>RF 1985</td>
<td>Min 17mm dia sheave</td>
</tr>
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<td>Spin Halyard block</td>
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<td>Min 26mm dia sheave (base)</td>
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<td>Large Exit Box</td>
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<td>Vang Pivot/Gooseneck</td>
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<td>Vang lever 49er/Vang</td>
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<td>HA Halyard Hook</td>
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<td>Mast Plug 49er/Plug</td>
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<td><strong>Wires/Boom</strong></td>
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<td>1/8 Swage Toggle</td>
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<td>Shrouds Chainplate</td>
<td>RF 2331/HA4772</td>
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<td>Boom section 49er/Boom</td>
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<td>Boom Gooseneck</td>
<td>RM678 (m)</td>
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<td>Vang Plates</td>
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<td>Exit Box (outhaul)</td>
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<td>Outhaul hook block</td>
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<td>Single block (outhaul)</td>
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<td>Cleat (outhaul)</td>
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<td>Extension Block</td>
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<td><strong>Forestay</strong></td>
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<td>Forestay fitting 49er/FS, Chain</td>
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<td>Aft bearing 49er/Aft, Bearing</td>
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<td><strong>Jib Sheet</strong></td>
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<td>Micro cheek block</td>
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<td><strong>Jib System</strong></td>
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<td>Cleat and Swivel</td>
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<td><strong>Chainplates</strong></td>
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<td>Chainplates hull</td>
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<td>Alloy Bar 49er/Chainplate</td>
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<td>Mast Step Channel 49er/MastStep</td>
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<td><strong>Other</strong></td>
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<td>Small Fairlead saddle</td>
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<td>Small cleat and guide</td>
<td>RF 5001 p/y</td>
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<td>Stand up blocks</td>
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<td>Spinnaker Sock 49er/SpinSock</td>
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<td>Micro Cheek Blocks</td>
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<td>Single block with hook</td>
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<td><strong>Rudder</strong></td>
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<td>Rudderstock and Tiller</td>
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<td>Rudder Gudgeon/Pin</td>
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<td>Rudder Frame</td>
<td>49er/RudFrame</td>
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<td>Anchor Gudgeons</td>
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<td>Rudder pin bushes</td>
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Wings

Wing Slides RF9506046 IRS Licensed supplier only
Wing Slides with Stopper RF9506045 IRS Licensed supplier only
Guides (set for 1 slide) RF 987 IRS Licensed supplier only
T Tracks RF 9506003 IRS Licensed supplier only
Track End RF 982 IRS Licensed supplier only
Ratchet Block RF 1720
V Cleat RF 5106

Replacement

Grommets PNP 54A

APPENDIX 2 – EVENT RULES
1.1 The minimum wind speed for starting will be that in which the race committee considers the boats have sufficient capability for pre-start maneuvers.
1.2 Races should not start, or races in progress should be abandoned when:
(a) wind gusts exceed 25 knots for more than 30 seconds.
(b) Wind gusts exceed 30 knots for any duration.
(c) The race committee considers conditions are unsafe for sailing.

SPECIFICATION CHANGES
A sailor may modify his boat to include an additional air bung to assist airflow though out the hull cavity. The bung must be within 450-550mm of the forestay pin and within 150-250mm of the gunwale on the port side. Further the hole in the deck laminate may not exceed 50mm in diameter.
2. Outhaul Cleat Effective June 15th 2000
The outhaul cleat may be move from the bottom of the boom to a position on the starboard side of the boom, in the same position for and aft and within 50mm of the bottom.
3. 49er Sails Effective 1st January 2002 in the Olympics plus World, Continental and Grand Prix racing for the Gold fleet.
Following the decision of the 1999 World Council, and in accordance with the recommendations of the class working party, the Class will adopt the Neil Pryde/Ian MacDairmid sail design and supply option as official class legal sails.
And that these become class legal from 1st October 2000 until the end of the 2004 Athens Olympics.
Further that only these sails will be class legal in Gold fleet racing after 1st January 2002 in the Olympics plus World, Continental and Grand Prix racing.
The class allows the introduction of 29er type cast alloy rudder stocks.
Further that only these rudder stocks will be class legal in Gold fleet racing after 1st January 2002 in the Olympics plus World, Continental and Grand Prix racing for the Gold fleet.

STATEMENT OF POSITION
For clarification, in regard to Spinnaker Socks,
IRS specifies that the Australian made “Big Foot” type Spinnaker sock is the only equipment that has met the IRS specification and therefore can be the only Spinnaker sock that can be supplied as “IRS Licensed supplier only”