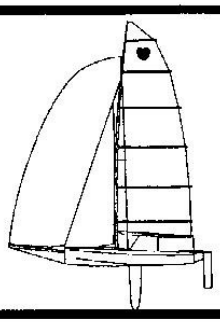
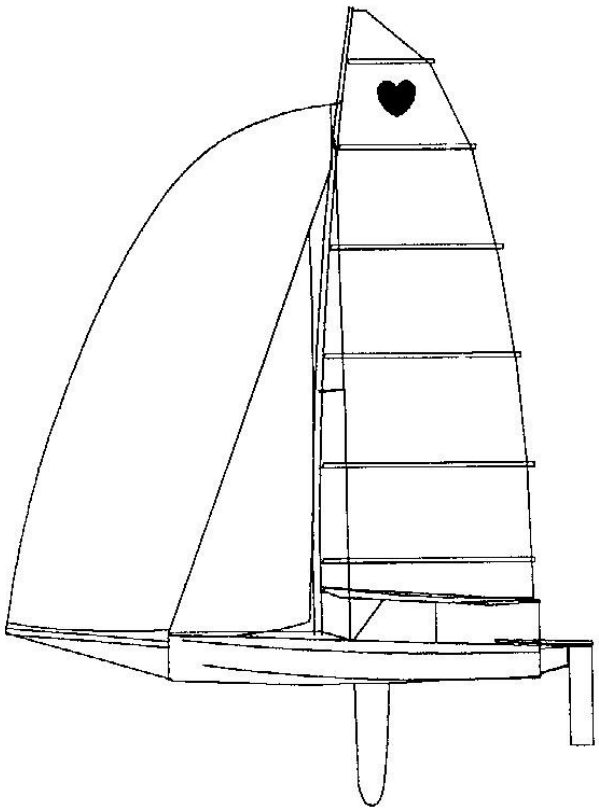
1991 Rules & Regulations



Cherub Class Owners Association (U.K.)



1. INTRODUCTION

The object of these rules is to provide a set of rules to which inexpensive high-performance dinghies may be designed and built.

2. CONSTITUTION

2.1. ADMINISTRATION
The Association shall hold an Annual General Meeting, normally at the National Championship. The date and venue of the A.G.M. shall be published at least one month before it is due to be held. The A.G.M. shall elect the following Association Officials:
President ,Secretary, Treasurer, Registrar, Technical Officer
It may also elect the following additional Officials: Magazine Editor, Publicity officer, Fixtures Secretary.
All these Officials shall be members of the Association Committee. The A.G.M. may elect additional committee members up to a total of ten.

2.2. AMENDMENTS TO CLASS RULES
Changes to these Rules may only be made as a result of a 2/3 majority vote in favour in a postal ballot of all paid up members of the association. Proposals for changes to these Rules may be submitted to the Association Committee at any time. Such proposals must be signed by five members and must detail the precise wording of the proposed change. The Committee shall consider each proposal and may suggest possible changes to the proposers. The final wording shall be agreed upon within four months of the original submission. The Committee shall, within a further three months, conduct a postal ballot of all members. The ballot shall include the full detailed wording of the proposals, any explanation submitted by the proposers and any comments from the Committee or Technical Officer. The ballot will close one month after the date of posting (this date to be stated in the ballot). The Committee shall decide the exact date on which any change shall come into effect. This shall not be less than three months or more than six months from the closing date of the ballot.

3. GENERAL

3.1. TITLE
The class shall be known as the UNITED KINGDOM CHERUB 12ft. DEVELOPMENT CLASS.

3.2. INSIGNIA
The insignia shall consist of a heart shaped silhouette of a size which would approximately be contained in a 12" (305mm) diameter circle. The insignia shall be placed on both sides of the mainsail, approximately one third from the top, and shall be of a colour contrasting with the mainsail.

3.3. REGISTRATION
On completion of measurement by an authorised measurer and subject to conforming with the class restrictions and payment of the prescribed fee, each boat shall be issued with a registration number by the Class Registrar. This number shall be displayed on both sides of the mainsail directly under the insignia and on the spinnaker at approximately half height on both sides, in contrasting colours. The numbers shall be approximately 12" (305mm) high and have a trunk width of approximately 2" (51mm).

3.4. CREW
The crew shall consist of two persons. One member of the crew may use a trapeze.

3.5. INTERPRETATION
The CHERUB is a development class and these rules may not cover every eventuality. In cases where doubt exists, account should be taken of the intentions and spirit of the rules and the matter should be referred to the Technical Officer and Association Committee.

4. CLASS RESTRICTIONS

4.1. HULL

4.1.1. Length - Overall length, excluding stem and transom fittings shall not exceed 12'0" (3.658m).(For the purpose of this rule any structure to support a bowsprit shall not be considered as a stem fitting.

4.1.2. Beam - Overall beam at mid-length shall not exceed 5'0" (1.524m).

4.1.3. Depth of Hull - Depth at mid-length, measured vertically from sheer to the lowest point of the hull, shall not be less than 1'6" (457mm).

4.1.4. Stem - The profile of the stem shall be approximately vertical and straight for a minimum depth below sheer of 1'6" (457mm). 4.1.5. Rise of Floor - The rise of floor at mid-length, measured 1'9.5" (546mm) either side of the centreline, shall not exceed 7" (178mm). (For the purpose of this rule, any hollow in the centreline in elevation shall be bridged by a straight line.) No part of the outer skin above either measurement point shall be inside a

vertical line passing through that measurement point. In addition, a string stretched over the bottom of the hull at mid-length, between points 1'9.5" (546mm) either side of the centre line shall at no point be more than 3/8" (9.5mm) from the hull skin. (Note: the idea of this, along with Rule 4.1.6., Anti-multihull rule is to prevent localised "bumping" at the rise of floor measurement points).

4.1.6. Anti-multihull rule - In any cross-section of the hull, no horizontal line shall pass through the hull skin more than once either side of the centreline.

4.1.7. Weight - The weight of the hull in dry condition shall not be less than 110lbs (49.9kg). The weight shall include all permanently fixed fittings, but shall exclude sails, spars, standing rigging, centreboard, rudder and other loose gear.

4.1.8. Sheer and Gunwale - The line of the sheer (intersection between topsides and deck) and the line of the outer edge of the gunwale shall be fair and continuous. Discontinuities or distortions at or near measurement points are not permitted. Footstops and footloops may extend outside the gunwale line; no other projections outside the gunwale are permitted.

4.1.9. Buoyancy - The hull shall be fitted with built-in buoyancy not less than 9 cu.ft. (0.255 cu.m.) contained in not less than three separate compartments of not less than 2/3 cu.ft. (0.019 cu.m) each. The buoyancy shall be arranged such as to enable the hull, with sails, spars, rudder, centreboard and all loose gear removed, and with the cockpit flooded to support 300lbs (131.1kg) of iron or other dense material placed not less than 4'6" (1.371m) from the stem. Gunwales shall remain clear all round for a minimum of 30 minutes. In hulls built substantially from non-buoyant materials, when buoyancy compartments are flooded there shall remain not less than 100lbs (45.4kg) of positive buoyancy.

4.1.10. Centreboard and rudder - centreboard and rudder shall not be ballasted (i.e. shall float). The centreboard case shall be fitted on the centreline of the hull.

4.2. SPARS

4.2.1. Spars - Spars shall be capable of being passed through a 4" (102mm) diameter ring when stripped of all fittings. Spars may not be constructed permanently bent. (No spar is built or remains perfectly straight: it is the intention of this rule to prohibit spars being designed and built intentionally bent.)

4.2.2. Mast - no part of the mast or rig shall extend more than 20'8" above the hull's sheerline.

4.2.3. Measurement Bands - Two contrasting coloured bands not less than 1/2" (13mm) in width and spaced not more than 18'0" (5.486m) apart between inner edges shall be marked on the mast. A contrasting coloured band not less than 1/2" (13mm) in width shall be marked on the boom. (Note: this band will be used to measure the foot length of the mainsail when calculating its overall area.)

4.2.4. Spinnaker Pole - This may not exceed 9'0" (2.743m) in length, inclusive of fittings. Either a Spinnaker Pole or a Bowsprit may be used for setting a spinnaker, but both may not carried in any race.

4.2.5. Bowsprit - The bowsprit, if fitted, shall be retractible to within 12" (305mm) of the stem. The outer end of the bowsprit shall be solid or capped. No sail other than a spinnaker may be set from the bowsprit or its supports.

4.3. SAILS

4.3.1. Material - The sails may be constructed from woven fibre cloth, unwoven fibre cloth, flexible plastic film or composite materials consisting of any combination of the three. All sails shall be stowable in sailbags of normal dimensions. (For the purpose of this rule, 'long' sailbags for the stowing of rolled up sails are regarded as normal.)

4.3.2. Reinforcement - Reinforcement having the effect of stiffening the sail is permitted only at the tack, head, clew and spinnaker recovery points and shall be within a distance from the relevant point of 150mm plus 3% of the length of the luff of the sail. Other reinforcement shall not comprise more than two additional layers of the same material as the body of the sail.

4.3.3. Mainsail and Jib

4.3.3.1. Sail Area - The areas of the mainsail and jib will be measured in accordance with the I.Y.R.U. Measurement Instructions (1979), Part IV, Measurement and Calculation of Sail Area (printed in Appendix 1). The following are excepted:
a) Section 2 shall not apply (i.e. the area of the

spars shall not be included in the measured sail area.)
b) Section 6, Spinnaker, shall not apply.
The combined area of the mainsail and jib shall not exceed 125 sq.ft. (11.61 sq. m.).

4.3.3.2. Mainsail Bands - No part of the headboard or sail shall extend above the lower edge of the upper mast band. No part of the luff may extend below the upper edge of the lower mast band. No part of the foot may extend beyond the inner edge of the boom band.

4.3.3.3. Mainsail Battens - Battens are permitted in the leach only, shall not exceed 6 in number and shall not exceed 2.5" (64mm) in width.

4.3.3.4. Jib Battens - Battens are permitted in the leach only and may not exceed 3 in number. Maximum dimensions of each batten shall not exceed 8" by 1.25" (203mm by 32mm). Upper and lower batten pockets may not be placed less than 2'6" (762mm) from the head or clew.

4.3.4. Spinnaker - Spinnakers shall be measured in a dry condition. Luff and leach measurements shall be measured with the relevant edge pulled taut. The Girth measurements shall be measured with the sail folded down the centre line so that the luff and leach coincide as far as possible, and laid out flat and free from wrinkles in that area. The following measurements shall be made.:- L is calculated as the mean of the luff and leach lengths. F is measured from a point L down the luff to a point down the centre line. G is measured from a point L/2 down the luff to a point L/2 down the centre line. The area of the spinnaker shall be taken as:

$$\text{Area} = \frac{LF}{3} + \frac{4LG}{3}$$

L = mean of luff and leach lengths. F = foot length. G = mid-girth measurement from luff to centerline.
The area of the spinnaker may not exceed 140 sq.ft.(13.01sq.m.). One spinnaker only may be carried on board in any race.

4.3.5. I.Y.R.U rules 64.2 Spinnaker booms and 64.5 Headsails shall not apply

4.4. NOT PERMITTED.
The following are not permitted:
(a) Double or pocket luffed mainsails.
(b) Any contrivance other than a trapeze extending outboard to support the crew. Only one member of the crew may use the trapeze at any one time.
(c) Spinnaker sheet catchers on the stem which may be dangerous to other crew or craft.

APPENDIX

I.Y.R.U. MEASUREMENT INSTRUCTIONS 1

Part IV: Measurement and Calculation of Sail A

As applicable to U.K. CHERUB Cla
4.3.3.1, Sail Area (mainsail and jib), as
by the CHERUB Class Owners' Assc
U.K., effective from November 1987

1. GENERAL

1.1 The intention is to establish a relia simple method of measuring the whole area of the sail plan.

1.2 It is not possible to frame methods to d every eventuality and therefore in the unique or difficult shapes of rig the n may need to use his judgement in div rig for measurement in order to calcı area accurately. "Combination" rigs s soft trailing edge on a heavily shaped w or a rig where the camber and shape is p by tensioning when it is on the yacht, more conveniently and equitably mea an "assembled for sailing" conditio than in component parts. In these c measurer shall record the method use

1.3 Elements of the sail plan which are ve nearly so, when the yacht is not heeled measured. Elements of the sail plan w horizontal or nearly so when the yac heeled, such as fences and end plates measured, provided that:
i) the surfaces of such elements are nc make an angle, measured at right angl fore and aft axis of the yacht greater degrees to the horizontal when the ya heeled, and
ii) the total area of their surfaces exceed ten per cent of the measured excluding such surfaces.
For the purpose of calculating the horizontal, of nearly horizontal surfa the area of one side of each fence surface of an end plate which is adjac sail shall be included in the area.

1.4 A "soft sail" is any sail made up of other material which is flexible an rolled up or folded.

1.5 For the purposes of measurement of the term "sail.." shall be deemed to be of a soft sail outside the spars and inc

beyond the edge of the sail. It shall not include cringles which are wholly outside the sail or bolt or foot ropes which are inside the spars.

The area of any hole in the sail, the maximum dimension of which does not exceed 50mm, shall not be deducted from the measured area.

SPARS AND "WING" SAILS
(Not applicable. The area of the spars shall not be included in the measured sail area.)

SOFT SAILS SET ON SPAR(S)

When the sail is set on spars and between measurement bands the distance between the bands is used to obtain the primary dimensions of the main triangle.

Area using measurement bands

With battens set in their pockets the sail shall be pegged out on a flat surface with just sufficient tension to remove waves or wrinkles from the edge rounds and to spread the sail, as far as possible, substantially flat. Once the sail has been pegged out in this way all the required measurements shall be taken and no alterations to the tensions shall be made.

Needles shall be fixed at the head and clew, making allowance for that part of the sail inside the spars so that the distance between the needles is the length of the leech. A third needle shall be fixed at a point so that it is the distance between the measurement bands on the mast from the head needle and also the distance of the boom measurement band from the mast from the clew needle. If the boom is shorter than the foot of the sail or if there is no boom, the length of the foot shall be that found by measurement with the sail set on the mast. A thin line shall be stretched round these needles to define the main triangle. See fig (3).

3.2.3 The area of the main triangle shall be calculated from one of the following formulae or by a scale drawing.

(a) Area = $\sqrt{s.(s-a).(s-b).(s-c)}$

where $s = \frac{a+b+c}{2}$

and a = length of luff
b = length of leech
c = length of foot

(b) Area = $\frac{AB \times CP}{2}$ where CP is the minimum distance from C to the thread from A to B

3.2.4 The area of the luff round shall be calculated and added to or subtracted from the area of the main triangle. If the curve is fair and continuous its area shall be taken as two thirds of the product of the chord length and the maximum perpendicular offset to the chord. In fig (3) below the area of the luff round is 2g(AY)/3. The offset to the chord shall be taken as the maximum distance between the point on the sail corresponding with the aft edge of the mast, and the thread defining the main triangle.

3.2.5 The area of the leech round shall be found as follows:
either
(a) where the leech is a continuous fair curve from point A to point C in fig (3)
the area is taken as $\frac{AC\ (1.16d + e + 1.16f)}{4}$
where AC is the leech length indicated in fig (3); d, e and f are the perpendicular offsets between the points on the thread from A to C a quarter, a half and three quarters of the distance between the leech measurement points A and C and the edge of the sail. For the purposes of the measurement of the offsets, any hollows in the leech shall be bridged.
or

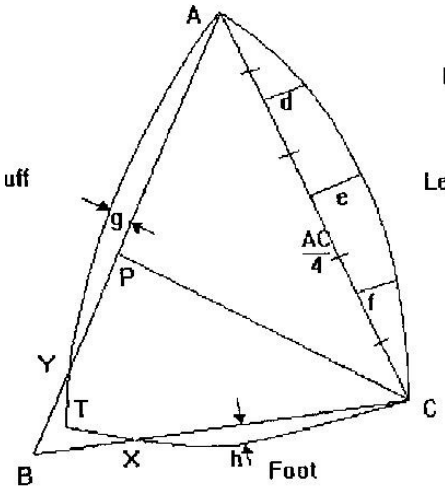


Figure 3

AB = distance between mast bands

BC = distance between boom bands

(b) where the leech is not a fair curve from point A to point C in fig (3) the area of the leech round shall be found by dividing the area into trapeziums, triangles and segments and measuring each. For the purpose of this instruction the area of a segment shall be taken as two thirds of the product of the chord of the round and the maximum perpendicular offset to the chord.

The area of the foot round, if the sail can be pegged out substantially flat, shall be measured in the same manner as the luff round.

Where the foot has a "shelf" or a substantial amount of shape so that when the foot is extended there is loose or bulging material above it, then the area of the "flow" of the bulging material shall be determined as follows (see also fig (4) below). A measurement shall be taken from the straight line joining the tack to the clew, in the way of the greatest fullness, to an arbitrary point where the sail does lie flat. A second measurement is then taken from the arbitrary point to the point of greatest fullness following the folds or bulges of material. The difference between the two measurements represents the offset of the rounded foot. The area of the foot round is taken as two thirds of the length between the tack and clew multiplied by the offset.

The area of the shape BYTX in fig (3) is not deducted from the area of the main triangle.

Where there are no measurement bands on the spars

With battens set in their pockets the sail shall be pegged out on a flat surface with just sufficient tension to remove waves or wrinkles from the edges and to spread the sail, as far as possible, substantially flat.
Needles shall be fixed at the head, tack and clew. A thin line or thread shall be stretched tight between head, tack and clew to define the main triangle.

3.3.3 The area of the main triangle shall be calculated in the manner indicated in Section 3.2.3 above.

3.3.4 The area of the luff, leech and foot rounds shall be found in accordance with the instructions 3.2.4, 3.2.5, 3.2.6, 3.2.7 above.

4. SOFT SAIL NOT SET ON A SPAR

4.1 A soft sail which is not set on a spar, such as a headsail, set on a stay or flying, shall be measured in accordance with instruction 3.3 above, except that if the leech has an offset not exceeding 5 per cent of the leech length and is a fair curve the area of the leech the area of the leech round shall be measured in accordance with 3.2.4.

4.2 If the luff of the sail is wired, sufficient tension shall be applied to remove bends or kinks in the wire.

5. SAIL OF UNUSUAL SHAPE
The foregoing instructions assume that the sails are essentially triangular. If a quadrilateral or multilateral sail is to be measured the sail is to be divided into suitable triangles whose area can be measured and added. The areas of the luff, foot and leech rounds shall also be added, or subtracted as the case may be. The measurer shall record the method he has used to assess the area of the sail.

6. SPINNAKER
(Not applicable. See CHERUB Rules and Restrictions, 1987, Rule 4.3.4 Spinnaker.)

Figure 4.