

A Chronology of Sail Girth Measurements in the EC 12M Class

The following comes from material prepared by Bob Sterne and Larry Robinson intended for AMYA EC 12M Class Advisory Committee members regarding the sail girth measurement problem from its inception shortly after girth dimensions entered the class rule. We think the information should be available to all EC 12M sailors too. Both of us were directly involved in the first presentation of this issue, beginning about 1993.

We have used reliable documentation from Model Yachting (MY) as much as possible, but in a few cases have presented our combined memories of specific points. Although motions for voting on class issues are required to be presented in the Spring issue, have the ballot in the Summer issue, and have the results reported in the Autumn issue of MY, as per the AMYA bylaws, this was not always the case.

Towards the later part of the 1980's many EC 12M sailors began to feel that the 'pushed roach' sails of the era were leading the class in an undesirable direction. The boat, which originated as a semi-scale meter boat began to have sails that looked like those on a 36-600 for example. A number of motions were proposed as solutions:

1988

Motion **M-EC-4** was presented to amend the EC 12M sail plan. It would replace the roach limitations with 3 girth dimensions per a diagram shown on page 8 of the motions section. This diagram shows dimensions measured from the head, progressively down both luff and leach. That is for example, the top girth dimension for the main was to be 17.38 inches down the leech from the head, and 16.75 inches down the luff. There was a similar diagram for the jib.

The Autumn issue (#73) announces that motion **M-EC-4 Failed** 37 yes to 63 no.

1989

Two EC 12M motions were presented:

M-EC-1 proposed that the class adopt the IMYRU IEC 12 Meter One Design Rule. This was a conjoint effort between the AMYA EC 12M class leadership at the time and the IMYRU Technical Committee, the predecessor to the current ISAF - RSD Technical Committee. The goal was to make the EC 12M an international class like the Marblehead or the 10 Rater.

M-EC-2, proposed as an alternate to M-EC-1, would replace Section 15.0 Sails with text that, in the comment section of the motion, is said to be from the 1988 IMYRU specifications. Also in the comments, there is a specific reference to the "IMYRU A Rig sail plan (Figure 2, page 12 of the 1988 specification)"

The voting results on these motions could not be found in the Autumn 1989 Issue (#77), but both were defeated. Glenn Chalder reports later that motion **M-EC-1 Failed** 45 yes to 78 no. We have not been able to find ballot results for motion M-EC-2, however the rules did not change until after the issue was revisited in 1991.

1990

There were no motions affecting the EC 12M Class. During this time period the IEC 12 Class was formed using the rules the IMYRU had passed during 1989, but the AMYA Board of Directors refused to recognize it. In the Spring issue of MY, Glenn Chalder announced that he had been appointed as the new EC 12M class secretary, replacing Rod Carr.

1991

In the Spring 1991 issue, (#83) motion **M-CS-2** appears, sponsored by Charles Lalor. It is the adaptation of the IEC 12 sailplan, and shows the sail diagram (Figure 1) covering a full page, on page 4 of the ballot section.

The ballot was in the Summer issue (#84), and the voting results in the Autumn issue (#85)

M-CS-2 New EC 12M Sail Specs **Pass** (83%) Yes - 45 No - 9

The figure in the motion as printed in MY #83 and accepted by the class, became critical at a later date because it was open to two different interpretations**. (Footnote below)

The EC 12M Rules sent out by the AMYA after this motion passed consist of pages V-E-1-1977, V-E-2-1991, V-E-3-1991, and V-E-4-1991 (Figure 1). The diagram is exactly the same as shown in the Spring issue (#83) where motion M-CS-2 was presented.

1992

There were no motions affecting the EC 12M Class voted on during the year.

1993

There were three motions presented affecting the EC 12M Class:

M-CS-2 specified that three sets of sails and/or rigs be allowed in a regatta.

M-CS-3 dealt with the method of attachment of the sails to the booms.

M-CS-4 proposed a new Section 17.0 ALTERNATE SAIL RIGS. This established a "B" rig between the existing "A" rig and the storm suit, and set dimensions for a "C" rig, which to quote from the comments attached to the motion "have been established as maximum dimensions that will permit the use of existing AMYA storm sails or the use of the International "b" and "c" rigs."

The results were reported in the Autumn issue (#93):

M-CS-2 Permit three sets of sails **Pass** (94%)

M-CS-3 Attachment of sail to boom **Pass** (92%)

M-CS-4 Permit three alternate rigs **Pass** (94%)

In 1993, Glenn Chalder, EC 12M Class Secretary, published a new "Figure 1" on which the "dots" defining the intersection of the Girth Measurement Lines with the "C" or 'leach line' were much more emphasized than on the original, where they had previously gone unnoticed by all but the most careful observer.

1994

At the Puyallup Model Expo in February, Larry Robinson brought the diagram he had received from Glenn to Bob's attention. In that diagram, the dots were now very prominent, and we discussed how the girth measurements should be taken. Since there were two possible interpretations, Larry decided to approach Glenn Chalder for an interpretation of the rules. This was done. Glenn brought the matter before the Advisory Committee of the day, and presented their ruling in the Summer issue of Model Yachting (#96) The pertinent text is quoted below:

12 METER CLASS NEWS (Class Secretary Report)

by Glenn Chalder

SAIL GIRTH MEASUREMENTS (on Page 14)

"Your Class Secretary has been humbled some more. It turns out that the sail diagram issued with the Class Rules is not drawn as well as it could be and is leading to some confusion.

Girth measurements are the luff-to-leech measurements of the sail at various locations on the main and jib (dimensions F-H for the main and N-P for the jib as shown on the sail diagram). The IYRU procedure for girth measurements is to measure the girth dimensions from points on the leech (not from points on the line C as the diagram seems to indicate) perpendicular to the luff.

While the difference in sail area is small, the IYRU procedure (which is being used by sail makers) does produce slightly larger sails.

Following discussion of this issue among the members of the Advisory Committee, the following decision has been made:

The starting location for girth measurements is at a point on the leech. The correct leech point may be found by folding the sail along the leech (if off the spar) or finding the midpoint and quarterpoint (if on the spar). Any questions regarding this procedure should be directed to a member of the Advisory Committee.

While most purchased sails will conform to this procedure, some self-made sails may not. Since the self-made sails are likely to be 1 to 2% smaller than the regulation, the Advisory Committee has decided to allow these sails to remain in use until January 1, 1996. Following that date, **ALL SAILS MUST COMPLY WITH THE CORRECT IYRU PROCEDURE.**

Sorry for the problem if it affects anyone!"

We have examined the Class Secretary's Reports for all of the issues of MY covering the remainder of Glenn Chalder's term as Class Secretary and all of his successor's (Mark Reinhart). This includes all issues up to and including Winter 1996 (#102), and no further mention of the method of measuring sails occurs. From this evidence and our collective memories, we conclude that the question of how girths were to be measured had been settled to everyone's satisfaction at the time.

Larry adds that during the Brower era (1996 - 1998), Glenn Chalder's interpretation was actively supported (rather than just passively) in the following way: a digital file was created that cleaned up the diagram but preserved the interpretation exactly, and that this file was posted on the EC 12M website at the time, and sent in digital fashion to anyone who asked. To the best of our knowledge, this diagram, which is in agreement with the 1994 Interpretation, has been in place on the EC 12M website since ~1996/97.

2002 - The issue of girth measurements is raised again:

Recently, the girth measurement question resurfaced, and at the request of Class Secretary, Rod Carr, the Class Advisory Committee discussed the issue at length. It appears to us however that the CAC was not made aware of the existence of a previous interpretation on the subject. On November 10, with CAC approval, the Class Secretary issued the following interpretation:

"SAIL SPECIFICATION CLARIFICATION 11-10-02

- 1) All sails manufactured after January 1, 2003 shall comply with the 1991 Ballot EC-12 Class Sail Specification. (As published in AMYA Quarterly #83, Spring 1991, Ballot Section Pages 2-3-4, as attached.)
- 2) All sails used at 2003 Regional and National Championships, and at events in which it is specified in the sailing instructions, shall comply with the 1991 Ballot EC-12 Class Sail Specification.

3) All sails used in a regatta after January 1, 2004 shall comply with the above requirements.

The 1991 Ballot EC-12 Class Sail Specification continues to stand as the class rule. It is further declared that Figure 1 as attached shall be interpreted such that cross girth measurement lines are drawn by dividing line C and line L into fourths, and through those points on line C and line L drawing lines F, G and H perpendicular to line A, and lines N, O and P perpendicular to line J."

It is important to note that in the above clarification/interpretation, no mention is made of the pre-existing 1994 interpretation on this matter. When the Chalder interpretation was brought to the attention of the CAC on November 19, the November 10 ruling was rescinded the following day (November 20) and it was announced that the issue would be put to a vote.

A comment:

It is our understanding that once a rule is interpreted and the interpretation published, should the class wish to change the effect of the interpretation the accepted practice in full size and radio sailed classes is to change the class rule. Re-interpreting interpretations is relatively unheard of in sailing. In fact it is regarded as forbidden in International radio sailed classes, (not that this necessarily must apply to AMYA classes). Sailors may wish to consider in general the effect of re-interpreting published interpretations of the class rules with each change of class administration.

It is now clear that there was a pre-existing rule interpretation in place that specifically addressed sail girths in the EC 12M Class when the November 10 ruling was announced. That prior interpretation included a deadline for compliance. It is somewhat uncertain to us whether or not the text included in the retraction of the November 10 ruling was officially intended as a new interpretation (re-interpretation) that would rescind part of Chalder's interpretation.

If one uses the interpretation accepted by the class from 1994 to this point, the implication for boats with what have recently been called 'small' sails is clear. However, this should have little impact, as from the information we have, almost all EC 12M sailmakers have been making sails according to the Chalder interpretation. Unfortunately, we understand that Carr Sails have used the method required by the now rescinded November 10 ruling.

There is more information [here](#) for those interested. This MS Word document prepared in 1997 by Larry at the request of past Class Secretary Jerry Brower with his assistance and approval, discusses a more subtle issue regarding girth measurements, but it assumes the Chalder interpretation. However, to our knowledge Jerry never issued this document as a formal interpretation because there had been no specific request from a class member. It was made available to the CAC via one of its members at the time, as well as more recently. Some may find the diagrams helpful in understanding how girth measurements should be made, based on the 1994 interpretation.

** Figure 1 of the EC 12M diagram, especially as redrawn with large dots, was ambiguous based on the following: It showed horizontal girth lines that pass through dots on the direct line from clew to head. However, parallel and just behind the 'C' dimension line, are 3 other lines, indicating $1/4 C$, $1/2 C$, etc. These lines terminate in strike marks that touch the leech substantially above the horizontal girth lines, and further, if one projected the strike marks into the body of the sail, they would pass through the dots. This later feature could be taken to indicate that these strike marks indicate the correct position on the leech from which the girth lines must be measured. [This would be consistent with Chalder's amended diagram that followed his interpretation, and Jerry Brower's diagram.]

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