

AC Rule

Windows Version 14

User Manual

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AC Rule Program

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AC Rule User Manual

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AC Rule

AC Rule provides measurement and rating data for International Americas Cup Class yachts. It can work with hull measurements provided by the designer, or can automatically measure a hull designed using Maxsurf. The yacht's rating is updated whenever a parameter is changed, providing instant feedback during the rating optimisation process.

This version of AC Rule is compliant with America's Cup Class Rule Version 5, December 15, 2003, which has been adopted by the Challenger of Record and the Defender for America's Cup XXXII.

Installing AC Rule

To install AC Rule you must install Maxsurf Pro first or already have Maxsurf Pro installed on your computer. To install Maxsurf Pro, please follow the installation instructions found in the purchase letter at the front of this binder.

Once Maxsurf Pro is installed:

- **Go to the Help Menu and select About Maxsurf**
- **Once in the About Maxsurf dialog box select the Options button**
- **Enter your authorisation code in the Options dialog**

You will be informed that the authorisation code was accepted and that the America's Cup Class rule evaluation option has been enabled.

America's Cup Class rule calculations may now be performed by selecting AC Rule from the Data menu.

Using AC Rule

Select AC Rule from the Data menu. You will be presented with a dialog containing a blank table of measurement data. Values are arranged in two columns, headed Measurement and Derived Value (see picture). Values in the measurement column can be entered or modified by the user or measured from a design, whereas derived values are calculated by the program and cannot be changed directly.

| America's Cup Rule | | | |
|--------------------|--------------------------------|-------------|--------------|
| | Parameter | Measurement | Derived Val. |
| 1 | Length Between Girths (LBG) | 19.051 | |
| 2 | Forward Girth (FG) | 2.591 | |
| 3 | Angle of Topsides forward | 4.445 | |
| 4 | Forward Beam Correction (FBC) | | -0.005 |
| 5 | Forward Girth Correction (FGC) | | 0.300 |
| 6 | Aft Girth (AG) | 3.575 | |
| 7 | Angle of Topsides aft | 18.616 | |
| 8 | Aft Beam Correction (ABC) | | 0.359 |
| 9 | Aft Girth Correction (AGC) | | 1.600 |
| 10 | Girth Component (G) | | 1.900 |
| 11 | Measured Length (LM) | | 20.952 |
| 12 | Rated Length (L) | | 21.150 |
| 13 | Beam (B) | 4.521 | |
| 14 | Draft (D) | 4.049 | |
| 15 | Freeboard at FGS | 1.500 | |
| 16 | Freeboard at Amidships | 1.298 | |
| 17 | Freeboard at AGS | 1.232 | |
| 18 | Freeboard Penalty (FP) | | 0.002 |
| 19 | Draft Penalty (DP) | | 0.197 |
| 20 | Weight Penalty (WP) | | 0.000 |
| 21 | Beam Penalty (BP) | | 0.000 |
| 22 | Measured Sail Area (SM) | 271.000 | |
| 23 | Rated Sail Area (S) | | 271.000 |
| 24 | Weight of Yacht (WV) | 18956.233 | |
| 25 | Displaced Volume (DSP) | | 18.494 |
| 26 | Rating | | 23.287 |

Measuring a Design

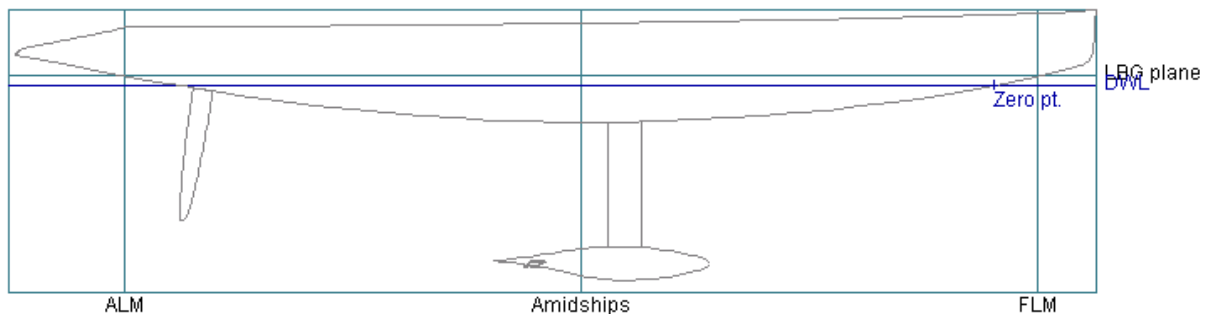
If you wish to measure a Maxsurf hull,

- Choose Open Design from the File menu
- Select your design (see the ACHull_7Surface.msdx design in the Maxsurf\Sample Designs\SailingYachts folder on your computer for an example).

When AC Rule has opened the design file,

- Choose Measure Design... from the Measurement menu

AC Rule will take several seconds to measure the design and will then insert the values found into the Measurement Column.



Note:

The design should be in measurement trim rather than in sailing trim prior to the measurement being performed.

Girth measurement

While previous versions of ACRule used planar girth measurements, the girths used for version 10.01 onward are true geodesic (i.e. chain) girth measurements.

Copying, Printing & Saving Data

To print or save America's Cup Rule measurements and calculations, it is necessary to copy the data to a spreadsheet or other similar applications.

- **Use the mouse to select the contents of the measurement data window**
- **Select Copy from the Edit menu or use the Control+C function on your keyboard**
- **Open a spreadsheet application and use the paste function in the Edit menu or the Control+V function on the keyboard to paste the information**

The information will be pasted into your spreadsheet application as tab separated text. You will be able to format, print and save this information from your spreadsheet application.

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