

Seahorse

International Sailing

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**Bridge,
what bridge?**
– Jerry Kirby

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INTERNATIONAL RATING
IRC
40th ANNIVERSARY
1984-2024



TIM WRIGHT

IRC Rating Authority
ircrating.org

The IRC Rule is owned and managed by RORC and YCF and certificates are issued by:

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In countries outside the UK and France, IRC administration is through the local Rule Authorities around the world.

Please see ircrating.org for contact details.

IRC is 40 years old

Yes, our rating rule is celebrating its 40th birthday in 2024. In the main IRC article this month RORC Technical Manager Jenny Howells looks at some of the history and developments over the last four decades.



RORCRICK TOMLINSON

IRC has given a new lease of life to IOR designs such as the popular Quarter Ton fleet – what better way to preserve boats than to keep them actively racing?

Clarification about IRC Flying Headsails v. headsails 'set flying'

This is something that sometimes causes confusion, as these are not necessarily the same thing.

An IRC **Flying Headsail** is a sail that complies with the IRC Flying Headsail definition. The full definition can be seen in the IRC rule and there are two particular issues that we notice as the Rating Authority: Sails are sometimes designed to be exactly on the minimum half width/foot 60% ratio; this is risky as a subsequent check measurement after the sail has been used might mean the sail no longer complies and has to be rated as the largest headsail, incurring a significant rating increase. An IRC Flying Headsail shall not be tacked forward of a maximum point, called STLFHmax, this is defined and stated on the IRC certificate. Normally the sail is designed so STLFHmax is equal to STL, but in a few cases it calculates as midway between the forestay and the end of

the bowsprit; please check that the sail designer has considered this part of the rules so you don't get caught out.

The IRC rule is here: <https://ircrating.org/irc-rule/> and for additional helpful advice see the Flying Headsail summary on the Measurement page in the Rig & Sails section <https://ircrating.org/irc-certificate/measurement/>

A headsail 'set flying' is different to an IRC Flying Headsail and simply refers to how a sail is set and may be any headsail tacked forward of the forestay, it is also a term that may be used in other rating rules. If a headsail is 'set flying' it does not necessarily mean that the sail rates as an IRC Flying Headsail, that would depend on how the sail's measurements fit the IRC definitions. IRC rule 21.3.4 permits a spinnaker, headsail or flying headsail to be tacked to a bowsprit, and 21.7.1 allows multiple headsails to be set simultaneously.

South boats revalidation

By the time you read this, boats in countries with June to May certificate validity will be thinking about IRC revalidation for 2024. As a reminder, every boat will need to declare the number of headsails that will be carried while racing. For a re-cap of all the changes for 2024 please check

the Rules & Policies page on the IRC website <https://ircrating.org/irc-rule/>. Your IRC Rule Authority should contact you about applying for your 2024 certificate; you can find contact details online at <https://ircrating.org/irc-certificate/how-to-apply/>.

Promoting (safe) development

As an 18-year-old in January 1985, my first full-time job was office junior at the RORC Rating Office; little did I know I would get deeply involved in a nascent yacht rating rule that, over the next 40 years, would become a world leader.

In the early 1980s boats were racing under the International Offshore Rule (IOR), but it was becoming steadily more focused on grand prix racing, bringing some extreme typeforming. So RORC in the UK and UNCL in France agreed that a large contingency of other racing sailors needed a simpler rule that typeformed less but allowed a wide variety of boat shapes and sizes to compete as fairly as possible: thus the Channel Handicap System (CHS) was conceived.

French marine surveyor Jean Sans, involved in CHS from the start, recalls, 'We replaced calculated displacement with a simple weight, and removed the constraints of fore and aft girth measurement, allowing more voluminous designs in the ends better suited to cruising boats.' The first CHS ratings were issued in 1984.

The current International Rating Certificate (IRC) was a re-brand of CHS in 1999 as part of the new IR2000 rating family, consisting of IRC (unpublished club-level rule) and IRM (open grand prix rule).

By spring 1985, the year CHS was first used for Cowes Week, there were 300 applications at the rating office, with a 'new' BASIC program unable to calculate consistent ratings or print certificates!

So RORC asked the RYA if their technical manager,

Ken Kershaw, could help... the result was that Ken spent two weeks at the rating office rewriting the program, ensuring a sound basis upon which CHS could and did flourish! This was a catalyst for a strong bond between the RORC and RYA technical offices, and Ken continued to help us with the program until his retirement in 2009.

By 1988 there were 3,000 CHS-rated boats worldwide and in 1991 Sir Peter Johnson noted that it was 'today an accepted and primary rating system for handicap classes at major events'.

One early adopter was western Australia, Australia itself fully embracing CHS in 1998; this was cemented in 2023 when the Cruising Yacht Club of Australia confirmed IRC as the sole rating rule for its blue water programme. IRC is now used in over 30 countries on six continents. Later with new technology came a dedicated website (ircrating.org) plus news and social media channels.

Over 40 years a huge variety of monohulls have been rated using CHS/IRC, including numerous IOR designs, production cruiser/racers, superyachts, sportboats, classics and cutting-edge raceboats, always with the fundamental policy of protecting the existing fleet.

IRC has drawn thousands of cruising-oriented boats into racing: the single furling headsail allowance introduced in 1999 being a typical example (since tweaked to prevent abuse!). During the 1990s we also tried to rate different sail cloths (a suggestion again



IRC... by any comparison a clever rating system that has been promoting fair competition as well as performance development since 1984. A period neatly bookended by current IRC top dog Lann Ael 3 and the magnificent IRC refurbishment of the 1977 Quarter Tonne *Purple Haze*

IRC 2024 Rules and Definitions

IRC 2024 Rules and Definitions are available to download at ircrating.org



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<https://www.riyc.ie>
in association with RORC
<https://rorc.org>

You can also follow updates at
<https://ircrating.org/irc-news-articles/>



Recently completed by Corby Boats. While *Lann Ael* and her soon to emerge siblings may threaten the current IRC pecking order, this is not IRC's first rodeo and things will soon settle down. Perhaps the only current IRC yacht with a better win/loss ratio than the Manuard/Nivelt design is Giovanni Belgrano's 85-year-old Laurent Giles design *Whooper*... If there's another rating system that can put *Whooper* and *Lann Ael 3* on the same podium we have yet to hear about it

being mooted in some circles); after many complications and difficulties this was abandoned in 2001. In 2024 IRC is addressing excessive headsail wardrobes, giving credit to those carrying fewer sails.

1988 saw a Safety and Stability Screen (SSS) introduced to help race organisers filter fleets. This was a consequence of a Fastnet Enquiry recommendation, and also led to the MCA STOPS screen for small commercial vessels and the ISO STIX stability assessment.

CHS influence has therefore extended to all (under 24m) yachts whether racing, cruising or commercially used including all sail training yachts. Initially SSS was a traffic-light system but it was then changed to the numeric value still in occasional use today.

IRC supports international standards where possible, and since ISO stability standard 12217-2 was introduced in 2002 IRC certificates have included STIX and AVS data where available, alongside the SSS calculated for every IRC-rated design.

Rated data is the bedrock of any rating system. Although always an owner-declaration rating system, Endorsed IRC certificates with verified data appeared in 1994 providing extra confidence in rated data. However, all applications, Endorsed or Standard, are rigorously checked by the rating team before issuing a certificate. Sail data is now measured in accordance with World Sailing Equipment Rules of Sailing, so compatible with the Universal Measurement System (UMS) and easily transferable between different rating systems.

Promoting development

IRC has always been inclusive of new developments and technology through rating rather than banning them, even if these are initially rated on a cautious basis. Examples of the IRC's encouragement of new features include canting keels, forward appendages, water ballast, bowsprits, new sail designs, stored power, keel design, adjustment of mast foot/forestay, and modern foils.

All were allowed into IRC fleets from the outset, the

mathematics later being refined with experience.

CHS was first used in the Fastnet Race in 1989. Today IRC determines the overall winners in all of the major offshore races around the world and is the rule of choice for many inshore regattas and club racing worldwide. There is international enthusiasm for RORC's revival of the Admiral's Cup in 2025 which will also be raced entirely in IRC. The inaugural IRC European Championship was held in Cork, Ireland, in 2016 and alternates between southern and northern Europe; it returns to Ireland in September 2024, to Dublin Bay. More recently the IRC Middle East Championship has been established by Dubai Offshore Sailing Club.

IRC enjoys unparalleled continuity and experience within its team, past and present, surely a big reason for its stability and endurance. In the rating office technical team member Emma Smith has worked alongside me for 19 years, while Dr Jason Smithwick (director of rating) and Sally Moss (technical team) joined the rating office seven and five years ago respectively.

In France Ludovic Abollivier, now Directeur du Centre de Calcul IRC and himself an experienced measurer, began his IRC tenure with UNCL in 2001. Mike Urwin was a pivotal figure in shaping the face of CHS/IRC for over two decades, as technical manager and later director at the rating office until 2016. Mike says: 'One of the fundamental issues of an "unpublished" rating system is trust and integrity. One of my primary concerns was that owners and industry professionals could rely on us all in the rating office.'

'That fostered a great team spirit in the office, and created the situation where designers, owners, manufacturers and sailmakers with novel ideas are prepared to talk to us first, knowing that they can do so in confidence, or share information around innovative new technology. This level of trust has enabled IRC to remain up to date and to grow to its solid position today.'

IRC software is developed in-house with steady advances, right down to simple things like emailing PDF certificates. A major new feature was the Short-Handed certificate introduced in 2007, allowing a second valid certificate with limited configuration differences; in 2023 this was extended to any boat as the Secondary certificate.

Jason Smithwick was keen to further update the software and user experience. He developed the current software adding more tools for the rating offices, some of which also benefit sailors such as the visual representation of data; this led to the publishing of rated data online from January 2024.

What has kept me at the rating office for almost 40 years (apart from a wonderful team)... This job never gets boring: there are constant challenges and developments in design, measurement and safety, and in new technology. I am proud to have been involved in CHS/IRC since (almost) the beginning and look forward to it being a driving force in yacht racing for many years to come.

Jenny Howells, Technical Manager,
RORC Rating Office



Seahorse Magazine

DEAR IRC MEMBER

I really hope you are enjoying your IRC edition of Seahorse magazine.

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