

GREAT LEVELLER

In an ideal world the handicap system would iron out differences in performance between boats taking part in a race. The level of crew work across the fleet would be of a sufficiently high and consistent standard to ensure close racing. And everyone's corrected time would be the same. While the results table would be easy to read, prizegivings would be a nightmare.

Of course, handicap racing is anything but ideal. Bandit ratings, poor course setting and bad luck will usually

Aside from the paperwork, proper well-planned training can work wonders

be further up the list of excuses than lack of ability, planning or preparation. But as the IRC administrators are quick to point out, many of us are carrying unnecessary points on our certificates.

Aside from the paperwork, proper well planned training can also work wonders as this year's winners of the Somerset Memorial trophy have proved.

Our boat of the month, *Puma Logic*, may be ten years old with a relatively inexperienced crew, but their campaign proves it's not the paperwork or the tools that are generally to blame.

Their story is indeed an example of an ideal world.



matthew_sheahan@ipcmmedia.com



IMPROVE YOUR

Understanding your certificate

According to the Rating Office, more than 50 per cent of IRC racers carry unnecessary points. In part 2 of our special feature Matthew Sheahan explains the detail on your IRC certificate

Take a look at your IRC rating. Is that the best you can do? This might seem a harsh question, but given the number of boats carrying points for performance they simply don't have, it's a reasonable one to ask. With your boat laid up for a few months, now is the time to take stock and make the first steps towards sharpening up your performance for the coming season.

Understanding what the data on your IRC certificate means is essential in order to make sure

that your boat really has what you're paying for. And, unlike the good old days of IOR when bumps,

blisters and bustles could hide among the complex data of a handicap printout that only a handful of boffins could understand, today's IRC certificates are easy to read and even easier to cross-check against your boat.

Certainly there are some factors that have little practical relevance to the boat's performance, but which are they and which are the factors that matter?

A trip to the RORC Rating Office with a handful of certificates provided some insights into maximising your rating.



TCC – Time Correction Coefficient

This is the number that really counts. If the figure is 'Endorsed' (as here) the data has been audited and verified where necessary by the Rating Office. If you submit new/revised data with your annual IRC application you won't be charged the amended certificate fee that you will be if you change data later in the season.

But whether you pay extra or not, unless the data has come from either a bona fide measurer or an approved sailmaker, new data will cancel the Endorsed element of your certificate until such time as it becomes re-Endorsed by the Rating Office.

Overhangs

Not to be confused with the Overhang Factor, these are important and worth checking, especially if the Rating Office has had to use standard data. But if you do measure them, make sure that the boat is empty and in its correct trim.

DLR – Displacement:length ratio

How heavy is your boat for her length? Smaller figures tend to be better downwind flyers and plane readily. Bigger figures tend to be better in a breeze and upwind.

Typical range: 60-350

60 – Mini-Maxi type

150-200 – modern production cruiser

350 – displacement cruiser or cruiser-racer

There's not much you can do to change this number in order to tweak your rating, but the DLR does provide a good initial guide as to what kind of a boat you're dealing with. Particularly useful for regatta organisers to group similar types of boat rather than just their size, but also handy for skippers to get a handle on their competition.

Batteries and cushions

Are you rated without cushions and if so, do they stay ashore? There's no point in carrying unnecessary weight if your boat isn't rated for them.

IRC RATING: Part 2

COPY

RORC, Rating Office
Seahorse Building
Bath Road
Lymington
Hampshire, SO41 3SE
UK
Tel: +44 (0) 1590 677030 Fax: +44 (0) 1590 679478 E-mail: info@rorcrating.com www.rorcrating.com

IRC

Boat:
Name: PUMA LOGIC
Sail Number: GBR7383R
Cert No: 10078

TCC: 1.071 2009
ENDORSED

Stability
SSS Base Value: 30
STIX: 41
AVS: 143
ISO Design Category: A

General Details
Design: REFLEX 38 2.30 Series Date: 1999
Type: Bermudian Sloop Age Date: 1999 Hull Factor: 9.0
Issue: Amendment : weight, SPA Crew No.: 9 Rig Factor: 1.01
Notes: Seahorse weighed +6kg new boom + 50kg strengthening ; Overhangs measured Overhang Factor: 1.04
Notes: Sail data from sailmaker

Hull	Overhangs	Rig & Mainsail	Headsail	Mizzen	Spinnaker
LH: 11.58	BO: 0.19	P: 14.46	LLmax: 14.22	PY: 0.00	SPA: 108.16
LWP: 10.52	x: 0.00	E: 5.25	LL: 14.22	EY: 0.00	STL: 4.49
Hull Beam: 3.90	h: 0.00	J: 4.08	LP: 5.95	LLY: 0.00	SLE: 14.14
Boat Weight: 6108	SO: 0.87	FL: 14.87	HW: 2.98	LPY: 0.00	SLU: 14.14
IRC Disp: 6826	y: 0.21	MUW: 1.15	HTW: 1.49		SF: 8.76
DLR: 163		MTW: 1.99	HHB: 0.11		SHW: 9.33
Draft: 2.3		MHW: 3.41	HSA: 42.34		

Detail
Low vcg iron+lead single keel
No wing keel
Inboard engine : Weight 210kg
2 blade folding/feathering propeller
Internal ballast 0 kg
Weight includes batteries/cushions
ISAF OSR compliant guardrails fitted
Manual power only for running rigging
No variable/moveable ballast carried
Forestay/Mast Foot not adjustable

No Spinnaker TCC: 1.051
Multiple headsails permitted
Maximum number of spinnakers carried: 4
Spinnaker/whisker pole with or without Bowsprit
2 Spreader (sets) 0 Jumper (sets)
0 Runners (sets) 0 Checkstays (sets)
Aluminium Mast
HSA=0.125*LL*(2*LP + 3*HHW + 2*HTW)
SPA=((SLU+SLE)/2)*((SF+(4*SHW))/5)*0.83

* For information only

Certificate issued by the IRC Rating Authority and VALID from 20 May 2009
Expires 31 Dec 2009 unless superseded or invalidated by IRC Rules and Regulations
I accept the dimensions shown on this certificate and agree to report all subsequent changes and any errors found at a later date to the issuing Authority

Signed: _____ (Owner)

Stability

AVS typical range:
104 – poor (especially on small boats)
150 – very good

This data has no effect on your handicap and is included primarily to help event organisers establish the ISO category of the entries and their stability data.

However, having clear stability information displayed gets the thumbs up from us – especially AVS, the angle of vanishing stability, measured in degrees, which details the angle at which the boat wants to invert rather than right itself.

The number cannot be treated in isolation as the size of the boat is a factor, but in general, the bigger the better.

Wire/rod/composite rigging

Check that the rigging you are rated for is what you have. At present there are relatively few boats with composite (eg PBO or carbon) standing rigging and while the Rating Office doesn't wish to discourage such materials, it is also aware that at present the technology is expensive and doesn't want to force owners to go down this route to be competitive.

One to watch in the future as the rigging becomes more commonplace and hopefully more affordable.

Multiple headsails

Are you are racing with a furling headsail alone? If so, the wording on your certificate should reflect this and you could be eligible for a furling headsail credit.

Understanding your certificate

Hull Factor - the final fudge factor?

Typical range: higher number, more extreme racer
 3.50 - Bristol Channel Pilot Cutter
 16.0 - Full Pelt, 36ft LOA Open sportsboat

Possibly the most hotly debated IRC factor, the Hull Factor is seen by many as a final arbitrary tweak to shift the calculated handicap to where the Rating Office believes it would most accurately represent the performance of the boat. While this may have been the case in the early days of Channel Handicap, Rating Office technical director Mike Urwin is quick to correct the misconception.

"Hull factor is addressing the otherwise unrated elements of a boat. It is making a judgement of her likely 'efficiency' on a scale between pure cruiser and pure racer," he says. "We do not have the hull lines, but we do know the general hull form, whether it is fair form, IOR-inspired, clinker, etc. We also know quite a lot about the keel and whether it is just a fin or some form of low centre of gravity keel. We know how many rudders the boat has and whether these are transom-mounted, hung on a skeg or are a spade configuration. We also know whether or not the boat has a novel appendage configuration, a canting keel or twin lifting daggerboards perhaps.

"We also know what the boat is built from, whether it is a completely stripped-out dayboat, or a grand-prix inshore racer, or a fully fitted world girdling cruiser with running hot and cold everything. We know what materials have been used in the construction of the interior.

"Taking this and other data like it, we can then assign a numerical value to each element using objective rules and methodologies developed over the years. Combining these then gives us the Hull Factor (HF).

"Within the sensible range for any boat, the effect of HF on TCC is small, generally less than 0.005."

For the complete IRC Yearbook 2010 online go to www.yachtingworld.com/ircyearbook2010

Rig Factor

Typical range:
 1.00-1.03. Higher number, more extreme 'tweaky' rig
 0.90 - 'Cat' rig
 1.08 - Open 60 style
 This looks at the ability

to tweak a rig to change gear. The number also takes into account light rigs, although carbon rigs do not count here. Not a lot of ways to adjust your handicap although, if you have

an older rig with aft-swept spreaders and checkstays, ask whether you really need the checks any more. Worth taking advice from the sparmaker on this one.

Overhang Factor

Ignore, used to be significant, but now of little importance to the majority of boats.

COPY

RORC, Rating Office
 Seahorse Building
 Bath Road
 Lymington
 Hampshire, SO41 3SE
 UK
 Tel: +44 (0) 1590 677030 Fax: +44 (0) 1590 679478 E-mail: info@rorcrating.com www.rorcrating.com

Boat:		Stability	
Name:	PUMA LOGIC	SSS Base Value:	30
Sail Number:	GBR7383R	STIX:	41
Cert No	10078	AVS:	143
TCC: 1.071 2009		ISO Design Category:	A
ENDORSED			

General Details			
Design:	REFLEX 38 2.30	Series Date:	1999
Type:	Bermudian Sloop	Age Date:	1999
Issue:	Amendment : weight, SPA	Crew No.:	9
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Detail	
Low vcg iron+lead single keel	No Spinnaker TCC: 1.051
No wing keel	Multiple headsails permitted
Inboard engine : Weight 210kg	Maximum number of spinnakers carried: 4
2 blade folding/feathering propeller	Spinnaker/whisker pole with or without bowsprit: 2
Internal ballast 0 kg	2 Spreader (sets)
Weight includes batteries/cushions	0 Jumper (sets)
ISAF OSR compliant guardrails fitted	0 Runners (sets)
Manual power only for running rigging	0 Checkstays (sets)
No variable/movable ballast carried	Aluminum Mast
Forestay/Mast Foot not adjustable	Wire standing rigging
	HSA=0.123*LL*(2*LP + 3*HHW + 2*HTW)
	SPA=(SLE+SLE/2)*(SF+(4*SHW)/5)*0.83

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Manual or stored power

New for 2010, there are now three categories: manual power only, stored power for backstay only and stored power for running rigging.

Spinnaker pole and/or bowsprit

IRC sees four distinct categories, listed here in order of ascending rating:
 1 - No pole at all
 2 - Centreline bowsprit
 3 - Articulated bowsprit
 4 - Conventional spinnaker pole and bowsprit, provided latter is no longer than the spinnaker pole

HSA and SPA

How the headsail and spinnaker areas are calculated. Knowing how the area is calculated can help owners and sailmakers assess how to change the proportions of a sail without changing the area.

Max spinnakers

Are you paying a penalty for carrying too many kites? Three is the default, a fourth or more will incur a penalty, although this penalty is smaller for bigger boats.