



MYCQ

OMR Review

March 2023

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History of OMR Reviews

- Last Full Review 2016
 - Reduced Feathering Propeller Drag Factors
 - Reduced Impact of Rotating Mast
 - Removed Sail Efficiency Factors
 - Introduced RL Factor
- Administrative Review 2021
 - Updated Specifications / Preamble
 - Procedural Changes for Weighing
 - New Forms



Issues to Address

- Growing Spread in Corrected Times
 - OMR working to reduce coefficients of variance
- More Boats with High Power to Weight Ratios
 - Rating lower on OMR than PCF's suggest
 - Appear favoured in recent races (and in conditions that suit)
- Upwind Screachers
 - Existing system has a hard edge for loose luff sails of midgirth being >50% of foot
 - OMR system needs to accommodate and account for upwind screachers
- Cost in Reweighing Boats
 - Difficult and expensive to reweigh boats – hurdle to competing under OMR



Changes Proposed

- Introduce WP – Weight Penalty
 - 15% WP automatically applied when weight is older than 10 years. Previously rating was cancelled limiting participation.
- Modify Screacher and Spinnaker Combination Coefficients
 - To avoid discouraging screachers.
 - When boats carried both a screacher and spinnaker the coefficients were 0.055 and 0.295 respectively. Now 0.07 and 0.28. Means less penalty for both sails together.



Changes Proposed

- Introduce New Sail Type - Upwind Screachers
 - Any existing or new screacher with midgirth $\leq 52\%$ of foot will now be termed an “Upwind Screacher”.
 - Screacher now defined as being a loose luffed sail mounted forward of the forestay rather than by % MG alone.
 - Largest screacher and smallest screacher carried must now be measured. Previously only largest screacher.
 - Screachers can still contribute to offwind rating exactly as before, but now a screacher $\leq 52\%$ MG will also have an upwind component added to rated sail area.



Changes Proposed

- Upwind Screachers (continued)

- Utility of sail introduced: 47 % or less MG screacher can be used upwind in most conditions while 52 % MG screacher suits a narrower range of conditions and is less effective.

52 % MG = 0 utility, 47 % MG = 100 % utility, linear between and < 47 %.

Soft transition between an offwind only screacher and an upwind screacher.

- Any % MG can now be carried and rated to encourage trialling new configurations.

- Upwind Screacher Rated Area =

$0.25 \times \text{Utility} \times (\text{Upwind Screacher Area} - \text{Genoa Area})$



Changes Proposed

- Introduce Crew Weight Allowance
 - Whole premise of OMR is that adding weight to a boat will see it go slower. Some light high powered boats see the opposite, adding weight in some conditions allows them to go faster. Hence crew weight is added to reduce rating and increase speed.
 - Crew weight allowance should address this.
 - 22 foot boat and smaller is allowed 30 % of the boat weight as crew weight, while 40 ft boat and bigger is allowed 10 % of the boat weight as crew weight. Linear in between.
 - Crew weight applied is capped at this allowance.



Changes Proposed

- Crew Weight Allowance (Continued)
 - Not intended to be an indication of the crew weight required to safely sail the boat.
 - Intended to mathematically identify boats that are lighter than typical for their length – these are the boats where adding weight may make their performance improve.
 - Restricting applied crew weight on these boats avoids situation where the boat goes faster AND at the same time benefits from a lower rating.



Changes Proposed

- Administrative Changes
 - Update Specifications and Preamble
 - Encourage division splits by typeform rather than OMR cutoffs
 - Allow sailmakers to measure sails
 - OMR Version 9



Impact of Changes

- Examined Impact on Recent Races
- Variances in Corrected Times Reduced
- Better Alignment with OMR Ratings and PCF's



Impact of Changes – 2022 St Helena Cup Race 1

Boat Name	Elapsed Time (Mins)	As Raced			New OMR			
		OMR	Corrected Time	Place	OMR	% Change OMR	Corrected Time	Place
Coconuts	127.48	0.925	117.92	4	0.946	2.3	120.60	4
Cut Snake	141.23	0.873	123.30	7	0.871	-0.2	123.01	7
El Toro	125.07	0.938	117.31	3	0.953	1.6	119.19	3
Full Bore	138.97	0.886	123.12	6	0.885	-0.1	122.99	6
High Voltage	96.13	1.104	106.13	1	1.197	8.4	115.07	1
Kestrel	168.43	0.785	132.22	9	0.782	-0.4	131.71	9
Magic Shadow	171.90	0.792	136.14	12	0.794	0.3	136.49	11
Parabellum	97.28	1.114	108.37	2	1.193	7.1	116.06	2
Purple Haze	135.28	0.907	122.70	5	0.907	0.0	122.70	5
Ritalin	130.77	1.014	132.60	10	1.096	8.1	143.32	12
Rogntudjuuu	118.83	1.140	135.47	11	1.14	0.0	135.47	10
Rushour	136.85	0.923	126.31	8	0.925	0.2	126.59	8

Mean	123	Mean	126
Stand Dev	9.9	Stand Dev	8.8
Low Spread	17.3	Low Spread	11.0
High Spread	12.7	High Spread	17.2
Variance	1071	Variance	855

Impact of Changes – 2022 ABRW Race 5

Boat Name	Elapsed Time (Mins)	As Raced			New OMR			
		OMR	Corrected Time	Place	OMR	% Change OMR	Corrected Time	Place
Angus	160.88	1.120	180.19	2	1.173	4.7	188.72	1
Carbon Credit	229.53	0.972	223.11	7	1.004	3.3	230.45	6
Charleston	195.38	1.053	205.74	5	1.146	8.8	223.91	5
Coconuts	220.80	0.922	203.58	4	0.946	2.6	208.88	4
Crosshair	234.33	0.979	229.41	8	1.024	4.6	239.96	8
High Voltage	167.50	1.120	187.60	3	1.197	6.9	200.50	2
M32 World	171.58	1.038	178.10	1	1.172	12.9	201.10	3
Ritalin	217.00	1.014	220.04	6	1.096	8.1	237.83	7

Mean	203	Mean	216
Stand Dev	19.9	Stand Dev	19.2
Low Spread	25.4	Low Spread	27.7
High Spread	25.9	High Spread	23.5
Variance	2776	Variance	2578

Impact of Changes – 2023 Pt Lincoln Week Race 6

Boat Name	Elapsed Time (Mins)	As Raced			New OMR			
		OMR	Corrected Time	Place	OMR	% Change OMR	Corrected Time	Place
Carbon Credit	48.28	0.965	46.59	4	1.004	4.0	48.48	5
Crosshair	42.40	0.979	41.51	1	1.024	4.6	43.42	1
Peccadillo	55.22	0.884	48.81	6	0.888	0.5	49.03	6
Sknot	60.63	0.772	46.81	5	0.781	1.2	47.35	4
The Stig	53.43	0.859	45.90	3	0.862	0.3	46.06	3
Venom	43.22	1.018	43.99	2	1.029	1.1	44.47	2
		Mean	45.6		Mean		46.5	
		Stand Dev	2.5		Stand Dev		2.2	
		Low Spread	4.1		Low Spread		3.1	
		High Spread	3.2		High Spread		2.6	
		Variance	32.2		Variance		24.9	

Next Steps

- Finalise Spreadsheet and Specifications
- Sign Off Process for Sail Measurements
- Communication of changes
 - Zoom Call With Other Clubs
- Roll Over to OMR Version 9 Mid March
- Monitor over Coming Races
- Modify Factors as Required

