



# Handicap Drift over a Season

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## Background.

Because handicapping of boats is purely relative (within the group) drift is not really an issue. In saying that, it becomes an issue when (for example) a boat misses a block of races mid-season. A boat that does not receive a time stamp for 'this' race has its Allocated Handicap for 'this' race rolled forward to the 'next' race. If the remaining fleet's handicap is drifting down, and the non-starter re-joins the competition that re-joining boat will have a handicap advantage, and (depending on the drift speed and the number of missed races) could quite possibly win on corrected time: an outcome that would be considered by the other competitors as unfair.

Additionally, he is likely to continue winning until the auto-adjusting handicap system 'catches up'.

## Handicap Calculation.

See the Separate document: [How the Next Handicap is Calculated](#)

## Detecting Drift.

### Option 1: Fleet.

1. Go to last race in a Series
2. Follow sequence **Admin | View | Handicap Data | Summary Data**
3. Click on the column heading 'Class'
4. Press **Ctrl X**: this will then show the Initial Handicap, the first race number and the Next race HC for each competitor.
5. Press **Ctrl A**: this will give you the Fleet Average Handicap for each race.

See Appendix 1

### Option 2: Class.

1. Go to last race in a Series
2. Follow sequence **Admin | View | Handicap Data | Summary Data**
3. Click on the column heading Class
4. Put the cursor on the class name for any boat.
5. Press **Ctrl X**: this will then show the Initial Handicap, the first race number and the Next Race Handicap for each competitor.
6. Press **Ctrl A**: this will give you the Average Handicap for each class for each race.

See Appendix 2.

It is shown at the bottom of each set of boats for a class. This clearly demonstrates any HC drift over time.

You can then eyeball the average data. A drift would be obvious.

## Quantifying Drift.

If you have doubts, you can dump the data into a **.csv** file, and then load it into a Spreadsheet.

⇒ See: [TopYacht HELP | Viewing and Publishing Results | Export results in Different File Formats | Create TXT and CSV Files](#)

By using a "Least Squares Linear Regression" tool, the gradient of the drift will be calculated.

The output will be in the form  $y = a*x + b$ , where 'a' is the gradient.

- ⇒ A positive number means the handicaps are increasing through time
- ⇒ A negative number means the handicaps are decreasing through time

Click [here](#) for a regression tutorial (only if you **want** to know).

As mentioned earlier, the mark boat is pivotal in the calculation of the next-race handicaps.

The mark boat is set in the handicapping recipe: **Admin | Maintain | For Master List | Define / Edit Handicaps**

- ⇒ See Screen Snapshot below
- ⇒ Select the Handicap Name (recipe) that is in use (there are several recipes!!)
- ⇒ Change the values in Parameter 1 (Back Calculated handicap Reference Time is...)

Increasing this pair of numbers will select a mark boat further down the list, and will slow a downward drift (or reverse it). Be aware that the numbers nominated are rounded to a specific boat count within the list, and changing the number from 45% to (say) 46%, will **not** be enough of a change to force the selection of the next boat. The size of this change needed to change the mark boat becomes larger as the fleet size gets smaller

**Handicap Definitions** [X]

Handicap Name: Club HC [v] [Define New HC Definition]

Handicap type:  
 Time On Time  
 Time On Distance  
 Time (pursuit)  
 Time

Back Calculated Handicap Reference time is...  
1] Average time of first **45 % to 45 %**  
**OR** Average times of boats to  
2] HC Corrected Time [NOT Elapsed Time]

Computer Calculated HC parameters...  
3] **Calculate new HC for next race**   
4] Show Next Race HC on Current Results   
5] HCing Maths: Exponential [v]  
6] Gain: 3  
7] BCH clamped at: UPPER 6 % LOWER 4 %

Computer Calculated HC parameters cont'd...  
9] Discard lowest and highest BCHs.  
10] "Provisional" HC indicated by the letter   
11] "Provisional" HCs adjusted more quickly  
12] High Limit 50.0 % 13] Low Limit 50.0 %  
14] Max Step Size 6 % 15] Min Step Size 0.01 %  
16] Restrict Min. HC to -X% of Initial HC  %  
**OR** Restrict Min. HC to -X% of Class Mark  %  
17] Early HCs adjusted more quickly   
18] High Precision BCH  18] Gain Bias %   
19] Allow Cross Division BCHs calculations   
20] Add Place Penalties  Anti Creep   
Percents 1st % 2nd % 3rd %  
21] GP Params  
 Not Used  
 Not Used  
 Not Used  
 Not Used  
Param 5

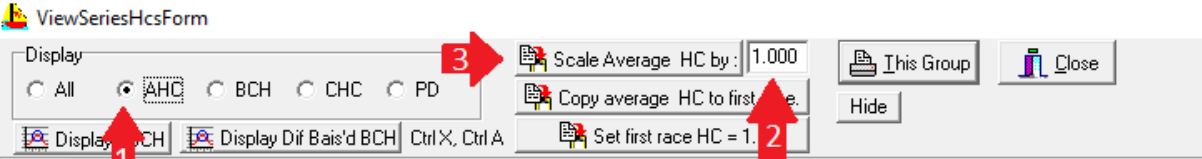
[Accept] [Cancel] [Help] [Close]

TopYacht Handicap Recipe Screen.

## Correcting Drift.

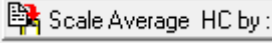
TopYacht provides some tools for factoring up the fleet's handicaps.

Open the Handicapping Menu screen. **Admin | View | Handicap Data | Summary Data**



The screenshot shows the 'ViewSeriesHcsForm' window. The 'Display' section has radio buttons for 'All', 'AHC', 'BCH', 'CHC', and 'PD'. The 'AHC' button is selected and highlighted with a red arrow labeled '1'. To the right, the 'Scale Average HC by:' field is set to '1.000' and highlighted with a red arrow labeled '2'. Below this, there are buttons for 'This Group', 'Close', 'Hide', and 'Set first race HC = 1.000'. The main table below shows a list of boats with their handicaps for various races.

SAL...	BOAT	FROM	CLASS	DIV	DESIGN	AHC1	AHC2	AHC3	AHC4	AHC5	AHC6	AHC7	AHC8	AHC9
5672	ANTARES		CaderBlue	2		0.983	0.977	0.964	0.977	0.968	0.967	0.969	0.967	0.967
5679	TICKLED PINK		Cadet Red	2		0.882	0.870	0.870	0.864	0.876	0.876	0.864	0.852	0.852
5760	ANACONDA		Cadet Red	2		1.035	1.023	1.037	1.027	1.013	1.015	1.001	0.991	0.991
8931	MIDNIGHT MAGIC		Cadet Red	2		0.809	0.812	0.812	0.812	0.812	0.801	0.801	0.801	0.801
9523	BROTHERS IN ARMS		Cadet Red	2		0.999	0.991	0.991	0.993	0.993	0.993	0.980	0.980	0.980

1. Choose the AHC button
2. Determine the scale factor
3. Press the  box.
4. **Tell the troops that you have scaled up the fleet's handicaps and why.**
5. You may wish to adjust the AHC for the boat that missed the block of races accordingly.



# Handicap Drift over a Season

## Appendix 1

### Typical Fleet Data Dump

PHS

SAIL NO	BOAT	FROM	CLASS	DIV	DESIGN	BCH1	BCH2	BCH3	BCH4	BCH5	BCH6	BCH7	BCH8	BCH9	BCH10	BCH11	BCH12	BCH13	BCH14	BCH15	BCH16	BCH17	BCH18	BCH19	BCH20	BCH21	AvBCH
5760	ANACONDA		Cadet Red	2		1.000	1.087	1.007	0.948	1.019	0.968	0.971	1.005	1.011	0.996	0.997	0.986		0.993				0.959		1.007	0.884	0.990
5672	ANTARES		CaderBlue	2		0.966	0.937	1.002	0.939	0.964	0.974	0.962	0.989	0.964	1.000			0.983	1.067	0.958	1.023	0.999		0.964	0.951	1.026	0.981
9930	AQUILO		CaderBlue	2		0.984	0.768	0.994	0.979	0.983	1.031	1.009	0.968	1.011	0.982	0.999	0.998	0.982	0.993	0.954	0.907	0.972	1.000	0.962	0.926	0.881	0.966
9560	ASSASSIN		Cadet Red	2		0.981	0.898	0.925	0.936	0.977	0.940	0.967	0.963	0.957	0.951	0.938	0.979	0.941	0.958	0.930	0.971	0.956	1.001	0.937	1.004	0.886	0.952
9523	BROTHERS IN ARMS		Cadet Red	2		0.976	0.991	0.998			0.931	0.899	0.954	0.922		0.975	0.940			0.967	0.930	0.923		0.942		0.844	0.942
9616	IMP		Cadet Red	2		0.963	1.014	0.962			0.971	0.922	0.958	0.929		0.929	0.862	0.916	0.928	0.931	0.931			0.919	0.920	0.845	0.931
8931	MIDNIGHT MAGIC		Cadet Red	2		0.818			0.705	0.766						0.819	0.690	0.763	0.801	0.809	0.700		0.597	0.743		0.820	0.753
9527	MUSTANG SALLY		Cadet Red	2		1.031	1.045	0.971	0.974	0.972	0.899	0.912				0.922	0.850	0.924	0.938		0.909		0.837	0.987	0.976	0.945	0.943
9624	NEED FOR SPEED	RGYC	Cadet Red	2				0.787	0.838	0.858	0.889	0.903				0.925	0.880								0.844		0.866
9913	OCEAN WARRIOR		CaderBlue	2		0.976	0.765	0.979	0.975	0.996	1.004	0.955	0.953	0.957	0.909	0.957	1.014	0.991	0.940	0.949	0.987	0.939	0.977	1.015	0.928	0.840	0.953
4677X	RESISTANCE		CaderBlue	2		1.005	1.001	1.018	0.949	0.957	0.963	0.994	0.987	0.981													0.984
9559	RESISTANCE		Cadet Red	2				0.977	0.923	0.944	0.783	0.957	0.899							0.981	0.933	0.933	0.825	0.932	0.945	0.949	0.922
9545	SMOOTH CRIMINAL		CaderBlue	2		1.000	1.025	1.010		0.975	1.019	1.017	0.987	1.012	1.011			1.052	1.014	1.001	0.988	0.977	1.030	1.008	1.000	1.009	1.007
9919	SPARKLE		CaderBlue	2		1.023		1.002	1.052	1.011	0.961	0.988	0.993	1.007	1.024	0.977	1.036	1.031	0.896	1.100		1.022	0.961	1.002	1.018	1.001	1.006
9822	SPITFIRE	RYCV	CaderBlue	2														1.000	1.036	0.749	1.062	1.025	1.025	1.064		0.994	
5679	TICKLED PINK		Cadet Red	2		0.819		0.853	0.903		0.837	0.823				0.828	0.743	0.778	0.825	0.861	0.766	0.913	0.739	0.735	0.752	0.837	0.813
9698	WILDCARD		Cadet Red	2									0.971	0.839						0.924			0.954	0.926	0.922	0.983	0.931
	AVERAGE VALUE					0.965	0.953	0.963	0.927	0.952	0.941	0.949	0.969	0.963	0.982	0.933	0.907	0.942	0.949	0.932	0.926	0.966	0.909	0.938	0.938	0.911	0.937

## Appendix 2

### Typical Class Data Dump

PHS																										
SAIL NO	BOAT	FROM	CLASS	DIV	DESIGN	AHC1	AHC2	AHC3	AHC4	AHC5	AHC6	AHC7	AHC8	AHC9	AHC10	AHC11	AHC12	AHC13	AHC14	AHC15	AHC16	AHC17	AHC18	AHC19	AHC20	AHC21
5672	ANTARES		CaderBlue	2		0.983	0.977	0.964	0.977	0.968	0.967	0.969	0.967	0.967	0.966	0.977	0.977	0.977	0.979	0.992	0.981	0.994	0.996	0.996	0.985	0.974
9930	AQUILLO		CaderBlue	2		0.964	0.971	0.971	0.979	0.983	0.983	0.996	1.000	1.000	1.004	0.997	0.998	0.998	0.993	0.993	0.980	0.967	0.969	0.979	0.973	0.960
9913	OCEAN WARRIOR		CaderBlue	2		0.960	0.965	0.965	0.970	0.975	0.982	0.989	0.978	0.978	0.971	0.958	0.958	0.971	0.978	0.965	0.960	0.969	0.959	0.985	0.995	0.982
4677X	RESISTANCE		CaderBlue	2		1.008	1.007	1.005	1.009	0.996	0.983	0.976	0.982	0.982	0.982	0.982	0.982	0.982	0.982	0.982	0.982	0.982	0.982	0.982	0.982	0.982
9545	SMOOTH CRIMINAL		CaderBlue	2		1.017	1.011	1.016	1.014	1.014	1.001	1.007	1.010	1.010	1.011	1.011	1.011	1.011	1.024	1.021	1.014	1.005	0.996	0.996	1.000	1.000
9919	SPARKLE		CaderBlue	2		1.050	1.041	1.041	1.028	1.040	1.030	1.016	1.007	1.007	1.007	1.013	1.001	1.013	1.019	1.019	1.033	1.033	1.029	0.988	0.993	1.001
9822	SPITFIRE	RYCV	CaderBlue	2		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.012	1.012	1.025	1.025	1.025	1.038	1.038
	AVERAGE VALUE					0.997	0.996	0.995	0.997	0.997	0.992	0.993	0.992	0.992	0.992	0.991	0.990	0.993	0.996	0.998	0.995	0.996	0.994	0.993	0.995	0.991
5760	ANACONDA		Cadet Red	2		1.035	1.023	1.037	1.027	1.013	1.015	1.001	0.991	0.991	0.998	0.997	0.997	0.993	0.993	0.993	0.993	0.993	0.993	0.982	0.982	0.990
9560	ASSASSIN		Cadet Red	2		0.965	0.970	0.957	0.946	0.946	0.956	0.951	0.956	0.956	0.956	0.954	0.949	0.959	0.953	0.955	0.947	0.955	0.955	0.968	0.958	0.971
9523	BROTHERS IN ARMS		Cadet Red	2		0.999	0.991	0.991	0.993	0.993	0.993	0.980	0.980	0.980	0.967	0.967	0.970	0.960	0.960	0.960	0.962	0.951	0.942	0.942	0.942	0.942
9616	IMP		Cadet Red	2		0.963	0.963	0.976	0.971	0.971	0.971	0.971	0.958	0.958	0.948	0.948	0.942	0.942	0.933	0.931	0.931	0.931	0.931	0.931	0.927	0.925
8931	MIDNIGHT MAGIC		Cadet Red	2		0.809	0.812	0.812	0.812	0.812	0.801	0.801	0.801	0.801	0.801	0.801	0.807	0.807	0.796	0.798	0.802	0.802	0.802	0.802	0.791	0.791
9527	MUSTANG SALLY		Cadet Red	2		1.021	1.024	1.031	1.017	1.006	0.995	0.995	0.995	0.995	0.995	0.995	0.982	0.982	0.969	0.959	0.959	0.946	0.946	0.946	0.959	0.965
9624	NEED FOR SPEED	RGYC	Cadet Red	2		0.839	0.839	0.839	0.828	0.828	0.838	0.849	0.860	0.860	0.860	0.860	0.871	0.874	0.874	0.874	0.874	0.874	0.874	0.874	0.874	0.864
9559	RESISTANCE		Cadet Red	2		0.977	0.977	0.977	0.977	0.964	0.957	0.957	0.957	0.957	0.957	0.957	0.957	0.957	0.957	0.957	0.965	0.954	0.947	0.947	0.942	0.943
5679	TICKLED PINK		Cadet Red	2		0.882	0.870	0.870	0.864	0.876	0.876	0.864	0.852	0.852	0.852	0.852	0.844	0.844	0.833	0.830	0.840	0.840	0.851	0.851	0.851	0.851
9698	WILDCARD		Cadet Red	2									1.000	0.990	0.990	0.990	0.990	0.990	0.990	0.990	0.990	0.990	0.990	0.990	0.990	0.990
	AVERAGE VALUE					0.943	0.941	0.943	0.937	0.934	0.934	0.930	0.935	0.934	0.932	0.932	0.931	0.931	0.926	0.925	0.925	0.922	0.922	0.921	0.918	0.918