

June 2012 UPDATE

This Formula is based on Quad fin positions with the added advantage of having the Thruster rear fin positions. It is more of a Quad orientated positioning. My Thruster formula is different.

Thrusters on guns generally have the front fins further to the rear of the board than on a Quad except they come closer to Quads on shorter lengths. I recommend pure Quads on Guns.

McKee M4 Quattro & McKee M5 Multisystem Formula for Shortboards & Guns

Board length	Standard Rounded Square Tail & SwallowTail Positions				Thruster tail fin for M5 Multisystem	
	Distance from tail		Distance from tail			
	Front Fins	Back fins				
5' 6"	27.1 cm	10-11/16"	12.6 cm	4-15/16"	8.3 cm	3-1/4"
5' 9"	27.4	10-13/16"	12.8	5	8.3	3-1/4"
6' 0"	27.7	10-15/16"	12.9	5-1/16"	8.4	3-5/16"
6' 3"	28.0	11-1/16"	13.0	5-3/16	8.6	3-3/8"
6' 6"	28.7	11-5/16"	13.3	5-5/16"	8.8	3-7/16"
6' 9"	29.4	11-9/16"	13.8	5-7/16"	8.9	3-1/2"
7' 0"	31.1	12-1/4"	14.3	5-5/8"	9.1	3-9/16"
7' 3"	31.8	12-1/2"	14.8	5-13/16"	9.2	3-5/8"
7' 6"	32.5	12-13/16"	15.3	6"	9.4	3-11/16"
7' 9"	33.2	13-1/16"	15.8	6-1/4"	9.5	3-3/4"
8' 0"	33.9	13-3/8"	16.3	6-7/16"	9.7	3-13/16"
8' 3"	34.8	13-11/16"	16.8	6-5/8"	9.8	3-7/8"
8' 6"	35.3	13-15/16"	17.3	6-13/16"	10.0	3-15/16"
8' 9"	36.0	14-3/16"	17.8	7"	10.2	4"
9' 0"	36.7	14-7/16"	18.3	7-3/16"	10.3	4-1/16"
9' 3"	37.4	14-3/4"	18.8	7-5/16"	10.5	4-1/8"
9' 6"	38.1	15"	19.3	7-1/2"	10.6	4-3/16"
9' 9"	38.8	15-5/16"	19.8	13/16"	10.8	4-1/4"
10' 0"	39.5	15-9/16"	20.3	8"	11.0	4-5/16"
10'3"	40.0	15-3/4"	20.8	8 3/16"		
10'6"	40.5	15-15/16"	21.3	8 3/8"		
10'9"	41.0	16-1/8"	21.8	8 9/16"		
11'0"	41.5	16-5/16"	22.3	8 3/4"		

Width between back fins				
Width at 12" up from tail		one side		
12-1/2"	31.8 & less	12.7 cm	5"	6.35 cm
32.4 cm	12-3/4"	12.8 cm	5-1/16"	6.4 cm
33.0 cm	13"	13 cm	5-1/8"	6.5 cm
33.7 cm	13-1/4"	13.2 cm	5-3/16"	6.6 cm
34.3 cm	13-1/2"	13.7 cm	5-3/8"	6.85 cm
34.9 cm	13-3/4"	13.8 cm	5-9/16"	6.9 cm
35.5 cm	14"	14.6 cm	5-3/4"	7.3 cm
36.2 cm	14-1/4"	15.0 cm	5-15/16"	7.5 cm
36.8 cm	14-1/2"	15.6 cm	6-1/8"	7.8 cm
37.5 cm	14-3/4"	16.0 cm	6-5/16"	8.0 cm
38.1 cm	15"	16.5 cm	6-1/2"	8.25 cm
38.7 cm	15-1/4"	17.0 cm	6-11/16"	8.5 cm
39.4 cm	15-1/2"	17.5 cm	6-7/8"	8.75 cm
40 cm	15-3/4"	17.9 cm	7-1/16"	8.95 cm
40.6 cm	16"	18.4 cm	7-1/4"	9.2 cm
41.3 cm	16-1/4"	18.9 cm	7-7/16"	9.45 cm
41.9 cm	16-1/2"	19.4 cm	7-9/16"	9.7 cm
42.5 cm	16-3/4"	19.9 cm	7-13/16"	9.95 cm
43.18 cm	17"	20.3 cm	8"	10.15 cm
43.8 cm	17-1/4"	20.8 cm	8-3/16"	10.4 cm
44.5 cm	17-1/2"	21.3 cm	8-3/8"	10.65 cm
45.1 cm	17-3/4"	21.4 cm	8-9/16"	10.7 cm

For pintails add 0.5cm (3/16") to back side fin distances

Fin positioning is based on tail area in relation to the 'Sweet Spot' of back foot placement. Search for the happy medium.

<i>Fine tuning the Quattro cluster for narrow tails.</i>				
note: for pintails also add the 0.5cm (3/16") to back fins before this addition				
tail width at 12" up				
<i>Move cluster (all fins) forward.</i>				
	Pintails		Square & Swallowtails	
13"	0.3 cm	1/8"	0 cm	0"
12-3/4"	0.6 cm	1/4"	0.5 cm	3/16"
12-1/4"	0.9 cm	3/8"	0.9 cm	3/8"
11-3/4"	1.3 cm	1/2"	1.6 cm	5/8"
11-1/4"	1.6 cm	5/8"	1.9 cm	3/4"
10-3/4" & Under	1.81 cm	13/16"	2.55 cm	1"

FIN DIRECTION COMPENSATION		
Compensation for all boards 5'10" & Under		
Add this amount to distance from stringer at nose		
5' 10"	+ 0.2 cm	+ 1/16"
5' 9"	+ 0.35	+ 1/8"
5' 8"	+ 0.5	+ 3/16"
5' 7"	+ 0.65	+ 1/4"
5' 6"	+ 0.8	+ 5/16"
5' 5"	+ 0.95	+ 3/8"
5' 4"	+ 1.1	+ 7/16"
5' 3"	+ 1.3	+ 1/2"
5' 2"	+ 1.45	+ 9/16"
5' 1"	+ 1.6	+ 5/8"
5' 0"	+ 1.75	+ 11/16"

FIN DIRECTION DATA IN DETAILED FORM

AT 12" 30.4CM FROM TAIL		Distance from stringer at nose				
TAIL WIDTH		FRONT cm		BACK cm		
cm	30.4		inches		inches	
		12"	3.7	1-7/16"	1.5	1/2"
31.1		12-1/4"	3.8	1-1/2"	1.6	1/2"
31.7		12-1/2"	3.9	1-9/16"	1.65	5/8"
32.4		12-3/4"	4.1	1-5/8"	1.75	5/8"
33		13"	4.3	1-11/16"	1.8	11/16"
33.6		13-1/4"	4.5	1-3/4"	1.9	3/4"
34.3		13-1/2"	4.6	1-13/16"	1.95	3/4"
34.9		13-3/4"	4.7	1-7/8"	2	13/16"
35.6		14"	4.9	1-15/16"	2.1	7/8"
36.2		14-1/4"	5.1	2"	2.2	7/8"
36.8		14-1/2"	5.2	2-1/16"	2.25	7/8"
37.5		14-3/4"	5.4	2-1/8"	2.3	15/16"
38.1		15"	5.6	2-3/16"	2.35	15/16"
38.7		15-1/4"	5.7	2-1/4"	2.4	1"
39.4		15-1/2"	5.9	2-5/16"	2.5	1"
40		15-3/4"	6	2-3/8"	2.55	1"
40.6		16"	6.2	2-7/16"	2.6	1"
41.3		16-1/4"	6.3	2-1/2"	2.7	1-1/16"
41.9		16-1/2"	6.5	2-9/16"	2.8	1-1/16"
42.6		16-3/4"	6.7	2-5/8"	2.85	1-1/8"
43.2		17"	6.8	2-11/16"	2.9	1-3/16"
43.8		17-1/4"	7	2-3/4"	3	1-3/16"
44.4		17-1/2"	7.2	2-13/16"	3.1	1-1/4"
45.1		17-3/4"	7.3	2-7/8"	3.2	1-1/4"

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