



## FACT SHEET

“ Tasmania’s cutting edge technological solution to horse performance analysis ”

### StrideMASTER



#### *StrideMASTER in situ*

Weighing less than 70 grams, the tracker is carried in the saddle cloth of each horse. It uses a combination of GPS and movement sensors to capture detailed information about each horse's performance.

The device provides a wealth of information that would have previously only been available in a university testing environment. Tasracing understands that this is the first time that this type of information is being collected and made available anywhere in the world.

Tasracing has launched a revolutionary new sectional timing device which provides a way of collecting performance information of horses during races. Working closely with the developer, Tasracing launched the StrideMASTER system in July 2011.

For the first time, sectional timing information is available for all Tasmanian races for the entirety of the race, tracking each individual horse.

As well as collecting speed, sectional times and positions in running, it is the first system that has been implemented that captures bio-metric data on each horse's stride. This includes stride length, stride count and stride duration.

StrideMASTER has the potential to assist with race day integrity functions (utilising GPS information), as a research tool and as a veterinary diagnostic device.

The ability to be able to collect large amounts of actual racing data will allow statistically-powerful studies examining correlation between biometric data and racehorse performance.

In time, StrideMASTER data will greatly assist in the identification and quantification of a superior athlete or a potential superior athlete.

When the stride data is combined with speed information, the system can provide a measure of each horse's stride efficiency. Stride efficiency looks at how stride length, stride duration and speed compare to known performance benchmarks.

The data from StrideMASTER enables trainers, owners, jockeys and punters to better understand a horse's performance, its level of fitness and its athletic potential. The data is amassed quickly and reports can be generated within a few minutes of the finish of a race, providing extremely detailed insights into individual horse performance.

*StrideMASTER sample report  
Individual horse performance*

Result	TAB no.	Horse (Barrier)	1120 to	1000m to	800m to	600m to	400m to	200m to	Total or
1st	4	Smart Catch (3)	1000m	800m	600m	400m	200m	WP	Average
		Position in running (margin)	-	2(1.1)	1(0.0)	1(0.0)	1(0.0)	1(0.0)	
		Sectional time (s)	9.69	11.30	11.61	11.31	11.69	11.50	
		Cumulative time (s)	67.09	57.40	46.10	34.49	23.18	11.50	1:07:09
		Speed (m/s)	12.38	17.70	17.23	17.68	17.11	17.39	16.69
		Stride length (m)	5.29	7.29	7.22	7.39	7.10	7.35	6.99
		Stride duration (s)	0.402	0.412	0.419	0.418	0.415	0.423	0.419
		Stride efficiency (%)	43.80	82.98	81.45	85.26	78.71	84.48	76.30
		Stride count	22.67	27.45	27.70	27.08	28.18	27.20	160.28

**POSITION IN RUNNING**

Position in running is the horse's actual position during the race at each designated 200 metre section. Margins reflect the actual distance from the lead horse (measured in lengths).

**SECTIONAL TIME (Seconds)**

Time taken between two points on the track, 200 metres apart.

**CUMULATIVE TIME (Seconds)**

The cumulative time taken at each sectional marker in the race.

**SPEED (Metres per Second)**

Average speed measured over each 200 metre section.

**STRIDE LENGTH (Metres)**

Stride length is the individual length of a horse's stride. The figure presented is an average stride length for each 200m section. [Stride Length = 200m ÷ Stride Count]

**STRIDE DURATION (Seconds)**

Stride Duration is the time taken for the horse to take each stride. The figure presented is an average stride duration for each 200m section. [Stride Duration = Sectional Time ÷ Stride Count]

**STRIDE EFFICIENCY (%)**

Compares stride length, stride duration and speed to an elite racehorse running 11 second 200m sections. The benchmark for stride length, stride duration and speed are 8m, 0.44s and 18.18 metres per second respectively.

**STRIDE COUNT**

Stride Count is the total number of strides taken in each 200m section. [Stride Count = Number of Strides]

**How To Interpret StrideMASTER Data**

These figures reflect the total or average of the horse's overall performance for the race. For example this horse had an average stride length of 6.87m throughout the race.

**Sections**

	1	2	3	4	5	6	7	
Horse Name	1400m to 1200m	1200m to 1000m	1000m to 800m	800m to 600m	600m to 400m	400m to 200m	200m to WP	Total or Average
Position in Running Margin	4 (3.2)	2 (0.8)	2 (0.4)	1 (0.0)	1 (0.0)	1 (0.0)	1 (0.0)	
Sectional Time (s)	14.24	11.72	12.11	12.38	11.99	12.23	12.96	
Cumulative Time (s)	87.63	73.39	61.67	49.56	37.18	25.19	12.97	01:27.63
Speed (m/s)	14.04	17.06	16.52	16.16	16.68	16.35	15.43	16.03
Stride Length (m)	6.00	7.30	7.12	6.89	7.03	6.96	6.81	6.87
Stride Duration (s)	0.430	0.430	0.430	0.430	0.420	0.430	0.440	0.430
Stride Efficiency (%)	56.26	83.27	79.26	74.13	77.19	75.65	72.46	74.03
Stride Count	33.33	27.4	28.08	29.04	28.46	28.74	29.37	204.42

**This is the total number of strides taken during the race**

The StrideMASTER Tracker Case is a portable mobile hub which houses the StrideMASTER trackers. Three sets of trackers are housed in the hub, with each set of trackers used once every three races. When the hub is connected to the StrideMASTER laptop, trackers are assigned for each horse in the upcoming race. After each race the data is downloaded from each tracker back to the StrideMASTER laptop from which reports can be subsequently generated. The hub also charges the trackers continuously throughout the day.



## StrideMASTER Digital Products

“ StrideMASTER digital products utilise data collected on race days to formulate three invaluable products to analyse Tasmanian thoroughbred racing. Race ready and available on the Tasracing website, StrideMASTER digital products include Speed Maps, Fast Finishers and StrideMASTER Horse Performance. ”











### StrideMASTER Speed Maps

Incorporating all previous runs, StrideMASTER Speed Maps positions horses in the race based on recent racing patterns. Generated by the settling position of each horse, StrideMASTER Speed Maps gauge a horse's racing pattern and positions them in one of three categories: FORWARD, MIDDLE or BACK.

The inclusion of additional runs collected from StrideMASTER reduces variables and allows the system to determine the horse's exact settling position based on previous starts. These patterns are then positioned against the other horses in the field to determine the horse's position in the run as well as predicting the race tempo based on the number of horses in each category. And the more data StrideMASTER collects, the more accurate it becomes. Increased accuracy of the field also allows for the running of a justified tempo, providing a clearer reflection of how the race will unfold.

StrideMASTER Speed Maps will be the must have tool when assessing Tasmanian Thoroughbred racing.





### Speed Map

Barrier	TAB no.	Horse	Starts	Back	Midfield	Forward
1	4	La Phillyharmonic	5			
2	3	Free Shout	5			
3	1	Can Get Thirsty	5			
4	9	Mushala	5			
5	8	Alice Alice	5			
6	2	Maywyn On Tuesday	4			
7	7	Danny Dazzler	2			
8	5	Peggyichi	5			
9	6	Carbon County	5			
10	10	Mijn Jongen	3			



## StrideMASTER Fast Finishers

Identifying eye catching runs from a race can be difficult, but StrideMaster Fast Finishers finds them. The StrideMaster Fast Finishers report identifies horses that have run the fastest, second fastest or third fastest closing 600m sectionals at their last start to highlight them for their next run. Additionally, StrideMASTER Fast Finishers incorporates a quick analysis from the race fields last run. Each horse's start in the previous 21 days includes the venue, track rating, margin, race class, race distance, race time, final 600m and finishing position are included in a runner by runner format to give a quick analysis of the field.

This Race			Last Race											
TAB #	Barrier	Horse	Date	Venue	Class	Dist	Track Rating	Result	Margin ( L )	Race Time	600m Time (Position)	Third Fastest	Second Fastest	Fastest
1	4	Can Get Thirsty	2012-07-01	Ltn	BM68	2100	Dead-5	8/9	11.60	2:22.12	39.54 (3)			
2	3	Maywyn On Tuesday	2012-07-01	Ltn	BM68	2100	Dead-5	9/9	18.60	2:23.58	39.97 (8)			
3	1	Free Shout	2012-07-01	Ltn	BM68	2100	Dead-5	4/9	04.80	2:20.73	38.94 (2)			
4	9	La Phillyharmonic	2012-07-01	Ltn	BM68	2100	Dead-5	5/9	07.10	2:21.20	39.26 (1)			
5	8	Peggyichi	2012-06-24	Hbt		2100	Heavy-8	1/13	00.00	2:21.69	40.90 (3)			
6	2	Carbon County	2012-06-24	Hbt		2100	Heavy-8	3/13	08.30	2:23.40	41.49 (12)			
7	7	Danny Dazzler	2012-07-01	Ltn	BM68	2100	Dead-5	2/9	02.00	2:20.17	37.76 (6)			
8	5	Alice Alice	2012-06-24	Hbt		2100	Heavy-8	2/13	04.00	2:22.51	41.48 (4)			
9	6	Mushala	2012-06-24	Hbt		2100	Heavy-8	4/13	08.50	2:23.44	42.28 (7)			
10	10	Mijn Jongen	2012-07-01	Ltn	MDN / CL1	1600	Dead-5	5/14	12.30	1:44.79	40.83 (2)			

## StrideMASTER Horse Performance

Providing highly detailed form from the last five runs, StrideMASTER Horses Performance enables you to compare and assess the entire StrideMASTER data set and scrutinise a horse's previous starts. Optimum form analysis is offered with detailed data including sectional and cumulative times, position in running, distance from leader, including stride length, stride duration, stride efficiency and stride count, which will demonstrate changes in timing and biometric traits over time.

Index	Date	Venue	Type	Distance	Rail	Track Rating	Barrier	Result	Margin ( L )
1	July 22, 2012	Hobart	OPEN HCP	1200	Elwick Course Proper - Offset 0m	SLOW 7	10	4 / 12	2.4
2	July 08, 2012	Hobart	BM78	1400	Elwick Course Proper - Offset 6m	HEAVY 8	1	1 / 9	0
3	June 24, 2012	Hobart	BM78	1400	Elwick Course Proper - Offset 5m	HEAVY 8	1	9 / 13	17.2
4	June 10, 2012	Devonport Synthetic	BM78	1350	Spreyton - Offset 0m	GOOD 3	6	7 / 9	2
5	May 27, 2012	Hobart	OPEN HCP	1200	Elwick Course Proper - Offset 3m	HEAVY 10	6	5 / 12	10.1

Sectional Times ( s )	1400m	1200m	1000m	800m	600m	400m	200m	Total or Average
1	-	15.78	10.62	11.61	13.01	12.49	11.88	-
2	20.58	11.87	11.69	12.05	11.89	12.15	11.12	-
3	18.48	11.47	11.74	12.38	13.38	14.01	14.79	-
4	-	11.24	10.54	11.85	12.13	11.94	12.11	-
5	-	16.19	11.23	11.63	12.93	13.52	14.16	-

Cumulative Times ( s )	1400m	1200m	1000m	800m	600m	400m	200m	Total or Average
1	-	75.38	59.6	48.98	37.37	24.36	11.88	1:15.37
2	91.35	70.77	58.9	47.21	35.16	23.27	11.12	1:31.34
3	96.24	77.76	66.29	54.55	42.17	28.79	14.79	1:36.23
4	-	69.8	58.57	48.03	36.18	24.05	12.11	1:20.79
5	-	79.66	63.47	52.24	40.6	27.67	14.16	1:19.65

### Disclaimer

Tasracing Pty Ltd and Thoroughbred Ratings Pty Ltd accepts no responsibility for the completeness or accuracy of any of the information contained herein, and makes no representations about its suitability for any particular purpose. Users should make their own judgements about those matters and/or seek independent advice. You assume all risks associated with the use of the data provided in this brochure.