

Movement for Spyro 3 can be tracked in 3 different memory locations (version 1.1)

0704b4 - "Max" speed of the current movement type

0704b8 - Current speed accounting for acceleration time

0704bc - Current displacement accounting for turns and moving into an object

For version 1.0, these addresses may be found at:

0703d4 - "Max" speed of the current movement type

0703d8 - Current speed accounting for acceleration time

0703dc - Current displacement accounting for turns and moving into an object

Spyro	Max Speed	% of top speed (charging)
Standard Moves		
Walking	4536	58.094%
Walking*	4608	59.016%
Walking on ice	4536	58.094%
Walking on ice*	4608	59.016%
Charging	7808	100.000%
Jumping	3150	40.343%
Jumping*	3200	40.984%
Hovering	0	0.000%
Hovering with a direction	1575	20.172%
Hovering with a direction*	1600	20.492%
Flopping	0	0.000%
Flopping with a direction	1575	20.172%
Flopping with a direction*	1600	20.492%
Surface swimming	2394	30.661%
Surface swimming*	2432	31.148%
Swimming while being attacked/acid damage	3150	40.343%
Underwater charging	7168	91.803%
Underwater swimming	3584	45.902%
Gliding	6400	81.967%
Gliding while holding downward directions	Variable	
Charge Jumping	6144	78.689%
Climbing	1524	19.518%
Supercharge	14208	181.967%

*denotes movement that works at different speeds on different axes. From my testing, slower on up or left but faster on the 6 other directions

note: when on ice, your decay in actual speed is dependant on your movement type(?). Charging on ice will give you a max speed of 0. You will however decelerate slower than if you hold forward to walk on ice.

note: sproder speed alternates between gliding and charge jumping speed meaning a wall glide is always better than a sproder

note: I would include superfly values here but they're so variable based on pitch and elevation, it's almost meaningless. Some takeaways though from their actual speed is that being low, angled down, and flapping to maintain height is the best way to move and is just barely slower than charging. If you're really curious I'd take this to emulator yourself with the mem locs given above

on supercharging: similar to SV skateboarding, you can maintain a speed by charge jumping. The initial speed you take while charging is dependant on your pitch while landing. Landing with a severe downward angle can increase your supercharge speed to about 19k and jumping maintains this value. After one jump however, you stay at the regular 14k since your pitch has now leveled out

Speedways

Preemptive note: flight speeds are dependant on your current elevation. Therefore, the following numbers are based on the highest and lowest values of elevation in each speedway. Supercharging speed is the same as regular supercharging discussed above

Standard Moves	Max Speed
Low flying (Mushroom)	10432
High flying (Mushroom)	4672
Low flying (Country)	12800
High flying (Country)	4672
Low flying (Honey)	13632
High flying (Honey)	4672
Low flying (Harbor)	14634
High flying (Harbor)	7402

note: blue stars give you a boost of about 8200 for 37 frames before your speed begins to decay

note: supercharging in speedways acts the same as supercharging as Spyro in normal levels such as Molten or Icy

Sheila	Max Speed	% of top speed (walking)
Walking	5922	98.438%
Walking*	6016	100.000%
Jumping	3150	52.360%
Jumping*	3200	53.191%
Falling	1575	26.180%
Falling*	1600	26.596%
Super jumping	1575	26.180%
Super jumping*	1600	26.596%

Byrd

Standard Moves	Max Speed	% of top speed (flying)
Walking	3780	59.063%
Walking*	3840	60.000%
Flying	6300	98.438%
Flying*	6400	100.000%
Falling	6300	98.438%
Falling*	6400	100.000%

Bentley

Standard Moves	Max Speed	% of top speed (walking)
Walking	3780	98.438%
Walking*	3840	100.000%
Jumping	3150	82.031%
Jumping*	3200	83.333%
Falling	1575	41.016%
Falling*	1600	41.667%
Optimal pushing	1510	39.323%

note: while pushing, his speed is dependent on his angle to the block. Holding forward to push the block while moving the camera decreases this as he begins to push off line. At about 1000 speed, he starts to walk off the side of the block

Agent 9	Max Speed	% of top speed (walking)
Walking	3840	100.000%
Jumping	3150	82.031%
Jumping*	3200	83.333%
Falling	1575	41.016%
Falling*	1600	41.667%

note: haha yes zigzagging exists. For curiosity sake, I was getting up to the 39k area for actual speed

Sparx	Max Speed	% of top speed (boosting)
Regular flying	4480	66.667%

