

# RideDNA

## Handling Index Analysis

Generated June 26, 2026

### Marauder

Size: S | Configuration: Airborne Marauder S

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Trail: 90.0mm	Wheel Flop: 30.7mm	HTA: 68.5°	Fork Offset: 50.5mm
Front Center: 631mm	Chainstay: 431mm	Wheelbase: 1049mm	BB Drop: 93.0mm

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#### AGILITY INDEX™

Score: 66.8/100

32% Ground Trail	-35.0
26% Wheel Flop	+26.0
10% Front Center	-21.1
10% Chain Stay	-19.6
8% Gyroscopic MOI	0.0
6% BB Drop	-14.6
4% Axle Height	+4.1
4% Pneumatic Trail	-3.0

#### STABILITY INDEX™

Score: 87.6/100

20% Wheel Flop	-12.0
15% Ground Trail	+29.6
15% Front Center	+16.9
15% Gyroscopic MOI	+22.5
10% Chain Stay	0.0
10% Axle Height	-4.1
8% BB Drop	+21.9
7% Pneumatic Trail	+20.2

AGILITY: Higher contributions → more reactive

STABILITY: Higher contributions → more planted



# Airborne Marauder S

RideDNA AI Analysis

- [Placeholder]

Marauder [Placeholder]

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## 7. [Placeholder]

- \*\* [Placeholder] 30.7mm \*\* [Placeholder] 44-48cm [Placeholder]
- \*\* [Placeholder] 90.0mm \*\* [Placeholder]
- \*\* [Placeholder] 68.5° \*\* [Placeholder]

[Placeholder]

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## 8. [Placeholder]

Marauder [Placeholder] 410-435mm [Placeholder] 6

[Placeholder] 57mm [Placeholder] 410mm [Placeholder] 42mm [Placeholder]

[Placeholder] Marauder [Placeholder]

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## 9. [Placeholder]

Marauder (S) [Placeholder]

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## 10. [Placeholder]

- [Meijaard et al. (2007): "Linearized dynamics equations for the balance and steer of a bicycle"]([http://ruina.tam.cornell.edu/research/topics/bicycle\\_mechanics/\\*FinalBicyclePaperv45wAppendix.pdf](http://ruina.tam.cornell.edu/research/topics/bicycle_mechanics/*FinalBicyclePaperv45wAppendix.pdf))
- [Rolo Bikes (2013): "The benefits of low flop geometry"](<https://www.rolobikes.com/pdf/rolo-wheel-flop.pdf>)
- [Fajans & Curry (2000): "Steering in bicycles and motorcycles"]([https://physics.berkeley.edu/sites/default/files/bulk\\_3/SteerBikeAJP.PDF](https://physics.berkeley.edu/sites/default/files/bulk_3/SteerBikeAJP.PDF))
- [Jones, D.E.H. (1970): "The stability of the bicycle"](<https://home.phys.ntnu.no/brukdef/undervisning/tfy4145/diverse/UnridableBicycle.pdf>)
- [Schwab & Meijaard (2013): "A review on bicycle dynamics and rider control"](<http://bicycle.tudelft.nl/schwab/Publications/schwab2013review.pdf>)
- [Cain, Ashton-Miller & Perkins (2016): "On the Skill of Balancing While Riding a Bicycle"](<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0149340>)