

NDS FET



AERO

USER MANUAL

TABLE OF CONTENTS

01

Package Contents

02

Company Introduction

03-04

Diagram and Size

05-06

Specs and Software

07

Software and Headlight

08

Suspension Adjustment

09

General Maintenance

10-11

Display Info and Settings
Options

12

Error Codes

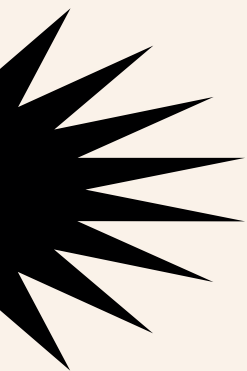
13-14

Terms of Use & Warranty

PACKAGE CONTENTS

- 1 X AERO
- 1 X Charger + AC Cable
- 1 X AERO User Manual
- 1 X Suspension User Manual
- 1 X NOSFET Stickers

NOT YOUR ORDINARY COMPANY



NOSFET is like a lovechild of the core team's passion and dedication. We're all in this together, pouring our hearts into a product that not only walks the talk but also dares to dream big. Our mantra? Keeping our eyes on the prize: creating an unforgettable experience for our awesome customers!

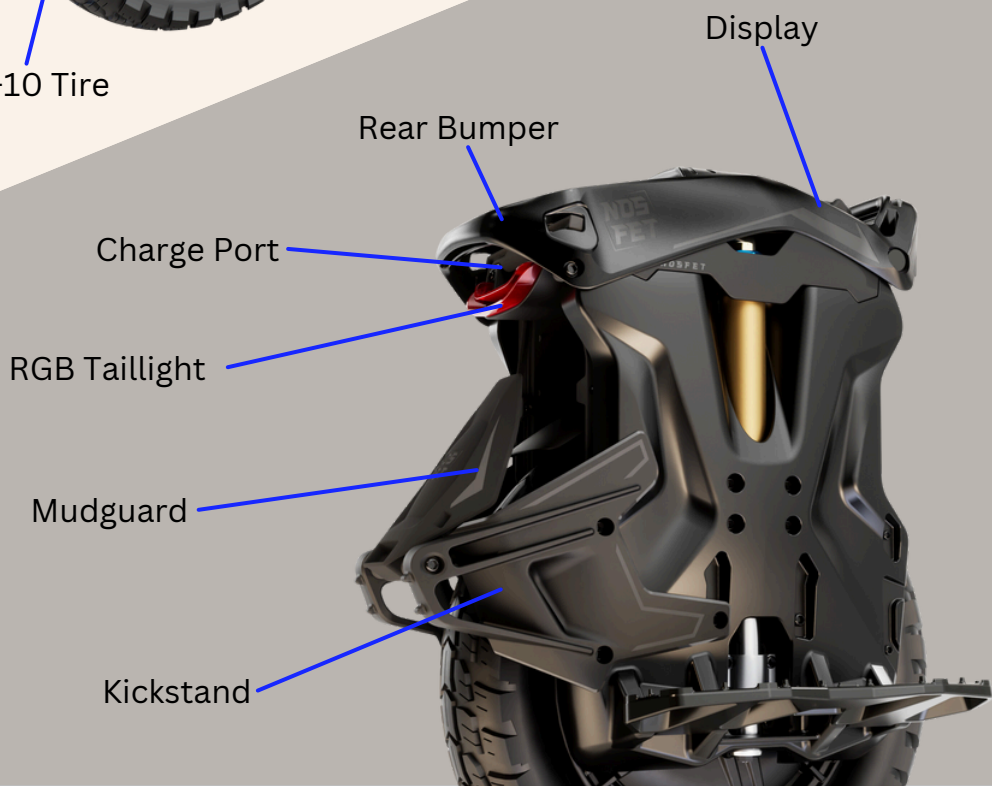
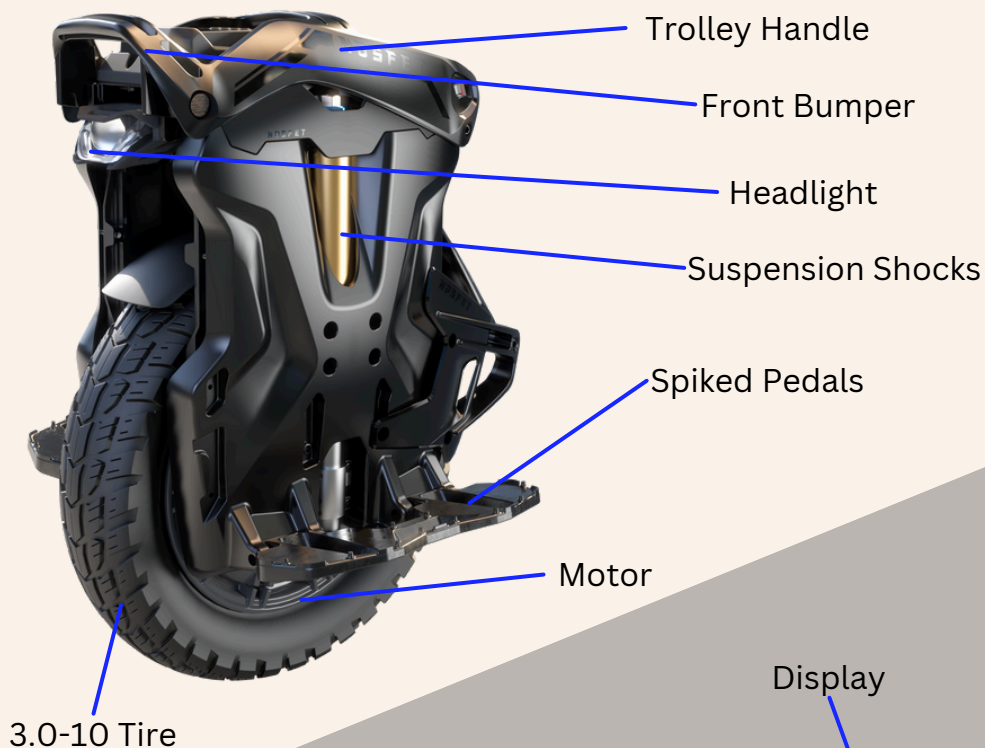


We get it, you're itching to take your snazzy new NOSFET gadget for a spin, and hey, we're all for it! But before you rev up, let's lay down some ground rules!

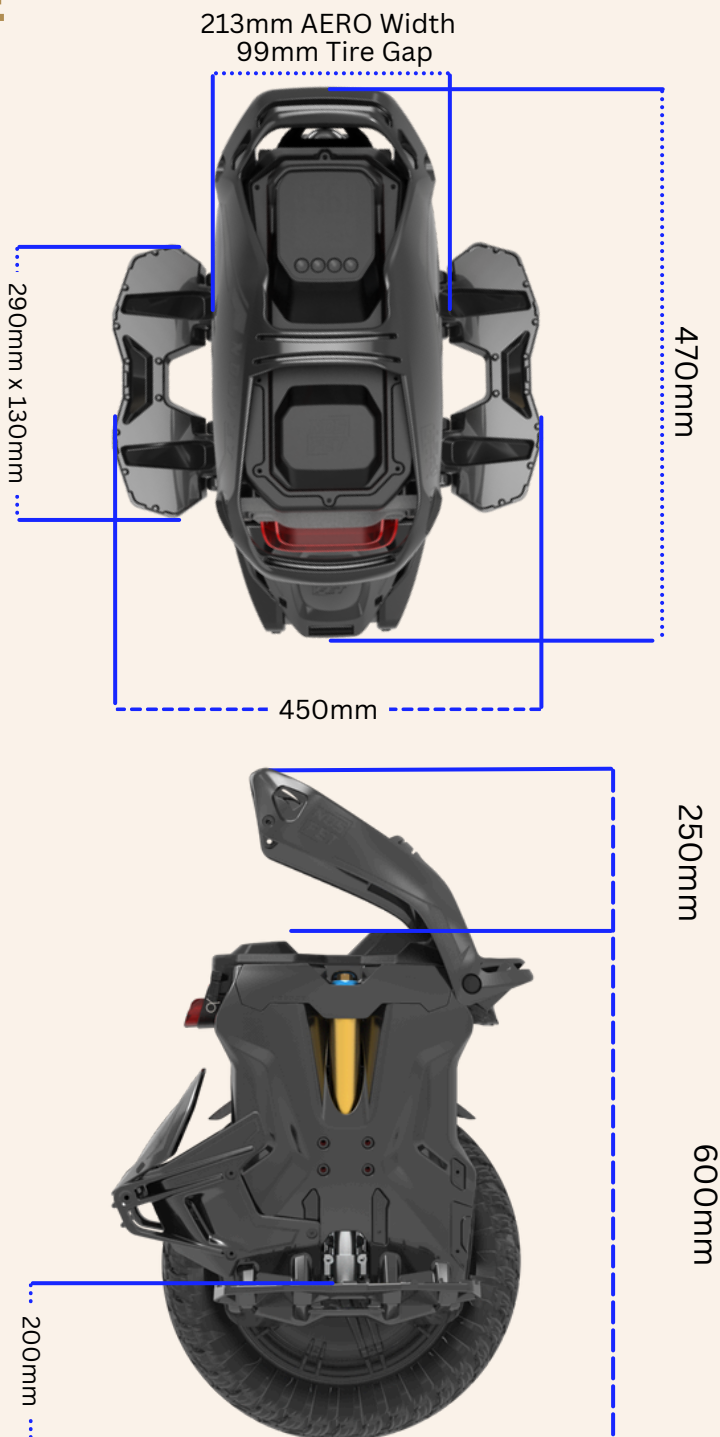
- Get to know every cool trick your gadget can pull off before zooming around.
- Stick to the rules of the road, abide by local laws and regulations!
- Keep it chill with the speed, following all the rules.
- Give your NOSFET buddy some regular TLC (tender loving care) AKA service and maintenance.
- Need backup? Your retailer is there for you!
- Need extra backup? Find us through our official website.
 - www.nosfet.com



AERO DIAGRAM



SIZE



SPECIFICATIONS

Model	AERO
Free Spin Speed	78km/h
Safe Speed	19km/h
Battery	Samsung INR21700 50S 126v 1110wh
Charger	126v 5A
Charge Time	2.5-3 hours
Max Weight	120kg
Motor	Nominal 2000W / Peak 8000W
Tire	3.0-10
Operating Temperature	-10°C-80°C
Weight & Size Dimension	
Net Weight	24.8kg
Dimension	800mm x 213mm x470mm
Hardware	
Suspension	Symetrical Bidirectional Suspension 70mm
Controller	Dual Board, 18pc MOS max Current 495A Controller 200A Current
Headlight	20W
Taillight	Dual Taillight Modes - Slow Brake/Emergency Brake
Display	Speedometer, Voltage, Mileage, Battery, Ride Mode etc...
Charge Port	GX16-6 Max 10A
Motor	Magnesium Alloy Rim

Error Self Detection	Left/Right Battery: high temperature alarm, overvoltage alarm, over discharge alarm, charging current over voltage, and vehicle high temperature alarm etc...
Angle Protection	Vertical Tilt Max of 68° Horizontal Tilt can be between 35 ~75° through display.
Riding Mode	Pedal hardness value can be set between 0%-100% through display.
Power Tilt Back	Power tilt-back value could be set between 30%-100% through display
Speed Tilt Back	Speed tilt-back value can be set between 10kph-200kph through display.
Speed Alarm	Speed alarm value could be set between 10kph--200kph through display.
Button Volume	Button volume value can be set between 0-100% through display.
Low Battery Mode	Always ON
High Speed Mode	Always ON
Smart BMS	Inspecting each string of cells: 6 zones of temperature monitoring, displaying voltage etc.
Low Voltage Protection	Initial alarm at 91.5V, tilt back at 88.5V. BMS Shut Off Voltage: 85.5V with continuous alarm.
Temperature Alarm	Alarm at 85°C (upper control board) Alarm at 105°C (lower board).

Other Functions	Multiple functions adjustable all adjustable through display, supports data logging.
Hall Sensor-less Algorithm	Detects hall sensor error and automatically fixes algorithm to allow the wheel to balancing.
Smart Field Weakening to Speed Up	Increase speed safety margin through software algorithm.
Motor Position Hold	Motor holds position and does not release when there is current with no speed.
No Hall Emergency Mode	In the event the wheel has no hall sensor the product can still continue riding with impacted performance.
APP Info	Speed, voltage, distance, trip, current, temperature etc

HEADLIGHT

- Headlight features 4 lights modes + stealth mode.
The three modes:
 - Daylight Running Light
 - Low Brightness
 - Medium Brightness
 - Highest Brightness
- Can be triggered by hitting the headlight function.
- Speed is auto brightness dependent on speed.
- Stealth Mode: Hold down the headlight button with main beam off to turn off the daylight running light.

SUSPENSION ADJUSTMENT



**Rebound
Adjustment**

**Preload
Adjustment**

**Compression
Adjustment**



The AERO features a bidirectional dampening suspension on each side with rebound and dampening adjustment. The bidirectional dampening feature allows the same coil to fit more weight classes of riders.

Rebound Adjustment: Silver Dial at the Top

Preload Adjustment: Size 16 Wrench at the Top

Compression Adjustment: Gold Dial located at Bottom

TIP: For heavier riders, we recommend increasing the compression if bottom out happens often.

GENERAL MAINTENANCE

Battery:

- Please store battery away from direct sunlight and heat.
- For prolonged storage and extended health please store the battery between: 30%-70%.

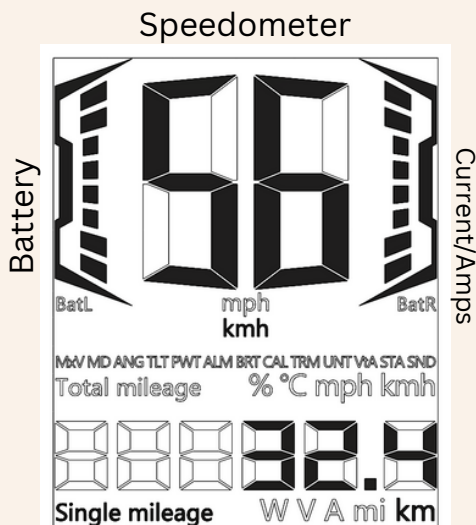
Tire:

- Please keep tire well inflated to prevent damage to the rim.
- Inspect the tire before each ride, ensure it's free from cracks and punctures and has enough tread.

Suspension:

- Please refer to shock manual for maintenance guidelines.
- Maintenance is required for the suspension to ensure smoothest performance.

DISPLAY INFO



W: Watts V: Voltage A: Amps/Current mph: miles/h kmh: kilometers/h



**Lift
Switch**



**Menu
Toggle**



**Headlight
Switch**



**Power
ON/OFF**

Lift Switch Mode

1. Push once to enable lift mode, to prevent motor from spinning. P will show on the display.
2. Push again to disable lift mode, ensure wheel is self balancing before riding.

Adjusting Wheel Settings

1. To Adjust the AERO settings, long press the until the beep, and let go.
2. Use the and to scroll through menu settings, and push till the beep and let go to adjust the selected setting.
3. Use the to adjust to the right adjustment.
4. Short press the to back confirm and return back to the page.

SETTINGS OPTION

MD: Ride Mode

Pedal Hardness; the lower the percentage the more the pedal leans towards the direction.

ANG: Vertical Angle Adjustment

Front and Back Angle Adjustments. Not to be related with gyroscope calibration.

TLT: Tilt-Back Speed

Speed at which the unit tilts back. Highest value turns off tilt-back.

PWT: PWM Tilt Back Alarm

Tilt back at the PWM value. Highest value turns off PWM tilt back.

ALM: Alarm Speed

Set the speed at which the alarm will sound. Highest value turns off alarm speed.

BRT: Brightness

Brightness of the Display.

CAL: Calibration

Gyroscope Calibration, Mode 0 is preparing, Mode 1 starts the process, disables the gyro, please balance the device vertically and hold position. Mode 2, confirms the positions. Mode 3, complete. Please restart device.

TRM: Transport Mode

IFor transporting the unicycle during shipment, prevents wheel from activating.

UNT: Unit

To switch between KMH and MPH, imperial vs metric.

VtA: Voltage Adjustment

Manually adjusts the voltage of the unicycle to match a realistic number.

STA: Side Tilt Angle (L/R)

Left and right angle cut off. Higher number is ideal for trails and skateparks but may cause the wheel to spin in place when toppled over.

SND: Volume Adjustment

Adjust the volume of the beeper. Does not impact PWM alarm, only menu alarms.

MxV: Max Charge Voltage

Adjust the maximum limit of voltage.

ANG %: Acceleration Assist

Makes the wheel easier to accelerate by temporarily tilting the pedal forward by a max of 2 degrees.

ALM Torque Alarm(ON/OFF)

Alarm will sound when maximum torque is achieved.

ANG TLT: Angle Tilt Re-Centre

Gyroscope recalibration time. 100%= a very long duration 15sec+ VS 0% = stock duration gyroscope re-centers quickly. When going off berms when you feel tilt back it is due to stock duration being too quick, try adjusting by increments.

BRT: Auto Headlight (ON/OFF)

Controls the sensor that controls the headlight automatically turning ON or OFF when going through a dark environment.

PWM Alarm cannot be turned off. Will always sound at 86%.

ERROR CODES

Code	Issue
br tEñ	Right Battery Pack High Temperature Alarm
bl tEñ	Left Battery Pack High Temperature Alarm
bt LoY	Battery Pack Over Alarm
u HCGH	Battery Pack Overpressure Alarm
E CHñr	Charging Current Exceeds the Set Value
E HALL	Motor Hall Error Alarm
t HCGH	Controller High Temperature Alarm

Need additional help?

Please contact your official NOSFET retailer for assistance or email us at support@nosfet.com

TERMS OF USE

SUPPORT: Please contact your retailer first before emailing us at: support@nosfet.com

The following persons are prohibited from riding this product:

- Persons who are under the influence of drugs or alcohol and have limited mobility and reaction ability.
- Additionally, any persons with; hypertension, cardiovascular and cerebrovascular diseases or other high-risk diseases.
- Minors under 16 years old, pregnant women, mentally ill and the elderly over 60 years old.

Additional Terms:

- This product is not allowed to be disassembled or repaired by uncertified personnel. If the machine is disassembled by uncertified personnel the warranty service will be voided.
- If the NOSFET product produces an **alarm sound**, please stop riding it immediately and send it to certified NOSFET retailer for maintenance immediately, continued use without repair will void the products warranty.
- **Such actions are prohibited** when using this product:
 - Hard acceleration, especially at below 60% battery.
 - Riding backwards in public space.
 - Riding one footed or performing other acrobatics.
 - Carrying items or other people.
- **ALWAYS WEAR SAFETY GEAR:** full face helmet, elbow and knee protection, chest guard and wrist guards are mandatory.
- During the production or sale of this product, design changes and further improvements will be carried out continuously. In case of any discrepancy with this manual, please refer to the actual product.

WARRANTY

SUPPORT: Please contact your retailer first before emailing us at: support@nosfet.com

Controller: 24 months

Motor: 24months

Battery Packs: 18 months

Charger: 6 months

Suspension Shock: Refer to manufacturer's user manual.

NOTE: NOSFET warranty only includes providing the relevant parts for repair and does not include labour costs for repair, logistical and any additional expenses. Please speak with your NOSFET retailer for details.

The following conditions are not covered by the warranty:

- Warranty period has expired.
- Damage caused by human factors.
- Damage caused by force majeure.
- All kinds of damage caused by failure to use product according to manual, maintenance, modification of NOSFET products.
- Failure or damage caused by forced use of this product beyond normal conditions.
- The product has been disassembled or maintained by personnel not authorized by NOSFET.
- Malicious damage to warranty content and product.



THANK YOU

WWW.NOSFET.COM

**FOLLOW US ON SOCIALS.
TAG US IN YOUR CONTENT!
RIDE SAFE.**