

# *fluid*

## **Horizon V2 Electric Scooter**

### **USER MANUAL**



**Read this manual carefully  
BEFORE operating your scooter!**

**Congratulations on your new fluid Horizon V2 electric scooter! And thank you for purchasing it at [fluidfreeride.com](https://fluidfreeride.com) or at one of our retail partners.**

**Follow us on Instagram and tag us to be featured on our page!**

**[@fluidfreeride](https://www.instagram.com/fluidfreeride)**

## **DO NOT RETURN TO PLACE OF PURCHASE**

Please contact us at  
[fluidfreeride.com/contact](https://fluidfreeride.com/contact) for any  
assistance.



Check out our support library at  
[support.fluidfreeride.com](https://support.fluidfreeride.com) for  
common concerns.



## **BEFORE YOU START**

**It is important to read through, understand, and adhere to all instructions and safety warnings before charging and operating this scooter.**

Upon receiving and opening your box, please inspect the contents for signs of damage or loose screws from transport. If something doesn't look or feel right, please take a few pictures and contact your place of purchase immediately.

YOUR SCOOTER COMES WITH A LIMITED WARRANTY AGAINST MANUFACTURING DEFECTS AS DESCRIBED AT [fluidfreeride.com/warranty](https://fluidfreeride.com/warranty). THIS LIMITED WARRANTY IS AVAILABLE TO THE ORIGINAL PURCHASER ONLY AND CERTAIN ACTIONS OR OMISSIONS MAY VOID THE LIMITED WARRANTY. IN CASE OF ANY ISSUES EXCEPT FROM THE LIMITED WARRANTY, THERE ARE NO OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, TITLE, MERCHANTABILITY OR NON-INFRINGEMENT, AND ALL OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED.

**Make sure you understand and adhere to all local laws, rules, ordinances, and regulations applicable to riding scooters. Riding an electric scooter comes with inherent risks and hazards. To minimize the risk of falling, being injured, or injuring others, make sure you understand how to safely operate and control this scooter. ALWAYS USE GOOD JUDGEMENT, COMMON SENSE AND PROTECTIVE GEAR.**

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## GENERAL SAFETY WARNINGS

- Always wear a helmet and protective safety equipment when riding your electric scooter.
- Wear closed shoes without heels and ensure your laces are tied.
- Only use your scooter in line with its intended purpose.
- Check your scooter for any loose parts or screws, flat tires, signs of damage or excessive wear before every ride. Stop operation immediately and contact your place of purchase if something does not feel right.
- Start riding slowly to familiarize yourself with the behavior of your scooter. Start in first gear and slowly try out the brakes. Always slow down when riding over bumps or on rough road conditions.
- Keep the scooter away from children. It is not a toy. 16+ riders only.
- Do not use your electric scooter in heavy rain, on surfaces covered by more than ½ inch of water. Do not submerge the scooter in liquid or let any liquid near the battery or electrical components.
- Do not ride with more than one rider or exceed the **weight limit of 120kg / 265lbs** in any other way.
- Do not lend your scooter to anybody unfamiliar with its operation. Ensure any new riders are familiar with these instructions and are wearing proper safety gear.
- Once riding in public space, you are subject to the risks faced by all traffic participants just like when you're riding a bike.
  - Other traffic participants may not obey traffic regulations or ride carelessly.
  - The faster you ride your scooter, the longer it will take you to stop.
  - The scooter may slip on slippery surfaces leading to subsequent injuries to the rider. Pay special attention crossing train tracks and when it is wet.
  - Always use caution, adapt your speed to road/traffic conditions and keep distance from other traffic participants.
  - Watch out for pedestrians. Do not use your scooter in any way that could harm pedestrians. Slow down when you are passing them to avoid accidents.
- You must follow all local traffic rules and regulations.

## **SAFETY CHECKLIST**

### **General**

- Your scooter should feel stable without much play or wobble.
- If something does not feel or look right, please contact fluidfreeride.

### **Riding Environment**

- There must be sufficient light so you can see the road ahead of you. If not, use an additional headlight!
- If you must ride in the rain, ride slowly and with caution.

### **Wheels**

- Check the main lateral wheel nuts for firmness regularly and after your first 50 miles of riding. Re-tighten if necessary.

### **Throttle**

- Before riding, check if the throttle sits firmly on the handlebar and is returning to its original position when released.

### **Brakes**

- Check the rear drum brake for proper tension and effectiveness regularly and prior to using the scooter for the first time.

### **Folding mechanism**

- Check that the folding mechanism is locked into place with an audible click. See further below under FOLDING AND UNFOLDING.

## **CAUTION**

**Wear protective gear like helmet, gloves, knee, and elbow pads at all times during use**

# HORIZON OVERVIEW

## What's in the Box



fluid Horizon Electric Scooter



UL certified  
Charger



Manual

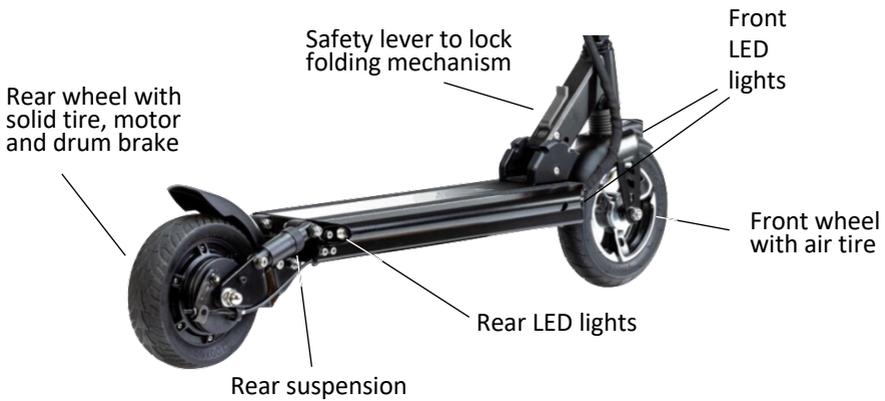
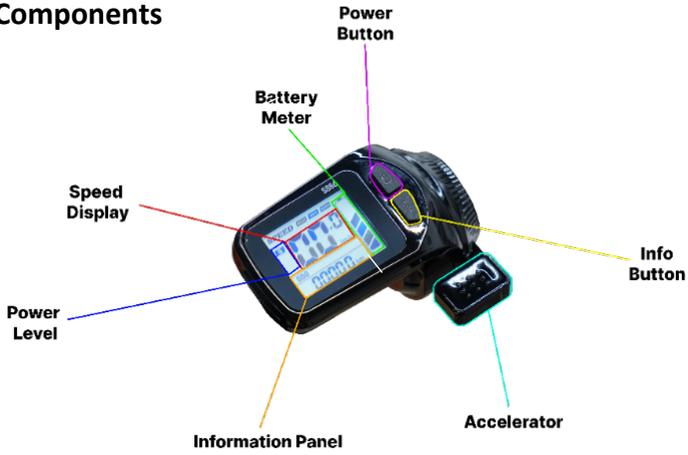


Set of Tools

## Technical Specifications

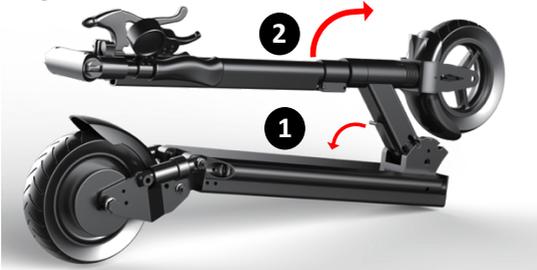
Motor	48V 500W BLDC hub motor (20A controller)	Dimensions	42.5 x 23.2 x 46.8 inch 108 x 59 x 119 cm
Battery -or-	48V 10.4Ah Li-Ion 48V 13Ah Li-ion	Folded Dimensions	38.6 x 7.1 x 14.6 inch 98 x 18 x 37 cm
Brakes	Rear drum brake	Tires	8" rear solid, front air
Suspension	Front & Rear	Weight	40lb / 18.2kg (10.4 Ah) 42.5lb / 19.3kg (13Ah)
Weight limit	265 lb – 120 kg	Charger input	110 - 240V
Top speed	25 mph / 40 km/h	output	54.6V 2.0A
Range	23miles / 37km (10Ah) 30miles / 48km (13Ah)	certification	UL certified

# Key Components



## UNFOLDING AND FOLDING

1. Open the folding lever
2. Lift the front stem upright until it **audibly snaps into place with a clicking sound.**



3. If you do not hear the click, push the stem forward to ensure that the folding mechanism has locked into place.
4. Fold the handlebars upward and secure them with the two cuffs (twist as indicated below)



5. Adjust the height of the handlebar by pulling up the front stem.
6. Fasten the front stem with the quick release lever.



### **Fold your scooter by following the above steps in reverse.**

If you find it hard to open the folding lever, push the stem forward to alleviate pressure from the mechanism. The easiest way to unfold is to put your right foot on the board, place your right hand in the center of the handlebars and push forward while using your left hand to open the lever.

## **WARNING: Secure Unfolding**

**Always ensure the folding mechanism has snapped in place before you ride.** The main bolt needs to sit firmly inside its slot:



There is an audible click sound when you fold the scooter up and the bolt snaps into place. You may need to push the stem forward to secure the mechanism.

## **Folding Mechanism Sensitivity Adjustment**

If you feel the mechanism is too soft (leads to movement in stem) or too hard (very difficult to fold and unfold), the sensitivity can be adjusted:

Locate the three screws in front of the board facing the wheel. These screws regulate the tightness of the folding mechanism via little plastic bumpers on the other side. If you feel the folding mechanism is too tight or too loose, you can screw these out (less tight) or in (tighter).

### **Recommended for ideal set up:**

1. Loosen all three screws
2. Fold up the scooter and snap it into place
3. Tighten all three screws lightly

The folding mechanism is perfectly set up when you need to lightly push forward the handlebar in order to open the lever or to snap the bolt into place when folding up.



## INITIAL SET UP

Your Horizon will be delivered with brake lever and display loose on the handlebar for more secure shipping. Use the included Allen keys to fasten the brake and display in the position that best suits your riding style.

## CHARGING AND BATTERY SAFETY

### Charging your Horizon

- Turn your scooter off
- Connect the charger to the wall power outlet
- Open the charging port cover
- Connect the charger to the scooter



The LED on the charger will turn red while charging and turn green when the scooter is ready for use. Remove the charger and cover the plug. Charging time is 4-6 hours for the 10.4Ah battery and 6-8 hours for the 13Ah battery.

### Battery Maintenance

- We recommend you charge your scooter after every use. This is not required.
- A Li-ion battery is a consumable device. Please, replace with a new battery once capacity drops below 50% of what you experienced initially. Contact your place of purchase for a replacement.
- Make sure the battery is charged and that the scooter is turned off before storing your scooter for extended periods at a time.
- Store your scooter in a dry and cool place. Do not keep it outdoors or in outdoor sheds for extended periods of time as excessive cold, heat, sunlight, rain, or other environmental conditions may impact safe operation and reduce the scooter's lifespan.
- Charge your battery at minimum every 3 months to prevent it from running completely empty. Once the battery runs completely empty due to slow discharge while in storage, it may have to be replaced.

- Batteries perform poorly at low temperatures. For instance, if the temperature is around 0°F (-18°C), battery capacity reduces by 50%. Capacity will restore to normal when temperatures rise.
- Battery life and riding ranges will vary depending on usage, climate, conditions, rider weight, and/or riding style, proper care and maintenance.

## **Battery Disposal**

- Do not dispose of your battery by way of landfilling, incineration or household trash.
- We recommend disposing through a local recycling program suitable for lithium-ion batteries. Contact your local waste management service for more information.
- Mishandling of used batteries may do tremendous harm to the environment. You must abide by local laws and regulations to properly dispose of used batteries.

## **Charging and Battery Safety Warnings**

- Use caution when using outlets to prevent electric shock.
- Do not leave the charger plugged in for extended period of times (>24 hours).
- Only charge your scooter in a safe, clean, and dry environment. Keep the charger and scooter away from inflammable materials as they may get hot.
- Only use the original battery packs and the original charger supplied with your electric scooter. Contact your place of purchase if you need a replacement. Use of other models or brands may not be safe.
- Do not touch any part of the charging prongs and keep them away from metal objects to prevent short circuit which may result in battery damage or physical injuries and death.
- Do not place the battery in direct contact with heat or near high temperatures. Do not expose the battery to direct sunlight. Do not leave the scooter in a car where the battery might get hot.

- Do not pierce the battery with sharp objects. Do not subject it to impact or force.
- Stop charging if the battery fails to recharge within the approximate charging time. This will prevent the battery from overheating, rupturing, or igniting.
- Do not charge the battery in temperatures below 32°F (0°C) or above 104°F (40°C) as this can hamper performance, result in breaking, overheating, rupturing, or igniting and could cause personal injury or property damage.
- Do not charge your scooter if the charging port on the scooter is damaged or wet. Do not charge if there is excessive heat, odor or leakage coming from the battery or it looks abnormal in any way.
- If the battery leaks and you accidentally get in touch with the liquid, rinse thoroughly with water and then seek medical care.
- Never attempt to disassemble, modify, perform repairs or maintenance on the battery. You run the risk of damaging the protective and safety components that prevent incidents, personal injury or property damage. Professionals only!
- Mishandling or misuse of the battery can result in lower performance, shorter lifespan, rupturing, igniting, or other incidents and could increase the risk of serious personal injury.
- Do not discharge the battery using any other product than the scooter it comes with. Doing so could result in damage to the other product or the battery and reduced lifespan. The battery could overheat, rupture, or ignite and cause personal injury or property damage.

## OPERATION AND CONTROLS

**The Horizon scooter is equipped with a display throttle combination that controls operation**

**POWER** – press and hold the POWER button to turn the scooter on or off.

**HEADLIGHT / REAR LIGHT** – press and hold the INFO button for 1 second to turn the lights on or off.

**GEAR CHANGE** – short press the INFO button to switch between three gears. 1= slow, 2 = medium, 3 = fast.

**DISPLAY INFORMATION** – short press on the POWER button to toggle between odometer (total mileage), trip mileage, and battery voltage. Trip mileage can be reset to 0 by pressing the INFO button for 3 seconds while 'TRIP' is displayed.

### Riding

- Ensure you have sufficient runway ahead of you. Do not use the scooter indoors.
- Put both of your hands on the handle bar.
- Step with one foot on the scooter, kick it lightly with your other foot to bring it slightly in motion.
- Step with your second foot onto the board, hold on tight and press the throttle.

### Braking

**The Horizon scooter has a rear drum brake.**

Use the front brake lever to engage the brake on the rear wheel. Exercise caution when braking, the drum brake can be sensitive.

**DO NOT step on the rear mud guard to brake!**

Emergency ONLY

## Advanced Display Settings (P-Settings)

To access P-settings to make various advanced changes, press POWER and INFO simultaneously. To cycle through the P-settings press the POWER button. To make changes press the INFO button. To exit P-settings wait for 10 seconds or press POWER and INFO together.

	Description	Default
P01	Display brightness: 1(low) – 3 (bright)	2
P02	Display Kilometers (0) or Miles (1)	1
P03	System Voltage level (do not change)	48
P04	Sleep timer in minutes	10
P05	Do Not Change	0
P06	Wheel diameter (impacts odometer)	8
P07	Number of magnets on motor	30
P08	Speed limit 0-100% of top speed	100
P09	Zero start (0) or Non-zero start (1)	1
P10	Do Not Change	2
P11	Electric Braking Strength low (1) to high (24)	1
P12	Initial Acceleration: soft (1) to strong (5)	5
P13	Do Not Change	8
P14	Current amperage limit	12
P15	Controller cutoff voltage (do not change)	39
P16	Set odometer to 0	-
P17	Cruise control on (1) or off (0)	0
P18	Do Not Change	100
P19	Do Not Change	1
P20	Do Not Change	4

**P08** – Set to 100% for no speed limit. If top speed is 25mph, a setting of 80% will set the speed limit at 20mph.

**P09** – Important safety feature: Non-zero start on (1) = need to kick the scooter before accelerator works. Prevents user from accidentally accelerating while not riding the scooter.

**P11/P12** – Changing these settings has a barely noticeable effect. Note that electric braking can only be felt at faster speeds.

**P17 – Cruise control** will automatically maintain scooter speed after you have held the accelerator in place for a few seconds. Deactivated through accelerator touch or brake. CAUTION: Ride in a position where you can immediately access the brake to cancel Cruise Control if necessary. **ONLY RECOMMENDED FOR ADVANCED USERS.**

## BATTERY VOLTAGE AND CHARGING STATUS

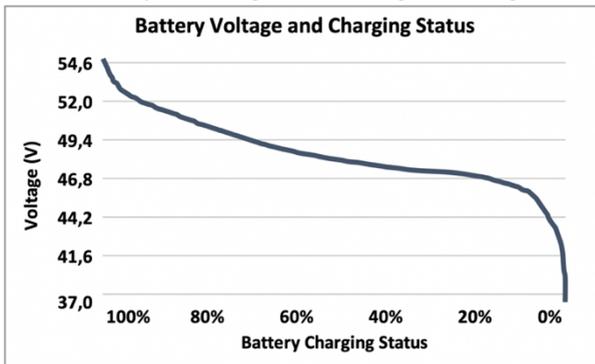
The battery voltage display can be accessed by short pressing the power button – it will appear above the battery symbol indicated with a “V” that looks like a “U”.

The live reading of battery voltage will greatly improve your understanding of battery health and charging status vs. just looking at the battery bars, which are just a rough translation of battery voltage. You will see the voltage fluctuating down (when you accelerate) and up (when you idle) during your ride.

**You will learn over time how to interpret your voltage display to make the right conclusions about status of battery charge.**

The theory is as follows: When your battery is fully charged using the accompanying 54.6V charger, the display will show 54.6V (+/- 0.5V due to inaccuracies in measurement). The battery will shut down at 39V as configured in the display. You will be very close to empty at 42V.

The relationship of charge and voltage reading is NOT linear:



This curve shifts downwards the more power you are using. E.g. an aggressive driving style will reduce your voltage reading at the same battery charge status. Note that an aggressive driving style will also reduce range (the distance you can travel at a given charging status).

**If you prefer it plain and simple, disregard this section and go with the battery bars to check your charge.**

## SCOOTER MAINTENANCE & TRANSPORT

### Brake Adjustment

To adjust the drum brake, compress or loosen the spring by tightening (clockwise) or loosening (counterclockwise) the nut.

Tightening the nut will compress the high-tension spring and give you more breaking power.



- Never perform maintenance on this product while the unit is powered on or charging. Always power off before performing maintenance. Do not attempt to perform repairs or modify the scooter but contact your place of purchase or refer to a professional repair facility.
- Clean stains on your scooter's body with a damp cloth. Do not use alcohol, gasoline, kerosene or other corrosive and volatile chemicals. Do not wash with high pressure cleaners. Make sure the scooter is turned off and unplugged during cleaning and ensure no moisture enters the charging port.
- When transporting your scooter, please take into account that it contains lithium-ion batteries that are considered a hazardous material.
- Always exercise caution and follow applicable rules and regulations when transporting your scooter. It is very likely that you will not be allowed to take your scooter including battery on a plane.

## Error Code List

E02	Brake
E06	Low battery voltage
E07	Motor fault
E08	Throttle fault
E09	Controller fault
E10	Communication receiving fault
E11	Communication sending fault

## **DECLARATION OF CONFORMITY**

This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This product may not cause harmful interference, and (2) this product must accept any interference received, including interference that may cause undesired operation.

### **FCC RELATED INFORMATION:**

This product has been tested and found to comply with the limits for a Class B digital product, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the product and receiver.
3. Connect the product into an outlet on a circuit different from that to which the receiver is connected.
4. Consult your place of purchase or an experienced radio/TV technician for assistance.

# *fluid*



**Horizon V2 User Manual – [fluidfreeride.com](http://fluidfreeride.com)**

**Keep it fluid!**