

# User manual

Model:M-H32

Brand:Stary

# DISCLAIMER

By removal of the warning sticker and/or shrink wrap from the product or evidence or indication of use is considered use of STARY. The user assumes all liability and responsibility for risk associated with the use of STARY Board.

STARY Board are intended for use on paved surfaces, concrete sidewalks and inclines less than 11 degrees.

All other obligations and conditions or liabilities, including obligations for consequential damages, are excluded.

Skateboarding, like all sports, carries an inherent risk of injury, damage to property and death. You should always wear a helmet, pads and any other protective equipment to limit your risk. You should skate within your abilities, learn to stop (slide) and don't skate in traffic or other dangerous locations that may increase your risk. Kids under 14 shall use STARY with supervision.

## SAFETY PRECAUTION

We have provided important safety messages and warning issues in this manual. Make sure to read all of them before riding your board.

Definition of Terms:



WARNING

Instructions, which if not properly followed, would cause possible damages to property and/or little to no possible injuries.



NOTICE

Instructions, which if not properly followed, would cause possible damages to property (even collateral damages) and/or property (even collateral damages) and/or (most possibly) superficial injuries, scratches or serious injuries.



**WARNING:** Skateboarding, like all sports, carries inherent risk or injury. The rider may lose balance and fall off while riding this electric skateboard, which would cause serious injury or even death. Always skate within your abilities. Learn to stop (slide) and don't skate in traffic or other hazardous situations that may increase your risk.



**WARNING:** You should always wear protective equipment such as helmet, pads etc. to limit your risk.



**WARNING:** It's dangerous to go downhill and ride at high speed. Always ride within your abilities.



**WARNING:** Due to the nature of electric parts, please try to avoid riding through waters. Permanent damages of electronic parts due to over-exposed to water are not covered by warranty.

# SAFETY PRECAUTION



**WARNING:**Never touch power wheel with bare hands while or once after riding. This could lead to burns and injuries.



**WARNING:**Never use the board at night or under the condition of poor visibility.



**WARNING:**Please don't try longboard tricks such as jump, slides on an electric skateboard to avoid injuries to yourself or damage to the board.



**WARNING:**Please don't use your mobile phone or earphone while riding.



**NOTICE:**You should ride in a proper dress and neither stand on this electric skateboard with bare feet nor ride on a beach.



**NOTICE:**You should check your shoelace before riding and pay special attention not to let your shoelace get involved in wheels or power system which may cause fatal consequences.



**NOTICE:**This product is not intended to be used by persons(including children)with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the product by a person responsible for their safety. Children below the age of 8 should be supervised to ensure that they cannot reach this product.



**NOTICE:**Please ride with care and concentration. Check the road condition before you start. Riding through obstacles such as pebbles may cause the board to carve sharply or even run out of control. Please Be careful to avoid pedestrians or other means of transportation while riding.



**NOTICE:**Please obey local laws, regulations and ride this electric skateboard where you are allowed to.



**NOTICE:** Please ride outdoor in suitable environment. Riders can speed up with remote after standing steadily on the board. Never speed up in a rush.



**NOTICE:** Due to the nature of regenerative braking, if rider goes downhill with a full battery and exert brake, the battery will be overcharged. When battery voltage surpasses the safety value, remote will vibrate to alert the rider. The rider should come to a full stop,find some flat ground or uphill and consume some of the power to make the voltage return to normal. Check the battery status before going downhill would effectively help avoid such situation.

# SAFETY PRECAUTION



**WARNING:**STARY is designed for single-rider commuting.



**WARNING:**STARY is designed to ride on flat pavement in open space. Please do not ride on rough roads with potholes, gallets, grits or silt or slippery grounds such as snowfield, ice ground to avoid falling off.



**WARNING:**Please try to avoid riding in rain or snow.

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Learn how to perceive potential dangers on the way.

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We can never go this far without your trust and support.

# GETTING STARTED

Briefly introduced and prepared for your first ride.

## ABOUT STARY

STARY is the lightest and most advanced electric skateboard in the world. A beast weighing only 4.9kg but can hit 30 km/h. As a result of painstaking effort and multiple revisions, we finally developed the most powerful, compact wheel on the market. A good skateboard needs not only high speed, but also excellent grade ability. Instead of short-lived, clumsy belts, we designed planetary gearing with a smaller size and higher reduction ratio, completely hidden inside of the wheel. Remote controller with OLED screen is capable of accurately displaying the status of skateboard

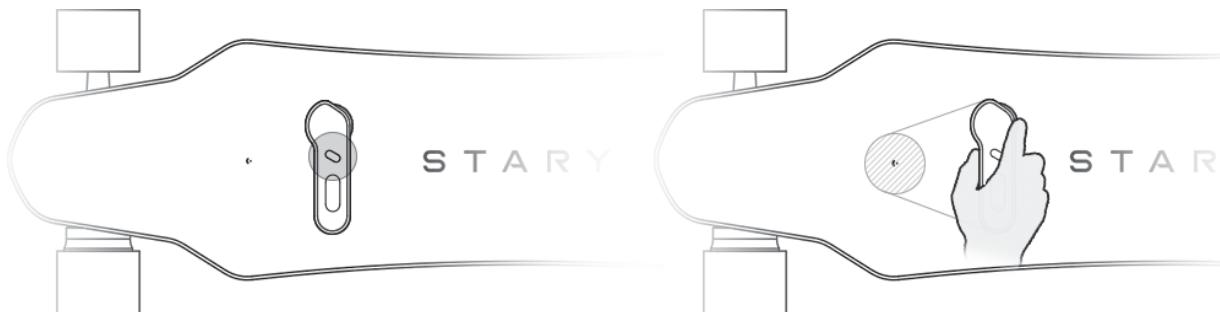


### NOTICE:

We strongly suggest you go through the whole manual before riding STARY but if you are so excited to get started, read this one-minute guidance at least.

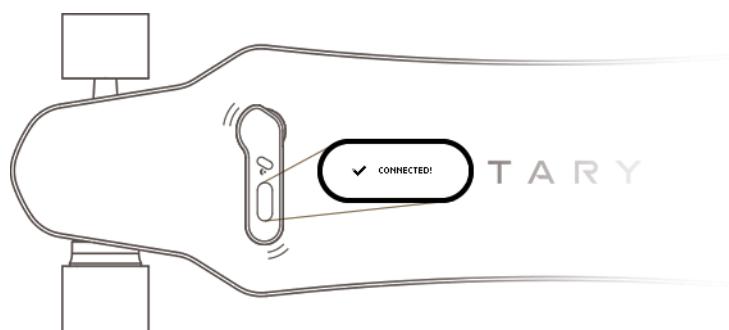
## 5-STEP QUICK GUIDE

### 1 POWER ON



Put the remote (with screen side up) in the induction zone tagged on the griptape. The remote will vibrate to indicate that the skateboard has been switched on.

### 2 CONNECT TO REMOTE

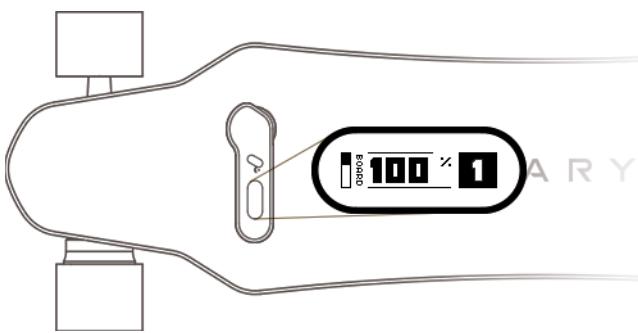


The screen will display 'connected' to indicate normal communication between skateboard and remote.

# 5-STEP QUICK GUIDE

## 3 USING THE REMOTE

We strongly suggest you go through the whole manual before riding STARY but if you are so excited to get started, read this one-minute guidance at least.



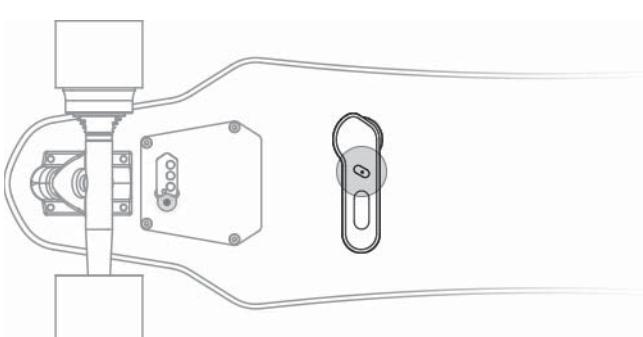
## 4 SPEED UP

Tap the main button 3 times for speed mode switching.



## 5 TURNING OFF

Long press the main button on remote and wait for the screen to black out. The skateboard will switch off simultaneously.



## USEFUL TIPS

1. Before you step on the board, pull the thumbwheel to the very end, this will stabilize the board.
2. Slightly bending your knees will help keep balance.
3. Lean a little bit forward and put the gravity on your back foot when accelerating.
4. The remote should be removed from induction zone after the board is switched on. Staying of the remote for more than 5s will get the board into "Matching Mode". For detailed information about matching process, please refer to chapter Remote - Setting Mode - Matching
5. Please choose suitable speed mode referring to the traffic condition and always ride within your abilities.

# BOARD

Detailed introduction on the components of the board.

## OVERVIEW

You just can't believe this is an electric skateboard at first glance. Hub motor, planetary gear, regenerative braking; all magic integrated in the power wheel. Different from traditional wooden deck, STARY board employs Canadian maple, glass fiber and carbon fiber weave to ensure compressive strength while unibody battery pack guaranteeing flexibility. 180mm reverse kingpin trucks and 75mm/80A wheels make smooth carve and enjoyable ride.

## POWER WHEEL

All the magic of STARY is included in this wheel. Sophisticated design of integrated hub motor, planetary gear set and regenerative braking. Manufactured by full-automatic cutting machine: accuracy down to 20 $\mu$ m-3/1 of hair diameter, it's both strong and durable.

## INDUCTION ZONE

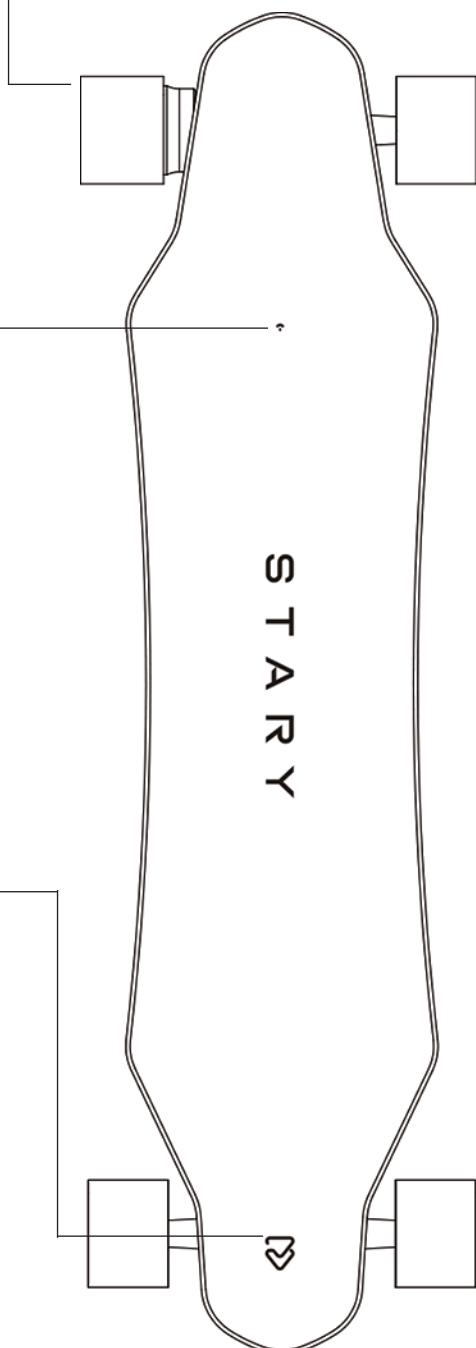
There is no physical button on the board. This zone is for remote switching

## FORWARD SIGN

This sign indicates the head of board so that you know in which direction you are heading.

## DRIVEN WHEEL

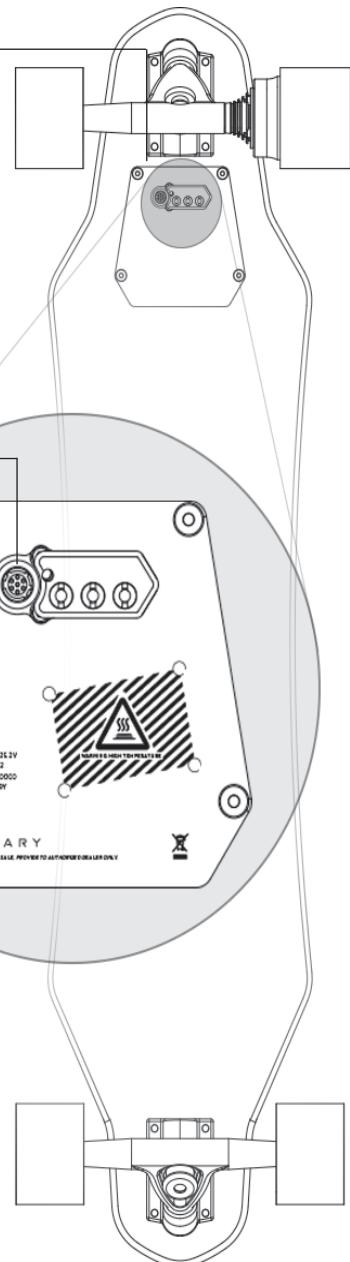
75mm/80A longboard wheels with large contact patch, square lips, great grip and amazing rebound.



# BOARD OVERVIEW: BACK

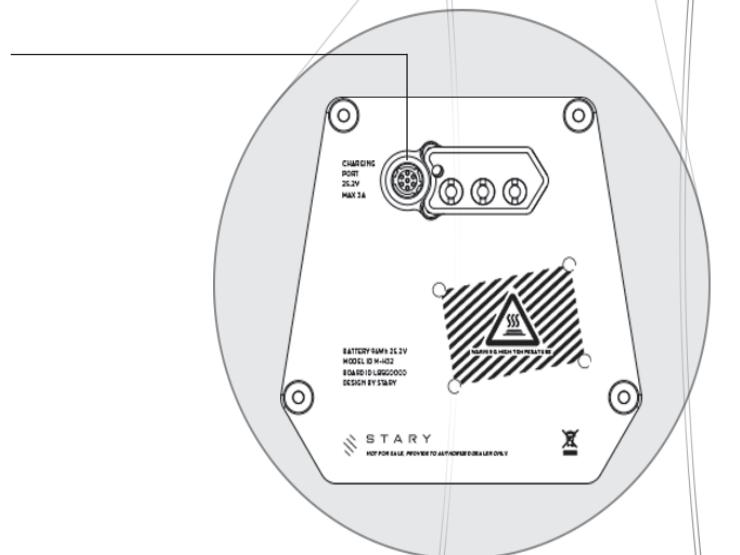
## TRUCKS

Attached to the deck are two metal (usually aluminum alloy) trucks, which connect the wheels and bearings to the deck.



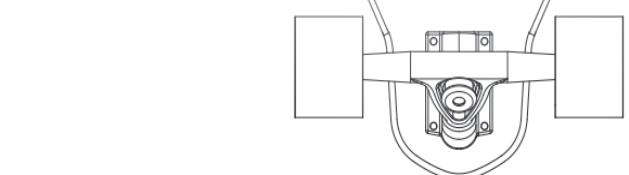
## CHARGING PORT

This port is for connection of charger and board. Don't forget to put the cap back on for water resistance capability after charging.



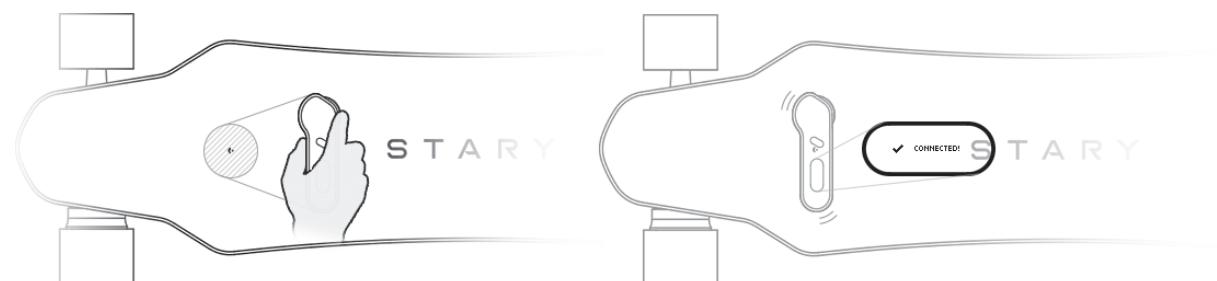
## BOARD IDs

Each board has its one and only ID when leave factory to prove it's one of STARY products. Please DO NOT stain board ID since that will cause problems in warranty issues.



## POWER ON

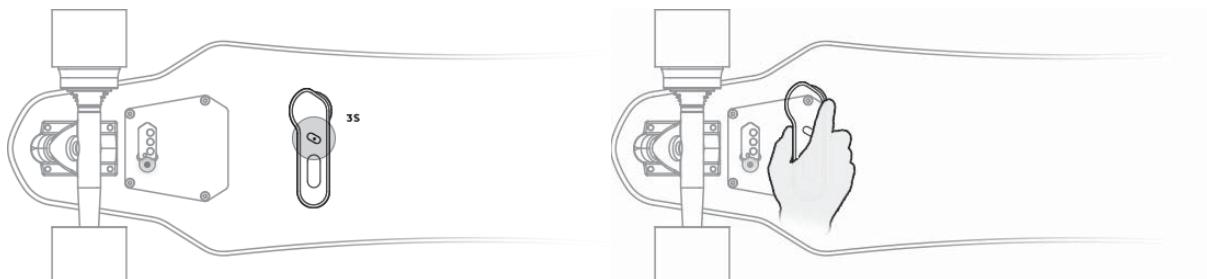
Put the remote (with screen side up) in the sensing area on the griptape. The remote will vibrate to indicate that the board has been switched on.



Note: Considering the capability of water resistance and potential danger brought by mis-trigger, there is no physical power button on STARY board.

## POWER OFF

There are 2 ways to switch the board off:



**A**

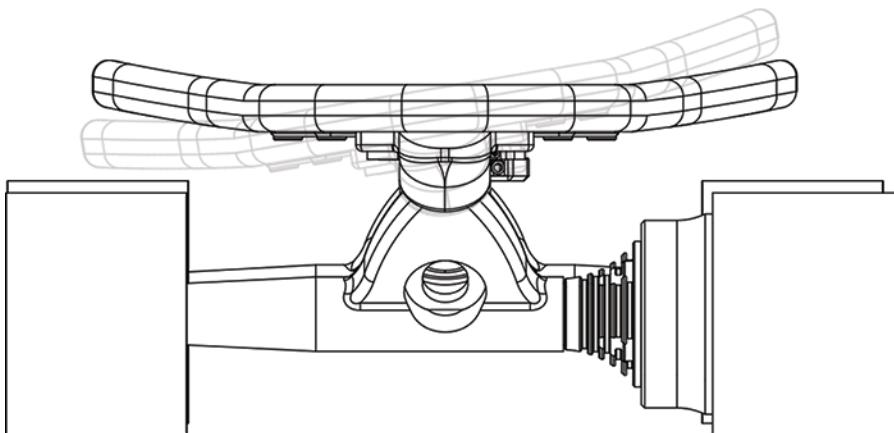
Long press the Power button for more than 3s can switch both remote and board off simultaneously.

**B**

Turn over the board and put the remote in the induction zone around the cover plate (with screen side up) and wait for the green power indicator turns into blue and extinguishes.

## CARVING

We take regular stance as example here. It would be in reverse for goofy stance.



**1**

**Slightly Bend Your Knees**

This will help you keeping balance.

**2**

**Keep Balance**

Shift all your weight to the back, or heel of your foot. Try to relax.

**3**

**Turning Left**

You will notice your board will start heading to the left side of the sidewalk.

**4**

**Turning Right**

You will notice your board will start heading to the right side.

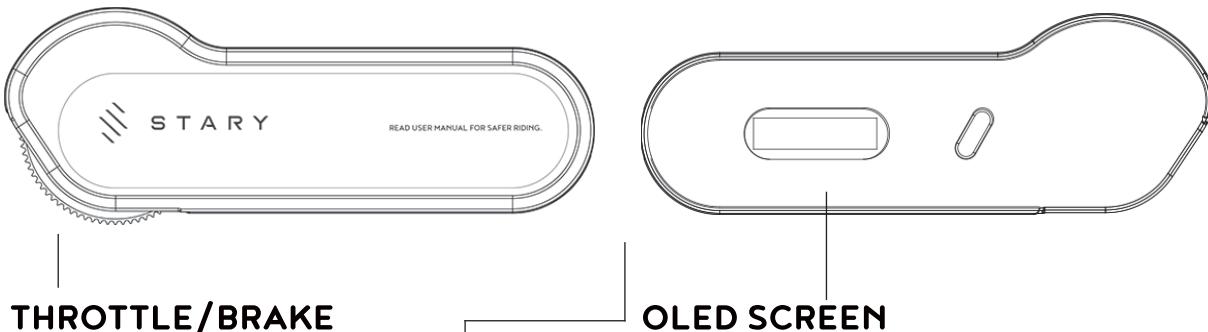
# REMOTE

Everything you need know-about the remote control

## OVERVIEW

Ergonomic design, 0.9 inch Organic Light Emitting Display(OLED) screen with various animation, sophisticated thumbwheel: with this pocket-size little thing in hand, everything is in your control.

## REMOTE OVERVIEW

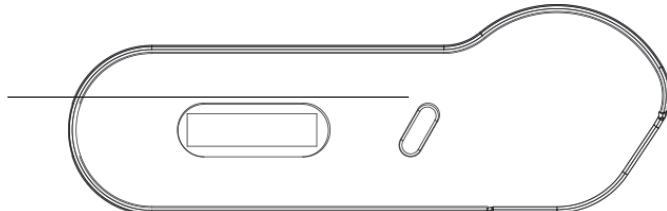


Large thumb-wheel with wider range and more accurate speed control

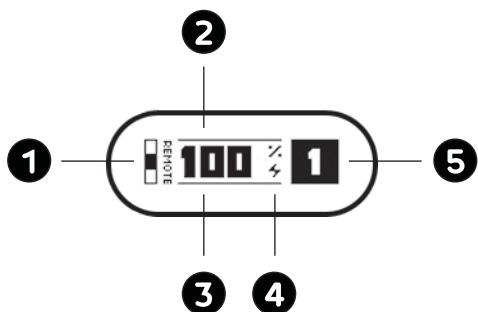
High-resolution power-saving Organic Light Emitting Display(OLED), all statistics and alerts absolutely clear on screen. One charge last up to x days.

## POWER BUTTON

The only physical button you can find on STARY. Operation based on various combination.



## REMOTE UI OVERVIEW



1. TITLE OF CURRENT INTERFACE
2. PERCENTAGE BAR OF BOARD BATTERY
3. PERCENTAGE BAR OF REMOTE BATTERY
4. CHARGING ICON
5. SPEED LEVEL

## OPERATION: POWER ON&OFF

Long press the Power button and wait for the screen to light up. Long press the Power button and wait for the screen to black out. The board will switch off simultaneously once you turn off the remote.



## OPERATION: BOARD CONTROL

Push the thumbwheel forward for acceleration and pull it backward for brake.



**NOTICE:** Sudden acceleration or brake could be dangerous. Please adjust your speed gradually.

## DISPLAY

### CONTENT SWITCHING

Single press the power button



Board  
battery status



Remote  
battery status

### SPEED MODE SWITCHING

Press the power button 3 times



Beginner  
Mode



Cruise  
Mode



Advance  
Mode



Expert  
Mode

## DISPLAY



**WARNING:** When STARY is in Expert Mode, the remote is extremely sensitive. Therefore, it's thrilling to speed up and reach the top speed, meanwhile this also increases the possibility of falling off the board. If you try Advanced Mode for the very first time, put your gravity on your back foot and gradually speed up with great care and concentration.



**NOTICE:** Please choose suitable speed mode referring to the traffic condition and always ride within your abilities.

## SETTING MODE

This mode enables you to customize and gain more control over your board. Matching helps set up communication between your board and remote. While calibration focuses on the adjustment of thumb-wheel which leads to more accurate speed control.

### MENU

Long press the power button for 5s



Choose an option to continue



**PUSH or PULL** to switch from different options.

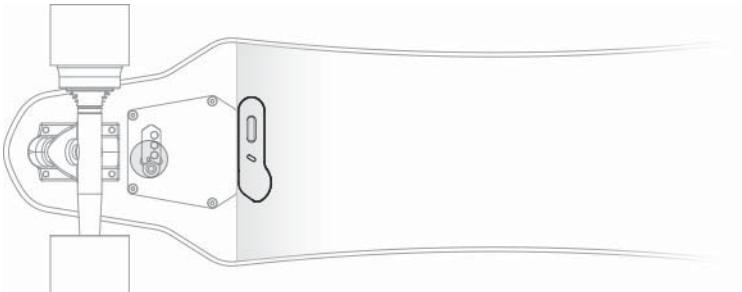
**SINGLE PRESS** to choose an option.

# SETTING MODE: MATCHING

Turn the remote off and put it in the induction zone(as shown in the following picture)with screen side up for more than 5s. Wait for the green light indicator to twinkle.

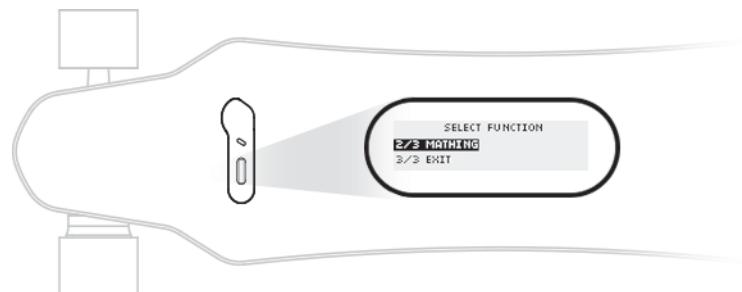
## 1 SEARCHING

The remote will then enter Matching Mode and start searching. You can remove your remote for now.



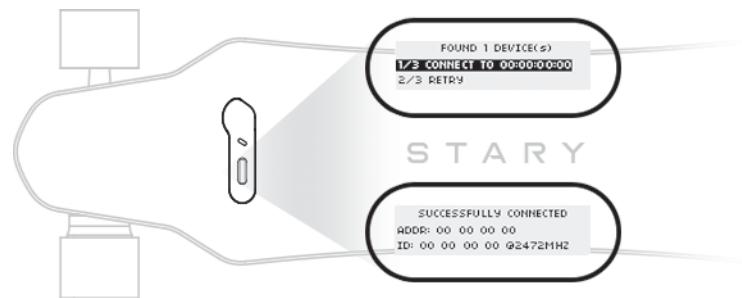
## 2 ENTERING SETTING MODE

Turn you remote off if you remote was on, and then press the main button for 5s until the setting mode screen.



## 3 MATCHING & CONFIRM

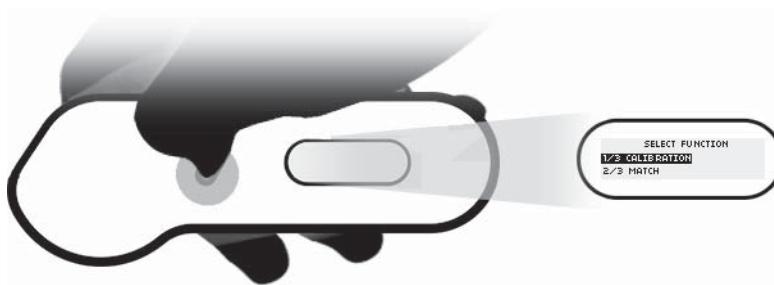
The result of searching will be displayed on the screen. Select your board and proceed to finish the matching.



**NOTICE:** If there is more than 1 STARY around, please match separately.

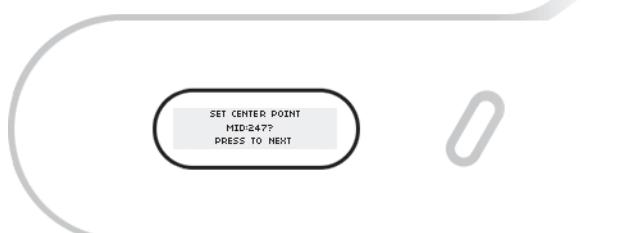
# SETTING MODE: CALIBRATION

Choose “Begin Calibration” from the engineering mode screen and proceed.



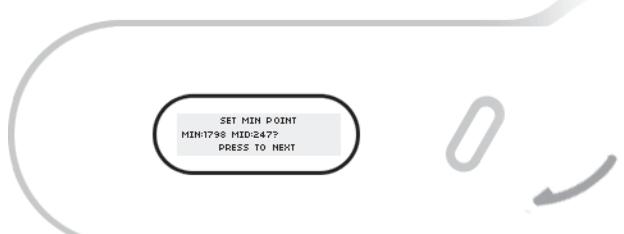
## 1 SET THE MEDIAN POINT

Leave the thumbwheel free and single press the power button.



## 2 CALIBRATE BRAKING

Pull the thumbwheel backward to the very end, hold it and tap main button.



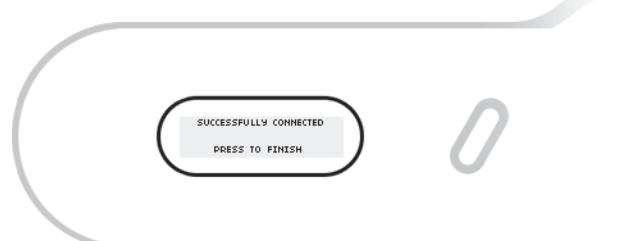
## 3 CALIBRATE THROTTLE

Push thumbwheel forward to the very end, hold it and single press the power button.

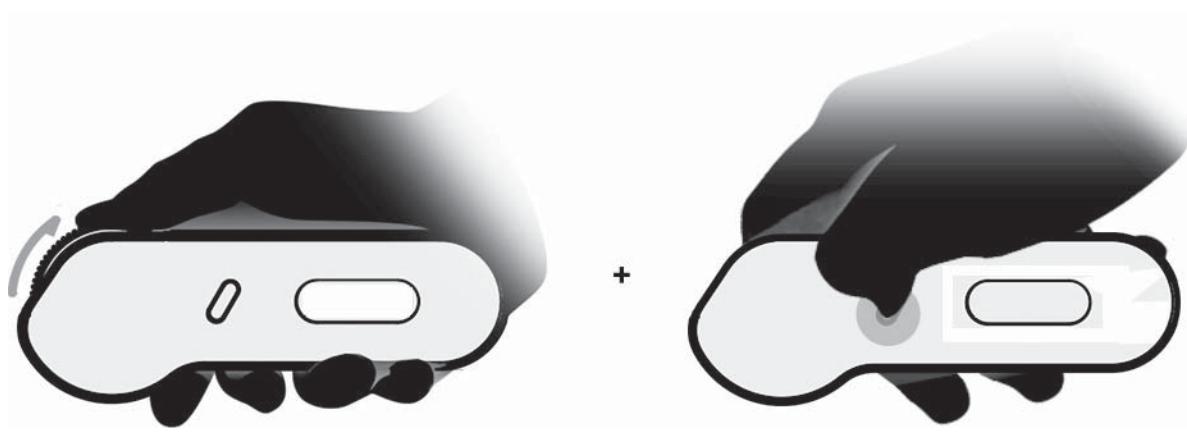


## 4 FINISHING

The screen will show “Calibration completed”.



## STATIC SCREEN



This mode enables you to read more detailed information about your board. We believe these statistics are the most powerful proof of STARY specs.

Pull the remote to the very end, hold it and tap the main button to enter Statistic Mode Tap the main button to switch contents.

In Statistics Mode you may see:

- 1** Distance Travelled/Since On  
PWM Output
  
- 2** All batteries status  
inside the board
  
- 3** Battery temperature  
CPU temperature
  
- 4** Channel address,  
Package lost
  
- 5** Maximum speed, Board version  
Remote version

## REFERENCE

### Warning from the Remote



#### **Vibrate One Time**

indicates a remind of battery status.



#### **Vibrate at Regular Interval**

Indicates there is something wrong. You should slow down and wait for the board to self-react or stop to check the board.



#### **Vibrate Continuously**

Indicates the board is in abnormal status and you should stop immediately and check the board.

### Trouble-shooting list

	DESCRIPTION	REMOTE DISPLAY CONTENT
	Remote low battery (10% remaining)	REMOTE LOW POWER
	Board low battery (20% remaining)	REMOTE LOW POWER
	Remote low battery (5% remaining)	REMOTE LOW POWER

## REFERENCE

### Trouble-shooting list

	DESCRIPTION	REMOTE DISPLAY CONTENT
 R	Board low battery (10% remaining)	BOARD LOW POWER
 R	Battery overheat or overcool	SENSOR ALARM
	<b>SUGGESTION:</b> Take the board indoor. When the temperature return to normal, the vibration will stop. There are altogether 4 temperature limits in software so we set 2 levels of alarm.	
 R	Motor stuck or locked	MOTOR JAMMED
	<b>SUGGESTION:</b> Stop riding and check if the board is overloaded or there is anything stuck in the motor.	
 R	Battery Overcharged	CURRENT OVERLOAD
	<b>SUGGESTION:</b> Speed up gradually. Stop pushing the thumbwheel and slow down. The vibration will stop when the board returns to normal	

## REFERENCE

### Trouble-shooting list

	DESCRIPTION	REMOTE DISPLAY CONTENT
 C	Remote low battery (1% remaining)	REMOTE LOW POWER
	<b>SUGGESTION:</b> Connect to the USB cable and charge	
 C	Board low battery (3% remaining)	BOARD BAT1 LOW
	<b>SUGGESTION:</b> To prolong the life of battery, please stop riding and connect to the charger.	

# CHARGING

Proper use of STARY's  
charger and adapter

## OVERVIEW

Your board and remote can be 'hungry' when running out of battery. Feed them some 'food'. Make sure to understand correctly the charging information. Most importantly, you should always supervise the device when it's charging. Even fires or exposures may be caused if it's not properly charged.

Here's a list of what you need to charge the board and remote from the package:

### Board Charging

1x Adapter, 1x Charger for battery balancing

### Remote Charging

1x MicroUSB Cable, 1x Adapter

## BATTERY WARNING AND USAGE



**NOTICE:** All instructions and precautions must be read and followed exactly



**NOTICE:** Always refer to your charger's manual to ensure safe operation.



**NOTICE:** For your safety, please closely supervise the board and remote while they are being charged.



**WARNING:** Use ONLY the original adapter we provide in the package to charge your board. Using other adapters may cause severe danger.



**WARNING:** Never cut off the adapter to replace it with another plug, as this causes a hazardous situation.



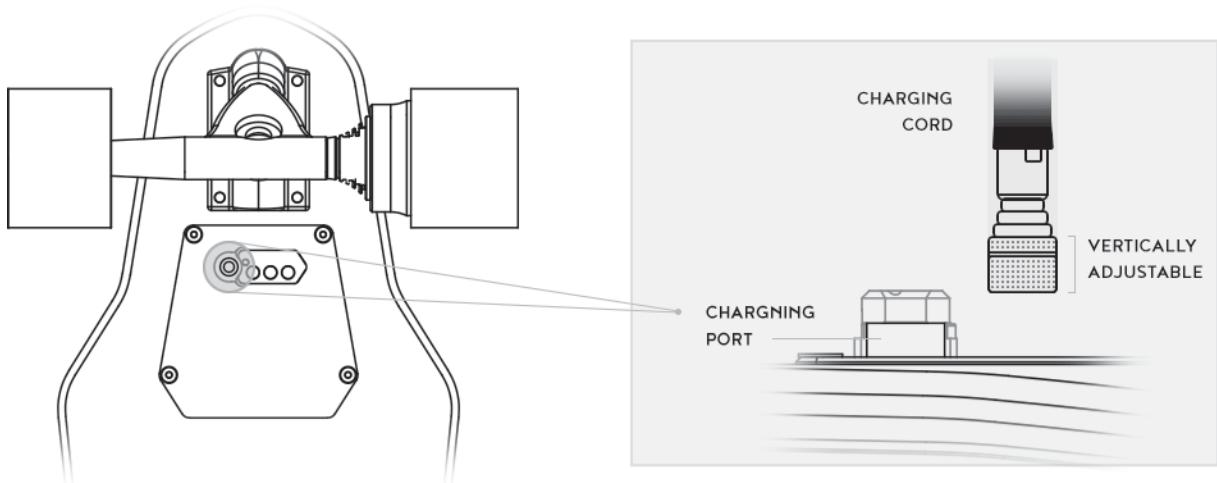
**WARNING:** Charging while riding is strictly forbidden. Doing this may cause severe consequences such as catching severe consequences such as catching



**WARNING:** Please keep the board away from flammable and explosive materials while charging.

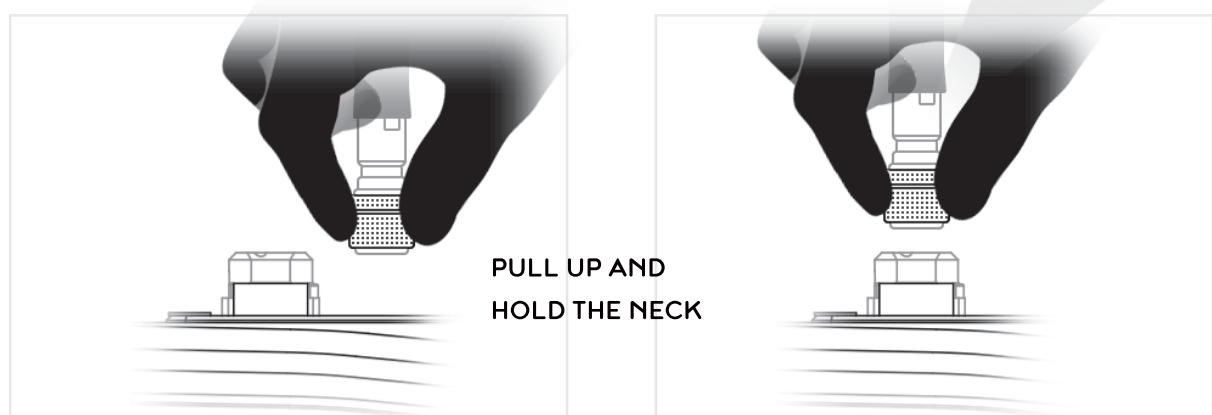
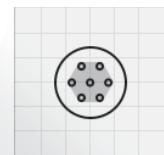
## BOARD CHARGING

Put the small plug in the interface on the rear of the deck. just around the back truck, near the engraving part.



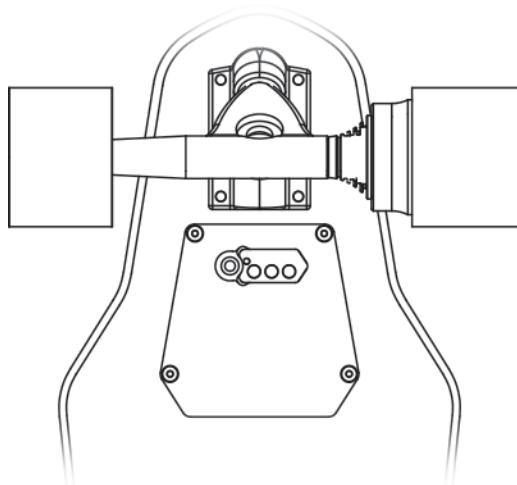
## ADJUST TO PLUG IN

Rotate the plug and slightly put it in until hearing the sound “click”.



## BOARD CHARGING

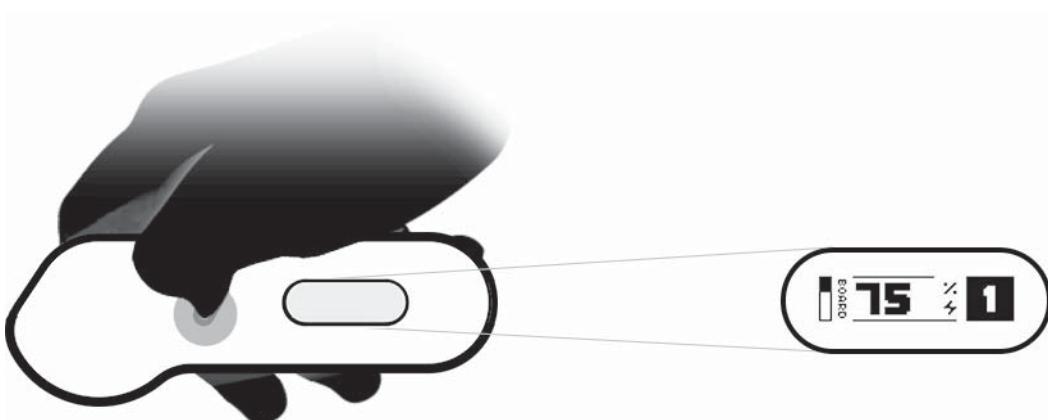
When the battery of board is fully charged, the charging indicator will turn from red to green.



PULL UP AND HOLD THE NECK

## CHECKING STATUS

You may check the real-time battery status of board through remote.



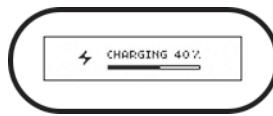
## REMOTE CHARGING

Put the small plug of USB cable in the interface on the remote. Put the other end in a **5v power source**.

MicroUSB Cable



Your remote will enter charging mode if it's off



Or the 'Flash' will appear once you plug in the cable while the remote is on



The charging will take approximately 2 hours on average.



**NOTICE:** Always refer to your charger's manual to ensure safe operation.

# TECH SPEC

## BOARD SPECIFICATION

<b>Weight (approx.)</b>	5.2kg
<b>Dimensions</b>	(L x W x H) 937mm*274mm*115mm
<b>Deck Material</b>	Glassfiber + Maple
<b>Battery Capacity</b>	91Wh
<b>Battery Type</b>	Li-Po
<b>Charging Time (approx.)</b>	Approx. 3 hours
<b>Motor Power (MAX)</b>	1500w
<b>Motor Type</b>	External Rotor Brushless Motor (With Sensors)
<b>MCU Main Frequency</b>	72Mhz
<b>Battery Management System</b>	Over-discharge/Overcharge/ Overheat Protection

## REMOTE SPECIFICATION

<b>Wireless Type</b>	2.4G
<b>Battery Capacity</b>	310mAh
<b>Standby Time</b>	> 8hrs
<b>Battery Type</b>	Lithium
<b>Charging Time (approx.)</b>	Approx. 3 hours
<b>Mode</b>	4 Optional Speed Modes
<b>User Interface</b>	Animated Multi-Interface

# RECIPE FOR SAFER RIDING

Your safety is always our top priority. We set aside this chapter as a reminder of the road conditions that you should be careful with. A couple of examples will be mentioned and wish those could help limit your risk as possible.



**NOTICE:** If you ride on blacktop (bicycle lane), you should be careful and concentrate on your path. Be responsible for yourself. Bear in mind that traffic condition in busy cities could be complicated and dangerous



**NOTICE:** You can ride STARY through common deceleration strips with some speed (You will get stuck at the strip if going too slow) Try to balance yourself and keep practicing. Most importantly, always wear protective equipment & ride within your ability.

## RECIPE FOR SAFER RIDING

### Pathways for the blind

Riding on such ground may cause the board to bump – power wheel in the air and lose grip. Never carve sharply on such ground at high speed: you may fall off the board. If you have to ride through it, take great care and control your speed.

### Curb extensions

Usually appear at the boundary of sidewalk and driveway. The suggestion is to plan your route with a roughly 45 degree angle with the curb you are going up and make one of the front wheels up first then the other three. If you go in 90 degree, both of the 2 front wheels may get stuck and you may fall off the board.

### Little Pits

Be careful and avoid those “traps”. Never get both of two front wheel stuck in it or you will fall off your board.

### Zebra crossing and other pavements covered with paint

These pavements seem safe to pass but on days of high humidity, esp. with dews on it, it could be extremely dangerous to do so. Neither exert too much throttle nor carve sharply on such surface.

### Underground parking

Similar to zebra crossing hence more probable to cause slide especially with water on it. Never ride through pools on such surface at high speed nor carve sharply or you would fall off your board.

### Cars about to start

Careless drivers could be a life threat and may be unaware of your coming through, especially at crossings. Slow down and pay attention to observe whether the car is about to take a turn.

### Pedestrians

They may be making a phone call, viewing a message or chatting and unaware of your riding through. Slow down and be careful.

### Pools

There may be a large hole hidden beneath the water so be careful to go through pools.

# **SPECIAL THANKS**

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A BIG THANK YOU to every single one of our Kickstarter backers. STARY can never go this far without your help, trust and support. You work with us all the way through the creation and manufacturing of STARY. Cheers!

**Rex, STARY Founder**

**FCC Caution.**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment 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 equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.