



60V Max 2700W BLDC HUBLESS Foot Scooter

DUALTRON MAN
The dream of electric technology

Electric **WHEELMAN**

DUALTRONMAN
User manual

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Checklist before use

- 01 This manual includes everything the users need to care.**

Please read the manual carefully before use.
Please contact the seller for technical support.(www.dual-tron.com)
- Contents of the box : DUALTRONMAN, Charger, Manual and warranty card
- 02 Open the box and remove the protection styrofoam on the product first.**

DUALTRONMAN(Electric WHEELMAN) is 33kg and it is enough to lift for the adult. However, it is recommendable to prepare before lift to prevent damage on the muscle and put your hands to the hole of the DUALTRONMAN(Or hold thick rubber parts of the align bar) and lift.
Please keep the product box to use when you send product for the repairing service.

Product introduction



Thank you for your purchasing our product.

DUALTRONMAN(Electric WHEELMAN)is for leisure activity and it is an extreme electric foot scooter which provide environmentally friendly product as it uses lithium battery.

DUALTRONMAN(Electric WHEELMAN) has maximum 2700W of motor output power and it provides powerful torque with a silent and stable power which the users who enjoy trick also can be satisfied. As it can be different according to the user's weight or driving condition, you can ride with maximum speed 65km/h and cover 100km of distance. In addition, it has high torque and can climb around 50% of degree.

Enjoy your riding with the high efficiency electric brake system and cruise control mode.

DUALTRONMAN(Electric WHEELMAN) will give you a new experience as if you are snowboarding.



Warning

Danger of death or serious injury

When you ride the product, there is danger of death or serious injury from losing control, collision, falling down. For a safety riding, the user should read manual carefully and follow.

While riding, rider should always wear protective equipments such as a safety helmet, kneepads, elbow pads, and gloves before riding. For safety riding, it is recommended to avoid a rainy day, a wet road, a slippery or rough road, a steep slope, a highway, a broken road, a track or a road if there is obstacles can make falling down on the road. And don't ride in the poor visibility or narrow area as an indoor or a parking lot.

Warning : Every DUALTRONMAN(Electric WHEELMAN) is manufactured with a strict quality checking but it is a essential to do check a hook rubber, bolt & nut, tire pressure, brake and if there is any strange noise when it is idling by itself before riding for safety riding.



Be careful water!

DUALTRONMAN(Electric WHEELMAN) is not waterproof. Electric system, motor, bearing and the other parts can get damage and it can be the cause of malfunction or fire. The warranty does not cover if DUALTRONMAN is damaged by water.



Be careful the point can be caught in!

Be careful the rolling parts as a tire and wheel disk as a finger or a hair can be caught in. A cloth or shoes string also can be caught in.



Be careful electric shock!

Don't open or adjust electric system(controller, battery, motor). Malfunction or fire can be occurred and the warranty does not cover in this case.

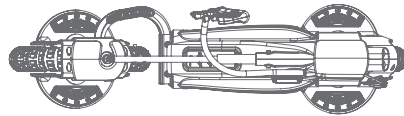
Preparations before use

01 Prepare safety gear

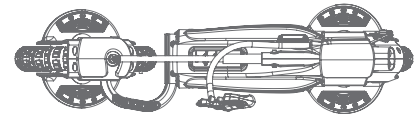


- Always wear a full face helmet, gloves and knee, elbow, back born, shoulder pad when riding.
- For the first riding, learn the function at the open, flat and clean space.
- Before riding, read carefully about warning and maintenance in this manual.
- Don't wear shoes as a slipper, a high hill, sports shoes that have long string during riding for safety riding.

02 Stance of user



Regular Style : Left foot is front



Goofy Style : Right foot is front

- For safety riding, DUALTRONMAN(Electric WHEELMAN) is designed for both stance regular(Left foot is front) and goofy(Right foot is front). The default factory setting is for regular as there are regular riders are much more than goofy riders. The goofy riders need to change hook connector as it can be difficult to balance for goofy riders with default setting. If you want to check your riding stance, try to stand on the long board naturally. If your left foot is front, set the hook connector on the right side, if your right foot is front, set the hook connector on the left side.

Preparations before use

03 Safety gear

It can be different for the riding condition and rider's preference, however, it is recommended to wear the all of the safety gear as full face helmet, elbow pad, knee pad, riding glove, back born pad and shoulder pad.

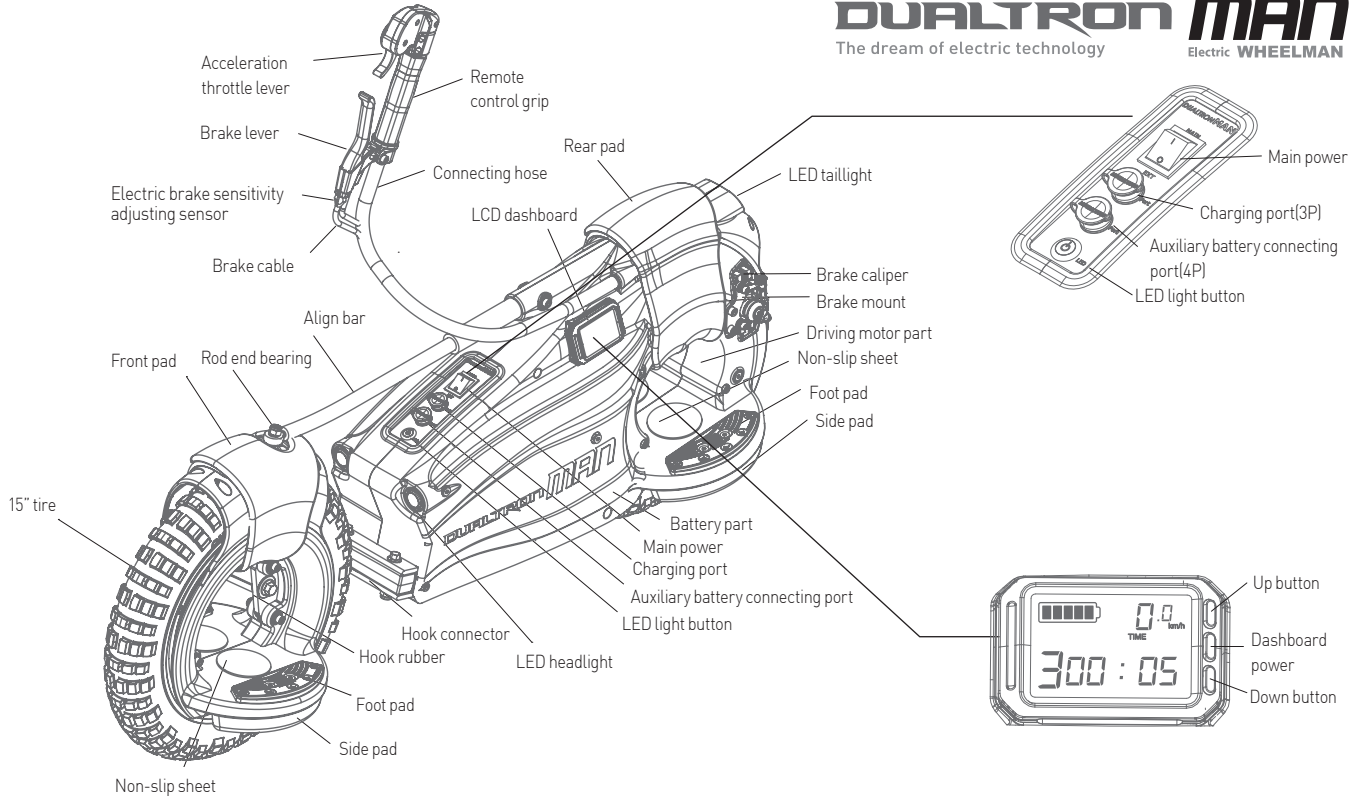
04 Basic riding skill and safety riding

It is easy to learn how to ride DUALTRONMAN(Electric WHEELMAN) but you need to consider something before riding.

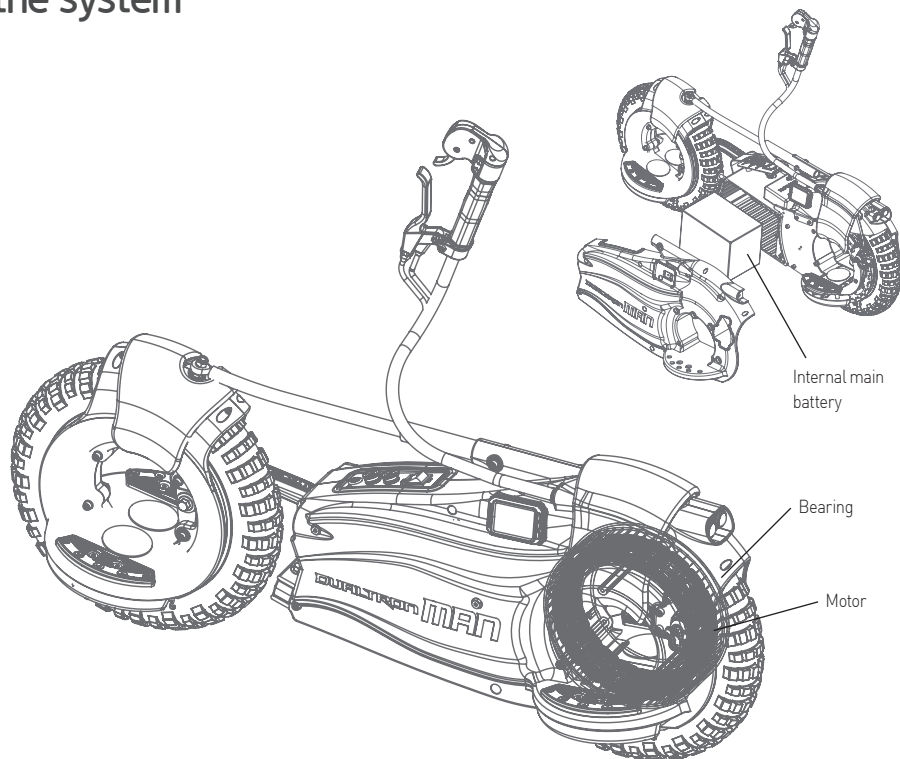
- Firstly, find your preference stance between regular and goofy.
- Put the DUALTRONMAN(Electric WHEELMAN) on the ground to make its side pad which is on the same way with the hook connector meets the ground.
- Hold rail, wall or hand of the helper and put your foot to center of each front and rear tire.
- From the front foot, make shin tight to the device and push the footpad with the heel to make the ankle around 90 degree and stand the front wheel up.
- As same as the front foot, put the footpad with the heel and make shin tight to the device. And make ankle around 90 degree and ride with throttle and brake during stand the rear wheel up. (Refer to the How to use remote control assembly)
- If you put your feet too much or too little, the stance can be not correct.
- During riding, never lie down the front wheel to avoid falling down.
- To move to left or right slowly, open or close your feet slowly.
- Whether if it is a slow speed or high speed, there can be occurred 'Speed Wobble' in the unstable stance. High speed riding can be dangerous before learning the stable stance.

Product description

DUALTRON MAN
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Electric WHEELMAN

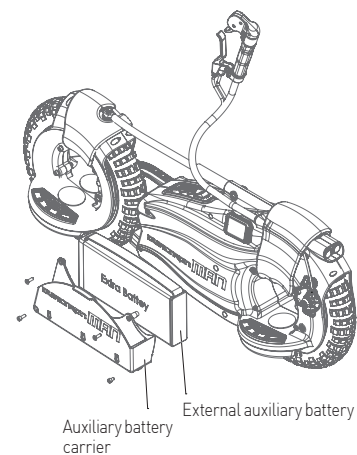


Driving parts of the system



Selectable additional option

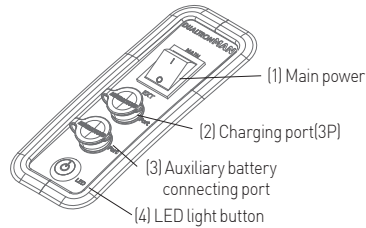
Installing external auxiliary battery



*The specification of the external battery and design of the carrier can be changed without notice to improve product quality.

Control parts description

A Power, Charging, LED control panel



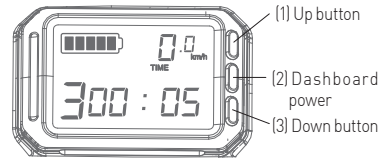
(1) Main power The '1' means main battery power ON status. The '0' means main battery power OFF, however the '0' is auxiliary battery ON status then it is connected. The auxiliary battery should be removed when you don't use the product.

(2) Charging port The port to charge internal main battery..

(3) Auxiliary battery connecting port The port to connect extra auxiliary battery.

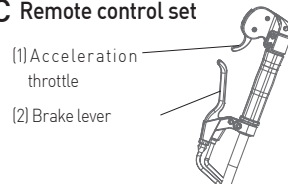
(4) LED light button Turn on and off the front and rear LED light.

B Controller setting dashboard



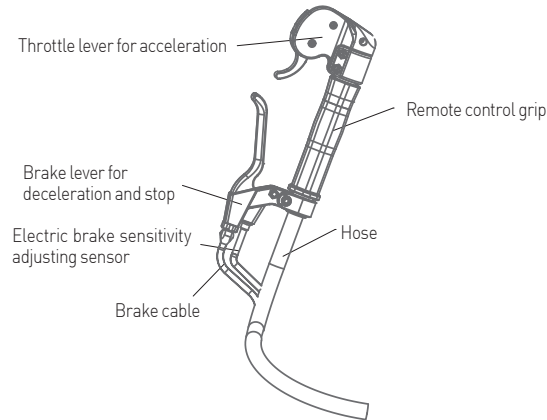
Variety setting can be set include motor output power and electric brake. (Refer to the 11page for the detail)

C Remote control set



One hand remote control which can accelerate and decelerate with one hand.

How to use remote control assembly



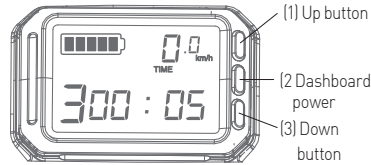
One hand remote control grip Hold the grip on the handle bar to control; accelerate and brake.

Use throttle Rotation times of the motor can be increased and decreased with the throttle lever squeezing. As it is very sensitive, slow and mild acceleration is recommended.

Use Brake Hold brake lever to decelerating to decelerate and stop. A rapid decreasing is forbidden as it is dangerous.

Use electric brake sensitivity adjusting sensor The electric brake works even though you squeeze slightly. You can adjust its working point with electric brake sensitivity adjusting sensor nut on the brake lever.

Dashboard setting



- Press the (2)On/Off while the main power switch ON(I) and can check default screen with time, ODO, RPM and ETC.
- Speed can be adjusted with (1),(3) button when it is default screen.
- User setting can be set with pressing (1), (3) button simultaneously. (P0-P11)
- Turn off the dashboard power with long pressing (2) button and then turn off(O) the main switch for storage.
- Turn the main power off(O) and remove the auxiliary battery for storage.

Status	No	Default setting	Description	Note
P	0	15	Tire size setting	Fixed
	1	45	Voltage setting	Fixed
	2	20	Magnetic quantity	Fixed
	3	0	Speed sensor setting	
	4	0	Kilometer : 0 / Mile : 1	
	5	0	Throttle start : 0 / Kick start : 1	
	6	0	Cruise mode set : 1 / None : 0	
	7	0	Slow start : 0 / Power start : 1	
	8	0	No function	
	9	0	No function	
	10	100	Max speed 1~100%	
11	2	Electric brake 0:None, 1:Medium, 2:hard		



* You can find detail information from the Minimotors global website(<http://dual-tron.com>)

* Never change the default setting of P0, P1, P2.

* As it is difficult to handle in an emergency situation, cruise mode should be used in a safety riding condition.

* You can cancel the cruise mode with squeezing brake or accelation lever a little.

Battery charging

Cautions when storage the product after riding

Is the power off?

When you store the product, the main power switch should be on 0 to off the power.

Is the auxiliary battery disconnected?

After riding, turn off the main power and auxiliary connected battery should be disconnected after charging.

Is it a suitable place to store?

Don't store or charge the device or auxiliary battery in the place wet or hot. [Avoid a direct ray of light and car trunk in Summer]

How to do long time storage?

If you would like to storage more than one month, the battery should be charged before storage. [Refer to the General safety guidelines and restrictions and Use and care tips: Lithium-ion battery]

01 How to charge

- Connect charger to the charging port correctly.[If the direction is wrong or use too much power, port can be damaged and the battery and charger can be broken due to short.
- Connect the power plug of the charger to the consent.
- It needs around 16hours if it is completely discharged on EX+ 60V 31.5A battery. (If you use high speed charger which is additional selectable option, 3 times faster.)
- The red lamp means charging, the green lamp means charging is done.
- Disconnect the charger after charging is done.

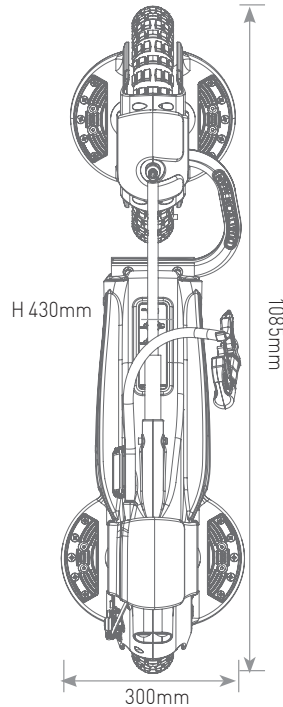
02 How to use charger correctly

- Don't use and inquire to the seller if the lamp on the charger doesn't work or if there is damage on the cable.
- The charger should be used indoor and it is forbidden to use in the place wet or hot.
- Don't tune the charger or use other charger not genuine.
- To use charger safely, read manual carefully before use the charger.



Warning : Use only DUALTRONMAN genuine charger and additional selectable option speed charger. If you use other charger, it has danger of fire and explosion.

Product specifications



DUALTRON MAN
The dream of electric technology **Electric WHEELMAN**

Product Name	DUALTRONMAN			Electric WHEELMAN
Motor	MAX 2700W BLDC HUBLESS MOTOR			(Silent wheel drive with big bearing drive system)
Model	MX	EX	EX+	Li-ion battery(EX-Li-Polymer)
Capacity	60V 1,065Wh	60V 1,540Wh	60V 1,864Wh	18A / 26A / 31.5A
Weight	33kg	32.5kg	33kg	Flame: 25.5kg / Battery: 7.5kg(EX+)
Charging	9hr±	13hr±	16hr±	Standard 2A charger base / Can be different due to battery status (If you use optional quick charger, 3 times faster) EX+ battery, 70kg loaded, 25°C atmosphere temperature
Range	Max 100-110km			20km constant drive on flat road
Speed	Max 65km/h			70kg loaded, 67.2V max charged
Gradability	50% (Climb ability 26°)			Gradability can be different due to riders weight, road condition, battery status, temperature
Max load	140kg			Under 120kg is recommendable
Brake	Rear disk brake and electric brake (Two brakes work simultaneously)			Auto recovery charging system applied when brake lever works. : max charging current around 5A(World first and biggest efficiency)
Cooling control system	Cooling heat control system only for DUALTRONMAN			Cooling maximize system is applied for stable working of controller
Dashboard	LCD multi functional dashboard			Battery remains, TRIP, ODO, Time, Speed, Voltage and user selected function
Product size	1085 x 300 x 430mm			Front width(FW) x Length(L) x Rear width(RW)
Tire	Front and rear Taiwan Chungshin Offload tube tire			Onload tire can be replaced(Will be release) (Offload tire is default)
Material	Flame-Full aluminum alloy, Aluminum forged alloy(6082-T6) / Cowl-Polycarbonate			

* Parts and specification can be changed to improve products quality and safety.

* The range on the specification is checked on the following conditions. (70kg loaded, flat road 20km/h constant riding) Riding performance can be different with the riding condition.

* Range can be affected due to the loaded weight, atmosphere temperature, wind direction(wind speed), road condition, gradient and tire condition.

Safety tips for riding



Precautions while riding

- Follow the law and regulations of the country in which you intend to use it.
- Be careful of pedestrian or car. Avoid riding at the crowded place.
- Don't park at the place can block the pedestrian or car. It can be cause of the safety issue.
- Don't ride on the crosswalk. For safety, carry the product when you cross the crosswalk.
- Keep the safety distance when ride with other riders.
- Keep the safety distance can discriminate obstacles and dangerous things on the road.
- Riders should ride at the safe place with wearing safety gears.

DUALTRONMAN(Electric WHEELMAN) is a device for leisure sports. As every device for leisure sports needs to be mastered with practicing and balancing, there are some special safety cautions to do.

01 One person riding and place for riding

DUALTRONMAN(Electric WHEELMAN) is a device only for one person riding and it is an extreme device for the outdoor activity. Don't ride at closed place as indoor or parking lot. Ride only in a good field of vision or day time. Don't interrupt the transit of the other people or cars.

02 Tire air pressure check and maintenance

Before and after riding, always check if there is big damage on the hook rubber which is steering part. The user needs to check if there is any play or a crack on the align bar and if there is some loosen bolt or nut, the air pressure of the tire is acceptable (35~40psi), the brake work well, if there is any strange sound when motor is idling. It is essential to check to avoid accident. If there is any problem, stop using immediately and check the device with the seller or a service center.

03 Avoid riding on a rainy day or humid day

DUALTRONMAN(Electric WHEELMAN) need to be managed in a wet or a cold weather. 0~45 degree of the temperature is recommendable) If it is windy or rainy too much.

Start riding



Step1 Ready

Put the device down on the flat surface.

Step2 Power on

Turn on the main power and set the suitable speed at the dashboard setting.



Step3 Stance

Hold Remote control assembly lightly and set your stance goofy or regular. Lay down the side pad same way to the hook connector.



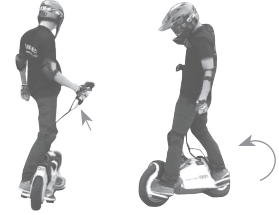
Step4 Balancing

Hold rail, wall or hand of the helper and put your foot to center of each front and rear tire. From the front foot, make shin tight to the device and push the footpad with the heel to make the ankle around 90 degree and stand the front wheel up. As same as the front foot, put the footpad with the heel and make shin tight to the device. And make ankle around 90 degree and stand the rear wheel up.



Step5 Speed up

Front wheel should be stand to the forward way and pull the acceleration throttle on the Remote control assembly to speed up.



Step6 Deceleration and stop

To decelerate and stop, pull the brake lever. Stop the operation of the motor and lay down rear foot naturally to side pad touch the ground to decrease speed.



General safety guidelines and restrictions

- Never carry passengers or allow more than one person at a time to ride the scooter.
- Novice riders need to practice how to operate the scooter in the safe place.
- Stop the scooter with the brakes when unexpected obstacles suddenly show up. Never use your foot to stop the scooter.
- Store the battery fully charged. Discharged battery may shorten the life of battery.
- When you store the battery for a long time more than three months, store the battery not fully charged under 80~90% at dry and low-temperature.
- If the battery is damaged, the battery emits an unusual smell, or the battery leaks, stop using the product, contact the authorized service center immediately and get technical support.
- Put the battery in a safe place out of the reach of children and pets.
- Use of an unauthorized charger could cause serious damage to the battery and circuit.
- When the product is waterlogged, Never charge the battery and contact the seller for inspection.
- Never ride the scooter in wet or icy weather and contact the seller for inspection when your scooter gets wet.
- Always wear protective equipment, such as an approved safety helmet, kneepads, elbow pads, and gloves before riding.
- Never drink and drive. Do not ride the scooter with barefoot or wearing high heels, open toed shoes and sandals.
- Check the brake for proper function before each ride. When the brakes do not function properly, inspect the brakes and reserve brake power by adjusting the brakes.
- Always check the tires pressure and re-inflate as necessary before open.

If there is any inquiry, don't hesitate to contact the seller. Thanks.



Use and care tips : Lithium-ion batter



1. Only use the charger that was supplied with your product to charge lithium-ion battery. Use of an unauthorized charger could cause serious damage to the battery and can cause fire.
2. Charge lithium-ion battery within 0-45°C and discharge within -20-60°C. Charging and discharging the battery not within the appropriate temperature may damage the lithium-ion battery.
3. Do not leave lithium-ion battery in any place exposed to direct sunlight or high temperature. Do not store it in wet place. Always store it in dry place.
4. Charge lithium-ion battery in dry, open, and well-ventilated place. Do not charge the battery near inflammable goods.
5. In the winter, bring the battery from outside to inside, temperatures changed from low to high and this may cause dew condensation. In this case, do not charge the battery immediately but charge it after reduce temperature difference.
6. If the battery protection circuit is damaged, the battery emits an unusual smell, or the battery leaks, contact the authorized service center immediately and get technical support.
7. Put lithium-ion battery in a safe place out of the reach of children and pets.
8. Do not reverse the polarity on a battery and short-circuit. Also exposing the battery to excessive shock can result in explosion of battery.
9. Do not do stunts or jumps on the product on bumpy surface. Exposing a battery pack to excessive shock can result in fire on the battery. If there are some crashes during riding, then you should remove it out of the product to check whether the battery is working well.
10. Connecting the charger when the product is waterlogged, the risk of electric shock and fire is very high. Do not charge the battery in this case and the battery should be checked by expert before charging.
11. Do not disassemble or incinerate lithium-ion battery. To safely dispose of lithium-ion battery, put it as industrial waste and be careful not short-circuit occurs in the terminals.
12. If the battery require replacement after long-term use, replace it with new one through the authorized dealer. Normally, the discharge capacity of lithium-ion battery normally decrease more than 15% after 300 times of cycle use.
13. Do not use the battery if it leaks or gives off an odor, and short-circuit inside the battery pack. Lithium-ion is inflammable material. Avoid charging the battery without proper care. Be very alert to the time that you have charged the battery to prevent fire.
14. Use only with the authorized and recommended battery and charger. Manufacturer and distributor cannot be held responsible for any damage of your product by using unauthentic battery and charger.

The important information before riding

- Check features and structure of the product before purchasing.
 - Use the product after reading the user manual.
 - Keep the products' box for the repairing service.
 - Most products of Minimotors Co. Ltd, are mini motor products and it is classified as an extreme leisure vehicle.
 - Extreme leisure vehicle needs to be maintained frequently.
 - It's impossible to exchange or refund the products after assembly or using. Since it is as a car or bike. (However, we solve all the initial problem of the products.)
 - The products can be broken during delivery.
- (1) If there is any problem when you check the product after receiving, you have to contact the seller immediately and tell them for exchange or free repairing service.
 - (2) If you don't let the seller know, we can't recompense or exchange the product as it is impossible to proof the broken products to the logistic company.
 - (3) If the product is broken during delivery, you have to check with deliveryman or take picture for proof.
 - (4) You have to let the seller know by the day you received if the product is broken during delivery. The seller does not in charge if you tell them later.

| Delivery information |

- We are trying to sent the product in a day, however, it can be delayed 1-2days for the late order or holiday order. It needs 1-3 days from the order.
- Some products can't be delivery together. Please check before order.
- You can pay delivery pee in advance and the amount can be different for each products.
- The delivery can be delayed if there are too many orders.
- If you order from island or mountain area, seller will call you as delivery cost can be different.

| Exchange or refund |

- You have to use contracted logistic company to deliver for the initial defect, wrong delivery, exchange, refund to save the delivery cost.
- If you want refund or exchange, don't open the box and let us know in 7days that you want refund or exchange. Exchanging the product is limited for 1 time. If you send the product without any notice, we will resend it to you.
- If you exchange or refund due to change your mind, you need to pay for the delivery cost for the going and returning.
- There is an address for return on the bottom of the product warranty card.

Warranty



1. The warranty covers only the defect occurred due to a manufacturing fault in the warranty period with normal use.
The warranty covers 3months and you need to pay for the repairing after 3months.
2. In this case, you need to pay for the repairing even if it is in warranty period.
 - If the malfunction is occurred by user as carelessness, self repairing or tuning.
 - If the product is used for the rental business.
 - Replacing tire or expendables (ex: Tire, Tube, Brake pad, cables, Gears, Chain, etc)
3. You need to show warranty card when you request repairing.
4. For the repairing, you need to visit the service center and you need to pay delivery cost for the going and returning if you want to use logistics service.

Purchasing date	20 . . .
Store name	
Contact No.	

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