



C.T.M. MOBILITY SCOOTER

HS-828 Instruction Booklet



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1. INTRODUCTION

Thank you and congratulations on purchasing your new CTM mobility scooter.

It is designed to provide the transportation ability indoors and outdoors for person whose ability to walk is impaired, but who are still in terms of their eyesight and physically and mentally able to operate an electric scooter.

We pride ourselves on providing safe and comfortable products. Our goal is to ensure your complete satisfaction. We sincerely hope you enjoy your CTM mobility scooter.

Please read and observe all warnings and instructions provided in owner's manual before your operate the various functions of this scooter. Also, please retain this booklet for future reference.

If you have any question, please contact :

CHIEN TI ENTERPRISE CO., LTD.

No. 13, Lane 227, Fu Ying Rd., Hsin Chuang District.

New Taipei City, Taiwan.

Tel : +886-2-2903-2987

Fax: +886-2-2903-8807

E-Mail : sales@chienti.com.tw , <http://www.chienti.com.tw>

Information of European Representative :

EMERGO EUROPE

Prinsessegracht 20

2514 AP The Hague

The Netherlands.

2.IMPORTANT PRECAUTIONS

2-1 Before driving for the first time,

- Before take the first trip with mobility scooter, you should familiarize yourself well the operation of mobility scooter and with the operation elements. Please take your time to read this introduction booklet.
- Before driving, please evaluate the personal condition, and fully understand the operation of mobility scooter.
- You should not assemble, maintain, and operate the mobility scooter before you read this instruction booklet.
- Observe and obey all pedestrian rules and regulations in which you are riding.
- Mobility device may only be used on the traffic routes for which it is approved in accordance with the relevant national legislation.
- Always be aware of pedestrians and situations which might require extra care when using your scooter on public walk ways and footpaths.
- Do not drive your scooter if you are under the influence of alcohol or medication that may affect your ability.
- Try not to drive scooter at night.
- Turn the key off before getting on or off (see section 4-1).



Please observe all relevant rules and regulations pertaining to pedestrians and road users, at all times when you are driving the scooter.



- Do not turn the power on before you get in and sit securely on the seat.
- Be certain that the power is turned off when get in, get out. This will eliminate the possibility of accidentally activating the wigwag controls and causing injury.
- Keep your weight toward the middle of the deck. Putting most or all of your weight on the edge of the deck may cause an unstable condition.
- Only one person at a time could ride a C.T.M. Mobility Scooter. Do not carry passengers under any circumstances.

• Practice Tips

- If you are new to driving a scooter, it is a good idea to practice in a clear, safe space on a sound level surface. (I.e. Park, Playground).
- Basic functions to practice : Wig wag accelerate /Wig wag release /Stop /Reverse /Turn /Ramp proceeding.
- Set the speed control to its lowest speed, slightly increase the speed when you are getting familiar with the scooter. (Refer to 4-2 for speed adjustment)



Practice operating your scooter in the presence of an attendant. Remember that only with practice will you become a competent driver. Practice these basic functions until you feel that you have control of your scooter.

2-2 CAUTIONS WHEN DRIVING

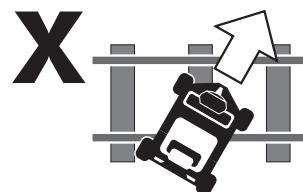
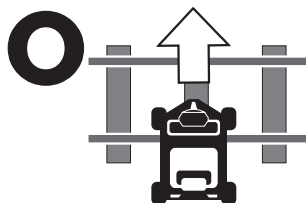
- Please do the daily check before your journey always. (Refer to 7-1 Daily check.)
- Do not extend your body over the mobility scooter.
- Please make sure your safety when crossing the level crossing.
- Cross the level crossing, please be aware of the wheel and rail are perpendicular.
- Do not use the mobile phone and wireless mobile devices.
- Do not use the batteries of mobility scooter to charge any other electric devices, expect the accessories from original manufacturer.
- Not drive on slope over the limit. (Refer to 10 Specification, curb climbing)
- Reduce speed when descending to prevent any danger.
- Increase speed when ascending (Refer to 4-2 LCD panel - setting of speed adjustment.)
- Do not drive to across the obstacle over the limit (Refer to 2-5 Safety of obstacle)
- Do not attempt to drive the scooter in rain, wet grass, or any other potentially hazardous condition.
- Ensure that the lights of scooter are turned on while driving at night or in poor visibility.
- Please stop operating the scooter if the batteries have drained, continuous operation may damage the scooter.



- Always follow the local pedestrian traffic rules when riding outside.
- When turning, reduce your speed and maintain a stable center of gravity. This greatly reduces the possibility of a tip or fall.




- Do not turn off the power while driving.
- Do not stretch your body out on the scooter. For maximum stability, lean forward in your body while proceeding up ramps, inclines, curbs, or any low rise.
- Do not attempt to have your scooter climb or descend an obstacle that is inordinately high. This may cause the scooter to tip.
- Do not attempt to use your scooter on an escalator.
- Do not make sharp turns while driving. This may cause the scooter to tip.
- Never place the scooter in freewheel mode when on any sort of an incline or decline. When the scooter is parked, the lever for engaging and disengaging the motors must be locked firmly into the "DRIVE" position. (Refer to 5-2 N-D lever adjustment)
- Cross the railroad crossing, make sure the wheels pass the rail at 90degree angles, avoid scooter stuck on railroad crossing.



- When descending an incline, use the slowest speed possible. If the descent is faster that you desire, release the throttle lever to stop the scooter. Then press the throttle lever slightly to control the speed.

2-3 GENERAL SAFETY INFORMATION FOR SCOOTER

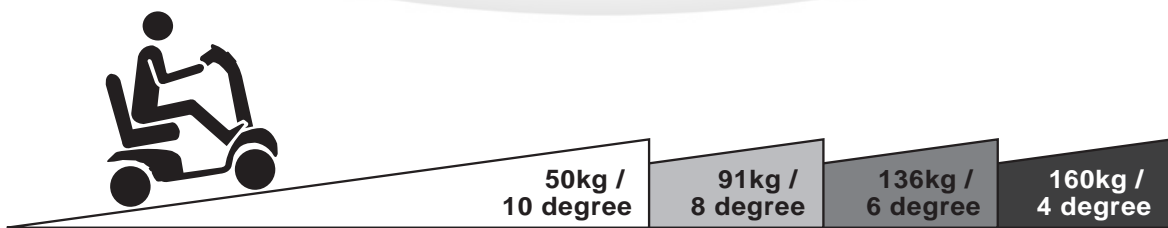
- Batteries should be fully charged before using for maximum performance and longevity. (see section 6-2)
- The maximum load of the scooter is 160kg. Do not exceed the maximum permissible load. Exceeding the max.weight rating may result in injury to yourself.
- The maximum load of the front basket is 3KG, exceeding the max. weight may result damage to basket.
- The mobility device is only designed for use by a single occupant whose maximum weight does not exceed the maximum permissible load of the device. Never use the mobility device to transport more than one person (including children).
- Do not attempt to carry out maintenance work that is not described in this user manual.
- Do not change, modify, remove any parts from products especially safety protected parts such as anti-tips.
- Completely deflate the tires (air tires) before dismantling the rim or attempting




- Materials and assemblies of scooter is flame resistant.
- Avoid exposure the scooter to rain, snow, ice, salt, or standing water whenever possible. Maintain and store in a clean and dry condition. Any direct contact with water can cause damage to the scooter and electrical system.
- Do not remove the anti-tip wheels or modify your scooter in any way that is not authorized.
- Only use the chargers, accessories, or components supplied as original equipment with your scooter supplier.
- Immediately stop using the scooter if you encounter a problem with scooter. Turn off the power and contact dealer for further checking.
- Please pay more attention when driving the scooter, the emergency stop may encounter.

2.4 CAUTIONS WHEN DRIVING ON INCLINES

- The scooter has been rated to a maximum climbable height, obstacle height, and gap. (Refer to 10 Specifications)
- Never drive on a slope that exceeds the rated slope.
- The weight capacity limit at different ramp degree (please refer to following picture).



- Your scooter's ability to travel up inclines is affected by your weight, your scooter's speed, your angle of approach to the incline, and your scooter setup.
- Please avoid to drive on a long ramp or any uneven terrain to prevent any danger from motor defected.
- The batteries voltage normally will go up when driving on descending road. If the battery voltage becomes too high, the over-voltage protection will be activated by slowing the speed till the scooter stops. (error code :ERR3 will be displaying). Please pull over the scooter to the safe area, release the wigwags and restart the scooter again.



- When driving down a ramp or uneven terrain, keep the scooter's speed adjustment set to the slowest speed setting to ensure a safely controlled driving.
- If the speed is too fast, release the throttle control lever, let the scooter stop. When you feel that you again have control of your scooter, push the throttle control lever forward and continue safely driving.

To prevent any danger, do not turn around at high speed on ascending, descending ramp.

2-5 CAUTIONS WHEN CLIMBING

- The maximum height of obstacle and curb that scooter can climb is up to 10 cm with run-up (A).
- The maximum gap that scooter can drive over is 15-20 cm (B).
- Always overcome obstacles straight on at 90 degrees, in one stroke, do not stop halfway! Firstly, make sure the front wheels of the scooter is perpendicular to the obstacle, approach the obstacle slowly until the front wheels touch the obstacle, increase the speed and ensure that the front wheels and rear wheels have moved over the obstacles, and then you may reduce the speed.
- When driving scooter on ramp, adjust body center of gravity for scooter stability.

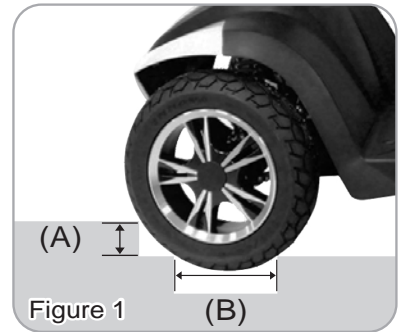


Figure 1



Never attempt to overcome an obstacle when on an uphill or downhill gradient or it may increase the chance of tipping!
Adjust the seatback into an upright position before climbing an obstacle, or it may increase the chance of tipping!

2-6 ELECTROMAGNETIC INTERFERENCE AND WARNINGS



It is very important that you read this information regarding the possible effects of Electromagnetic Interference on your mobility scooter.

Mobility scooters may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and mobile phones. The interference (from radio wave sources) can cause the mobility scooter to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the mobility scooter control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m). Each mobility scooter can resist EMI up to certain intensity. This is called its "immunity level." The higher the immunity level, the greater the protection. At this time, current technology is capable of achieving at least a 20 V/m immunity level, which would provide useful protection from the more common sources of radiated EMI. The immunity level of this mobility scooter model is not known.

There are a number of sources of relatively intense electromagnetic fields in the everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure is unavoidable. However, we believe that by following the warnings listed below, your risk to EMI will be minimized.

The sources of radiated EMI can be broadly classified into three types :

1. Hand-held portable transceivers (transmitters-receivers) with the antenna mounted directly on the transmitting unit. Examples include: citizens band (CB) radios, "walkie talkie," security, fire, and police transceivers, mobile phones, and other personal communication devices.



Some mobile phones and similar devices transmit signals while they are ON, even when not being used

2. Medium-range mobile transceivers, such as those used in police cars, fire trucks, ambulances, and taxis. These usually have the antenna mounted on the outside of the vehicle; and
3. Long-range transmitters and transceivers such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.



Other types of hand-held devices, such as cordless phones, laptop computers, AM/FM radios, TV sets, CD players, and cassette players, and small appliances, such as electric shavers and hair dryers, so far as we know, are not likely to cause EMI problems to your mobility scooter.

Mobility Scooter Electromagnetic Interference :

Because EM energy rapidly becomes more intense as one move closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy very close to the motorized scooter control system while using these devices. This can affect mobility scooter movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the mobility scooter.

Warnings :

Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios, and mobile phones can affect mobility scooters. Following the warnings listed below should reduce the chance of unintended brake release or motorized scooter movement which could result in serious injury.

1. Do not operate hand-held transceivers (transmitters-receivers), such as citizens band (CB) radios, or turn ON personal communication devices, such as mobile phones, while the mobility scooter is turned ON;
2. Be aware of nearby transmitters, such as radio or TV stations, and try to avoid coming close to them;
3. If unintended movement or brake release occurs, turn the motorized scooter OFF as soon as it is safe;
4. Be aware that adding accessories or components, or modifying the mobility scooter, may make it more susceptible to EMI; and



There is no easy way to evaluate their effect on the overall immunity of the motorized scooter.

5. Report all incidents of unintended movement or brake release to the distributor listed on the inside front cover of this manual. Note whether there is a source of EMI nearby.

Important Information :

1. 20 volts per meter (V/m) is a generally achievable and useful immunity level against EMI (as of May 1994). The higher the level, the greater the protection.
2. The immunity level of this product is at least 20/Vm.

2-7 SAFETY WARNING AND INSTRUCTION LABELS.

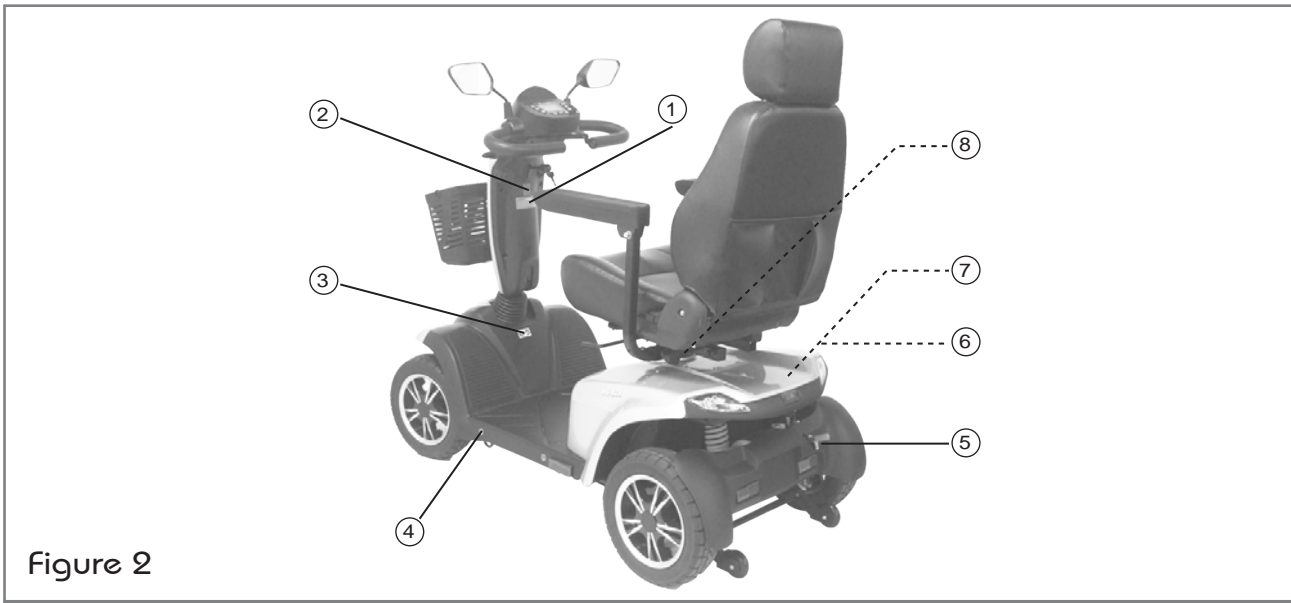







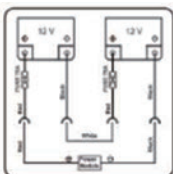


Figure 2

<p>1</p> 	<p>Warning Sticker</p> <ol style="list-style-type: none"> 1. Please read the instruction booklet carefully before using your scooter. 2. Do not drive the scooter on slippery surfaces or on slopes over 6~10 degrees limit. 3. Do not drive on highway, crowded roads, or unfamiliar areas. 4. Do not turn at high speed in either forward or reverse. 5. Do no wash with water or leave scooter in humid environment since water can damage the electronic parts. 		
<p>2</p> 	<p>Do not hang baggage or other objects on the tiller / tiller adjustment lever.</p>	<p>6</p> 	<p>European representative label</p>
<p>3</p> 	<p>The scooter is not intended to be used as a seat in a motor vehicle.</p>	<p>7</p> 	<p>Information Sticker states the date of manufacture and serial number of the scooter.</p>
<p>4</p> 	<p>Tie-down points of the scooter. Do not sit or stay on the scooter during transporting.</p>		<p>This product has been supplied from an environmentally aware manufacturer. It may contain substances that could be harmful to the environment. Recycling must be carried out in accordance with the respective national legal provisions.</p>
<p>5</p> 	<p>N-D Lever Adjustment label which instructs freewheel mode operation. (see section 5-1 for operation)</p>	<p>8</p> 	<p>Wiring diagram Label</p>

3.IDENTIFICATION OF PARTS



Figure 3

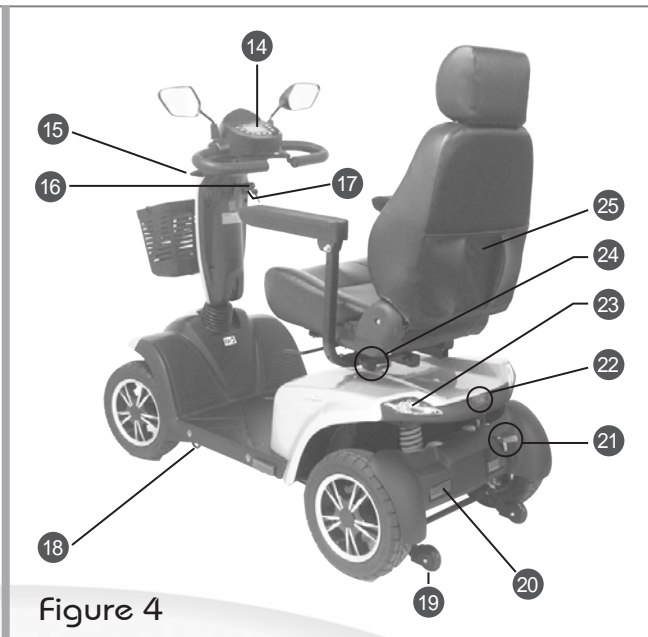


Figure 4

NO.	ITEM
01	Rear Mirror
02	Emergency Hand Brake
03	Tiller Angle Adjustment Lever
04	Front Basket
05	Headlight
06	Decorative Light
07	Side Reflector
08	Seat fore-aft Adjustment Lever
09	Seat Swivel Lever
10	Width adjustable armrests
11	Seat Back Angle Adjustment Lever
12	Luxury Seat
13	Throttle Level
14	Control Panel
15	Front Turn Signal
16	Charging Port
17	Key Switch
18	Tie-down Hooks
19	Anti-Tipper
20	Rear Reflector
21	N-D Lever
22	Brake Light
23	Tail Light /Rear Turn Signal
24	Armrest Width Adjustment Thumbscrews
25	Rear Pocket

*Above is only for reference,

4.INTRODUCTION & OPERATION OF CONTROL PANEL

4-1 IDENTIFICATION of CONTROL PANEL

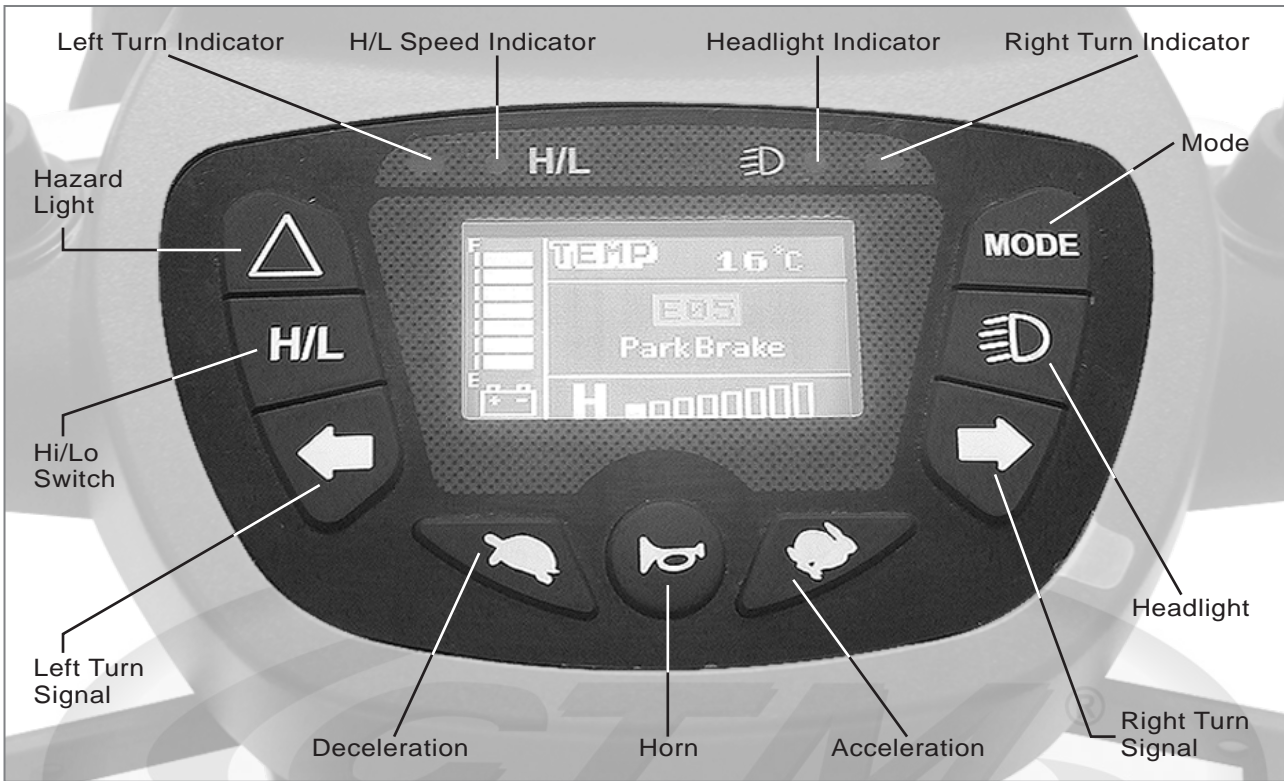
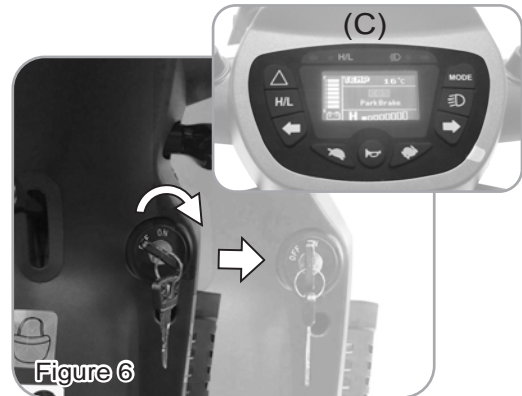



Figure 5 - HS-828 Control Panel

	Button Name	Operation
	Hazard Light	Press the Hazard lights button once to switch on, press again to switch off
H/L	Hi/Lo Switch	High / Low mode, see section 4-2
	Left Turn Signal	Press the turn signal button once to switch on, press again to switch off (switches itself off automatically after 30 seconds)
	Right Turn Signal	Press the turn signal button once to switch on, press again to switch off (switches itself off automatically after 30 seconds)
	Deceleration	Press low speed button once to decrease speed, the minimum speed is 1
	Acceleration	Press acceleration button once to increase speed, the maximum speed is 8
	Horn	Press horn button once to sound warning tone when necessary.
	Headlight Switch	Press headlight switch to turn on headlight and taillight.
MODE	Mode Setting	Press mode setting button to set different mode.

Main Key Switch :

- Turn the key to the right - Turn scooter on.
- Turn the key to the left - Turn scooter off.
- Turn on the scooter, control panel will be in standby mode. (C)





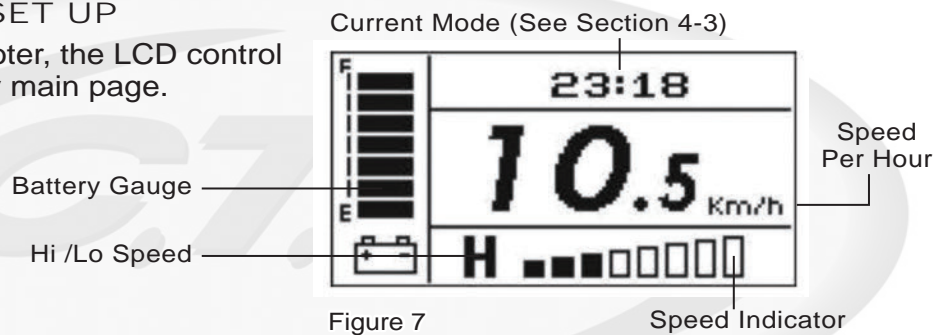
- Always ensure that the scooter is switched off before getting on or off the scooter and before removing any items of the scooter.
- Turning the scooter OFF whilst driving will bring the scooter to an abrupt stop and danger.

Sleep Mode :

- Scooter will go into Sleep Mode with one long beep warning sound if no throttle activity is detected for programmable time period. (Default programmable time is 30 mins.)
- When scooter is in Sleep Mode, the LCD display will be off automatically and the scooter will not respond to commands.
- To wake up the scooter, turn the power (key) off and then on again.

4-2 OPERATION & SET UP

- When starting the scooter, the LCD control panel will be in display main page.



Speed :

- [H/L] switch : Press H/L Speed button once, the High/Low Speed Indicator will light on, means driving in high speed mode; Press again, the indicator will extinguish, means driving in low speed mode. (Hi/Lo speed will vary which depends on your current speed settings)
- [👉] [👈] Press acceleration / deceleration button to increase / decrease speed. There are 8 different speeds of adjustment.

Speed Display	H Max %	L Max %
■ □ □ □ □ □ □ □	25	15
■ ■ □ □ □ □ □ □	35	21
■ ■ ■ □ □ □ □ □	45	27
■ ■ ■ ■ □ □ □ □	55	34

Speed Display	H Max %	L Max %
■ ■ ■ ■ ■ □ □ □	65	42
■ ■ ■ ■ ■ ■ □ □	75	50
■ ■ ■ ■ ■ ■ ■ □	88	55
■ ■ ■ ■ ■ ■ ■ ■	100	65

Figure 8

H / L Switch :

- The max speed can be 100% (Max) if [H/L] is set to “H”
- The Low Speed LED indicator will be on if [H/L] is set to “L”, the max speed in low speed mode can be up to 60% of max speed of scooter.
- Press [H] / [L] to reduce /increase max speed.

Head light / Tail light/ Decorative light :

- There are 4 modes for lights: On (Default) / Off / Head Light / 3-Stage.
- Please refer to section 4-4 for light modes setting.
- For any head light or tail light faults, the panel indicator will flash and stop in 5 seconds when pressing headlight switch. Please contact your authorized dealer for assistance.

Turning light and Parking Light :

- To activate the hazard lights (left and right turning lights blink simultaneously), press the [Hazard light] key. Pressing this key again will turn off the light.
- To activate the left turn light, press the [Left Turn] key. Pressing this key again will turn off the light.
- To activate the right turn light, press the [Right Turn] key. Pressing this key again will turn off the light.
- When any of the buttons are pressed, a synchronized beep with the flashing lights will be produced. (Please refer to section 4-4 if adjustment of buzzer volume is needed).
- The turning light will automatically turn off after 30 seconds (not for parking light).
- For any turning light or park light faults, the panel indicator flashing and buzzer alarm frequency will increase and stop in 30 seconds. Please contact your authorized dealer for assistance.

Battery Gauge :

- When the vehicle is in operation, the battery level will only decrease.

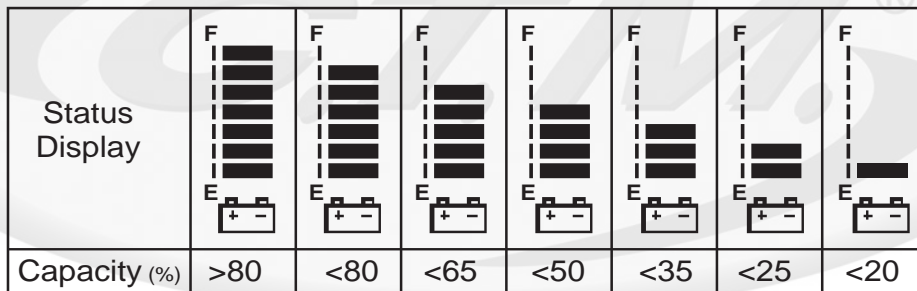


Figure 9

Low Battery Warning :

- Warning Condition: The low battery warning will be activated once the battery level is less 25% of max capacity.
- Warning Sound: Be- Be-Be
- Warning Display : Flashing bar symbol.

Battery Charging Status Indication :

- After 10 sections without pressing any key, LCD back light will be automatically off. Press any key to turn on the back light.
- Please refer to the indicators on battery charger for more accurate charging status .
- The charging status will be displayed on LCD screen while charging. (The scooter can not be operated while it is in charging.)
- Recharge the scooter immediately when the battery level drops to 20% as the remaining power can only keep scooter going for buffering 3km or less.

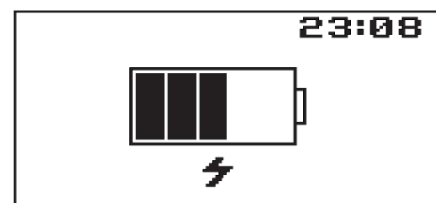


Figure 10

4-3 [MODE] SELECTION

- Press [MODE] to change display mode: TIME, TEMP, ODO, and TRIP.

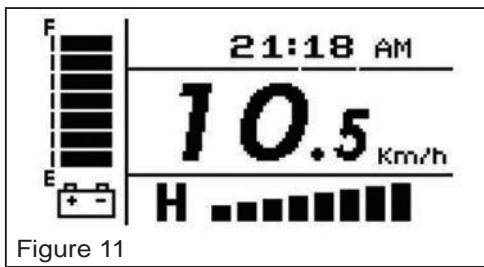


Figure 11

[TIME]

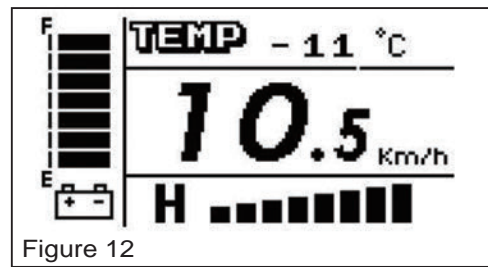


Figure 12

[TEMP]

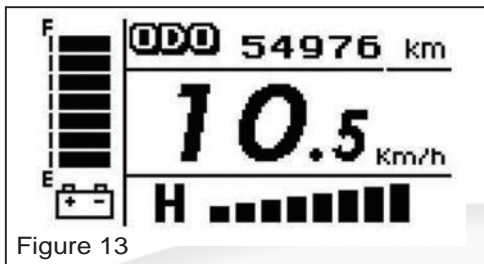


Figure 13

[ODO]

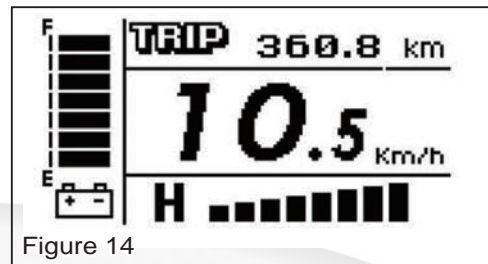


Figure 14

[TRIP]

Exit / Save :

- Setup mode will automatically quit after 15secs without pressing [left turn] and [right turn], and scooter will save the setting and return to operation mode.
- User can also press any buttons, except [left turn] [right turn] to save the setting automatically and return to operation mode.

[TIME] Time mode (Figure 11) :

- Hold both buttons [left turn] [right turn] together for 2 secs to set up the time.
- Press [left turn] to increase digits/ Press [right turn] to decrease digits.
- 12hr-mode : 12:00AM~11:59PM / 24hr-mode : 00:00~23:59. Tolerance : +/- 2sections/day.

[TEMP] Temperature mode (Figure 12) :

- Press [left turn] : Centigrade. Range -20°C~50°C.
- Press [right turn] : Fahrenheit. Range -4°F~122°F.



[ODO] Odometer mode (Figure 13) :

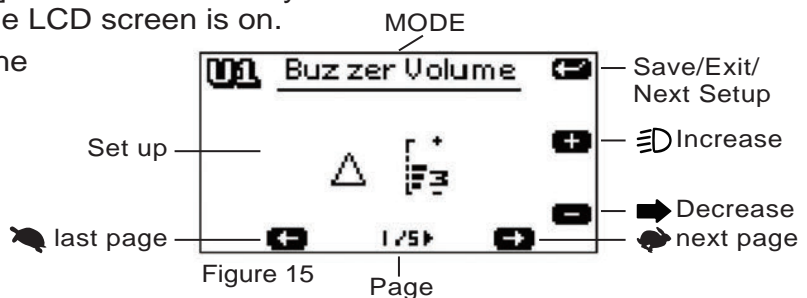
- Range : 0~99999.
- The odometer will be reset automatically to zero after the total distance reaching 99999km (62149 mile).
- The odometer (hrs) will stop counting after reaching 99999hrs.

[TRIP] Trip mode (Figure 14) :

- Hold [left turn] [right turn] together for 2 secs to reset TRIP meter.
- Range : 0.0~999.9hrs. The trip meter will stop counting when reaching 999.9hrs.

4-4 SETTING- USER DEFINE

1. Make sure the scooter (key) is off.
2. Press and hold both [] [] then turn on the key. Keep holding the buttons until the LCD screen is on.
3. Press [MODE] button to select the modes you want to set up.



Exit /Save the setting :






- Setup mode will automatically quit after 15secs without pressing any button. Scooter will save the setting and return to operation mode.

Buzzer Volume setup (Figure 16) :

- Low battery warning sound is controlled by the controller.



Figure 16

Item	Description	Initial value
1/5	 Hazard Warning volume	3
2/5	 Indicator warning volume	3
3/5	 Reverse warning volume	3
4/5	 Low battery warning volume	off
5/5	 Horn volume	5

Unit setup (Figure 17) :



Figure 17

Item	Description	Initial value
1/4	Clock 24 , 12	24
2/4	Speed km/h , mph	km/h
3/4	Odo km , hrs	km
4/4	Temp °C , °F	°C

LCD panel backlight (Figure 18) :







Figure 18



Figure 19

Head light / Decorative light Modes (Figure 19) :

- [ON] In this default mode, the decorative light will be automatically on when scooter turns on.
- [OFF] In this mode, the decorative light is primarily off and the head light will be on only if the headlight button is pressed.
- [Head Light] In this mode, the head light and decorative light will be on only if the headlight button is pressed.
- [3-Stage] In this mode, lights can be displayed in 3 stages by pressing [] button.
 - Press to turn on the decorative light. The icon [] will be showed on the LCD screen.
 - Press again to turn off the decorative light, and turn on the headlight. The icon [] will be showed on the LCD screen.
 - Press again to turn off both headlight and decorative light.

 Suggestion: Refer to user manual when you set up the control panel.

5. OPERATION YOUR SCOOTER

5-1 GERNERAL OPERATION

Brake :

- Release throttle, scooter will stop automatically.
- If necessary, please use handbrake to stop scooter. (Figure 20)

Throttle :

- Pull the right throttle to move scooter forward. Pull the left throttle to move scooter backward. This can be reversed if required by local dealer. (Figure 21)
- These are also your accelerator. The further you depress them, the faster you go. (Subject to the position of speed control)
- Releasing both left/right throttles automatically operates the brakes to slow down and stop.



Tiller angle adjustment :

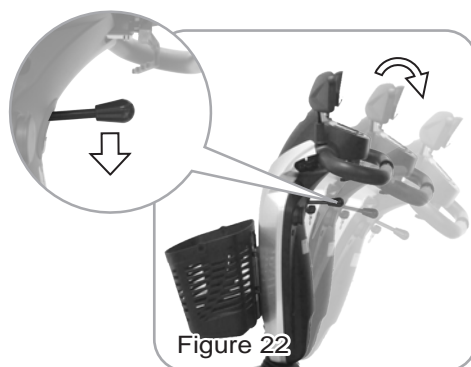
- Pull the tiller adjustment downwards to adjust tiller's angle and release to lock at a desired comfortable position. (Figure 22)



Do not pull both right and left throttle at the same time; you might not able to control the scooter. Always ensure the scooter is switched off before getting on or off the scooter.

Seat Swivel Adjustment :

- Pull the swivel lever upwards to rotate seat left and right. (Figure 23)



Seat fore-aft Adjustment :

- Set at a comfortable position by lifting lever forward to adjust the seat. (Figure 24)

Seat back Angle Adjustment :

- Set at a comfortable seat back angle by moving seat angle lever. (Figure 25)

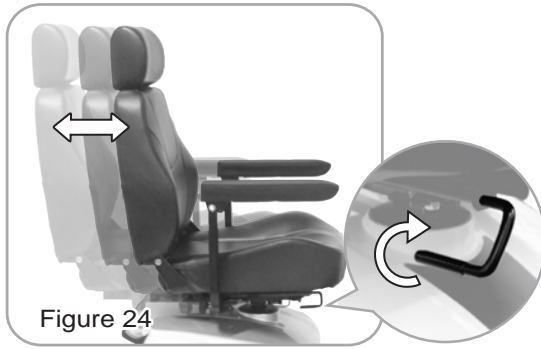


Figure 24



Figure 25

Armrest angle, height, and width adjustment :

- **Width** : Loosen the thumbscrews as picture to adjust the width, tighten again to lock at a desired position. (Figure 27)
- **Angle** : Adjust the attached screw height to control armrest's angle. Pull the armrest up when getting on or off the scooter. (Figure 26)



When driving the scooter, set the seat at foremost position to prevent tip over. Do not hang heavy goods on the armrests.



Figure 26

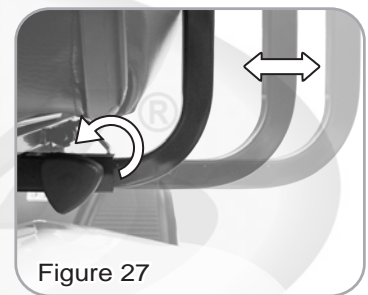


Figure 27

5-2 FREE-WHEELING (N-D LEVER)

- When lever is in Neutral (N) position, scooter can be moved manually without power.
- When lever is in Drive (D) position, scooter can be driven. Normal position is D.



Freewheel operation is only recommended on flat surfaces. Never leave your scooter on gradient with its motors disengaged. When adjusting N-D lever, do not sit on the scooter.

It's not able to drive the scooter when the lever is in Neutral. Turn off the scooter and switch to D position, then turn on and drive scooter.



Figure 28

5-3 FIXED HOOKS

- To ensure safety during the transportation. There are four fixed hooks for fixing scooter on other vehicles.
- Make sure the scooter is in D position when transporting. (Figure 29)
- Do not sit on the scooter during transportation.

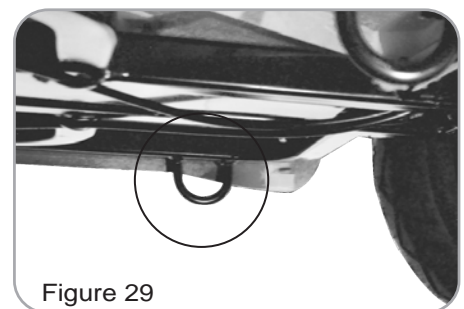


Figure 29

5-4 DISASSEMBLING YOUR SCOOTER

Disassembling seat :

- By lifting lever to remove seat upwards. (Figure 30)

Rear Compartment cover :

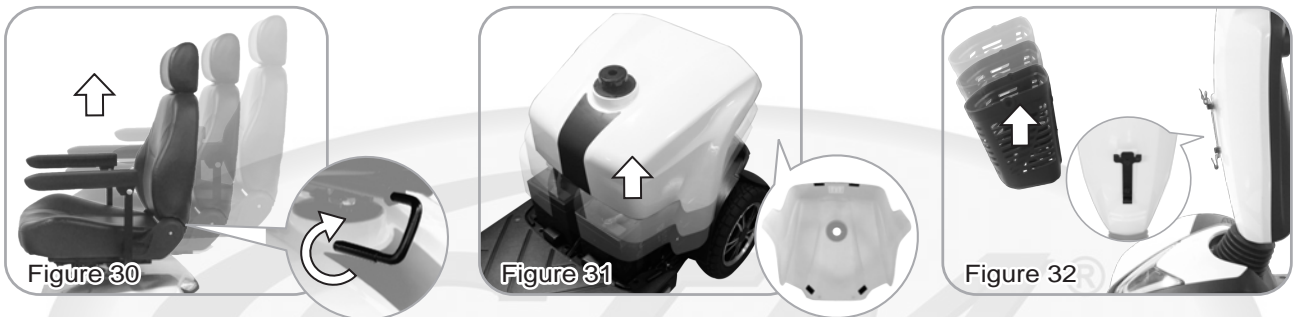
- Open the compartment cover upwards according to the example. (Figure 31)

Disassembling front basket :

- Lift the front basket upwards. (Figure 32)

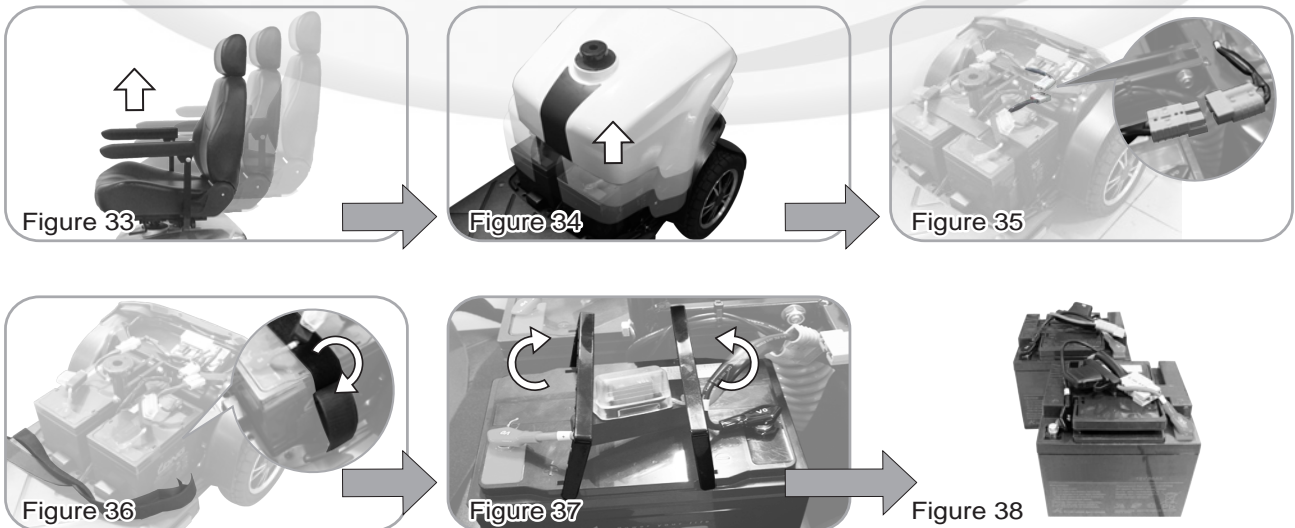


Do not turn on the scooter when disassemble/assemble the scooter, and make sure the scooter is in D position.
Do not modify or change the scooter with non-authorized parts or accessories.



5-5 DISASSEMBLING BATTERIES

- Release the battery velcro straps and disconnect the battery connectors to remove the batteries. (Figure 33~38)



- Batteries are heavy, be careful when removing the batteries.
- Do not connect battery terminal [+] [-] with any metals to avoid danger.
- Connect the red terminal to red, blue terminal to blue.
- When replacing the batteries remove the screws and connectors in sequence and tighten each component back.
- Maintenance & repair must only be carried out by a competent engineer or authorized dealer.

6.CHARGING THE BATTERIES

6-1 OPERATING THE CHARGER

Batteries must be charged before using the scooter for the first time and should be recharged after each day use. You will need the scooter and the battery charger.



Each country may supply different charger.
The charging procedure may be different from below.
If you require more details, please contact your authorized dealer.
Be sure the scooter key is in the OFF position.
Do not use extension cord to connect the charger.
Do not use other brand charger to charge the scooter.

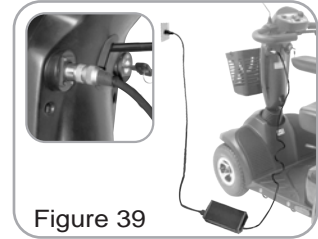


Figure 39

- 1.Insert battery charger cord into the charger connector on the charger output.
Refer to above figure for correct position
- 2.Plug the other end of the battery charger cable into a standard electrical outlet.
- 3.Turn the power on. Normally, The LED (Power) Light will turn on when electric current passes.
- 4.Charging starts. During charging, LED (Charge) will indicate orange light, when it turns to green light, that means well-charged.
- 5.LED indication
 - LED(POWER) - GREEN LIGHT ON : Power On.
 - LED(CHARGE) - ORANGE LIGHT ON : Charging / GREEN LIGHT ON : Fully Charged
- 6.Charger Trouble Shooting
 - (A)If LED (POWER) light is off
 - Check the input voltage (115V/230V) is the same as you adjust.
 - If light is still off, please check and repair the battery charger.
 - (B)If LED (CHARGE) light is off
 - Check to see clips connection is correct.
 - If the battery is fully charged, the LED (CHARGE) light will be off.
 - If light is still off, the battery may be defective.
 - (C)If ORANGE light can turn to GREEN
 - The battery can not be charged. Please check and recover it.
 - (D)If ORANGE light turns to GREEN immediately
 - Check to see the battery is fully charged, if not, The battery may be defective Check and recover it.



The time needed to recharge will vary depending on the depletion of the batteries. Charging for longer than necessary will not harm the batteries. They can not be overcharged.

6-2 INFORMATION FOR BATTERY & CHARGER

Battery :

- Only be used for 12V lead-acid battery, not used for other type of battery or other voltage.
- Do not turn the key on while scooter is in charging.
- Charge the batteries after each trip. Only use the battery charger (under 8Amps) supplied with your scooter.
- If the scooter is not used for some time batteries must be recharged once every three months at least. Make sure that batteries are fully charged, and on returning, charge them again before using scooter.
- Batteries will only give maximum performance after scooter has been used. And batteries have been recharged up to 10 times.
- Do not switch off, unplug or interrupt the recharge cycle until the charging cycle has completed. (charger indicator turns green)
- The minimum time needed to recharge will vary up to 15hrs which depends on the depletion of the batteries. Excessive or short period charging will be detrimental to battery life.
- Please charge the scooter in 0°C ~ 40°C, out of this range might affect the performance of the charger and battery.
- For longest life, your batteries should be recharged regularly. Please recharge the batteries before they run down to 20%.

Charger :

- Do not leave charger plugged into your scooter with charger switched off as this may discharge your batteries.
- Inspect the battery charger before each use, make sure connectors are dry and clean. Do not attempt to use an extension cord to plug in your battery charger.
- Be aware that the battery charger case may become hot during charging. Please avoid skin contact.



※The battery charger is equipped with cooling fan. If the fan does not appear to be working correctly, please turn off the charger immediately as it may be overheated. Please contact your authorized scooter dealer.

※Use the battery charger in a well-ventilated area. Do not smoke as explosive gases may be generated while charging the batteries.

※Any battery faults due to unauthorized maintenance, dismantle, misuse or accidental damage is not covered by the manufacturer's warranty.

7.CARE AND MAINTENANCE

7-1 DAILY CHECK

Please always check your scooter before you start your every journey.

Check point	Inspection	Ref.	What to do if the inspection is failed
N-D lever	Check for correct function	P.12	Contact your dealer.
Horn	Check for correct function	P.10	Contact your dealer.
Throttles	Pull the wigwag to test the scooter movement	P.10	Contact your dealer.
Electro-mechanical brake and Emergency hand brake	Pull the wigwag a little bit and release it to test if brake works. If your scooter comes with emergency handbrake, please check it as well.	P.10	Contact your dealer.
Battery Gauge	Check if the battery gauge is displayed and whether it is at low power.	P.13	<ul style="list-style-type: none"> • Contact your dealer if battery gauge is not working. • Recharge the battery immediately if low
Rear mirror (s)	Check if the parts are clean and firmly tighten to the scooter and do not wobble.	P. 8	<ul style="list-style-type: none"> • Clean up the dirt by damp cloth. • Tighten the screw or clamping stem that holds the mirror(s)
Lighting	Check if all lights, such as head lights, rear lights, and turn signal are functioning correctly.	P.11	Contact your dealer.

7-2 WEEKLY CHECK

Check point	Inspection	Ref.	What to do if the inspection is failed
Speed Dial Knob	Check for correct function	P.10	Contact your dealer.
Armrests	Check if the parts are clean and firmly tighten to the scooter and do not wobble. Tighten the screw knob that holds the armrest.	P.11	Contact your dealer.
Wheels/Tires	Inflate the tire to the correct pressure and check that <ol style="list-style-type: none"> 1. Drive wheels rotate without wobbling. 2. Tire tread depth is not less than 0.5mm. 3. No foreign objects in tires. 	P.16	Contact your dealer.
Motor	Check for correct function	Observe while driving	Contact your dealer.
Battery Charger	Check if the charger is functioning correctly and the batteries are charged.	P.14	Contact your dealer.

7-3 MONTHLY CHECK

Check point	Inspection	Ref.	What to do if the inspection is failed
Seat / Upholstery	Check for movement and if it's worn	P.11	Contact your dealer.
Electronics	Check if all the battery cables and connectors are firmly tighten to the scooter	P.13	Contact your dealer.

7-4 CLEANING YOUR SCOOTER

- Do not use any abrasive or scouring liquids for cleaning. Only use a damp cloth and gentle detergent.
- Do not use hose pipe or splash water directly onto the scooter as this may cause damage to electronics.

7-5 MAINTENANCE

- User should inspect the scooter regularly to keep scooter in good running order.
- Check if the electrical cable connectors are fully connected.
- All maintenance and repair of scooter should be done by an authorized dealer.

Seat Upholstery :

Only use damp cloth and a little soap to wipe the seat. Do not use abrasive cleaners as this will damage the seat.

Frame / Shroud :

- The frame and shroud of the scooter can be wiped with lightly damp cloth. Do not use abrasive cleaners as this will damage the coating.
- Car polish can be used to keep the paint and frame in pristine condition.

Storage :

- Please store the scooter in a dry location. If store the scooter in long time, please disconnect the battery terminals.
- Do not store your scooter where it will be exposed to source of direct heat, damp, oil, acid, alkaline, or where Ozone could be possibly generated. All of the above will minimize scooter / tire cycle and shorten its lifetime.

Tire :

User should inspect the tires frequently for damage, the presence of foreign bodies, unusual wear and sufficient tread depth. If replacement tires are needed, please contact the nearest dealer.

The following areas require periodic inspection :

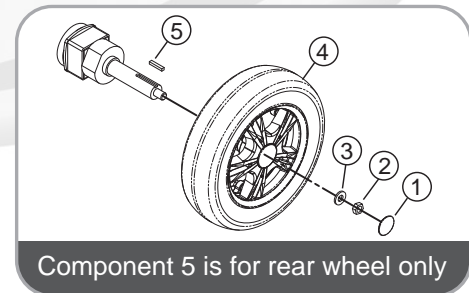
- Tire pressure between 30-35 psi
- Tread depth drops below 0.5 mm

Recommended range of storage,

Temperature : -30oc ~ +50oc, Humidity : 25% ~ 85%

Follow these easy steps to replace the tire :

1. Turn off the scooter and remove the key. Make sure the lever is in D position before you lift the scooter.
2. Use an ratchet and socket to remove the drive wheel screw from the centre hub of the wheel. Pull the wheel off of the axle.
3. Separate the tire from the rim.
4. Remove the old tire and replace it with a new tire.
5. Slide the wheel back onto the shaft.
6. Install the drive wheel nut into the centre hub and verify the key is lined up with axle and wheel, then tighten to secure it in place. (Torque 300±30kgf-cm)



All maintenance and repair of scooter should be done by an authorized dealer.

7-6 MAINTENANCE REMINDER

- User can set the system to track distance intervals for maintenance.
- The maintenance warning light on the LCD screen will be flashing when the maintenance is due at set distance. The flashing light will be off automatically after a minute.

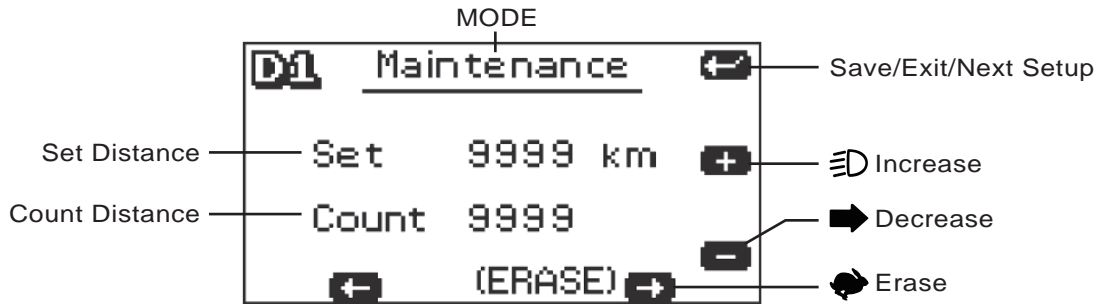


※The scooter/control panel can still be operating when the maintenance warning light is flashing.

※Please contact the authorized dealer for routine maintenance when the maintenance warning light is flashing.

Setting :

- Please reset for next maintenance distance when the maintenance is performed.
- 1. Turn the power (key) off
- 2. Press [MODE] button and [←] button at the same time.
- 3. Hold the two buttons and then turn the power to get in Maintenance mode setting.
- 4. Press [↔] to increase digits (+ 500km/per press) or [→] to decrease digits (-500km/per press).
- 5. Press and hold [↻] for 2 seconds to erase the setting.
- 6. Press 「MODE」 to save and exit setup mode when finished.



- The maintenance warning light will flash for a second every time when the scooter turns on if the Set Distance reaches Count Distance.
- Setup mode will automatically off after 15 secs without pressing any button. Scooter will save the setting and return to operation mode.

8. OTHER INFORMATION

8-1 RECYCLING & DISPOSAL

- The equipment wrapping is potentially recyclable.
- The metal parts are used for scrap metal recycling. The plastic parts are used for plastic recycling.
- Electric components and printed circuit boards are disposed of as electronic scrap.
- Exhausted or damaged batteries can be returned to your medical equipment supplier.
- Disposal must be carried out in accordance with the respective national legal provisions.
- Ask your city or district council for details of the local waste management companies.

8-2 SERVICE LIFE

We estimate a service life of five years for this product, provided it is used in strict accordance with the intended use as set out in this document and all maintenance and service requirements are met. The estimated service can be exceeded if the product is carefully used and properly maintained, and provided technical and scientific advances do not result in technical limitations. The service life can also be considerably reduced by extreme or incorrect usage. The fact that we estimate a service life for this product does not constitute an additional warranty.

9. TROUBLE SHOOTING

Here are some suggestions about solving problems you may have with your scooter. There is a self-diagnostic warning light on the control panel. To check the self-diagnostic warning light, turn on the key and count the number of blinks on the warning light.

9-1 SCOOTER WON'T MOVE WHEN KEY IN TURNED ON

Check point	Solution
Check if the power is off	Turn the power on.
Check if the N-D lever is in Neutral position	Switch to D (drive) position. Turn off the power and turn on again.
Check if the battery power is enough. (Battery gauge is under 25%)	Recharge the battery and then retest.
Check if the charger power cord is still plugged in scooter	Unplug the charger power cord.

9-2 ERROR CODE

Flash	Description	Initial check points
E02	Low Battery Fault	The batteries have run out of charge. <ul style="list-style-type: none"> • Recharge the batteries. • Check the battery and associated connections and wiring.
E03	High Battery Fault	Battery voltage is too high. This may occur if overcharged and/or traveling down a long slope. <ul style="list-style-type: none"> • If traveling down a slope, reduce your speed to minimize the amount of regenerative charging.
E04	Current limit time-out or controller overheat	The motor has been exceeding its maximum current rating for too long. <ul style="list-style-type: none"> • The scooter may have stalled. Turn the controller off, leave for a few minutes and turn back on again. • The motor may be faulty. Check the motor and associated connections and wiring.
E05	Park Brake	Either a park brake release switch is active or the park brake is faulty. <ul style="list-style-type: none"> • Check the park brake and associated connections and wiring. • Ensure any associated switches are in their correct positions.
E06	Drive Inhibit	Either a stop function is active or charger inhibits or OONAPU condition has occurred. <ul style="list-style-type: none"> • Release the stop condition (seat raised etc.) • Disconnect the battery charger. • Ensure the throttle is in Neutral when turning the controller on. • The throttle may require re-calibration.
E07	Speed Pot	The throttle, speed limit pot. SRW or their associated wiring may be faulty. <ul style="list-style-type: none"> • Check the throttle and speed pot and associated connections and wiring.
E08	Motor Voltage	The motor or its associated wiring is faulty. <ul style="list-style-type: none"> • Check the motor and associated connections and wiring.
E09	Other Error	The controller may have an internal fault. <ul style="list-style-type: none"> • Check all connections and wiring.

9-3 OTHER PROBLEMS

- TIRE : Low tire pressure: pump up tires to 30~35 psi.
- Charger: During charging, light on charger doesn't change to green. Please refer to section 6-1.

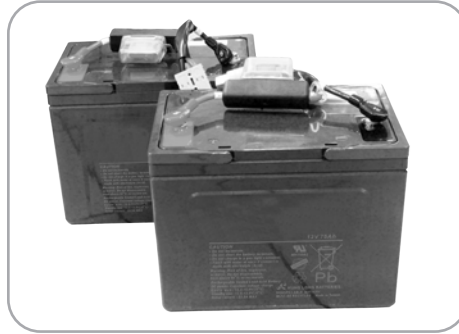
OPTIONS

We offer below options to add functionality for your scooter, please contact the authorized dealer for more information.

Height Adjustable Armrests



12V/75Ah Battery



8A Charger



Safety Turning Speed Reduction (Gyro Meter)

When turning left and right, scooter will reduce the speed itself according turning space to ensure safety.

- ◎Power on :
On/off LED - Green light flashing
- ◎Charge on : Charge LED
 - Orange light Flashing = Pre-charge
 - Orange light on = Normal charging
 - Green & Orange light flashing = 80% fully charged.
 - Green light on = Fully charged
 - Red light flashing = Faulty

10. TECHNICAL SPECIFICATIONS

Overall Length	1400 mm / 55.1"
Overall Width	680 mm / 26.8"
Overall Height	1325 mm / 52.2"
Front Wheels	330 mm / 13"
Rear Wheels	330 mm / 13"
Weight W/ Batteries	124 kg / 272 lbs
Max. Speed	15 kmph / 9.3 mph
Weight Capacity	160 kg / 352.7 lbs
Ground Clearance	90 mm / 3.5"
Grade Climbable	10 degree
Curb Climbable	100 mm / 3.9"
Turning Radius	1660 mm / 65.4"
Suspension	Front & Rear
Brake	Hand Brake & Electro-Mechanical
Seat Type	Swivel Captain Seat With Seat Sliding Mechanism & Back Angle Adjustment
Seat Width	515 mm / 20.3"
Motor Size	850W, 5000 r.p.m.
Battery Size	(2) 12V. 50Ah
Weight of Battery	30.5 kg / 67.2 lbs
Travel Range	27 km / 16.8 Miles
Battery Charger	5A Off Board
Electronics	On / Off Key Switch, Battery Level Indicator, Speed Control Knob

*Subject to change without notice. (Rev. 3, 2019/10/22)