USERS MANUAL

PT3

HEARTWAY

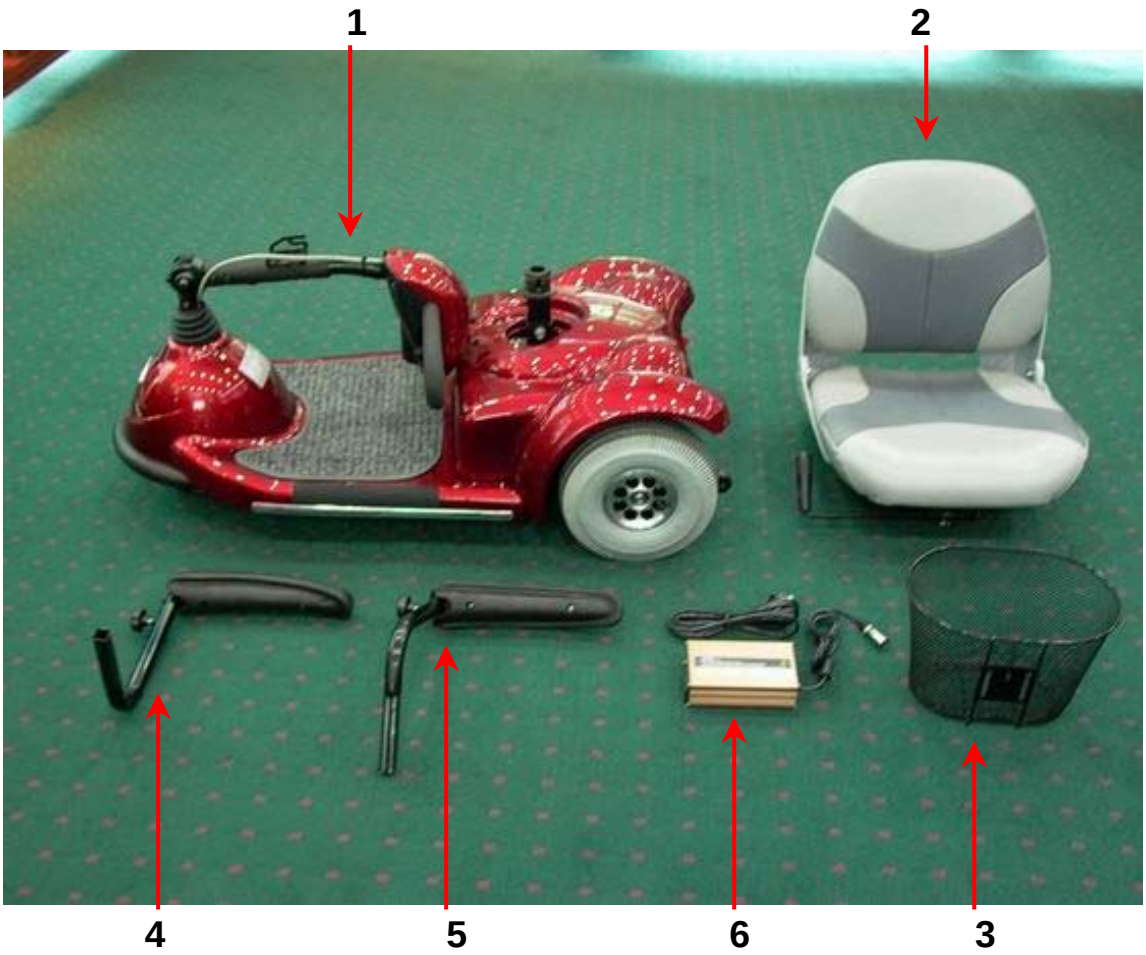
HEARTWAY **MEDICAL PRODUCTS CO., LTD.**

Part no:70030056

COMPONENTS

Your power scooter is shipped partially dissembled to protect it during shipping. After unpacking, please check whether you have received the following main components as our standard specification (See Fig.1).

1. **Chassis**
2. **Seat**
3. **Front Basket**
4. **Armrest (Left)**
5. **Armrset (Right)**
6. **Charger**



(Fig 1)

SAFETY INSTRUCTION

Operation of Scooter

1.Always ensure that the power is switched off when getting in or out of the scooter. This will eliminate the possibility of causing injury to yourself or others.

2.Always check that the drive wheels are engaged (drive mode) before driving.

3.Set the speed control knob according to your driving ability and the environment in which you are going to operate. We recommend that you keep your speed at the slowest position (press the deceleration button) until you are familiar with the driving characteristics of the vehicle. We also recommend that you use the slowest speed when using your power wheelchair indoors.

4.Always reduce your speed when making sharp turns.

5.Do not switch off the power when the scooter is still moving forward. This will bring the chair to an extremely abrupt stop.

6.Avoid jerky stop/start motions as the will result in excessive current draw from the batteries, increased tire wear and the rapid wearing of the gearboxes and motors.

7.To brake in an emergency, simply release the forward/reverse lever.

Ramps and Curbs

8. When driving up or down ramps, be sure to check that the angle of the slope is less than 10 degrees (slopes about 1/6). Also check that ramp surface is roughened to prevent slipping. Never drive across the slope or turn sharply on a slope.
9. When driving up curbs, always check the height of the curb to ensure that it does not exceed 1-1/2”(40mm) height.

Transfers, Reaching and Bending

10. Transferring on and off the PT3 requires a good sense of balance. To eliminate the possibility of injury, wet recommends performing the following tasks before attempting a transfer:
    - → Position scooter so that the distance between your power scooter and the object to which you are transferring is close enough for a safe transfer.
    - → Turn the power off
    - → Ensure that your power scooter not in freewheel mode.
    - → Flip up or remove armrests
11. When reaching, bending or leaning while seated on your power scooter, make sure that you maintain a stable center of gravity to keep the power chair from tipping.

General

12. Always use a seat belt, and keep your feet on the scooter all the time.
13. For safety reasons, make sure that your weight does not exceed the recommended weight limit of the scooter. Consult your dealer for the specified weight limits for your particular model.
14. Do not attempt to lift or move a power scooter by any of its removable parts. Personal injury and damage to the power chair may result.
15. Never try to use your scooter beyond its limitations as described in this manual.
16. Do not operate your vehicle if it is not functioning properly.
17. Do not connect any electrical or mechanical device to the vehicle. Failure to obey this instruction may result in injury and will void the warranty.
18. Never use electronic radio transmitters such as CB, walkie-talkies, portable computers or cellular phones while using the vehicle without first turning the vehicle off.

Use While Under The Influence Of Medication Or Alcohol

19. Check with your physician if you are taking any medication that may affect your ability to operate your power scooter safely.
20. Do not operate your vehicle while you are under the influence of alcohol, as this may impair your ability to operate your power scooter in a safe manner.

Electromagnetic interference (EMI) from Radio Wave Sources

The rapid development of electronics, especially in the area of communications, has saturated our environment with electromagnetic(EM) radio waves that are emitted by television, radio and communication signals. These EM wave are invisible and their strength increases as one approaches the source. All electrical conductors act as antennas to the EM signals and, to varying degrees, all power wheelchairs and scooters are susceptible to electromagnetic interference(EMI). The interference could result in abnormal, unintentional movement and/or erratic control of the vehicle. The United States Food and drug Administration (FDA) suggests that the following statement be incorporated to the user's manual for all power scooters like the PT3. Power wheelchairs and motorized scooters (in this section, both will be referred to as powered scooters) may as susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy emitted from sources such as radio stations, TV stations, amateur radio (HAN) transmitter, two-way radios and cellular phones. The interference (from radio wave sources) can cause the powered scooter to release its brakes, move by itself or move in unintended directions. It can also permanently

damage the powered scooter's control system. The intensity of the EM energy can be measured in volts per meter (V/m). Each powered scooter can resist EMI up to a certain intensity. This is called "immunity level". The higher the immunity level, the greater the protection. At this time, current technology is capable of providing at least 20 V/m of immunity level, which would provide useful protection against common sources of radiated EMI.

Following the warnings listed below should reduce the chance of unintended brake release or powered scooter movement that could result in serious injury:

1,Do not turn on hand-held personal communication devices such as citizens band(CB) radios and cellular phones while the powered 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 powered scooter off as soon as it is safe.

4.Be aware that adding accessories or components, or modifying the powered scooter, may make it more susceptible to interference from radio wave sources
(Note: It is difficult to evaluate the effect on the overall immunity of the powered scooter).

5.Report all incidents of unintended movement or brake release to the powered scooter manufacturer, and note whether there is a radio wave source nearby.

TURN OFF YOUR POWERED SCOOTER AS SOON AS POSSIBLE WHEN EXPERIENCING THE FOLLOWING:

- Unintentional motions
- Unintended or uncontrollable direction.
- Unexpected brake release

The FDA has written to the manufacturers of power scooters asking them to test new products to be sure they provide a reasonable degree of immunity against EMI. The FDA requires that a powered wheelchair should have an immunity level at least 20 V/m, which provides a reasonable degree of protection against more common sources of EMI. The higher the immunity level, the greater the protection. Your powered scooter has an immunity level of 20 V/m which should protect against common sources of EMI.

ENVIRONMENTAL CONDITIONS

Environmental conditions may affect the safety and performance of your power scooter. Water and extreme temperatures are the main elements that can cause damage and affect performance.

A) Rain, Sleet and Snow

If exposed to water, your power scooter is susceptible to damage to electronic or mechanical components. Water can cause electronic malfunction or promote premature corrosion of electrical components and frame.

B) Temperature

Some of the parts of the power scooter are susceptible to change in temperature. The controller can only operate in temperature that range between 18°F(-8°C) and 122°F(50°C).

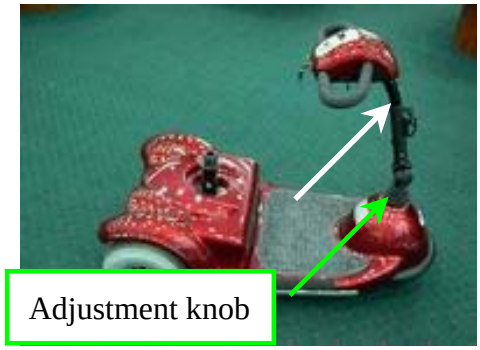
At extreme low temperatures, the batteries may freeze, and your power scooter may not be able to operate. In extreme high temperatures, it may operate at slower speeds due to a safety feature of the controller that prevents damage to the motors and other electrical components.

ASSEMBLY INSTRUCTION

It is very easy to assemble your scooter as follow the below procedure to your destination.

1. Installing the Chassis (#1)

Loose the round shaped adjustment knob, fold the tiller up to vertical position and tighten the adjustment knob. (See Fig 2)



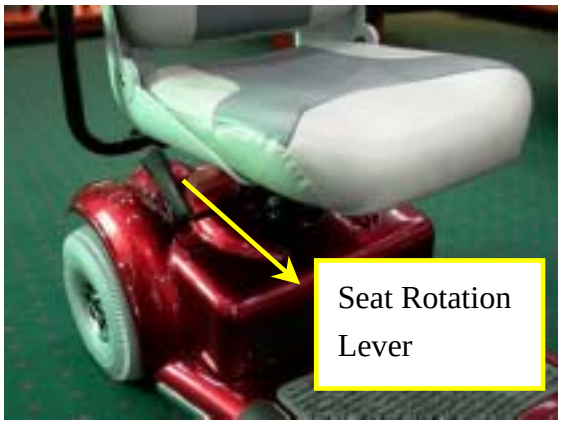
(Fig 2)

2. Installing the Seat (#2)

Put the seat (#2) axle into the seat post and let it lock automatically.(See Fig 3)

Note: If your seat cannot fit into the seat post, just lift the seat rotation lever slightly. Then you can easily install. (See Fig 4)

(Fig 3)

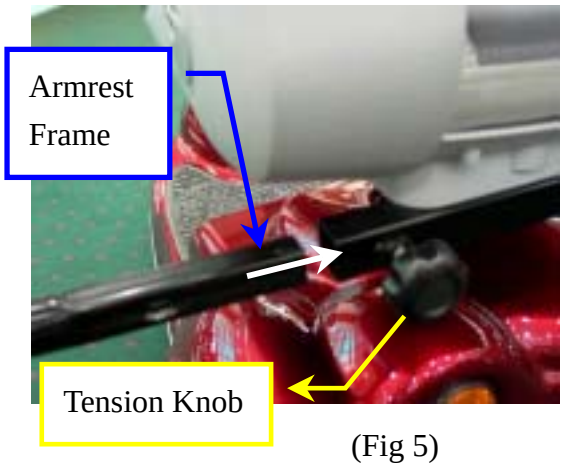


(Fig 4)

3.Installing the Armrest (#5)

Insert the armrest frame into the seat frame and tighten the tension knob. (See Fig 5)

Note: You can easily fold or flat your armrest by manual adjustment in PT3 scooter. (See Fig 6)



(Fig 5)

(Fig 6)

4.Installing the Front Basket (#3)

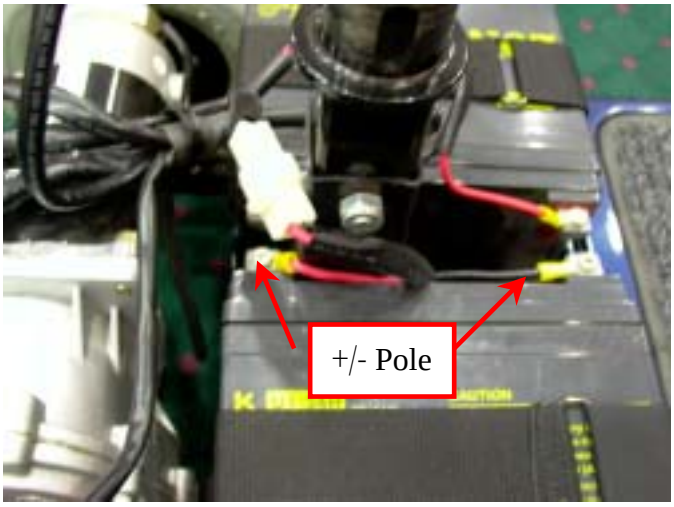
Install the front basket onto the front basket bracket. You need to make sure the bracket hook the grooves of basket. (See Fig 7)

(Fig 7)

5.Installing the Batteries (you can omit this step if your scooter already assembled the batteries)

Take out the shroud from the base frame slightly. Both of them only attach by velcro and simple attachment. Put the batteries to the battery loops and connect the cable (2 ends) with the batter positive and negative poles in 2 batteries. (See Fig 8)

Note: There is a battery circuit diagram labeled on the backside of the shroud. Please refer this diagram before you assemble the battery.



(Fig 8)

ADJUSTMENTS FOR SEATING CONFORT

To maximize seating comfort, your power wheelchair lets you adjust:

→Tiller angle

→Armrest width and height

→Seat rotation

→Backrest folding

A. Tiller Angle Adjustment

→ loosen the round shaped adjustment knob

→ pull up the tiller and adjust the angle

→ place the tiller into the slot

→ tighten the round shaped adjustment knob (See Fig 9)

Please refer to the operation decal located on the button of tiller.

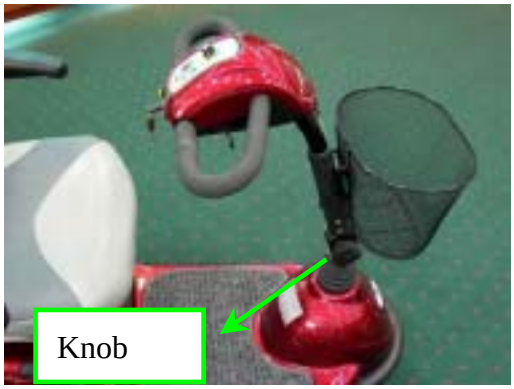
B. Armrest Adjustment

B-1 Armrest Width Adjustment

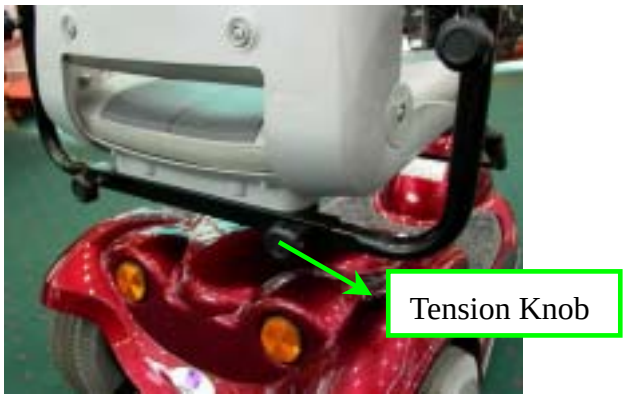
→ Loosen the width adjustment tension knob

→ slide the armrest frame to your desired width

→ tighten the knob.(See Fig 10)



(Fig 9)



(Fig 10)

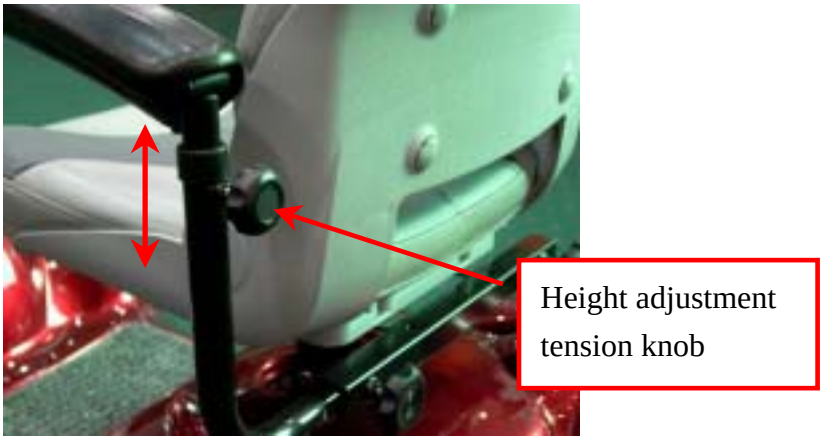
Note: You can do right and left armrest both sides

B-2 Armrest Height Adjustment

→ Loosen the height adjustment tension knob

→ slide the armrest frame to your desired width

→ tighten the knob.(See Fig 11)



(Fig 11)

C. Seat Rotation Adjustment

→ press down the seat rotation lever

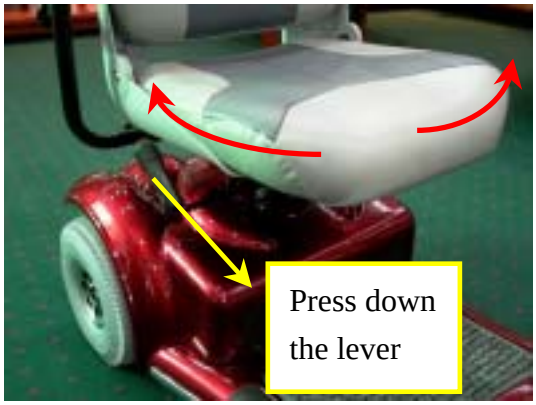
→ rotate your seat by clockwise or counter-clockwise direction. (See Fig 12)

→ let the lever lock into the corresponding notch.

Note: There is a lock in 90° position whenever you turn by clockwise or counter-clockwise direction.

D. Backrest Folding Adjustment

You can fold or unfold your backrest by manual adjustment.(See Fig13)



(Fig 12)

(Fig 13)

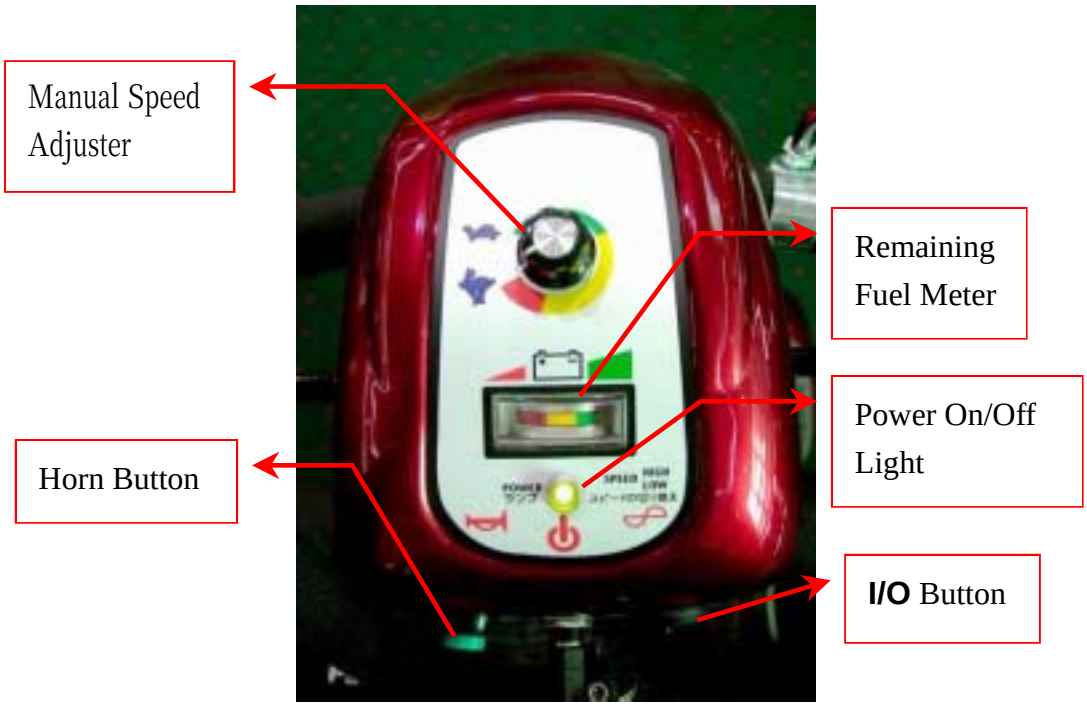
OPERATION

The power scooter is simple to operate. However we recommend that you read carefully the following instructions to become familiarized with your new vehicle.

A Word of Caution:

Before you turn the power on, always be aware of the environment that surrounds you to select your desired speed. For indoor environments we recommend that you select the slowest speed setting. For outdoor operation of this vehicle we recommend that you select a speed that is comfortable for you to control it safely.

The following steps are required to operate your vehicle safely with the controller (See Fig 14) The fig shows the display of PT3 scooter.



(Fig 14)

Button functions

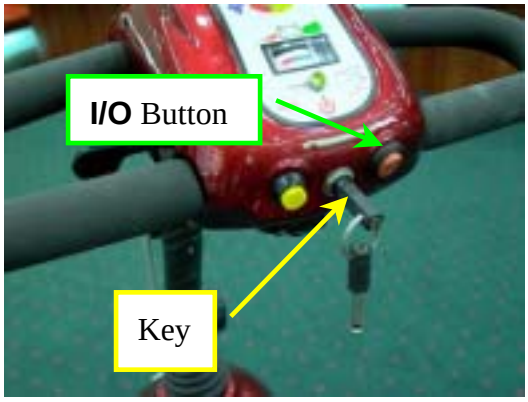
1. Remaining Fuel Meter: When your scooter is switched on, the needles on the meter will move across the scale from the left 'red' sector towards the 'green' sector, indicating the state of charge in your batteries. As the power is used up in your batteries the needle will move towards the 'red' sector indicating the state of charge at that precise time. When the needle is fully over to the right, the batteries are fully charged. When the needle falls towards the red sector your batteries are losing power, but you will still have power to spare. When the needle falls into the red sector your batteries are low in power and need to be recharged. It is wise to recharge your batteries when the needle enters the red zone (see Batteries and Battery Charging section of this manual).

2. Manual Speed Adjuster: This allows you to pre-select your desired speed. The adjuster is proportional to speed and can be set anywhere between 1 and 5 increments. Turn the adjuster knob counter-clockwise to minimum for a very gentle operation, and clockwise towards maximum to increase your speed.
3. Power ON/OFF Light: The light will turn on if you insert into the key. The light will turn off if you take out of the key.
4. Horn button: Press this button to sound the horn.(Easy operation for left hand or right hand)

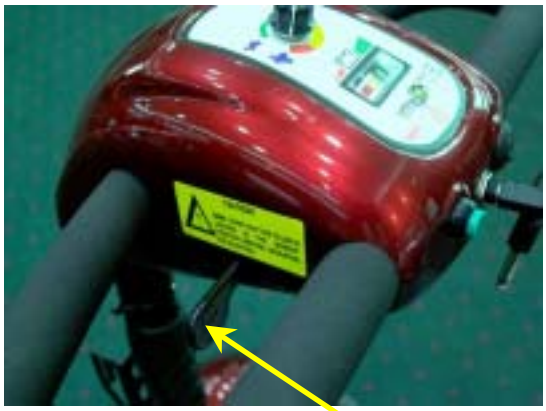
A. Driving:

1. Controller ON/OFF Switch

Insert the key to let the scooter power on (Remove the key is the power off). (See Fig 15) Swing the finger lever control forward or backward to control the driving direction of the vehicle (The finger lever control located both sides of the controller (See Fig 16).



(Fig 15)



(Fig 16) Finger Lever Control

And the returning of the finger lever control to its neutral position,(center), will reduce the speed and stop the vehicle by automatically applying the electromagnetic brakes.

2.Speed Control

1. Press "**I / O** " button (H/L gear mode): Automatically change H gear to L gear or from L to H gear. (Press O on H gear, press **I** on L gear)
2. Turn the adjuster knob clockwise towards maximum to increase your speed, and counter-clockwise toward minimum to slow down your speed.

3.Finger Lever Control

The finger lever control controls the speed of your vehicle. The farther away (forward / backward) the finger lever control is from the neutral position, the faster the vehicle will go.

Notes:

→After inserting the key into controller ON/OFF port, the light of power ON/OFF will turn on for a few seconds during self checking process.

→When the vehicle is in operation, the surface of the charger will become slightly hot.

→In case of emergency, let go of the finger lever control and the vehicle will come to a stop.

B. Controller Display

The controller display is a multifunction visual display. It can provide a lot of information of the vehicle.(shown as Fig 14)

＃When the needle falls into the red sector your batteries are low in power and need to be recharged. It is wise to recharge your batteries when the needle enters the red zone Remaining fuel needle only goes lower when using the battery, regardless the battery voltage. The remaining fuel needle goes higher only when recharging battery in progress.

＃Power ON/OFF will flash when the battery voltage is lower than 23.3V. That means the batteries need to be charged.

＃System will lock when the vehicle without using over 30 minutes. You need to remove the key and insert the key to restart the power of scooter.

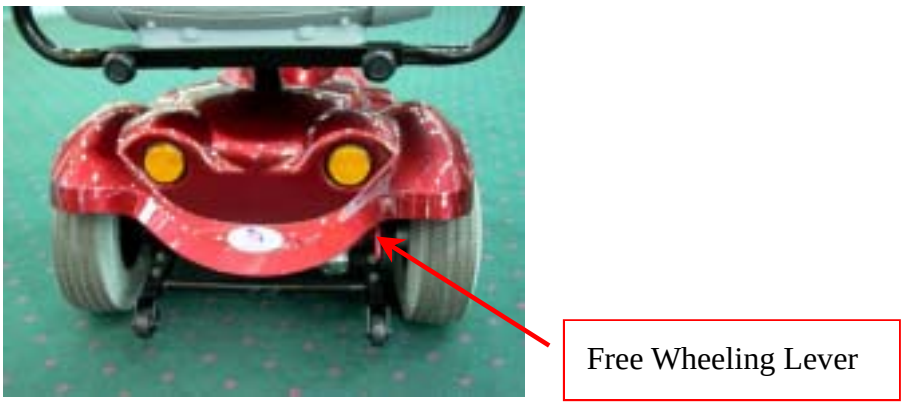
C. Free-Wheeling:

Because the motors are designed to engage the electromagnetic brakes when the vehicle is not in use or when the power is OFF. They also have a manual feature that allows them to “free-wheel”. Free-wheeling is accomplished by adjusting the free-wheeling levers to the free-wheeling position.(See Fig 17)

Warning！ →Never free-wheel your power scooter on a slope.

→Never free-wheel the motors while operating your vehicle.

→Always remember to engage the motors before turning the power ON.



(Fig 17)

Electromagnetic Brakes:

Your power scooter comes with an Electromagnetic Brakes., i.e. an automatic magnetic disc safety brake which is also known as Fail-Safe brake. The electro-magnetic Brakes are automatic and work when the power scooter is ON but in a steady state (i.e. Wigwag is released to the neutral position), even when the scooter is on a slope. The Electromagnetic Brakes will also be set whenever the power scooter is OFF, but the motor levers are in the engaged (vertical) position.

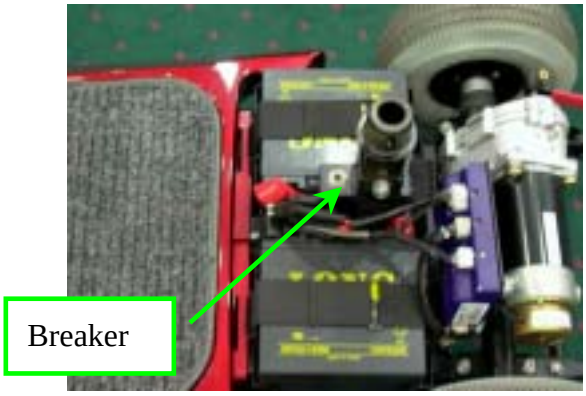
Note: Please refer to the section titled to check brake in the Maintenance & Repair section in page 18 to make sure brakes are in good condition.

D. Thermal Protection:

Your power scooter controller is equipped with a safety system called thermal rollback. A built-in circuit monitors the temperature of the controller and motors, the controller reduces the motor voltage and speed of the power wheelchair. The reduction of the speed allows the electrical components to cool down. Although your power scooter will resume its normal speed when the temperature returns to a safe level, we recommend that you turn the power off and wait for 5 minutes before restarting to allow the components to cool down if you find that you have lost speed suddenly.

E. Main Circuit Breaker:

The PF6 main circuit breakers reset button located in the rear of the base frame after taking out of the shroud.(See Fig 18)



(Fig 18)

The main circuit breaker monitors the electric current drawn from the battery. It is a safety feature built in your power scooter for your extra safety. When the batteries and motors are heavily strained (e.g., from excessive loads),the main circuit breaker will trip to prevent damage to the motor and the electronics. If the circuit breaker trips, wait for approximately one minute and then depress the button to reset it. Then turn on the controller power, and continue normal operation. If the main circuit breaker continues to trip repeatedly, contact your authorized dealer.

BATTERIES & CHARGER

BATTERY

We recommend that you use deep-cycle batteries that are sealed and maintenance free for your power scooter. Both sealed lead-acid (SLA) and gel cell are deep-cycle batteries and are similar in performance. Deep-cycle batteries are specifically designed to provide power, drain down, and then accept a relatively quick recharge. Lead-acid batteries should be charge as often as possible.

Specification of the battery that we recommend:

Type:	Deep –cycle sealed lead-acid or gel cell
Size:	34AH,U-1
Voltage:	12V each
Amp Hours:	34 amp hours

Depending on the use, terrain and driving conditions, the batteries will provide a range of 16-22 miles of travel. However, even if the power scooter is not in use, we recommend that the batteries be charged periodically.

Note:

→Do not use any automotive batteries. They are not designed to handle a long, deep discharge and also are unsafe for use in power scooter.

→The useful life of a battery is quite often a reflection of the care it receives.

CHARGER

The battery charger takes the standard wall outlet voltage (alternating current)and converts it into VDC (direct current).The batteries use direct current to run your power scooter. When the batteries are fully charged, the amperage from the charger is almost at zero. This is how the charger maintains a charge but does not overcharge the battery.

Note: The batteries will not be able to be charged after they are discharged to nearly zero voltage.

CHARGING INSTRUCTIONS

To recharge the batteries, follow the steps below:

→Place your power scooter close to a standard electrical wall outlet.

→Remove your key to let the power OFF

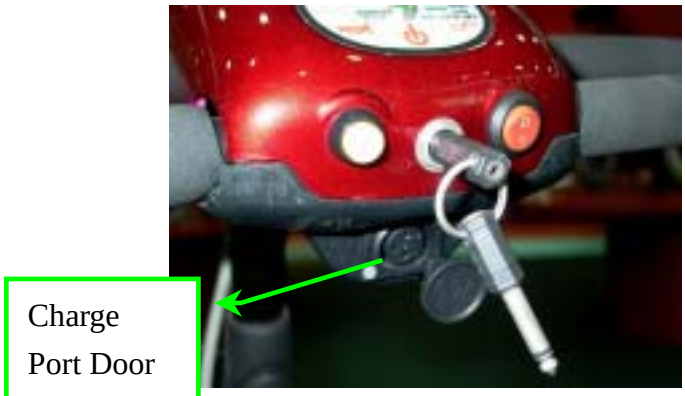
→Slide the charger port door open.(The direction of opening port door refers with the printing on the plastic cover- See Fig 19)

→Plug the XLR connector of the charger to the charger port.(See Fig 20)

→Plug the other end of power cord into a standard wall outlet.

→When charging is completed, fuel capacity indicator is shown.

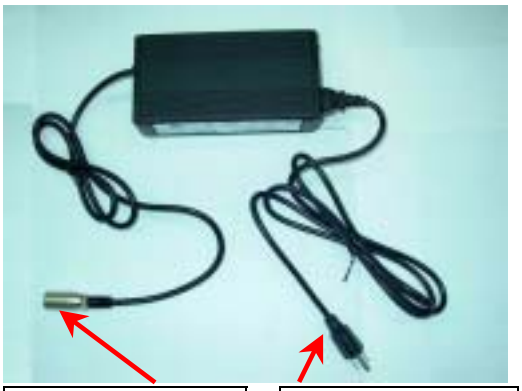
→Disconnect the charger power cord from the wall outlet when the batteries are fully charged.



(Fig 19)

Important!

Do not use for voltage input except the specified. Make sure your present voltage input (110V or 220V) and adjust manually. (See Fig 21)



(Fig 20)

(Fig 21)

1. Recharge battery only when the key is in off position. When inhibit is in low status, confirms battery recharge.
2. Battery capacity only goes higher when recharging is in progress, regardless the battery voltage.

Note:

→Always charge your batteries in well ventilated areas.

→The charger is intended for indoor use only. Protect from moisture.

→For maximum performance , it is recommended that you replace both batteries at the same time if the batteries are weak.

→If the vehicle will not be used for a long period of time, arrange to have the batteries fully charge for at least once every month.

According to the battery type and condition of the batteries, batteries usually can be fully charged in 4-10 hours. This will be indicated when the status light in the battery charger side panel turns green charging the battery longer than necessary will not harm the battery. We recommended that you charge the batteries for 8 to 10 hours after daily use. Do not charge the batteries for more than 24 hours.

MAINTENANCE & REPAIR

Your power scooter is designed for minimal maintenance. However, like any motorized vehicle it requires routine maintenance.

To keep your PT3 for years of trouble-free operation, we recommend you follow the following maintenance checks as scheduled.

DAILY CHECKS

1. Visually inspect the controller harnesses. Make sure that they are not frayed, cut or have any exposed wires.
2. Inspect the battery condition meter on the controller to determine if batteries need to be charged.

WEEKLY CHECKS

1. Check for proper tire inflation. Your power scooter comes with standard flat-free solid tires. If your power scooter comes with optional air tires, make sure to maintain the pressure of the tires between 30-35 psi.
2. Check the brakes. This test should be carried out on a level surface with at least three feet of clearance around your power scooter.

To check the brakes (your power scooter may move slightly when performing this test):

→Turn on the controller and turn down the speed and response adjustment knob.

→After one second, check that the battery condition meter remains on condition.

→Slowly push the finger lever control forward until you hear the parking brakes click. Immediately release the finger lever control. You must be able to hear each parking brake operate within a few seconds of lever release.

→Repeat this test of the brake for the back positions

SEMI-ANNUAL CHECKS

1. Check the motor brushes. We recommended that your authorized dealer inspect the bushes every six months, or sooner if your power scooter is not operating smoothly. If inspection determines excessive wear on the brushes, they must be replaced or motor damage will result.

Warning! Failure to maintain the brushes could void the power wheelchair warranty.

To inspect or replace the motor brushes:

1.Unscrew the motor brush caps. (See Fig 22)

2.Remove the brushes.

3.Inspect the brushes for wear. (See Fig 23)

4.Replace the brushes if necessary.

New Motor Brush Worn Motor Brush

(Fig 22)

Motor Brush caps

(Fig 23)

2. Inspect the state of the battery terminals every six months. Make sure that they are not corroded and the connections are tight. Periodically apply a thin film of petroleum jelly on the surface of terminals to guard against corrosion.

PERIODICAL CHECKS

1. Make sure to keep the controller clean while protecting it from rain or water. Never hose off your power scooter or place it in direct contact with water.
2. Keep wheels free from lint, hair, sand and carpet fibers.
3. Visually inspect the tire tread. If less than 1/32”, please have your tires replaced by your local dealer.
4. All upholstery can be washed with warm water and mild soap. Occasionally check the seat and back for sagging, cuts and tears. replace if necessary. Do not store your chair in damp conditions as this will lead to mildew and rapid deterioration of the upholstery parts.
5. All moving mechanism will benefit from simple lubrication and inspection. Lubricate using petroleum jelly or light oil. Do not use too much oil, otherwise small drips could stain and damage carpets and furnishings etc. Always perform a general inspection of the tightness of all nuts and bolts.
6. RHINO Nine detecting modes of RHINO (The power ON/OFF light will flash on when your scooter stay in error mode. You must count the number of the flash, and see the list to check what kind of error happened according to the number)

Number of Flashes	Fault	Impact on Scooter	Notes
1	Battery needs recharging	Will drive	Battery charge is running low. Recharge the batteries as soon as possible.
2	Battery	Drive	Battery charge is empty. Recharge the batteries. If the

	voltage too low	inhibited	scooter is left off for a few minutes, battery charge may recover sufficiently to allow driving for a short period of time.
3	Battery voltage too high	Drive inhibited	Battery charge is too high. If a charger is plugged in, unplug it or turn the Charge/Run switch to Run. Scooters powered by RHINO will charge the batteries when traveling down slopes or decelerating. Excessive charging in this manner may cause this fault. Turn the scooter power off and then back on again.
4	Current limit time out	Drive inhibited	The scooter has drawn too much current for too long, possibly because the motor has been over worked, jammed or stalled. Turn the scooter power off, leave for a few minutes, and then turn the power back on again. The controller has detected a shorted motor. Check the loom for shorts and check the motor. Contact your server agent.
5	Brake fault	Drive inhibited	Check that the park brake release lever is in the engaged position . The park brake coil or wiring is faulty. Check the park brake and wiring for open or short circuits. Contact your service agent.
6	Out of Neutral at Power Up	Drive inhibited	Throttle is not in neutral position when tuning switch key on. Return throttle to neutral, turn power off and back on again. Throttle may need to be re-calibrated Check throttle wiring.
7	Speed Pot Error	Drive inhibited	The throttle or its wiring is faulty. Check for open or short circuits. Throttle may not be correctly set up. Contact your service agent.
8	Motor Volts Error	Drive inhibited	The motor or its wiring is faulty. Check for open or short circuits. Contact your service agent.
9	Other Internal Errors	Drive inhibited	Contact your service agent.

Note:

If you experience any technical problems, it is recommended that you check with your local dealer before attempting to troubleshoot on your own.

The following symptoms could indicate a serious problem with your power scooter. Contact your local dealer if any of the following arises:

1. Motor noise
2. Frayed harnesses
3. Cracked or broken connectors
4. Uneven wear on any of tires
5. Jerky motion
6. Pulling to one side
7. Bent or broken wheel assemblies
8. Does not power up
9. Powers up, but dose not move