Quick Reference Guide

1. Controller
2. Joystick
3. Armrest
4. Cover
5. Drive wheel
6. Caster wheel
7. Footplate

Model No.	710 / MP3HD
Length	39"
Width	27"
Seat height (from ground)	21.25"~22.25"
Front wheel	9" FF
Rear wheel	12" Pne umatic tire
Weight Capacity	500 lbs
Speed	max 5 mph
Range	GP 24 - 25in
Turning Radius	31.5"
Battery	GP 24 x 2
Brakes	Intelligent, regenerative and electromagnetic brakes
Anti-tip	2 rear anti-tip wheels
Bumper	none
Unit Weight	281 lbs w/GP 24 batteries and seat
Charger	5A off-board 110-220v 50~60HZ

Welcome aboard your new powerchair. We wish to thank you for letting us improve your freedom and independence. This model has been designed with your practical needs in mind. It is equipped with modern high-tech electronics and special features for a more comfortable ride. Its safety and performance will provide you with years of excellent service and pleasure.

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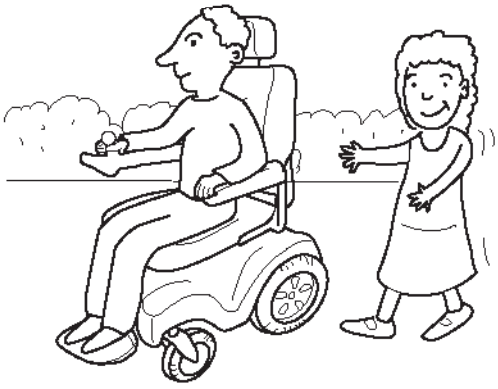
Failure to follow these instructions may result in damage to the power wheelchair or serious injury.

■ Practice before operating

Find an open area such as a park and have an assistant help you practice until you have confidence operating this vehicle.

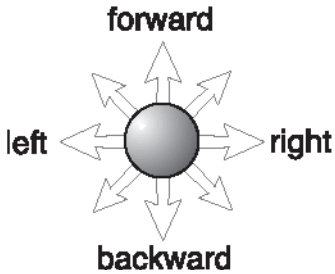


Make sure that the power is off before getting in or out of the seat. Set the speed control button according to your driving ability.
We recommend that you keep the speed control at the slowest position until you are familiar with the driving characteristics of this vehicle.

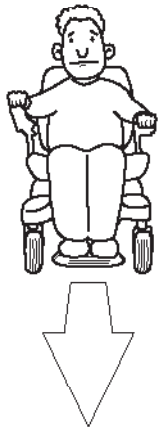
710

Stop, forward, and reverse operation practice

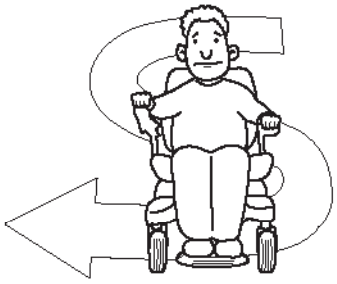
Push the lever in the direction you want to move and the chair will move accordingly.



Getting familiar with this vehicle



First, practice moving forward.
Be sure to set the speed to the lowest setting.



After becoming familiar with moving forward, practice making "S" turns.

Once you are familiar with "S" turns, practice moving in reverse. Note that for any speed control setting, the vehicle moves more slowly in reverse than forward.

General Warnings

Read and understand these Warnings and the entire manual before using your Power Chair.

Warning!

Failure to follow these instructions may result in damage to the vehicle or serious injury

Read Carefully

1. **DO NOT** exceed the specifications of this unit, modify this unit in any way, or use the unit for other than a powerchair.

2. **DO NOT** operate this unit if your health or medications you are taking cause you to feel dizzy, affect your vision, or in any way impact your thought process, coordination, or ability to safely operate the unit. Check with your physician should you experience any of these symptoms.

3. **DO NOT** operate this unit after consuming any alcoholic beverages.

4. **DO NOT** transfer "on" or "off" the unit until it is turned "off", completely stopped, and when it is on a stable and level surface

5. **DO NOT** attempt to ride over curbs or other obstruction higher than 1-1/2 inches.

6. **DO NOT** stop when going up an incline. If you must do so, always lean forward when you start to move. This will shift your center of gravity forward to prevent the unit from tipping over backwards.

7. **DO NOT** climb inclines that pose a concern for stability. The ability to climb or descend grades varies with the load rating of the powerchair. See the specification section for the maximum grade recommendation.

8. **DO NOT** drive across an incline or attempt to turn while on an incline.

9. **DO NOT** back down an incline or allow the unit to be backed down an incline.

10. **DO NOT** turn off the power while the unit is moving.

11. **DO NOT** operate on a ramp or incline unless the seat is in an upright position and the seatlift is in the lowest position.

12. **ALWAYS** remember vehicle capacity is limited to one occupant only. This unit is not approved for towing or for weight in excess of the published maximum.

13. **ALWAYS** drive straight up and down inclines.

14. **ALWAYS** turn the power off when the unit is not in use. This will not only extend the life of the battery but will keep the unit from being accidentally moved.

15. **ALWAYS** use a 3-prong grounded receptacle for the battery charger. If you must use an extension cord, use a UL approved 3-prong cord with 16 gauge wire.

16. **ALWAYS** reduce speed when making a turn.

17. **ALWAYS** use a positioning belt and keep arms and legs within the confines of the unit. Do not carry passengers or packages while operating the powerchair.

18. **ALWAYS** keep your feet on a footrest when operating the PowerChair.

19. **USE EXTRA CAUTION** when climbing inclines (ramps, hills, driveways, etc.)

20. **USE CAUTION** when braking on an incline or wet or slippery surfaces as the unit will take longer to come to a complete stop.

21. **USE CAUTION** when driving over soft, uneven or unprotected surfaces such as grass, gravel and decks.

22. **USE CAUTION** when operating the unit in bad weather or driving through water as moisture could affect the control system or other parts of the unit either temporarily or permanently.

23. **NEVER** hose off your PowerChair, use it in a shower or steam room, or allow it to come in direct contact with water.

24. **NEVER** charge batteries that may be frozen.

25. **SET** the speed control knob according to your driving ability and the environment in which you are going to operate it. We recommend that you keep the speed at the slowest (fully counter-clock-wise) until you are familiar with the driving characteristics of this vehicle.

26. **NEVER** occupy your PowerChair when transporting it in a motor vehicle. When transporting, make sure it is securely strapped with an approved tie-down system

27. **NEVER** drive on the roadway. Leave and join sidewalk curb-cuts perpendicular to the road. Always cross street intersections via the most direct route and make sure that you are visible to traffic.

28. **NEVER** use electronic radio transmitters such as CB's, walkie-talkies, portable computers or cellular phones while using the vehicle without first turning the vehicle off.

29. **NEVER** sit on the chair when in free wheel mode

Electromagnetic Interference (EMI) from Radio Wave Sources

The rapid development of electronics, especially in the area of communications, has saturated our environment with electromagnetic (radio) waves that are emitted by television, radio and communication signals. These EM waves 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 powerchairs and scooters are susceptible to electromagnetic interference (EMI). This 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 powerchairs.

Powerchairs and motorized scooters (in this text, both will be referred to as powered wheelchairs) may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios and cellular phones. The interference (from radio wave sources) can cause the powered wheelchair to release its brakes, move by itself or move in unintended directions. It can also permanently damage the powered wheelchair's control system. The intensity of the EM energy can be measured in volts per meter (V/m). Each powered wheelchair can resist EMI up to a certain intensity. This is called the "immunity level." The higher the immunity level, the greater the protection. At this time, current technology is capable of providing at least 20V/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 powerchair 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 powerchair 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 powerchair off as soon as it is safe.
4) Be aware that adding accessories or components, or modifying the powerchair, may make it more susceptible to interference from radio wave sources. (Note: there is no easy way to evaluate their effect on the overall immunity of the powerchair).
5) Report all incidents of unintended movement or brake release to the powerchair retailer, and note whether there is a radio wave source nearby.

TURN OFF YOUR POWER CHAIR AS SOON AS POSSIBLE WHEN EXPERIENCING THE FOLLOWING:

1. Unintenional motions.
2. Unintented or uncontrollable direction.
3. Unexpected brake release.

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

Your power chair has an immunity level of 20V / m which should protect against EMI.

Environmental Conditions

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

A) Rain, Sleet and Snow

If exposed to moisture, your powerchair is susceptible to damage of electronic or mechanical components. Water will cause electronic malfunction or promote premature corrosion of electrical and frame components.

B) Temperature

Some parts of the power chair are susceptible to changes in temperature. At extremely low temperatures, the batteries may freeze, and your power chair may not be able to operate. In extremely high temperatures, it may operate at slower speeds due to the controller's safety feature to prevent damage to the motors and other electrical components.

Features Diagram

In this section, we will acquaint you with the many features of your power wheelchair and how they work. Upon receipt of your power wheelchair, inspect it for any damage. Your power wheelchair consists of the following components.

1. Controller
2. Joystick
3. Armrest
4. Cover
5. Drive wheel
6. Caster wheel
7. Footplate

EMC Part: 55066800 - Rev.2 - 6/22/05

Terminology

Joystick: The device used to "move" the power chair.

Controller: The device that allows joysticks to function. Not all joysticks have a controller.

Armrests: Where arms can rest during time spent on power chair.

Cover: The plastic piece or pieces that cover the power chair base.

Footplate: Where feet rest during time spent on the power chair.

Anti-tip Wheels: Wheels that allow slight tipping, or prevent tipping while driving.

Drive Wheel: Wheels that move the power chair. These are the main wheels.

Caster Wheel: The front wheels.

Controller Harness: Joystick cable connected to the power base.

Free Wheel Levers: L-Shaped levers at the top rear part of the cover.

Freewheel Lever

WARNING: DO NOT use the power wheelchair without the presence of an attendant while the drive motors are disengaged! **DO NOT** disengage the drive motors when your power wheelchair is on an incline, as the chair could roll down on its own, causing injury!

Assembling the Powerbase Wheelchair

INSTALLING THE SEAT

1. Lift the seat and insert the 4 tubes that protrude from the seat base into the respective tubes that protrude upward from the frame.
2. Engage the hitch-pin through each of the 4 mounting tubes to lock the seat to the frame.
   Note: The hitch pins can be installed into the mounting tubes in either of two positions. The positions are 1 inch apart and allow the seat height to be set at either 22 inches or 23 inches.

INSERTING THE HEIGHT AND WIDTH ADJUSTABLE ARMRESTS

SETTING THE INITIAL WIDTH

1. Loosen the knobs on the armrest receiver.
2. Slide armrest into the horizontal receiver brackets.
3. Select desired width and tighten the knobs.

SETTING THE INITIAL HEIGHT

1. Locate and loosen the knobs on the vertical armrest holder.
2. Insert the armrest into the receiver.
3. Select desired height and tighten the knobs as firmly as possible.

INSTALLING THE CONTROLLER

1. Insert controller bracket tube into the receiver.
2. Adjust the controller to your desired length, then tighten it with the Allen wrench.
3. Insert the main plug into the controller socket.

Adjusting the Seat

SETTING THE SEAT BACK-ANGLE

There is a provision to set the seat back-angle to one of four positions:

a) Back vertical (90 degrees)

b) Back reclined by 10 degrees (100 degrees)

c) Back reclined by 15 degrees (105 degrees)

d) Back reclined by 30 degrees (120 degrees)

For reasons of operator forward visibility and vehicle stability, it is suggested that the most forward back-angle be choosen that is consistent with operator comfort.

RESETTING THE BACK ANGLE

1. Note that at the pivot point of the seat back a screw is positioned through the pivot that limits backward motion of the seat back. The left side pivot is imprinted with the stop angles. Observe the current stop position.
2. Remove the nut and screw from the stop position on each pivot.
3. If you need to recline the back more, reposition the stop screws into the stop positions 1 higher than was observed in (1). If you wish to reduce the back angle, reposition the stop screws in the positions 1 lower than was observed in (1)
4. Replace the nuts onto the stop screws to lock the setting.

Adjusting the Footplate

ADJUSTING THE HEIGHT

(After removing the seat and the cover)

1. Using a 10mm hex wrench, remove the bolts and nuts.
2. Slide the platform to your desired height.
3. Replace the bolts and nuts and be sure to tighten them.

ADJUSTING THE ANGLE

1. Flip up the foot plate for easy access and loosen the nut.
2. With an Allen key, simply turn the bolt counter-clockwise to increase the angle or clockwise to decrease it.
3. Be sure to re-tighten the nuts.

Adjusting the Joystick

ADJUSTING THE JOYSTICK LENGTH FORWARD OR BACKWARD

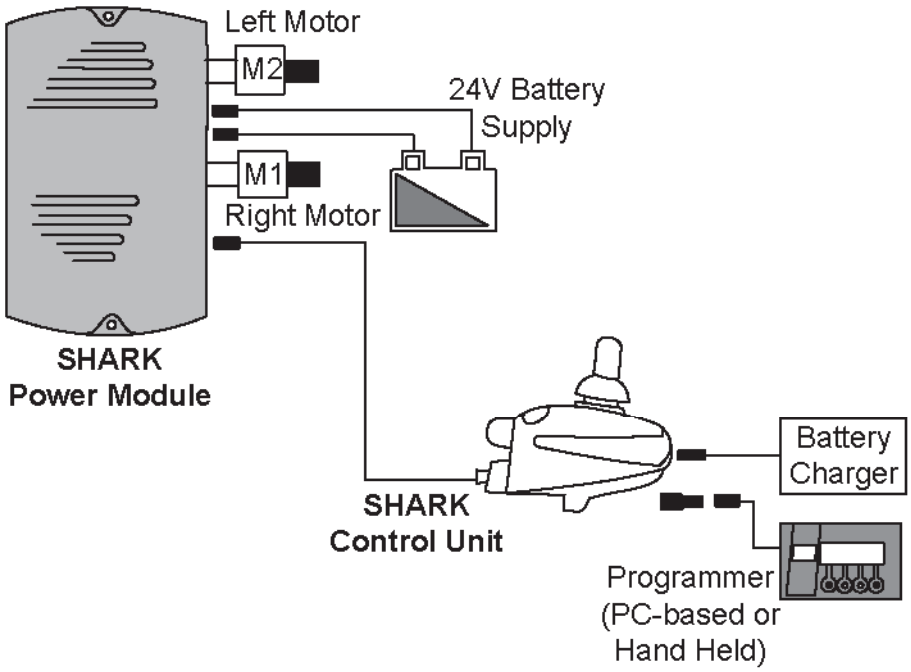
1. Flip up the armrest for easy access.
2. Loosen the bracket bolt with an Allen key. Slide the Joystick bracket in or out to your desired length.
3. Re-tighten the bolt.

MOVING THE JOYSTICK TO OTHER SEAT ARM

1. Disconnect the joystick cable.
2. Remove both sets of armrests, while the joystick still is secured on one of armrest.
3. Exchange both armrests.
4. Be sure to tighten the knobs.

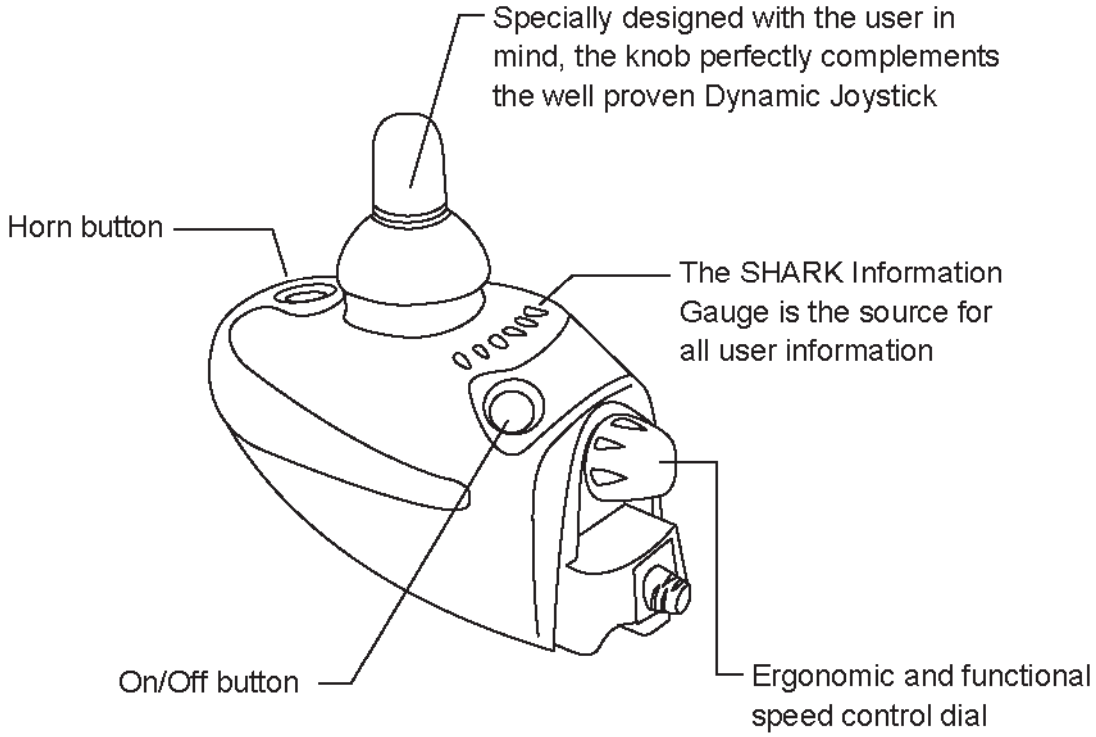
EMC Part: 55066800 - Rev.2 - 6/22/05

Dynamic Shark Controller Operation:

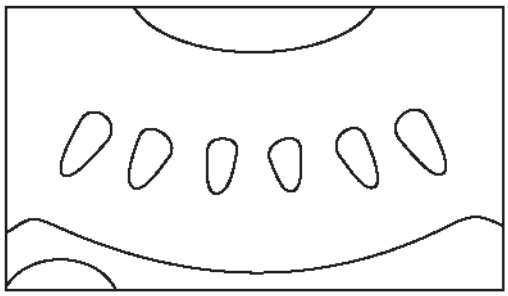


Shark Controller Introduction

The Shark Controller Unit



The Shark Information Gauge



The SHARK Information Gauge is the primary source of user feedback. It displays every possible status the SHARK may have, including;

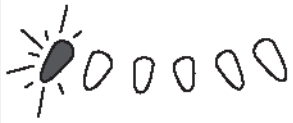
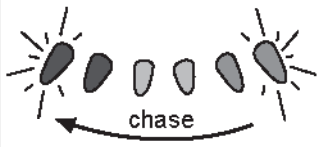
- SHARK Power ON

  True state-of-battery-charge, including notification of when the battery desperately requires charging.

  - **Any green** LED's lit indicates well-charged batteries.
  - If only **amber and red** LED's are lit, the batteries are moderately charged. Recharge before undertaking a long trip.
  - If **only red** LED's are lit, the batteries are running out of charge. Recharge as soon as possible.

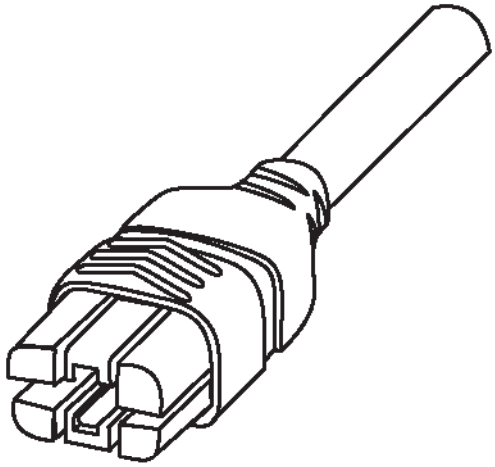
- SHARK Lock Mode countdown
- Program, inhibit or charge modes
- Fault indication (Flash Codes)

The following table indicates what the gauge will display for any given state.

Display	Description	This means...	Notes
	All LED's OFF	Power is OFF	
	All LED's ON steady	Power is ON	Less LED's imply a reduced battery charge.
	Left RED LED is flashing	Battery charge is low	The batteries should be charged as soon as possible.
	Right to left 'chase'	SHARK is being brought out of Lock mode	To unlock SHARK, press the Horn button twice within 10 seconds.
	Left to right 'chase' alternating with steady display	SHARK is in programming, inhibit and/or charging mode	The steady LED's indicate the current state of battery charge.
	Right GREEN LED is flashing	SHARK is in SPEED LIMIT mode	The current state of battery charge will be displayed at the same time.
	All LED's flashing slowly	SHARK has detected an Out Of Neutral At Power Up (OONAPU) condition	Release the joystick back to neutral.
	All LED's flashing quickly	SHARK has detected a fault	SHARK uses Flash Codes to indicate faults. Refer to the Diagnostics section for further information about fault diagnostics.

The Shark Controller Harness

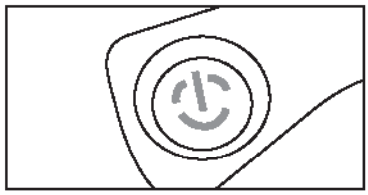
The SHARK Power Module communicates to the Control Unit through the SHARK Controller harness. The harness also supplies power to the Control Unit. The connector is ' keyed' and can only be plugged in one way - the control Unit symbol on top of the plug should be facing up.



Turning the Power ON

	Press the Power button. All indicators will light briefly. Either the current battery charge or Lock Mode will then be indicated.

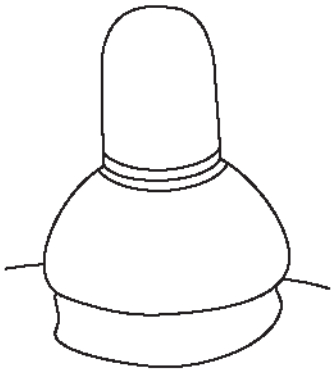
Turning the Power OFF

	Press the Power button. The LED's will turn off.

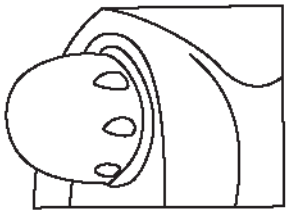
The Power button can also be used to turn SHARK off in case of an emergency.

After a certain amount of time with no joystick movement SHARK will automatically turn itself off.

Any button press (or joystick movement if Wakeup style has been set to 'Joystick or Button') will bring the system out of sleep mode.

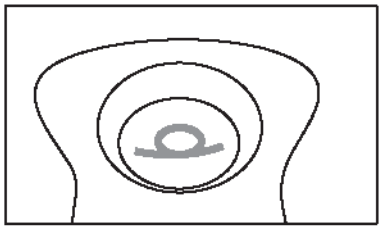


Moving the joystick will cause the powerchair to drive in that direction. The amount of joystick movement will determine the speed that the powerchair will move in that direction.



A user may adjust the top speed of their powerchair to suit their preference or environment by turning the speed control dial.

Simply turn the dial fully clockwise to travel at top speed when the joystick is pushed fully forward. The top speed progressively reduces as the dial is turned counter-clockwise.



Press the Horn button.

The horn will sound for as long as the button is pressed.

Flash codes indicate the nature of an abnormal condition directly from the SHARK Information Gauge. Without the use of any servicing tools, the condition can be simply diagnosed.

Flash Code	Description	
1	User Fault	Possible stall timeout or user error. Release the joystick to neutral and try again.
2	Battery Fault	Check the batteries and cabling. Try charging the batteries. Batteries may require replacing.
3	Left Motor Fault	Check the left motor, connections and cabling.
4	Right Motor Fault	Check the right motor, connections and cabling.
5	Left Park Brake Fault	Check the left park brake, connections and cabling.

Flash Code	Description	
6	Right Park Barke Fault	Check the right park brake, connections and cabling.
7	SHARK Control Unit Fault	Check the SHARK Controller Harness connections and wiring. Replace the Control Urit.
8	SHARK Power Module Fault	Check SHARK connections and wiring. Replace the Power Module.
9	SHARK Communications Fault	Check SHARK connections and wiring. Replace the SHARK Control Unit.
10	Unknown Fault	Check all connections and wiring. Consult a service agent.
11	Incompatible Control Unit.	Wrong type of Control Unit connected. Ensure the branding of the Power Module matches that of the Control Unit.

Pushing Your Wheelchair.

This model uses manual brake release levers, one attached to each motor. The levers are accessible from the rear of the vehicle, just behind the rear cover at the center bottom of the cover. The normal (drive) position for these levers is both UP. The levers are each moved down to manually release each of the motor brakes. If either of the Manual Brake Release Levers is set to the DOWN position, (released), the controller will enter an error condition with 9 bars flashing if drive is attempted. With the brakes manually released, the wheelchair can be pushed. It is important however that the controller power be set to OFF while pushing the vehicle or it will try to resist that pushing.

Batteries and Charging

Your powerbase wheelchair uses two long-lasting, 12-volt batteries. These batteries are sealed, maintenance free, deep-cycle batteries. Since they are sealed, there is no need to check the electrolyte (fluid) level. Deep-cycle batteries are designed to handle a deep discharge. Though they are similar in appearance to automotive batteries, they are not interchangeable. Automotive batteries are not designed to handle a long, deep discharge, and are also unsafe for use in power wheelchairs.

WARNING! Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

BATTERY BREAK-IN

To break in your power wheelchair new batteries for maximum efficiency:

1. Fully recharge any new battery prior to initial use. This will bring the battery up to about 90% of its peak performance level.
2. Run your power wheelchair about the house and yard. Move slowly at first, and do not stray too far until you become accustomed to the controls and break in the batteries.
3. Give the batteries another full charge of 8 to 14 hours and operate the power wheelchair again. The batteries should now perform at over 90% of their potential.
4. After four or five charging cycles, the batteries will top off at 100% charge and last for an extended period.

IMPORTANT INFORMATION ABOUT BATTERIES

A fully charged deep-cycle battery provides reliable performance and extended battery life. Keep your batteries fully charged whenever possible. Batteries that are regularly discharged, infrequently charged, or stored without a full charge may be permanently damaged, causing unreliable operation and limited battery life.

If you do not use your power wheelchair regularly, we recommend maintaining battery vitality by charging the batteries at least once a week.

Note: If you are storing a power wheelchair for an extended period of time, you may wish to block the unit up off the ground with several boards under the frame. This keeps the tires off the ground and prevents the possibility of flat spots developing.

If you intend to use public transportation while using your power wheelchair, you must contact in advance the transportation provider to determine their specific requirements.

Sealed Lead Acid and Gel Cell batteries are designed for application in wheelchairs and in other mobility vehicles. Generally, Sealed Lead Acid batteries that are marked as "Non-Spill" are safe for all forms of transportation such as aircraft, buses, and trains. We suggest that you contact your transportation provider to determine specific requirements of transportation and packaging.

If you wish to use a freight company to ship the power wheelchair to your final destination, repack the power wheelchair in the original shipping container and ship its batteries in separate boxes.

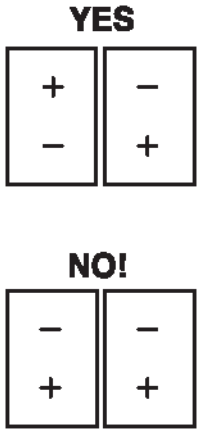
CHARGING YOUR BATTERIES

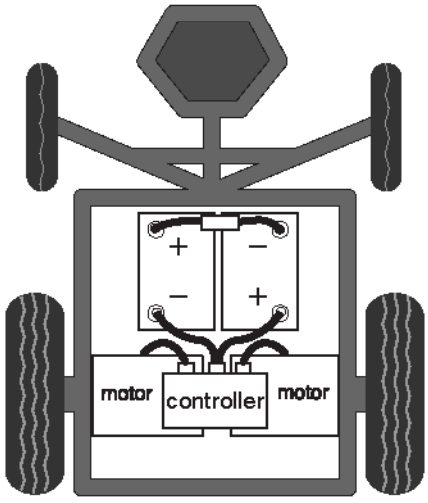
The battery charger is one of the most important parts of your power wheelchair. Optimize your power wheelchair performance by charging the batteries safely, quickly, and easily. Use only the charger supplied with the vehicle.

Battery Installation / Replacement.

Your service provider should perform battery installation and or replacement whenever this is possible. The batteries are heavy and awkward to handle. Old batteries must be disposed of in accordance with EPA regulations. Do not keep old batteries; they can be dangerous to health, property and the environment.

(a) Remove Seat
(b) Remove Top Cover.
(c) If replacement, pull back the black terminal cover of the forward-most battery terminal and unbolt the cable from that terminal. Use extreme caution to ensure that tools not contact two terminals at the same time.
(d) Pull back the red terminal cover of the forward-most battery terminal and unbolt the cable from that terminal. Remove the fused battery link.
(e) Pull back the black terminal cover of the rear-most battery terminal and unbolt the black cable from that terminal.
(f) Pull back the red terminal cover of the rear-most battery terminal and unbolt the red cable from that terminal.
(g) Release the battery hold-down straps and lift the batteries out of the vehicle.
(h) Set the replacement batteries into the vehicle as shown in diagram.
(i) Connect the fused battery joining cable (black terminal cover-end) to the forward-most negative (-) battery terminal. Tighten terminal bolt to approximately 30-inch/lb. Slip terminal cover over battery terminal.
(j) Connect the fused battery joining cable (red terminal cover-end) to the forward-most positive (+) battery terminal. Tighten terminal bolt to approximately 30-inch/lb. Slip terminal cover over battery terminal.
(k) Connect the black controller power cable to the rear-most negative (-) battery terminal. Tighten terminal bolt to approximately 30-inch/lb. Slip terminal cover over battery terminal.
(l) Connect the red controller power cable to the rear-most positive (+) battery terminal. Tighten terminal bolt to approximately 30-inch/lb. Slip terminal cover over battery terminal.





▶Three Year Limited Warranty◀

Three Year Warranty

For three years from the date of purchase, Electric Mobility will repair or replace at our option to the original purchaser, the main frame if found upon examination by an authorized representative of Electric Mobility to be defective in material and/or workmanship.

One Year Warranty

For one year from the date of purchase, Electric Mobility will repair or replace at our option to the original purchaser, any of the following parts found upon examination by an authorized representative of Electric Mobility to be defective in material and/or workmanship:

- Electronic controller and joystick modules
- Motor/gear box assembly
- Main frame sub-assemblies (forks, torsion bar, metal seat base, foot rest)
- Plastic components except body shell
- Rubber components except tires
- Bearings and bushings
- Casters and anti-tip wheels

One Year Warranty Exceptions:

Motor: Commutator damage as a result of not replacing motor brushes after heavy wear to the brushes.
Brushes are wear items and are not warranted.

Brakes: One year warranty for electrical functionality of the brake.
Brake pads are wear items and are not warranted.

Batteries: Battery warranties are covered by the battery manufacturer.
Battery warranty is not covered by Electric Mobility.
Note: Warranty service can be performed by EMC authorized sevrice center.

Warranty Exclusions:

- Plastic body shell is a wear item and is not warranted.
- Batteries are warranted by the battery manufacturer and not by Electric Mobility.
- Tires and tubes.
- Seating and upholstery
- Damage caused by: battery fluid spillage or leakage; abuse, misuse, accident, negligence; improper operation, maintenance or storage; commercial use or use other than normal; repair and/or modifications made to any part without prior consent by Electric Mobility, or any circumstances beyond the control of Electric Mobility.
- Labor, service calls, shipping, and other charges incurred for repair of the product unless specifically authorized by Electric Mobility.
- There is no other expressed warranty.

We wish you a safe and comfortable riding experience!

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