

# OWNERS MANUAL

## Pioneer 3 and 4



# WELCOME

Congratulations on the purchase of your new Pioneer 3 or 4 power scooter. We at MERITS believe that you have chosen a product that will enhance your quality of life by allowing you the freedom to go places you have always wanted to go.

This unique and user-friendly Pioneer 3 or 4 is designed for maximum maneuverability even in narrow and tight spaces. With your Pioneer 3 or 4 , you will enjoy the freedom to move around your home, visit with your friends and neighbors or just enjoy the outdoors.

Happy motoring and welcome to MERITS family!

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Your Pioneer 3 or 4 is a battery operated personal mobility vehicle. Therefore, it is required to exercise caution and consideration when operating it to ensure your own personal safety and that of others around you. The following are the rules for safe operation of your Pioneer 3 or 4.

1. Make sure that the unit is off before getting in or out of it. This will eliminate the possibility of accidentally activating the speed engage lever and causing injury to yourself or others.
2. Always use a seatbelt if you have one and keep your arms on or inside the armrests and feet on the scooter at all times.
3. Set the speed 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 position until you are familiar with the driving characteristics of this vehicle. We also recommend that you use the slowest speed when using your Pioneer 3 or 4 indoors.
4. Always climb or descend grades perpendicular to the slope. Never drive across the slope.
5. Do not attempt to climb or descend grades greater than 12 degrees.
6. Do not carry any passengers under any circumstance. Otherwise, your Pioneer will become unstable and may result in personal injury.
7. Never drive on the roadway.
8. Always cross street intersections via the most direct route making sure that you are visible to motor traffic.
9. Leave and join curb-cuts perpendicular to the road.
10. Use caution when driving over soft, uneven or unprotected surfaces such as grass, gravel and decks.
11. Never occupy your Pioneer 3 or 4 when transporting it in a motor vehicle. Make sure that it is securely strapped with an approved tie-down system.
12. Do not operate your vehicle if it isn't functioning properly.

13. Do not connect, or allow someone else to connect, any electrical or mechanical device to the vehicle. Failure to do this may result in injury and will void the Warranty.
14. 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.
15. Check with your physician if you are taking any medication that may affect your judgment and ability to operate your Pioneer 3 or 4.

**TURN OFF YOUR PIONEER 3 OR 4 AS SOON AS POSSIBLE WHEN EXPERIENCING THE FOLLOWING:**

1. Unintentional motions.
2. Unintended or uncontrollable direction.
3. Unexpected brake release.

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



**WARNING: Radio wave sources may affect powered wheelchair control**

Radio wave sources, such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones, can affect powered wheelchairs. Following the warnings listed below should reduce the chance of unintended brake release or powered wheelchair movement which 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 wheelchair 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 wheelchair OFF as soon as it is safe.
4. Be aware that adding accessories or components, or modifying the powered wheelchair, may make it more susceptible to interference from radio wave sources (Note: There is no easy way to evaluate their effect of the overall immunity of the powered wheelchair).
5. Report all incidents of unintended movement or brake release to the powered wheelchair manufacturer, and note whether there is a radio wave source nearby.

**Important Information**

1. 20 volts per meter (V/m) is a generally achievable and useful immunity level against interference from radio wave sources (as of May 1994) (the higher the level, the greater the protection).
2. The immunity level of the Pioneer 3 and 4 is not known.

**CAUTION: IT IS VERY IMPORTANT THAT YOU READ THIS INFORMATION REGARDING THE POSSIBLE EFFECTS OF ELECTRO MAGNETIC INTERFERENCE ON YOUR POWERED WHEELCHAIR.****Electromagnetic Interference (EMI) From Radio Wave Sources**

Powered wheelchairs and motorized 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 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 wheelchair's control system. The intensity of the interfering 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 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. This powered wheelchair model as shipped, with no further modification. The immunity level of the Pioneer 3 and 4 is not known.

The environmental conditions may affect the safety and performance of your Pioneer scooter. 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 Pioneer 3 or 4 is susceptible to damage to electronic or mechanical components. Water will cause an electronic malfunction or promote premature corrosion of electrical components and frame.

## (B). Temperature

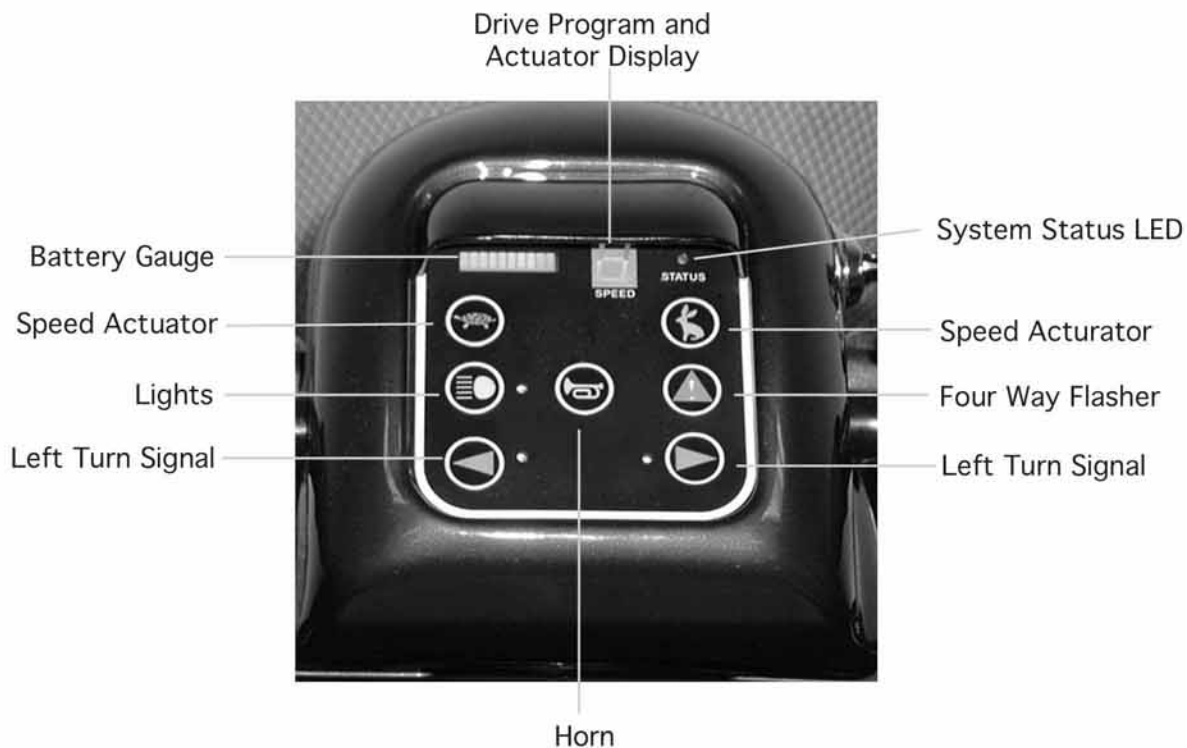
Some of the parts of the Pioneer 3 and 4 are susceptible to change in temperature.

At extremely low temperatures, the batteries may freeze and your Pioneer 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.

Only drive within your control limitations. Loss of control of your scooter could result in serious injury to yourself or others. If your speed becomes difficult to control, release the speed engager lever and your scooter will come to a complete stop. Only use the on/off switch to stop your scooter in an emergency.

**Speed Actuator:** Speed Actuator regulates the speed of the scooter. Start at the slowest speed until you feel confident with controlling your scooter safely. Push the turtle Speed Actuator to decrease the speed. Push the rabbit Speed Actuator to increase the speed.

**Turn Signals:** If your scooter is equipped with turn signals, push either the left or the right turn signal button to activate the signal. To turn off the signal, simply press the same turn signal button again.



**Forward/ Reverse:** To move forward, push the right side of the speed engage lever forward. To move in reverse, push the left side of the speed engage lever forward.

**Battery Gauge Indicator:** Indicates the charge level of your batteries. If the battery gauge lights decrease to the left, the batteries need to be charged as soon as possible. If the battery gauge lights increase to the right, the batteries are fully charged. As the lights move to the left, it indicates the depletion level.



**Horn:** The horn is activated by pressing the horn button on the control panel. Releasing the horn button deactivates the horn. The horn is useful to warn people or animals that you are coming towards them. You may also find it helpful to use when rounding blind corners or backing up.

**Light Switch:** To turn "ON" the head light press down on the Push Button switch. The red lamp inside the switch will light while the head light is "ON". To turn "OFF" the head light press the Push Button switch again. The light will be off.

**Four Way Flasher:** To activate the four way flasher, press down the push button located on the right side of the panel. The lamp inside the switch will blink. To turn off, press the Push Button again.

**Key Switch:** The key-switch operates two functions: ON and OFF. "OFF" position (turn the key straight up) "ON" position (turn the key to the forward position, the Scooter is ready to operate).

**Brakes and Throttle control lever:** Whenever the speed engager lever is moved out of the neutral position, the electromagnetic brake will automatically release and your scooter will move. When the speed engager lever is released, it will return to the neutral position and the scooter will decelerate and come to a complete stop. The parking brake will then engage preventing further movement of your scooter. Your unit is equipped with a programmable controller that has a high peddle disable safety feature. This will prevent unexpected acceleration of the scooter if the speed engage lever is activated the same time you turn the key "ON". To reset the controller, release the speed engage lever and turn the key "OFF" for a couple of seconds and then turn it back "ON".

**If your scooter ever moves in an unexpected manner, release the speed engager lever and turn off the power.**

## **Seat Adjustment**

### **Seat Height:**

- Turn the power key off while making any adjustments.
- Pull the swivel lever up and lift the seat straight up and off of seat post.
- Remove rear plastic cover.
- Unfasten the Velcro material by slightly pulling the cover out away from the frame and lift cover straight up and off the scooter.
- Remove the nut and bolt from the seat post assembly.

**Reassemble by reversing the previous instructions.**

### **Back rest angle:**

- Fold the backrest for easy access.
- Turn the screw counter-clock wise to increase the angle or clockwise for more up right position
- Tighten the lock nut.

## Seat swivel positions:

The seat swivel lever (located on the side of the seat) allows the seat rotation in position every 45 degrees. You may use this feature to make it easier to transfer in and out of the seat.

- Pull the swivel lever up to unlock and rotate the seat.
- Pivot the seat to the position you desire.
- Release the lever and try to turn the seat back and forth slightly allowing the lever to lock into position.



Seat Lever

## Armrest angle:

• Flip the armrest up to expose the adjustable bolt and loosen the lock nut. Turn the bolt in to lower the angle of the armrest; turn the bolt out to raise the angle of the armrest to your desired angle. Tighten the lock nut.

## Armrest width:

- Locate the Width clamping nut (follow the armrest support down to the base of the seat)
- Loosen the clamping nut by turning counter-clock wise.
- Pull the armrest in or out to reach your desired position.
- Tighten the Width clamping nut.

## Armrest height:

- Locate the Height clamping nut (behind the arm rest).
- Loosen the Width clamping nut by turning counter-clock wise.
- Pull up or push down the armrest to reach your desired position.
- Tighten the Height clamping nut.



In this section, we will acquaint you with the many features of your Pioneer 3 or 4 scooter and how they work. Upon receipt of your scooter, inspect for any damage. Your scooter consists of a frame assembly, drive train assembly, seat assembly, tiller assembly, battery charger, and owner's manual. Contact your sales agent if any questions arise.





## CHARGING YOUR BATTERIES

Your scooter is equipped with maintenance free, sealed lead acid batteries. These batteries require no maintenance other than to ensure that they are properly charged. If other batteries are used, check with your battery supplier for proper battery care and maintenance instructions.

Your scooter comes supplied with two battery cables. Attach the red wire of the first cable to the (+) terminal of the first battery. Attach the black wire of the first cable to the (-) terminal of the first battery. Repeat this procedure for the second battery.

### **Warning!**

Use of a non-grounded receptacle could result in an electric shock

- Park the scooter near a 3 prong grounded electrical receptacle.
- Turn the scooter power (key) off while charging the batteries.
- Check the charger indicator lights (Located on the right side of the shroud). You will find two lights; one will be red (indicating the charger is working properly) and one that is white (indicating that the batteries need to be charged). When the white light turns to a green light (indicating that the batteries are fully charged) you can unplug the charger from the wall receptacle. It is recommended that you charge the batteries after daily use, regardless of the battery depletion level. We do not recommend that you leave your scooter continuously charging because there is no added benefit after the batteries have reached their full charge.

## Operating

Make sure the free-wheel lever is in the drive (up) position to prevent the scooter from rolling. Never sit in your scooter if it's in "Free-wheel" mode.

Manual free-wheel Mode: Your scooter features a "free-wheel" mode for manual operation. To activate manually, turn the key switch OFF and locate the freewheel lever under the rear cover on the right side of the drive train. Push lever to the "down" position to disengage the brake. Pull the lever to the "up" position to engage the brake. When the scooter is in manual free-wheel mode, you will have no brakes. You will be unable to operate the scooter. When you wish to push your scooter for a short distance, you may put it into Manual free-wheel mode.

Getting in and out: Your scooter is designed to make getting in and out of the scooter as easy as possible. Make sure the scooter is on a level surface and the key switch is turned OFF. If necessary, raise the armrest to give you maximum space to transfer in or out of the seat. Once transfer is complete, return the armrest before operating the scooter.

**Never operate your scooter without your feet being placed on the scooter platform. Driving your scooter without your feet on the platform could cause serious bodily injury.**

## Disassembly & Reassembly

Your scooter is made up of 8 pieces: tiller, front section, rear section with drive train, rear chassis cover, seat, plus basket and two batteries.

## To Disassemble the Scooter:

- Turn the key off.
- Remove the front basket by lifting it off the mounting post.
- Remove the seat by pulling it straight up and out of the seat post assembly while pulling the swivel lever up.
- Remove rear plastic cover. Unfasten the Velcro material by slightly pulling the cover out away from the frame. Lift cover enough to unplug the light connection located under the left side of the cover. Lift plugs before pulling apart.
- Unplug all wire connections to the drive train, control box, batteries and charger, Squeeze the clips on the plugs before pulling apart.
- Remove batteries by unfastening the Velcro straps and lifting batteries out.
- Remove the two quick release pins which fasten the front section and rear section with drive train by pulling it straight out.
- Unfasten the lock nuts, then loosen the set screws.
- Standing at the side of the unit, hold the seat post in one hand and the front of the scooter in the other hand. Slightly lift the seat post and pivot the front end forward. Remove the front section from the rear section with drive train by lifting straight up.

## To Reassemble the Scooter:

- Holding the front section in one hand and the seat post in the other hand, place it onto the brackets by aligning them into the sockets.
- Lower the front of the scooter onto the floor.
- Tighten the set screws and Fasten the lock nuts.
- Insert the quick release pins through the hole.
- Place both batteries into the battery trays and fasten them with the Velcro straps.
- Connect all of the connectors to the drive train, control box, batteries, and charger.
- Place the rear plastic cover over the seat post and let it rest on chassis. Plug in the light connection located under the left side of the cover. Align the cover over the frame and press down firmly onto the frame.



- Place the seat onto the unit by guiding it into the seat post hole while pulling up the swivel lever. Make sure the seat is inserted all the way and that it locks in the forward position.
- Place the front basket onto the square post in front of the tiller.

**Always have your scooter turned "off" prior to servicing or inspection of your scooter.**

**Tire:** It is recommended that you replace the tire when the tread depth is less than 1/32 of an inch.

**Electrical Connections:** Check the battery terminals and all plug connectors to make sure that there is a tight connection. If the battery terminals are corroded, disconnect the leads and clean all connections with a soft wire brush. Reconnect the leads and apply a protective coating to prevent corrosion.

**Hardware Inspection:** Make sure that all fasteners (bolts, clips, etc.) are present and secure. Replace any missing fasteners and tighten any that have become loose.

## Troubleshooting Hints

If your scooter is not moving properly, check the following:

- Make sure the key is in the "ON" position.
- Make sure that the circuit breaker located on the control box is not "tripped".
- Make sure the fuse located on the charger is not "blown".
- Make sure that the brake release is not in the "free wheel" mode.
- Make sure that the battery charger is not plugged into an electrical outlet.
- Make sure that all connections are tight.
- Your unit is equipped with a programmable controller that has a high peddle disable safety feature. This prevents unexpected acceleration of the scooter, if the speed engage lever is activated the same time you turn the key "ON". To reset the electrical program controller, release the speed engaged lever and turn the key "OFF" for a couple of seconds and then turn it back "ON".



## SPECIFICATIONS

<b>Model</b>	<b>Pioneer 3</b>	<b>Pioneer 4</b>
<b>Overall Dimensions</b>		
Length	47 in	47 in
Width	25 in	25 in
Top Speed	5 mph	5 mph
Load Capacity	350 lbs	350 lbs
<b>Wheel Sizes</b>		
Drive Wheels	10 in	10 in
Front Wheel	10 in	10 in
<b>Brake</b>	regenerative and electromagnetic brake	
<b>Charger</b>	Portable, 110-220 V, 50-60 Hz, 4 amp	
<b>Battery Type</b>	2 (two U1 (31 AH) sealed lead acid	

**Life Time Warranty:** Scooter frame

We will repair the frame with new or refurbished parts, free of charge, in the U.S.A. in the event of defective materials or workmanship.

**One Year Limited Warranty:**

- Electronic Controller
- Drive Train Components

MERITS Health Products Inc. will repair these products with new or refurbished parts, free of charge, in the U.S.A., for one (1) year from the original date of purchase in the event of defective materials or workmanship.

Excluded from the One Year Limited Warranty are the following items:

- Motor brushes
- Brake pads

**Six Month Limited Warranty:**

- Plastic parts
- Rubber parts
- Bearings
- Other parts not specifically identified above.

MERITS Health Products Inc. will repair these products with new or refurbished parts, free of charge, in the U.S.A., for six (6) months from the original date of purchase in the event of defective materials or workmanship.

**Warranty Exclusions:**

- ABS plastic shrouds
- Batteries (batteries are warranted by the battery manufacturer)
- Tires and Tubes

This warranty is extended only to the original purchaser. Your original receipt will be necessary as proof of purchase before any warranty performance is rendered.

This warranty only covers failures due to defects in materials or workmanship which occur during normal use and does not cover damage that occurs in shipment or failures which are caused by products not supplied by MERITS Health Products Inc, or failures resulting from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, commercial use or by anyone other than an authorized Dealer, or damage that is attributable to acts of God.

MERITS Health Products Inc shall not be liable for incidental or consequential damages resulting from the use of this product or arising out of any breach of this warranty.



# SAFETY INSTRUCTIONS

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 talkies," security, fire, and police transceivers, cellular telephones, and other personal communication devices. \*\*NOTE: Some cellular telephones 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 tools. These usually have the antenna mounted on the outside of the vehicle.
  3. Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.
- NOTE: 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 powered wheelchair.

## **Powered Wheelchair Electromagnetic Interference (EMI)**

Because EM energy rapidly becomes more intense as one moves 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 powered wheelchair's control system while using these devices. This can affect powered wheelchair movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the powered wheelchair.

## **WARNINGS**

Electromagnetic interference (EMI) from source such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones can affect powered wheelchairs. Following the warnings listed below should reduce the chance of unintended brake release or powered wheelchair 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 cellular phones, while the powered wheelchair or motorized 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 wheelchair OFF as soon as it is safe.
4. Be aware that adding accessories or components, or modifying the powered wheelchair or motorized scooter, may make it more susceptible to EMI (Note: There is no easy way to evaluate their effect on the overall immunity of the powered wheelchair).
5. Report all incidents of unintended movement or brake release to the powered wheelchair or scooter manufacturer, and note whether there is a radio wave source nearby.

## **Important Information**

1. 20 volts per meter (VM) 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 the Pioneer 3 and 4 is unknown.