

Owner's Manual



► PowerPack(P001)

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■ General Instructions

1. Powerpack complete with battery weighs 29 lbs (13.2kg). Please refer to the wheelchair manufacturer's handbook for the maximum user weight limits of the wheelchair.
2. Powerpack is not to be used on wheelchairs where the combined weight of user plus Powerpack exceeds 300 lbs (136kg).
3. Please read instructions carefully before unpacking the Powerpack or attempting to install onto the wheelchair.
4. As the Powerpack and its associated components are relatively heavy and installed at a low level, great care must be taken not to strain when lifting and assembling onto the wheelchair.
5. Remove Powerpack from the box first, then remove battery. Do not remove both together, as the battery may slip causing damage or personal injury.
6. Always install the Powerpack onto the wheelchair first, and then install the battery.
7. Always remove battery from Powerpack before disassembling from wheelchair.
8. Always ensure the on/off key is in the OFF position when connecting or disconnecting the battery.
9. Always ensure the on/off key is in the OFF position before anyone transfers into or out of the wheelchair.
10. Never operate the Powerpack without the chair being occupied.
11. The Powerpack is very simple to install and use. However, if you have any problems regarding installation and/or use, please contact your medical equipment provider.
12. Refer to the "Installation Instructions" of this handbook and the wheelchair manufacturer's instructions (wheelchair handbook) before using the Powerpack for the first time.

13. The Powerpack is capable of climbing small inclines without assistance. Larger inclines SHOULD NOT be attempted without the assistance of an attendant. Depending on the occupant's weight and the gradient of the incline, some inclines may be too steep for the powerpack to attempt. Please use caution before attempting any size incline.
14. The Powerpack is not designed to climb steep gradients, nor take you anywhere under power assistance that you would not normally be able to push the chair without using any power assistance. Please remember that negotiating down an incline can sometimes be more difficult than climbing up the incline. Therefore, it's strongly recommended to install attendant controlled brakes to your wheelchair if moderately steep or long slopes are likely to be negotiated.
15. Range is dependant on various factors, such as weight of occupant, number of inclines and gradient of inclines encountered on your journey. In addition, the amount of assistance the attendant gives the Powerpack will affect the range.

■ Installation Instructions

1. First check to ensure you have all components as listed below (Fig 1):



Fig 1. Powerpack Installation Components

1. Powerpack with lifting strap
2. Battery pack
3. Crossbar
4. Mounting brackets (left hand and right hand)
5. Upper controller with controller bracket
6. Holding strap

2. Install mounting brackets to the bottom of the wheelchair frame (Fig 2).
Keep the two mounting brackets at the same axle position on each side of the frame (Fig 3).



Fig 2.

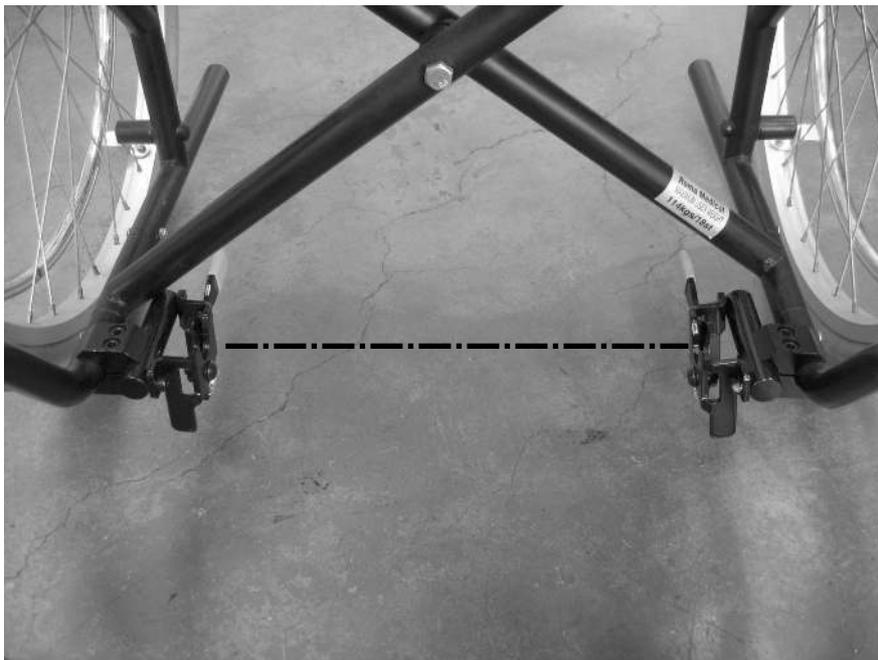


Fig 3.

3. Insert the larger crossbar into the crossbar housing (Fig 4). Then lock it and the gearbox together with the four screws. Do not tighten the wing nut at this stage. Insert the smaller crossbar into the larger crossbar (Fig 5).

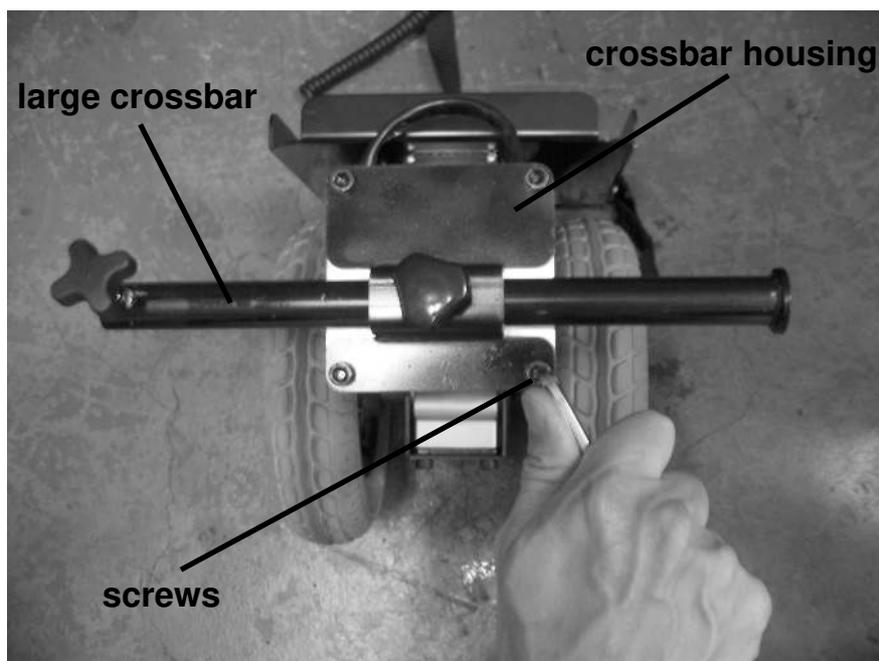


Fig 4.

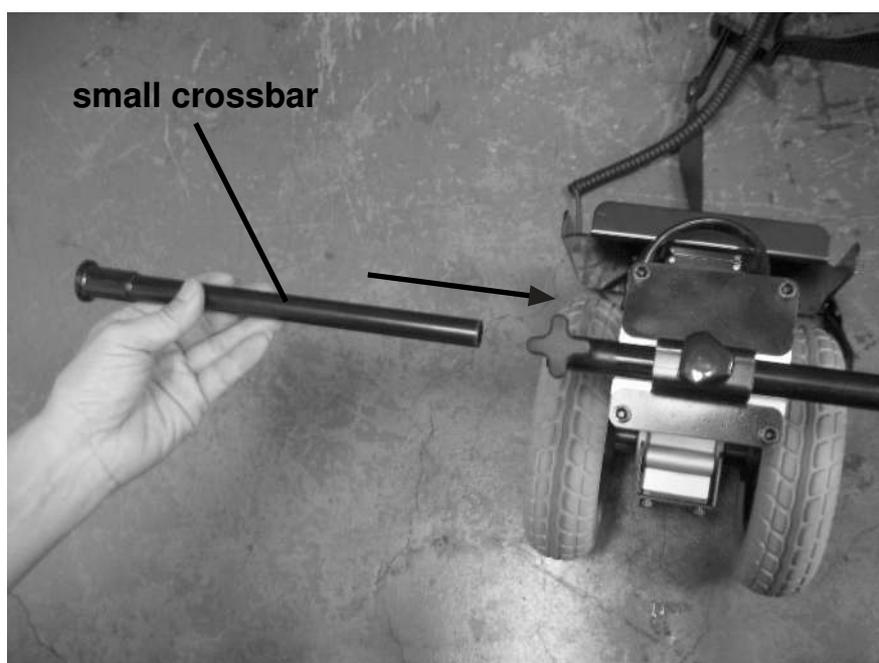


Fig 5.

4. Insert the crossbar between the two mounting brackets (Fig 6 and 7), and confirm the mounting brackets are locked. Secure the crossbar with the wing nut (Fig 8).

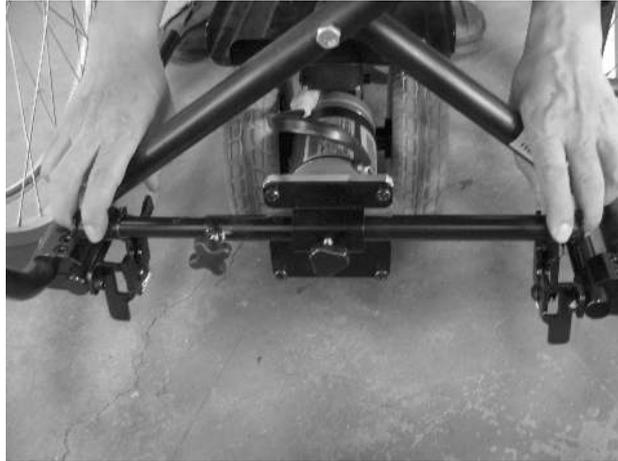


Fig 6.



Fig 7.

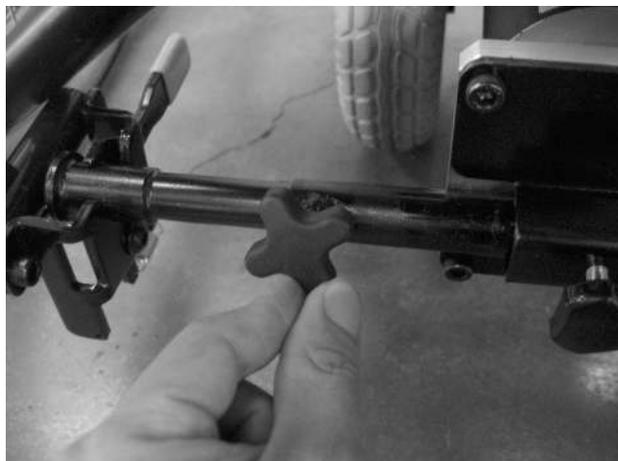


Fig 8.

5. Confirm the Powerpack is at the central position of the wheelchair frame (Fig 9). Tighten the wing nut (Fig 10).

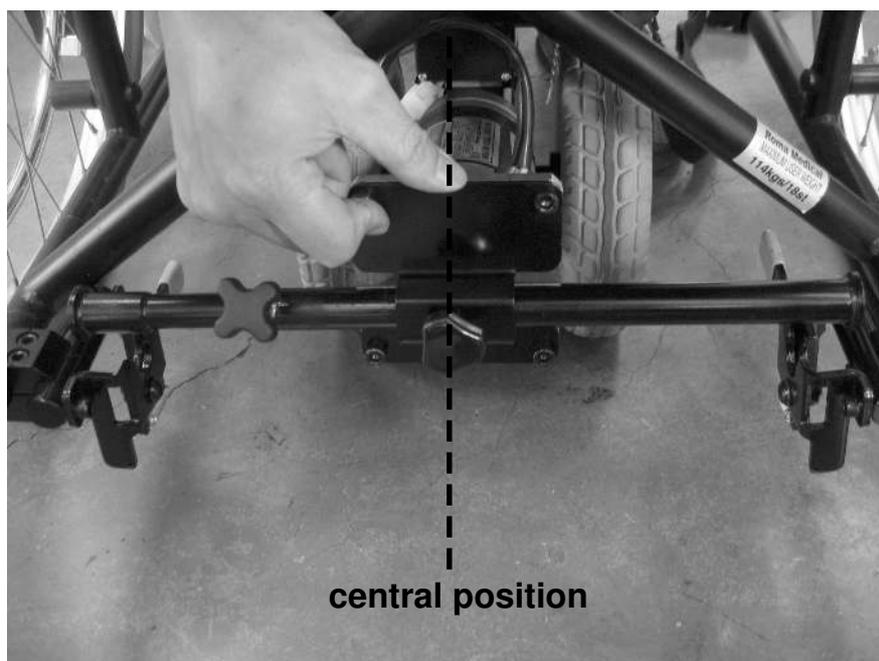


Fig 9.



Fig10.

6. Fit the controller brackets to the handle of the frame of the wheelchair (Fig 11). Be sure the occupant doesn't touch the controller when the occupant reclines the backrest.

Adjust the upper controller's angle and tighten the screws (Fig 12).



Fig 11.



Fig 12.

7. Place the battery pack on the Powerpack (Fig 13).
Connect the battery plug and socket to the plug and socket of the controller box (Fig 14).



Fig 13.



Fig 14.

8. Connect the socket from the controller box to the hand controller (Fig 15).



Fig 15.

9. Take the two holding straps and attach them to the bottom of the wheelchair frame (Fig 16). Let the tip of the holding straps cross the chain (Fig 17). Tighten the holding straps and bind them (Fig 18).

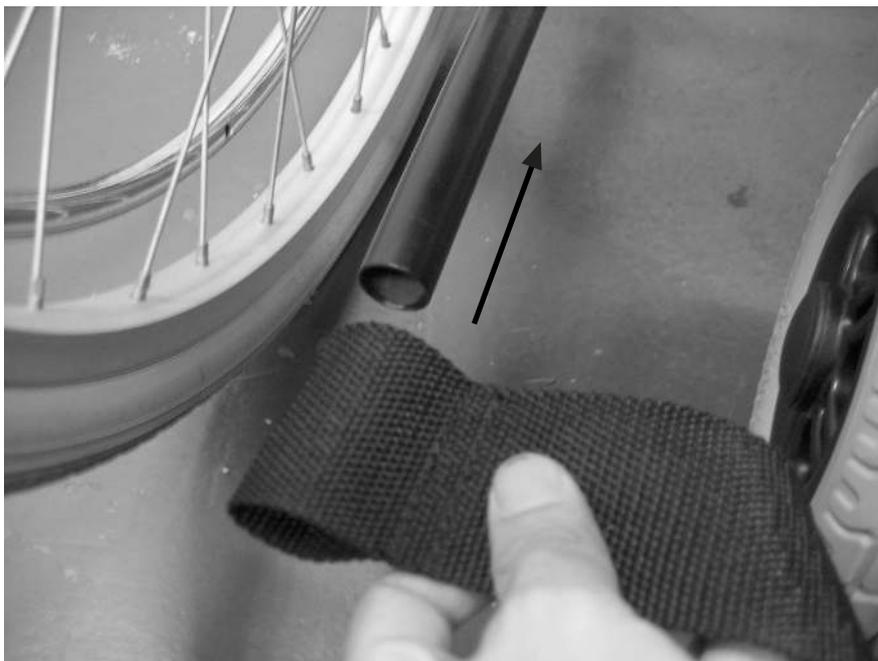


Fig 16.

Notice - Holding straps cannot be installed on all models of wheelchairs.



Fig 17.



Fig 18.

■ Powerpack Specifications



Model No.	P001
max. speed up to	3.4 mph / 5.5 kph
range up to	10mi / 16 km
motor	DC 12 V / 75 W / 280 W
battery	12 V / 20 AH
charger	1.5 A off-board
drive wheel	8" PU tire x 2 pcs
capacity	300 lb / 136 kg
dimension	300 L x 200 W x 245 H
weight-base	14 lb / 6.4 kg
weight-battery	15 lb / 6.8 kg
weight-total	29 lb / 13.2 kg
fits wheelchair width	14 in ~ 20 in

■ Controls

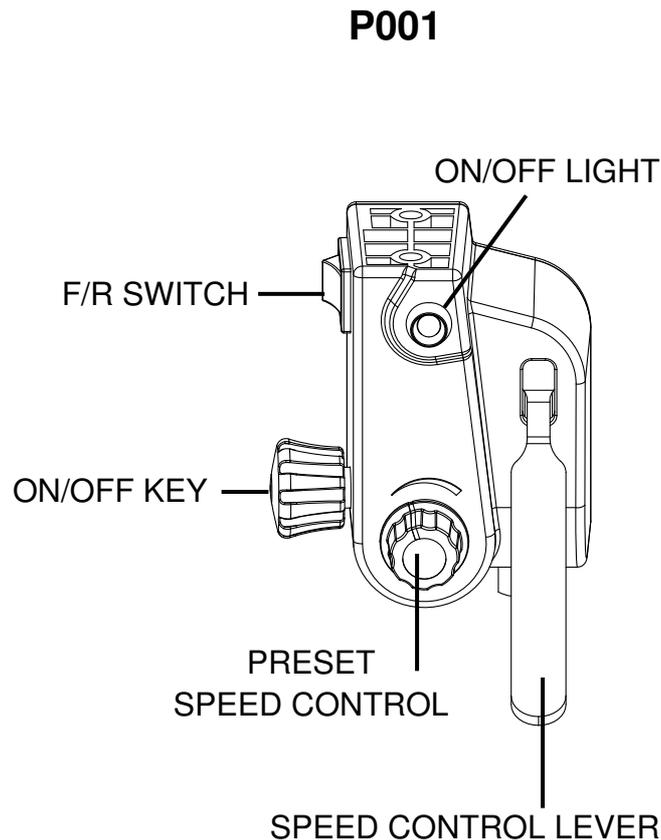


Fig 19. Handlebar Control

1. **ON/OFF Light** - This is a multi-function light that illuminates when the ON/OFF key is switched to the ON position indicating the machine is ready for use.
2. **PRESET SPEED CONTROL** - This controls the maximum speed of the Powerpack. Turn in a clockwise direction to increase speed and counterclockwise to reduce speed. This function is useful when navigating confined spaces where a high level of control is needed.
3. **SPEED CONTROL LEVER** - While the Preset Speed Control limits the top speed of the Powerpack, the speed control lever progressively controls the speed up to the preset limits. The more you pull the lever up with your hand the quicker you will go.
4. **ON/OFF KEY** - The key will be in a vertical position for OFF. Turn clockwise for ON. Never leave the key in the ON position when not in use or with someone sitting in the chair unattended. When leaving the chair always take the key with you.
5. **F/R SWITCH** - Switching the Powerpack to FORWARD OR REVERSE.

■ Controller Diagnostic Flash codes

Flash codes indicate the nature of an abnormal condition directly from the controller information gauge. Without the use of any servicing tools, the condition can be easily diagnosed.

Flash code	Fault	Impact on controller	Note
1	Battery needs recharging	Will drive	Battery charge is running low. Recharge the battery as soon as possible.
2	Battery voltage too low	Drive inhibited	Battery charge is empty. Recharge the battery.
3	Battery voltage too high	Drive inhibited	Battery charge is too high Excessive charging can cause this fault.
4	Current limit time-out	Drive inhibited	The controller has drawn too much current for too long, possibly because the motor has been over-worked, jammed or stalled. Turn the controller 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.
5	N/A	N/A	N/A
6	N/A	N/A	N/A
7	Throttle/Speed potentiometer error	Drive inhibited	The throttle, speed limit potentiometer or their wiring may be faulty. Check for open or short circuits. The throttle, speed limit potentiometer may not be correctly set up.
8	N/A	N/A	N/A
9	Internal error	Drive inhibited	Contact your service agent

■ Batteries and charging

Operating your Powerpack

Your Powerpack uses one long-lasting, 12-volt battery. The battery is a sealed, maintenance free, deep-cycle battery. Since it is 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 the Powerpack.

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

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 Powerpack regularly, we recommend maintaining battery vitality by charging the batteries at least once a week.

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

If you intend to use public transportation while using your Powerpack, you must contact the transportation provider in advance, 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 for transportation and packaging.

If you wish to use a freight company to ship the Powerpack to your final destination, repack the Powerpack in the original shipping container and ship its battery in a separate box.

Charging Your Battery

The battery charger is one of the most important parts of your Powerpack. Optimize your Powerpack performance by charging the battery safely, quickly, and easily. Only use the charger supplied with the product.

Charging Procedures

1. Keep charger output plug inserted into the charging socket in the front of the controller before having the charger input plugged into an electrical outlet.
2. Follow the instructions on the front panel of the charger for operating and learn the meanings of the different indicators accordingly.
3. Minimum charging time varies depending on battery condition and discharge level. It is recommended to charge the battery overnight.

NOTE: The specially designed charger assures that excess power is not consumed regardless of how long it is switched on, and connected to the batteries.

4. Once charging is complete, disconnect the charger from the electrical outlet and then disconnect the charger from the controller socket. Do not leave the charger connected to the controller when input power is disconnected. It is dangerous and will jeopardize the power charging to the battery.

■ IEC SYMBOLS

IEC SYMBOLS	
	Caution, attention or consult accompanying documents.
	Alternating Current
	Type BF Equipment
	Double Insulation
	No Smoking or Open Flames

Degree of protection against ingress of water is rated as IPx0.

■ Limited Warranty

Corporation warrants to the original purchaser of this product that it is free of defect in material and workmanship and that, when operated within the guidelines and restrictions of this manual, will remain so free of defect in material and workmanship for a period of One (1) year from the original date of purchase.

Excluded from this warranty is failure due to negligence, abuse, accident, operation outside of rated limits, commercial or institutional use, damage / wear to upholstery or tires and improper maintenance or storage. The batteries for this product are not supplied by Corporation; contact the battery manufacturer / supplier if warranty replacement is requested.

This product must not be modified in any way without the express written consent of Corporation. Any such unauthorized modification could cause unreliable and / or unsafe operation and will void this warranty.

Where a failure occurs within the 1- year warranty period that is not excluded above, the failed components will be replaced with similar new or reconditioned components at sole option. Corporation will not be responsible for labor and / or shipping charges.

The foregoing warranty is exclusive and in lieu of all other warranties expressed or implied including, but not limited to, the implied warranty of merchantability and fitness for a particular purpose. Corporation will not be liable for any consequential or incidental damages whatsoever.

We wish you a safe and comfortable riding experience!

