



58V + 84V LITHIUM-ION POWERHEAD

Owner's Manual



IMPORTANT

To reduce the risk of fire, burn hazard or other injury, please read these instructions carefully before use.

Keep these instructions in a safe place for future use.

This manual covers the Masport 58V Battery PowerHead

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PRODUCT SPECIFICATION

58V + 84v Battery PowerHead
Battery Type – 58v + 84v Lithium-ion

Disclaimer: * Maximum initial battery voltage (measured off load) is 58.8v.
Nominal voltage as per industry rule (3.65v /cell) is 51.1 Volts.
84.0v. nominal voltage as per industry rule (3.65v /cell) is 73.0 Volts.

SAFETY INSTRUCTIONS

GENERAL SAFETY RULES

READ ALL INSTRUCTIONS CAREFULLY



WARNING!

- For safe operation, read and understand the instruction manual.
- To reduce the risk of electric shock, do not expose to water or operate on wet ground.
- Replace any damaged parts immediately. Remove the safety key prior to servicing.
- For use only with Masport batteries and Masport Charger.

BATTERY & CHARGER



WARNING!

- Use only approved replacement batteries fitted by Authorised Masport Dealers. The use of other batteries may cause injury or damage to the PowerHead.
- For use only with Masport batteries (Part Number 574558) 4.3 Ah + (Part Number 565123) 4.3Ah.

BATTERY SAFETY RULES

- Battery tools do not need an external source of power to operate, therefore they are always in an operating condition. To minimise risk always store the machine safety key in a separate location to the mower. Following this rule will reduce the risk of electrical shock, fire or serious personal injury.
- Do not place battery mowers near fire or heat. This will reduce the risk of explosion and possibly injury.
- Do not crush, drop or dismantle the Powerhead. Do not use a PowerHead that has been dropped or received a sharp blow that may have dislodged the internal battery pack.
- Batteries can explode in the presence of a source of ignition, such as a pilot light. To reduce the risk of serious personal injury, never use any cordless product in the presence of open flame. An exploded battery can propel debris and chemicals. If exposed, flush with water immediately. Do not charge the PowerHead in a damp or wet location. Following this rule will reduce the risk of electric shock.
- For best results, your PowerHead should be charged in a location where the temperature is more than 5°C but less than 40°C. To reduce the risk of serious personal injury, do not store outside or in vehicles.

SAFETY INFORMATION

- Always remove the safety key (twist to lock/unlock) from your PowerHead when you are assembling parts, making adjustments, cleaning, or when not in use. Removing the safety key will prevent accidental starting that could cause serious personal injury.
- Always remove the safety key and fit rubber socket cover before storing the device.
- When battery becomes fully charged, unplug the charger from the power supply and then unplug the charger from the PowerHead.
- Always wear eye protection with side shields marked to comply with ANSI Z87.1 along with hearing protection. Failure to do so could result in objects being thrown into your eyes and other possible serious injuries.

- Keep the PowerHead dry, clean, and free from oil and grease. Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products, or any solvents to clean the PowerHead.

PROPER CARE FOR BATTERY

Off-season storage

To obtain the longest possible battery life, we suggest the following:

- Unplug the charger from the PowerHead once it is fully charged.
- Store the safety key in a safe location away from the PowerHead.

Extended storage

- For PowerHead storage longer than 30 days:

Store the PowerHead where the temperature is below 26°C and away from moisture. Store battery packs in at least a 50% charged condition. Every two months, check the state of charge and charge as required. Store safety key in a safe location away from the PowerHead.

CHARGER SAFETY RULES

- Charge the PowerHead in a dry area that is protected from the weather. Do not expose the mower or the charger to rain. Do not charge the battery in a wet location. Operate the battery charger in temperatures between 5°C and 40°C. In order to reduce the risk of electric shock, use only the charger that is provided by the manufacturer to charge the battery.
- DO NOT ABUSE THE CHARGE CORD. Never carry the charger by the cord. Do not disconnect the charger from the outlet or from the PowerHead by pulling the charger cord.
- Do not use a damaged charger. Replace the charger cords or the charger immediately.
- Keep the PowerHead and the charger away from water, heat sources (radiators, heaters, stoves, etc.), flames and chemicals.
- Do not place the charger and battery pack in an area of extreme heat or cold. They will work best at normal room temperature.
- When batteries become fully charged, unplug the charger from the power supply and remove the Charger lead from the PowerHead.



WARNING!

- When transporting or servicing the unit, always remove the safety key.

SERVICE

- Servicing requires extreme care and knowledge and should be performed only by a Masport qualified service technician. For service we suggest you return the product to your nearest MASPORT AUTHORISED SERVICE CENTRE for repair. When servicing, use only identical replacement parts.

SYMBOLS

The following signal words and meanings are intended to explain the levels of risk associated with this product.

	Warning	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	Caution	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	Important	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	Read User Manual	To reduce the risk of injury, the user must read and understand the operator's manual before using this product. (Keep User Manual).
	Eye Protection	Always wear eye protection with side shields marked to comply with ANSI Z87.1 when operating this equipment.
	Environmental Protection	Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice. The battery contains material which is hazardous to you and the environment. It must be removed and disposed of separately at a facility that accepts lithium-ion batteries.

WARNING!

- To avoid serious personal injury, do not attempt to use this product until you have read this Owner's Manual thoroughly and understand it completely. If you do not understand the warnings and instructions in this Owner's Manual, do not use this product. Call a Masport authorised dealer for assistance.

to and from the area to be mowed.

- Never operate the appliance with defective guards or shields, or without safety devices, for example deflectors and/or grass catchers, in place.
- Switch on the motor according to instructions and with feet well away from the blade(s).
- Do not tilt the appliance when switching on the motor, except if the appliance has to be tilted for starting. In this case, do not tilt it more than absolutely necessary and lift only the part which is away from the operator. Always ensure that both hands are in the operating position before returning the appliance to the ground.
- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times. Never pick up or carry an appliance while the motor is running.

- Remove the safety key from your Power-head:

- whenever you leave the machine;
- before clearing a blockage;
- before checking, cleaning or working on the appliance;
- after striking a foreign object. Inspect the appliance for damage and make repairs as necessary;
- if the appliance starts to vibrate abnormally (check immediately).

4) Maintenance and storage

- Keep all nuts, bolts, and screws tight to be sure the appliance is in safe working condition.
- Check the grass catcher frequently for wear or deterioration.
- Replace worn or damaged parts for safety.
- Ensure that only replacement cutting means of the right type are used.

- Caution – Do not touch rotating blade
- The battery charger should be supplied via a residual current device (RCD) with a tripping current of not more than 30 mA during charging.
- **WARNING:** For the purposes of recharging the battery, only use the detachable supply unit provided with this appliance .

1) Training

- Read the instructions carefully. Be familiar with the controls and the proper use of the appliance.
- Never allow children or people unfamiliar with these instructions to use the appliance. Local regulations may restrict the age of the operator.
- Never mow while people, especially children, or pets are nearby.
- The operator or user is responsible for accidents or hazards occurring to other people or their property.

2) Preparation

- While mowing, always wear substantial footwear and long trousers.
- Do not operate the appliance when barefoot or wearing open sandals.
- Thoroughly inspect the area where the appliance is to be used and remove all stones, sticks, wires, bones, and other foreign objects.
- Before using, always visually inspect to see that the blades, blade bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts in sets to preserve balance.
- On multi-bladed appliances, take care as rotating one blade can cause other blades to rotate.

3) Operation

- Mow only in daylight or in good artificial light.
- Avoid operating the appliance in wet grass, where feasible.
- Always be sure of your footing on slopes.
- Walk, never run.
- Mow across the face of slopes, never up and down.
- Exercise extreme caution when changing direction on slopes.
- Do not mow excessively steep slopes.
- Use extreme caution when reversing or pulling the appliance towards you.
- Stop the blade(s) if the appliance has to be tilted for transportation when crossing surfaces other than grass, and when transporting the appliance

ASSEMBLY

TO PREPARE POWERHEAD FOR USE

1. Lift and hold up the charging flap.
2. Uncover safety key by lifting rubber cover and store as shown. (See Figure 1).
3. Insert the safety key. (See Figure 2) Twist to lock.



Figure 1.



Figure 2.

OPERATION

STARTING/STOPPING THE POWERHEAD

(See Figure 3).

TO START THE POWERHEAD

1. Open the charging flap.
2. Insert the safety key. (See Figure 2) Twist to lock. The Safety key can only go in one direction.
3. Close the charging flap.
4. Press and hold the safety lock-out button (See Figure 3) - (1).
5. Pull the bail lever (See Figure 3) - (2) upward to start the motor and release the button.

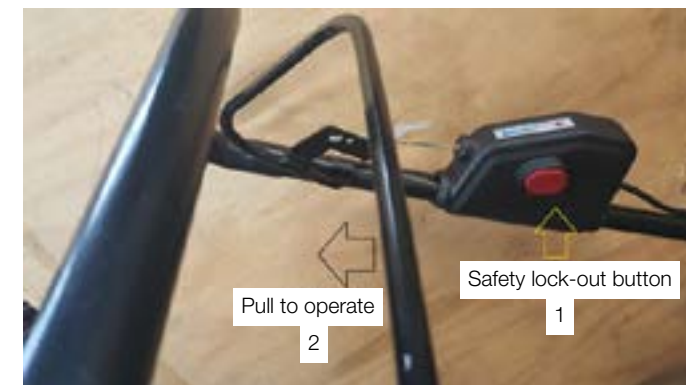


Figure 3.

TO STOP THE POWERHEAD

1. Release the bail lever.

SOFT-START

Your PowerHead is equipped with a "soft-start" feature. When initially starting up, the PowerHead will take approximately 7-8 seconds to get up to full speed. If the PowerHead does not initially start: Remove the safety key and check under the machine deck to ensure there is nothing obstructing the blade and that the blade can spin freely by hand. Even a small amount of grass blocking the PowerHead blade may prevent the mower blade from accelerating and engaging.

Do not start in grass but on a hard surface.

CAUTION!

- Do not attempt to override the operation of the safety lock-out button or bail lever.

CHECKING THE CHARGE STATUS OF THE BATTERY

1. The mower is fitted with a convenient, easy to view battery level indicator.
2. Press and release the 'Test' button, the LEDs will illuminate for approximately 3-4 secs and indicate the state of charge (see Figure 4).

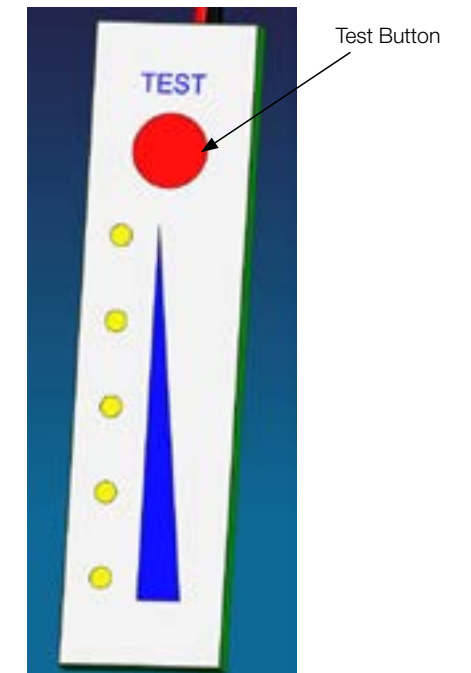
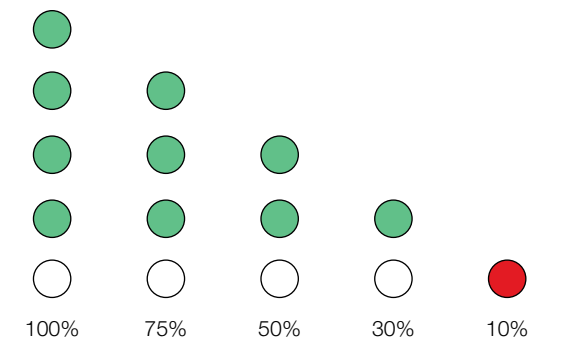


Figure 4.



NOTE:

The blades fitted to the mower will affect the run time of the Powerhead. To ensure you get the maximum run time from your Powerhead use only genuine Masport blades and ensure they are regularly checked for wear.

BATTERY AND CHARGER MAINTENANCE

CHARGING PROCEDURE



NOTE:

The battery is not shipped fully charged. It is recommended to fully charge before first use to ensure that maximum run time can be achieved. This lithium-ion battery will not develop a memory and may be charged at any time.

LOW VOLTAGE CHARGING

If the battery has been stored with little to no charge for a long period of time, the charger will go into recovery mode and will take 20 hrs to fully charge the battery. This will enhance the life of the battery. Once it is fully charged, the next charge will return to standard charging.

1. Lift the charging flap.
2. Remove safety key (if fitted) to expose the charging socket.
3. Insert the charging plug attached to charger into the charging socket. (Twist to lock).
4. Plug the charger into an AC power outlet.



Figure 3. The charger supplied is a smart charger and indicates its status via two LEDs.



- | | | | | |
|-------|----------------------------------|--|--|--|
| LED 1 | Red LED on = Powerhead connected | | | PowerHead connected |
| LED 2 | Red LED = Charging has started | | | Fan operational - Charging has started |
| LED 2 | Green LED = Charging is complete | | | Charging is complete. |

Charge time: 120 minutes max for standard charging.



IMPORTANT!

- Always connect the Powerhead to the charger before connecting the charger to the AC Power.



CAUTION!

- If the fan in the charger does not start when LED 2 has turned RED, LED 2 does not illuminate, or after an extended charging period, LED 2 has not turned Green, this may indicate a faulty battery. Take the PowerHead and charger to a MASPORT authorised dealer for further investigation.
- For diagnosis of simple faults see the table at the end of this document.



WARNING!

- Do not use any charger other than the MASPORT supplied charger.

MAINTENANCE

1. Store the PowerHead in a cool dry location, if possible. Charge the battery every two months when not in use in order to prolong its life.
2. Remove the safety key and store in a secure location out of the reach of children.



WARNING!

- Always remove the safety key when servicing or transporting the PowerHead and refit the rubber socket cover to prevent ingress of moisture.

ENVIRONMENTALLY SAFE BATTERY DISPOSAL

The batteries used in this PowerHead's battery pack contain the following toxic and corrosive material: LITHIUM-ION.



RECYCLE

In the first instance return any faulty PowerHeads to a MASPORT authorised repair centre for repair.

Items that contain toxic materials must be disposed of in a specified manner in order to prevent contamination of the environment. Before disposing of damaged or worn out Battery PowerHeads, contact your local waste disposal agency for information and specific instructions. Take the Powerhead to a local recycling and/or disposal centre that is certified for disposal. Dispose of it. **DO NOT ATTEMPT TO REPAIR IT!**

Follow these instructions in order to avoid injury and the risk of fire, explosion, or electric shock and to avoid damage to the environment:

- DO NOT attempt to repair the battery PowerHead.
- DO NOT attempt to remove or destroy any of the components of the battery PowerHead.
- DO NOT attempt to open the battery PowerHead.
- If a leak develops, the electrolytes that are released are corrosive and toxic.
- DO NOT get the solution in the eyes or on the skin and do not swallow it.
- DO NOT place battery PowerHeads or any part in regular household trash.
- DO NOT incinerate battery PowerHeads or any part thereof.
- DO NOT place batteries where they will become part of any waste landfill or municipal solid waste stream.
- Dispose of batteries at a certified recycling or disposal centre.

TROUBLESHOOTING

Electric machines prefer to run at a constant speed. If you encounter some heavy / thick grass that slows the motor down, slow down the forward motion to allow the motor to run back up to its normal operating speed.

The electronic speed controller within the Masport smart lawn mower has been design to protect itself from damage by only operating within a safe operating zone. If you cut some particularly long / dense grass (first cut of the season etc.) the controller may get warm to the point that it will protect itself by switching off the motor. No worries, it will allow the motor to operate again after it has cooled down. This is not a fault; it is by design to provide you with a long term reliable product.

The same is true of a separate electronic controller built into the Lithium Ion Battery pack and coupled with another one built into the smart charger. They have been designed to work in unison to protect the high performance Lithium Ion Battery, resulting in a long trouble free operating life and providing the optimum charge every time. In achieving this, the controller may sometimes prevent the battery from being charged if the previous run resulted in an overly warm battery pack. Waiting a brief period after cutting the grass before putting the machine on charge will allow the battery pack to cool down to enable it to receive a full fresh charge.

These smarts have been incorporated to protect the various items from damage and provide the user with a reliable long term product.

To allow the free running of the motor, do not cut with an excessively low cut height. Two light cuts are better than one heavy cut especially when not using the catcher.

Problem	Possible Cause	Solution
The PowerHead does not start.	Battery not charged	Charge the battery.
	Safety key is not inserted correctly	Insert safety key and twist to lock.
	Battery may require service	Contact Masport approved dealership.
	Fuse is blown	Replace fuse.
	Warm controller after cutting particularly long / dense grass	Wait for controller to cool down.
Battery does not charge.	Not enough travel on the OPC cable	Make sure 'z' bend is in 3rd hole.
	Overly warm battery after long use will not charge	Wait for battery pack to cool down.
Excessive noise and/or vibration.	Charging of the battery will not start	Always connect the charging plug to the PowerHead before connecting the charger to the AC power.
	Bent motor shaft	Remove safety key & inspect PowerHead for damage
Beeps from the controller x 2	Blade assembly is unbalanced	Remove safety key & replace / repair blades and tighten bolt
	Low battery	Charge the battery
Beeps from the controller x 3	High temperature	Wait for controller to cool down
Beeps from the controller x 4	Excess current	Remove safety key and inspect if the blade is jammed up with grass. Clear grass away. If that does not solve the problem, contact a Masport approved dealership.
Beeps from the controller x 5	Motor Jam	Remove safety key and inspect if the blade is jammed up with grass. Clear grass away.

WARRANTY

Check warranty card for terms.

The logo for Masport, featuring the word "Masport" in a bold, italicized, white font with a thick black outline. A registered trademark symbol (®) is located at the top right of the letter 't'.

Masport[®]

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