



Sweeper Operation Manual



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(Note: The translation follows standard technical manual formatting. Adjustments can be made based on specific terminology preferences.)

****Translation:******### Introduction****#### Content and Purpose of the Manual**

This manual provides customers with essential information to ensure the safe, convenient, and correct use of the machine.

(Includes technical specifications, operating methods, machine storage, maintenance, spare parts, and safety conditions.)

Before using the machine, users, professional repairers, and maintenance technicians must carefully read this manual.

If there is any discrepancy between the manual and the actual product, the product shall prevail.

Manual Storage

This manual must be kept in a secure location near the machine, easily accessible at all times, and away from liquids or other elements that may damage it.

Verification of Information

The machine's identification plate contains the model number and serial number. This information is crucial for purchasing spare parts.

Spare Parts, Maintenance, and Repairs

All necessary operations, maintenance, and repair procedures must be performed by professionals.

Revisions and Improvements

Our company continually improves our products; however, we are not obligated to implement these improvements for products already sold.

Customers seeking product upgrades or improvements should contact our after-sales department.





Safety

Attention: The User Manual Must Be Read Before Operating This Machine

Please Carefully Read the Following Safety Clauses

Detailed warnings and instructions to prevent personal injury and machine damage are listed below:

1. This machine must only be operated by professionally trained and designated personnel. Children, individuals with disabilities, and non-professionals are strictly prohibited from using it.
2. Before any maintenance or repair, the power must be turned off, and the key from the main power switch must be removed.
3. Do not use the machine in hazardous, flammable, or explosive environments containing gases, liquids, or water vapor.
4. This machine is designed to clean general debris. Strictly prohibit sweeping silk, belts, high-temperature waste, standing water, flammable materials, or toxic substances to avoid tangling, burning the main brush or side brushes, and causing malfunctions.
5. This machine is intended solely as a cleaning tool. Any use beyond the scope of this manual will not be covered for resulting damages.
6. Operating the machine under the influence of alcohol or at excessive speeds is strictly prohibited.
7. Do not wear accessories while using the machine.
8. Keep unauthorized personnel away from the machine during operation.
9. During operation, maintain a working speed below 5 km/h and perform intermittent vibration seating (frequency depends on the working environment) for optimal cleaning results.
10. There is a risk of tipping when turning at high speeds or driving on steep slopes.
11. When the machine is not in use, it must be parked on a level surface.
12. After completing work, promptly remove the key to prevent unauthorized use.
13. When the machine stops working or displays a low-voltage warning during operation, recharge the battery promptly to extend its lifespan.





14. Ensure proper ventilation during battery charging and keep away from open flames.
15. Keep loose clothing, hair, fingers, and any body parts away from the machine's vents and moving components.
16. To avoid lightning strikes and reduce fire risks, do not store the machine outdoors. Keep it indoors at a temperature between 0°C and 40°C.
17. In case of fire, use a dry powder fire extinguisher. Do not use water.
18. Do not clean the internal parts of the machine with running water to prevent electrical short circuits. Avoid using corrosive cleaners.
19. The operating temperature range for the machine is 0°C to 40°C. For use in environments between 0°C and -20°C, consult the supplier.
20. Even during disposal or dismantling, only authorized personnel should handle the machine. Harmful materials (e.g., waste batteries, oil, plastic) must be sent to designated processing centers.

****Battery Safety Requirements****

1. Avoid leaving the battery in a low-voltage state; recharge it promptly.
2. Keep the battery dry and clean to prevent leakage. Remove contaminants such as metal dust promptly.
3. Do not place metal objects (e.g., tools) on the battery to prevent short circuits and damage.
4. When handling or transporting batteries, keep them away from open flames. Dispose of batteries in compliance with local regulations.
5. Charge batteries in a well-ventilated area.
6. Do not connect or disconnect the battery when the key switch is in the ON position.
7. Before removing the battery, disconnect the negative (-) terminal first, then the positive (+) terminal. During reconnection, ensure correct polarity to avoid damaging electrical components.
8. Never allow direct contact between the positive and negative terminals, as this can cause a high-current short circuit, overheating, and potential fire hazards.





****Machine Description****

****Operational Performance:****

This sweeper is operated by personnel to clean dust or light debris on flat surfaces such as cement, asphalt, or tiled floors. The operator, seated in the cabin, controls forward, backward, left, and right movements by adjusting the gear buttons and steering wheel.

****Control Panel:****

1. Forward/Reverse Switch
2. Turn Signal Switch
3. Main Brush and Side Brush Operation Button
4. Dust Vibration Switch
5. Water Spray Switch
6. Horn Switch
7. Headlight Switch
8. High/Medium/Low Speed Switch
9. Battery Level Indicator
10. Main Power Switch
11. Large Debris Pedal
12. Brake Pedal
13. Accelerator
14. Electric Water Spray Nozzle
15. Water Tank Filling Cap





****Usage****

****Before Starting the Machine****

Ensure that the door/cover is closed during normal operation, the dustbin is properly secured, and check that all components have not been displaced during transportation.



****Tip:****

To enhance driving comfort, the rear tires of the vehicle are equipped with vacuum-filled pneumatic tires. Before using the machine, always check the tire pressure to ensure it is within the normal range. Failure to do so may compromise cleaning performance and risk damaging the motor, belts, or wiring.

****Starting the Machine****

**** (1) Driving Mode ****

- Make sure the side brush and main brush are in the raised position.
- Insert the key and turn it to the "ON" position.
- Move the forward/reverse switch to the forward gear and depress the speed control pedal to start the sweeper moving forward.





(2) Cleaning Mode

Press the main brush and side brush buttons to lower and activate them.

Move the forward/backward switch to the forward position and step on the speed control pedal to start cleaning the floor.

For large debris (e.g., sticks, cigarette boxes, etc.), step on the large debris pedal and proceed slowly to the work area. The main brush will sweep the large debris into the dustbin.

If the working environment is poor, activate the dust-shaking motor intermittently (press the dust-shaking button).

When cleaning is complete, press the stop button to raise and deactivate the main brush and side brush.

Check if the dustbin has been emptied.

(3) Passing Obstacles

Obstacles not exceeding 4cm in height:

— Can pass safely. Before moving, step on the large debris pedal and raise the main brush and side brush.

Obstacles exceeding 8cm in height:

— Must drive onto a sloped surface to pass.





Machine Operation

! Note: During operation, decide whether to temporarily activate the vibration device based on the amount of debris on the floor. When the filter is clogged or the dustbin is full, the machine will no longer collect debris.

The dustbin must be emptied after each use and when full.

! Caution: Every 45 minutes of operation, stop the machine and activate vibration for 1 minute, while also emptying the dustbin.

Emptying the Dustbin

1. Release the pedal to stop the machine.
2. Lift the handle with one hand, then release the dustbin latch.
3. Pull the dustbin downward and remove it.
4. Reinsert the dustbin into the machine and secure the latch.
5. The machine is now ready for use again.

After Completing Work

Before leaving the machine after use, perform the following steps:

1. Press the stop button to raise the main and side brushes.
2. Press the vibration button to clean the filter.
3. Empty the dustbin.
4. Remove the key from the power switch.

! Note: When the machine is not in use, the brushes must be raised to prevent deformation.

Pushing/Dragging the Machine

! Caution: When the machine is turned off or malfunctioning and needs to be moved, ensure the speed does not exceed 5 km/h and disconnect one of the drive motor wires.

Machine Storage

If the machine will not be used for 30 days, store it in a clean and dry location.

First-Time Use

After the first use (8 hours), the following must be checked:

1. Ensure all connections and fasteners are properly tightened.
2. Inspect visible components for any damage or defects.





Maintenance

The lifespan of the machine and operational safety depend on proper routine maintenance. The maintenance intervals can be adjusted based on the working conditions, as determined by the responsible maintenance professional.

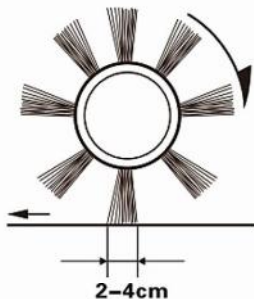
Maintenance operation	At the time of delivery	Every 10 hours	Every 50 hours	Every 100 hours	Every 200 hours
Check the height adjustment of the main brush and side brush					
Is the main brush wired or wrapped with silk					
Complete inspection of garbage filter screen					
Brush edge height and operation inspection					
Add fuel to the refueling hole					
Dust collector inspection					
Main brush drive belt inspection					
Tightening inspection of screws and nuts					
Brake pedal inspection and adjustment					
Check the wear of the main edge brush					
Main brush drive belt replacement					

Check the Main Brush Ground Pressure

1. Ensure the main brush is correctly positioned above the ground as follows:

- Operate the machine on a level surface.
- Stop and rotate the main brush for a few seconds.
- Check if the brush leaves a trace of 2–4 cm along its length.
- If the trace does not meet this standard, adjust the brush-to-ground pressure.

2. Replace the brush if it is too worn to be adjusted.





Caution!

If the traces of the main brush exceed 5 cm, the normal operation of the machine will be affected, and the components will overheat, thereby reducing the machine's service life. Exercise caution when performing the aforementioned checks. The machine should only be operated under the conditions mentioned above.

###Main Brush Replacement

###Caution!

When replacing the main brush, it is advisable to wear gloves to avoid hand injuries.

- Loosen the star-shaped nut and remove the guard plate.



- Unscrew screw and the corresponding chassis screw.
- Press down and pull out the main brush.



Replacing the New Main Brush

2. Important Note!!

The rotation direction of the main brush is as shown in the diagram. Ensure the main brush is installed correctly according to the instructions and refer to the relevant sections. Check the pressure between the main brush and the ground.



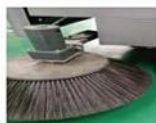
Side Brush Replacement

****Caution!****

When replacing the side brush, it is advisable to wear gloves to avoid potential cuts. The primary function of the side brush is to use its rotation to gather debris from the sides toward the center, where the main brush collects it into the dustbin. The advantage of the side brush is its ability to sweep out debris from corners and hard-to-reach areas, improving cleaning efficiency.

1. Adjusting the Side Brush Height

During normal operation, the brush should be positioned as shown in the diagram below. If set too low, it will increase friction with the ground, accelerating brush wear. Worn bristles will not make proper contact with the ground, significantly reducing cleaning effectiveness. Adjust Nut 1 to lower the side brush to the correct position.



1



2. Side Brush Removal and Replacement

- Unscrew Screw

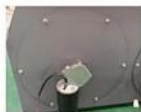
1 to remove the side brush; unscrew Screw

2 to replace the side brush.

- Reinstall the side brush in the reverse order.



2

****Cleaning and Integrity Check of the Garbage Filter****

- Unscrew the 8 nuts (two sets).
- Pull the filter outward (two sets).
- Unscrew the 6 nuts (two sets).

Remove the dust from the surface. If possible, check the condition of the rubber seal on the frame filter and clean it. Replace it if necessary. Reassemble in the reverse order.

****Usage of the Battery Charger****

Before using this battery charger, please read the manual carefully to ensure proper operation.

If there are discrepancies between this manual and the one inside the charger's box, follow the instructions in the box!

To ensure the safety of the operator and the stability of the equipment, strictly adhere to the following guidelines.

****Warning:**** Ensure the DC plug is securely connected to the socket. If the plug or socket is damaged, loose, or feels excessively hot, stop using it immediately and replace the damaged parts. Plugging or unplugging the DC connector should only be done when the charger is powered off to avoid arcing. To prevent damage to the charger cable, avoid pulling, shaking, or twisting the cable when disconnecting the plug from the socket.

****Danger:**** Do not touch the battery terminals or the pins of the DC plug.

****Note:**** If charging needs to be stopped during the process, disconnect the AC plug before unplugging the DC connector. Only remove the DC plug from the socket after the charger has been powered off.

****Operating Instructions******- **Scope of Application****

This charger is suitable for flooded and maintenance-free batteries (customizable based on client requirements).

The total voltage is based on single 12V or 6V cells connected to form a battery pack. Chargers of different voltages must not be mixed.

Battery voltages are categorized according to standard battery pack voltages. Refer to the nameplate on the charger for details.

For example: A 48V charger must not be used for 24V/72V batteries, as it may cause overcharging/undercharging and damage the battery.





****Translation:****

**Operating Steps**

1. Connect the power supply and battery according to the input and output requirements listed in the model table.
2. Ensure proper connections. The CPU will self-check, the battery indicator will light up, the fan will start, and charging will begin.
3. The device will automatically shut down after fully charging.

**Safety Guidelines**

****Warning:**** This symbol indicates that the operation involves potential hazards.

****Warning:**** This symbol highlights the importance of the operation for the product.

- Do not disassemble or attempt to repair or debug the machine without authorization.
- Do not replace the power cord without permission.
- For AC power, use a three-core cable with a ground wire and ensure proper grounding.
- Avoid placing the charger in areas exposed to rain.
- Ensure the DC plug and socket are securely connected. Replace them immediately if damaged or loose.
- If abnormal noises or odors occur during operation, unplug the power cord immediately. For maintenance, contact our company for prompt assistance.
- Do not extend or replace the output cable.
- Keep the charger's air vents unobstructed.
- Disconnect the power cord and charging plug before moving the charger.
- The battery voltage must match the charger's rated voltage (e.g., a 48V charger is only for 48V batteries).
- To avoid damaging the charging cable, do not pull, pinch, or shake it.

****Proper Placement:**** Place upright.

****Avoid Rain:**** Keep the charger dry.

****No Disassembly:**** Do not open the device.



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****Charger Fault Inspection and Troubleshooting********Usage Precautions and Simple Fault Diagnosis****

1. ****Ensure the charger's specifications and parameters match the battery pack being used.****

Confirm whether the battery pack is liquid-filled or maintenance-free, and verify that the battery voltage and capacity are compatible with the charger model. Using a 72V charger for a 48V battery pack or a liquid-filled charger for a maintenance-free battery pack may cause the battery to swell and become irreparable. Conversely, mismatched usage can lead to long-term undercharging and battery failure.

2. ****Place the charger on a well-ventilated, unobstructed platform protected from rain.****

Since the onboard charger uses a fan-cooled design for heat dissipation, with air intake vents located at the bottom, ensure these vents remain unobstructed for proper cooling. Overheating may prevent the charger from functioning normally.

3. ****Ensure secure input and output connections for the charger.****

Keep the charger's input and output plugs clean, free from carbonization or dirt. Use a reliable 16A three-prong AC power outlet with wires of at least 2.5 mm² cross-sectional area. Avoid using aged lamp cords, ordinary extension boards, or haphazard wiring, as these may overheat and cause fires. Regularly check the battery pack's securing screws to ensure tight and clean connections. For liquid-filled batteries, acidic corrosion may lead to poor contact and sparking. Rinse the top cover with hot water to remove dirt (acid residue and dust), and apply grease to the screws to prevent acid corrosion.

****The charger is warranted for one year. The following scenarios are not covered under warranty:****

1. Damage caused by improper or 违规操作.
2. Unauthorized opening of the charger without permission from the company.
3. Damage due to improper handling, such as impacts, drops, or collisions.
4. Damage caused by water exposure or moisture.
5. Damage due to sudden voltage surges exceeding 10% (as per national standards).
6. Damage resulting from severe pulling or tugging of input/output cables.
7. Failure to fully charge the battery pack due to input/output cables.



****Fault Repair****

Question	Fault analysis			Handling method
Turn on the power switch, there is no power display on the dashboard	Fuse blown			Replace the fuse
	No voltage output from battery			Charging: If the battery is not used for a long time, please charge it every two months
The car doesn't move	Differential damaged	The walking motor is not running properly	The walking motor is running normally	Replace the gearbox gears
			motor burnout	Replace the motor
			Fuse blown	Replace the fuse
			Loose connecting wire	check wiring
			Controller or throttle damaged	Replace the throttle or controller
			Brake travel switch damaged	Replace the brake travel switch
			Command switch damaged	Replace the command switch
Only move forward without retreating or only retreat without moving forward	Command switch damaged			Replace the command switch
	Controller damaged			Replace the controller
Flying car	The throttle is damaged			Replace the throttle
	Controller damaged			Replace the controller
Cleaning edge brush does not work	The lifting rod is damaged			Replace the lifting rod
	The side brush motor is damaged			Replace the edge brush motor
	The main brush belt is damaged			Replace the main brush belt
	The cleaning button is damaged			Replace the cleaning button
	Fuse damaged			Replace the fuse
	Clean the damaged relay			Replace the cleaning relay
Unclean cleaning	Brush wear, gear wear			Replace the brush
	Wear and tear of the gear skin			Replace the protective cover
	The brush does not descend properly (gets stuck)			Check the cause of the jamming and eliminate the fault
Leakage of oversized leaves or garbage particles	Filter malfunction	Filter clogged		Clean the filter and shake the dust for 2-8 minutes
Leave the soil and other garbage behind		The fan is not working	Motor burnt out	Replace the motor
			Loose connecting wire	check wiring
garbage behind	The work speed is too fast			Reduce work speed
	The pressure of the brush is too low			Adjust brush pressure
	The bristles of the brush are deformed or entangled by obstacles			Replace brushes and remove obstacles
	Dust shield damaged			Replace the dust shield and
	The front dust shield elevator is not working			step on the foot pedal to change the working state
Garbage rushes up	The front dust shield is damaged			Replace the front dust shield
Roll up the front dust shield with the main brush	The front dust shield is damaged			Replace the front dust shield
The brush wears out too quickly	The pressure on the brush is too high			Reduce brush pressure
	The working surface is very rough			
The working noise of the main brush has increased	The main brush is tangled with debris			Remove debris
Garbage leakage from the dust collection box	The sealing strip of the dust collection box is damaged			Replace the sealing strip
	Too full of garbage			Discard the garbage
The working time is too short, and the battery discharges too quickly	Insufficient charging time			Increase charging time
	Battery damage			Replacing the battery



****Electrical Assembly Diagram****

Serial Number	name	role
1	48V-12V voltage converter	Provide 12V power supply for the entire vehicle
2	Drive system controller	Control the speed of the entire vehicle to move forward and backward
3	Voice prompt device	Voice prompt during the working time of the driver controller
4	63A overload switch	Provide overload protection for the drive controller
5	100A overload switch	Provide overload protection for cleaning appliances
6	48V contactor	Power supply for main fan operation
7	Edge brush push rod descent relay	To work on the edge brush, the push rod descends and supplies power
8	Edge brush push rod rising relay	Power supply for the upward movement of the push rod when the edge brush stops working
9	Vibration dust relay	Power supply for the vibration dust motor
10	Sprinkler relay	Power supply for beverage motor
11	15A insurance sheet	Vehicle 12V power supply provides insurance
12	15A insurance sheet	Vehicle 48V control power supply provides insurance







****Product Warranty Card (Main Card)****

*(This warranty card serves as the primary proof for warranty services.

Please keep it safely.)*

During the warranty period, repairs will be provided free of charge for malfunctions that occur under normal use as described in the instruction manual. To avail of free repair services, please bring the faulty product, this warranty card, and the purchase invoice to the place of purchase.

The following circumstances will void the free repair service. We appreciate your understanding:

1. Failure to present the original warranty card and valid purchase invoice.
2. Malfunctions or damages caused by improper use, unauthorized repairs, or modifications.
3. Faults or damages resulting from transportation, handling, or dropping after purchase.
4. Malfunctions or damages caused by using a power source (voltage, frequency, etc.) other than the specified one or due to abnormal voltage.
5. The warranty covers free repairs for the main unit under the stated conditions, but excludes accessories such as the exterior appearance, dust filters, filter elements, power cords, hoses, or steel pipes. The manufacturer shall not be liable for any other losses incurred due to malfunctions.



****Product Warranty Card (Duplicate Copy)******1. Product Information:**

Product Model & Name:

Serial Number:

2. User Information:

End User Organization:

Phone:

Address:

Postal Code:

Email:

3. Seller Information:

Seller Name: (Valid with official seal)

Phone:

Address:

Postal Code:

Contact Person:

Date of Sale:

To fulfill our company's service commitment and provide excellent after-sales support, we will establish a user information database in our customer service system.

1. Users are required to complete both the original and duplicate copies of the warranty card and return the duplicate copy to the company's Customer Service Department within one month after purchase for record-keeping.

2. If the original warranty card or purchase receipt is lost, our user information database can be referenced to ensure you receive the entitled services.

