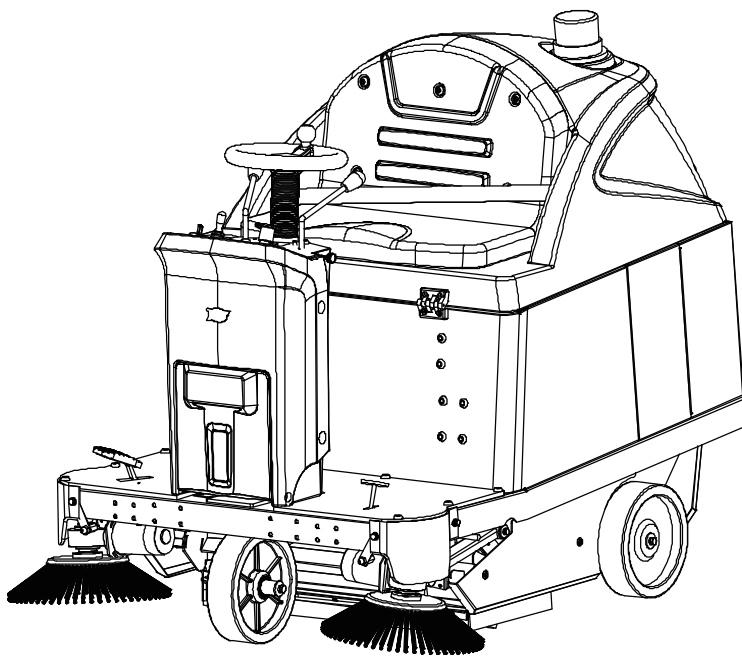


Ride-on Sweeper

Applicable Models: GS52B

User Manual

V1.0



REMINDER

Please check the machine carefully after unboxing.

If you find any abnormalities or missing parts, please contact the after-sales service team immediately.

Please follow the manual strictly and maintain the machine regularly according to the provided maintenance instructions.

APPLICATION SCENARIOS

The machine is suitable for commercial floor cleaning, especially for cleaning schools, hospitals, offices, shopping malls, supermarkets, and hotels.

The machine is recommended for cleaning indoor concrete floor, based floor, ceramic tiles, various types of stone floors, and other resilient floors, but it is not recommended for outdoor rough floors and large-area scenarios.

SYMBOLS INTRODUCTION IN THIS MANUAL



Attention:

Indicates that improper operation may cause serious injury

Indicates that improper operation may cause injury to minors or property damage.

Indicates that improper operation could lead to personal injury or death.

Indicates that improper operation may lead to property damage.

WARNING



Attention:

Do not operate the machine under the following conditions:

- Persons with physical or mental disabilities (including children) or persons without training and authorization are not allowed to use this product.
- Failure to read, understand and follow the instructions in this operation manual.
- After taking alcohol or drugs.
- This machine must not be used outside the range of usage conditions. The recommendations are as follows: room temperature between 0°C and 40°C, relative humidity between 30% and 95%.
- Located in areas where flammable vapors/liquids or flammable dusts are present.



Attention:

Do not use or pick up flammable materials or reactive metals.

- This machine is not equipped with an explosion-proof motor. The motor generates sparks during start-up and operation, which may cause a flash fire or explosion if the machine is used in areas where flammable vapors/liquids or flammable dusts are present.



Attention:

- Do not use acidic solutions, as this may damage the machine or endanger the operator.
- Do not touch the floor pad/disc brush with your hands when it's rotating for cleaning.
- Improper handling of the battery can lead to explosion or fire. The battery, please open the battery compartment for heat dissipation and keep away from any open flames.
- Before cleaning and maintaining the machine, please disconnect the battery and charger cables.
- Do not charge the battery with a damaged power cord.
- Do not modify the plug.
- If the charger power cord is damaged or broken, it must be replaced by the manufacturer or the technical agent or qualified person, to avoid danger.

SAFETY TIPS

1. Before Transporting and Installing the Machine:

- To ensure safety: Wear protective gloves and professional protective shoes.
- When assembling or not in use, please make sure to turn off the machine switch and disconnect the power supply.
- When assembling or not in use, please ensure that the machine's wheels and body are secured to prevent any unwanted movement.
- Do not park the machine on surfaces with a huge slope.
- Please use an inclined surface to unload the machine and avoid the wheels straight up and down and excessive bumps.

2. Before Operating the Machine:

- Please check if the machine body is complete, whether there is any damage or missing parts.
- Please check if the brush , squeegee, and rubber strips are properly installed.
- Before operating the machine, check for any potential risks of liquid leakage.

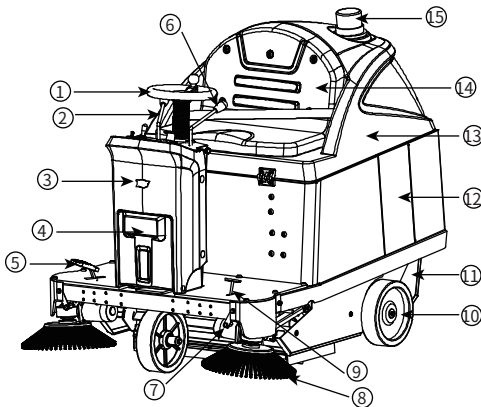
3. During Machine Operation:

- If the machine is damaged or fails to operate, please stop using it and contact the after-sales engineer in a timely manner.
- Pay attention to personal protective equipment; do not wear shorts, slippery shoes, or flip-flops.
- Avoid using flammable, acidic solutions, or cleaners with excessive foam to prevent defoliating agent foam from entering the vacuum motor inlet.
- Please use neutral cleaning agents; otherwise, it may cause chemical damage to the machine's materials or components.

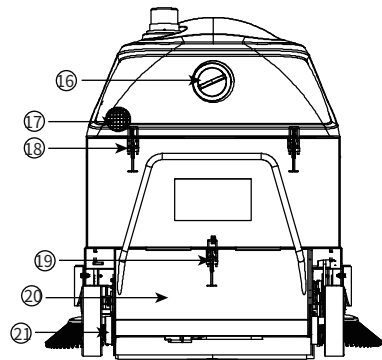
4. Before Leaving or Maintaining the Machine:

- Park the machine on an even floor surface.
- Before maintenance, please turn off the power supply.
- Do not use non-original accessories, as they may cause machine malfunction, personal injury, or property damage.
- No unauthorized disassembly of the machine is allowed, and all repairs must be carried out by authorized personnel.
- No unauthorized modifications to the machine are permitted.
- Please wear personal protective equipment when using/maintaining the machine.

MACHINE PARTS

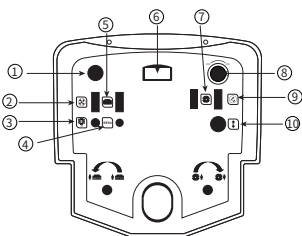


- | | |
|-----------------------------------|---------------------|
| 1. Steering Wheel | 9. Foot Accelerator |
| 2. Roller Brush Handle | 10. Wheel |
| 3. Steering Gear Cover | 11. Dustbin |
| 4. Steering Gear Front Plate | 12. Car Body Shell |
| 5. Dust Front Plate Lifting Pedal | 13. Water Tank |
| 6. Side Brush Handle | 14. Seat |
| 7. Spray Nozzle | 15. Warning Light |
| 8. Side Brush | |



- | | |
|-------------------------------|--------------------------|
| 16. Water Tank Cover | 19. Dustbin Tower Buckle |
| 17. Fan Outlet | 20. Dustbin |
| 18. Machine Body Tower Buckle | 21. Dustbin Wheel |

CONTROL PANEL INTRODUCTION



1. Emergency Stop Switch
2. Vacuum Switch
3. Dust Shaking Switch
4. Menu Button
5. Side Brush Switch

6. LCD Panel
7. Rolling Brush Switch
8. Key Switch
9. Spray Switch
10. Forward/Reverse Switch

BATTERY

Before first use, the battery must be fully charged.

- ⚠ Attention: The room where the battery is charged must be well-ventilated, and the battery compartment should be opened to prevent the accumulation of any leaked gases.
- ⚠ Attention: The following operations must be performed by qualified personnel. Incorrect connection of connectors may cause equipment failure.
- ⚠ Attention: Using an incompatible battery charger may cause battery damage and fire accidents.

BATTERY USAGE

1. Move the machine close to the battery charger.
 2. Make sure the water tank is empty, or else completely empty it.
 3. Ensure the key switch is in the "OFF" position.
 4. Lift the water tank and secure it with the support rod.
 5. Disconnect the battery plug and the power plug, then connect the battery plug to the charging plug, and after that, connect the charger to the wall outlet. Once the charging is complete, disconnect the battery plug and the charging plug, and reconnect the battery plug and the power plug.
- The red light on or flashing indicates a fault; please recheck the connections.
 - The yellow indicator light flashing indicates no battery connection.
 - A solid yellow light indicates normal charging.
 - A solid green light indicates the device is fully charged.

Battery Charging Status Indicator

- Power display can show 10 power status values and 2 flashing alerts.
 - These values represent different energy states.
- 10 indicates 100%, flashing light means the battery is completely discharged.

⚠ Attention

- The flashing warning light will stay on for a few minutes before the drive motor is automatically shut off; charge the battery in a timely manner.
- To achieve the best performance, always keep the batteries charged and do not let them be in a state of discharge.

Warning

- The lead-acid battery is highly corrosive; always wear protective gloves and eye protection.
- Do not tilt the battery, as acid may flow out from the vent.
- Prohibit open flames, sparks, and cigarette butts.
- Wear safety goggles when operating cables and electrical equipment to avoid generating sparks.
- Avoid short circuits.
- Keep acidic substances and batteries away from children.
- Batteries are dangerous! They release hydrogen gas that can cause explosions or fires. Keep sparks and flames away from the batteries. When charging the machine, keep the battery compartment open.

MACHINE OPERATION

▲ Fill the Water Tank

- Unscrew the water tank cover and fill it with clean water

▲ Adjustment of Side Brush Height

The height of the side brush must be adjusted according to the wear condition of the side brush state.

Please follow these steps for adjustment:

1. Loosen the hex nut (A) on the adjustment button.
2. Rotate the adjustment button (B), turn it clockwise to increase the side brush height from the ground, and counterclockwise to decrease the side brush height from the ground.
3. When the side brush reaches the desired height, tighten the hex nut (A).

▲ Adjusting the Brush Height

The brush height must be adjusted according to the wear condition of the brush state.

Please follow these steps for adjustment:

1. Loosen the hex nut (C) on the adjustment button.
2. Rotate the adjustment button (D), turn it clockwise to increase the brush height from the ground, and counterclockwise to decrease the brush height from the ground.
3. When the brush reaches the desired height, tighten the hex nut (C).

▲ Draining the Water Tank

1. Push the machine to the wastewater discharge area, open the water tank, and unscrew the drain pipe cover.
2. Drain the water into the sewer drain pipe until all the water in the tank is drained.
3. Tighten the drain pipe cover and return the drain pipe to its original position.

▲ Operate the Machine

1. During operation, the user must remain seated at all times.
2. Turn the key on the key switch to the "On" position, and the power meter on the control panel will illuminate.
3. Traction Drive - The machine is equipped with an electronic drive control system, and it is necessary to select the direction of travel.
- When the forward button is pressed and the drive pedal is depressed, the machine will move forward. Adjust the speed by varying the pressure on the pedal.
- When the reverse button is pressed and the drive pedal is depressed, the machine will move backward. Adjust the speed by varying the pressure on the pedal.
- To stop the machine's movement, switch the direction switch to the neutral position.
- When the driver leaves the seat, the pressure switch disconnects, causing the machine to stop moving.
4. Push the brush handle (on the right) in a clockwise direction to lower the brush, and push the side brush handle (on the left) counterclockwise to lower the side brush;
5. Turn on the brush switch to activate the brush.
6. Turn on the side brush switch to activate the side brush.
7. Turn on the vacuum switch to activate the vacuuming.
8. Turn on the spray switch to activate the spraying.
9. Turn on the dust vibration switch to activate the dust shaking.

Attention

- To stop the machine, please release your foot from the throttle pedal, and the machine will gradually come to a stop;
- For large debris, press down on the dusting pedal (left foot) to increase the opening angle of the front dusting baffle, facilitating the sweeping of larger debris into the dustbin, allowing the machine to pass smoothly;
- During the operation of the machine, do not continuously press the accelerator pedal; when you need to turn the steering wheel, lift the pedal to slow down.

▲ Parking Brake

- Release the throttle pedal, and the machine will slow down and stop, with the electromagnetic brake locking the wheels.

▲ Dustbin Operation

After using the machine and before performing any type of maintenance please proceed as follows:

1. Release the throttle pedal, disconnect the brush switch, dust collection switch, and spray switch, and wait for the machine's motor to stop running.
2. Rotate the roller brush handle (on the right) counterclockwise to lift the roller brush, and rotate the side brush handle (on the left) clockwise to raise the side brush.
3. Move the machine to the designated garbage dumping area, open the dustbin tower buckle and empty the dustbin, then reinstall the dustbin and fasten the tower buckle.
4. Move the machine to the designated parking area, release the machine's throttle pedal; push the direction switch to the middle/neutral gear, wait for the machine to completely stop; turn the key switch to the "Off" position to shut off the machine's power, then remove the key from the dashboard.

Attention

- Before starting any maintenance, please remove the key from the instrument, turn off the panel, and disconnect the machine from the battery plug.
- Do not leave the machine unattended without turning off the switch, and additionally, do not park the machine in open areas or on sloping ground.
- If the machine is left unattended, be sure to remove the key for a while.

MACHINE MAINTENANCE

Warning

Before starting any maintenance operations, remove the key from the dashboard and disconnect the machine from the battery connector plug, and ensure that the electromagnetic brake is released.

▲ Filter Cleaning

1. After each work session is completed, please press the dust shaking switch for 10 seconds to remove the dust that is attached to the filter cylinders.
2. After using the machine for a while, if you feel that the suction power has significantly decreased and using the dust shaking function does not improve it, please remove the six filter cylinders of the machine and clean them with compressed air. When no more dust spills out from the filter cylinders, it can be considered that the cleaning is complete. Then, reinstall the six filter cylinders to their original positions.

▲ Dustbin Cleaning

1. After completing work each time, move the machine to the designated area for dumping waste.
2. Pull out the dustbin, empty the trash from the dustbin, and if there is any caked trash attached to the dustbin, please clean it up promptly.

▲ Battery Maintenance

This cleaning machine uses a high-performance, maintenance-free battery.

Always charge the battery according to the instructions in the battery charging section of this manual.

- Keep the battery top and terminals free from corrosion. A concentrated solution of baking soda and water is the best method to prevent battery corrosion. Do not let the baking soda/water enter the battery.
- Clean the battery terminals and connections properly with a steel brush dipped in a baking soda solution; inspect the battery connections for wear and loose terminals, and replace them if necessary.

▲ Processing

- Old batteries must be disposed of according to local specific regulations;
- Do not treat old batteries as household waste!
- Check the motor every 250 hours. Turn on/off the side brush, roller brush, and vacuum motor to ensure the motor is working properly.

▲ Machine Storage

- Store the machine in a dry indoor location.
- Raise the side brushes and roller brush to ensure they are off the ground.
- Before storage, make sure to thoroughly drain the solution and recovery tank, especially when storing in cold places.

▲ Replace the Roller Brush

1. Remove the left side cover of the machine.
2. Now remove the nut (B), then remove the screw of the central shaft (C), and remove the baffle.
3. Separately remove the tension spring and the brush holder (D), take out the brush (E) for replacement, and reassemble the replaced brush in the reverse order of disassembly.

▲ Dismantling the Side Brush

1. Remove the bolt at the bottom of the side brush.
2. Remove the 3 bolts at the top of the side brush.
3. Replace the side brush, and then restore the machine by reversing these steps.

▲ Replace the Filter

1. Open the water tank and remove these 4 bolts, then remove the mounting plate.
2. Replace the six filters, and then restore the machine by reversing these steps.
3. It is recommended to replace the filters every eight months.

TECHNICAL SPECIFICATIONS

Parameters	International Units	GS52B
Cleaning Width	mm	1330
Work Efficiency	m ² /h	7315
Maximum Driving Speed	km/h	6.5
Maximum Grade	%	18
Disk Brush (Diameter * Quantity)	mm (φ)	390*2/700*1
Operating Voltage	V	DC24V
Rated Total Power	W	2000
Motor	W	800
Side Brush Motor	W	100*2
Roller Brush Motor	W	500
Vacuum Cleaner Motor	W	400
Dust-Vibrating Motor	W	100
Clear Water Tank	L	30
Trash Bin	L	100
Net Weight	kg	283
Machine Dimensions (Excluding Scraper)	L*W*H (mm)	1485*1200*1215

COMMON TROUBLESHOOTING

Problem		Solution
Machine Startup Failure		1. Check if the battery is charged. 2. Ensure that the machine's connector plug is connected to the battery's connector plug. 3. Check if the key switch is in the "On" position. 4. Check if the first fuse in the fuse box is blown.
Insufficient Sprinkling Water		1. Check if there is water in the water tank. 2. Ensure that the solenoid valve or water pump is properly activated. 3. Clean the filter.
The cleaning effect of the machine is not satisfactory		Check the wear of the cleaning brush and replace it if necessary
Erro Code	Erro Name	Trouble Shooting
F01	Emergency stop signal trigger	1.Release the emergency stop switch and restart the controller
F02	EEPROM Failure 1	1.Re-write the configuration parameters and then power on again
F03	Low battery voltage	1. Charge the battery and restart the controller 2. Replace the controller
F04	High battery voltage	1.The battery voltage is higher than the parameter setting voltage, wait for the voltage to recover and restart the controller
F05	Precharge fault 1	1. Check and eliminate the short circuit of the travel motor/electro-magnetic brake 2. Replace the controller
F06	Key switch voltage failure	1. Eliminate wiring problems
F07	Controller self-test error	1. Replace the controller
F10	Walking motor MOS tube failure	1. Eliminate water ingress problems such as brakes and re-energize 2. Eliminate the connection problem of the travel motor circuit (whether it is short-circuited with the positive and negative of the battery) 3. Replace the controller
F11	Roller brush motor MOS tube failure	1. Eliminate the problem of the roller brush motor circuit connection (whether it is short-circuited with the positive and negative of the battery) 2. Replace the controller
F12	Suction motor MOS tube failure	1. Eliminate the connection problem of the suction motor circuit (whether it is short-circuited with the positive and negative of the battery) 2. Replace the controller
F13	MOS tube failure of dust-vibrating motor	1. Check the connection problem of the dust-vibrating motor circuit (whether it is short-circuited with the positive and negative of the battery) 2. Replace the controller
F14	Side brush motor MOS tube failure	1. Check the connection problem of the side brush motor circuit (whether it is short-circuited with the positive and negative of the battery) 2. Replace the controller
F16	Travel motor short circuit fault	1. Check the travel motor circuit 2. Replace the controller
F18	Roller brush motor short circuit fault	1. Check the roller brush motor circuit 2. Replace the controller
F19	Suction motor short circuit fault	1. Check the suction motor circuit 2. Replace the controller
F20	Dust-vibrating motor short circuit fault	1. Check the dust-vibrating motor circuit 2. Replace the controller

Erro Code	Erro Name	Trouble Shooting
F21	Side brush motor short circuit fault	1. Check the side brush motor circuit 2. Replace the controller
F22	Host CAN offline fault	1. Check whether the CAN communication line is connected properly
F23	Throttle connection failure	1. Check the pedal circuit 2. Replace the pedal 3. Replace the controller
F24	High pedal inhibit fault	1. Check the pedal circuit 2. Release the pedal and start the machine 3. Replace the pedal
F26	Temperature sensor failure	1. The controller temperature is too high or too low 2. Replace the controller
F29	Roller brush motor open circuit fault	1. Check the roller motor circuit and restart the controller
F30	Suction motor open circuit fault	1. Check the suction motor circuit and restart the controller
F33	Travel motor overload fault	1. Eliminate motor stalling and other issues
F34	Roller brush motor overload failure	1. Eliminate motor stalling and other issues
F35	Suction motor overload failure	1. Eliminate motor stalling and other issues
F36	Dust-vibrating motor overload failure	1. Eliminate motor stalling and other issues
F37	Side brush motor overload failure	1. Eliminate motor stalling and other issues
F52	Controller over temperature alarm	1. The controller temperature is too high, check the load
F55	Clear water without warning	1. Add clean water 2. Check the liquid level switch circuit 3. Replace the liquid level switch
F56	Sewage full warning	1. Drain the sewage 2. Check the liquid level switch circuit 3. Replace the liquid level switch
F57	Seat switch not sitting down warning	1. Check the seat switch circuit and restart the controller
F82	Electromagnetic brake open circuit fault	1. Check the brake circuit and restart the controller
F83	Electromagnetic brake short circuit fault	1. Check the electromagnetic brake circuit 2. Replace the electromagnetic brake
F84	Precharge fault 2	1. Check the brush plate/air suction/brush plate lifting/squeegee lifting motor circuits 2. Check the warning light/drain solenoid valve/detergent pump/universal output speaker circuits and re-power on
F86	Buzzer open circuit warning	1. Check the buzzer circuit
F87	Buzzer output short circuit fault	1. Check the buzzer circuit 2. Replace the buzzer
F92	Warning light open road warning	1. Check the warning light circuit
F93	Warning light short circuit fault	1. Check the warning light circuit 2. Replace the warning light
F94	Solenoid valve open circuit alarm	1. Check the solenoid valve circuit
F95	Solenoid valve short circuit fault	1. Check the solenoid valve circuit 2. Replace the solenoid valve
F99	Water pump short circuit fault	1. Check the water pump circuit
F100	Headlight open road warning	1. Check the headlight circuit
F101	Headlight short circuit fault	1. Check the headlight circuit 2. Headlight drive circuit failure
F104	HCLO open circuit alarm	1. Check the HCLO module circuit 2. Check whether the water circuit is working properly
F105	HCLO short circuit fault	1. Check the HCLO module circuit
F112	Controller low temperature alarm	1. Wait for the controller to return to temperature and restart it
F115	IoT connection failure	1. Connect the IoT module
F116	HCLO module usage timeout alarm	1. Replace the HCLO module and manually clear the HCLO run time

Erro Code	Erro Name	Trouble Shooting
F117	Lock alarm	1. Please contact the manufacturer or dealer
F118	Lithium battery CAN disconnection failure	1. Please check whether the lithium battery CAN line is connected
F119	Lithium battery failure	1. There is an internal fault in the lithium battery. Please check whether the lithium battery is discharged

