

# GBZ-660B-1 Mini Ride-on Auto Scrubber

## Owner's Guide



This manual provides the necessary machine operation and instructions.

**Before the operation or use of the machine, please read and understand this manual.**

When booking replacement/spare parts, please refer to the attached accessories manual and must confirm the machine type & send number in advance .You can book spare/replacement parts to any authorized service center or dealer by telephone/mail. This machine can provide excellent service If the user can follow the following instruction. They will be able to obtain the best results with the lowest cost:

- Operate the machine carefully.
- Provide regular maintenance according to the operation manual.
- Use the parts of the original factory or the same level to repair.

	<b>保护环境</b>
	请依据您当地的废弃物处理法规，在维护环境安全的前提下，丢弃包装材料、电瓶等老旧机器组件、防冻剂和油料等有毒液体。 请务必做好回收工作。

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Specifications and parts may change ,without prior notice.

Machine information

Please fill while installing, for future reference.

Type Number-

Serial Number-

Optional Spare Parts-

Sales Representative-

Sales Representative Tel.-

The customer number-

Installation Date-

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**Attention items**

This machine is applied to clean the grounds of large industrial/commercial field, especially clean the hard floor indoor, not to other uses. Please always use commended detergent.

All operators must read, understand and obey the following safety attention items.

 Warning: For warning could lead to risk serious injury or death or unsafe operation

For safety sake: Instruct the items must be obeyed in operation to ensure the safety. If not follow the warning, may cause personal injury electric shock, fire or explosion.

 Warning: Fire or explosion:

— Not to use flammable liquids, must not operate the machine in the area of flammable liquids, gases or combustible dust.

This machine is not equipped with explosion-proof motor. If operate this machine in area of flammable liquids, gases or combustible dust, the spark would be produced during the start-up and operation of the electric motor may cause flash fire or explosion.

- Do not pick up flammable materials or active metal.
- The battery release hydrogen. Stay away from open fire or sparks. When charging is required to maintain the battery hatch open.

 Warning: The danger of electric shock. Please disconnect the battery wires before maintain/repair machine.

 Warning: The rotary brush running. Please keep away with both hands. Please turn off the power before maintain/repair machine.

The following information instructs the condition that will cause potential danger

to the operator or the equipment:

For safety sake:

1. Do not operate machine:

- Contact with flammable liquids or near flammable gas otherwise it may cause an explosion or flash fire condition.
- Unless trained and authorized to operate the machine.
- Unless you have read and understood the operating manual.
- If not in the correct operation.

2. Before start the machine:

- Please make sure that all safety devices have been positioned and correct operation.

3. During operation:

- Walk slowly in slope and sliding surface.
- Wear non slip shoes.
- Please slow down when turning.
- The machine damage or operational failure should immediately report.
- Don't let the children play on/near the machine.
- Abide by the mixed proportion and processing instructions on the chemical container.

4. Before remove or repair the machine :

- Machinery park on smooth ground.
- Shut down the machine.

5. When the repair machine:

- Avoid moving parts. Do not wear loose blouse, shirt or cuff.
- Before operate the machine, please disconnect the battery wires.
- Treating the battery or battery wires, please wear protective gloves and eye

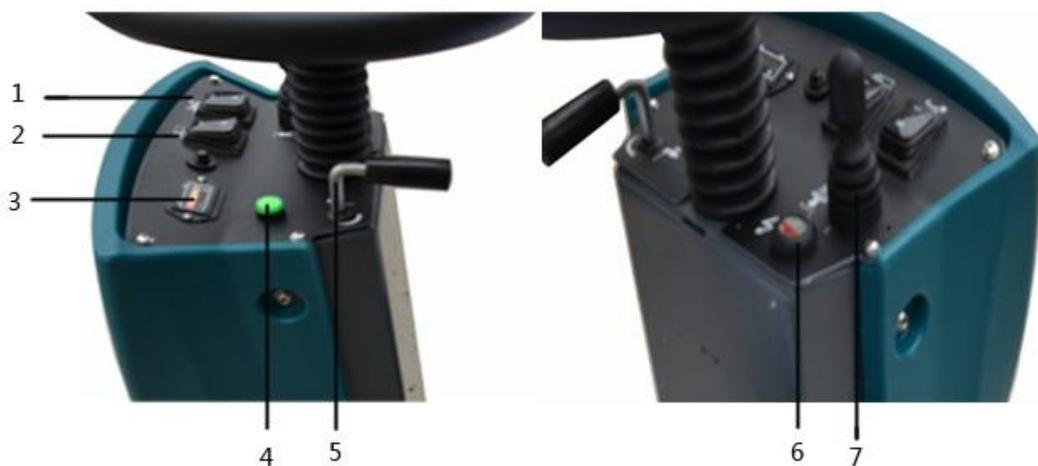
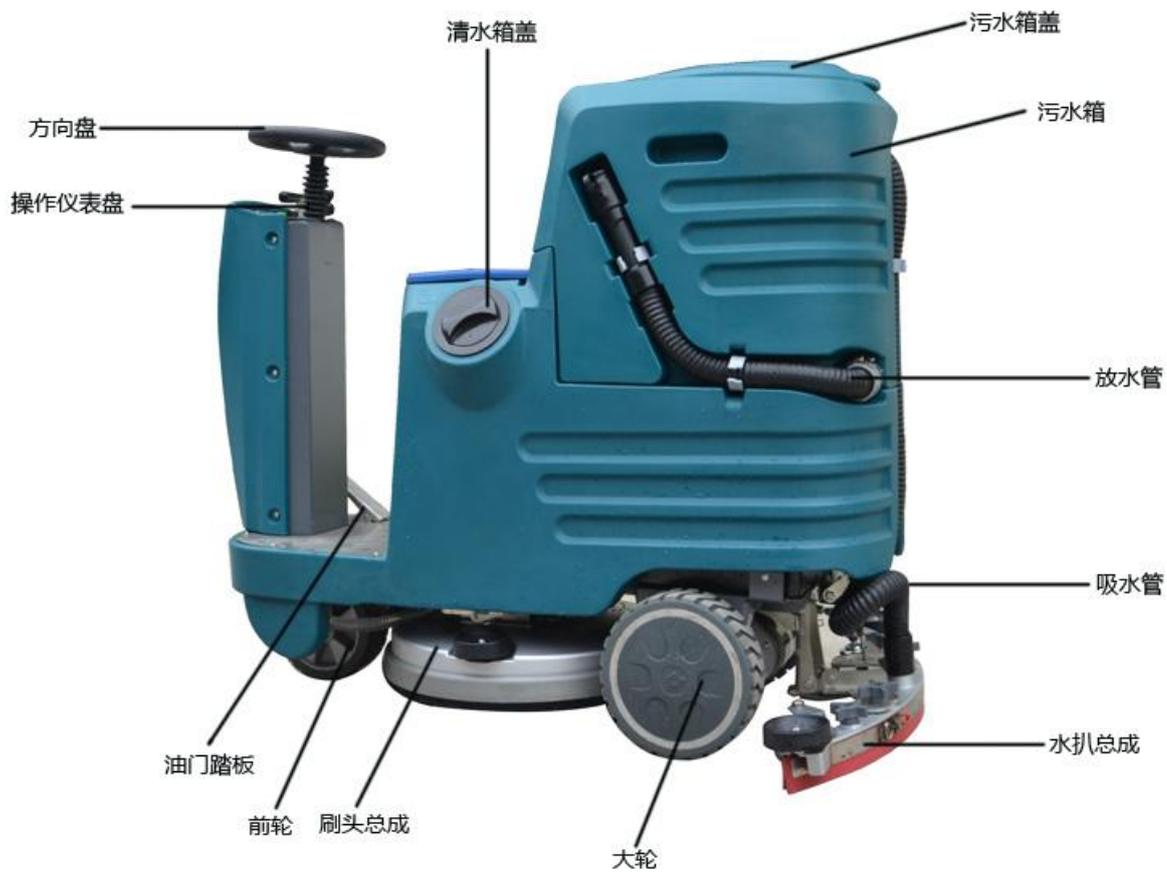
protection equipment.

- Avoid contact with battery acid
- Do not flush the machine with high pressure spray or water pipe.
- Use the parts of the original factor or approved to repair.
- All of the repair must be performed by a qualified repair personnel.
- Do not modify the original design of the machine.

6. When move the machine:

- Please shut down the machine.
- Please do not move the machine with battery loaded.
- Please handle the machine with the help of others.
- From the truck or trailer loading and unloading machine please use the suggested handling platform.
- Use the rope to fix the machine on a truck or trailer.
- Put the brush head down to the lower position.

**Operation instruction**



- 1、Brush switch    2、suction switch    3、battery power display meter  
 4、horn switch    5、drain rod  
 6、electric door lock    7、direction switch

## Receive machine

### Unpack the machine

1. Please carefully check if there is any damage in the package of machine. If any damage, you should point it out to the carrier immediately.
2. Check the packing list, if there are omissions please contact the dealer.

Packing list:

- 12V batteries 2ps—standard
- 24V battery charger 1pc—standard
- Battery connecting wires 1 set—standard
- Squeegee rubbers 1 set—standard
- Brush 1pc—standard
- Pad holder 1pc—standard
- Other spare parts—Optional

3. Before open the package, please remove the fixing pieces and ropes that fix the machine on the pallet. In the assistance of another person, carefully unload the machine from the pallet

Warning: Please do not remove the machine without the handling platform, avoiding damage to the machine

Warning: In order to avoid damage to the machine, please install the batteries after unload machine from the pallet.

### Install battery



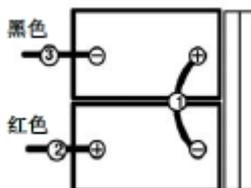
Warning: Fire or explosion. The battery release hydrogen. Stay away from open fire or sparks. When charging is required to maintain the battery hatch open.

For safety sake: Treating the battery or battery wires, please wear protective gloves and eye protection equipment. Avoid contact with battery acid.

1. Park the machine at level ground, and take out the key.

2. Lift sewage tank until battery bin exposed.

3. Install batteries into the bin carefully, connect the wires according to the following figure.



3---black, 2---red

the front of the machine

Warning: Please do not throw batteries into the bin, avoiding damage to the batteries and machine. Use t4. Please assure the electrode and electric terminal are clean before connect the batteries. Use the electrode cleaning solution and steel wire brush if necessary.

Instruction: Please smear lubricating oil with a thin layer of metal free or protection spray on the connecting wires avoiding battery corrosion.

5. After batteries installed, please check the battery power .Charge the batteries as needed.

#### The way of machine cleaning:

Control the valve by hand to adjust the flow of the cleaning liquid(water and detergent)to the ground. Brush clean the floor with the cleaning liquid. The sewage water on the floor are collected by the squeegee and suctioned to sewage tank along with the machine moves forward.

#### The information of brush and scouring pad.

In order to keep the best cleaning effect, please use the correct brush type. The suggestion as following:

#### Soft nylon brush(White) —

To clean the coated floor, do not hurt the surface, cleaning without leaving scratches.

#### Polish pad(white) —

To maintain the high shiny or polished surface.

### **Cushion pad(red) —**

To wipe the dirt slightly but not hurt the ground

### **Gravity fold hit pad(black) —**

To remove heavy coating or base, or do super strong scrubbing.

## **Machine installation**

### **Install and connect the component of squeegee rubber**

1. Park the machine on the level ground and take out the key.
2. Put the squeegee lift rod to the lower position.
3. Install the squeegee on the installation bracket, must insert the fastening knob fully into the jack then screw the knob tightly.
4. Connect suction pipe to the squeegee.
5. Check the squeegee rubber and make adjustment.

### **Install brush /scouring pad**

**Instruction: For suggested brush and scouring pad, please refer to the section of [ The information of brush and scouring pad] in this manual, or inquire to local authorized dealer.**

1. Park the machine on the level ground and take out the key.
2. Step on the brush head lifting pedal, rise the brush head from the ground.
3. Arrange the scouring pad in the pad holder, then install drive pad. Fasten the central lock to fix scouring pad.
4. Insert the pad holder/brush mounting into the motor drive wheel buckle, press the brush motor switch.
5. To remove pad holder and brush, step on the brush head lifting pedal, rise the brush head from the ground, press the brush motor switch.

### **Operate machine**

For safety sake: Please do not operate machine until read and understand operation manual.

Warning: Fire or explosion. Not to use flammable liquids; must not operate the machine in the area of flammable liquids, gasses or combustible dust.

### **Check before operate**

- Clean the dust on the ground.
- Check the power meter.
- Check scouring pad/brush condition.
- Check squeegee rubber condition and adjust the angle appropriately.
- Make sure the sewage tank is empty and a clean float type filtering net is installed.
- Check the condition of brush head skirt part.

### **Operate machine**

1. Turn the main power key on.
2. Put down squeegee lifting rod, let squeegee fell to the ground.
3. Step brush head lifting pedal, fell the brush head to the ground.
4. Open the control button of clean water.
5. Press brush motor switch, then press suction motor switch.
6. Motor drive type: adjust the speed control button to get the cleaning speed you need.

Instruction: Suggest using 45–60m/m speed.

### **During operation**

Warning: Fire or explosion. Do not pick up flammable materials or active medal.

1. Each cleaning paths overlap 5cm.
2. To make the machine keep marching to avoid damage to the ground.
3. If there are drag marks after squeegee passed, please eliminate waste on the rubber strip by rag wipe. Pre cleaning to prevent drag marks.
4. Do not operate machine in the slope exceeds 5% (3 degrees) .

For safety sake : In operation, walk slowly in slope and sliding surface.

5. If there are too many foam, put defoaming agent solution into sewaage tank.

Warning: Do not let the bubble into the filtering net , so as to avoid damage to the vacuum motor. The bubble will make filtering net switch to failure.

6. In dual cleaning way to clean the extreme dirty region. At first , clean with the squeegee lift, let the solution immersion 3–5 minutes, and then drop squeegee

to clean again.

7. Replace or turnover scouring pad as needed.
8. Watch the battery power meter.
9. Through the clear water tank liquid level gauge to examine residual liquid quantity. The traditional way of washing cost about 10 liters water every 10 minutes.
10. As the solution in the clean water tank finished, empty sewage tank and then add solution.
11. Please park the machine on level ground and take out the key if operator leave machine.
12. After cleaning process daily maintain program.

#### **Battery power meter**

Battery power meter display battery power. When the battery is full of electricity, lights are lit up all. With the power consumption, the light turn out from right to left. In order to prolong the battery life, please always charge the battery after operate machine over 30 minutes.

#### **Water tank drainage**

After each use should drain and clean sewage tank. Clean to water tank should be cleaned regularly to remove any corrosion. Move the machine to drainage point, turn off the power discharge water according to following instruction:

For safety sake :When leave or maintain machine, please park it on level ground shut down the machine and take out the key.

Discharge sewage tank

1. Unscrew the sewage tank drain cover in counterclockwise, take it off.
2. Open the cover of sewage tank, and then wash inside.
3. Remove and wash in the sewage tank floating filter net.

#### **Charge battery**

Warning: In order to prolong the battery life, please always charge the battery after operate machine over 30 minutes. Do not let the battery being empty too long. The following instruction is for the charger attached machine. Please always use

following type charger, avoid damage battery. Battery charger specification:

- Charger type: —Charger for —acid battery
- Output voltage —24 V
- Output current—15 A
- Automatic power—off circuit.
- Suit for deep cycle battery charging.

1. Move the machine to a well ventilated place for charging.

Warning: Fire or explosion. The battery release hydrogen. Stay away from open fire or sparks.

2. Park the machine on the level ground, switch the key to shut .down position

3. Inspect liquid level of each battery until before charging.

For safety sake: Treating the battery or battery wires, please wear protective gloves and eye protection equipment. Avoid contact with battery acid.

4. Please open the sewage tank in side for ventilation before charging.

5. Insert the of AC power line into the power socket grounded on.

6. Insert the charger DC line into the battery charging socket behind sewage tank.

7. The charger will automatically start to charge and can automatically close when in full.

Instruction: The machine cannot be opened when charging.

Attention: Please do not unplug DC line from socket of machine when charging, to avoid generating arc discharge. If have to stop charging, please unplug AC line at first.

Warning: Fire or explosion. The battery release hydrogen. Stay away from open fire or sparks. When charging is required to maintain the battery hatch open.

8. Inspect liquid level of each battery unit again after charging.

## **9. Machine maintenance**

As long as do comply with daily , weekly and monthly maintenance procedures , the machine can keep in the best working condition.

Warning: The danger of electric shock. Please disconnect the battery wires before maintenance machine

#### **Daily maintenance** (after each use)

1. Draining and cleaning sewage tank.
2. Remove and wash sewage tank floating type filtering net.
3. Drain the water tank, wash it with hot water under 60 degrees as needed.
4. Remove scouring pad/brush and clean them. If worn, turnover or replace scouring pad.
5. Wipe squeegee rubber. Lift squeegee to raised position, to avoid rubber damage.
6. Check the condition of blade of squeegee rubber, if worn, exchange the ends.
7. Use multi-purpose cleaning agent and wet cloth to wipe machine.

For safety sake: Do not flush the machine with high pressure spray or water pipe, to avoid fault of electronic parts.

8. Check the condition of brush head skirt part, replace it if worn or damage.
9. Charge batteries. In order to prolong the battery life, please always charge the battery after operate machine over 30 minutes.

#### **Monthly maintenance** (Used every 80 hours)

1. Remove clean water filter and clean filter net under machine. Make sure that drain clean water completely before remove filter.
2. Clean the battery top to prevent the erosion of electrode.
3. Check if the battery connection is loose.
4. Check and clean the seal rubber of sewage tank cover. Replace it if damage.
5. Spraying silicone dry lubricant at the pivot and rolling all, covered with a layer of waterproof lubricating oil, in order to maintain the smooth operation of the wheel axle.
6. Check if the nuts and bolts on the machine are loose.
7. Check whether the machine is leakage.

#### **Quarterly maintenance**

Check carbon brush wear condition of drive motor (driver models), vacuum motor and brush motor every 250 hours. When the carbon brushes worn length of 10 mm or less, need to replace the carbon brush. The machine if need repair please contact authorized service center

Warning:The danger of electric shock. Please disconnect the battery wires before maintenance machine

### Machine transportation

Use truck or trailer carrying machine, please follow the following bound program:

1. Rise the brush head to the transport position.
2. Use recommend platform to load machine.
3. Let the front of machine close to the front of a truck or trailer. After setup , fall brush head and then switch key to shut down position.
4. Place obstacles in rear of each driving wheel, in order to prevent the machine slide.
5. Fix machine top with rope to prevent inclination. You must setup a bracket in the truck or trailer.

For safety sake: Load machine to the truck or trailer, please use the handling platform, and then fix machine on board with rope.

### Machine storage

1. Charge battery before store, please do not store machine with battery power empty.
2. Drain water tank completely and wash them cleanly.
3. Store machine in dry place, and keep brush head on up position.
- 4 Open the sewage tank cover for ventilation.

Note:Do not let the machine subject to the rain, stored in room.

5. If store machine in the cold environment, please be sure to drain the liquid inside the machine all.

### 6. Troubleshooting

Problem	Reason	Solution
Machine do not work	Battery empty	Charge battery
	Battery fault	Change battery
	Battery wire lose	Fix battery wire
	Main fuse burn	Change fuse
Brush motor do not work	Brush head raised	Put down brush head

	Battery power meter locked	Charge battery
	Brush motor circuit breaker triggered jump	Reset brushes circuit breaker button
	Brush (up/down) switch fault	Call service center
	Motor carbon brush wear	Call service center
Vacuum cleaner motor do not work	Squeegee raised	Put down squeegee
	Motor or circuit fault	Call service center
	Fuse burn	Change fuse
	Motor carbon brush wear	Call service center
Little or no water flow	Clean water tank filter or solution pipe jam	Clean filter
	Flow speed control button set too low	Adjust button
	Control button screw lose	Fix crew behind lubricate button
Sewage water collect inefficiently	Sewage tank full	Drain sewage tank
	Squeegee rubber worn	Change squeegee rubber
	Suction pipe jam	Clean clogging debris
	Sewage tank seal rubber damage	Change seal rubber
	Vacuum motor fault	Call service center
Operation time reduce	Battery fault	Change battery
	Battery charging fault	Maintain or change battery

GBZ-660B-1 Mini Ride-on Auto Scrubber specification

specification	UNIT	GBZ-660B-1
Voltage	V/AH	24/120
Brush motor power	W	650

Suction motor power	W	500
Power	W	1150
Cleaning width	mm	530
Squeegee width	mm	770
Cleaning efficiency	m <sup>2</sup> /h	2700
Brush rotating speed	Rpm	220
Clean water tank	L	65
Sewage water tank	L	75
Weight	Kg	220
Size	Cm	198*62*103

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