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# RT15 Floor Scrubber Manual of Instructions

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# Chapter I

## Operation Safety Guidance

### 1.1 General Instructions

This manual offers necessary instructions for operation and maintenance of the machine. Please read it carefully and make sure that you have understood it before getting started. If you need to purchase spare parts, please refer to the spare part handbook attached to this manual. You can purchase them from any authorized service center or distributor. This product is able to provide excellent services, and you can achieve the best effects at the lowest cost if you abide by the following principles:

- Operate the machine carefully and cautiously;
- Maintain the machine regularly according to the instructions presented in this manual;
- Use spare parts from the same manufacturer or of the same class if you need repair.

### 1.2 Safety guidance

Damage might be caused to yourself, other people, the machine or other properties if you intend to operate the machine without reading this manual. Operators of this machine must be trained before getting started.

- In order to prevent fire, the machine can only be used to clean non-explosion-proof commercial ground.
- Do **NOT** use the machine if it is incomplete or not well assembled, because it would cause damage to yourself, other people, the machine or other properties.
- Repair of the machine must be carried out by specialized personnel, and the machine must be powered-off before any repair to prevent the failure from expanding.

### 1.3 Instructions for operating the machine

- When connecting the battery, special attention must be paid to its polarities; wrong connection is strictly forbidden, because the machine is powered by direct current, and wrong connection would cause damage to **every electronic part** of the machine!!!
- Batteries of different brands and specifications have their matched chargers; using unmatched chargers might cause damage to the battery

Number	Category	Unit	Parameter
1	Cleaning efficiency	sqft/h	14500
2	Brush plate width	inch	13.8
3	Squeegee width	inch	17.8
4	Brush plate rotation speed	rpm	180
5	Brush plate motor power	w	300
6	Water suction motor power	w	500
7	Clean water tank capacity	gal	3
8	Sewage tank capacity	gal	4
9	Battery capacity	V/Ah	24/32
10	Charging time	h	6-10
11	Working time	h	1.5-2
12	Total weight	LB	99
13	Product size	inch	27.5*18*41.3
14	Packing size	inch	35.1*21.5*43

and even lead to explosion in extreme cases.

- Short circuit may be produced if the electrical components of the machine are exposed to water or moisture.
- Do **NOT** put any objects on the battery.
- Do **NOT** let any water enter into the inlet of the suction motor when washing the machine.
- Damage may be caused if you do not pay attention to the labels on the machine and this manual. Read them carefully before operating the machine.
- The machine must **NOT** advance in a rough ground or slope. Do **NOT** sit on the machine and keep your hands, feet and loose clothing away from any moving part.
- Be careful when the machine is moving along the edge (of a wall), and pay attention to the space between its anti-collision wheel and the wall; do **NOT** push the machine over tiny obstacles.
- The use of water or detergent will wet the ground and may be prone to slippery. Put warning signs around during the work.

#### 1.4 Instructions for safety

- Since the machine is very heavy, special attention should be paid during transportation; if you need to transport the machine, the battery must be taken out first, and lift the metal frame at the bottom of the machine. Do **NOT** put your focus on the plastic water tank so as to avoid damage.
- Do **NOT** operate or store the machine (as well as the battery) in places with explosive gas or liquid.

#### 1.5 Safety requirements for batteries

- The battery must **NOT** be in a low voltage state; charge the battery **as soon as possible** when the voltage is below **21 V**;
- To avoid electric leakage, keep the battery dry and clean;
- Do **NOT** put metallic objects (such as tools) on the battery to prevent it from being short-circuited and burned;
- The charging room should be well ventilated;
- When the key switch is in the ON position, do **NOT** install or remove the battery;
- Before installing or removing the battery, disconnect first the negative wire (-) and then the positive wire (+). When rewiring, pay special attention to the polarity of the battery, as wrong connection would likely

damage electrical components inside the battery;

- Avoid direct contact between the positive and the negative electrodes, because it would cause a large current short circuit, high heat or even a fire.

**Attention: disconnect the battery connecting cable if the machine is not about to be used for a long time or is going to be repaired.**

# Chapter I I

## Routine Maintenance and Replacement of Wearing Parts

### 3.1 Preparation

- Choose the most suitable detergent and the appropriate concentration of detergent according to the state of the ground. In general, only two disposable cups of detergent are needed. Reduce the amount of detergent used to protect the environment and use neutral low-foaming detergent. Use defoamer at the same time in order to eliminate foam in the water tank and extend the service life of the water suction motor.
- Add detergent from the front water filling port, then fill the clean water tank with clean water.
- If you want to get water from the tap with a hose, you can plug the hose directly into the water hole on the side of the machine. However, pay attention to the water level to prevent an overflow of the detergent.

### 3.2 Before the work

- In the area that needs cleaning, first sweep the floor to eliminate large sundries and dust, and make sure that the ground is free of mud, stone pieces and paper scraps. This will boost your work efficiency and help you protect the machine.
- Turn on the general switch, check the battery level and make sure that it has sufficient power before starting the work.

### 3.3 During the work

The batteries must be charged in the case of low power!

- Turn the forward/backward switch to the forward gear, start the brush plate motor, water suction motor and switch button in sequence and use the water volume adjusting handle to control the flow of clean water.
- On the uneven ground, there might still be water after cleaning. In this case, you can raise the brush plate, start the water suction motor, push the machine and absorb water in the water area. Note that the water suction efficiency will be affected if there are deep grooves on the ground, and this problem can only be dealt with separately.

Problems that you may encounter when adjusting the squeegee:

When using the machine, if you feel that the water suction motor is abnormal and the squeegee cannot absorb water or the sound of the squeegee is abnormal, stop the work immediately to carry out an inspection.

1. If the water level has risen to the highest position, the float ball rises and the air passage is cut off, please remove the sewage tank, open its cover, discharge the sewage, and wash the sewage tank.
2. If the water level in the sewage tank is not high and there is no excessive foam, it is very likely that the joint between the squeegee and the pipe is blocked, and it will return to normal after being cleaned.
3. If the water level in the water tank is not high but there are too much foam, it is likely that you have added too much detergent or you have used high-foaming detergent. In this case, add an appropriate amount of defoamer to the sewage tank.
4. If the three solutions above do not work, unplug the suction pipe on the squeegee, start the water suction motor and check by hand whether the suction at the air inlet is normal. If the suction force is too small, check whether the squeegee connecting pipe is blocked.

### 3.4 Replacing the brush plate

- Put the brush plate to be installed under the brush plate cover (in the case of a needle plate, add the scouring pad first). Put down the brush plate and align the plate head with the bayonet.
- Turn on the switch button of the brush plate motor, and the brush plate will be automatically installed with the rotation of the motor. The brush plate can also be manually installed or removed.
- For unexperienced users, it is recommended to install or remove the brush plate manually: raise the brush plate first after finishing the work, turn off the brush plate switch, the brush plate motor will be stopped and you can remove the brush plate by rotating it.

### 3.5 Replacing the batteries

- Turn off all the switch buttons.
- Open the buckle of the batteries, disconnect the battery cable and remove the batteries separately.

### 3.6 Maintenance and replacement of the squeegee

The squeegee is an important part of the machine, and it will be worn due to friction with the ground. When the water absorption efficiency is low, check:

- If there is any debris in the plastic scrapper;

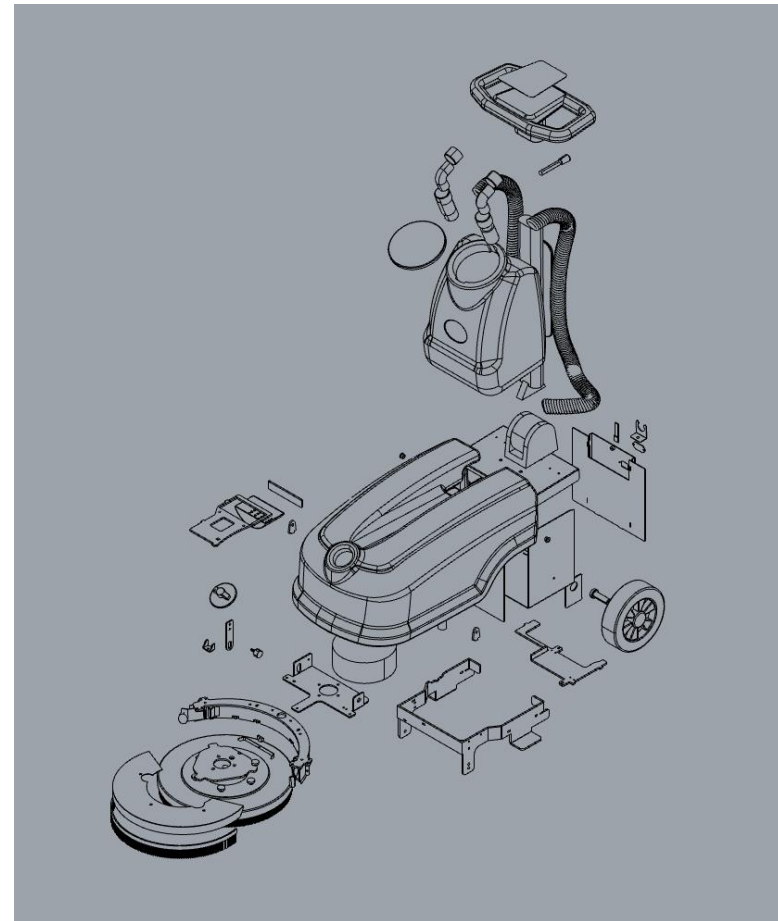
- If the joint between the squeegee and the hose is blocked;
- The wearing state of the adhesive tape (replace the tape if it is seriously worn);
- If you use the machine in a heavily oil-polluted environment, please purchase special oil-resistant adhesive tapes.

### 3.7 After the work

- Wipe the machine with a dry rag; discharge the sewage and clean the sewage tank.
- Lift the brush plate and squeegee; put the machine in a dry, well ventilated and flat ground with no flammable gas, liquid, chemicals or open flame.
- If it is not used for a long time, in order to protect the batteries, it is necessary to disconnect the battery cable and cover the machine with a dustproof cloth.

Note: the following cases are NOT covered in the warranty:

- Failure to perform maintenance in accordance with the maintenance manual, resulting in mechanical damage or failure.
- The mechanical appearance or structure is obviously damaged due to improper operation.
- Disassembly or modification not approved by the original manufacturer.
- Damage due to weather or force majeure.
- More than 1 year of warranty or more than 1500 hours of use.



# **User manual for Compact Walk-behind Floor Scrubber**

**RT-15**



**September 14th, 2023**



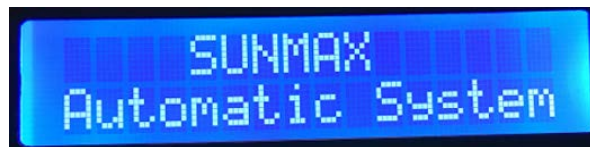
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## Display content on the control panel screen

### 1. Startup Screen:

When the floor scrubber is powered on, the display screen will initially show the startup screen. The first line of the startup screen displays "SUNMAX", and the second line displays "Automatic System".



### 2. Working Screen:

After powering on the floor scrubber, the default settings are as follows:

- Brush motor is off.
- Water valve is closed (displayed as "0").
- Dirty water suction motor is off.
- Timer displays as "T0000".
- Battery voltage is displayed as "Power 24.4V".



### 3. Detailed Explanation of Display Screen Items:

★ 0/1 - Water spray status indicator

"0" indicates that the water valve is closed, while "1" indicates that the water valve is open. The

floor scrubber activates the water spray function by pressing the water button, and the display screen shows the number "1" as a prompt. Pressing the water button again will deactivate the water spray function, and the display screen will show the number "0" as a prompt.



★ Power xx. xV: Indicates the battery voltage level.

When the voltage falls below the configured battery threshold voltage (21.6V for lead-acid batteries, 23.5V for lithium batteries), it will display "Low Battery" on the screen and simultaneously deactivate the dirty water suction motor, brush motor, and drive function.



★ Vacuum: Vacuum function indicator

Press the vacuum button to activate the vacuum function on the floor scrubber, and the display screen will show the "Vacuum" indicator. Press the vacuum button again to deactivate the vacuum function, the "Vacuum" indicator will disappear from the screen.



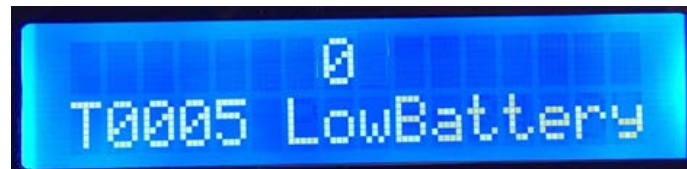
★ Brush: Brush function indicator

Press the brush button to activate the brush function on the floor scrubber, and the display screen will show the "Brush" indicator. Press the brush button again to deactivate the brush function, the "Brush" indicator will disappear from the screen.

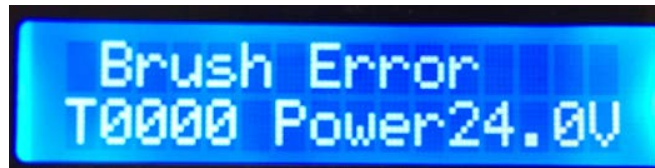


## Error Codes

1. Low Battery: The battery voltage is low; please recharge as soon as possible.



2. Brush error: Brush motor overcurrent; please check the brush motor mechanism and the floor surface.



3. Vacuum error: suction motor overcurrent; please check the dirty water suction mechanism and the floor surface.



## Advanced Features

1. Timer Reset

The floor scrubber keeps track of the time when the dirty water suction, brush motor, or water valve motors are in operation. After accumulating 9999 minutes of operation, you can reset the timer by simultaneously pressing and holding the "Suction" and "Brush" buttons for 3 seconds.



2. Setting Battery Threshold Voltage

The floor scrubber supports lead-acid and lithium-ion batteries, with a default threshold voltage of 21.6V for lead-acid batteries and 23.5V for lithium-ion batteries. After turning on the machine, you can switch the battery threshold voltage by pressing and holding the "Water" and "Brush" buttons together for 3 seconds.

**Note:**

The battery threshold switching function can only be performed once after turning on the key switch; if you need to switch it a second time, you must repeat the power-on operation.