

# ONYX

TECHNOLOGY POWERING A CLEANER FUTURE



**RX20**  
RIDE-ON FLOOR SCRUBBER

## OPERATOR MANUAL

RX-20 RIDE-ON 20" FLOOR SCRUBBER

This Guide provides necessary instructions on machine operation and maintenance. Before operation or use of this machine, please carefully read and understand this Guide.



TECHNOLOGY POWERING A CLEANER FUTURE

12703 Commerce Station Dr • Suite 200  
Huntersville, NC 28078  
704.827.9368

**Website:** <https://www.onyx solutions.store/>

No further notice will be given for possible change of specification and parts.

Machine Information:

Please fill in when installing for future reference.

Model number: \_\_\_\_\_

Machine serial number: \_\_\_\_\_

Sales representative: \_\_\_\_\_

PO number: \_\_\_\_\_

Date PO placed: \_\_\_\_\_

Installation Date: \_\_\_\_\_

**RX20**  
RIDE-ON FLOOR SCRUBBER



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## PARTS ORDERING

When ordering the replacement parts, please refer to the ONYX website at [www.onyx solutions.com](http://www.onyx solutions.com). Use of the published Illustrated Parts Lists (IPL's) to identify the correct part number required is required to support accuracy of parts ordering.

Machine IPL's can be found at the top of the SHOP page of the ONYX website. Before matching parts or accessories, please firstly determine your machine model and serial number. You can order parts and accessories from any authorized service center or dealer by telephone at 704-827-9368, or email us at [sales@onyx solutions.com](mailto:sales@onyx solutions.com).

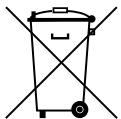
## WARRANTY CLAIMS

ONYX Warranty Statement (policy) and Warranty Claim form can be found on the SUPPORT page of the ONYX website, <https://www.onyx solutions.store/support>.

## TECHNICAL SUPPORT

Technical support is available by submitting a HELP TICKET on the CONTACT US page of the ONYX website, <https://onyx solutions.odoo.com/contact>.

## PROTECT THE ENVIRONMENT



Please abandon the old machine components such as packaging material, battery, etc. and toxic liquid such as anti-freezing agent and oil according to your local regulations on waste disposal and on the premise of maintaining environmental safety. Please ensure to carry out the recycling well.



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# SAFETY PRECAUTIONS

The ONYX RX20 Ride-On scrubber is designed to scrub hard surfaces (concrete, asphalt, stone, synthetic, etc) in an indoor environment. Typical applications include hotels, schools, hospitals, factories, shops, offices, and rental businesses. Do not use this machine on carpeted surfaces. Use only recommended pads and commercially available floor cleaners intended for machine application. Do not use this machine on soil, grass, artificial turf, or carpeted surfaces. This machine is intended for indoor use only.

This machine is not intended for use on public roadways. Do not use this machine other than described in this Operator Manual.

Before operating read and follow all safety labels. See safety labels located on steering column.

The following warning alert symbol and the “FOR SAFETY” heading are used throughout this manual as indicated in their description:



This “WARNING” alert symbol and the “FOR SAFETY” alert symbol are used throughout this manual as indicated in their description:



**WARNING:** To warn of hazards or unsafe practices which could result in severe personal injury or death.



**FOR SAFETY:** To identify actions which must be followed for safe operation of equipment.



All operators must read, understand and observe the following safety precautions.

The following safety precautions signal potentially dangerous conditions to the operator or equipment. If the following warnings are not observed, it may cause personal injury, electric shock, fire or explosion.



**WARNING:** Fire or Explosion Hazard:

- Do not use flammable liquid; do not operate the machine close to or in the place where there is flammable liquids, vapors or combustible dust.
- This machine is not equipped with explosion-proof motor. If this machine is used in the place where there is flammable vapors, liquids or combustible dust, electric motor may generate spark during the start and operation, which may cause flash fire or explosion.
- Do not pick up flammable materials or reactive metals.
- The battery releases hydrogen. Please keep away from sparks or open flame. The battery cabin must be kept open when charging.



**WARNING:** Electric Shock Hazard

- Please first disconnect the battery cables before performing any maintenance on the machine.
- If the charger supply cord is damaged or broken, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.



**WARNING: Operation of Rotary Brush:** Always keep hands away from the live spinning motor. Please turn off the power before maintaining the machine.

- Do not use flammable liquid; do not operate the machine close to or in the place where there is flammable liquids, vapors or combustible dust.
- This machine is not equipped with explosion-proof motor. If this machine is used in the place where there is flammable vapors, liquids or combustible dust, electric motor may generate spark during the start and operation, which may cause flash fire or explosion.
- Do not pick up flammable materials or reactive metals.
- The battery releases hydrogen. Please keep away from sparks or open flame. The battery cabin must be kept open when charging.

**FOR SAFETY: 1.** Please do not operate the machine:

- When contacting flammable liquid or getting close to flammable vapors, otherwise it may cause explosion or flash fire.
- Unless having been trained and authorized to operate the machine.
- Unless having read and understood the operation manual.
- Under the influence of alcohol or drugs.
- While using a cell phone or other types of electronic devices.
- Unless mentally and physically capable of following machine instructions.
- With brake disabled.
- If the machine is not in proper operating condition.
- If the battery emits an unusual odor. Move the machine to a ventilated area and contact Customer Service immediately.
- If the battery is leaking any substance. Avoid contact with battery substance and contact Customer Service immediately.
- If the battery becomes excessively hot. Disconnect battery charger. Move the machine to a ventilated area and contact Customer Service immediately.

**FOR SAFETY: 2.** Before starting the machine:

- Please ensure that all safety equipment is in place and operated correctly.
- Follow safety guidelines concerning wet floors.
- Make sure all safety devices are in place and operate properly.
- Check brakes and steering for proper operation.
- Adjust seat and fasten seat belt (if equipped).

**FOR SAFETY: 3.** When using the machine:

- Please drive slowly when encountering a slope and slippery surface.
- Follow site safety guidelines concerning wet floors.
- Please wear anti-skid shoes when operating the machine.
- Use brakes to stop the machine.
- Keep all parts of the body inside the operator station while the machine is moving.
- Use care when reversing the machine.
- Reduce speed when turning.

- NEVER allow children to play on or around the machine.
- NEVER carry passengers on the machine.
- Always follow safety and traffic rules.
- Report machine damage or faulty operation immediately.
- Observe the mixing ratio and processing instructions on the chemical vessel.
- In areas that are too dark to safely see the controls or operate the machine unless operating / headlights are turned on.
- In areas with possible falling objects unless equipped with overhead guard.

**FOR SAFETY: 4.** Before leaving or maintaining the machine:

- Stop and place the machine on a stable and flat surface.
- Shut down the machine.
- Remove the key.

**FOR SAFETY: 5.** When repairing and servicing the machine:

- Avoid moving the parts. Please do not wear loose jacket, jewelry, shirt or over sleeves.
- Before conducting service on the machine, please first disconnect the battery wiring.
- Block machine tires before jacking machine up.
- Jack machine up at designated locations only. Support machine with jack stands.
- Use a hoist or jack that will support the weight of the machine.
- Do not push or tow the machine on inclines with the brake disabled.
- When treating battery or battery wiring, please wear protective gloves and eye protection.
- Avoid contacting battery acid.
- Do not hose down or spray this machine with high pressure water.
- Use the replacement parts provided or recognized by the manufacturer.
- All maintenance must be carried out by qualified maintenance personnel.
- Relevant personal protective equipment (PPE) should always be worn when servicing the machine.
- Do not revise the original design of the machine.

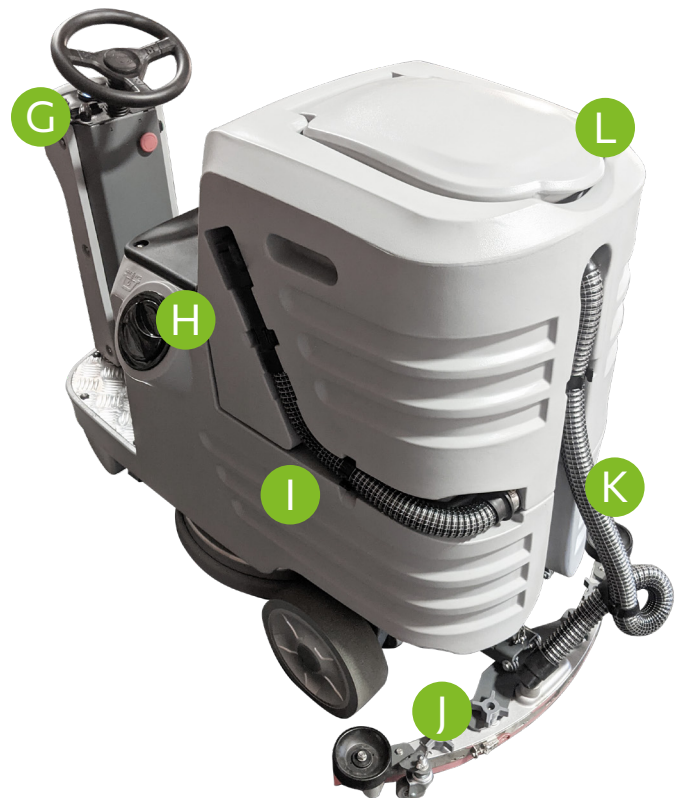
**FOR SAFETY: 6.** When transporting the machine:

- Shut down the machine. Remove the key.
- Drain tanks before loading.
- Lower scrub head and squeegee before tying down the machine.
- Use a recommended ramp when loading/unloading into/off truck or trailer.
- Use ramp, truck or trailer that will support the weight of the machine and operator.
- Use a winch. Do not push the machine onto/off the truck or trailer unless the load height is 380 mm (15 in) or less from the ground.
- Block machine tires.
- Tie machine down to truck or trailer.
- Use tie-down straps to secure the machine to truck or trailer

## MACHINE COMPONENTS



- A. Steering wheel
- B. Operator Seat
- C. Recovery Tank
- D. Batteries
- E. Scrub head
- F. Propel Pedal



- G. Control Panel
- H. Solution tank fill cap
- I. Solution tank
- J. Rear squeegee
- K. Recovery tank drain hose
- L. Recovery tank cover



# MACHINE UNPACKING

1. Please carefully check whether there is damage on the packing box of the machine. If there is, please immediately contact the shipping carrier.
2. Unpack on a level and flat surface.

## MACHINE INSTALLATION INSTRUCTIONS

### Battery Installation



**WARNING: Fire or explosion hazard:** The battery releases hydrogen. Please be away from spark or open flame. The battery cover must be kept open when charging.

**FOR SAFETY:** Please wear protective gloves and eye protectors when treating the battery and battery wiring when repairing and servicing the machine. Avoid contacting the battery acid.

### Battery Specification:

Two 12V 120Ah AGM Maintenance Free Batteries connected in series to produce total battery power pack of 24 volt, 120 Ah AGM Maintenance Free Batteries.

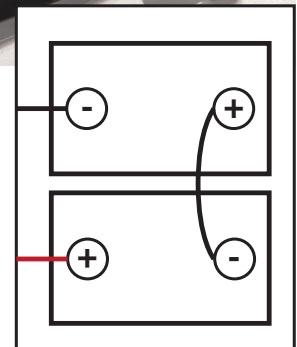
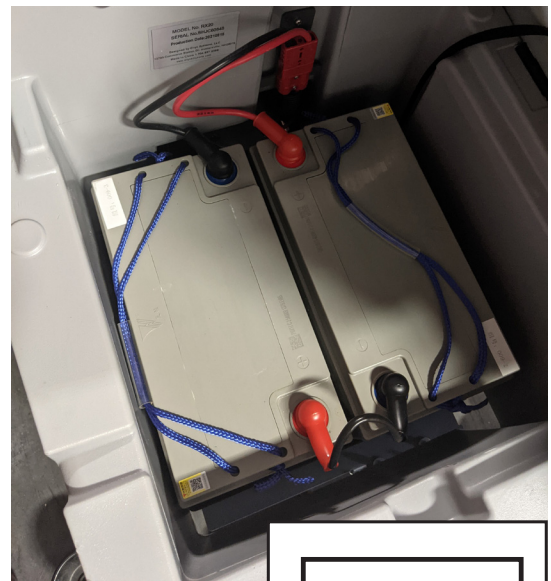
1. Stop and place the machine on the level ground and take out the key. Lift up the recovery tank to expose the battery cabin.
2. Carefully install the two 12V batteries in the battery cabin and connect the battery cable according to the following figure:

**Note:** Gently place each battery into the battery cabin to avoid damage to the battery and the machine.

**Hint:** Paint a thin layer of metal-free lubricating oil or protective spray on the connected wiring to avoid battery corrosion.

3. Before connecting the battery, please first ensure whether the electrodes and electric terminals are clean. Use electrode cleaning fluid and wire brush as required.

4. After the battery is installed, please check the scale of the battery power meter. Charge the battery as required.



# INSTALLATION AND CONNECTION OF SQUEEGEE COMPONENT

1. Stop and place the machine on the level ground, select the mode switch on the control panel to off. Brushes and squeegee will automatically lift to the up position, and take out the key.



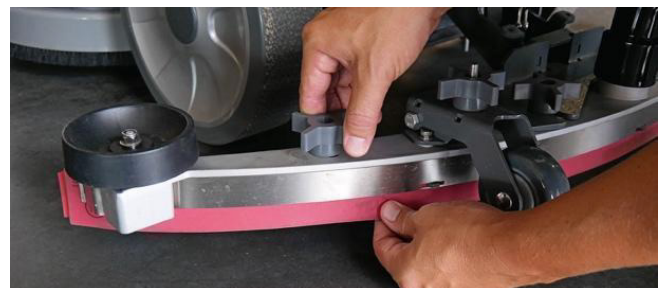
2. Lower the lifting rod of the squeegee to the lower position.



3. Install the squeegee to the squeegee installation bracket as shown in the figure. Ensure to fully place the fastening knob into the jack and then tighten the knob.



4. Connect the vacuum suction pipe to the squeegee component.



5. Examine the squeegee adhesive tape and reasonably adjust.

# INSTALLATION OF BRUSH/PAD

For suggested brush and pad selection, please refer to the section of [Information on Brush and Pad below] in this Guide or consult your local authorized dealer.

1. Stop and place the machine on the level ground, select the mode switch on the control panel to off. Brushes and squeegee will automatically lift to the up position and take out the key.

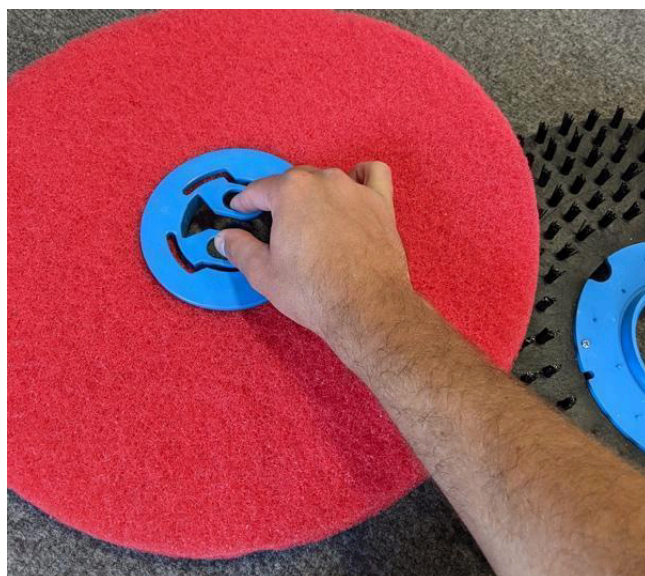
2. Lift skirt (should be loose)

3. Rotate counterclockwise to loosen and remove brush or pad driver.

4. To replace pad, remove blue retaining clip by pinching finger points together. (see image)

5. Place correctly sized pad on driver and secure with blue retaining clip. Pinch finger points together and press firmly until you hear a click.

6. With pad/brush side down, lift up onto driver and rotate clockwise until pad is secure.





# MACHINE OPERATION

## Machine Water Flow Adjustment

### Conventional Scrubbing/Cleaning:

Manually control the water valve to adjust the volume of the cleaning liquid (water and detergent) flowing to the ground.

The brush cleans the floor with the solution, mixing detergent and water. While the machine advances, pick-up the wastewater on the floor with the squeegee into the waste water tank.



## Information on Brush and Scouring Pad

To ensure the optimum efficiency, please use the correct type of brush for cleaning. The brush and scouring pad suggested for use are as follows:



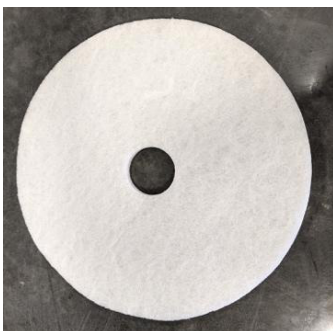
### Soft nylon brush (white)

It is suggested to clean the coated floor without damaging the floor. Clean without scratches.



### Crash pad (red)

It is used for scrubbing slight dirt without damaging the floor.



### Polishing pad (white)

It is used for maintaining a highly smooth or polished floor.



### Gravity folding pad (black)

It is used for powerfully removing the heavy coating or base or super-powerful scrubbing.





**WARNING: Fire or explosion hazard:** Do not operate the machine close to or in the place where there is flammable liquids, vapors or combustible dust.

**FOR SAFETY:** Please do not operate this machine before reading and understanding the operation manual.

### Pre-operational Examination

- Check the battery is well charged.
- Check the abrasion conditions of the pad/brush.
- Check the abrasion conditions of the squeegee blade and reasonably adjust the angle.
- Confirm that the wastewater tank is blank and has been equipped with a clean floating filter screen.



- Check the abrasion conditions of the skirt section of the brush head



# MACHINE OPERATION

1. Sit on the machine.

2. Switch the key of the main power supply to the position of (I).



3. Select the operational mode required. The vacuum motor and brush motor can be operated independently.



4. Select the desired clean water solution flow rate by using the valve on the dashboard.



5. Firmly grip the steering wheel and select forward or reverse gear stick, push forward for forward drive, and pull back for reverse.



6. Gently apply pressure to the right-hand drive foot pedal.



# MACHINE OPERATION DURATION



**WARNING: Fire or explosion hazard:** Please do not pick up flammable materials or reactive metals.

1. Recommend each cleaning path overlaps by 2”.
2. Let the machine advance constantly to avoid ground damage.
3. If there is drag mark on the ground after the squeegee absorbs water, check the squeegee blade for debris, and clean accordingly.
4. Do not operate the machine on the slope with a slope over 5% (3°).
5. If there is too much foam entering the wastewater tank, check the foamer/detergent concentration and adjust accordingly.

**Note:** Do not let the foam enter the filter screen so as to avoid damage to vacuum motor. The foam will make the switch of the filter screen invalid.

6. Replace or rotate the pad as required.
7. Observe the power consumption of the battery power meter.
8. Observe the residual liquid amount through the freshwater meter of the clean water tank.
9. When the solution in the clean water tank is used up, empty the waste water tank by accessing the waste water drain hose of the back of the machine, then re-pour the cleaning solution.
10. To stop machine operation, remove foot from drive pedal, select OFF on the Yellow control switch, park on level ground and remove the power key.



## BATTERY POWER METER

The battery power meter will display the power quantity of the battery. To prolong the life of the battery, do not let the battery indicator go below 20%.

**Hint:** To prolong the life of the battery, please ensure to charge the battery after the total use time of the machine exceeds 30min.



## DRAINAGE OF WATER TANK

**FOR SAFETY: 4.** Before leaving or maintaining the machine:

After each use, the wastewater tank shall be drained and cleaned. The clean water tank shall be periodically cleaned to remove any corroded parts. Carry the machine to the drainage place, switch off the key of the power supply, and drain the water according to the following drainage instructions:

## DRAINAGE OF WASTEWATER TANK

1. Unscrew the drain hose cover of the waste water tank drain hose counter-clockwise and drop the hose into waste water drain.
2. Open the cover of the waste water tank and flush the waste water tank with a hose using fresh water.
3. Rinse the waste water filter screen and remove any debris from inside the waste water tank.





# BATTERY CHARGING

**Note:** To prolong the life of the battery and ensure the optimum efficiency of the machine, the battery must be charged after the use time of the machine exceeds 30min. Please do not allow the battery to remain uncharged for long.

The following charging instructions are suitable for the charger. Please ensure to use the charger provided with the machine to avoid battery damage. The specification of the battery charger:

- Charger type: - charger for aluminum acid battery
- Output voltage - 24V
- Output current - 15A
- Suitable for deep cycle battery charging
- APO circuit



**WARNING: Fire or explosion hazard:** The battery releases hydrogen. Please be away from spark or open fire. The battery cabin must be kept open when charging.

**FOR SAFETY:** Please wear protective gloves and eye protectors when treating the battery and battery wiring when repairing the machine. Avoid contacting the battery acid. When charging, please open the side of the wastewater tank to facilitate ventilation.

1. Move the machine to the place with good ventilation for charging.
2. Stop and place the machine on the level ground and turn the key to the close position.
3. When charging, tilt back and leave open the waste water tank to facilitate ventilation.
4. Plug the AC (alternating current) power cord of the charger to the power socket with sound grounding.
5. Unplug battery from machine. Plug the red DC (direct current) power cord of the charger to the battery charging socket located in the battery compartment of the machine.
6. The charger will automatically start charging and will automatically switch off when charging is complete and the batteries are fully charged.

**Hint:** The machine will not work when being connected to the charger.



**Note:** during the charging of the batteries, please do not pull the DC cord of the charger out of the socket of the machine to avoid generation of arc strike. If the charging must be suspended during the charging, please pull out the AC power cord first.

# MACHINE MAINTENANCE

Only by following daily, weekly and monthly maintenance procedure can the machine be kept in the optimum working state.



**WARNING: Electric shock hazard:** Please first disconnect the battery wiring before maintaining the machine.

## Daily Maintenance (after each use)

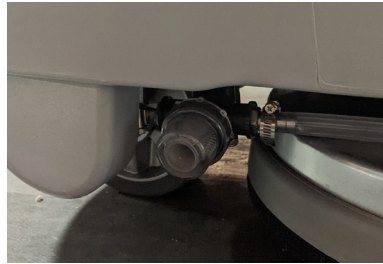
1. Drain and clean the wastewater tank.
2. Rinse and flush the floating filter screen in the wastewater tank.
3. Drain the clean water tank and flush the water tank with hot water, no higher than 50° C as required.
4. Inspect the pad/brush after cleaning, ensure pad/brush is still in good condition. If there is any abrasion, overturn or replace the brush/pad.
5. Wipe the squeegee blade.
6. Check the abrasion conditions of the scraper edge of the squeegee blade. If there is any wear and tear, exchange two sides of the blade.
7. Use multi-purpose detergent and wet cloth to wipe the machine.
8. Check the abrasion conditions of the skirt side of the brush head and replace it if there is any wear and tear or damage.
9. Charge the battery. To prolong the life of the battery and ensure the optimum efficiency of the machine, the battery must be charged after the use time of the machine exceeds 30min.



# MACHINE MAINTENANCE

## Monthly Maintenance (every 80 hours)

1. Dismantle the filter of the clean water tank from the bottom of the machine and clean the filter screen. Ensure the clean water tank is emptied before dismantling the filter.
2. Clean the top of the battery to prevent electrode corrosion (refer to [Battery Maintenance]).
3. Check whether the battery wiring is loose.
4. Check and clean the cover seal of the wastewater tank and replace it if there is any damage.
5. Spray the silica gel dry lubricant on all pivots and wheels and cover a layer of water-proof lubricating oil to ensure smooth operation of wheels and pivots.
6. Check whether the nuts and bolts on the machine are loose.
7. Check whether the machine leaks.



## MACHINE TRANSPORT

When transporting the machine with truck or trailer, please ensure to following the following procedure:

**FOR SAFETY:** When loading/unloading machine onto or off of a truck or trailer, use a ramp, truck or trailer that will support the weight of the machine and operator. Use tie- down straps to secure machine to truck or trailer.

1. Drain machine tanks.
2. Load the machine using a ramp that can support the machine weight and driver (assume combined weight of 1,000lbs)
3. Drive the scrubber onto the lift gate of the truck and position for transportation.



## MACHINE MAINTENANCE

4. Position the front of machine up against the front of the trailer or truck. Select brush and vacuum mode to the ON position. This will lower the pad/brush head and squeegee.
5. Switch power key to OFF position.
6. Place a block behind each wheel to prevent the machine from rolling.
7. Secure with tie-down straps. It may be necessary to install tie-down brackets to trailer or truck.

**Note:** To move the machine without using the battery power, lift the yellow lever to the UP position. This disengages the automatic brake and allows the machine to be moved manually. For normal battery powered use, the yellow lever should be in the down position.



## MACHINE STORAGE

**Note:** Do not let the machine be subject to rain, excessive amounts of humidity and moisture, and store indoor.

1. Please charge the battery before storage.
2. Switch vacuum and brush motor switches to the OFF position, this will place pad/brush head and squeegee in up position.
3. Switch power key to OFF position.
4. Disconnect the batteries before any long-term storage.
5. Drain and flush thoroughly the bottom of the water tank.
6. Store the machine in a dry place.
7. Open the cover of the waste water tank.
8. Note: Do not let the machine be subject to rain, excessive amounts of humidity and moisture, and store indoor.
9. If the machine is stored in a cold environment, drain all liquid in the machine.





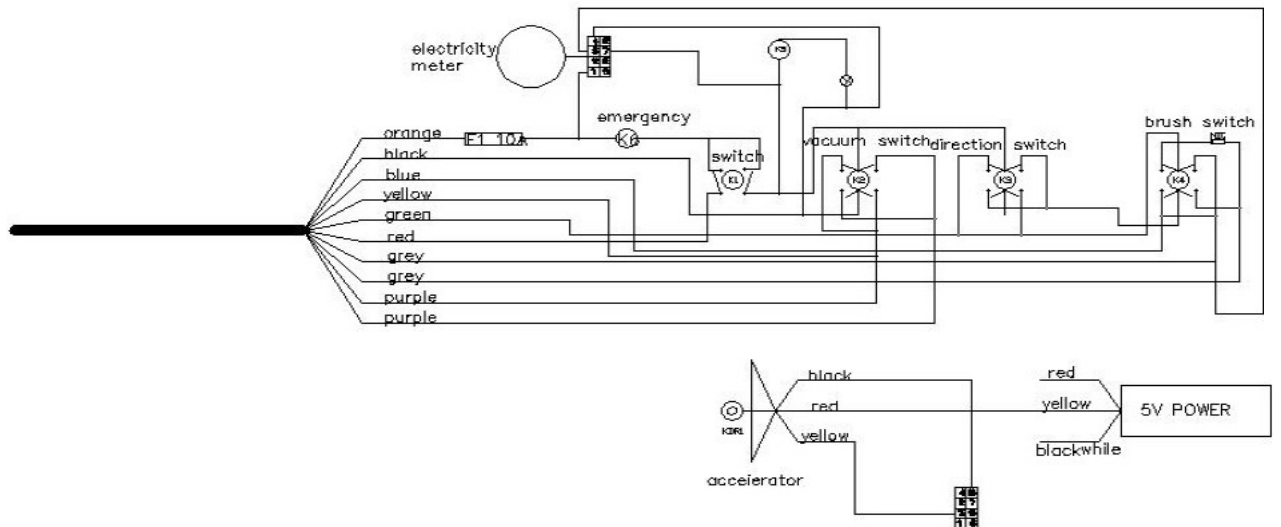
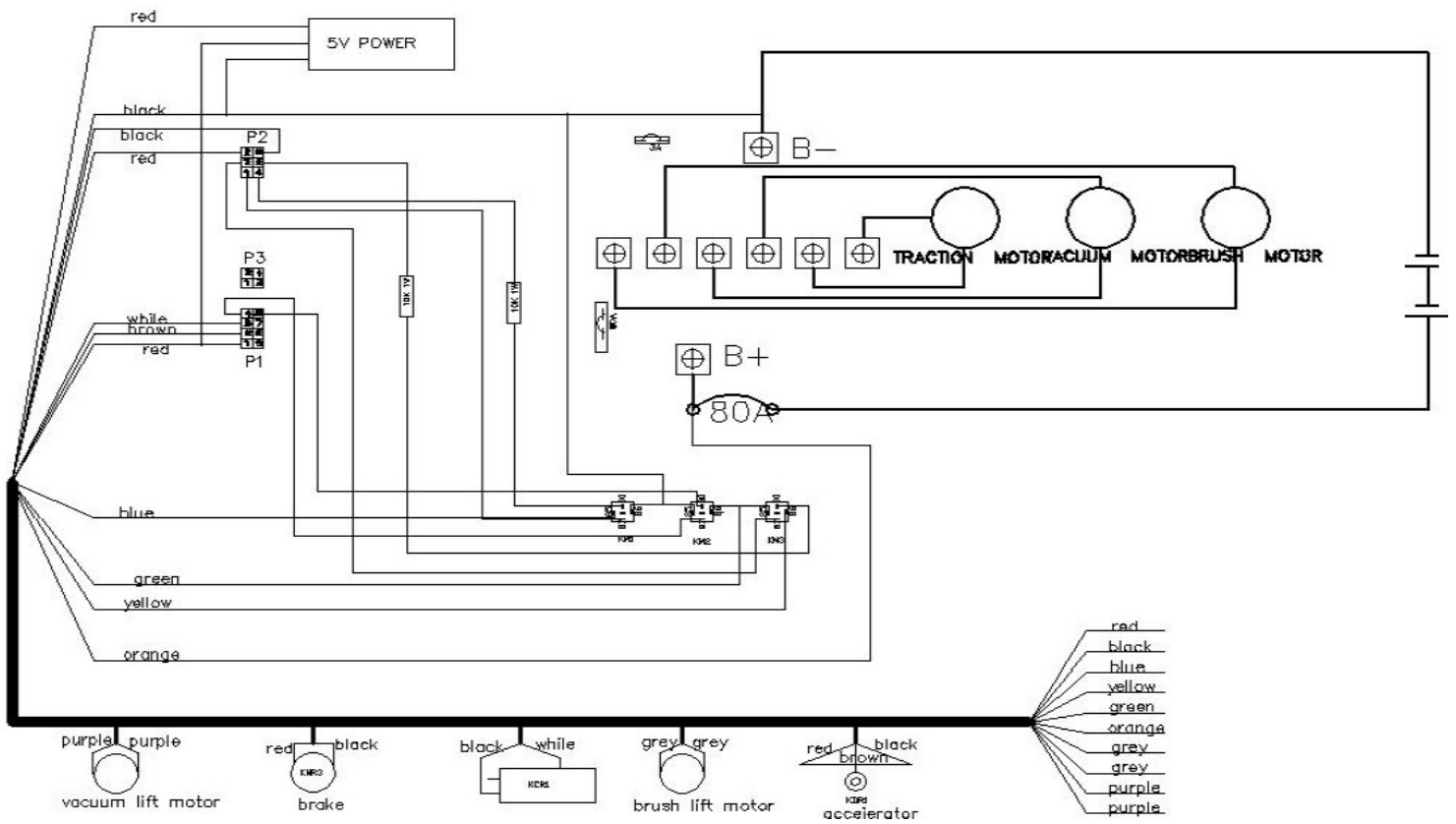
# TROUBLE SHOOTING GUIDE

Problem	Reason	Solution
The Machine cannot be operated	The battery has no power	Charge the battery
	The batter fails	Replace the battery
	The battery wiring is loose	Fasten the battery wiring
	The main fuse blows out	Replace the fuse
The brush motor does not work	The brush head rises up from the ground	Lower down the brush head
	The battery coulomb-meter is locked and not started	Charge the battery
	The breaker of the brush motor circuit triggers blackout	Reset the button of the breaker of the brush circuit
	The brush (upper/lower) switch fails	Please contact the service center
	The carbon brush of the motor wears	Please contact the service center
The vacuum motor does not work	The squeegee rises up from the ground	Lower down the squeegee
	The fuse of the vacuum motor blows out	Replace the fuse
	The vacuum motor or wiring fails	Please contact the service center
	The carbon brush of the motor is worn	Please contact the service center
Little or no water flows out	The filter or solution pipe of the clean water tank is blocked	Clean the filter of the clean water tank
	The speed of the flow control knob is set too low	Adjust the water control knob
	The screw of the control knob is loosened	Lubricate the knob and then fasten the screw
The waste water recovery rate is low	The waste water tank is full	Drain the waste water tank
	The water-absorbing adhesive tape is worn	Replace the water-absorbing adhesive tape
	The water suction pipe is blocked	Remove the blocked scraps
	The sealing strip of the waste water tank is damaged	Replace the sealing stripe
	The vacuum motor fails	Please contact with the service center
The Machine cannot be operated	The battery has flaws	Replace the battery
	The battery charging fails	Repair or replace the charger

## TECHNICAL PARAMETERS

Technical parameter	Unit	RX20
Operating voltage	V/AH	24/120
Scrubbing motor	W	650
Suction motor	W	500
Squeegee lifting motor	W	100
Brush lifting motor	W	100
Drive motor	W	800 (3.5hp)
Cleaning width	mm	530 (20")
Squeegee width	mm	770 (30")
Cleaning efficiency	m <sup>2</sup> /h	5500 (59,000sq-ft/hr)
Clean water tank capacity	L	65 (18 Gallons)
Waste water tank capacity	L	75 (20 Gallons)
Machine weight	Kg	220kg (485lbs; Shipping weight 515lbs)
Machine dimension	cm	127 x 59 x 103 (50" x 23" x 41")

## WIRING DIAGRAM/SCHEMATIC



Link to Wiring Schematic PDF file on ONYX Website Support Page:

<https://www.onyx solutions.store/support>



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