

# ROVE Pro

Robotic Vacuum

**User Manual**  
**L3510**

from



APPLIED SCIENCE

# CONTENTS

SAFETY INFORMATION.....	1
PRODUCT INTRODUCTION.....	5
INSTALLATION INSTRUCTION.....	8
ROUTINE MAINTENANCE .....	13
PRODUCT SPECIFICATIONS.....	16
TROUBLESHOOTING GUIDE.....	17
COMMON PROBLEMS.....	19
WARRANTY.....	20

## Usage Limitations

- The product is used for floor cleaning in home environment ONLY and cannot be used for outdoor, non-ground surfaces (such as sofa) and commercial/industrial environment.
- Please do not operate the product when the temperature is below 32°F or above 100°F, wet surfaces or over sticky substances on the ground.
- Please make sure no wiring is on the floor (including power cable from charging station) to prevent wiring from being trapped in the device and being damaged.
- Please remove fragile objects (such as vases, plastic bags, etc.) on the ground to prevent device from being damaged.
- This device can be used by children age 8 years and older.
- Adult supervision is required.
- Please keep main brush and other cleaning tools away from children.
- Please do not place objects (including children and pets) on a stationary or moving machine.
- Never let clothing or body parts (such as hair, nails, etc.) be drawn into the brush or wheel of this device, otherwise it may cause personal injury.
- Please do not use this product to sweep burning objects (such as burning cigarettes, matches, etc.).
- Please do not use this product to clean long-haired carpet (some carpets may need to be cleaned differently).
- Please keep the device far away from hard or sharp objects (such as glass, iron nails, etc.).
- Please do not move the machine by holding the protective cover of the LiDAR and collision bumper.
- Please regularly clean and maintain the device and the charging base under shutdown or power-off state.
- Please do not wipe any part of the product using a wet cloth or any other liquid.
- Please operate this product in accordance with the steps indicated in the User Manual.
- Keep the User Manual for future reference.
- Any operational behavior against the guiding content in the User Manual is likely to result in serious personal injury or damage to the product itself.

# SAFETY INFORMATION



1. This device is only to be used with the power supply unit provided with it.
2. The adapter must be removed from the socket-outlet before cleaning or maintaining the device.
3. This device contains batteries that are only replaceable by skilled persons.
4. The battery must be removed from the device before it is disposed of.
5. This device must be disconnected from the power supply when removing the battery.
6. The battery is to be disposed of safely.

**WARNING:** For the purposes of recharging the battery, only use the detachable power supply unit provided with this device.

Plug Type	Model	Input	Output
USA	GA241-2001000U	100-240VAC 50/60Hz 0.6A	20V1A

## Battery and Charging

- Please do not use a battery, charging base or charger provided by any third parties.
- Please do not dismantle or refit battery and charging base.
- Please keep the charging base away from heat sources (such as heating plate).
- Please do not wipe or clean the charging base using a wet cloth or wet hand.
- Please do not improperly dispose of used batteries. Used batteries should be disposed of by a professional recycling agency.
- If the power line is damaged or broken, please stop using it immediately and replace it with official Applied Science products.
- Please ensure the robot is turned off during transportation and the product should be transported in its original packaging.
- If the device is left unused for too long, it should be fully charged and then placed in a cool and dry place. Charge the device at least every 3 months, to avoid damaging batteries due to excessive discharge.

## Disposal Instructions

- The following information is only applicable to the disposal of this device, not its daily use.
- The chemical substances contained in the battery will pollute the environment. Before disposing of this product, remove the battery from it and take it to a professional recycling station. The battery should only be removed after it has been used completely. Do not under any circumstance allow the battery to come into contact with metal objects.

## Removing the Battery

1. Ensuring that the robot is not touching the charging base, keep the product running until it uses up all of the battery and shuts down.
2. Remove the screws from the battery cover.
3. Remove the battery cover, pull out the battery plug, and then remove the battery.

## Laser Safety information

- LiDAR of the product complies with the standard for class1 laser products of IEC60825 and does not produce dangerous laser radiation.
- Laser class IEC-60825 Class 1.
- The maximum laser output power of the product 10mW.
- Laser head Pulse time (1/2300s).
- invisible laser radiation.
- Laser energy-Exposure near aperture may cause burns.
- Standard: IEC 60825-1:2014

Frequency	2.4Ghz~2.4835Ghz
Power	≤ 17dBm

# WARNING !



This symbol means that according to local laws and regulations your product and/or its battery shall be disposed of separately from household waste. When this product reaches the end of its life, the user has the choice to give this product to a competent recycling organization. Proper recycling of your product will protect human health and the environment.



Indoor use only.

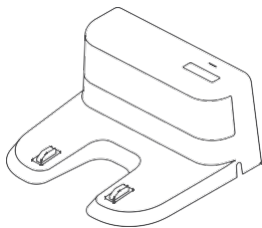
## BATTERY WARNING

1. The lithium battery is built into this product. It **must not** be dismantled, impacted or exposed to fire.
2. The battery is subjected to extremely low air pressure conditions that may result in an explosion or leakage of flammable liquid or gas.
3. Please do not put the battery in a high-temperature environment or expose it to the sun; doing so could cause it to explode.
4. Please do not continue to use this product if the battery appears to be swollen.
5. Please dispose of the battery in accordance with local regulations. Do not dispose of the battery as normal household waste.
6. Please do not attempt to repair, disassemble , modify or replace the battery.
7. Please do not place pressure on or pierce the battery with hard objects. Damaging the battery may cause battery leakage, overheating or fires.

# PRODUCT INTRODUCTION



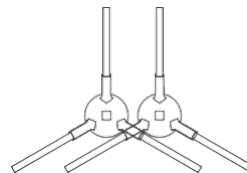
## WHAT'S INCLUDED



Charging Base x1



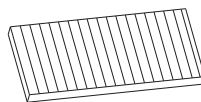
Adapter x1



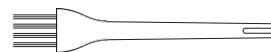
Left Sidebrush x1  
Right Sidebrush x1



Dust Box x 1



HEPA Filter x 1 + Sponge Foam Filter x 1

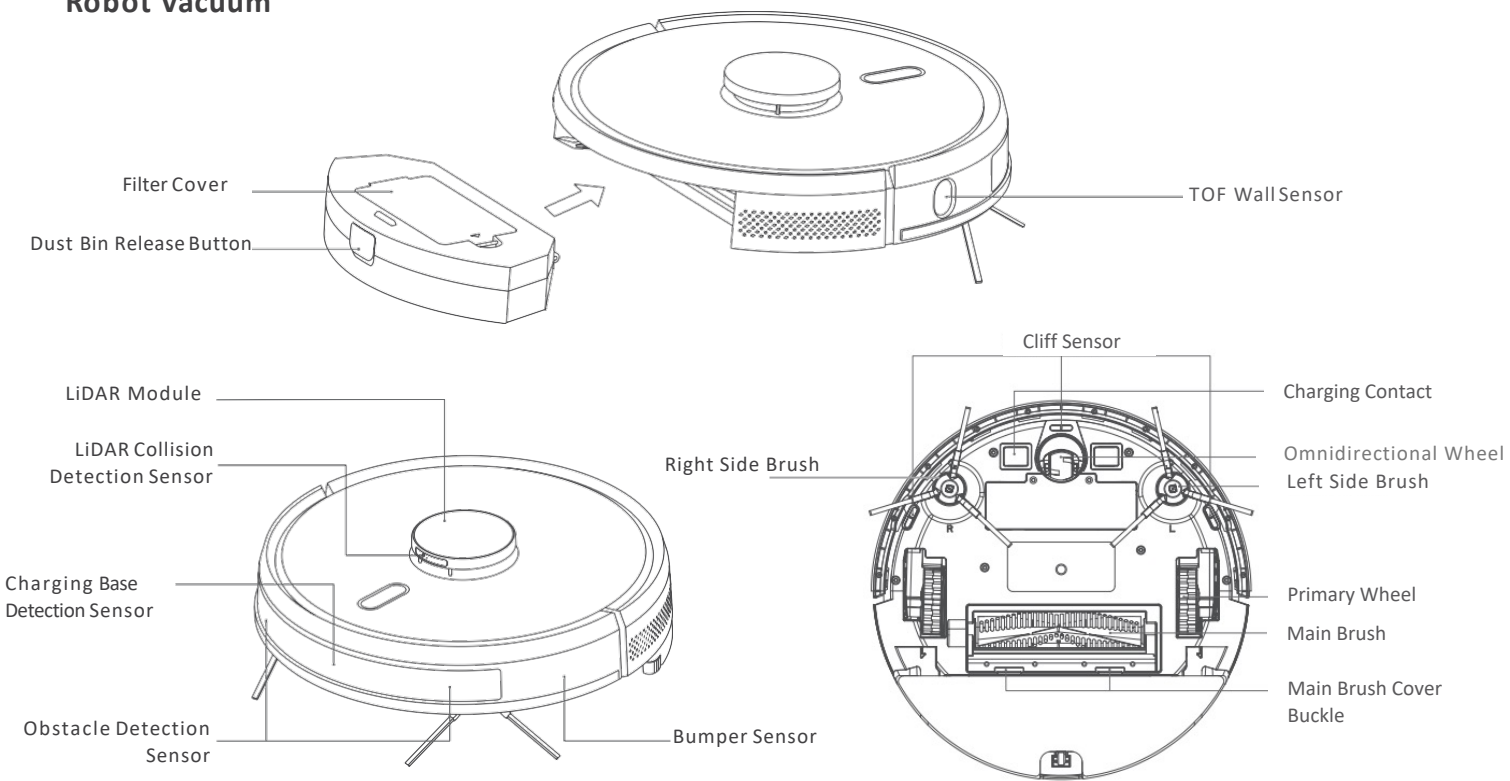


Cleaning Brush x 1

# PRODUCT INTRODUCTION



## Robot Vacuum

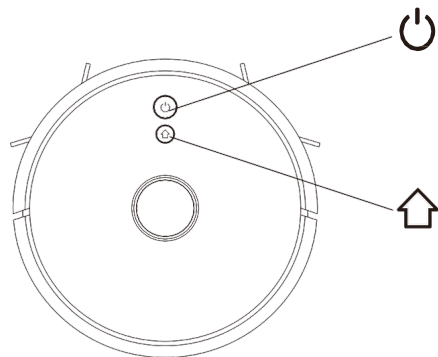




# PRODUCT INTRODUCTION



## Robot Vacuum



### On/Off/Clean/Pause Button

- Press once to start/pause cleaning
- Press and hold for 3 seconds to turn the device on/off
- When an error occurs, press and hold for 15 seconds to force shutdown

### Recharge/Partial Clean/Pause Button

- Press to recharge/pause
- Press and hold for 3 seconds to start partial cleaning

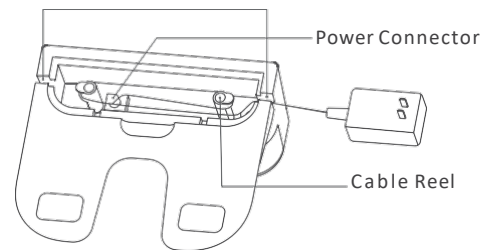
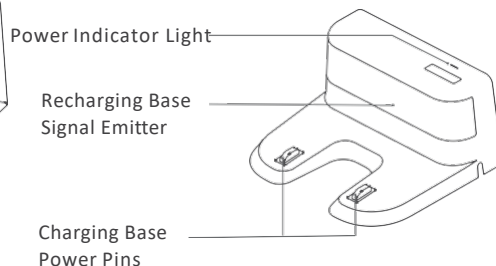
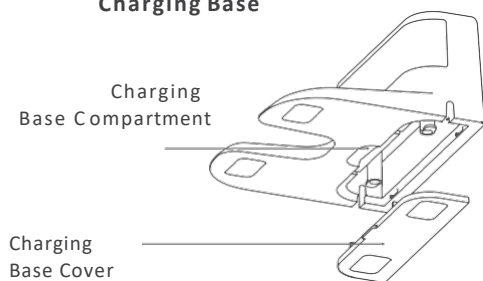
### Indicator Light

- White: Connected to Wi-Fi
- Orange: Not connected to Wi-Fi
- Red: Error or low battery

### Reset Wi-Fi

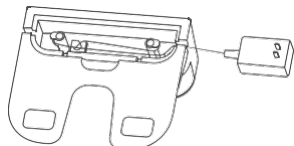
- Press and hold both buttons for 3 seconds

## Charging Base

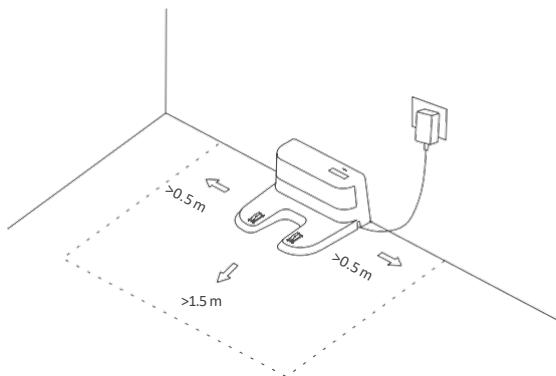


# INSTALLATION INSTRUCTION

1. Connect the adaptor power cable with the charging base, and then place any excess cable into the charging base's inner compartment.



2. Place the charging base against the wall on a flat surface. Then connect the base to a power supply.

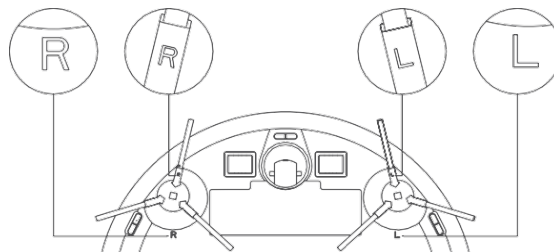


**Note:**


- Ensure that the charging base has at least 0.5 m of free space on both sides, and 1.5 m of free space in front of it.
- During installation, keep the power cable off the ground. When the power cable is on the ground, it may be dragged by the robot, which will cause the charging base to power off.
- The charging indicator light will remain on as long as the charging base has power.

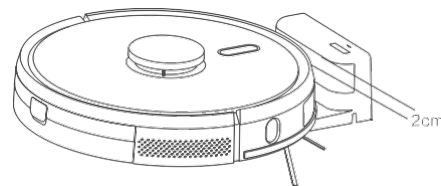
3. Install the Side Brushes

Align the left and right brushes with the corresponding markings on the bottom cover of the device. Press side brushes down until they click.



4. Power On and Charging

Press and hold the  button to turn on the device. Wait until the indicator light turns on, and then place the device on the charging base.





**Note:**

This device cannot start if it does not have enough battery power. Place the device on the charging base, and it will automatically turn on when it has enough power. The device can work normally only when the battery is  $\geq 20\%$  charged. As shown in the figure, the front of the device should face the charging base so that the charging contact of the robot is touching the wireless power receiver. The distance between the front of the device and the charging base should be around 0.8 inch.

# USAGE INSTRUCTION


## ON/OFF BUTTON

Press and hold the  button for 3 seconds. The indicator should light up blue to indicate that the device is turned on.

Under abnormal condition, press and hold  button for 15 seconds to force the device to shutdown immediately.

Note: The device cannot be turned off while charging in the charging base.

## CLEAN/PAUSE

Once the device has turned on, press the  button on the robot or use the mobile app to start the cleaning process.


(Press any key during cleaning to pause cleaning)

### Note:

- ROVE robot vacuum CANNOT be used to cleanup liquids.
- If the battery level is lower than 20%, the device will not be able to perform cleaning. Please charge the device before cleaning.
- If the battery level falls below 20% during the cleaning process, the device will automatically return to the charging base to recharge. Once the battery has been charged to 80%, the device will attempt to resume its work.
- Pickup all cables (including the power cable of the charging base) from the floor before use. It ensures the device does not cause any power outages / object damage by dragging cables.

## CHARGING

**Automatic Trigger Charging :** When cleaning is completed, the device will return to the charging base automatically.

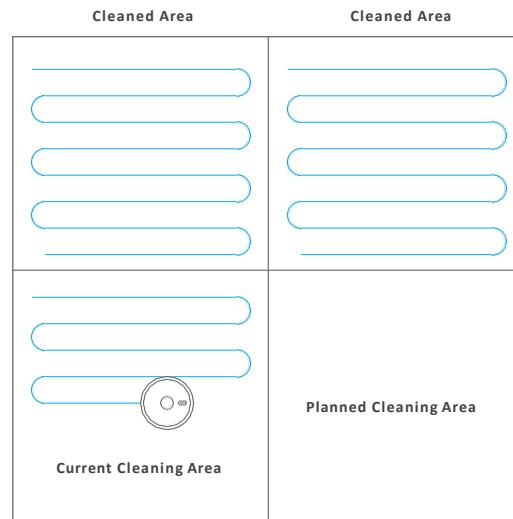
**Manual Trigger Charging :** While the device is paused, press the  key once or use the mobile app to trigger the recharging process.

**Note:** If the device cannot find the charging base, it will return to its starting position. Users must manually place the device on the charging base.

## START CLEANUP MODE

Press the ON/OFF button to start cleanup. Once the cleaning process has started, the robot will scan the area and generate a map. The device plans its cleaning route based on its generated map of the area. It cleans along the wall of a zone first and then moves in a S-shaped cleaning route to cover the whole area efficiently and thoroughly.

Once the cleaning process is completed, the device will automatically return to the charging base.



### Note:


Do not move the device casually during cleaning operation. Once moved, please place the vacuum at its approximate original location. Once the vacuum has restarted, it will attempt to reposition itself. If positioning is successful, the vacuum will resume its planned cleaning path. If positioning fails, it will abandon previous tasks and rebuild a new map to restart the cleaning process. Under this situation, the device may not be able to recharge automatically.

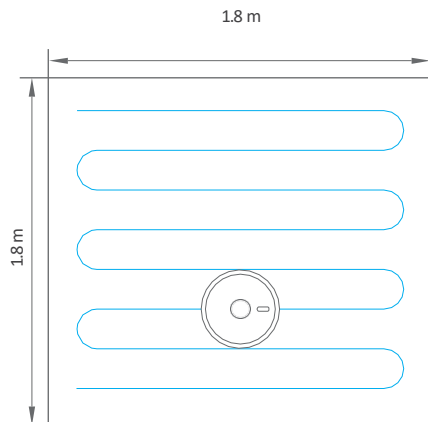
# USAGE INSTRUCTION

## SPOT CLEANING MODE

Users can select the desired area on the mobile app to deep clean a specified location. The vacuum will automatically drive through the spot and start spot cleaning in a 1.5m x 1.5m area.

## PARTIAL CLEANING MODE

Users can control the robot via the mobile app and can also manually move the vacuum to the target area. Press and hold the  key for 3 seconds. The device will enter partial cleaning mode and clean the 1.8m x 1.8m area.



## CUSTOM CLEANING AREA

Users can use the mobile app to create the desired size and location of the cleaning area(s). The vacuum will start cleaning the selected area automatically.

## RESTRICTED AREA

Users can use the mobile app to define one or more restricted areas. Once the restricted zone(s) are created, the vacuum will NOT attempt to enter the restricted area(s).

### Note:

- This device may enter a restricted area due to positioning errors or sensor failure.
- Restricted areas may be invalid when significant changes such as the shifting of furniture or the charging base. Do not move or interfere with the device during its cleaning operation.
- Building a new map will delete the previously set permanent restricted areas.

## SCHEDULED CLEANING



Users can use the mobile app to set scheduled cleaning times. The device will start cleaning based on the set times. The device will return to the charging base once completed.

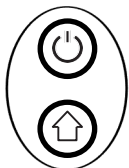
## SUCTION POWER LEVEL

The mobile app can let the user select up to 4 different suction levels: Quiet, Normal, Turbo or Max. The vacuum's default suction power is Normal.

# USAGE INSTRUCTION

## Wi-Fi RESET

If the cell phone cannot be connected to the robot vacuum due to change of router configuration / password or any other reasons, please reset the Wi-Fi. Press and hold the  key and  key simultaneously for 3 seconds. "Wi-Fi has been reset" voice command will be prompted, and the indicator light will turn purple and flick slowly.



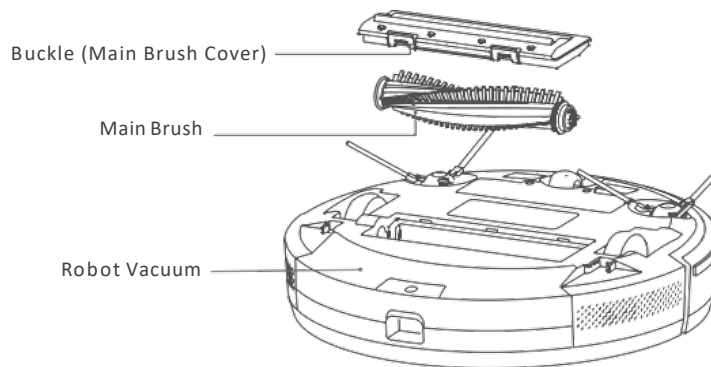
## Do Not Disturb (DND) MODE

Users can select DND MODE in the app so the device can clean the floor without any voice command. Available timing of DND mode can be set / modified through the app.

# ROUTINE MAINTENANCE

## Main Brush

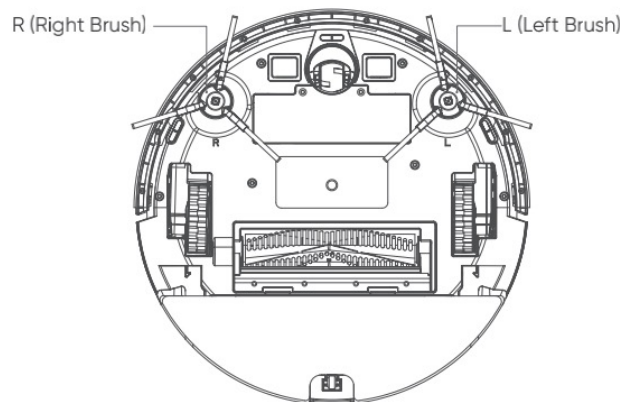
1. Flip over the device. Press the buckle on the main brush cover to take out the main brush.
2. Use the cleaning brush to remove dust & debris which may have been stuck in the main brush cavity and main brush body.
3. Reinstall the main brush, then the main brush cover. Once the brush cover has been securely installed, there will be a click sound.



## Side Brush

1. Flip over the device and pull out the side brushes vertically.
2. Reinstall the brushes after removing any trapped debris and dirt.
3. Align the left and right brushes with the corresponding markings (L/R) on the bottom cover, and then press down to install.

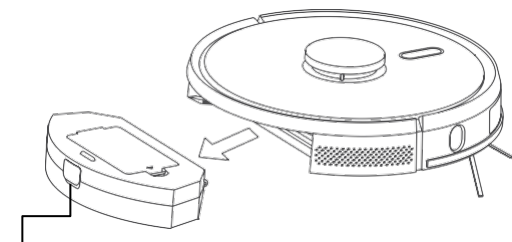
**Note:** It is recommended to replace the side brushes once every 3 to 6 months to ensure optimal performance.



# ROUTINE MAINTENANCE

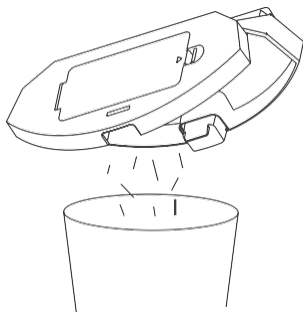
## Dust Bin

1. Press and hold the dust bin release button, then pull out the dust bin as shown below.



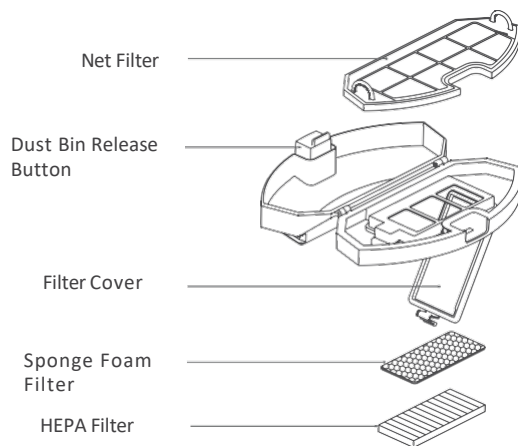
### Dust Bin Release Button

2. Open the dust bin and empty the dirt into the trash. Once cleaned up, close the dust bin cover and then slide it in vacuum body.



## Filters

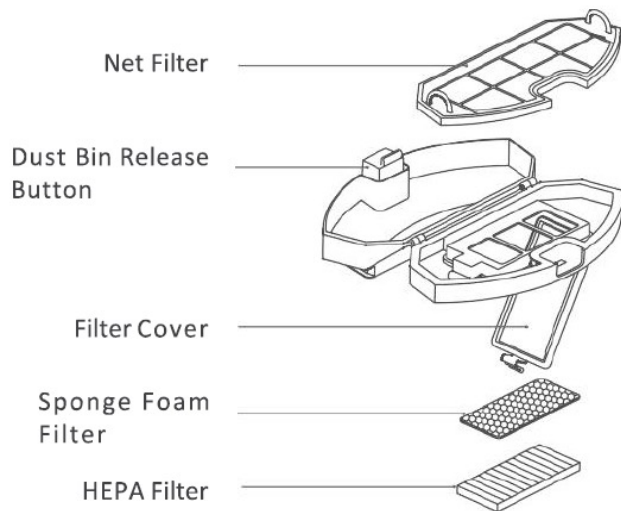
1. After a long period of use, remove the Net Filter, Sponge Foam Filter and HEPA Filter.
2. Rinse the removed filters and dust bin under a tap.
3. After rinsing, shake off water drops. Let the filters and dust bin dry completely.
4. After thoroughly drying, reinstall the filters in the following order: Net Filter > Sponge Foam Filter > HEPA Filter (shown in the diagram below).



### Note:

- Rinse the filters with clean water only. Do not add any detergents.
- Do not use a brush or your fingers to clean the filters.
- Allow the filters to dry thoroughly for at least 24 hours.
- It is recommended to replace the filters every 3-6 months.

# ROUTINE MAINTENANCE



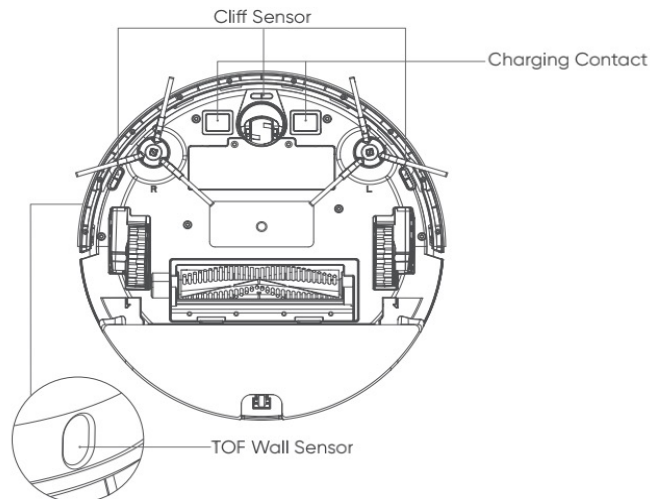
## Battery

- The vacuum robot is equipped with a high-performance lithium-ion battery. To ensure optimal battery performance, keep the device charged.
- If you do not intend to use the device for a long period of time, turn it off and store it in a safe place. Charge the device at least once per every 3 months in order to prevent damage to the battery due to over-discharge.

## Sensors (Regular Clean)

Use a soft, dry cloth to wipe all the sensors on the device, including the following:

1. The TOF Wall Sensor on the right of the vacuum
2. The Cliff Sensor on the bottom of the vacuum
3. The Obstacle Detection Sensor on the front of the vacuum
4. The LiDAR Collision Detection Sensor on the top of the vacuum
5. The Charging Contact Plate on the bottom of the vacuum and power charging pins on the charging base (**WARNING: Please turn off the power before cleaning**)
6. The Charging Base Signal Emission Window





## Vacuum Robot

Product Name	Rove Pro L3510 Laser Navigation Robot Vacuum Cleaner
Model	Rove Pro L3510
Dimensions	350x350x100 mm
Weight	3.3 kg
Battery	2600mAh Lithium Battery
Input Voltage	14.4V
Rated Power	50W

## Charging Base

Dimensions	160x143x80 mm
Rated Power	24W
Rated Output	24W

# TROUBLESHOOTING GUIDE



ERROR CODE	Solution
Error 1: Dust bin removed.	The device was started without a dust bin. Reattach the dust bin and start the device again.
Error 2: Top sensor may be blocked. Please check.	The top radar sensor has been blocked or the device was placed in an outdoor area. Remove the blockage from the top radar or move the device into an indoor area.
Error 3: Clean the bottom sensor and restart in new position.	The cliff sensor has been obstructed or placed on non-level ground. Wipe the window of the cliff sensor with a soft, dry cloth or move the device to level ground, then restart the device.
Error 4: Clean the front sensor and restart in new position.	The front optical detection sensor is dirty or has been blocked. Wipe the sensor with a soft dry cloth.
Error 5: Clean the right-side sensor and restart in new position.	The TOF wall sensor is dirty or has become obstructed. Wipe the TOF wall sensor with a soft, dry cloth.
Error 6: Bumper may be stuck. Please check.	The edge or bumper sensor is stuck. Move the front bumper left and right to ensure there's no jam.
Error 7: Please clean the dust bin and filters.	Dust Bin is full, or filter has been blocked. Clean the dust bin and filter or replace the filter.
Error 8: The dust bin out. Please clean the filter gently.	Clean the dust bin and filter or replace the filter.

# TROUBLESHOOTING GUIDE



ERROR CODE	SOLUTION
Error 9: Robot blocked. Restart in new position.	Move the device to a level surface, then restart it.
Error 10: Robot inclined. Restart in level surface.	The device is off the ground. Move the device to a level surface, then restart it.
Error 11: Main wheel may be stuck. Please check.	The driving wheel is stuck. Check the primary wheel and remove any foreign objects.
Error 12: Brush bar may be stuck. Please check.	The main brush is stuck. Check the main brush and remove any foreign objects.
Error 13: Side brush may be stuck. Please check.	The side brush is stuck. Check the side brush and remove any foreign objects.
Error 14: Charge station not found.	If the device says that the charging base is not found or not plugged in, check whether the charging base indicator light is on, or move the device back to the charging base.
Error 15: Battery low	Place the product on the charging base.
Error 16: Remove from charge station for power off.	The product cannot shut down when device is on the charging base. Move the product away from the charging base, and then press and hold the power button for device shut down.

Problem Type	Solution
Cannot be started	<ul style="list-style-type: none"> <li>The battery is low. Place the device on the charging base and align its charging contact onto the charging base power charging pins. The device should automatically turn on. If the device is out of power, it may take some time to turn on.</li> <li>The ambient temperature exceeds the normal operating range of 0-40°C. Only use this product in an environment which is under normal operating range of 32-100°F.</li> </ul>
Cannot be charged	<ul style="list-style-type: none"> <li>Remove the device and check whether the charging base indicator light is on or not. Ensure that both the charging base power charging pins are well connected with vacuum robot device charging contact plate.</li> <li>The side brush may block the connection between the charging contact plate and charging base power charging pins. Move the side brush to ensure there's no blockage. Clean the charging contacts on both charging pins and device contact plate.</li> </ul>
Cannot go back to Charging Base	The product is too far away from the charging base. Move it closer and try again.
Abnormal noise during operation	Foreign objects may be trapped in the primary brush, side brushes, or wheels. Turn off the product and clear the foreign objects, then restart device.
Reduced cleaning performance or dust leakage from device	<ul style="list-style-type: none"> <li>The dust bin is full and needs to be cleaned.</li> <li>The filter is blocked and needs to be cleaned or replaced.</li> <li>The main brush is stuck with a foreign object and needs to be cleaned.</li> </ul>
Cannot connect to Wi-Fi	<ul style="list-style-type: none"> <li>Weak Wi-Fi signal. Make sure the product is in an area with good Wi-Fi signal coverage.</li> <li>Wi-Fi connection error has occurred. Download the latest version of the app and reset the Wi-Fi connection. Try again.</li> <li>Incorrect Wi-Fi password.</li> <li>The router is running on a 5GHz network. The router needs to setup a 2.4 GHz network. This device only supports Wi-Fi connection with 2.4GHz networks.</li> </ul>
Consuming power while device is placed on the charging base	When the product is on the charging base, it will consume a minimum amount of power to optimize battery performance.

## WARRANTY – 1 YEAR LIMITED WARRANTY

The 1-Year Limited Warranty applies to purchases made from authorized retailers of WiiRobot Co Limited (ROVE). Warranty coverage applies to the original owner and to the original product only and is not transferable. ROVE warrants that the unit shall be free from defects in material and workmanship for a period of 1 year from the date of purchase when it is used under normal household conditions and maintained according to the requirements outlined in this instruction manual, subject to the following conditions and exclusions.

What is covered in my warranty?

1. The original unit and/or non-wearable components deemed defective, in ROVE 's sole discretion, will be repaired or replaced for up to 1 year from the original purchase date.
2. In the rare event that a replacement unit is issued, the warranty coverage ends six months following the receipt date of the replacement unit or the remainder of the existing warranty, whichever is greater. If the unit is replaced, ROVE reserves the right to replace the unit with one of equal or greater value.

Our Customer Service/Product Specialists are available to provide all the warranty service options available to you, including the possibility of upgrading to our VIP Warranty Service Options for select product categories:

1. Normal wear and tear of wearable parts such as foam filters, HEPA filters, pads etc., which require regular maintenance and/or replacement to ensure the proper functioning of your unit are not covered by this warranty.
2. Any unit that has been tampered with or used for commercial purposes.
3. WiiRobot (ROVE) will cover the cost for the customer to send in the unit to us for repair or replacement.
4. Damage caused by misuse, abuse, or negligent handling, or damage due to mishandling in transit.
5. Consequential and incidental damages.
6. Defects caused by or resulting from damages from shipping or from repairs, service or alteration to the product or any of its parts which have been performed by a repair person not authorized by ROVE.
7. Products purchased, used or operated outside of North America. Problems with your unit / How to get service If your appliance fails to operate properly while in use under normal household conditions within the warranty period, please send us email [rove.support@beaninformationlogistics.com](mailto:rove.support@beaninformationlogistics.com) for product care/maintenance self-help.
8. Our Customer Service and product specialists are also available at 1- 888-737-9984 to assist with product support and warranty service options.

Need Assistance?

Call 1- 888-737-9984 to have a Customer Service specialist assist you or to initiate a warranty claim. Return and Packing Instruction information will be provided at that time.

# FCC Compliance Statement



## ▪15.19 Labeling requirements.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## ▪15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## ▪ 15.105 Information to the user.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

\*This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.



Smart Robotic Vacuums