







A WARNING: Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Carefully read the instructions for the safe operation of the machine. Save all warnings and instructions for future reference.

# 1. HOW LANDROID VISION WORKS

In the following section, we would like to help you better understand how Landroid Vision works.

Landroid Vision is equipped with an AI (Artificial intelligence) camera sensor, enabling it to automatically work on its own. Landroid Vision can identify areas that are lawn covered or not, it knows when it needs to return to its charging base, can sense when is raining, can stop itself if it senses a problem and turn around when it sees something blocking its path. To prevent an accident, Landroid Vision will also automatically stop its blade disc from rotating if it is lifted off the ground or any other safety issues occur.

#### **Border management**



No boundary wire or antenna installation, no maintenance or signal concern. With Landroid Vision deep learning technology it knows where the boundary is, automatically mowing the lawn areas via grass and no-grass identification. To ensure its safety navigation around your lawn area, there are some scenarios that need to be paid special attention to. Please refer to the "preparation and planning" section.

#### **Obstacle avoidance**



Landroid Vision is able to detect objects ahead in real time using its Al camera technology, and an ever growing and extensive database of images. Non-grass things, such as tree stump, water pipe and balls will be avoided.

#### Cut to edge



The special offset blade gets as close as possible to the border of your lawn, leaving you little or no trimming to do. Landroid Vision is programmed to mow the edge twice a week on Monday and Friday. If you want to change this pre-set, you can modify it via your smartphone or by using the control panel in "Work time-Customize Work time" section.

#### All day cut



With the optional FiatLux, Landroid Vision can work all day even at night and remain friendly to nocturnal animals like hedgehogs. Otherwise the Landroid Vision can only work during the day.





#### **Easy cleanning**



Landroid Vision is IPX 5 waterproofed and can be washed by using a regular garden hose.

#### Self-leveling cutting deck



Landroid Vision's 'Ground Tracer' automatically adjusts the blade's height to mirror small undulations on the lawn surface.

## **Charge itself**



When your Landroid Vision needs to recharge its battery, it will stop mowing and follow the border in anti-clockwise direction back to its charging base. Once charging is completed, Landroid Vision will automatically resume mowing or stay in the charging base according to its mowing schedule.

#### **Rain sensor & Rain delay**



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Landroid Vision is 100% weather proof and happy to be outside. But mowing wet grass does not give you the best result. Landroid Vision is equipped with a rain sensor which detects rain and tells Landroid Vision to stop mowing and go back to its charging base. Landroid Vision then re-starts mowing when the grass is no longer wet. The default Rain Delay time is 180 minutes. You can change the Rain Delay time setting via the Landroid Vision App.

## No more grass clippings to collect



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Landroid Vision's daily mowing produces very short clippings that don't need to be raked, or collected. These clippings are a perfect organic nutrient for your lawn. Frequent mowing boosts the density of grass blades and effectively prevents the propagation of weeds.





## **Cutting Height**



Before starting your Landroid Vision at the first time, make sure your grass is not longer than 9 cm. If it isn't, use a regular mower to cut it before operating Landroid Vision. If you want to drastically shorten the height of your grass, it is recommended that you do so progressively, by adjusting the cutting height in steps.

#### In more extreme weather



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In case of a lightning storm, protect Landroid Vision by unplugging the charging base and making sure Landroid Vision is not allowed to charge. In the Winter and especially in case of very cold weather and snow, we recommend you to store your Landroid Vision inside. In some countries we offer a Winter servicing of your Landroid Vision so it's ready for the Spring growing season. Contact your dealer or check online for more details.

#### **Security & PIN Protection**



To prevent unauthorised people from being able to use it, Landroid Vision is protected by a PIN code that you can easily set up. Besides, Landroid Vision also supports auto lock function to prevent children or bystanders getting access to the settings.





# 2. WHAT'S IN THE BOX (See Fig. 1)

А	Worx Landroid Vision	G	Magnetic strip pegs
В	Charging tower	Н	Power supply
С	Charging base plate		20V battery
D	Spare blades kits	J	Magnetic strip in green*
E	Hex key	K	Manuals
F	Screws	L	RFID

## \* Only for Landroid Vision

Not all the accessories illustrated or described are included in standard delivery.

# **3. PREPARATION AND PLANNING**

Preparing your Worx Landroid Vision to work is easier if you carefully follow these instructions. In addition to this manual, you can watch the comprehensive video tutorials on our YouTube channel\*.

\* This information is provided for your convenience but cannot subsitute the instruction manual and the safety instructions that need to be read and understood.







## **3.1 PATROL YOUR LAWN TO PLAN INSTALLATION**

## 3.1.1 Plan for the charging base (See Fig. 2 - Fig. 4)

The charging base composed of charging base plate and charging tower, is where your Landroid Vision goes to have its battery recharged. It's also the parking lot where it rests in between one mowing session and the next.

Locate a proper position for it, bearing in mind:

- A. The station needs to sit on flat land to ensure effective docking.
- B. It needs 2 m straight driving path in front for Landroid Vision following the edge and entering the charging base.
- C. There isn't a large area of bare ground or sparse grass within the 2 m driving path to enter the charging base.
- D. The QR code on the charging tower is clear.
- E. It needs to be powered and be no more than 10 m away from an AC mains outlet.
- F. If possible, choose a shaded position as batteries and chargers don't like over-heating.
- G. Avoid places close to irrigation sprinklers.
- H. Make sure Landroid Vision enter right towards to the charging base and depart in anti-clockwise direction.

## 3.1.2 Plan for the RFID used for multi-zone

If you have separated lawns, the equipped RFIDs can help Landroid Vision navigate the passage or pathway and cut the separated lawn areas. The Landroid Vision follows the lawn edge and senses all the RFID cards to explore the zones in the first travel. The mower will follow its working schedule, sense the RFID card and come across to another zone to complete its work afterwards.

Each Landroid Vision will be equipped with 2 RFIDs. You need to install the RFID in each zone. If you have two separated lawns, you can refer to **Figure 5** to install the RFID. If you have three separated lawns, you can refer to **Figure 6** and **Figure 7** to install the RFID.

To make sure the RFID work well, please help check:

- A. there are no obstacles or large area of bare grass and the edge is straight within 1.5 m around the RFIDs.
- B. there is a clear boundary besides the RFID.
- C. the ground under RFID is flat.
- D. no wires and strong magnet devices within 30 cm around the RFID to avoid signal interference.

E. make sure the path between each zone is shorter than 6 m and that the height of any steps on the pathway are less than 3 cm. **NOTE:** If the RFID's supplied are not enough for you, you can purchase more from our retail partners and online.

#### 3.1.3 Patrol your lawn

#### A. Cutting height

It is recommended that the cutting height is lower than 9 cm at the first Landroid Vision do the cut.

## B. Piles of things (See Fig. 8 - Fig. 9)

We suggest you to clean up the things such as leaves and wildflowers on the lawn, otherwise Landroid Vision will see them as obstacles and avoid cutting this area.

#### C. Steps covered by grass on the boundary (See Fig. 10 - Fig. 11)

If the steps on the lawn boundary are covered with grass and there is also grass underneath the steps, and the height of the steps is more than 3 cm. It is recommended to install magnetic strips around the edges of the steps or leave a path without grass that is wider than 5 cm.

## D. Protected area (See Fig. 12 - Fig. 13)

If there are flowerbeds, vegetation or other valuable plants in your garden or on the boundary that are connected with or covered by grass, Landroid Vision may cut these when mowing. It is recommended to surround these areas with the magnetic strip, or set up a path without grass that is wider than 5 cm.

#### E. Slope at edge higher than 30% (17°) (See Fig. 14 - Fig. 15)

If your lawn edge has a steep slope higher than 30% (17°), Landroid Vision will struggle to navigate the slope. In order to protect your Landroid Vision, it is recommended to surround the slope area with the magnetic strip or set up a path without grass that is wider than 5 cm.

#### F. Tall grass (See Fig. 16 - Fig. 17)

If there is tall grass along the boundary, and the height of the grass is greater than 15 cm. If there are water puddles or holes underneath the tall grass, it is recommended to cut the grass to below 15 cm or install magnetic strips around the tall grass.

#### G. Adjacent grass (See Fig. 18 - Fig. 19)

If your lawn is connected to your neighbor's lawn, we recommend that you install magnetic strips or create a 5 cm wide path





#### without grass as a boundary.

NOTE (only for Landroid Vision): Make sure the magnetic strip is installed 32 cm away from the protected area and border. The starting and ending points of the magnetic strip should be in an arc shape.

#### H. Narrow passage (See Fig. 20)

Make sure the narrow passage for Landroid Vision to pass is wider than 1 m.

#### NOW ROLL YOUR SLEEVES UP. WHEN IT'S DONE IT'S DONE!

Now that you have planned the installation in every detail, you are ready to take action. Before starting, you may want to use your old mower for the last time to clean up your lawn and make the installation easier.

#### **3.2 INSTALL THE CHARGING BASE**

#### **Position the charging base**

#### Option A: Position the charging base at the corner of your lawn (See Fig. 21)

To enter the charging base, Landroid Vision needs at least 2 m straight path in front and 5-15 cm away from the boundary of the lawn.

#### Option B: Position the charging base on one side of your lawn (See Fig. 22)

To enter the charging base, Landroid Vision needs at least 2 m straight path in front and 5-15 cm away from the boundary of the lawn. It needs at least 1.5 m behind the charging base to make sure the grass can be cut.

#### Option C: Position the charging base in the corner outside the lawn (See Fig. 23)

Locate charging base on the extension line and 5-15 cm away from the edge. To enter the charging base, the charging station should be placed near the edge of the lawn.

#### **Charging base checklist:**

A. within reach of AC mains

- B. in shade (if possible)
- C. no obstacles, and no area of sparse grass within the 2 m straight path to the charging base
- D. flat or level location
- E. no irrigation sprinklers nearby

#### Fix the charging base in the selected location

A. Compose the charging base plate, flatten and tighten the conjunction. (See Fig. 24)

B. Insert charging tower into charging base plate. Then fix the charging base to the ground by means of the supplied screws, using the supplied hex key. (See Fig. 24)

C. If you position the base on hard surface, fix it with plug and screw fixings.

NOTE: It is recommended to assemble the charging base on a flat and hard surface.

#### 3.3 INSTALL THE RFID (See Fig. 25)

- A. The distance from the centre of the RFID to the front and rear lawn boundaries needs to be greater than 1.5 m.
- B. Make sure the center of the RFID is 50-60 cm away from the lawn edge, fix the RFID with 2 screws.
- C. Put another RFID symmetrically in the opposite zone and fix it.

#### **3.4 CONNECT CHARGING BASE TO AC**

There are only a few more steps to go:

- A. Connect the charging base to the AC mains socket. (See Fig. 26)
- B. If everything is fine, the LED will light green.

C. Open the cover of the battery enclosure and insert the PowerShare battery into the slot until it clicks. Then close the cover.

#### (See Fig. 27)

D. Place Landroid Vision on charge by making sure a deep contact is established with the base. **(See Fig. 28)** The LED will blink green; once the battery is fully charged, the LED will turn solid green.

E. Let the battery get charged for a while. Whilst it is charging you may want to take a well-deserved break: get familiar with the following instructions, and connect Landroid Vision to your Wi-Fi network.





# 4. START THE LANDROID VISION

## Get familiar with the control panel

Landroid Vision's control panel provides the key functions in a minimalistic design.

For advanced functions, the free Landroid Vision App provides further options in a richer interface: your smartphone.



## 4.1 Start Landroid Vision (See Fig. 29)

- A. Position Landroid Vision in the charging base and get it charged.
- B. Press and hold down 🕑 until the display lights up.
- C. Enter the default PIN code 0000 by pressing C three times. The display will show 0000. Press C again to confirm. The display will show "PIN code OK".
- D. Press the sum button and then the D button to confirm. The Landroid Vision will start mowing the lawn.
- E. You can stop the Landroid Vision at any time by pressing the large red button **STOP**.
- F. To send the Landroid Vision to the charging base, press the 🕥 button and confirm by pressing 🧶.

**NOTE:** For optimal performance of the Landroid Vision, it is recommended to perform "Update the software" during its initial setup.

#### 4.2 Update the software

It is recommended you to update the software to the latest firmware. It helps Landroid Vision become smarter. Please note that Landroid Vision should be updated to the latest firmware at the first time.

#### **Over-the-Air (OTA) updates**

If your Landroid Vision is connected to your Wi-Fi network, you will be notified that new software is available via the App. Once you confirm, the update will happen automatically Over-the-Air.

NOTE: Make sure Landroid Vision is charging or the battery capacity has reached 50% prior to starting the firmware update.

#### 4.3 Single zone: Identify the zone (See Fig. 30 - Fig. 31)

During the initial startup, Landroid Vision needs to confirm the working area. If you have a single lawn, please follow the steps below:

- A. Position Landroid Vision in the charging base within the designated working area and ensure it is charged.
- B. Start Landroid Vision, and it will exit the charging base to search for the lawn edge.
- C. Upon encountering the lawn edge for the first time, Landroid Vision will rotate in place, and a message "Is it your identified





zone" will be displayed on the screen.

D. Press () to confirm "Yes" and Landroid Vision will start working.

## 4.4 Multi-zone: Lawn explore (See Fig. 32 - Fig. 33)

If your lawn is multi-zone, Landroid Vision needs to follow the lawn edge in a circle to explore the zone during the initial startup.

Steps to explore zones:

A. Position the Landroid Vision inside the working area, in the charging base and get it charged.

B. Rotate Clockwise to access the main menu, select "General settings" and press .

C. Rotate 🔘 to select "Lawn explore", press 🔘 to confirm.

D. Landroid Vision will start from and return to charging base to complete the zone exploration process.

NOTE: Make sure the first time Landroid Vision starts at the charging base and has at least 50% battery.

The App is being prepared for you to fully take advantage of this feature. Please stay tuned for upcoming OTA updates.





# **5. MACHINE SETTING**

## Advanced functions via the built-in interface

Despite its minimalistic design, you can set several advanced functions through the built-in control panel.

However, for the best user experience, we recommend you to use the free Landroid Vision App to do this, given its much richer and intuitive interface.



- \* Be continuously updated according to the software version.
- \*\* Only shown for WR213E and WR216E
- \*\*\* For after-sales service only

## 5.1 Settings (See Fig. 34)

- A. To access the main menu, rotate 🔘 clockwise.
- B. Rotate 🔘 to select the menu items: "General settings" 💁, "Working time" 🔿, "Security" 🖬, then press 🔘 to enter.
- C. Use the same procedure for the following actions.

#### 5.2 Set date and time (See Fig. 35)

- A. Return to "General settings".
- B. Rotate Clockwise to select "Set date & time", then press O to enter.
- C. Rotate Clockwise to select the date, then press to confirm. The selected options (day, month or year) will start flashing.
- D. Rotate 🔘 to select the day, month or year and press quickly to confirm. Use the same method to complete the "Year / Month / Time".

#### 5.3 Set work schedule (See Fig. 36)

NOTE: It is possible to set two work schedules per day: "Scheduler #1" and "Scheduler #2".

- A. Return to the main menu and rotate 🔘 clockwise to select "Working time", then press 🔘 to enter.
- B. Rotate Clockwise to select "Customize work time", then press to confirm.
- C. Rotate Clockwise to select the day of the week, then press to confirm.
- D. Press 🔵 to enter settings.
- E. Rotate Clockwise to activate "Scheduler #1 \*". Press to confirm.
- F. Rotate Clockwise. Select the start time "Hour/minute" and press to enter. The selected number will start flashing.
- G. Rotate 🔘 to select the time you want the Landroid Vision to start working on that day, and press 🔘 to confirm. Follow the same procedure to set the time to stop work.
- H. Next, rotate O clockwise to select "Border cut" and press O to enter settings.
- I. Rotate Clockwise to choose whether or not to activate "Border cut" and press () to confirm.
- J. If you want to set a second working time ("Scheduler #2"), follow the same procedure.
- K. Press the (5) button and follow the same procedure to set the other days of the week.





## 5.4 Working time adjust (See Fig. 37)

You can rapidly adjust the work time of the week. The increment /decrement of time will be evenly allocated to required working days.

A. Return to main interface.

B. Anticlockwise rotate () to activate the working time adjust.

NOTE: The total time is based on the customized work time, and can be adjusted by gradient of 10%.

C. Then rotate to adjust and short press to confirm.

## 5.5 Adjust the blade height (only for WR213E) (See Fig. 38)

A. Back to home page, clockwise rotate 🔘 to select General settings and press 🔘 to confirm.

B. Clockwise rotate 🔘 to select Blade height adjustment, press 🔍 to confirm.

C. Press 🔍 button, the cutting height can be adjusted between 30-60 mm (5 mm every turn 🔘 ). Clockwise rotate 🔘 to select the cutting height you prefer, and then press 🔘 to confirm.



# 6. CONNECTING LANDROID VISION TO THE INTERNET

## Why connect Landroid Vision

Landroid Vision is an IoT (Internet of Things) device. To get full functionality out of your Landroid Vision and keep it always updated to the latest software, it is recommended to be connected to the internet via your Wi-Fi network. The more Landroid Vision mows your lawn, it will become smarter when connected to the internet.

## BEFORE YOU START

## 1. Download the App

Download the free Landroid Vision App first. Get it from Android or Apple App stores.

## 2. Ensure you have:

A. Your WiFi network password/Bluetooth function on your smartphone. B. Landroid Vision Serial Number: it can be found in the label under the rear bonnet of the machine.

If you don't want to type the 20-digit Serial Number, input it by scanning the QR code with your smartphone's camera.

## 3. Check your settings

## Wi-Fi connection

A. Landroid Vision works with 2.4GHz/5GHz Wi-Fi signal.

B. Make sure your Landroid Vision is in the same router environment as your smartphone.

C. Make sure the distance between your Landroid Vision, smartphone and your router is as close as possible during connection.

**Tip:** When Landroid Vision moves to an area of your lawn with poor or no Wi-Fi signal, instructions sent from the App will only be executed when Landroid Vision returns to an area with good signal.

## **Bluetooth function**

A. Bluetooth function on your smartphone is activated.

B. Make sure your Landroid Vision is within the connectable distance.

# 7. LANDROID VISION APP NOT A SIMPLE REMOTE CONTROL

Don't regard it as a remote control. The App is an integral part of the Worx Landroid Vision advanced ecosystem based on cloud computing and artificial intelligence.

Thanks to the App's augmented reality feature, you can measure the exact area of your lawn. It's as easy as taking a walk along its border.

You can use the App to upload information on your grass species, soil type and irrigation. These inputs, in combination with weather data and lawn size, will allow our cloud computing to tailor-make your Landroid Vision's working schedule to the actual growth of your grass, everyday.

The App also lets you view statistics on what Landroid Vision has been doing for you.

If you ever need to get your Landroid Vision serviced, you can even open a service ticket by using the App.

The App also notifies you when there's new software available for Landroid Vision to download automatically over the air.

Once connected, Landroid Vision can access its unique auto scheduling instructions from the cloud and is able to download the latest software to optimise its performance.





App Store

