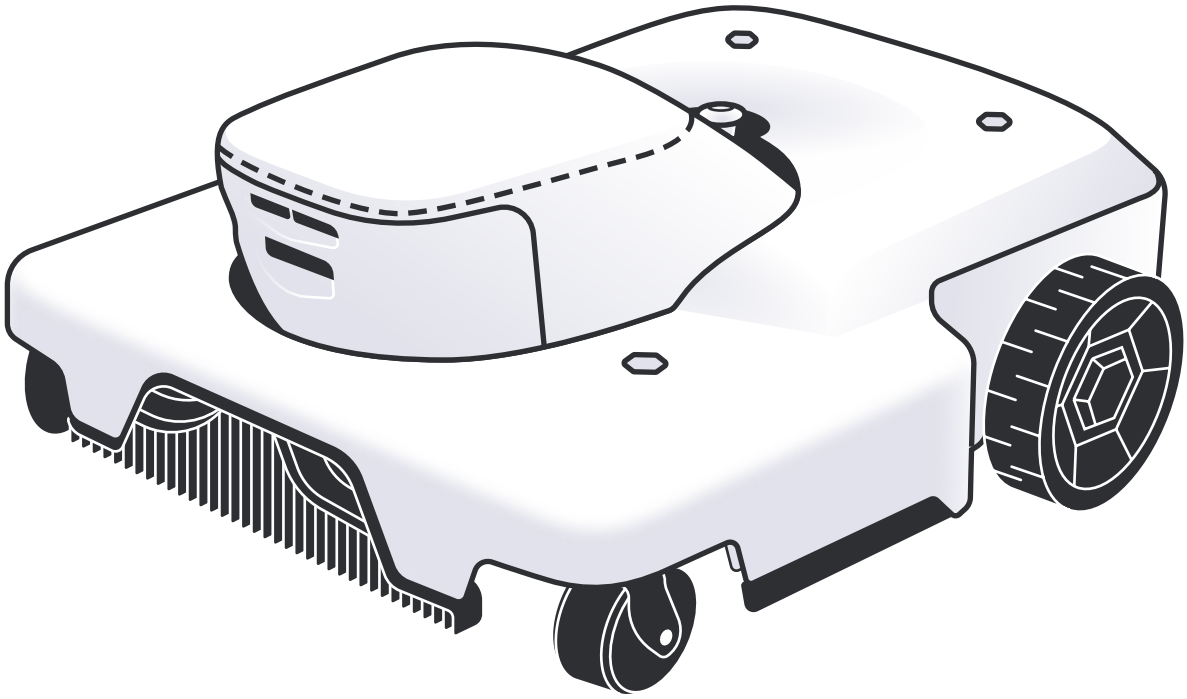
V1.1.4



Operator’s Manual

KINGDOM ARTHUR

Carefully read the operator’s manual and ensure you understand the instructions before using the product.

EN, English

Contents

1. Box Contents

Box Contents

Included in the package are the following:

1.1 Robot

- Robot

  Model Name: Arthur

  Kingdom's robotic lawn mower, 'Arthur', is designed for cutting grass autonomously. It can be controlled via the Kingdom app or set to operate autonomously after an initial user setup.

  The robot is equipped with cutting blades which can adjust their height off the ground, allowing the grass to be cut to a specified length.

  The robot uses location data from the charging station and satellites for precise navigation, eliminating the need for physical boundary wires.

  Powered by a rechargeable battery, the robot follows a user set schedule to mow a designated area. When the battery level is low or there is no area available to cut, the robot will return to and then enter the charging station. The robot's charging pads will then make contact with the charging station pins to commence charging. Once the robot reaches a sufficient level of charge, and there is an area available to cut, the robot will disconnect from the charging pins, reverse out of the charging station, and resume operation.

1.2 Charging Station

- Charging Station

  Model: Arthur Castle

  Kingdom's charging station, 'Arthur Castle', allows the robot to charge or remain in standby mode when not in use. It features a door that opens and closes, enabling the robot to enter and exit while being protected from external conditions.

  The charging station also transmits location data to the robot, helping it accurately navigate within the set boundary area.

- Mat

  The rubber mat can be placed at the entrance of the charging station to assist the robot entering and exiting the station when on soft ground.

- Ground Pegs

  The pegs are used to hold the charging station and rubber mat in place.

- Black Screw Caps

  Screw caps for covering the screws on the charging station backplate.

2. Tools & Equipment

Note: Tools & equipment are not provided with the product.

2.a Required Tools & Equipment

- T15 screwdriver
- T25 screwdriver
- Rubber/plastic mallet
- Torque wrench with T15 attachment
- Protective cut proof gloves

2.b Suggested Tools & Equipment

- Microfibre cloth
- Broom
- Brush
- Soft mat or blanket larger than the robot

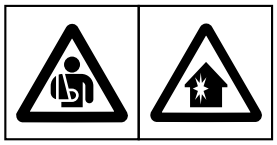
3. Health & Safety

3.a Safety Label Definitions

Warning: Risk of bodily injury or death if not obeyed

Caution: Risk of damage to the product or its surroundings if not obeyed

3.b General Safety Precautions & Hazard Warnings



- Read the manual thoroughly and ensure you understand the instructions prior to operating the robot.
- Keep the manual in a known location for future referencing.
- This product should only be used with equipment and parts approved by Kingdom Technologies. Other components may cause damage to the product.
- Use care when placing your hands underneath the mower or handling cutting blades. Cut resistant gloves are advised when handling the robot.
- Do not place any body parts under the charging station door while it is operating as this could result in injury.
- The product should not be operated by children, or persons with reduced mental, physical or sensory capabilities that could affect their ability to operate the robot.
- Ensure anyone who operates the robot has read the instructions and is comfortable doing so. Do not allow someone who is inexperienced or lacks knowledge to operate the robot.
- Do not touch any moving parts on the robot until all moving parts have come to a complete stop.
- Do not lift the robot until all moving parts have come to a halt.
- Press the emergency stop button prior to handling the robot in any way.
- Do not plug damaged cables into the mains.
- Do not touch the damaged section of a cable should it already be plugged in. Disconnect the cable from the mains first.
- Ensure warning signs are placed in the areas where the product operates with text reading along the lines of "WARNING! Autonomous Lawn Mowers Operating in the Area! Keep Children Under Supervision!".
- Wear appropriate footwear when in the vicinity of the robot. Avoid sandals or open toe shoes.
- Wear appropriate legwear when handling the robot. Long trousers are recommended.
- Check local regulation for autonomous lawn mowers in your area.
- Do not attempt to ride the mower under any circumstances as this can lead to injury and damage.
- Should an injury or accident occur, seek medical aid.
- Turn the robot off prior to performing any maintenance.
- Turn the charging station off prior to performing any maintenance.
- Should any of the safety guards come off the robot, turn it off and do not use the product.
- The robot contains an alarm that is loud, be careful, especially when bringing it indoors. To avoid damaging your ears it is recommended to turn the robot off should you need to bring it inside.

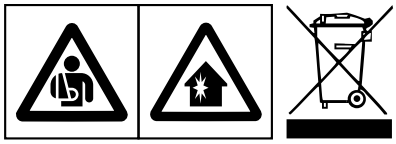
3.c Installation Safety Instructions

- Do not install the charging station in an area that is at risk of flooding.
- Do not install the charging station in an area where it could be a tripping hazard.
- Do not install the charging station in an area close to combustible material.
- Avoid installing the charging station where the robot would need to cross public paths.
- Do not install the charging station in a location where the robot would need to cross roads with motor vehicle traffic.
- Do not install the charging station in a location where the cable lies in the path of the robot.
- Do not install the charging station in a location where it could be a tripping hazard.

3.d Safety Instructions for Operating the Mower

- Do not operate the robot in extreme weather conditions or when there is low visibility such as fog.
- Do not operate the robot should it be making abnormal sounds to usual operation. Turn it off and contact your service provider.
- Do not operate the robot when children are in the vicinity.
- Avoid crowded areas when operating the robot. Should an area become crowded during operation, halt the robot.
- Do not place any body parts under the robot during operation as this can result in injury.
- Do not lift the robot while it is operating.
- Should you need to intervene, press the emergency stop button and wait until all moving parts have come to a halt.
- Ensure the operational area is free from objects such as branches, stones, tools and toys, as this can lead to damage to the robot and potentially become a hazard.
- Avoid colliding the robot into objects, halt the robot prior to any collisions.
- Should any of the safety features fail, do not operate the robot and contact your service provider.
- Do not operate the robot while sprinklers are in operation.
- Avoid operating the robot in areas where water pools when it rains.
- Do not operate the robot in areas where there is standing water.
- Maintain a safe distance while the robot is in operation. It is advised to keep at least 1 m away from the robot while it operates.
- Ensure you have a safe environment and stable footing when interacting or handling the robot.
- Do not operate the robot with defective or missing guards.
- Make sure all panels and backplates are properly attached to the the charging station when in use outdoors. Failure to do so can result in damage to the product.

3.e Battery Safety



3.e.i General Battery Safety

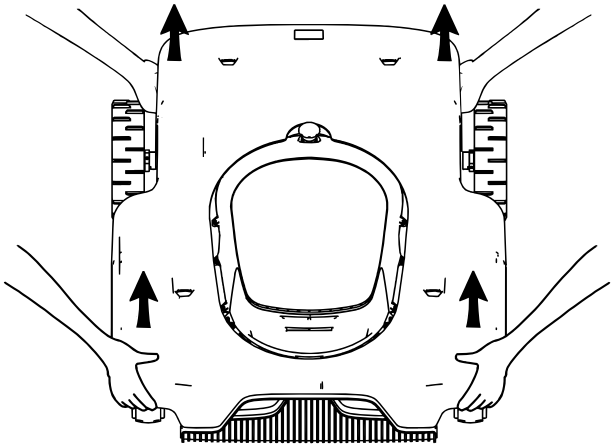
- This product contains a sealed Lithium-Ion (Li-ion) battery and therefore is susceptible to explosions or fire if mistreated or mishandled. Keep the product away from sources of heat and open flames.
- The battery in this product should only be serviced/replaced by Kingdom Technologies or an authorised service provider.
- Do not attempt to open, remove or replace the battery as this can lead to serious injury.
- Keep the battery away from heat (>50°C), fire and water.
- Avoid charging the battery below 0°C (32°F) as this can permanently reduce the capacity of the battery.
- For long term storage keep below 25°C (77°F) at a minimum 30% charge.
- Avoid storing the battery in areas where the ambient temperature goes above 50°C (122°F).
- Avoid physical damage to the battery.
- Keep the battery away from magnets as this can damage it.
- Use only batteries approved by Kingdom Technologies.
- Do not charge the product if the battery is leaking or damage is suspected.
- Should the battery set on fire, do not approach and contact your local emergency services.
- Should the product emit smoke, smell burnt, or show signs of overheating, turn it off.
- If the battery is leaking do not handle the robot without wearing the appropriate protective equipment such as chemical resistant gloves.
- Only charge the robot battery with a Kingdom approved charging station.

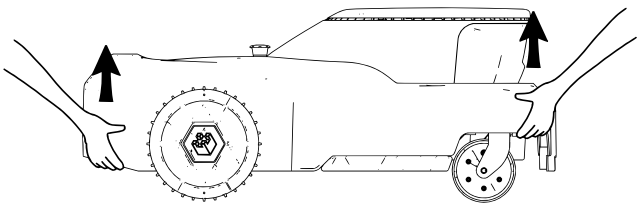
3.e.ii Transport and Compliance

- This product's battery is certified to UN38.3 standards.
- If returning or shipping the product, do not attempt to remove the battery. Contact Kingdom Technologies for instructions on safe transport.
- Damaged or swollen batteries must never be shipped by air. Go to Section 5.h on safe battery disposal following WEEE and Battery Reglations.

3.f Mower Handling Safety

- Prior to handling, press the emergency stop button down on the robot and ensure all moving parts have come to a halt.
- Where possible, use equipment such as a flat bed trolley when moving the robot over longer distances.
- Only rest the weight of the robot on all 4 wheels or upside down.
- Do not rest the robot on its cutting discs.
- Only lift the robot outside of the charging station and in an area with plenty of space.
- Protective gloves are recommended when handling the robot.
- Only lift the robot from the outer skirt.
- Two people are required to lift the robot.
- The robot should be lifted from opposite ends.
- Make sure to use proper posture when lifting.





3.g Mower Maintenance and Cleaning Safety

- Keep to a regular maintenance and cleaning schedule to avoid damage to the product.
- Perform yearly servicing as advised in Section 4.f.
- Do not spray the robot with a pressure washer when cleaning.
- Do not use solvents to clean the robot.
- Press the emergency stop button and turn the robot off prior to performing any maintenance or cleaning tasks.
- Wear cut resistant gloves when changing out the blades or handling the robots underside.

3.h Explanation of Stickers

WARNING: Sharp blades on robot.

Label signalling emergency stop button.

WARNING: Read the manual prior to operating the product.

WARNING: Disable the product prior to handling or performing maintenance.

WARNING: Ensure all moving parts have come to a halt prior to handling the product.

WARNING: Beware of sharp blades.

WARNING: Ensure to wear appropriate protective gloves and footwear when handling and approaching the product.

WARNING: Beware of static shocks.

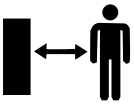
WARNING: Maintain a safe distance while the product is in operation.

WARNING: Do not place hands and feet under the product while operating.

WARNING: Be careful of projectiles, keep a safe distance.

WARNING: Do not sit on or attempt to ride the product.

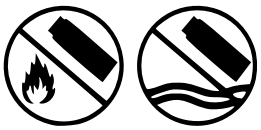
WARNING: Keep children and animals away from the product.



WARNING: Keep bystanders away.

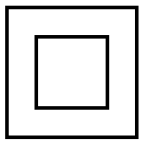
WARNING: Do not use high pressure jets to clean the product.

WARNING: Do not use solvents to clean the product.



WARNING: Li-ion batteries can explode and cause fires if mishandled. Do not expose to water, fire or high temperatures.

WARNING: Keep away from open flames.



Symbol IEC 60417-5172, for class II appliances.

Symbol IEC 60417-5180, for class III appliances.

Symbol IEC 60417-5018, for class II and class III appliances incorporating a functional earth.

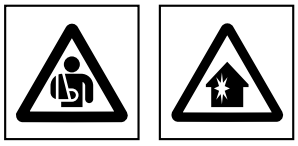
Do not dispose of the product in general waste. Look to local government guidelines for appropriate recycling options.

Ensure to recycle Li-ION batteries at an appropriate recycling centre.

This product complies with the applicable UK Directives.

This product complies with the applicable EU Directives.

3.i Risks



- Should proper safety not be adhered to, there is risk of, but not limited to:
  - Bodily harm including; lesions, disfigurement, chemical burns.
  - Damage to the product.
  - Damage to the environment and items in proximity to the product
- In the event of an accident resulting in serious bodily injury, seek immediate medical attention.
- Should an accident occur that results in an active hazard (i.e. a fire), the first point of contact should be your local emergency services.
- In the event of a breakdown contact your service provider.

4. Quick Start Guide

- Read the ‘Health and Safety’ section of the manual prior to any installation or operation of the product.
- Ensure that a maintenance cut has been performed prior to setting the robot to cut an area. This will avoid excess grass buildup on the robot and ensure a quality cut.
- Periodically inspect and clear the cutting area of any potential hazards such as sticks, stones and other debris.
- Robots will default to autonomous mode when on. To drive the robot you will need to turn off autonomous mode in the control screen. The robot will return to autonomous when you leave the control screen.
- Remove all packaging, including the charging pin caps inside the charging station (marked out by a label), prior to setting up or operating the product.
- After Charging Station setup the robot should be left to charge to 100%. While is it charging we advise you update the product to get access to the latest software version.

4.a Downloading App

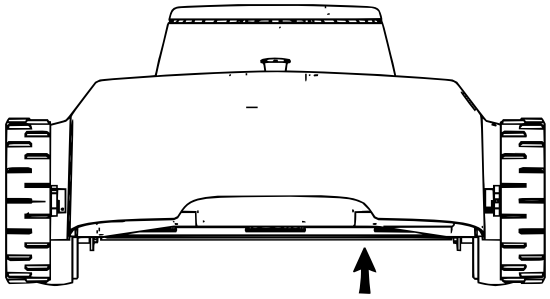
- You can find the Kingdom app on the Google Play store for Android devices by searching ‘Kingdom Technologies’.

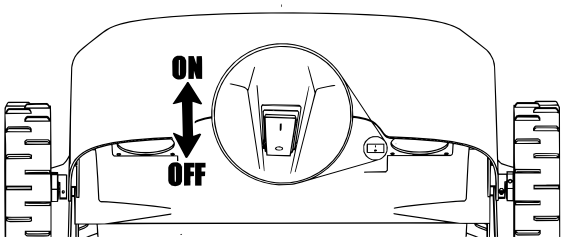
Available on Android

4.b Starting the Robot

Note: Do not place your hands under the robot without looking. Be careful of the sharp blades.

- To start the robot locate the switch on the right rear underside of the robot and flip it to the on position.
- To turn the robot off, flip the switch to the off position.



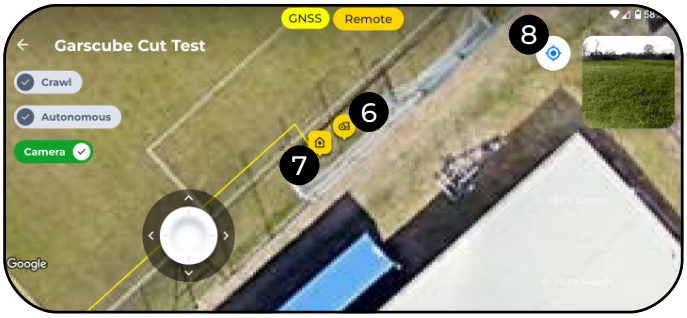


- Upon purchase of a Kingdom robot and the creation of a Kingdom account, the pairing process will commence.
- You will receive a notification in the Kingdom app once this process is complete.

4.c Driving the Robot

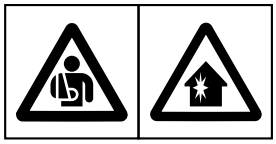
Note: Please be aware of your environment when driving the robot.

- **Note**: You will be unable to drive the robot until a site has been created in Section '4.d Installing the Charging Station'.
- Crawl mode reduces the speed of the robot and allows movement even when the bump sensor has been activated.
- The robot should be driven in a straight line on boot up to help calibrate its positioning.



1. Joystick for robot control and movement
2. Switch between camera and map mode
3. Toggle camera
4. Toggle autonomous mode
5. Toggle crawl mode
6. Robot icon
7. Station icon
8. Center the robot on the map

4.d Installing the Charging Station

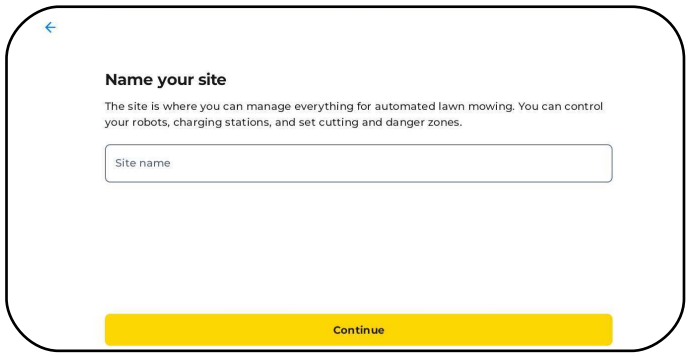


Note: Read Section 2.c 'Installation Safety Instructions' prior to installing the charging station.

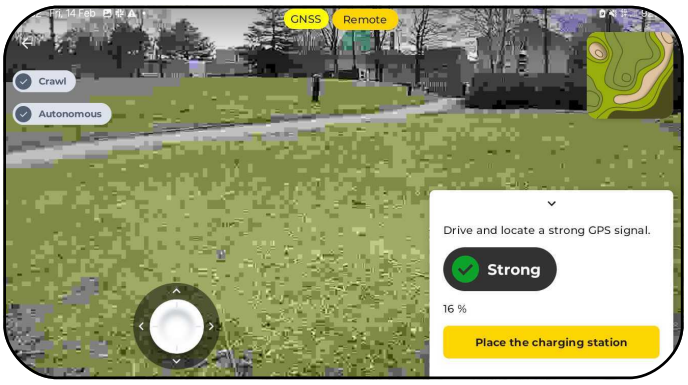
- **Note:** Two people are required for charging station installation.
- Charging stations can be placed on any flat, level surface so long as the selected site is close to an outlet, away from buildings and trees, and not in an area of high traffic or at risk of flooding.
- It is necessary to secure the charging station in place once it has been put down. Kingdom recommends a grass surface where the charging station can be secured with the pegs provided.

1. To begin installing the charging station place the robot down on the ground and turn it on.
2. Go into the Kingdom app and click on new site at the bottom right.

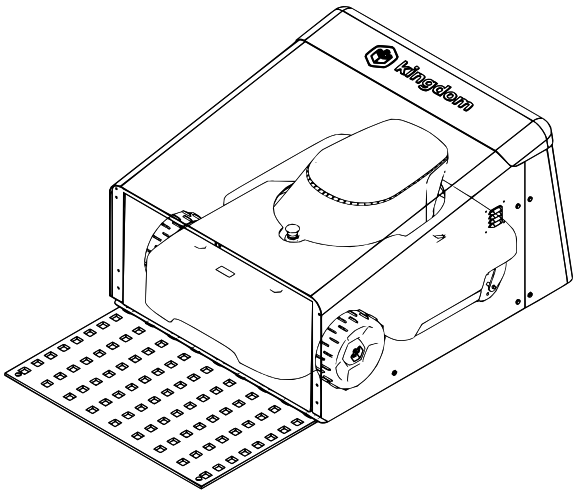
3. Name your site and proceed to the next step.



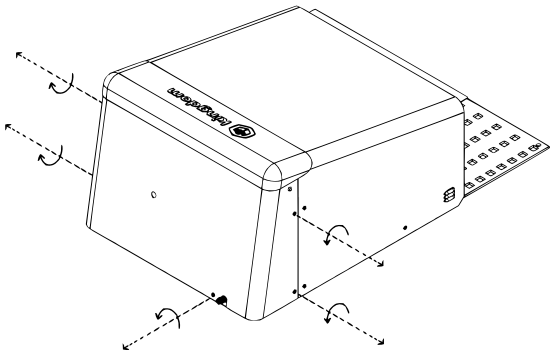
4. Guide the robot to the location you would like to place the charging station.



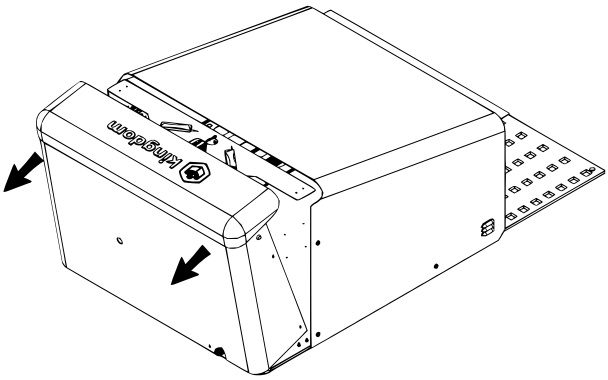
5. Once you have found a location with a strong signal click on "Place the charging station".
6. Move the robot from where it is located and place the charging station down in that location.
Note: Make sure the robot will have plenty of space to reverse out of the charging station. (recommended at least 3 m of space)



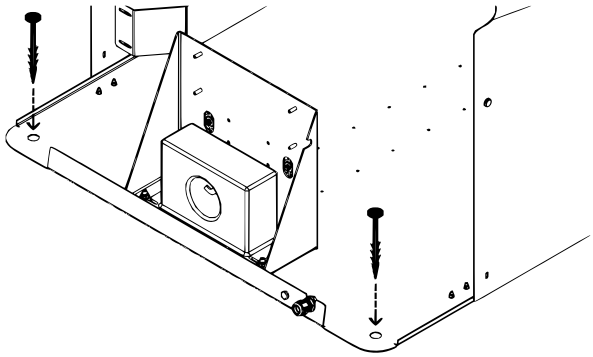
7. Unscrew the 5 screws holding the black backplate of the charging station using a T25 screwdriver



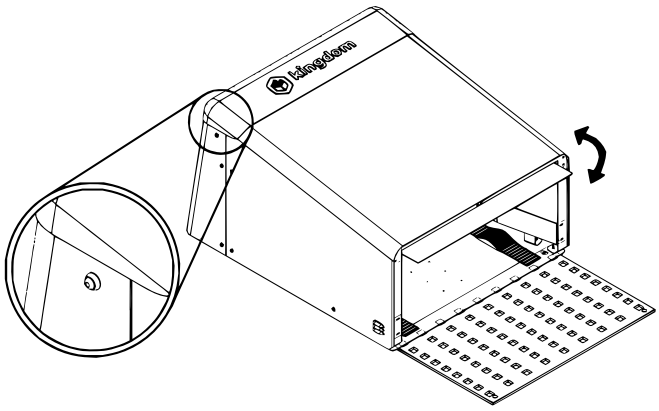
8. Gently pull back the backplate and disconnect the door button cable as you do so.



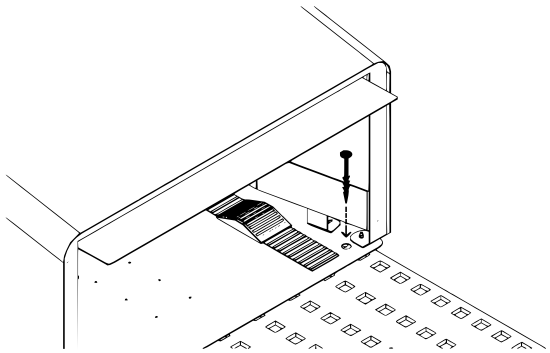
9. Locate the power cable and lay the gland down into the indent in the charging station base.
10. Tighten the nut to secure the power cable in place.
11. While the backplate is off you can place down 2 of the pegs on either corner using a mallet



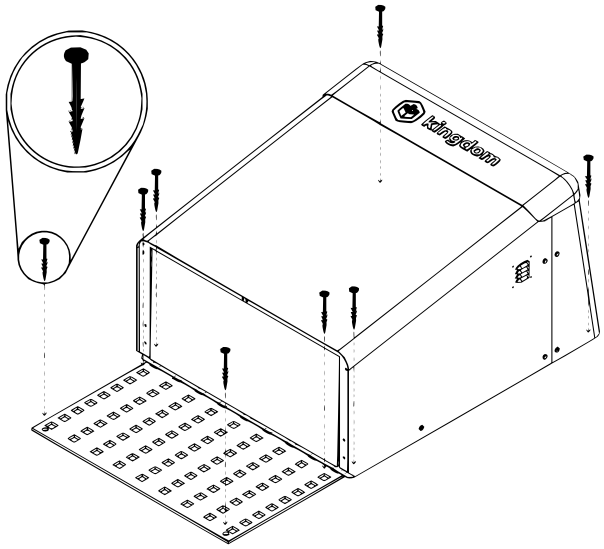
12. Replace the backplate into the station, making sure to reconnect the door button as you do so.
13. Screw the backplate back into place
14. Plug in the charging station and hold the button on the side to open the door.



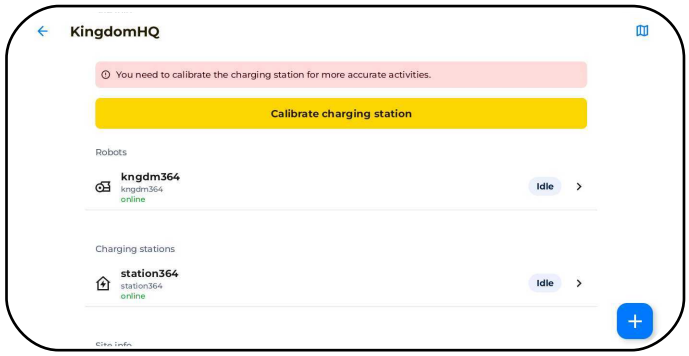
15. Using a mallet, hammer 2 pegs in the two holes at the front of the charging station to secure it in place.

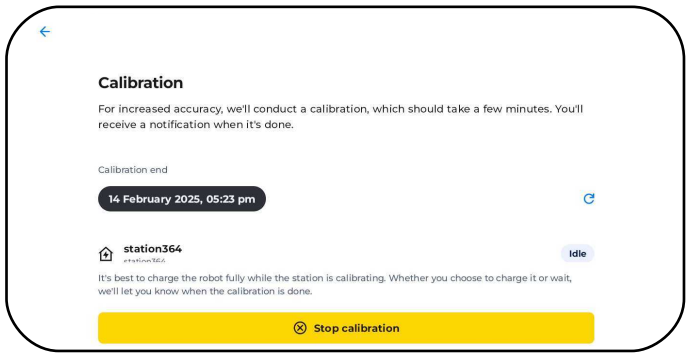


16. Close the charging station door by holing the button on the side again.
17. At this point, If you would like to cover up the screws on the backplate you can use the black screw caps provided.
18. On a softer surface such as grass, it is recommended to place the rubber mat provided in front of the station, and secure in place using 4 pegs.

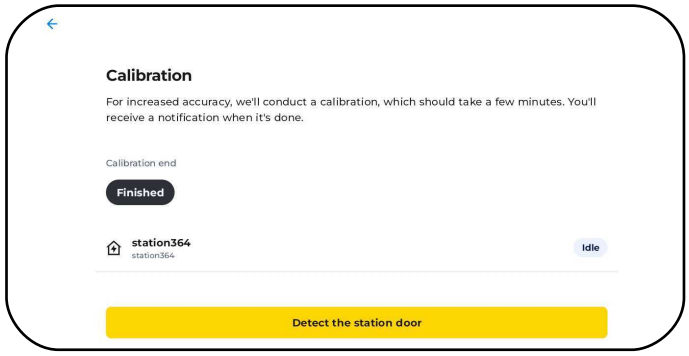


19. Back in the app begin the station calibration process on the site main page. **Note:** Calibration can take up to 30 min.

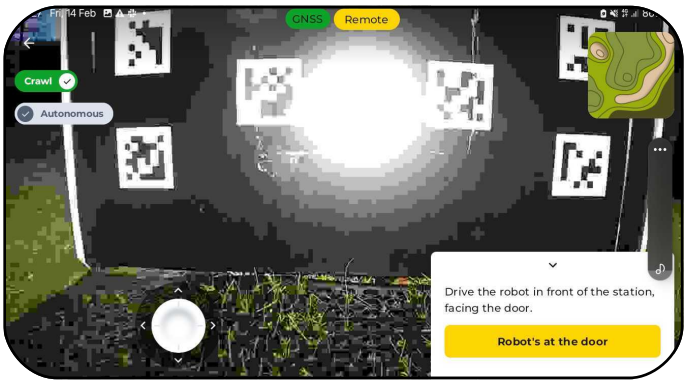




20. After the calibration process has finished the robot will need to detect the charging station door.



21. Enable the camera and move the robot for at least 30 seconds before positioning it with the camera facing the charging station door. Make sure all the symbols are visible to the camera, and press the “Robot’s at the door” button on the bottom right.



4.e Surveying

- Surveying allows the user to map the cutting areas, safe paths, and danger areas.
- **Note:** The robot may require charging prior to adding survey data.
- All survey data can be edited after it has been created. This allows the user to make small changes and fix errors like unwanted points that cause discontinuities.

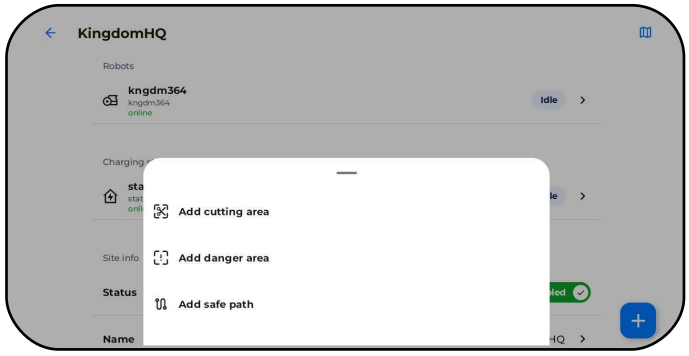
4.e.i Safe Path

- Safe paths are used to define pathways between the charging station and cutting areas.
- All cutting areas must be connected directly to the charging station via safe path or indirectly via other cutting areas that have a safe path to the station.

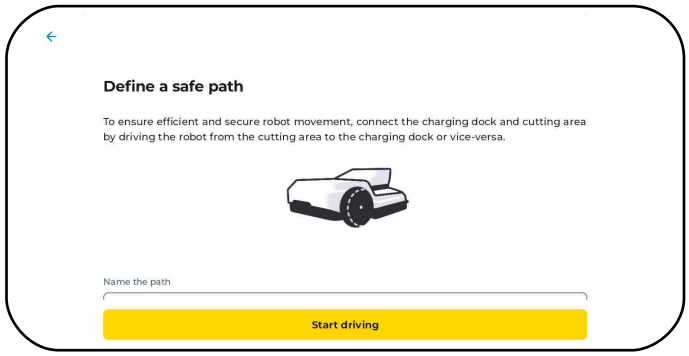
Creating a Safe Path:

1. In the app, open the site where you would like to complete the survey.

2. Press the plus icon at the bottom and select “Add safe path”.



3. Name your safe path and select “Start driving”.



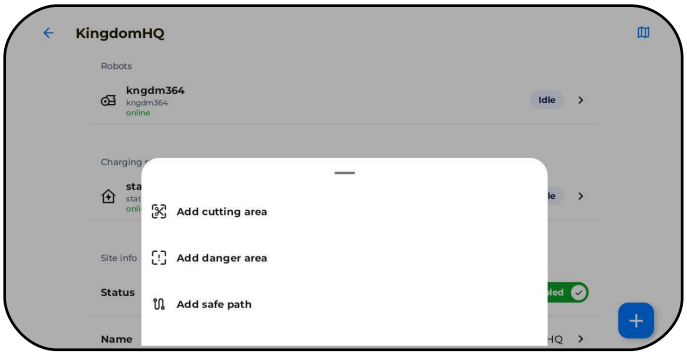
4. Points can be added in two ways:
    - a) Selecting the survey button will place markers on the map as you drive, creating a path for the robot to follow.
    - b) There is also the option to place individual markers instead of using the survey button. This will create straight paths between each point.
5. Drive the robot along the path you would like it to take, using either option a or b from step 4.
    - Points can be removed using the undo button
    - It is recommended to start the safe path facing away from the charging station and having the first 2 m of the safe path going straight from the station door for optimal docking/undocking.
6. Once happy with the path, press the finish button. A safe path has now been made.

4.e.ii Cutting Area

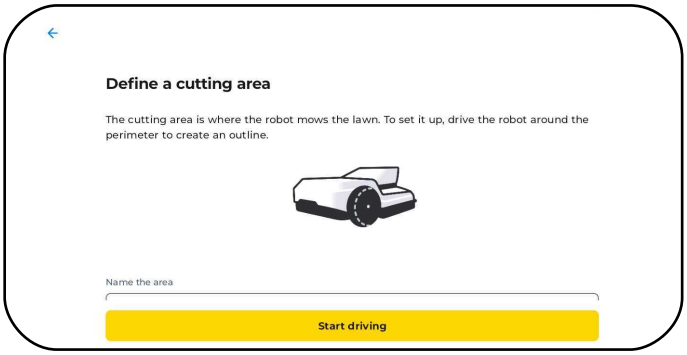
A cutting area must be connected directly or indirectly to the charging station by other cutting areas or safe paths.

Creating a Cutting Area:

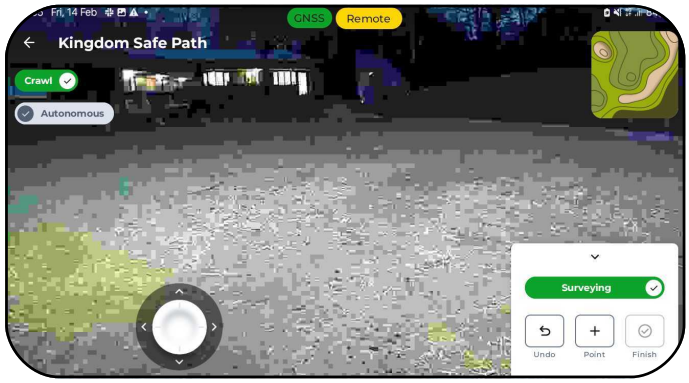
1. On the site menu press the plus button then select “Add cutting area”.



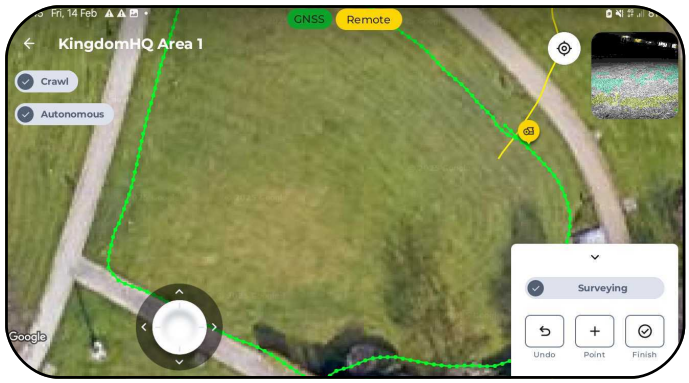
2. Name the cutting area and proceed to “Start driving”.



3. Position the robot on the border of your cutting area and press the surveying button to begin marking points.
4. Alternatively you can place individual markers instead of using the survey function. This will create borders with straight lines between the points. You may find this more useful if mapping out a sports field that is rectangular shaped with straight edges.



5. Drive the robot along the perimeter of your cutting area.



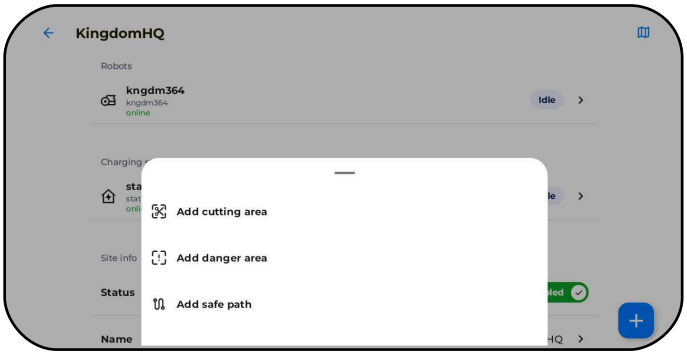
6. Once you are happy with the cutting area you can click “Finish”. A connection between the last point in the survey will automatically be made to the first point. Your cutting area has now been defined.

4.e.iii Danger Area

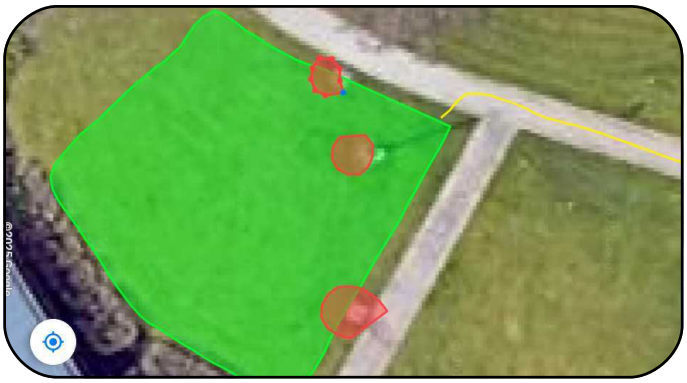
Danger areas define regions that the robot is forbidden to enter and operate in. Under manual control a user may still drive the robot into a danger area, but during autonomous operation the robot will not enter a danger area.

Creating a Danger Area:

1. On the site menu press the plus button then select “Add danger area”

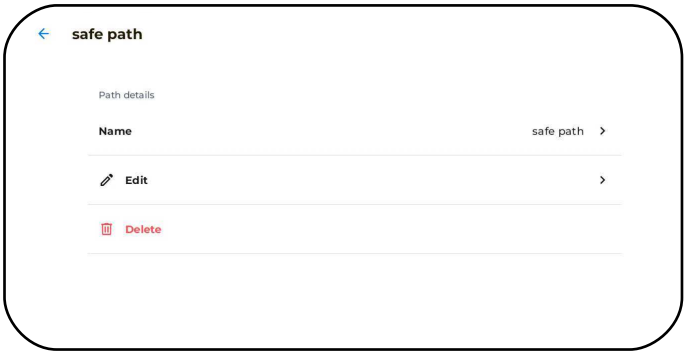


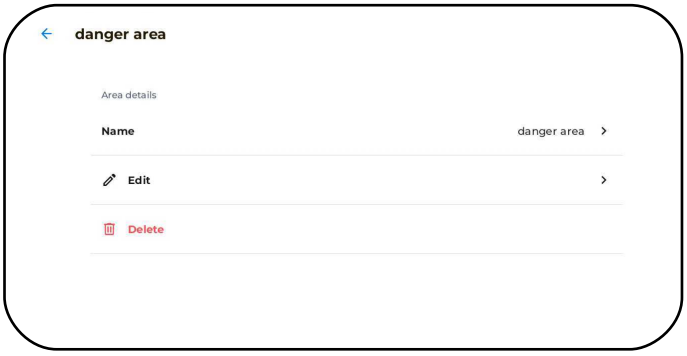
2. Name the danger area and proceed to “Start driving”
3. Position the robot on the border of your danger area and press the surveying button to begin marking points. Alternatively points can be placed individually as required.
4. Drive the robot along the perimeter of your danger area.
5. Once you are happy with the danger area you can click “Finish”. A connection between the last point in the survey will automatically be made to the first point. Your danger area has now been defined.



4.e.iv Deleting Surveys

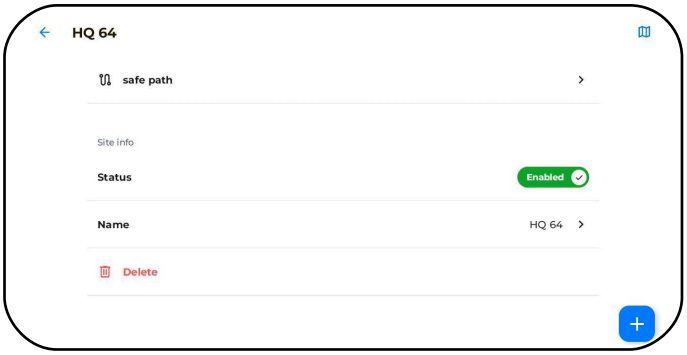
A safe path, cutting area or danger area can be deleted by selecting it and pressing “Delete”.





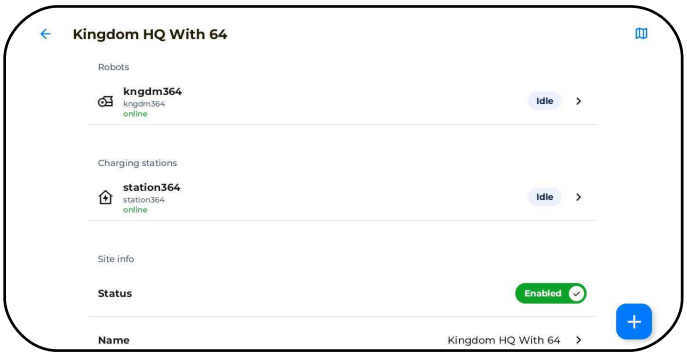
4.e.v Deleting Sites

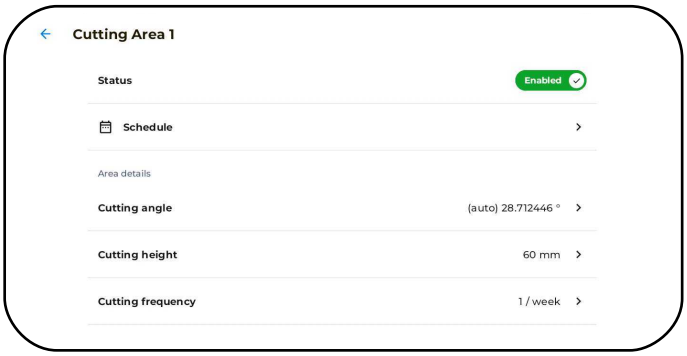
- A site can be deleted by scrolling down the site menu and pressing delete.
- This will delete the robot pairing to the charging station and all surveys within.



4.f Cutting Area Schedule

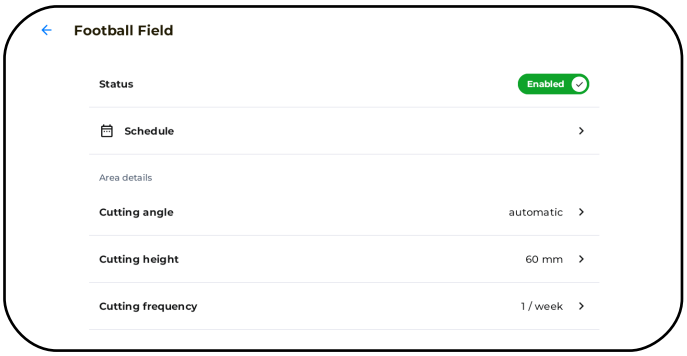
- The schedule for a cutting area defines when it can be cut. By default this is 24 hours a day, 7 days a week.
- To change the schedule, navigate to Site List → Site → Cutting Area → Schedule.
- Tap individual time increment boxes to toggle cutting on or off for a specific hour on a given day. The smallest increment is 30 minutes.

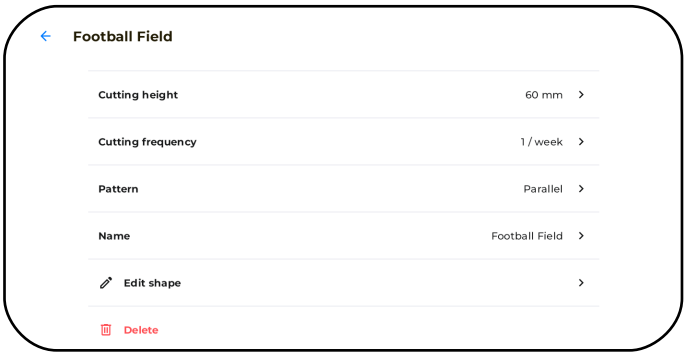




4.g Cutting Area Settings

- In the cutting area details menu you can control the cutting angle, cutting height, cutting frequency, and cutting pattern. The cutting area name can also be edited.
- The robot will attempt to meet the cutting frequency specified but if it is unable to do so then it will prioritise areas based on the desired frequency and last time they were cut.



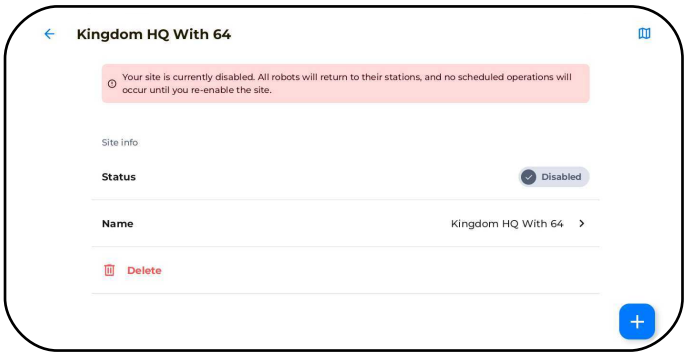


4.h Cutting Area Enable/Disable

- A cutting area can be disabled so the robot won't cut it. If the area is disabled it overrides the cutting area schedule.

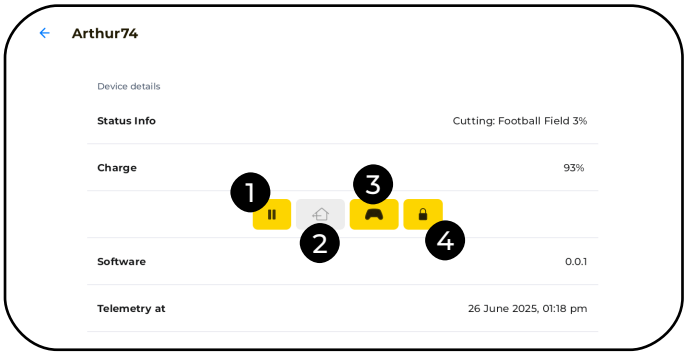
4.i Site Enable/Disable

- Disabling a site will force the robot to return to the charging station if it isn't already there.
- Disabling the site overrides any other cutting area setting.



4.j Robot General Settings

- From the site menu if you click on the robot you will be able to see some additional features.
- Status Info will show you what the robot is currently doing.
- If cutting, status info will show the current progress the robot has made on the current field.
- There are also buttons that will perform certain functions on the robot.

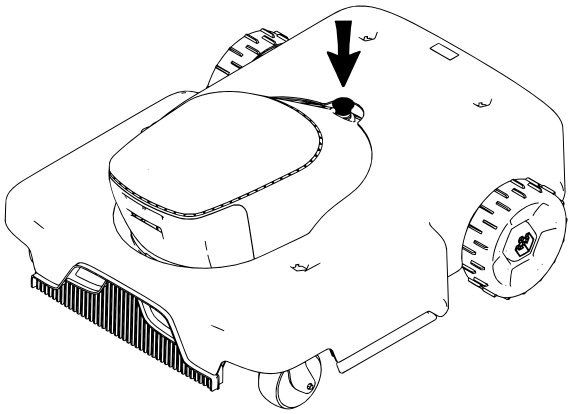


1. Pause robot - can stop and start as needed
2. Dock/Undock robot - useful for maintenance
3. Manually control robot
4. Disable robot - requires pin to resume

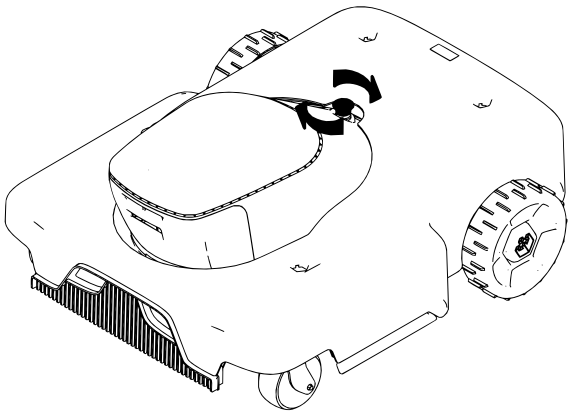
4.k Disabling the Robot

Note: Wait for all moving parts to come to a complete halt prior to handling the robot.

- In an emergency or when needing to handle the robot you should press the emergency stop button on top of the robot. This will lock the drive and cutting motors, stopping the robots moving parts.
- If handling the robot, it is also necessary to turn the robot off after pressing the emergency stop button.



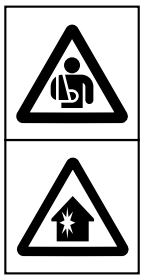
- To resume operating with the robot, turn it on if off. Twist the emergency stop button clockwise and it will lift up. In the app you will need to reset the safety, and then the robot will resume operation.



5. Service and Maintenance

- Do not operate the robot if the blades are not free moving.
- Do not operate the robot if the blade screws have not been tightened to an adequate torque.
- Do not use blades that are damaged.
- Do not use blades not approved by Kingdom.
- When operating the robot at maximum coverage output, it is recommended to replace the cutting blades every 2 weeks. The time of replacement can be extended proportionally with the cutting coverage up to 4 weeks.
- 4 weeks is the maximum amount of time recommended between blade changes.
- Replacement Blades can be purchased from your service provider.
- It is advised to use a large soft mat or blanket to lay the robot onto to avoid scratches and dents.

Note: Press the emergency stop button and turn the robot off before performing any maintenance or cleaning on the robot.



Note: Read through Section 2 'Health and safety' prior to performing any maintenance.

Note: Ensure all moving parts are stationary prior to handling.

- Regular servicing and maintenance is essential for optimal performance and longevity of your robotic lawnmower. Please follow the recommended intervals to ensure optimal operation.

5.a Blade Replacement

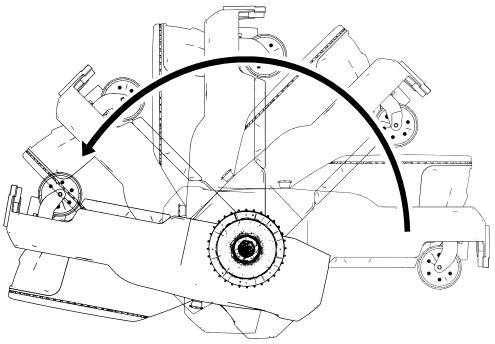
Note: Wear protective cut proof gloves when handling sharp objects.

Note: Failure to follow instruction may lead to damage to the robot or harm to others.

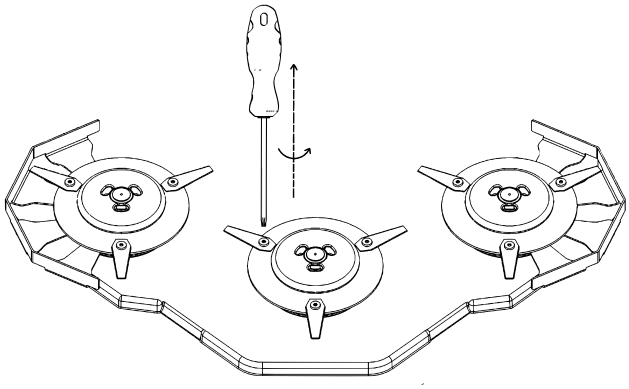
- Do not over-tighten the screws as this may lead to damage to the robot.
- Do not attempt to handle the robot until all moving parts have come to a halt.
- Do not operate the robot if the blades are not free moving.
- Do not operate the robot if the blade screws have not been tightened to an adequate torque.
- Do not use blades that are damaged.
- Do not use blades not approved by Kingdom.
- When operating the robot at maximum coverage output, it is recommended to replace the cutting blades every 2 weeks. The time of replacement can be extended proportionally with the cutting coverage up to 4 weeks.
- 4 weeks is the maximum amount of time recommended between blade changes.
- Replacement Blades can be purchased from your service provider.
- It is advised to use a large soft mat or blanket to lay the robot onto to avoid scratches and dents.

To Replace the Blades:

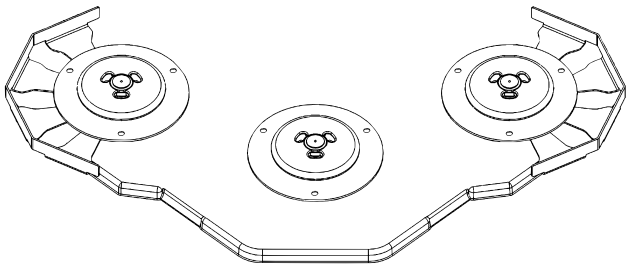
1. Press the emergency stop button on the robot then turn the robot off. Wait until all moving parts have stopped moving.
2. Gently flip the robot upside down.



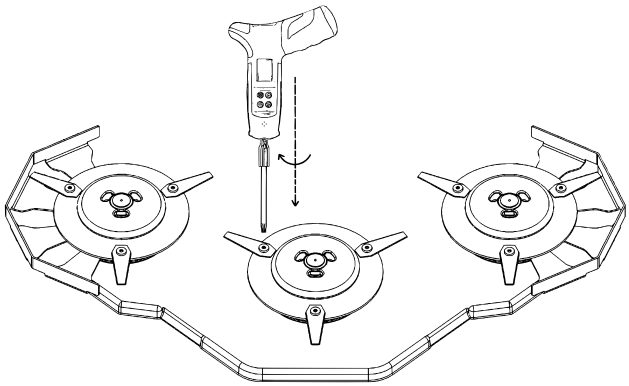
3. Using a T15 screwdriver, undo the screws connecting the blades to the disc and remove the worn blades. **(DO NOT UNDO THE SCREWS CONNECTING THE DISC TO THE ROBOT!)**



4. Ensure there is no excess grass buildup around the cutting discs. Cleaning may be required.



5. Attach the new blades to the robot using new screws and gently tighten until you begin to meet resistance.
6. Using a torque wrench, tighten the screws to 1.6 Nm of torque and stop.



7. Ensure the blades are free moving. If not. loosen and reposition the blade as it may be pinched under the screw.
8. The blades have now been replaced, tilt the robot the right way up, turn it on and lift the emergency stop button. The robot may resume cutting.

- **Note**: Failing to change the cutting blades as recommended will result in poor or uneven cut quality.

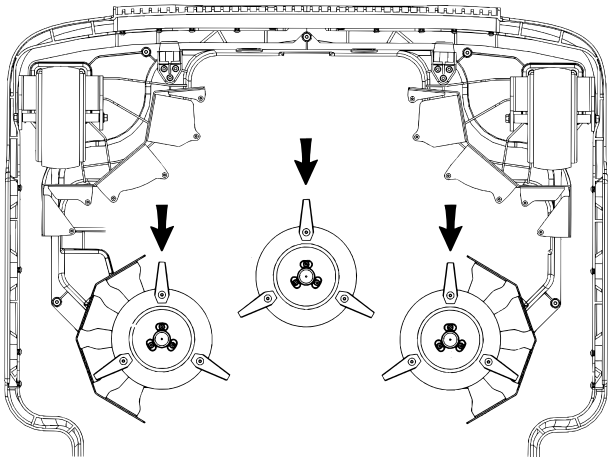
5.b Cleaning Grass Build-Up

Note: Wear protective cut proof gloves when handling sharp objects.

Note: Failure to clean grass build-up regularly will result in poor cut quality and inefficient energy usage. Damage may occur to the robot.

- In the first month of operating the product it is recommended to inspect the underside of the robot weekly and clean as required to get an idea how fast grass build-up occurs.
- Based on the findings in the first month the frequency of checks and cleaning can be adjusted. At a minimum the underside should be cleaned whenever the cutting blades are replaced.

1. Tilt the front of the robot up to inspect the underside.



2. Remove any big chunks of grass around the cutting disc.
3. Finish with a small brush to remove remaining build up.
4. Place the robot back down and repeat the cleaning process on the wheels.
5. Robot is ready to resume cutting.

- **Note**: Frequency of inspections and cleaning can vary depending on the season and weather conditions.

5.c Cleaning Sensors and Camera Lenses

Note: It is important to keep the sensors clean and in functioning condition to ensure the robot can safely navigate and operate.

- The robot sensors and camera lens should be inspected and cleaned at the same frequency as blade changes.
- Using a damp microfiber cloth, gently wipe and ensure there is no dirt covering the sensors. The robot may resume operation.

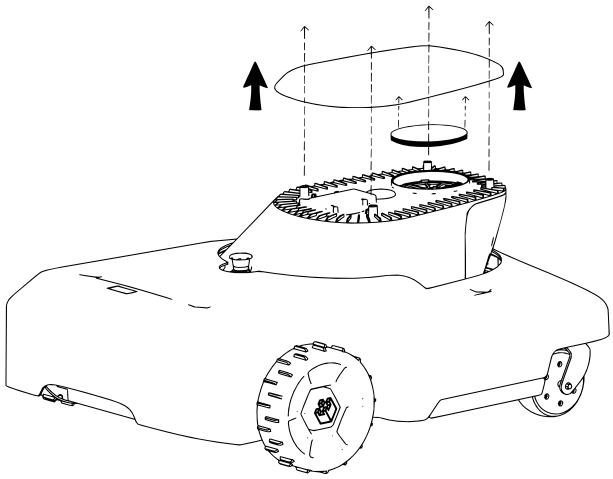
5.d Air Filters

Note: Failure to clean the air filter may result in the robot overheating.

- Air filters should be removed and cleaned every 3 months. A vacuum is recommended to help remove dust and debris.

To Clean the Air Filters:

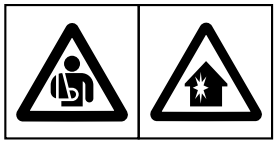
1. Remove the top of the robot with an upwards motion.
2. Remove the air filter from the centre.



3. Tap the air filter against a hard surface to remove debris.
    - For a better clean you can use a vacuum cleaner to remove bits of dust and debris.
4. Replace the air filter with thin mesh side down.
5. Place the top back on to robot with a firm downward click.
6. Robot may resume cutting.

- If particularly dirty it is possible to rinse the filter with warm water. Make sure it is completely dry before re-installing into the robot.

5.e Charging Station Cleaning

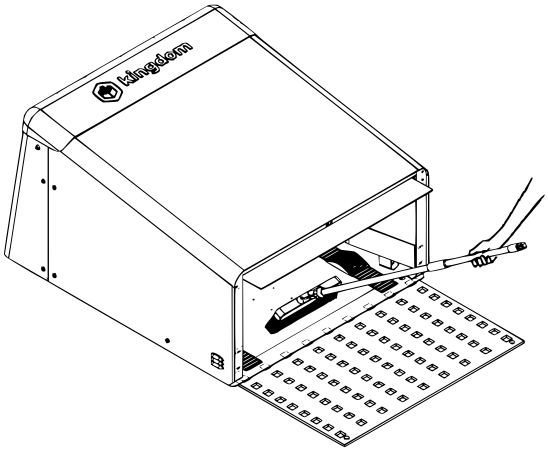


Note: Ensure all moving parts have come to a halt prior to interacting with the charging station.

- In the first month, the charging station should be inspected once a week and cleaned when required.
- After the first month the inspection and cleaning schedule can be adjusted based on the stations requirements.
- Should any damage be found to the power cable of the station, safely unplug the station from the mains and contact your service provider.

To Clean the Charging Station:

1. Open the charging station door.
2. Use a broom to sweep debris from the charging station.



3. Close the door.
4. Brush any debris off the rubber mat and ensure the grass underneath has not overgrown.
5. Charging station is ready to resume normal operations.

- **Note**: Failure to keep the charging station clean may result in the robot unable to charge and affect the robots performance.

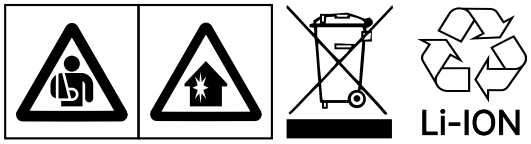
5.f Servicing the Robot

- It is recommended to perform servicing with a Kingdom authorized service provider once a year.
- The service provided includes:
  - Air filter cleaning or replacement
  - Wheel bolt tightening
  - Inspection of the cutting discs
  - Inspection for general wear tear
  - Full clean

5.g Storage Instructions

- Should you need to store the robot for a longer period of time, ensure the environment is dry and has a stable temperature between 0°C-25°C (32°F-77°F).
- When storing the robot for longer periods it is important to ensure the battery does not drain. Keep the battery between 30% an 80% to prevent degredation.
- Store the robot in a dry, ventilated area, away from direct sunlight.
- Store the robot away from heat sources.
- Ensure the charging station is disconnected from the mains.

5.h Robot & Battery Disposal



- The product contains a LI-ION battery and must only be disposed of in an appropriate recycling facility.
- Do not dispose of the product in general/ household waste.
- For battery disposal, follow the UK Waste Batteries and Accumulators Regulations 2009 or the EU Battery Directive 2006/66/EC depending on your location.
- Look to your local government guidelines about battery recycling and e-waste prior to disposing of the product.
- To find your nearest recycling point look for your local WEEE-compliant facility.
  - Visit www.recyclenow.com (UK only).

6. Specifications

6.a Dimensions

- Placeholder

Dimensions	Robot (Arthur)	Charging Station (Arthur Castle)
Length	93 cm (~36.6")	118 cm (~46.5")
Width	74 cm (~29.1")	90 cm (~35.4")
Height	42 cm (~16.5")	68 cm (~26.8")
Weight	35 kg (77.2 lbs)	40 kg (88.2 lbs)

Note: The mat will add an additional 44 cm to the width of the charging station making it 162 cm

6.b Arthur Specifications

1. Charging Pad
2. Castor Wheel
3. Drive Wheel
4. Emergency Stop Button
5. LED Indicator
6. Cutting Disc
7. Cutting Blade
8. LED Light
9. Camera
10. Power Switch

6.b.i LED Indicators

LED Indicators	
Solid Green	Robot is switched on
Solid Red	Charging contacts are live
Solid Yellow	The robot is being controlled through the app
Flashing Red	Safety has been triggered
Solid Purple	Safety is ready to reset

6.b.ii Operation Technical Data

Operation Specifications	
Maximum Weekly Coverage	80,000 m^2 (~17.3 acres)
Navigation	Line-by-line trajectory with perimeter laps
Working Speed	1.8 kph (~1.1 mph)
Ability to Operate in Rain/Fog	Yes
Cutting Height Range	20-60 mm (~0.78”-2.36”)
Cutting Height Resolution	3 mm (~1/8”)
Multiple Lawn islands	Yes
Climb Capacity	25°
Mowing Motors	sBLDC (outrunners)
Blade Mower Power (Each)	200 W
No. of Blade Motors	3
Maximum Blade Motor Speed	3900 RPM
Drive Motors	sBLDC
Drive Motor Power (Individual)	135 W
Cutting Blades	9 retractable steel razors
Cutting Width	54 cm (21.3”)
Connectivity	Cellular 4G
Mobile App	Yes
Noise Level	60 dB
IP Rating	IP44

6.b.iii Battery and Charging Technical Data

Battery/Charging Specifications	
Battery Type	Li-ion
Voltage Type	DC
Battery Capacity	39.2 Ah
Battery Voltage	22.2 V
Charge Power	180 W
Discharge Power	360 W
Automatic Charging	Yes
Typical Charging Time	2 hrs
Typical Working Time	4 hrs
Max Power Consumption	90 kWh/month
Battery Weight	4.116 kg

6.b.iv Safety Technical Data

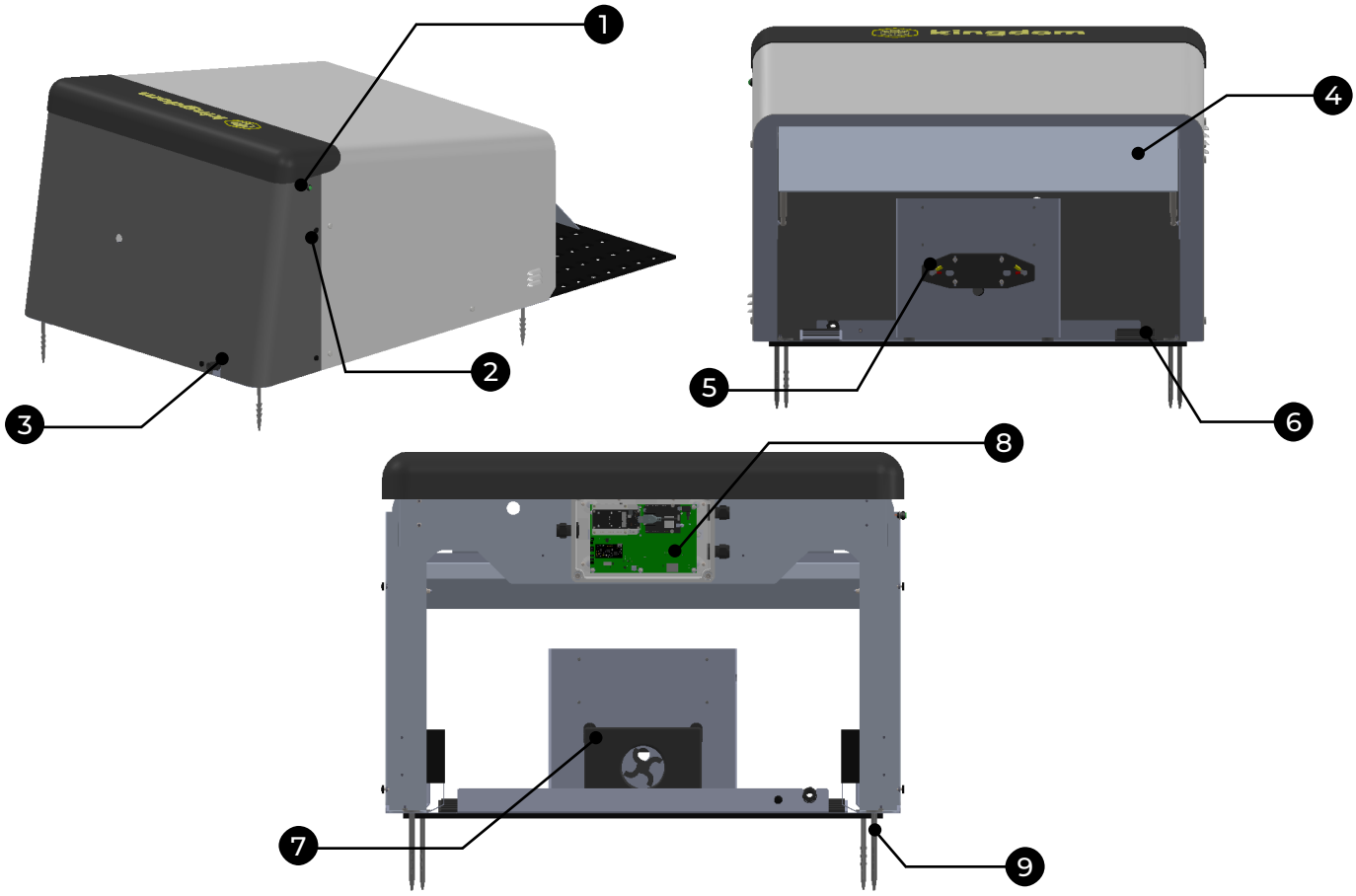
Safety Specifications	
Proximity Sensors	Yes
Camera	Yes
Bumping Sensors	Yes
Tilt Sensors	Yes
Lift Sensors	Yes
Independent Safety Control	Yes

6.b.v Security Technical Data

Security Specifications	
Alarm	Yes
Mobile App Alert	Yes
Pairing with Charging Station	Yes
Ability to Close Charging Station	Yes

- As an anti-theft measure when the robot is lifted while on, or if it bumps into an object, the alarm will be triggered.
- In the app the robot's location can be tracked via GNSS so long as it remains switched on.

6.c Arthur Castle Specifications



1. Door Open/Close
2. Backplate Screw
3. Power Cable
4. Door
5. Charging Pins
6. Holding Bump
7. Battery Charger
8. Electronics Box
9. Pegs

6.c.i Charging Station Technical Data

Charging Station Specifications	
Power Type	AC
Input Voltage	120/240V
Input Current	1.5 A
Input Frequency	50 Hz
Output Voltage	25.2 V
Max Output Current	20 A
Max Output Power	713 W

7. Compliance Certifications

7.a EU Declaration of Conformity

EU Declaration of Conformity

We, Kingdom Technologies Ltd., as a manufacturer declare under our sole responsibility that our robotic lawn mower, Model: Arthur, and its respective charging station, Model: Arthur Castle, comply fully with the following EU directives and regulations:

Product Type	Robotic Battery Powered Electric Lawn Mower	Automated Charging Station
Model	Arthur	Arthur Castle
Identification	Serial numbers assigned March 2025	
Directive/Regulation		
2006/42/EC - Machinery Directive 2011/65/EU - Restrictions of Hazardous Substances (ROHS) Directive 2014/53/EU - Radio Equipment Directive (RED)		

The following standards and technical specifications also apply:
EN 60335-1:2012+AC:2014+A11:2014+A13:2017+A15:2021
EN IEC 61000-3-2:2019+A1:2021
EN 61000-3-3:2013+A1:2019+A2:2022
EN 61000-4-2:2009
EN 61000-4-3:2020
EN 61000-4-4:2012
EN 61000-4-5:2014+A1:2017
EN 61000-4-6:2014
EN 61000-4-11:2020
EN IEC 63000:2018
EN 301 908-1 V15.2.1
ETSI EN 301 511 V12.5.1 (2017-03)
ETSI TS 151 010-1 V12.8.0 (2016-05)

Signed for and on behalf of Kingdom Technologies Ltd.

Place of Issue: Glasgow, United Kingdom

Date: 17/03/2025

Name & Signature: Joan Kangro

Manufacturer:
Kingdom Technologies Ltd.
Manufacturer Address:
Unit 6, Block 3, Kelvin Campus, West of Scotland Science Park, 2317 Maryhill Road, Glasgow, G20 0SP, United Kingdom

EU Representative:
Kuningriigi Tehnoloogiad Oü
EU Representative Address:
Harju maakond, Tallinn, Kesklinna linnaosa, Rävala pst 4, 10143, Estonia

7.b UK Declaration of Conformity

UK Declaration of Conformity

We, Kingdom Technologies Ltd., as a manufacturer declare under our sole responsibility that our robotic lawn mower, Model: Arthur, and its respective charging station, Model: Arthur Castle, comply fully with the following UK regulations:

Product Type	Robotic Battery Powered Electric Lawn Mower	Automated Charging Station
Model	Arthur	Arthur Castle
Identification	Serial numbers assigned March 2025	
Description		
Radio Equipment Regulations 2017 The Supply of Machinery (Safety) Regulations 2008 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012		

The following standards and technical specifications also apply:
EN 60335-1:2012+AC:2014+A11:2014+A13:2017+A15:2021
EN IEC 61000-3-2:2019+A1:2021
EN 61000-3-3:2013+A1:2019+A2:2022
EN 61000-4-2:2009
EN 61000-4-3:2020
EN 61000-4-4:2012
EN 61000-4-5:2014+A1:2017
EN 61000-4-6:2014
EN 61000-4-11:2020
EN IEC 63000:2018
EN 301 908-1 V15.2.1
ETSI EN 301 511 V12.5.1 (2017-03)
ETSI TS 151 010-1 V12.8.0 (2016-05)

Signed for and on behalf of Kingdom Technologies Ltd.

Place of Issue: Glasgow, United Kingdom

13/03/2025

Joan Kangro, Director

Manufacturer:
Kingdom Technologies Ltd.
Manufacturer Address:
Unit 6, Block 3, Kelvin Campus, West of Scotland Science Park, 2317 Maryhill Road, Glasgow, G20 0SP, United Kingdom

7.c PSTI Statement of Compliance

UK PSTI Statement of Compliance

We, Kingdom Technologies Ltd., as a manufacturer declare that our robotic lawn mower, Model: Arthur, and its respective charging station, Model: Arthur Castle, are in compliance with the applicable security requirements in schedule 1 of 'The Product Security and Telecommunications Infrastructure (Security Requirements for Relevant Connectable Products) Regulations 2023'.

Product Type	Robotic Battery Powered Electric Lawn Mower	Automated Charging Station
Model	Arthur	Arthur Castle
Defined Support Period	3 years from date of purchase	
Manufacturer Name	Kingdom Technologies Ltd.	
Manufacturer Address	Unit 3.06, Kelvin Campus West of Scotland Science Park, Glasgow, United Kingdom, G20 0SP	
EU Representative	KUNINGRIIGI TEHNOLOOGIAD OÜ	
EU Representative Address	Harju maakond, Tallinn, Kesklinna linnaosa Rävala pst 4, 10143, Estonia	

This statement of compliance was prepared by the manufacturer of the product.

Name: Joan Kangro

Title: Director

Signature: 

Date: 10/03/2025

Location: Unit 3.06, Kelvin Campus
West of Scotland Science Park,
Glasgow,
United Kingdom,
G20 0SP

This statement of compliance along with the defined support periods are only applicable to products sold within the UK. The support period may be extended at Kingdoms own discretion.

Kingdom Technologies Ltd. invites all input on potential software vulnerabilities so that we can improve the security of our product. Firmware updates for security and functionality will be provided via Over-the-Air (OTA) updates. Users will be notified over the Kingdom app.

To report any security concerns or vulnerabilities please contact us via email at support@kingdom.garden.

8. Glossary

- Arthur - Kingdoms own robotic lawn mower.
- Charging Station - Where the robot goes to charge and protect itself from external conditions.
- Emergency Stop/E-Button - Red button on top of the robot that stops all moving parts.
- Autonomous Mode - A mode where the robot will operate to a set schedule.
- Manual Mode - A mode where the robot can be controlled manually using the Kingdom app.
- Crawl Mode: A mode that will slow down the robot when manually driving.
- GNSS (Global Navigation Satellite System) - How the robot knows where it is.
- Surveying - The process of creating new safe paths, cutting areas, and danger areas for the robot.
- Safe Path - A path the robot will follow along to go between cutting areas and the charging station.
- Cutting Area - The area the robot will cut.
- Danger Area - An area the robot will avoid going in either inside the cutting area or near a safe path.
- Site - The group of cutting areas, safe paths, and danger areas linked to a robot.
- Docking/Undocking - The process of the robot entering or exiting the charging station.
- Cutting Height - The height the robot will cut the grass to.
- Blade disc - A metal disc on the underside of the robot that the cutting blades attach to.

Description Robotic	Battery Powered Electric Lawn Mower	Automated Robotic Lawn Mower Charging Station
Brand	Kingdom Technologies	Kingdom Technologies
Type/Model	Arthur	Arthur Castle
Serial Number		

Product of Kingdom Technologies Ltd.

Address: Unit 6, Block 3, Kelvin Campus, West of Scotland Science Park, 2317 Maryhill Road, Glasgow, G20 0SP, United Kingdom

EU Representative: Kuningriigi Tehnoloogiad Oü

Representative Address: Harju maakond, Tallinn, Kesklinna linnaosa, Rävala pst 4, 10143, Estonia

Contact: support@kingdom.garden

Checkout the latest version of the manual