

ADIBOT USER MANUAL

AI Fearless | Clean Endless

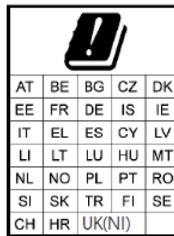


CONTENTS

Preface.....	.01	4.2.6 Version Information Display.....	15
Disclaimer.....	.01	4.2.7 Reset to Factory Settings.....	15
Part I Product Overview.....	.02	4.3 Disinfection Task.....	15
1.1 Packing List.....	.02	4.3.1 Creating Disinfection Task.....	15
1.2 Product Overview.....	.03	4.3.2 Disinfection Detailed Information.....	16
1.3 Product Specifications.....	.04	4.3.3 Executing Disinfection Task.....	16
Part II Safety.....	.05	4.4 Aoubt Me.....	.17
2.1 General Rules.....	.05	4.4.1 Room Manegement.....	.17
2.2 Safety Precautions.....	.05	4.4.2 System Settings.....	.18
2.3 Warning Sign.....	.06	Part V Transportation, Unpacking, Cleaning, and Storage.....	.19
2.4 Charging Indicator.....	.07	5.1 Packing and Transportation.....	.19
Part III Device Operations.....	.07	5.2 Unpacking.....	.19
3.1 Power on/off.....	.07	5.2.1 Opening the Package.....	.19
3.1.1 Power-on.....	.07	5.2.2 Installing UVC Lamp.....	.20
3.1.2 Power-off.....	.08	5.3 Maintenance and Cleaning.....	.20
3.2 Install the Charging Dock.....	.08	5.3.1 Cleaning the Robot.....	.20
3.3 Charging.....	.08	5.3.2 Cleaning the Adapter.....	.20
3.4 Hand Push Function.....	.09	5.3.3 Cleaning the Lamp Tubes.....	.21
3.5 Disinfecting Process.....	.09	5.4 Storage Instructions.....	.21
Part IV Functions of Tablet PC Software.....	.10	Part VI Application Scenarios.....	.21
4.1 User Login.....	.10	Part VII FAQs/Troubleshooting.....	.22
4.1.1 Login.....	.11	Part VIII Declaration of Conformity.....	.22
4.2 Robot Settings.....	.11		
4.2.1 Network Settings.....	.11		
4.2.2 Volume Settings.....	.13		
4.2.3 Language Settings.....	.13		
4.2.4 Safety Sign Settings.....	.14		
4.2.5 Server Settings.....	.14		

Preface

- Thank you for purchasing ADIBOT-A equipment from TGR Solutions, Inc. This user manual is only applicable to the operation of ADIBOT-A.
- In order to ensure safe use of ADIBOT-A and quickly grasp the usage method, please read this manual carefully.
- “ADIBOT-A”, “robot”, and “it” mentioned in this manual refer to the ADIBOT-A robot, and “you” refers to the user.
- This manual is for user's reference and guidance only, and the description may not be detailed enough. If you encounter any problems that can not be solved, please contact TGR Solutions, Inc. for technical support.
- This manual will be updated from time to time, and the latest user manual will add the latest content and pictures without further notice.
- The functions of Wireless Access Systems including Radio Local Area Networks(WAS/RLANs) within the band 5150-5350 MHz for this device are restricted to indoor use only within all European Union countries (BE/BG/CZ/DK/DE/EE/IE/EL/ES/FR/ /IT/CY/LV/LT/LU/HU/MT/NL/AT/PL/PT/RO/SI/SK/FI/ SE/TR/N O/CH/IS/LI/NI).



Disclaimer

- Failure or damage caused by the user not following the method described in the operating instructions.
- Failure or damage caused by the repair being operated by a non designated service organization.
- Failure or damage caused by unauthorized modifications of parts and circuits of this product.
- Failure or damage caused by force majeure factors (such as fire, earthquake, weather, etc).
- Failure and damage caused by using a non-designated power supply (voltage or frequency) or abnormal voltage.
- Failure and damage caused by using a non-specified charging dock or charging cable.

Part I Product Overview

1.1 Packing List

1. Packing List

a. Robot Body*1	e. Power Adapter*1	i. USB Dongle(4G)*1
b. Protective Cover*1	f. User Manual*1	j. Tablet PC*1
c. Safety Sign*1	g. Dosimeter card*10	k. 3*50mm Cross Screwdriver*1
d. Charging Dock*1	h. UVC goggle*1	



(a)



(b)



(c)



(d)



(e)



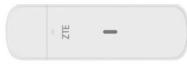
(f)



(g)



(h)



(i)



(j)



(k)

2. List of self-provided materials

- a. USB 4G SIM Card*1
- b. AA batteries*8



(a)



(b)

Note: Due to the need for better display of products, the product ratio of this icon (including all the images below) is not 1:1.

1.2 Product Overview

ADIBOT-A adopts the strongest ultraviolet sterilization band 253.7nm. It destroys the gene structure of pathogens to deprive their reproductive capacity and make them lose infectivity. Strong irradiation can eliminate more than 99.99% of harmful pathogens, including COVID-19 virus, SARS virus, fungi, and bacteria.

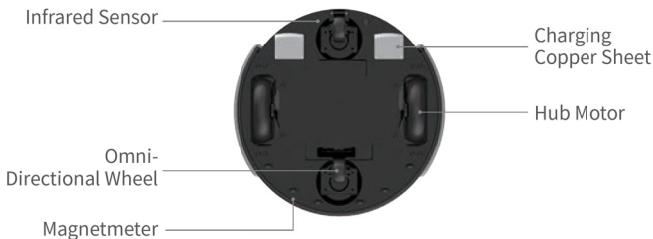
• Front View



• Rear View



- **Bottom View**



- **Charging Dock**



(Front View)



(Back Elevation)

1.3 Product Specifications

- **Basic Parameters**

Product Model	ADAA201	English Abbreviation	ADIBOT-A
Product Design	Mobile tower-type robot, with lamp Set on the flanks	Product Color	Grey lower body and stainless steel armrest
Product Size	555* 609* 1725(mm)	Package Size	780* 840* 1880(mm)
Product Weight	79kg	Gross Weight of Product	160kg
Tablet PC	Lenovo Tab M10 FHD Plus	Working Temperature	0 to 40°C (for indoor use only)
Storage Temperature	-20°C~60°C	Working Humidity	10%~85% (for indoor use only)
Storage Humidity	≤95%	Bactericidal Factor	UVC(ultraviolet ray)
Acoustic Equipment	amplifier speaker*2	After-sales Service	1-year warranty, 2-year extended warranty can be purchased
Acoustic Equipment Power	6W*2		

- **UVC Lamp**

Disinfecting Lamp	UVC lamp 1 * 8+ UVC lamp 2 * 8	Radiation Wavelength	253.7nm
Irradiation Intensity of Lamp 1	141μW/cm ²	Power of Single Lamp 1	41W
Length of Lamp 1	851mm	Life of Lamp 1	12000h
Irradiation Intensity of Lamp 2	40μW/cm ²	Power of Single Lamp 2	14W
Length of Lamp 2	295mm	Life of Lamp 2	12000h
Total Power of Lamps	440W		

• Main Chip and Memory

CPU	Intel X86 processor	Operating System	8
RAM	8G	ROM	64G
Operating System	Ubuntu 18.04		

• Network

WiFi	2.4GHz/5GHz 802.11b/g/n/ac	Bluetooth	Bluetooth 5.1
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• Battery

Battery Type	Lithium iron phosphate Battery	Battery Capacity	24V100AH
Charging Duration	About 3.5H	Disinfection Duration	About 5H in-place disinfection

• Power supply

Input Voltage	AC100-240V	Output Voltage	DC29.2V
Frequency	50/60Hz	Output Current	30A

• Motion Capability

Number of Chassis Wheels	2 driving wheels “+” 2 driven wheels	Move Mode	Forward
Turn Mode	Spin turn supported	Obstacle Clearing Capability	≤7mm
Ditch Crossing Capability	≤2cm	Climbing Height	≤5°
Ditch Crossing Capability	≥0.5		

Part II Safety

2.1 Gerneral Rules

Please read the following information carefully. Any direct or indirect losses caused by the unnormal operation of the product will not be beared.

Cautions!

- To ensure safety, you are strongly recommended to follow the safety rules below when operating the robot.
- We do not guarantee that the manual covers all the possible circumstances.
- Please operate the product carefully and ask technical suport for help if not familiar with the operation.
- ADIBOT-A is equipped with multiple safety sensors that can ensure safe operation. They work in parallel to minimize risks to others
- Please do not use the robot to perform any operations related to personal safety.
- Please keep children under 6 years old far away from ADIBOT-A.
- Please keep any other persons , animals and plants far away from ADIBOT-A.

2.2 Safety Precautions

DANGER	Danger is a situation that will cause very serious injuries if not being avoided.
WARNING	Warning is used to indicate a dangerous situation,which may cause severe injuries if not being avoided.
CAUTION	Caution is used to remind you of a dangerous situation,which may cause minor or moderate injuries if not being avoided.
NOTIFICATION	Notification is used to indicate the safety practice that is not harmful to human body such as maintenance informations which may cause the robot damaged.

Danger

- Do not touch ADIBOT-A when it is working, unless emergency circumstances.
- Do not put your toes into the chassis of ADIBOT-A, which may damage your toes.
- Do not stare at a turned-on UVC lamp for a long time, for the UV light may burn your skin and eyes, which may cause temporary blindness.
- Do not allow ADIBOT-A to be used in areas with incline, cliff or ladder.
- Do not allow any other substances fall into the gap of the robot, which may cause an electric shock or short circuit fault.
- When ADIBOT-A is operating, do not stand in a place directly exposed to UVC light (unless you are wearing qualified protective clothing). Standing there might hurt you.

Warning

- Please make sure that ADBOT-A is operated by professional and technical personnel or those who are familiar with the product.
- Please avoid any other substances fall into the gap of the robot, which may cause an electric shock or short circuit fault.
- Please keep ADIBOT-A dry, and prevent it from being operated in a humid environment, that can prevent the camera of the robot body from coming into contact with substances such as oil, steam, water vapor, moisture and dust. The normal operating humidity range of ADIBOT-A is 10% to 85%.
- Please keep ADIBOT-A away from open fire and heat sources, for the purpose of avoiding direct sunlight, which may damage the imaging sensor of the camera, lidar and other sensors. For the normal operating temperature range of ADIBOT-A is 0 to 40°C (32 to 104°F).
- Please do not cover any sensor of the product, which can affect the normal operation of its sensor.
- Please do not use irritating detergent or organic solvent to wipe the camera lens.
- Please make sure that all the maintenance operations be performed under the guidance or supervision of a technician of ADIBOT-A.

Cautions

- Please do not lean on ADIBOT-A.
- The ADIBOT-A ultraviolet sterilization lamp produces very little ozone during use, but the ozone concentration is harmless to human body.
- Please choose a three-phase plug to reduce the risk of electric shock.
- Please press the emergency button if your robot is out of control.

- Please make sure that ADIBOT-A is used indoors only.
- Please do not allow ADIBOT-A to be used on sloping areas.
- Please ask assistance to help pass when the ground bulge is higher than 5mm, the free push of Adibot-A is easily blocked.
- Please dispose any broken lamp according to the local laws and regulations based on mercury which is in the lamps.
- If ADIBOT-A failed to operate normally, especially when you detect unusual sound, smell, or smoke. Please take protection measures, and immediately press the emergency button, turn off the power supply of the robot, unplug the power cord, and contact the ADIBOT-A technical support for help.
- Please be sure to stick a geomagnetic stripe near the area where the robot may falling.

Battery Safety Alerts:

- Risk of explosion if the battery is replaced by an incorrect type.
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.
- Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.
- A battery subjected to extremely low air pressure that may result in an explosion or a leakage of flammable liquid or gas.

2.3 Warning Sign



2.4 Charging Indicator

The lamp signals of different colors provide the operator effective status indication of the robot. You can indicate the various states of the robot through the indicator light.

Body Lights Status:

LED	Status
○ Normally on in white	Normal operation
○ Normally on in white	Standby mode
● Normally on in blue	In disinfection with lights on
● Blue breathing	In disinfection task
● Normally on in green	Charge finished
● Green breathing	In charging
● Normally on in red	Robot status abnormal
● Flashing red	Emergency button pressed
● Red Breathing	Low battery reminder

Part III Device Operations

3.1 Power on/off

3.1.1 Power-on

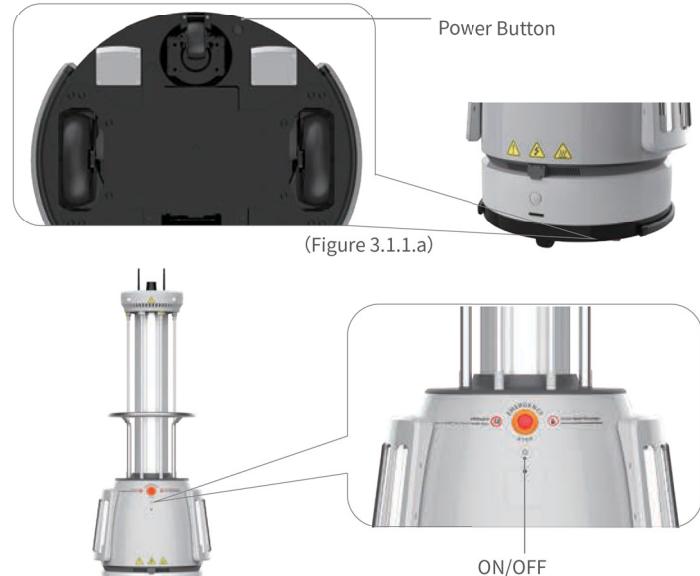
Steps:

Step 1: Press the power button (Figure 3.1.1.a) on the chassis;

Step 2: Press and hold the ON/OFF button (Figure 3.1.1.b) on the back for 3 seconds to start the robot.

Cautions:

1. Perform step 1 only if the power button is turned off, i. e. for first time use;
2. If the power button is turned on, just go to step 2.



(Figure 3.1.1.b)

3.1.2 Power-off

Steps:

Step 1: Press and hold the On/Off button (Figure 3.1.1.b) on the back for 3 seconds to shut down the robot;
Step 2: If the product will be used in a long time) Press the power button (Figure 3.1.1.a) on the chassis to turn off the power supply.

Cautions:

1. Decide whether to turn off the power supply according to the actual situation;
2. It is strictly forbidden to Shut down the robot by perform step 2 before step 1, as it may damage the robot.

3.2 Install the Charging Dock

Cautions:

1. Plug the charging cable into the dock and keep the back of the robot against a wall.
2. Place the charging dock on a dry and flat ground and beside a wall where few people pass by.
3. We highly recommend that no obstacles within 2m in front and 1m on the left and right of the charging dock.



(Figure 3.2)

Charging Dock Lights Status

LED	Status
● Green light for a long	In charging
● Red light for a long	Waiting for charge
● Red lamp flashing	Charging Dock abnormal

3.3 Charging

Method 1:

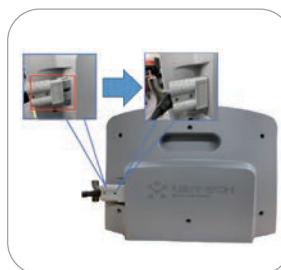
You can select a suitable power adapter and insert it into the charging port of the robot straightly(Figure 3.3.a).



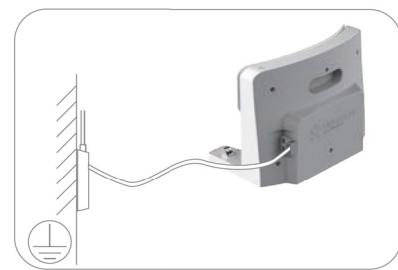
(Figure 3.3.a)

Method 2:

You can insert the adapter into the charging dock (with the alignment of the positive and negative poles), which allowing the robot to be charged on the dock (Figure 3.3.b).



(Figure 3.3.b)



(Figure 3.3.c)

Adapter Lights Status:

LED	Status
● Blue lights flashing	In charging
● Green light for a long	Charging finished/standby
● Red lamp flashing	Charging abnormal

3.4 Hand Push Function

The chassis motor is locked by default and the robot cannot be moved even the power is on. To push the robot, you should double press the On/Off button in a second of time when the robot is powered off (Figure 3.4) to unlock the robot chassis, and then push the robot when the robot is powered on.



(Figure 3.4)

3.5 Disinfecting Process

ADIBOT-A is intended to function as a supplement of routine disinfection and should not be considered as a substitute for usual disinfection equipment. Standard processes need to be carried out simultaneously with the deployment of ADIBOT-A and also ensure that ADIBOT-A has been set correctly before use to maximize the disinfection effect.

To help you get started quickly, please follow the instructions below:

Step 1: Perform basic cleaning and maintenance operations for the robot. (Refer to section 5.3 for the specific operations.)

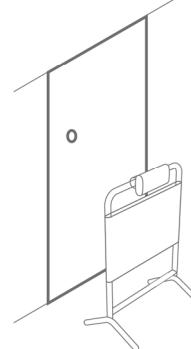
Make sure that the emergency stop button has not been pressed before starting the robot.

Step 2: Manage the room requiring disinfection, and then deploy ADIBOT-A to start disinfection.

Cautions:

- Please clean up any inflammable and explosive objects and paper to prevent a fire caused by high temperature on the surface of UV lamp,
- Please move away plants and animals in case the UV lamp can kill organic cells.
- Please make sure that the target place or object can be exposed to ultraviolet light. If any furniture in the room is moved, a new round of disinfection will then be needed.

Step 3: Place the robot at the disinfection position in the room and the safety sign in front of the door.

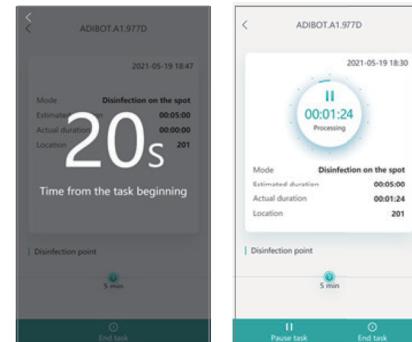


Caution:

Please ensure that all the other doors and of the disinfection room is closed and all windows are closed before starting disinfection. The robot will return to the charging dock automatically after finishing the disinfection if it was started at the dock.

Step 4: Select the in-place disinfection/auto-exploration disinfection solution (Refer to section 4.3.1 for details).

Step 5: After you tap to start disinfection on the tablet, ADIBOT-A will notify that ready for disinfection, please leave as soon as possible and counting down in seconds. Be sure to leave the disinfection site within the specified time to avoid being injured.



(Figure 3.5.a)