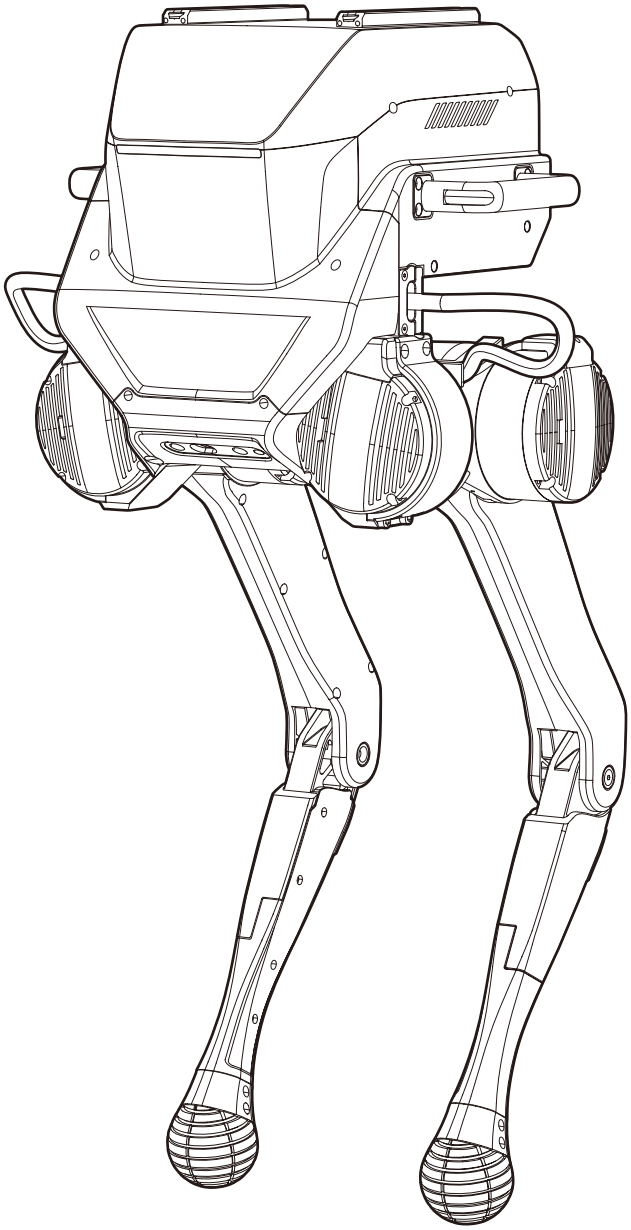
LIMX DYNAMICS

TRON 1

User Manual

用户手册

V1.0



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目录

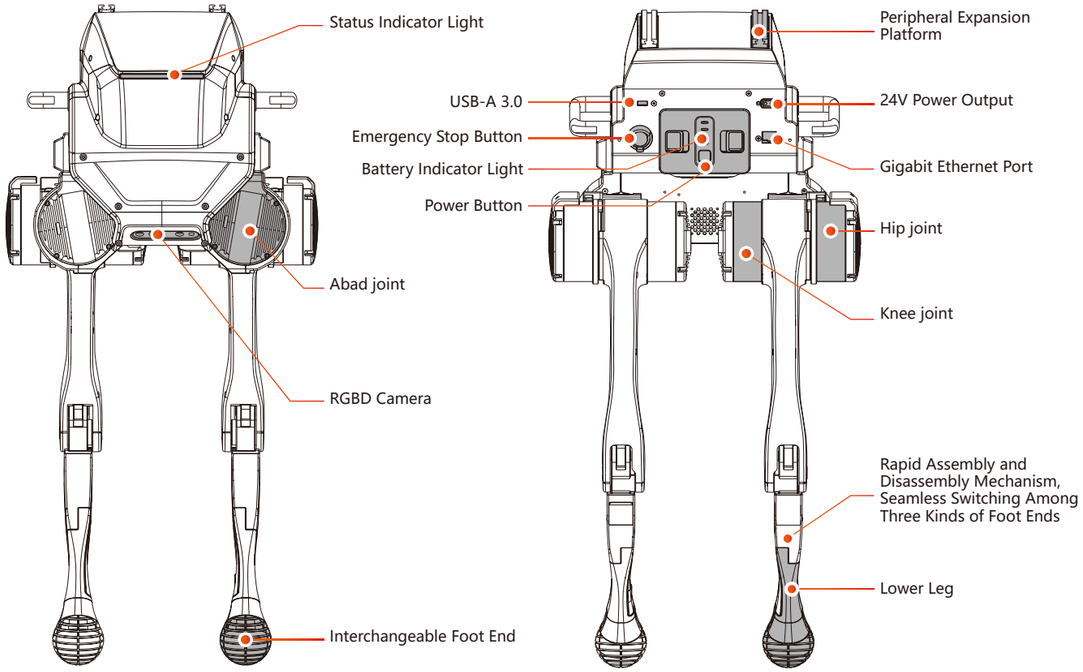
1. Product Overview

1.1 Introduction

LimX Dynamics' TRON 1 is an all-terrain biped robot featuring a "three-in-one" modular foot-end design. With dynamic balance algorithms and all-terrain mobility, it excels in handling tasks such as climbing and overcoming obstacles in complex environments. The TRON 1 features open, low-level interfaces and supports full-process development with Python and one-click Sim2Real deployment, significantly accelerating reinforcement learning research. As an ideal platform for academic research and education, it empowers the advancements of robotic technologies from the lab to the industry.

1.2 Robot Components and Ports

Front and Back Diagram



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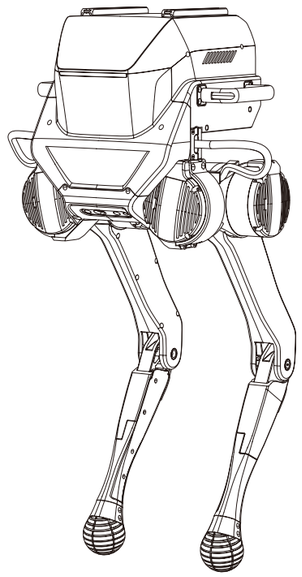
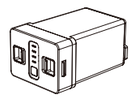
Components/Ports	Description
Status Indicator Light	Robot status display (control status, abnormal status, low battery reminder, etc.)
RGBD Camera (Optional)	Binocular Perception Sensor
Interchangeable Foot-end	User-replaceable rubber foot end
USB-A 3.0	The port supports the expansion of perception peripherals, such as adding an RGBD camera
E-Stop Button	Press this button in an emergency to activate the torque-free mode by cutting off all motor power
Battery Indicator Light	It displays the current battery level of the robot
Power Button	Power-on/off button
Peripheral Expansion Platform	The platform is constructed with EU-standard 1020 industrial aluminum profiles, allowing users to expand and mount peripherals
24V Output Port	XT60 male connector with a stable 24V DC, 100W (peak 200W) output
Gigabit Ethernet Port	The port supports external connections to computers, routers, or other communication modules
Lower Leg	They feature a rapid disassembly mechanism for seamless switching among three foot ends

1.3 Contents

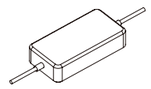
Note: The pictures are for reference only. Please refer to the actual product.



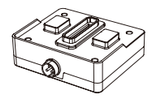
Robot Body × 1



Battery ×1



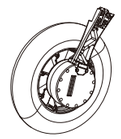
Power adapter ×1



Charging dock ×1

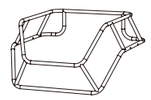
Spare foot ends x2

Sole foot accessories × 2 (optional)



Wheel foot accessories × 2 (optional)

Remote controller ×1



Roll cage ×1

Tool kit ×1

User manual ×1

Certificate of conformity ×1

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1.4 Product Specifications

Category		Std. Ed.	EDU Ed.
Mechanical Parameters	Dimensions	≤ 392mm x 420mm x 845mm	≤ 392mm x 420mm x 845mm
	Material	Aluminum Alloy + Industrial Plastic	Aluminum Alloy + Industrial Plastic
	Net Weight	≤ 20kg	≤ 20kg
Battery Parameters	Battery Supply Voltage	48V	48V
	Maximum Battery Power	1000W	1000W
	Battery Swapping	✔	✔
	Battery Type	Ternary Lithium	Ternary Lithium
	Battery Capacity	240Wh (48V/5Ah)	240Wh (48V/5Ah)
	Battery Range	≥ 2h (At Rated Operational Conditions)	≥ 2h (At Rated Operational Conditions)
	Charging Methods	Battery Charging, Quick Battery Swap	Battery Charging, Quick Battery Swap
	Charger	Battery Charging Dock	Battery Charging Dock
	Charging Time	<1h (20%-80%); 1.5h (100%)	<1h (20%-80%); 1.5h (100%)
Performance Parameters	Load Capacity	10kg (Maximum 15kg)	10kg (Maximum 15kg)
	Movement Speed	• Point-Foot: < 1m/s • Sole: < 1m/s • Wheeled: ≥ 5m/s	• Point-Foot: < 1m/s • Sole: < 1m/s • Wheeled: ≥ 5m/s
	Maximum Climbing Angle	≥ 15°	≥ 15°
	Maximum Obstacle Height Limitation	15cm	15cm
	Computer Specification	12th Gen i3 / 16GB RAM / 512GB (CPU/Memory/Storage)	12th Gen i3 / 16GB RAM / 512GB (CPU/Memory/Storage)
	Operating Environment	-5℃ to 40℃ (Operates in favorable weather conditions)	-5℃ to 40℃ (Operates in favorable weather conditions)
Actuator Parameters	Rated Voltage (V)	48V	48V
	Rated Torque (Nm)	30N/m	30N/m
	Peak Torque (Nm)	80N/m	80N/m
	Peak Speed (rad/s)	15rad/s	15rad/s
Sensor Configuration	RGBD Camera	/	✔ (Optional)
	IMU	✔	✔ (IMU Data Access for Developers)
Extensibility	Peripheral Expansion Ports	• 1*USB3.0 • 1*GbE	• 1*USB3.0 • 1*GbE
	Peripheral Power Supply Port	24V, Output Power: 100W (Peak 200W)	24V, Output Power: 100W (Peak 200W)
	Peripheral Mounting Point	✔	✔

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Category		Std. Ed.	EDU Ed.
Software Parameters	Handheld Remote Controller	1	1
	Remote Controller Communication Range	50m	50m
	Software Upgrade	Supported	Supported
	Remote E-Stop	✔	✔
	E-Stop Button	✔	✔
	Secondary Development	/	Supported
Developer Tools	SDK	/	✔
	Data Visualization Tools	/	✔
	Data Recording and Playback	/	✔
	Joint Control Algorithm	/	✔
	Simulation Platforms	/	✔
Foot End Extension	• Point-Foot	Four-directional Movement, Turning, Stepping, Squatting, Robot Height Adjustment, and Ground Clearance Detection	Four-directional Movement, Turning, Stepping, Squatting, Robot Height Adjustment, and Ground Clearance Detection
	• Sole	Four-directional Movement, Turning, In-place Stepping, Static Standing, Squatting Down In-place, Robot Height Adjustment, Stand Up After a Fall, and Ground Clearance Detection	Four-directional Movement, Turning, In-place Stepping, Static Standing, Squatting Down In-place, Robot Height Adjustment, Stand Up After a Fall, and Ground Clearance Detection
	• Wheeled	Wheeled Forward-Backward Movement, Turning, In-place Standing, Squatting Up and Down In-place, Robot Height Adjustment, Stand Up After a Fall, and Ground Clearance Detection	Wheeled Forward-Backward Movement, Turning, In-place Standing, Squatting Up and Down In-place, Robot Height Adjustment, Stand Up After a Fall, and Ground Clearance Detection
Others	Spare Battery	1 (Optional)	1 (Optional)
	RGBD Camera	/	1
	Roll Cage	1	1
	Accessories: Point-Foot	1 Pair	1 Pair (Optional)
	Accessories: Wheeled	1 Pair	1 Pair (Optional)
	Accessories: Sole	1 Pair	1 Pair (Optional)

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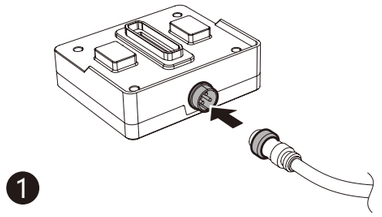
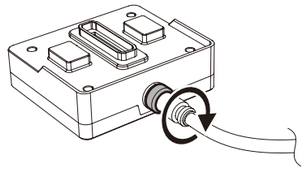
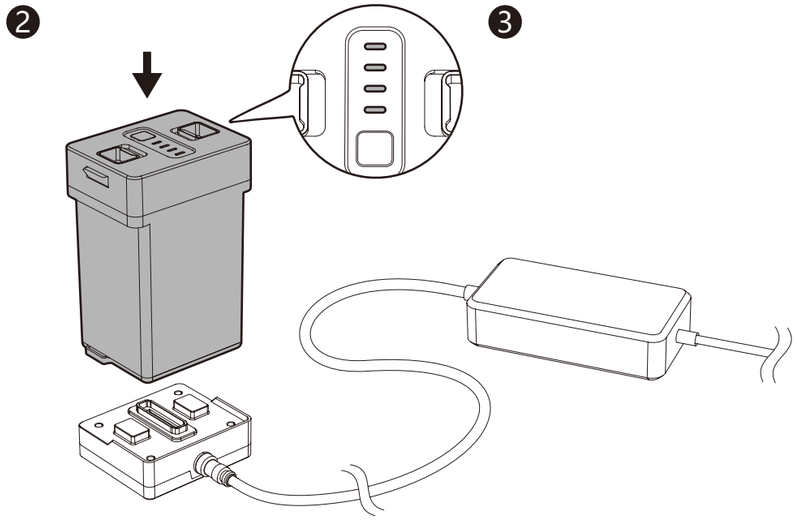
2. How to Charge

2.1 Charging the Robot Battery

1. Connect the battery charging dock to the power adapter, align the aviation plug with the socket, insert it till it's fully home, and then tighten the threaded insert clockwise.
2. Insert the battery into the dock by aligning it as shown in the figure below, press it down to ensure it is fully home, and plug the power adapter into a 220V AC outlet.
3. A flashing battery indicator light and a steady red power adapter light indicate a successful charging. A steady-lit battery indicator light and a steady green indicator light on the power adapter indicate a full charge.







Battery Charging Indicator Light

	Not charging	Charging	Charging complete
Battery	No light	Green flashing	Green steady on
Power Adapter	Green steady on	Red steady on	Green steady on

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2.2 Charging the Remote Controller

1. Connect the micro-USB end of the cable to the remote controller and the other end to the power adapter.
2. Plug the power adapter into a 220V AC outlet.
3. A steady red indicator light on the remote controller indicates successful charging. A steady green indicator light on the remote controller indicates that it is fully charged.

Remote Controller Indicator Light

	Not charging	Charging	Charging complete
Remote Controller	No light	Red steady on	Green steady on

⚠
- Charge the robot battery every three months if not used for a long time to avoid damaging the battery.
- Avoid prolonged charging. Unplug the power adapter when the battery is full.

3. Using the TRON 1

3.1 Operating Environment

- Electromagnetic interference: Avoid operating the robot near high-voltage power lines, mobile base stations, or other interfering sources.
- Wi-Fi signal interference: Avoid co-channel interference. Turn off nearby wireless signal sources in case of interference.
- Control within visual range: Always keep the robot within visual range and ensure a safe distance of no shorter than one meter from obstacles, crowds, water, etc.
- Temperature range: -5° C-40° C. Never use the robot in fog, rain, snow, thunderstorms, or other severe weather conditions.
- Waterproof and dustproof: The robot is neither waterproof nor dustproof. Avoid using it in humid, sandy, and dusty environments.
- Ground requirements: Exercise caution on low-friction or soft surfaces (ice, sponge floors, smooth surfaces, etc.). Beginner users should first practice using the robot in open areas.
- Assisted operation: During initial use in the remote controller mode or the developer mode, secure the robot with a tether rope to prevent falls.

3.2 Unboxing Inspection

1. Completeness: Check for all items against the shipping list to ensure correct quantities and intact components.
2. Robot appearance: Inspect the robot for any missing parts or physical damage.
3. Battery level: a. Press the Power button to check the robot's battery level; b. Power on the remote controller and check the battery icon on the display.

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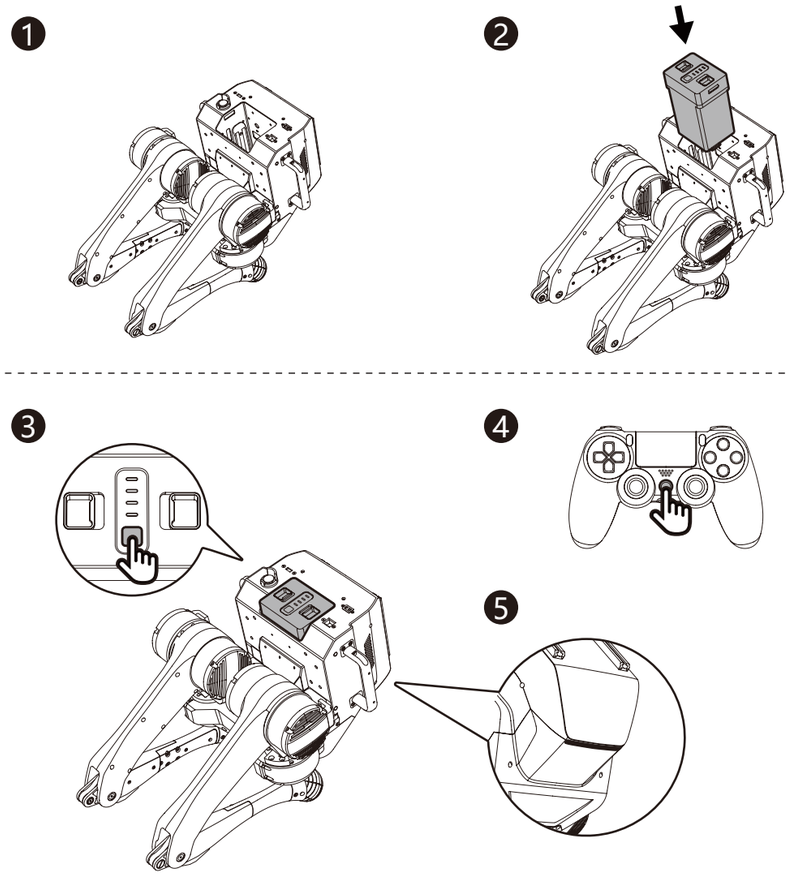
3.3 Powering On

1. Place the robot as shown in the figure below and keep it balanced.
2. Insert a fully charged battery into the battery compartment and press it until it is locked in.
3. Press and hold the robot's Power button for 3 seconds to turn it on. The battery indicator light turns on.
4. Press and hold the remote controller's Power button for 3 seconds to turn it on. The display lights up with system information.
5. The power-on process takes approximately 20 seconds. The status indicator light will change from white to steady blue or green. A signal icon on the remote controller's display indicates a successful pairing, completing the power-on process.



⚠
- An emergency stop will immediately cut off all motor power, and the robot may fall. Please verify the E-Stop button status before powering on the robot.
  a. Robot emergency stop: Press the E-Stop button to activate an emergency stop and release to deactivate.
  b. Remote controller emergency stop: Press both joystick buttons simultaneously to activate an emergency stop and press the right joystick button to deactivate.
- After the robot stands up, do not lift it off the ground to avoid injur

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3.4 Remote Controller Mode

- The robot operates in remote controller mode by default (indicated by a blue status indicator light).
- To switch from the developer mode to remote controller mode, press the R1 and Right D-pad buttons simultaneously after completing the power-on self-test.
- Press L1+ ○ to enter the ready state, then press L1+ △ to enter the walking status.
- The table below demonstrates the movement control of the robot operating with point feet. For other operations, please refer to Section 5.3 Remote Controller Commands.

Concept	Status Description	Prerequisites	Button	Note
Four-directional Movement	The robot moves forward, backward, left, and right according to the remote controller's commands.	Walking	Left joystick	
Turning	The robot turns clockwise and counterclockwise according to the remote controller's commands.	Walking	Right joystick	Pushing the joystick forward/ backward has no effect.
Offset Correction	Correct the robot's posture in real time when it is stepping in place	In-place stepping	Down D-pad Up D-pad Right D-pad Left D-pad	

⚠
- Offset correction: During in-place stepping on non-level surfaces, the robot may deviate to one side. Press the D-pad button opposite to the actual movement offset to correct it in real time.

3.5 Developer Mode (applicable to EDU models)

- After the power-on self-test is completed, press the R1 and Left D-pad buttons simultaneously to enter the developer mode (indicated by a green status indicator light on the robot).
- Connect the development computer to the robot via the external Ethernet port for subsequent operations.
- For detailed instructions, refer to the Support Center → Documentation → [TRON1 SDK Development Guide].

3.6 Powering Off

1. To stop the robot's movement, press L1 and X simultaneously under the remote controller mode so that the robot enters the squatting status, allowing the robot to stabilize on the ground.
2. Press and hold the robot's Power button for 3 seconds to turn it off. The battery indicator and status indicator lights will turn off.
3. Press and hold the remote controller's Power button for 3 seconds to turn it off. The display will turn off.
4. Remove the battery after all indicator lights are off.
5. Remove the roll cage and other peripherals, and place the robot, remote controller, and other accessories into the box.

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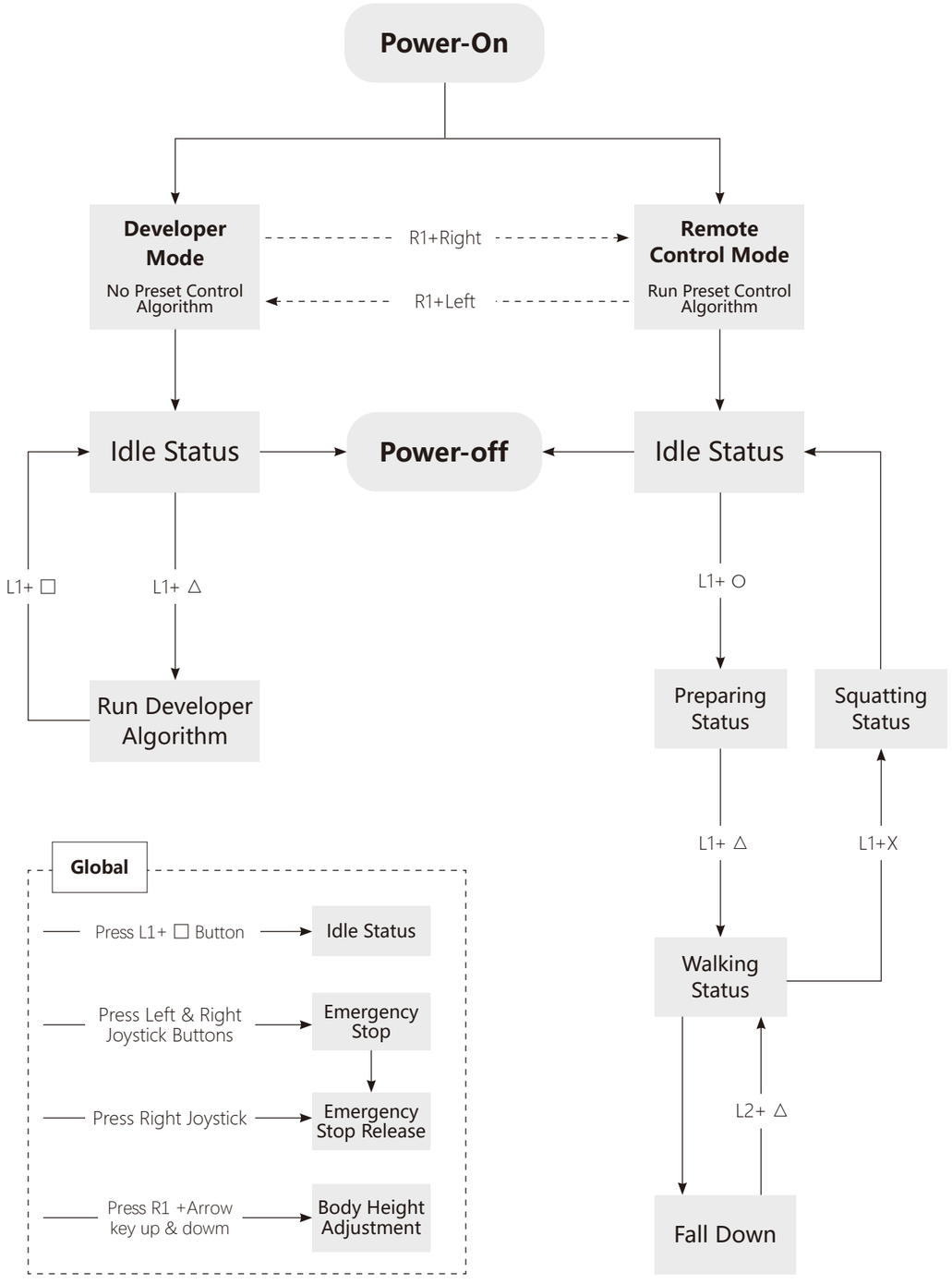
3.7 Flowchart



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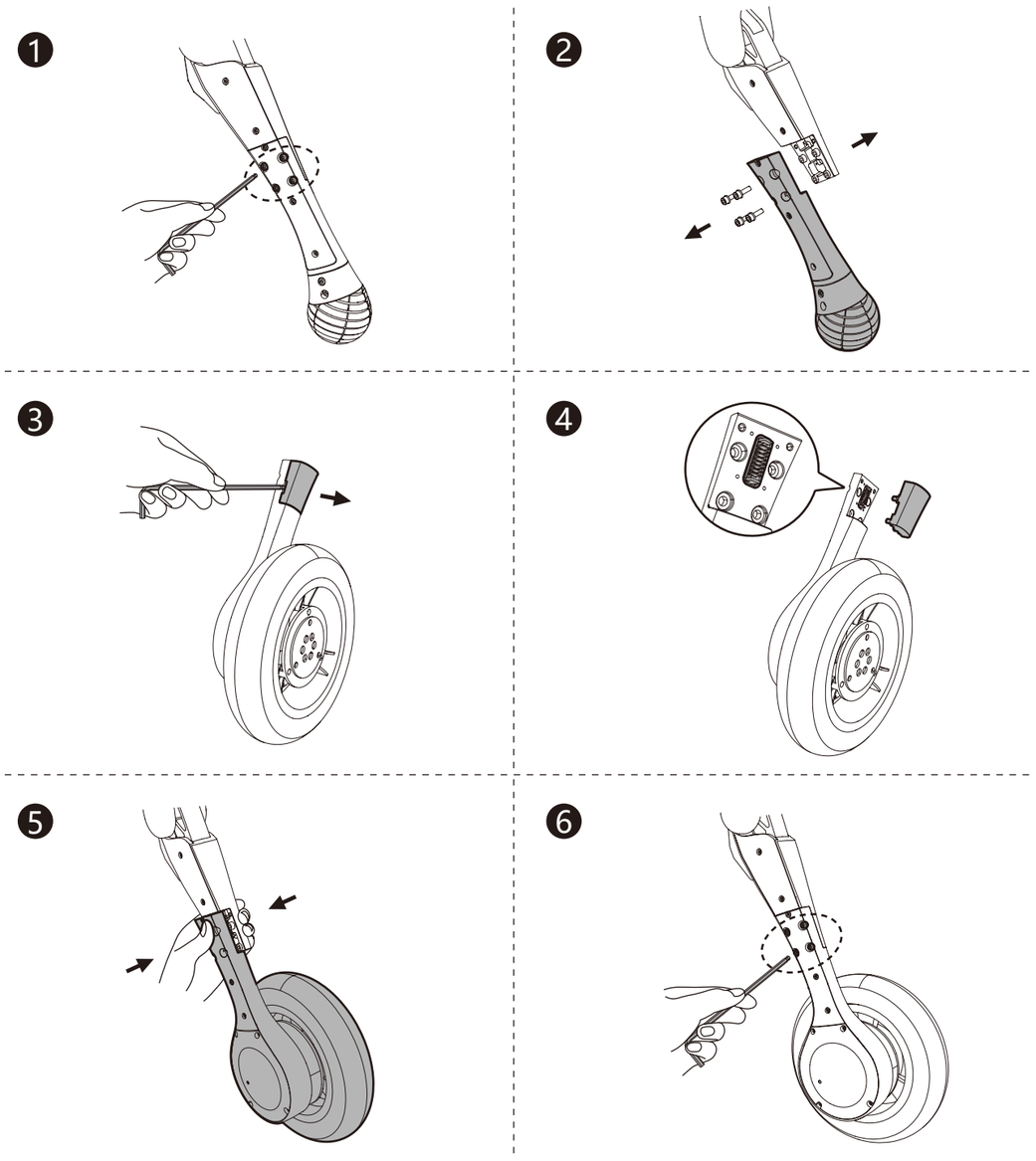
3.8 Replacing Foot Ends

1. Use an M4 wrench to remove the four hexagon socket head screws on the lower leg housing.
2. Remove the disassembled lower leg.
3. Take out the wheeled foot assembly and remove the protective cover at the connection.
4. Check that the contact is intact and free from deformation.
5. Insert the wheeled foot assembly onto the machine in the direction shown in the figure below.
6. Use an M4 wrench to tighten the four M4 hexagon socket screws.



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4. Robot Indicator Lights

4.1 Status Indicator Light

Event/Status	Color	Pattern	Description
Powering On	White	Flashing	Power-on self-test in progress
Error Warning	Red	Steady on	There's an error with the robot
Low Battery Warning		Flashing	The robot battery is low (less than 20%)
Critical Low Battery		Fast flashing	The robot battery is low (less than 5%)
Emergency Stop Status	Yellow	Flashing	The robot's E-Stop button is pressed
Developer Mode	Green	Steady on	The color will be displayed after powering on, and the subsequent modes share the same color as this mode
Remote Controller Mode	Blue	Steady on	The color will be displayed after powering on, and the subsequent modes share the same color as this mode
Stair Mode	Purple	Steady on	The color will be displayed after the mode switch, and the subsequent modes share the same color as this mode
Idle Status	Maintains original color	Steady on	The robot is in torque-free mode
Stance Status	Maintains original color	Steady on	The robot is in stance mode
Walking	Maintains original color	Flashing	The robot is in stepping mode
Fall Recovery Failed	Yellow	Steady on	The robot has failed to stand up after a fall and requires manual assistance

4.2 Motor Indicator Light

Event/Status	Color	Pattern	Description
Normal Status	Green	Flashing	Normal communication of motor
Abnormal Status	Red	Flashing	Motor starting up/Motor communication error

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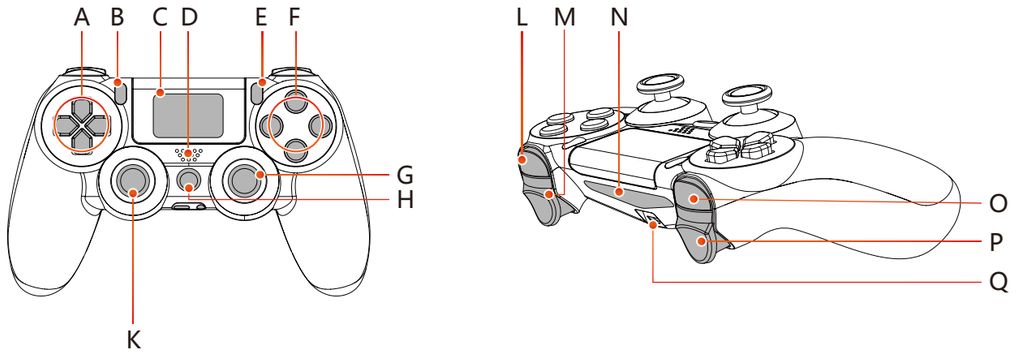
5. Instructions on Remote Controller



A	D-pad: used for robot offset correction
B	Share button
C	Display
D	Speaker
E	Options button
F	△ , ○ , X , and □
G	Right joystick: used for controlling the robot's turning direction
H	Power button: used for powering the remote controller on/off.
K	Left joystick: used for controlling the robot to move forward, backward, left, and right
L	R1 button
M	R2 button
N	Remote controller indicator light
O	L1 button
P	L2 button
Q	Charging and data transmission port

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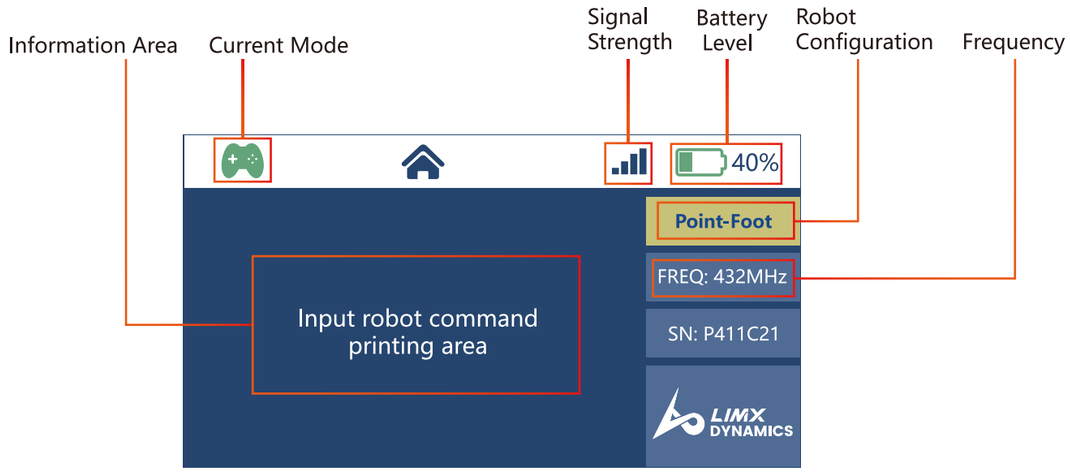
5.1 Powering On/Off the Remote Controller

- **Power on:** Press and hold the Power button for over 3 seconds until you hear a beep. The remote controller is turned on and enters the default interface.
- **Power off:** Press and hold the Power button for over 2 seconds until you hear three beeps. The remote controller is turned off, and the display goes off.

5.2 Remote Controller Display



Information area: Displays button information and machine error messages
Current mode: Developer mode/remote controller mode
Signal strength: No signal icon is displayed when the remote controller is disconnected from the robot. The displayed white signal bars indicate a successful connection. The more bars there are, the stronger the signal
Battery level: Indicates the battery level of the remote controller.
Frequency: Current communication frequency between the remote controller and the robot.
Robot Configuration: Indicates the current foot-end configuration of the robot. Available modes include:Point-Foot ,Wheel-Foot,Sole-Foot.

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5.3 Remote Controller Commands

5.3.1 General Commands

Concept	Status Description	Precondition	Button	Note
Automatic Homing	All joints are initialized to their zero positions	Idle status	L1+R1	
E-Stop Button	All motor drivers will be powered off immediately, but the battery supply and indicator lights will remain active, and the robot will fall	Global	Left and right joystick buttons	Press them simultaneously to trigger an emergency stop in any mode or status, cutting off all motor power.
E-Stop Release	Power on the motor again	Emergency stop status	Right joystick button	The button, when pressed, releases the robot from an emergency stop and works only in an emergency stop. After the emergency stop is released, the robot enters damping mode.
Idle Status	All joint motors enter torque damping mode, and the robot gradually lowers; The robot defaults to this mode after powering on;	Global (excluding emergency stop status)	L1+ □	
Ready Status	The legs are automatically powered on to perform ground-touching/head-lifting actions	Idle status	L1+ ○	External assistance is required with both lower legs touching the ground
Walking	The robot stands up on its own and enters the stepping status; the robot can now be controlled remotely	Stance status	L1+ △	
Squatting Status	The robot steps and squats autonomously	Walking	L1+ X	External assistance is required to prevent the robot from falling
Height Adjustment	Adjust the robot's height within the specified range using the remote controller	Stance status	R1+Down/Up	This operation is subject to the actual firmware

5.3.2 Movement Commands

- Point-Foot commands

Concept	Status Description	Precondition	Button	Note
Four-directional Movement	The robot moves forward, backward, left, and right according to the remote controller's commands.	Walking	Left joystick	
Turning	The robot turns clockwise and counterclockwise according to the remote controller's commands.	Walking	Right joystick	Pushing the joystick forward/backward has no effect.
Offset Correction	Correct the robot's posture in real time when it is stepping in place	In-place stepping	Down D-pad Up D-pad Right D-pad Left D-pad	

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- Wheel-Foot commands (including general commands for point feet)

Concept	Status Description	Precondition	Button	Note
Forward and Backward	The robot moves forward and backward according to the remote controller's commands.	Walking	Left joystick	Pushing the joystick left/right has no effect.
Mode Switch	Switch between flat ground mode and stair climbing mode in wheeled configuration	Wheeled configuration	Share button	Press and hold for 3 seconds
Fall Recovery	The robot stands up autonomously and enters the stance status	Fall detection	L2+ △	This button combination has no effect under normal status

- Sole-Foot commands (including general commands for point feet)

Concept	Status Description	Precondition	Button	Note
In-place Stepping	The robot enters the in-place stepping status in sole configuration	Sole configuration	R2	Press and hold for 3 seconds
Stance Status	The robot enters the stance status in sole configuration	Sole configuration	R2	Press and hold for 3 seconds
Fall Recovery	The robot stands up autonomously and enters the stance status	Fall detection	L2+ △	This button combination has no effect under normal status

5.3.3 System Commands

Concept	Status Description	Precondition	Button	Note
Developer Mode	This mode allows users to perform secondary development for program deployment and control	Idle status	R1+Left	
Remote Controller Mode	The remote control mode based on the RL model	Idle status	R1+Right	The mode remains active until otherwise switched to another mode (developer mode)

5.4 Pairing the Remote Controller

Follow the steps below if the remote controller cannot connect to the robot:

1. Press the left joystick button and the L1 button to enter the remote controller pairing mode.
2. Enter search mode and wait for the search to complete.
3. After the search is complete, press R1 or R2 to select your desired device.
4. After selecting the device SN, press the Options button to set up the channel and ISM area.
5. Press R1 or R2 to set the channel of the selected device to the target channel.
6. Press the left joystick button and the L2 button to save the pairing configuration.

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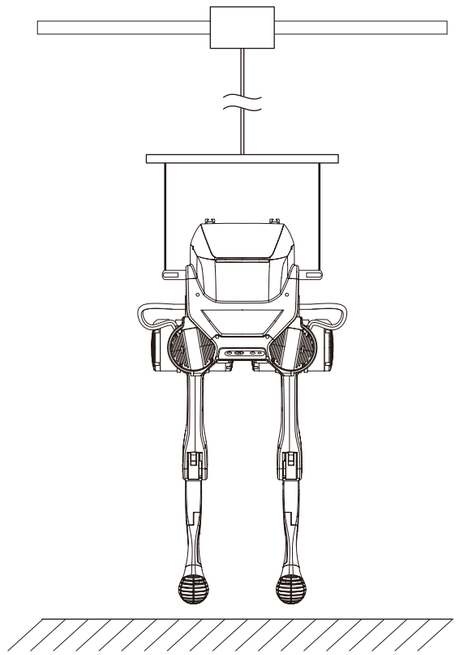
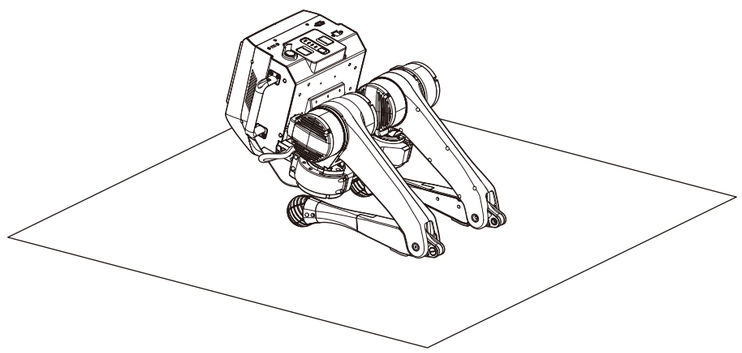
6. Robot Zero Calibration

⚠ • Zero calibration is typically unnecessary unless the motors have been replaced or significant position loss is observed (e.g., the front leg remains misaligned when standing up).

1. Ensure the robot is suspended or lifted with foot ends over 30cm above ground (as shown below)



1. Press "L1+R1" on the remote controller to perform automatic calibration (keep all joints unobstructed during movement).
2. After the calibration is completed, place the robot's lower legs on the ground to prepare for standing up, as shown in the figure below:



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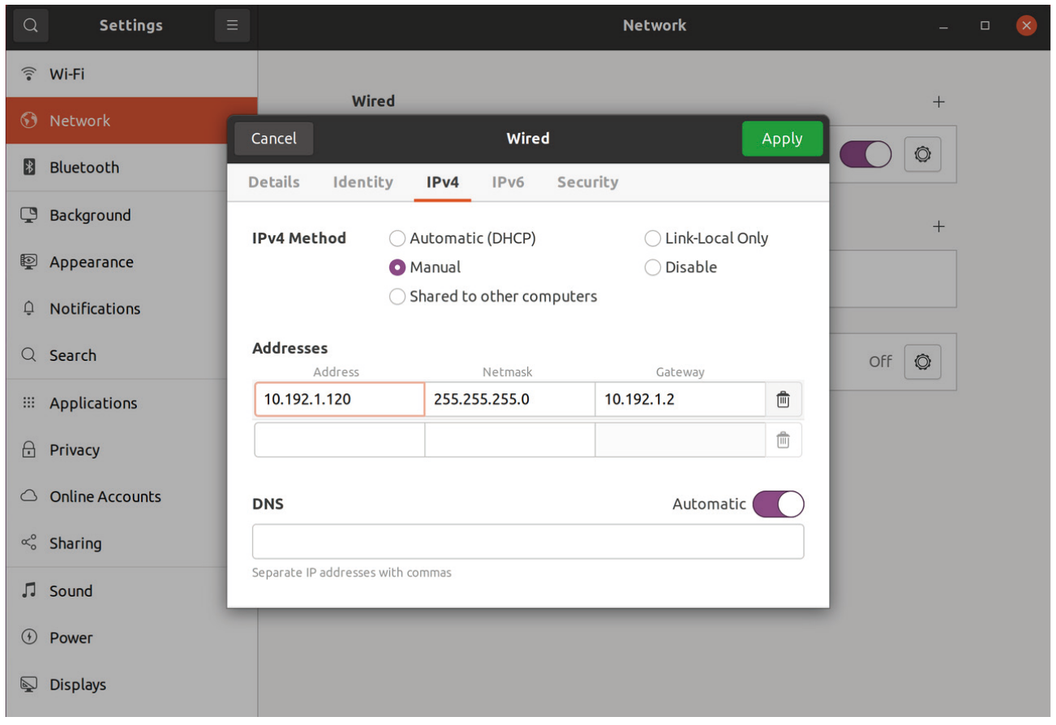
7. Connecting the Robot to a Network

7.1 Wired Connection

- Connect the Gigabit Ethernet port on the back of the robot to the Ethernet port on the PC using an Ethernet cable.
- Change the PC's IP address to the same network segment as the robot to enter the system. The robot's IP address is 10.192.1.2.



For example, you can set the address to 10.192.1.120

7.2 Wireless Connection

- After the robot is powered on, connect the PC to the robot's Wi-Fi network, which is typically named "TRON1A_01."
- Enter the Wi-Fi password: 12345678.

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8. Robot Software Upgrade

Access the robot management page via a web browser and upgrade the software using the upgrade file pre-downloaded on your PC. The steps are as follows:

1. Connection and IP setup:
   a. Connect your PC to the robot.
   b. Verify connection using the shell command: ping 10.192.1.2
2. Access the management page: Enter http://10.192.1.2:8080 in the browser's address bar to go to the robot management page.
3. File selection and software upgrade:
   a. Select "Choose File -> Upgrade" in the "Upgrade Version" column.
   b. The robot's master computer will automatically restart after the upgrade is complete.

9. Log Export

1. Connect your PC to the robot's Wi-Fi network, password: 12345678.
2. Enter http://10.192.1.2:8090 in the browser's address bar to go to the log management interface.
3. Export the log file and bag file of the time when the problem occurred.

10. Care and Maintenance

Clean Storage

- It is recommended that the robot's surface be cleaned regularly with a clean microfiber cloth or after operating in a dusty environment.
- It is recommended that a transport case specially designed for the TRON 1 robot be used for storage and transportation to protect the robot from shock and vibration.

Inspection and Maintenance

- Appearance maintenance: Remove dust from joints and check whether the screws are loose.
- Software update: Upgrade to the newest official firmware to fix potential system vulnerabilities and optimize movement algorithms.
- Battery: Charge to 50%-60% before storage (avoid fully charging or discharging the battery), and recharge to the same level every 3 months.
- Remote controller: Keep the ports clean, ensure that the joystick is not subjected to external force during storage, and regularly check the controller for anti-interference.

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CE DECLARATION OF CONFORMITY

I here by declare that the product

Product Name: Multi-Modal Biped Robot TRON1
Brand Name: Limx dynamics
Model: TRON1-EDU-WF, TRON1-EDU-SF, TRON1-EDU-PF
Serial Number：LX25M05TR1-0300
Production Date：2025 Q2

(Name of product, type or model, batch or serial number)

System components:

433 Antenna: FPC Antenna (Gain: 2dBi)
WIFI2.4G Antenna: Monopole Antenna (Gain: 3dBi)

Battery: Rechargeable Li-ion Battery
Model: C1589A1
Specification: Whole machine: DC 46.8V, 4.5Ah, 210.6Wh
Remote control: DC 3.7V,1000mAh,3.7Wh
Manufacture: Guangdong Pow-Tech New Power Co.,Ltd.

Adapter: Model: XSG5463000
Input: 100-240V ~ 50/60Hz 3A Max 660W
Output: DC 54.6V 3A Max 163.8W

Hardware Version: Remote control hardware version: RCTGen2A4AIM
Firmware version: Remote controller firmware version: V3.0.6
Software Version: Control software version: V2.0.12

Satisfies all the technical regulations applicable to the product within the scope of Council Directives 2014/53/EU, 2014/35/EU, 2014/30/EU and 2006/42/EC :and declare that the same application has not been lodged with any other notified body.

Health & Safety (Art. 3(1)(a)):	EN 62479:2010 , EN IEC 62311:2020,EN IEC 62368-1:2020+A11:2020
Machinery Directive	2006/42/EC, EN ISO 12100:2010,EN 60204-1:2018
EMC (Art. 3(1)(b)):	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01) ETSI EN 301 489-17 V3.2.4 (2020-09) EN 55032:2015+A1:2020; EN 55035:2017+A11:2020 EN IEC 61000-3-2:2019+A1:2021; EN 61000-3-3:2013+A2:2021
Radio Spectrum (Article 3.2)	ETSI EN 300 220-1 V3.1.1 (2017-02)
	ETSI EN 300 220-2 V3.2.1 (2018-06)
	ETSI EN 300 328 V2.2.2 (2019-07)

(Title(s) of regulations, standards, etc.)

All essential radio test suites have been carried out.

NOTIFIED BODY ： Timco Engineering, Inc.
Address ： 849 NW State Road 45 Newberry FL 32669,America
Notified Body number 1177
Manufacturer ： Limx Dynamics Technology Co.,Ltd.
1511-009A, Xiangjiang Financial Building, No. 3046 Xinghai Avenue, Nanshan District, Shenzhen, China

This declaration is issued under the sole responsibility of the manufacturer and, if applicable, his authorised representative.

Reference for the technical file /Representative ： Mariendorfer Damm 1 Berlin, Germany
N Robotics GmbH c/o Drivery
Zip Code:12099
Tax : DE345487812
Eori: DE235278663696051
Ludwig Faerber（Chief Executive Officer）
Phone:0049 173 1995522

Place,Date ： Shenzhen，March 17，2025

Signature Aron

Representative Person's Name Aron.li

Position Manager

Company Name(stamp) Limx Dynamics Technology Co.,Ltd.

Robot

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the
instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different
from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.
To maintain compliance with FCC’ s RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

Remote Control

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the
instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television
Reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different
from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.
The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

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LimX’s WeChat Official account

本手册如有更新，恕不另行通知。
您可以在 LimX 官方网站查询最新版本

This manual is subject to updates without prior notice.
You can check the latest version on LimX’s website

https://limxdynamics.com/

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