Mastercard Makerspace

Unitree Go2 Pro Robot Dog

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All devices and tools listed herein are maintained according to internal safety and operational standards.

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Mastercard Makerspace Technical Manual

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Table of Contents

Unitree Go2 Pro Robot Dog User Manual

Overview

Model: Go2 Pro AI
Manufacturer: Unitree Robotics
Category: Robotics

The Unitree Go2 Pro is a next-generation quadruped robot dog equipped with AI large-model capabilities, LiDAR-based navigation, stereo vision, and a high-performance controller. It's used for robotics education, autonomous mobility testing, and AI vision experiments.

1\. Setup

1. Ensure the robot is charged.

2. Connect to the controller or mobile app via Wi-Fi.

3. Calibrate IMU and joint sensors.

4. Perform a quick diagnostic check before use.

2\. Operation

Power on the Unitree Go2 Pro and connect through the Unitree App or PC client. Use motion control commands to test locomotion, obstacle avoidance, and path planning.

3\. Safety

Operate in an open space. Keep clear of moving joints. Disconnect power before adjusting sensors.

4\. Maintenance

Wipe sensors with a soft cloth weekly. Lubricate joints monthly. Update firmware regularly.

5\. Troubleshooting

If motion is unstable, recalibrate IMU. If communication fails, restart Wi-Fi module.

Unitree Go2 Pro Robot Dog Manual

Overview and Specifications

Product Overview

The Unitree Go2 Pro AI is a cutting-edge quadruped robot dog designed for advanced robotics applications. Equipped with AI large-model capabilities, LiDAR-based navigation, stereo vision, and a high-performance controller, it is ideal for robotics education, autonomous mobility testing, and AI vision experiments.

Specifications

Model: Go2 Pro AI

Manufacturer: Unitree Robotics

Category: Robotics

Dimensions: 58 cm x 28 cm x 48 cm (L x W x H)

Weight: 12 kg

Power Supply: Rechargeable Lithium-ion battery

Battery Life: Up to 2 hours of continuous operation

Charging Time: Approximately 3 hours

Connectivity: Wi-Fi, Bluetooth

Sensors: LiDAR, stereo cameras, IMU, joint sensors

Operating Temperature: -10 C to 40 C

Safety and Compliance Information

Operate in an open space to prevent collisions with obstacles.

Keep clear of moving joints to avoid injury.

Disconnect power before adjusting sensors or performing maintenance.

Complies with CE and FCC standards for electronic devices.

Installation / Setup

1. Ensure the robot is charged.

Connect the robot to the charger and wait for the battery to fully charge.

2. Connect to the controller or mobile app via Wi-Fi.

Use the Unitree App available on iOS and Android, or connect via PC client.

  3. Calibrate IMU and joint sensors.

Follow the calibration instructions within the app to ensure accurate sensor readings.

  4. Perform a quick diagnostic check before use.

Run the diagnostic tool in the app to check all systems are functioning correctly.

Operating Modes and Usage Examples

Power On:

Turn on the Unitree Go2 Pro by pressing the power button located on its back.

  Connect and Control:

Use the Unitree App or PC client to establish a connection and send motion control commands.

  Locomotion Testing:

Test the robot's walking, trotting, and running capabilities.

  Obstacle Avoidance:

Utilize LiDAR and stereo vision for real-time obstacle detection and avoidance.

  Path Planning:

Set waypoints and paths for autonomous navigation experiments.

Maintenance Schedule

Maintenance Task	Frequency
Wipe sensors with a soft cloth	Weekly
Lubricate joints	Monthly
Update firmware	Regularly

Troubleshooting

Problem	Cause	Solution
Motion is unstable	IMU not calibrated	Recalibrate IMU
Communication fails	Wi-Fi module not responding	Restart Wi-Fi module
Sensors not responding	Dirty or obstructed sensors	Clean sensors with a soft cloth

Accessories or Compatible Components

Battery Charger: Compatible with Unitree Go2 Pro AI

  Protective Case: Designed for safe transport and storage

  Replacement Joints: Available for maintenance and repair

Warranty and Support Notes

Warranty: 1-year limited warranty covering manufacturing defects.

Support: Contact Unitree Robotics customer service for technical support and service inquiries.

Contact Information: Visit [Unitree Robotics Support](https://www.unitree.com/support) for more details.

For further assistance, please refer to the detailed guides and resources available on the manufacturer's website.

Resources:

End of Manual - For updates, please check the latest version at:

https://mpandey-mastercard.github.io/makerspace-manuals/manuals/tool_001_manual.pdf

- Manual Pdf Local: /manuals/tool_001_manual.pdf

- Manual Pdf Public: https://mpandey-mastercard.github.io/makerspace-manuals/manuals/tool_001_manual.pdf

- Tutorial Video: https://www.youtube.com/watch?v=FSwzCiv4N0U

- Qr Code: https://mpandey-mastercard.github.io/makerspace-manuals/qrcodes/tool_001_qr.png