



Matrice 4T/4E

Matrice 4T/4E Enterprise Drone User Manual

Model: Matrice 4T, Matrice 4E

1. INTRODUCTION

The Matrice 4T/4E Enterprise Drone is a professional-grade unmanned aerial system designed for advanced commercial applications. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your drone.

Key features include an integrated thermal camera, laser ranging module, and Near-Infrared (NIR) auxiliary light system, enabling high-precision data collection and enhanced performance in various conditions.

2. SAFETY INFORMATION

Operating the Matrice 4T/4E drone requires adherence to strict safety guidelines to prevent injury, damage, or legal issues. Always prioritize safety during all phases of operation.

- **Pre-Flight Check:** Always perform a thorough pre-flight inspection of the drone, propellers, batteries, and remote controller before each flight.
- **Weather Conditions:** Do not fly in strong winds, heavy rain, snow, or fog. Optimal flight conditions are clear and calm.
- **Flight Environment:** Maintain a safe distance from people, animals, buildings, and obstacles. Avoid flying over crowds or restricted airspace.
- **Battery Safety:** Use only approved batteries and chargers. Do not overcharge or puncture batteries. Store batteries in a cool, dry place.
- **Propeller Safety:** Keep hands and face clear of rotating propellers. Ensure propellers are securely attached before flight.
- **Emergency Procedures:** Familiarize yourself with emergency landing procedures and the Return-to-Home (RTH) function.
- **Legal Compliance:** Understand and comply with all local aviation regulations and laws regarding drone operation.

3. PACKAGE CONTENTS

Verify that all items listed below are present in your package. If any items are missing or damaged, contact customer support.



Image: Overview of the Matrice 4T/4E Enterprise Drone package contents, including the drone, remote control, protective case, batteries, and propellers.

- Matrice 4T/4E Drone
- Remote Control
- Protective Case
- Intelligent Flight Batteries (Quantity may vary by package)
- Propellers (Pairs)
- Battery Charger
- USB-C Cable
- User Manual (This document)

4. PRODUCT OVERVIEW

Familiarize yourself with the main components of the Matrice 4T/4E drone.

4.1 Drone Components



Image: Front view of the Matrice 4T/4E drone, highlighting the multi-sensor payload including the thermal camera, visual camera, laser ranging module, and NIR auxiliary light.

- **Gimbal and Camera System:** Houses the thermal camera, visual camera, laser ranging module, and NIR auxiliary light.
- **Propellers:** Four foldable propellers for flight.
- **Motors:** Power the propellers.
- **Landing Gear:** Provides stable support when on the ground.
- **Intelligent Flight Battery Compartment:** Located at the rear of the drone.
- **Vision Sensors:** Located on the front, rear, and sides for obstacle avoidance.
- **Status Indicators:** LED lights on the arms indicate drone status.

4.2 Remote Control

The remote control provides intuitive command over the drone and access to its advanced features.

- **Control Sticks:** For flight maneuvers.
- **Integrated Display:** Provides real-time flight data and camera feed.
- **Function Buttons:** Customizable buttons for quick access to features.
- **Antennas:** For stable signal transmission.
- **Battery Level Indicators:** Shows remaining battery life of the remote control.

5. SETUP

5.1 Charging Batteries

Ensure both the Intelligent Flight Battery and the Remote Control battery are fully charged before first use and before each flight.

1. Connect the battery charger to a power outlet.
2. Insert the Intelligent Flight Battery into the charging hub or directly into the charger.
3. Connect the remote control to the charger using the provided USB-C cable.
4. Charging is complete when the battery indicator lights turn off or show full.

5.2 Attaching Propellers

The Matrice 4T/4E uses quick-release propellers. Ensure they are correctly matched and securely attached.

1. Identify the two types of propellers: those with a mark (e.g., orange ring) and those without.
2. Match the marked propellers to the marked motor mounts and the unmarked propellers to the unmarked motor mounts.
3. Press down on the propeller and rotate it in the direction indicated on the motor mount until it locks into place.
4. Gently pull up on each propeller to ensure it is securely fastened.

5.3 Drone Preparation

1. Unfold the drone arms. Ensure they click into place.
2. Insert the fully charged Intelligent Flight Battery into the battery compartment until it clicks.
3. Remove the gimbal protector and lens cap.

5.4 Remote Control Preparation

1. Unfold the remote control antennas.
2. Attach the control sticks to the remote control.

6. OPERATING THE DRONE

6.1 Powering On/Off

- **Power On:** Press the power button on the drone once, then press and hold for two seconds until the indicator lights turn on. Repeat for the remote control.
- **Power Off:** Press the power button on the drone once, then press and hold for two seconds until the indicator lights turn off. Repeat for the remote control.

6.2 Pre-Flight Checks

Before every flight, perform the following checks:

- Ensure all batteries (drone and remote control) are fully charged.
- Verify propellers are securely attached and undamaged.
- Check for any physical damage to the drone or remote control.
- Ensure the gimbal protector and lens cap are removed.
- Confirm GPS signal is strong (if applicable) and home point is recorded.
- Check the flight environment for obstacles, people, and restricted airspace.

6.3 Taking Off and Landing

- **Manual Takeoff:** Push both control sticks to the bottom inner or outer corners (Mode 2) to start the motors. Slowly push the left stick (throttle) up to ascend.
- **Auto Takeoff:** Tap the auto-takeoff icon on the remote control's display and confirm. The drone will automatically ascend to a safe height.
- **Manual Landing:** Slowly pull the left stick (throttle) down to descend. Once landed, hold the stick down for a few seconds until motors stop.
- **Auto Landing/Return-to-Home (RTH):** Tap the RTH icon on the remote control's display. The drone will return to the recorded home point and land automatically.

6.4 Flight Modes

The Matrice 4T/4E offers various flight modes for different operational needs. Refer to the remote control's interface for specific mode selection and details.



Flagship Intelligent Multi-Sensor Compact Drone

DJI MATRICE 4 SERIES

The Age of Intelligent Flight

Introducing the DJI Matrice 4 Series, a new compact and intelligent multi-sensor flagship drone series for enterprise industries. The series includes Matrice 4T and Matrice 4E, each equipped with advanced features such as smart detection and measurement with laser range finder. Flight operations are now safer, more reliable, and powered by AI, with significantly enhanced sensing capabilities. The accessories for the Matrice 4 series have also been significantly upgraded. The Matrice 4T is suitable for a wide range of industries, including electricity, emergency response, public safety, and forestry conservation. The Matrice 4E is designed for geospatial applications such as surveying and mapping, construction, and mining. A new era in intelligent aerial operations begins now.

Image: The Matrice 4T/4E drone flying over a landscape with a ground crew and vehicle, demonstrating its operational use.

6.5 Camera and Sensor Operation

The Matrice 4T/4E is equipped with advanced imaging and sensing capabilities.

- **Thermal Camera:** Access thermal imaging modes via the remote control's display. Used for temperature detection, heat signatures, and industrial inspections.
- **Laser Ranging Module:** Provides accurate distance measurements. Activate and view data through the flight application. Useful for precise mapping and object positioning.
- **NIR Auxiliary Light:** Enhances visibility and imaging in low-light conditions or for specialized Near-Infrared

applications. Can be toggled on/off via the remote control.

- **Photo/Video Capture:** Use dedicated buttons on the remote control to capture still images or record video. Adjust camera settings (ISO, shutter speed, aperture) through the app interface.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Matrice 4T/4E drone.

- **Cleaning:**
 - Wipe the drone body with a soft, damp cloth after each flight.
 - Clean camera lenses and vision sensors with a microfiber cloth and lens cleaning solution.
 - Ensure no dust or debris accumulates in motor areas.
- **Propeller Inspection:**
 - Inspect propellers for cracks, bends, or nicks before every flight. Replace damaged propellers immediately.
- **Battery Care:**
 - Store batteries at approximately 50-60% charge if not used for extended periods.
 - Avoid extreme temperatures during charging and storage.
 - Do not use swollen, leaking, or damaged batteries.
- **Storage:**
 - Store the drone and accessories in the provided protective case in a cool, dry environment.
 - Avoid direct sunlight and high humidity.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your Matrice 4T/4E drone.

Problem	Possible Cause	Solution
Drone does not power on.	Low or uncharged battery; Battery not properly inserted.	Charge the Intelligent Flight Battery; Ensure battery is fully inserted until it clicks.
Remote control does not connect to drone.	Remote control battery low; Pairing issue; Interference.	Charge remote control; Re-pair the remote control with the drone (refer to pairing instructions in the full manual); Move to an area with less interference.
Poor image/video quality.	Dirty lens; Incorrect camera settings; Low light conditions.	Clean the camera lens; Adjust camera settings (ISO, exposure); Utilize NIR auxiliary light in low light.
Drone drifts during flight.	Compass calibration needed; Strong winds; Propeller damage.	Perform compass calibration; Avoid flying in strong winds; Inspect and replace damaged propellers.
App crashes or freezes.	Outdated app version; Device compatibility issues; Insufficient device storage.	Update the flight application; Ensure your mobile device meets system requirements; Clear device storage.

9. SPECIFICATIONS

Detailed technical specifications for the Matrice 4T/4E Enterprise Drone.

Feature	Detail
Brand	Generic
Model Name	Matrice 4T / Matrice 4E
Manufacturer Part Number	M4t-4e
Max Flight Time	Up to 49 minutes
Video Capture Resolution	4K
Effective Still Resolution	640 MP (Thermal/Visual combined capabilities)
Special Features	Infrared Thermal Camera, Laser Ranging Module, NIR Auxiliary Light, Smart Detection, AI-powered sensing
Connectivity Technology	USB, Wi-Fi (for remote control)
Included Components	Drone, Remote Control, Protective Case, Battery, Propeller
Skill Level	Professional
Item Weight	401 Grams (approx. 14.1 ounces)
Battery Capacity	6741 Milliamp Hours (Intelligent Flight Battery)
Battery Cell Composition	Lithium Ion
Product Dimensions	10.26"L x 4.48"W x 5.45"H
Material	Plastic
Color	Grey

10. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the official documentation provided with your purchase or contact the manufacturer directly.

Please visit the manufacturer's official website for the most up-to-date support resources, FAQs, and contact details.