

## Standard Operating Procedure (SOP) - DJI Matrice 200 V2 Drone



## Standard Operating Procedure (SOP) for DJI Matrice 200 V2 Drone

### 1. Purpose

The purpose of this SOP is to provide guidelines for the safe and efficient operation of the DJI Matrice 200 V2 Drone. This document outlines the procedures for pre-flight, flight, and post-flight operations to ensure compliance with regulatory requirements and manufacturer recommendations.

### 2. Scope

This SOP applies to all personnel operating the DJI Matrice 200 V2 Drone within the organization. It covers procedures from preparation and setup to flight operations and post-flight activities.

### 3. Responsibilities

- **Drone Operator (Pilot-in-Command):** Responsible for the safe operation of the drone, including pre-flight checks, flight operations, and post-flight procedures.
- **Visual Observer (if applicable):** Assists the operator in maintaining visual line of sight and ensuring safe operation.
- **Maintenance Personnel:** Responsible for regular maintenance and repairs of the drone.

### 4. Equipment and Materials

- DJI Matrice 200 V2 Drone
- Remote Controller
- Batteries (charged)
- Propellers (spare set recommended)
- SD Cards
- Laptop/Tablet for flight planning
- First Aid Kit
- Tool Kit for minor repairs

### 5. Pre-Flight Procedures

#### 5.1. Site Assessment

- Conduct a risk assessment of the flight area.
- Ensure the area is clear of obstacles, people, and restricted zones.
- Verify weather conditions are suitable for flight (e.g., no strong winds, rain, or lightning).

#### 5.2. Equipment Inspection

- Inspect the drone for any visible damage or wear.
- Ensure all propellers are securely attached and undamaged.
- Verify battery levels and ensure batteries are properly installed.
- Check the remote controller for functionality and sufficient charge.

#### 5.3. Software and Firmware

- Ensure all firmware (drone and controller) is up to date.
- Open the DJI Pilot app and check for any software updates.
- Calibrate the compass and IMU if prompted by the app.

#### 5.4. Flight Plan

- Plan the flight path and mission objectives.
- Input flight plan into the DJI Pilot app or compatible software.
- Ensure the flight plan complies with local regulations and airspace restrictions.

## 6. Flight Procedures

### 6.1. Takeoff

- Power on the remote controller and drone.
- Wait for GPS lock and verify home point is recorded.
- Perform a final check of surroundings and ensure area is clear.
- Arm the motors and initiate takeoff.

### 6.2. In-Flight Operations

- Maintain visual line of sight with the drone at all times.
- Monitor battery levels and signal strength.
- Adhere to the planned flight path and avoid restricted areas.
- Communicate with the visual observer (if applicable) to ensure safe operations.

### 6.3. Emergency Procedures

- In case of a low battery warning, return to home (RTH) immediately.
- If the drone loses signal, it will automatically return to the home point.
- For any mechanical failure or unexpected behavior, initiate a controlled landing as safely as possible.

## 7. Post-Flight Procedures

### 7.1. Landing

- Select a safe landing area and ensure it is clear.
- Gently reduce altitude and land the drone.
- Disarm the motors and power off the drone.

### 7.2. Data Management

- Power off the remote controller.
- Remove the SD card and transfer flight data to a laptop or storage device.
- Review flight data and ensure all mission objectives were met.

### 7.3. Equipment Inspection and Maintenance

- Inspect the drone and equipment for any signs of damage or wear.
- Clean the drone and remove any debris.
- Recharge batteries and prepare for the next flight.
- Log the flight details in the maintenance and flight logbook.

## 8. Safety and Compliance

- Ensure compliance with local aviation regulations and obtain necessary permits.
- Wear appropriate safety gear, including high-visibility clothing and protective eyewear.
- Regularly review and update the SOP to reflect changes in regulations or equipment.

## 9. Training and Certification

- Operators must undergo training on the DJI Matrice 200 V2 and demonstrate proficiency.
- Maintain up-to-date certification and complete periodic refresher training.

## 10. Record Keeping

- Maintain detailed records of all flights, including date, time, location, flight duration, and any incidents.
- Keep maintenance logs for the drone and associated equipment.

## 11. Review and Audit

- Conduct regular audits of flight operations and maintenance procedures.
- Review this SOP annually and update as necessary to ensure it reflects current best practices and regulatory requirements.

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By following this SOP, operators can ensure the safe, efficient, and compliant operation of the DJI Matrice 200 V2 Drone.

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