

DJI Model DJI Mini 4 Pro

UAS Flight Manual

Document Control: DJI JAPAN K.K.

Revision History

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Chapter 1 Overview

1.1 Name of the designer

DJI JAPAN K.K.

1.2 Name of the manufacturer

DJI JAPAN K.K.

1.3 Type and model of the UAS

Type: Rotorcraft (Multicopter)

Model: DJI Model DJI Mini 4 Pro

1.4 Flight configurations for the UAS

Aircraft	Battery	Total Weight	Remote Controller	Flight Configuration
DJI Mini 4 Pro	IFB*	249 g	DJI RC2	1a
			DJI RC-N2	1b
	IFB-P**	292 g	DJI RC2	2a
			DJI RC-N2	2b
DJI Mini 4 Pro + PG***	IFB	333 g	DJI RC2	3a
			DJI RC-N2	3b

*IFB: DJI Mini 4 Pro Intelligent Flight Battery

**IFB-P: DJI Mini 4 Pro/Mini 3 Series Intelligent Flight Battery Plus

***PG: DJI Mini 4 Pro 360° Propeller Guard

Chapter 2 Operational Limitations of the UAS

2.1 General

This chapter contains operational limits of the UAS.

2.2 Intended type of operations

The following is a list of specified flights that can be flown by the UAS to be certified, as stipulated in Article 132-85, paragraph (1) (airspace in which flights are prohibited) and Article 132-86, paragraph (2) (method of flight) of the Civil Aeronautics Act.

Article 132-85, paragraph (1) (i)	Airspaces around airports and its vicinity; or altitude of 150m or more above the ground	N/A
Article 132-85, paragraph (1) (ii)	Flight over DID areas	Applicable
Article 132-86, paragraph (2) (i)	Night flight	Applicable
Article 132-86, paragraph (2) (ii)	BVLOS flight	Applicable
Article 132-86, paragraph (2) (iii)	Flight at a distance of less than 30m from a person or an object	Applicable
Article 132-86, paragraph (2) (iv)	Flight over an event	Applicable
Article 132-86, paragraph (2) (v)	Carriage of dangerous goods	N/A
Article 132-86, paragraph (2) (vi)	Air dropping of an object	N/A

2.3 Maximum take-off weight, Maximum loading weight

- Maximum take-off weight:

Flight configurations (see section 1.4)	Maximum take-off weight
1a or 1b	249 g
2a or 2b	292 g
3a or 3b	333 g

- Maximum loading weight: N/A

2.4 Prohibited operation

- DO NOT operate the UAS with both of IFB-P and PG.
- DO NOT fly the UAS at a distance of less than 30m from a person or an object without PG.

2.5 Maximum density altitude

Flight configurations (see section 1.4)	Maximum density altitude
1a or 1b	4800 m
2a or 2b	3850 m
3a or 3b	1950 m

2.6 Limitations when using PG

- Before installing PG onto the UAS, the operator shall make sure to update the firmware of UAS to v01.00.0200 or later.

- After installing PG onto the UAS, the operator shall hover the UAS for approximately six seconds until DJI Fly app prompts that PG has been detected. The UAS is ready to fly once PG is detected.
- When using PG together with IFB, the maximum flight height is 120 m, and the maximum flight distance is 500 m.
- After installing PG onto the UAS, the obstacle sensing function will be unavailable. The UAS cannot actively bypass obstacles or brake when obstacles are on its route. There is no obstacle sensing when using intelligent flight modes, either.
- After installing PG onto the UAS, the UAS cannot use FocusTrack (see 3.2.4).
- When using PG, BVLOS flight is not allowed, and the operator shall maintain visual line of sight of the UAS.

2.7 Operating altitude

Flight configurations (see section 1.4)	Operating altitude
1a or 1b	Less than 150 m AGL
2a or 2b	Less than 150 m AGL
3a or 3b	Less than 120 m AGL

2.8 Flight environment restrictions

Flyable environment:

- Temperature range: -10°C to 40°C

Prohibited environment:

- Wind speed exceeding 10.7 m/s
- Rain, snow, icing, and fog conditions
- Operation of the UAS into areas of lightning activity is prohibited. A lightning strike could cause loss of aircraft.

Electromagnetic Interference (EMI) or High Intensity Radiated Fields (HIRF):

- This UAS has not undergone sufficient testing to obtain full environmental qualification for radiated fields (RF) susceptibility, and the UAS may not operate reliably when exposed to RF power.
- The operator shall minimize interference by avoiding areas with high levels of electromagnetism, such as locations near power lines, base stations, electrical substations, and broadcasting towers.

2.9 Aircraft to pilot ratio

- 1:1

Chapter 3 Operating Procedures of the UAS

3.1 General

This chapter contains operational procedures (normal and emergency operations) for the UAS.

3.2 Normal operation

3.2.1 Preparation for flying the UAS

See section "Using for the First Time" (P.10-13) of Appendix 1.
That section contains the following contents.

- Preparing the Aircraft
- Preparing the Remote Controller
- Activating the Aircraft
- Binding the Aircraft and Remote Controller

3.2.2 Pre-flight check

See section 1.6.3 (Check just before flight) of the Maintenance Manual for the UAS.

3.2.3 Basic flight

See section "Basic Flight" (P.23-26) of Appendix 1.
That section contains the following contents.

- Auto Takeoff/Landing
- Starting/Stopping the Motors
- Controlling the Aircraft
- Takeoff/Landing Procedures
- Video Suggestions and Tips

3.2.4 Intelligent flight

See section "Intelligent Flight Mode" (P.27-46) of Appendix 1.
That section contains the following contents.

- FocusTrack
- MasterShots
- Hyperlapse
- Waypoint Flight
- Cruise Control

3.2.5 Check during a flight

See section 1.6.4 (Check after flight start) of the Maintenance Manual for the UAS.

3.2.6 Post-flight check

See section 1.6.5 (Post-flight inspection) of the Maintenance Manual for the UAS.

3.2.7 Aircraft systems

(a) Flight mode (Normal/Sport/Cine)

See section "Flight Mode" (P.48-49) of Appendix 1.

(b) Aircraft Status Indicators

See section "Aircraft Status Indicators" (P.49-50) of Appendix 1.

(c) Return to Home

See section "Return to Home" (P.50-56) of Appendix 1.

That section contains the following contents.

- Advanced RTH
- Landing Protection
- Precision Landing

(d) Vision Systems and 3D Infrared Sensing System

See section "Vision Systems and 3D Infrared Sensing System" (P.57-59) of Appendix 1.

That section contains the following contents.

- Detection Range
- Using the Vision Systems

(e) Advanced Pilot Assistance Systems

See section "Advanced Pilot Assistance Systems" (P.60) of Appendix 1.

(f) Vision Assist

See section "Vision Assist" (P.61-62) of Appendix 1.

(g) Flight Recorder

See section "Flight Recorder" (P.62) of Appendix 1.

(h) Propellers

See section "Propellers" (P.62-64) of Appendix 1.

That section contains the following contents.

- Attaching the propellers
- Detaching the propellers

(i) Intelligent Flight Battery

See section "Intelligent Flight Battery" (P.64-70) of Appendix 1.

That section contains the following contents.

- Battery Features
- Using the Battery
- Charging the Battery
- Inserting/Removing the Battery

(j) Gimbal and Camera

See section "Gimbal and Camera" (P.70-73) of Appendix 1.

That section contains the following contents.

- Gimbal Profile
- Gimbal Operation Modes
- Camera Profile
- Storing and Exporting Photos and Videos

(k) Quick transfer of photos and videos to mobile devices

See section "QuickTransfer" (P.73) of Appendix 1.

3.2.8 Remote Controller

(a) DJI RC 2

See section "DJI RC 2" (P.76-85) of Appendix 1.

That section contains the following contents.

- Operation
- Remote Controller LEDs
- Remote Controller Alert
- Linking the Remote Controller

- Optimal Transmission Zone
- Operating the Touchscreen
- Advanced Features

(b) DJI RC-N2

See section "DJI RC 2" (P.86-91) of Appendix 1.
That section contains the following contents.

- Operation
- Battery Level LEDs
- Remote Controller Alert
- Optimal Transmission Zone
- Linking the Remote Controller

3.2.9 DJI Fly App

See section "DJI Fly App" (P.93-102) of Appendix 1.
That section contains the following contents.

- Camera View
 - Button Descriptions
 - Screen Shortcuts
- Settings
 - Safety
 - Control
 - Camera
 - Transmission
 - About

3.2.10 DJI Mini 4 Pro 360° Propeller Guard

See the guide on installation and specifications of the propeller guard in Appendix 2.
That section contains the following contents.

3.2.11 Wide-Angle Lens and ND Filter

See Appendix 3.

3.2.12 Protective measures for cybersecurity

Take the following measures to ensure cybersecurity of the aircraft and the remote controller.

- (a) USB-C Port and microSD Card Slot on the aircraft
USB-C Port: Use a genuine DJI USB cable and do not insert any storage device directly in the port.
microSD Card Slot: Check any microSD card for viruses before inserting it in the slot.
- (b) USB-C Port and microSD Card Slot on DJI RC 2
USB-C Port: Use a genuine DJI USB cable and do not insert any storage device directly.
microSD Card Slot: Check any microSD card for viruses before inserting it in the slot.
- (c) USB-C Port on DJI RC-N2
Use a genuine DJI USB cable and do not insert any storage device directly in the port.
- (d) WiFi network on DJI RC 2
Do not connect DJI RC 2 to public WiFi networks with weak security measures, but connect it to WiFi networks with advanced security measures and passwords provided by a trusted service provider.
- (e) A smartphone connected to DJI RC-N2 via a remote controller cable (USB or Lightning)
Use a smartphone with security measures in place. Check the smartphone for viruses before connecting it to DJI RC-N2 and use a genuine DJI USB/Lightning cable for the

connection. Do not connect the smartphone to public WiFi networks with weak security measures, but connect it to WiFi networks with advanced security measures and passwords provided by a trusted service provider.

(f) GNSS signal

This aircraft can receive three types of GNSS signals: GPS, Galileo, and BeiDou, ensuring redundancy. When GNSS signal has been jammed or may have been jammed during flight, take the following action depending on the flight mode (automatic or manual).

During automatic flight:

- Cancel on-going automatic flight and switch to manual flight, and land the aircraft in a safe location while checking the images from the gimbal camera.

During manual flight:

- Land the aircraft in a safe location while checking the images from the gimbal camera.

3.2.13 Flight restrictions

See section "Flight Restrictions" (P.20-22) of Appendix 1.

That section contains the following contents.

- GEO (Geospatial Environment Online) System
- Flight Limits
- Flight Altitude and Distance Limits
- Unlocking GEO Zones

3.3 Emergency operation

3.3.1 Stopping the motors mid-flight

See section "Stopping the Motors Mid-Flight" (P.24) of Appendix 1.

3.3.2 Aircraft Status Indicators – Warning States

See section "Aircraft Status Indicators" (P.49) of Appendix 1.

That section contains the following warning states.

- Remote controller signal lost
- Takeoff is disabled, e.g. low battery
- Critically low battery
- Critical error
- Compass calibration required

3.3.2 Aircraft low battery

See section "Aircraft low battery" (P.51-52) of Appendix 1.

3.3.3 Loss of remote controller signal

See section "Loss of remote controller signal" (P.52-53) of Appendix 1.

3.3.4 Loss of the GNSS signal when the vision systems are unavailable or disabled

See section "Flight Mode" (P.48-49) of Appendix 1, in particular, the following part.

"The aircraft automatically changes to Attitude (ATTI) mode when the vision systems are unavailable or disabled and the GNSS signal is weak or the compass experiences interference. In ATTI mode, the aircraft may be more easily affected by its surroundings. Environmental factors such as wind can result in horizontal drift of the aircraft, which may present hazards especially when flying in confined spaces. The aircraft will not be able to hover or brake automatically, therefore the pilot should land the aircraft as soon as possible to avoid accidents."

3.3.5 Troubleshooting procedures

See section "Troubleshooting Procedures" (P.119) of Appendix 1.

3.3.6 Risk and warnings

See section "Risk and Warnings" (P.119) of Appendix 1.

Chapter 4 Performance Information

4.1 General

This chapter contains the performance information of the UAS

4.2 Flight performance

4.2.1 Maximum flight time

Flight configurations (see section 1.4)	Maximum flight time
1a or 1b	34 minutes (measured while flying at 7 m/s in a windless environment)
2a or 2b	45 minutes (measured while flying at 7 m/s in a windless environment)
3a or 3b	16.5 minutes (measured while flying at 4 m/s in a windless environment)

4.2.2 Maximum horizontal speed

- 16 m/s (Sport Mode)
- 12 m/s (Normal Mode)
- 12 m/s (Cine Mode)

4.2.3 Maximum ascent speed

- 5 m/s (Sport Mode)
- 5 m/s (Normal Mode)
- 3 m/s (Cine Mode)

4.2.4 Maximum descent speed

- 5 m/s (Sport Mode)
- 5 m/s (Normal Mode)
- 3 m/s (Cine Mode)

4.2.5 Maximum pitch angle

35°

4.2.6 Hovering accuracy range (windless or breezy)

Vertical:

±0.1 m (with vision positioning)

±0.5 m (with GNSS positioning)

Horizontal:

±0.1 m (with vision positioning)

±0.5 m (with GNSS positioning)

4.2.7 Maximum cruising range

Flight configurations (see section 1.4)	Maximum cruising range
1a or 1b	18 km (measured while flying at 11.3 m/s in a windless environment)
2a or 2b	25 km (measured while flying at 12.3 m/s in a windless environment)
3a or 3b	7 km (measured while flying at 10 m/s in a windless environment)

4.3 Battery power capacity, usable capacity and model number

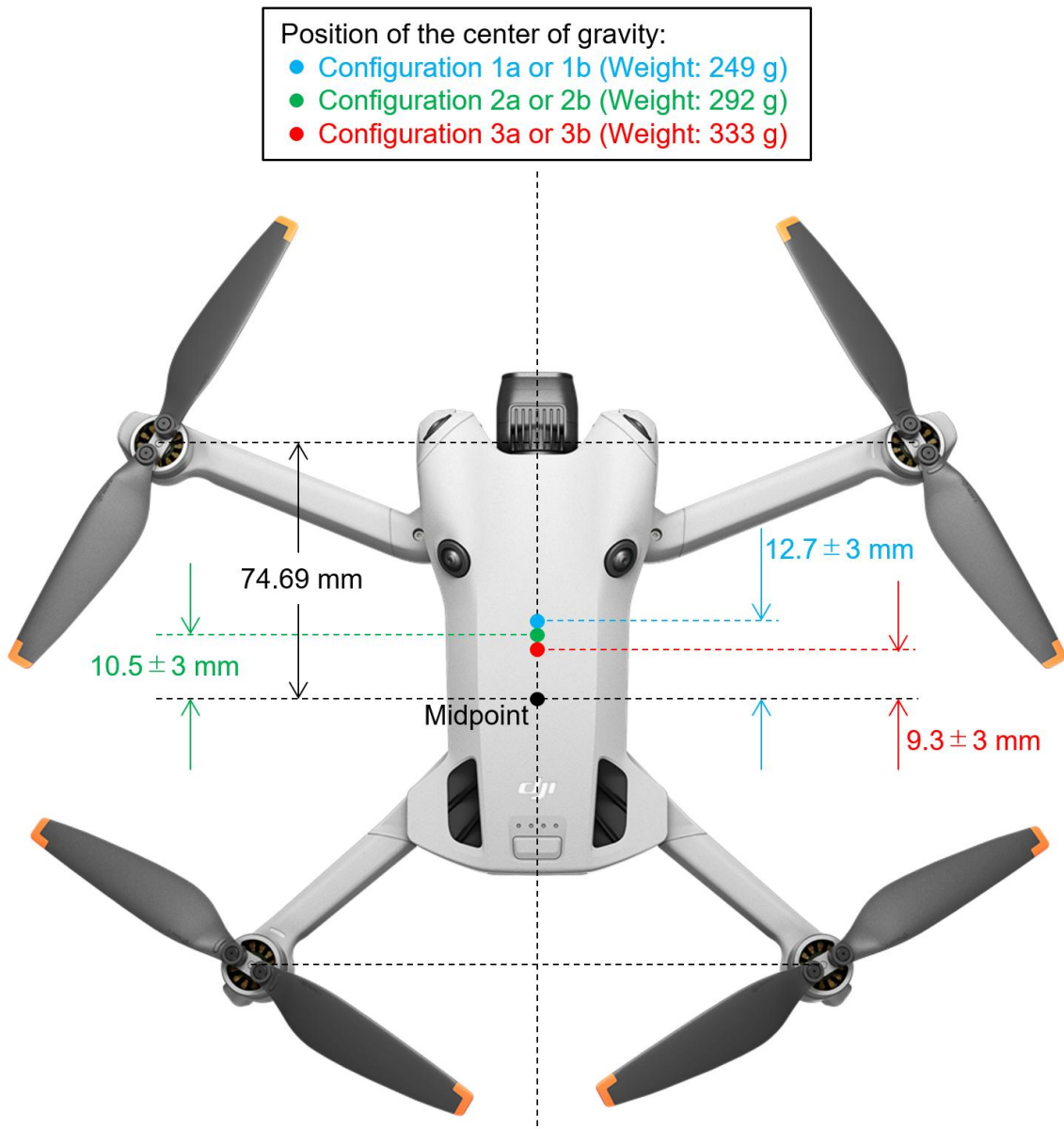
- IFB
Power capacity: 2590 mAh
Usable capacity: 2590 mAh
Model number: BWX140-2590-7.32 (Manufacturer: DJI)
- IFB-P
Power capacity: 3850 mAh
Usable capacity: 3850 mAh
Model number: BWX162-3850-7.38 (Manufacturer: DJI)

Chapter 5 Loading Information

5.1 General

This chapter contains the loading information of the UAS.

5.2 Weight and center of gravity chart



5.3 Cargo and ballast loading

N/A

5.4 Allowable center of gravity position range

N/A

5.5 List of optional equipment affecting weight and center of gravity

- PG

Chapter 6 Other information that is necessary for safe operation because of design, operating, or handling characteristics.

6.1 General

This chapter contains other information that is necessary for safe operation because of design, operating, or handling characteristics.

6.2 Continuous operational safety reporting

6.2.1 Application for flight permission/approval

An operator shall apply to the Minister of Land, Infrastructure, Transport and Tourism for flight permission/approval when conducting specified flights (see Section 2.2) using this UAS in any of the following conditions.

- The UAS to be flown has not obtained an UAS Certification.
- The operator does not hold an UA Remote Pilot Certificate.
- The UAS to be flown has obtained an UAS Certification and the operator holds an UA Remote Pilot Certificate, but the application for flight permission/approval is not exempted for the specified flight to be conducted (Note 1)

Note 1: Corresponding specified flights

Article 132-85, paragraph (1) (i)	Airspaces around airports and its vicinity; or altitude of 150m or more above the ground
Article 132-86, paragraph (2) (iv)	Flight over an event
Article 132-86, paragraph (2) (v)	Carriage of dangerous goods
Article 132-86, paragraph (2) (vi)	Air dropping of an object

6.2.2 Flight plan report

Operators shall notify the Minister of Land, Infrastructure, Transport and Tourism in advance of the information such as the date, time, and route of any specified flights they plan to conduct with this UAS (the same applies to cases where flight permission or approval is not required).

6.2.3 Flight logbook

Operators shall keep their flight logbook and enter all of necessary items below in it.

- Journey Log: Record items about actual flight
- Daily Inspection Log: Record check results before flight
- Inspection and Maintenance Record: Record items about periodical inspection, maintenance, and alteration

6.2.4 Accident and serious incident report

If an accident (Note 2) or serious incident (Note 3) occurs during flight, the operator shall take the following actions.

- (1) Immediately stop the flight of the UAS and provide first aid to the injured.
- (2) Report the details of the accident, etc. to the Minister of Land, Infrastructure, Transport and Tourism.

Note 2: Accident

- Death and injury to a person (major injury) caused by the UAS

- Damage to property owned by a third party
- Collision or contact with an aircraft

Note 3: Serious incident

- Injury to a person (minor injury) caused by the UAS
- Loss of control of the UAS
- The UAS ignites while in flight
- When there was a risk of collision or contact with an aircraft in flight

Appendix 1 – DJI Mini 4 Pro User Manual v1.4

https://dl.djicdn.com/downloads/DJI_Mini_4_Pro/20240627/DJI_Mini_4_Pro_User_Manual_ENI.pdf

Appendix 2 – DJI Mini 4 Pro 360° Propeller Guard User Guide v1.4

Multi-language:

https://dl.djicdn.com/downloads/DJI_Mini_4_Pro/AC/20240514/DJI_Mini_4_Pro_Propeller_Guard_User_Guide_multi_v1.4.pdf

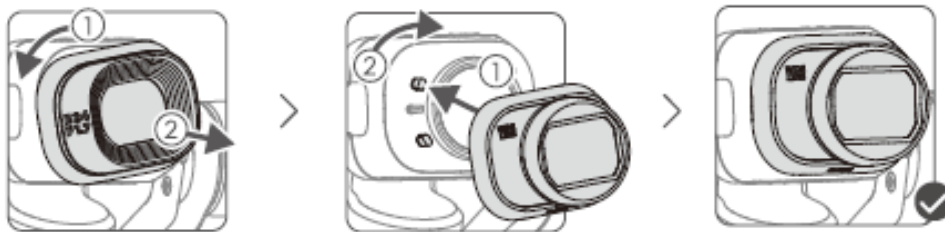
Appendix 3 – Wide-Angle Lens and ND Filter

1. Wide-Angle Lens

- Weight approx. 2.3 g



Installation method:

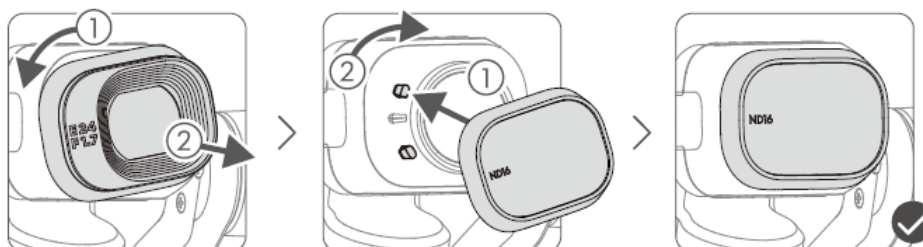


2. ND Filter (3 types - ND16, ND64, ND256)

- Weight approx. 0.75 g each



Installation method:



Note:

The gimbal lens protection unit that comes standard with the aircraft (see the leftmost diagram of how to install the lens and filter above) weighs approximately 0.63 g.