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DJI RM510 / CP.MA.00000406.01

DJI RC Pro Remote Controller User Manual

Model: RM510 / CP.MA.00000406.01
Brand: DJI

1. Introduction and Overview

The DJI RC Pro is a high-performance remote controller designed for professional-level aerial photography. It features a next-generation processor and increased storage capacity, ensuring stable and smooth operation. Equipped with the powerful O3+ video transmission technology, it supports the DJI Cellular Dongle for 4G communication. The controller also incorporates the same precise, ultra-smooth control sticks found in the DJI FPV, providing an enhanced control experience.

What's in the Box:

- DJI RC Pro × 1
- USB 3.0 Type-C Cable × 1

2. Key Features

Extended Range and Strong Signal: With the O3+ transmission system, the DJI RC Pro remote controller supports a 15km max video transmission range with latency as low as 120 ms.

Bright Screen for Outdoor Flying: A 5.5-inch 1080p screen with a 1,000-nit max brightness allows for clear visibility of details in various environments, even under direct sunlight.

Built for Performance: The DJI RC Pro is equipped with a high-speed processor that ensures durability, stability, and a smooth operating experience during every flight.

Precision Control: Achieve precise maneuvering, fluid operation, and better shot composition with the high-quality control sticks, identical to those on the DJI FPV.

Audio, Video, and More: Playback videos at 4K/120fps in H.264 and H.265 codecs. The system also supports the installation of third-party applications for expanded creative options.

Compatibility: Compatible with DJI Mavic 3 Pro, DJI Mavic 3 Pro Cine, DJI Mavic 3 Classic, DJI Mavic 3, DJI Mavic 3 Cine, DJI Mini 3 Pro, and DJI Air 2S.

Product Visuals:



Front and back view of the DJI RC Pro remote controller, highlighting its ergonomic design and dual antennas.



The DJI RC Pro remote controller positioned alongside a DJI Mavic 3 drone, showcasing their compatible design.



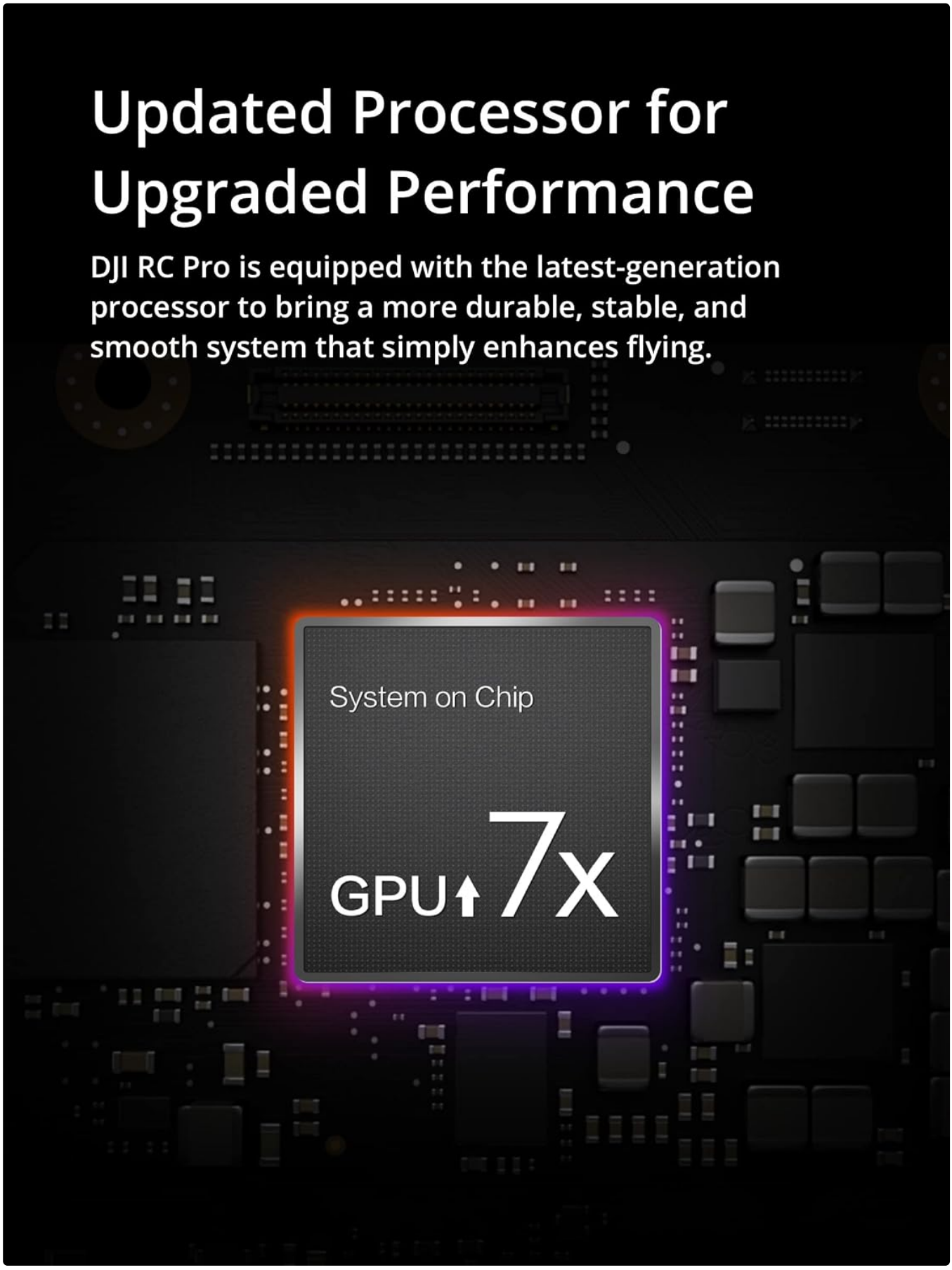
A user operating the DJI RC Pro, with the bright screen displaying a live feed from a connected drone, demonstrating its clear visibility.



A top-down view of the DJI RC Pro, highlighting the layout of its control sticks, buttons, and integrated screen.



The DJI RC Pro in use outdoors, demonstrating the screen's high brightness and clarity even in sunny conditions.



A visual representation of the upgraded processor within the DJI RC Pro, symbolizing its enhanced performance and stability.

3. Setup

1. **Charging the Controller:** Connect the supplied USB 3.0 Type-C cable to the controller's charging port and a

compatible USB power adapter. Ensure the controller is fully charged before first use.

2. **Attaching Control Sticks:** The control sticks are detachable for storage. Screw them firmly into the joystick mounts on the controller.
3. **Powering On/Off:** Press the Power button once, then press and hold it for two seconds to power on or off the controller.
4. **Antenna Adjustment:** For optimal signal strength, unfold the antennas and adjust their angle to face the general direction of your aircraft during flight.
5. **Initial Pairing:** Follow the on-screen instructions to pair the DJI RC Pro with your compatible DJI aircraft. Refer to the aircraft's specific user manual for detailed pairing procedures.

4. Operating Instructions

Basic Controls:

- **Control Sticks:** Used for flight control (throttle, yaw, pitch, roll).
- **Power Button:** Powers the unit on/off.
- **Return-to-Home (RTH) Button:** Initiates the RTH procedure for the connected aircraft.
- **Flight Mode Switch:** Toggles between different flight modes (e.g., Normal, Sport, Cine).
- **Record Button:** Starts and stops video recording.
- **Shutter Button:** Takes photos.
- **Customizable Buttons (C1/C2):** Can be assigned to various functions via the DJI Fly app settings.
- **5D Button:** Navigates menus and controls various functions on the screen.
- **Gimbal Dial:** Controls the tilt of the aircraft's camera gimbal.

Screen Functions:

The integrated 5.5-inch 1080p screen displays the live camera feed from your drone, flight parameters, battery status, and various settings. The high brightness of 1,000 nits ensures clear visibility even in bright outdoor conditions. Navigate the interface using the touchscreen or the 5D button.

Connectivity:

The O3+ video transmission system provides a robust and stable connection. For enhanced connectivity, the DJI RC Pro supports the DJI Cellular Dongle (sold separately) for 4G communication, offering improved signal reliability in challenging environments.

5. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the controller's surface. For the screen, use a microfiber cloth specifically designed for electronics. Avoid using harsh chemicals or abrasive materials.
- **Storage:** Store the controller in a cool, dry place away from direct sunlight. Detach the control sticks before storing to prevent damage.
- **Battery Care:** For long-term storage, ensure the battery is charged to approximately 50-60%. Recharge the battery every three months to maintain its health.
- **Firmware Updates:** Regularly check for and install the latest firmware updates via the DJI Fly app or DJI Assistant 2 software. Updates often include performance improvements, bug fixes, and new features (e.g., the "Outdoor mode" function will be available through an upcoming firmware update).

6. Troubleshooting

- **No Power:** Ensure the controller is fully charged. If the issue persists, try a different USB-C cable and power adapter.
- **Connection Issues:**
  - Verify that the controller is paired correctly with your aircraft.
  - Ensure antennas are unfolded and positioned correctly.
  - Check for strong signal interference in your operating environment.
  - Update both the controller and aircraft firmware to the latest version.
- **Screen Dimness/Visibility:** Adjust screen brightness in settings. Ensure "Outdoor mode" (if available via firmware update) is enabled for bright conditions.
- **Third-Party App Issues:** DJI is not responsible for permissions or information security related to third-party apps. If an installed third-party app causes issues, try removing it or restoring the controller to factory settings.
- **General Malfunction:** If the controller behaves unexpectedly, try restarting it. If the problem persists, perform a factory reset (note: this will erase custom settings).

7. Specifications

Brand	DJI
Model Name	RM510
Item Model Number	CP.MA.00000406.01
Special Feature	Ergonomic
Color	Gray
Video Capture Resolution	1080p
Connectivity Technology	Radio Frequency
Item Weight	680 Grams (1.5 pounds)
Control Type	Remote Control
Maximum Range	15000 Meters
Wireless Communication Technology	Cellular
Battery Cell Composition	Lithium Ion
Product Dimensions	7.22 x 8.01 x 2.36 inches

8. Warranty and Support

For detailed warranty information, technical support, and service inquiries, please refer to the official DJI website or the comprehensive User Manual. It is recommended to register your product with DJI to receive important updates and support.

You can access the official User Manual (PDF) for the DJI RC Prohere.

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