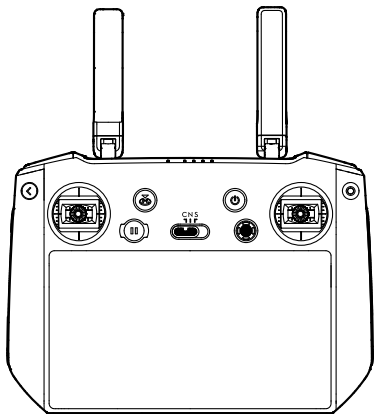


DJI RC Pro

User Manual

v1.2 2022.05



Searching for Keywords

Search for keywords such as “battery” and “install” to find a topic. If you are using Adobe Acrobat Reader to read this document, press Ctrl+F on Windows or Command+F on Mac to begin a search.

Navigating to a Topic

View a complete list of topics in the table of contents. Click on a topic to navigate to that section.

Printing this Document

This document supports high resolution printing.

Revision Log

Version	Date	Revisions
v1.2	2022.5	Updated content after v03.01.07.00 firmware update.

Using this Manual

Legend

 Important

 Hints and Tips

 Reference

Read Before the First Use

Read the following documents before using the DJI™ RC Pro.

1. Quick Start Guide
2. User Manual

It is recommended to watch all tutorial videos on the official DJI website and read quick start guide before using for the first time. Refer to this user manual for more information.

Video Tutorials

Go to the address below or scan the QR code to watch the DJI RC Pro tutorial videos, which demonstrate how to use the DJI RC Pro safely.



<https://s.dji.com/guide9>

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Product Profile

Introduction

The DJI RC Pro remote controller features O3+, the latest version of DJI's signature OCUSYNC™ image transmission technology, and can transmit a live HD view from the camera of an aircraft at a distance of up to 15 km ^[1]. The remote controller also supports dual transmission, making the HD video downlink stable and reliable. The remote controller has a maximum operating time of 3 hours ^[2].

High-Bright Screen: The built-in 5.5-in high brightness 1000 cd/m² screen boasts a resolution of 1920×1080 pixels.

Multiple Connection Options: Users can connect to the internet via Wi-Fi and the Android operating system comes with a variety of functions such as Bluetooth and GNSS.

Audio and Video: With the built-in speaker, the remote controller supports H.264 4K/120fps and H.265 4K/120fps video, which also supports video output via the Mini HDMI port.

Extended Storage Capability: The internal storage of the remote controller is 32 GB and also supports the use of microSD cards to store the photos and videos, making it easier to export to a computer.

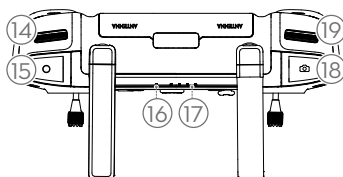
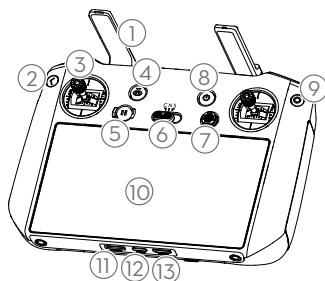
Reliable in More Environments: The remote controller can operate normally within a wide temperature range from -10° to 40° C (14° to 104° F).

Compatible with Multiple DJI Aircraft: Users can switch aircraft in DJI Fly app to be compatible with different aircraft models. Currently supports Mavic 3, DJI Air 2S (when using a remote controller firmware version of v03.01.05.00 or later and an app version of v1.5.8 or later).

[1] The remote controller can reach its maximum transmission distance (FCC) in a wide open area with no electromagnetic interference using a MAVIC™ 3 at an altitude of approximately 120 meters.

[2] The maximum operating time was tested in a lab environment and is for reference only.

DJI RC Pro

**1. Antennas**

Relay aircraft control and video wireless signals.

2. Back Button

Press once to return to the previous screen. Press twice to return to the home screen.

3. Control Sticks

Use the control sticks to control the aircraft movements. Set the flight control mode in DJI Fly. The control sticks are removable and easy to store.

4. Return to Home (RTH) Button

Press and hold to initiate RTH. Press again to cancel RTH.

5. Flight Pause Button

Press once to make the aircraft brake and hover in place (only when GNSS or Vision Systems are available). The Flight Pause Button can be different in different intelligent flight modes. Refer to the description of the flight pause button for the aircraft for more information.

6. Flight Mode Switch

Switch between Cine, Normal, and Sport mode.

7. 5D Button

View the 5D Button features in DJI Fly by entering Camera View, Settings, and then Control.

8. Power Button

Press once to check the current battery level. Press and then press and hold to power the remote controller on or off. When the remote controller is powered on, press once to turn the touchscreen on or off.

9. Confirm Button*

Press once to confirm a selection. The button does not have a function when using DJI Fly.

10. Touchscreen

Touch the screen to operate the remote controller. Note that the touchscreen is not waterproof. Operate with caution.

11. microSD Card Slot

Use to insert a microSD card.

12. USB-C port

For charging.

13. Mini HDMI Port

For video output.

14. Gimbal Dial

Controls the tilt of the camera.

15. Record Button

Press once to start or stop recording.

16. Status LED

Indicates the status of remote controller.

17. Battery Level LEDs

Displays the current battery level of the remote controller.

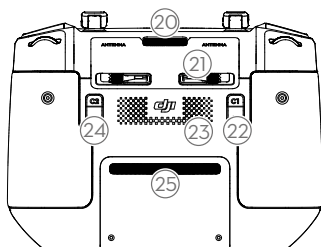
18. Focus/Shutter Button

Press halfway down on the button to auto focus and press all the way down to take a photo.

19. Camera Control Dial

For zoom control.

* The function of the button when linked to an aircraft will be able to be customized in DJI Fly. The updates are in effect when using a remote controller firmware version of v03.01.07.00 or later and an app version of v1.6.4 or later.



20. Air Vent

Used for heat dissipation. Do not block the air vent during usage.

21. Control Sticks Storage Slot

For storing the control sticks.

22. Customizable C1 Button

Switch between recentering the gimbal and pointing the gimbal downward. The function can be set in DJI Fly.

23. Speaker

Outputs sound.

24. Customizable C2 Button

Press once to turn the Auxiliary Bottom Light on or off. The function can be set in DJI Fly.

25. Air Intake

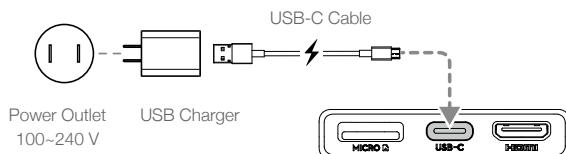
Used for heat dissipation. DO NOT cover the air intake during use.

Preparing the Remote Controller

Charging the Battery

The built-in battery is placed in hibernation mode before delivery. It must be charged before using for the first time.

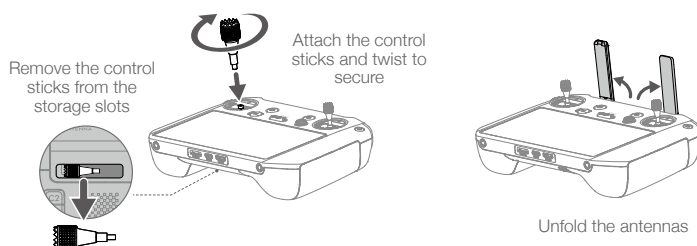
It takes approximately two hours to fully charge the remote controller using a recommended USB charger rated 12V and one and a half hours using a recommended USB charger rated 15V.



- It is recommended to use an FCC/CE certified USB charger rated 12V or 15V.
- Recharge the battery at least every three months to prevent over discharging. The battery depletes when stored for an extended period.

Mounting

1. Remove the control sticks from the storage slots on the remote controller and screw them into place.
2. Unfold the antennas.



- Make sure the control sticks are firmly mounted.

Activating the Remote Controller

The remote controller needs to be activated before using for the first time. Make sure the remote controller can connect to the internet during activation. Follow the steps below to activate the remote controller.



1. Power on the remote controller. Select the language and tap “Next”. Carefully read the terms of use and privacy policy and tap “Agree”. After confirming, set the country/region.
2. Connect the remote controller to the internet via Wi-Fi. After connecting, tap “Next” to continue and select the time zone, date, and time.

3. Log in with your DJI account. If you do not have an account, create a DJI account and log in.
4. Tap "Activate" on the activation page.
5. After activating, select if you would like to join the improvement project. The project helps to improve the user experience by sending diagnostic and usage data automatically every day. No personal data will be collected by DJI.

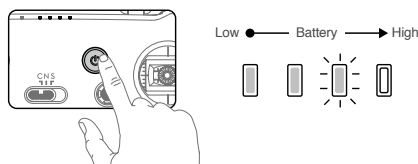


- Check the internet connection if the activation fails. If the internet connection is normal, please try to activate the remote controller again. Contact DJI Support if the issue persists.
-

Remote Controller Operations

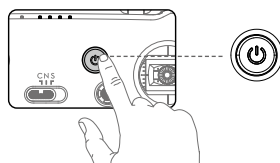
Checking the Battery Level

Press the power button once to check the current battery level.



Powering On/Off

Press and then press again and hold to power the remote controller on or off.



Linking the Remote Controller

The aircraft and remote controller must be linked before use. Follow these steps to link a new remote controller.

Method 1:

1. Power on the remote controller and the aircraft.
2. Press the C1, C2, and record button simultaneously until the status LED blinks blue and the remote controller beeps.
3. Press and hold the power button of the aircraft for more than four seconds. The aircraft beeps once to indicate it is ready to link. The aircraft beeps twice to indicate linking is successful. The battery level LEDs of the remote controller will glow solid.

Method 2:

1. Power on the remote controller and the aircraft.
2. Launch DJI Fly.
3. In camera view, tap ●●● and select Control and Pair to Aircraft (Link).
4. Press and hold the power button of the aircraft for more than four seconds. The aircraft beeps once indicating it is ready to link. The aircraft beeps twice indicating linking is successful. The battery level LEDs of the remote controller will glow solid.



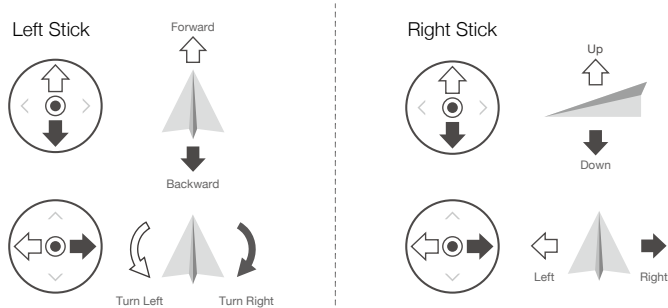
- Make sure the remote controller is within 1.6 ft (0.5 m) of the aircraft during linking.
- Make sure the remote controller is connected to the internet when logging in using a DJI account.

Controlling the Aircraft

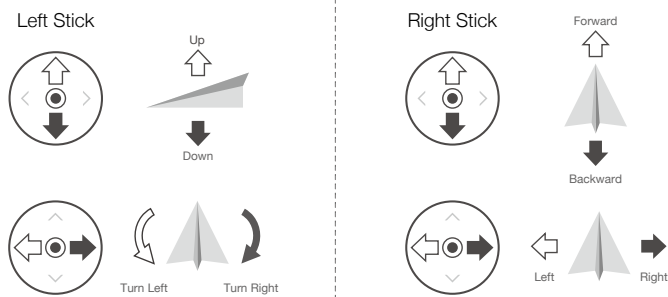
Control Mode

The control sticks control the aircraft's orientation (pan), forward/backward movement (pitch), altitude (throttle), and left/right movement (roll). The control stick mode determines the function of each control stick movement. Three preprogrammed modes (Mode 1, Mode 2, and Mode 3) are available and custom modes can be configured in DJI Fly. The default mode is Mode 2. In each of the three pre-programmed modes, the aircraft hovers in place at a constant orientation when both sticks are centered. See the figures below to see the function of each control stick in the three preprogrammed modes.

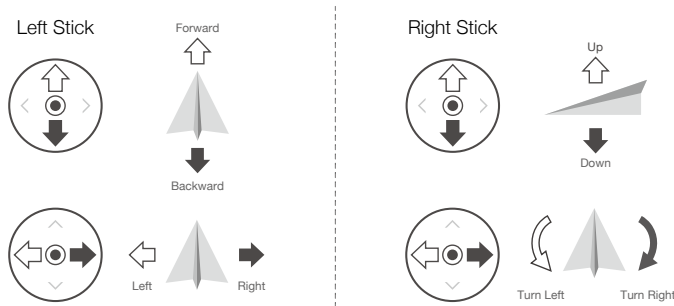
Mode 1



Mode 2

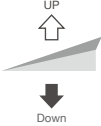
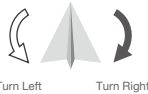


Mode 3



-  Center position: control sticks are centered.
- Moving the control stick: control sticks are pushed away from the center.

The figure below explains how to use each control stick. Mode 2 has been used as an example.

Remote Controller (Mode 2)	Aircraft (◀ Indicates Nose Direction)	Remarks
Left Stick 		Moving the left stick up or down changes the aircraft's altitude. Push the stick up to ascend and down to descend. The more the stick is pushed away from the center position, the faster the aircraft will change altitude. Push the stick gently to prevent sudden and unexpected changes in altitude.
Left Stick 		Moving the left stick to the left or right controls the orientation of the aircraft. Push the stick left to rotate the aircraft counter-clockwise and right to rotate the aircraft clockwise. The more the stick is pushed away from the center position, the faster the aircraft will rotate.
Right Stick 		Moving the right stick up and down changes the aircraft's pitch. Push the stick up to fly forward and down to fly backward. The more the stick is pushed away from the center position, the faster the aircraft will move.
Right Stick 		Moving the right stick to the left or right changes the aircraft's roll. Push the stick left to fly left and right to fly right. The more the stick is pushed away from the center position, the faster the aircraft will move.

-  • Keep the remote controller away from magnetic materials to avoid it being affected by magnetic interference.
- To avoid damage, it is recommended that the control sticks are removed and stored in the storage slot on the remote controller during transportation or storage.

Flight Mode Switch

Toggle the switch to select the flight mode.

Position	Flight Mode
S	Sport Mode
N	Normal Mode
C	Cine Mode



Normal Mode: The aircraft utilizes GNSS and the Vision Systems and Infrared Sensing System to locate and stabilize itself. When the GNSS signal is strong, the aircraft uses GNSS to locate and stabilize itself. When the GNSS is weak but the lighting and other environment conditions are sufficient, the aircraft uses the vision systems to locate and stabilize itself.

Sport Mode: In Sport Mode, the aircraft uses GNSS for positioning and the aircraft responses are optimized for agility and speed making it more responsive to control stick movements. Note that obstacle sensing is disabled in Sport Mode.

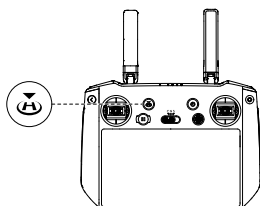
Cine Mode: Cine mode is based on Normal mode and the flight speed is limited, making the aircraft more stable during shooting.



- Refer to the flight modes section in the aircraft's user manual for more information about flight mode features for different aircraft types.

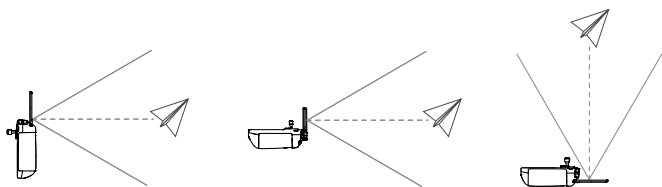
RTH Button

Press and hold the RTH button until the remote controller beeps to start RTH. Press this button again to cancel RTH and regain control of the aircraft. Refer to the Return to Home section for more information about RTH.



Optimal Transmission Zone

The signal between the aircraft and the remote controller is most reliable when the antennas are positioned in relation to the aircraft as illustrated below.



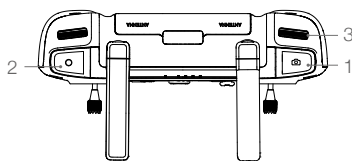
The optimal transmission range is where the antennas are facing toward the aircraft and the angle between the antennas and the back of the remote controller is 180° or 270°. The illustrations show situations where the operator and aircraft are far away.



- Do not use other wireless devices operating at the same frequency as the remote controller. Otherwise, the remote controller will experience interference.
- A prompt will be received in DJI Fly if the transmission signal is weak during flight. Adjust the antennas to make sure that the aircraft is in the optimal transmission range.

Controlling the Camera

The remote controller can be used to control the camera.



1. Focus/Shutter Button

Press halfway down to auto focus and press all the way down to take a photo. The photo mode can be set in DJI Fly.

2. Record Button

Press once to start or stop recording.

3. Camera Control Dial

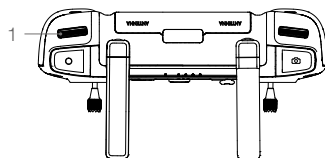
Use to adjust the zoom.

Controlling the Gimbal

The remote controller can be used to control the gimbal.

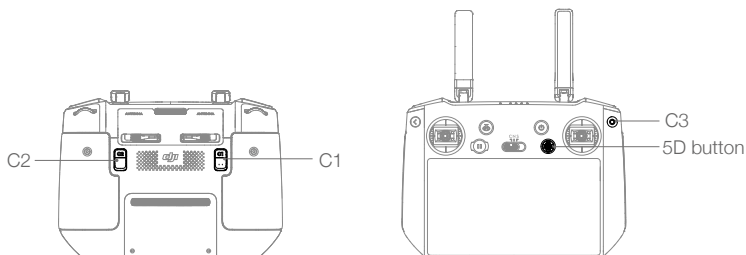
1. Gimbal Dial

Use to adjust the tilt of the gimbal. Rotate the dial clockwise to tilt the gimbal up. Rotate the dial counter clockwise to tilt the gimbal down.



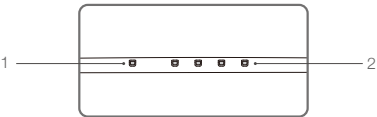
Customizable Buttons

The customizable buttons include the C1, C2, C3*, and 5D button. Go to System Settings in DJI Fly and select Control to customize the function of the button.



* The ability to customize the C3 button and the right dial are supported when using a remote controller firmware version of v03.01.07.00 or later and an app version of v1.6.4 or later.

Status LED and Battery Level LEDs Description



1. Status LED

The status LED displays the linking status and warnings for control stick, low battery level, and high temperature.

Blinking Pattern	Descriptions
Solid red	Disconnected with aircraft
Blinks red	The temperature of the remote controller is too high or the battery level of the aircraft is low
Solid green	Connected with aircraft
Blinks blue	The remote controller is linking to an aircraft
Solid yellow	Firmware update failed
Blinks yellow	The battery level of the remote controller is low
Blinks cyan	Control sticks not centered

2. Battery Level Indicators

Battery level indicators display the battery level of the controller.

Blinking Pattern				Battery Level
●	●	●	●	75%~100%
●	●	●	○	50%~75%
●	●	○	○	25%~50%
●	○	○	○	0%~25%

Remote Controller Alert

The remote controller vibrates or beeps when there is an error or warning. Pay attention when prompts appear on the touchscreen or in DJI Fly. Slide down from the top to select Do Not Disturb or Mute to disable some alerts.

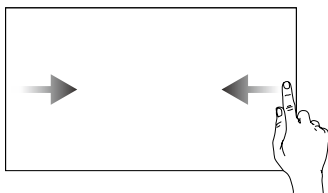
Touchscreen

Home Screen

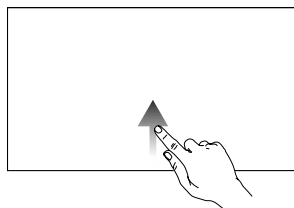


- 1. Time**
Displays local time.
- 2. DJI Fly**
Tap to enter DJI Fly.
- 3. Gallery**
Tap to check stored images and videos.
- 4. Files**
Tap to check stored files.
- 5. Browser**
Tap to open the browser.
- 6. Setting**
Tap to enter system settings.
- 7. Guide**
Tap to read the guide and quickly learn about the remote controller buttons and LEDs.
- 8. Wi-Fi Signal**
Displays the Wi-Fi signal status when connected to Wi-Fi. It can be enabled or disabled in the shortcut settings.
- 9. Battery Level**
Displays the battery level of the remote controller.

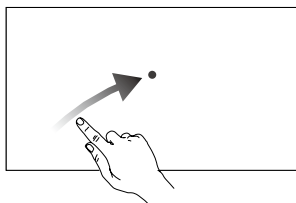
Operations



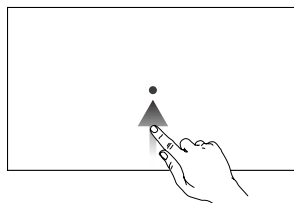
Slide from the left or right to the center of the screen to return to the previous screen.



Slide up from the bottom of the screen and release to return to the home screen.

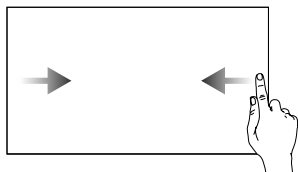


Slide diagonally right from the bottom of the screen and hold to access recently opened apps when on the home screen.

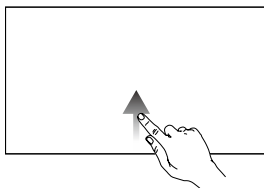


Slide up from the bottom of the screen and hold to access recently opened apps when not on the home screen.

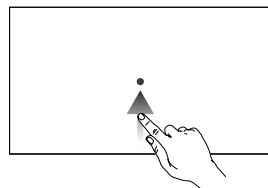
The following updates are in effect when using a remote controller firmware version of v03.01.07.00 or later.



Slide from the left or right to the center of the screen to return to the previous screen.

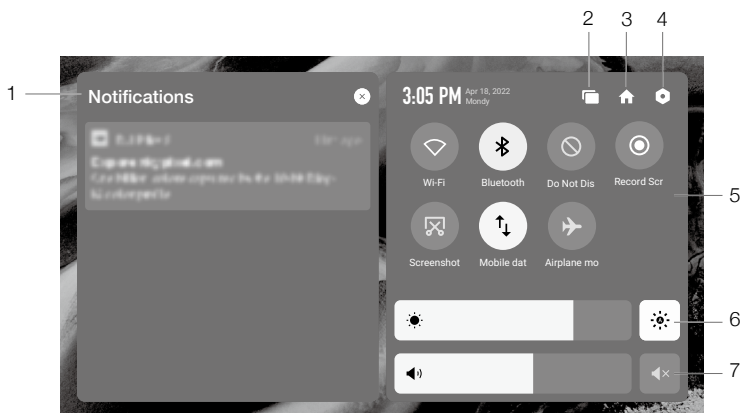


Slide up from the bottom of the screen to return to the home screen.



Slide up from the bottom of the screen and hold to access recently opened apps.

Shortcut Settings



1. Notifications

Tap to check system notifications.

2. Recent

Tap to check recently opened apps.

3. Home

Tap to return to the home screen.

4. System Settings

Tap to access system settings.

5. Shortcuts

Wi-Fi : Tap to enable or disable Wi-Fi. Hold to enter settings and connect to or add a Wi-Fi network.

Bluetooth : Tap to enable or disable Bluetooth. Hold to enter settings and connect with nearby Bluetooth devices.

Do Not Disturb : Tap to enable Do Not Disturb mode. In this mode, system prompts will be disabled.

Record Screen : Tap to start recording the screen. While recording, the screen displays the recording time. Tap Stop to stop recording.

Screenshot : Tap to screenshot the screen.

Mobile data : Tap to turn mobile data on or off; long press to set mobile data and diagnose network connection status.

Airplane mode : Tap to enable Airplane mode. Wi-Fi, Bluetooth, and mobile data will be disabled.

6. Adjusting Brightness

Brightness icon : The screen is in auto brightness mode when the icon is highlighted. Tap the icon or slide the bar to switch to manual brightness mode.

7. Adjusting Volume

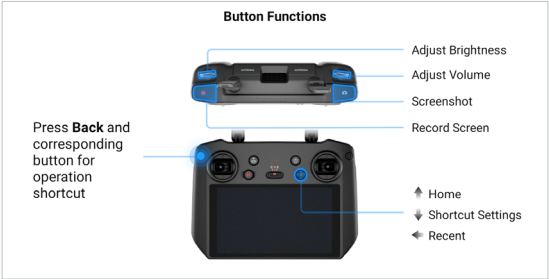
Volume slider : Slide the bar to adjust the volume and tap Mute to mute. Note that after muting, all sounds of the remote controller will be completely disabled, including related alarm sounds. Please turn on the mute with caution.

Combination Buttons

Some frequently-used features can be activated by using combination buttons. To use combination buttons, hold the back button and operate the additional button.

Checking Available Combination Buttons

Power on the remote controller, enter the home screen, and tap Guide to check combination buttons.



Using Combination Buttons

The functions of the combination buttons cannot be changed. The following table displays the function of each combination button. Hold the back button and operate the additional button when using this feature.

Combination Buttons	Description
Back + Gimbal Dial	Adjust Brightness
Back + Camera Control Dial	Adjust Volume
Back + Record Button	Record Screen
Back + Shutter Button	Screenshot
Back + 5D Button	Up - Home, Down - Shortcut Settings, Left - Recent

DJI Fly App

Tap DJI Fly on the home screen to check the flight status and set flight and camera parameters. Since the DJI RC Pro is compatible with multiple aircraft models and the interface of DJI Fly may vary depending on the aircraft model, refer to the DJI Fly app section in the user manual of the relevant aircraft for more information.

Advanced Feature

Calibrating the Compass

The compass may need to be calibrated after the remote controller is used in areas with electromagnetic interference. Follow the steps below to calibrate the remote controller.

1. Enter the home screen.
2. Select Settings, scroll down, and tap Compass.
3. Follow the diagram on the screen to calibrate your remote controller.
4. The user will receive a prompt when the calibration is successful.

HDMI Settings

The touchscreen can be shared to a display after connecting the HDMI port of the remote controller. The resolution can be set by entering Settings, Display, and then Advanced HDMI.

Update Firmware

Using DJI Fly

1. Power on the remote controller and make sure it is connected to the internet.
2. Run DJI Fly. A prompt will appear when new firmware is available. Tap the prompt to enter the update screen.
3. Update will start automatically after downloading the latest firmware.
4. The remote controller automatically restarts when the update is complete.



- Make sure the remote controller has a battery level of more than 20% and the memory storage of at least 6.8 GB before updating.
 - The update takes approximately 15 minutes (depending on network strength). Make sure the remote controller is connected to the internet during the whole update process.
-

Appendix

Specification

O3+	
Operation Frequency Range	2.400-2.4835 GHz; 5.725-5.850 GHz*
Max Transmission Distance (Unobstructed, free of interference)	15 km (FCC); 8 km (CE/SRRC/MIC)
Transmission Power (EIRP)	2.4 GHz: <33 dBm (FCC); <20 dBm (CE/SRRC/MIC) 5.8 GHz: <33 dBm (FCC); <14 dBm (CE); <23 dBm (SRRC)
Wi-Fi	
Protocol	802.11b/a/g/n/ac/ax 2x2 MIMO
Operation Frequency Range	2.400-2.4835 GHz; 5.725-5.850 GHz*
Transmission Power (EIRP)	2.4 GHz: <26 dBm (FCC); <20 dBm (CE/SRRC/MIC) 5.8 GHz: <26 dBm (FCC/SRRC); <14 dBm (CE)
Bluetooth	
Protocol	Bluetooth 5.1
Operation Frequency Range	2.400-2.4835 GHz
Transmission Power (EIRP)	<8 dBm
General	
Battery	Li-ion (5000 mAh @ 7.2 V)
Charging Type	Recommended to use USB chargers rated 12V or 15V
Rated Power	12 W
Storage Capacity	ROM 32GB + expandable storage via microSD card
Charging Time	2 hours (using a USB charger rated 12V) 1.5 hours (using a USB charger rated 15V)
Operating Time	3 hours
Video Output Port	Mini HDMI Port
Operation Temperature Range	-10° to 40° C (14° to 104° F)
Storage Temperature Range	Less than one month: -30° to 60° C (-22° to 140° F) One to three months: -30° to 45° C (-22° to 113° F) Three to six months: -30° to 35° C (-22° to 95° F) More than six months: -30° to 25° C (-22° to 77° F)
Charging Temperature Range	5° to 40° C (41° to 104° F)
Supported Aircraft Models**	DJI Mavic 3; DJI Air 2S
GNSS	GPS+GLONASS+Galileo
Weight	Approx. 680 g
Model	RM510

* 5.8 GHz is unavailable in some countries due to local regulations.

** The DJI RC Pro will support more DJI aircraft in future. Visit the official website for the latest information.

DJI Support
<http://www.dji.com/support>

This content is subject to change.



Download the latest version from
<https://www.dji.com/rc-pro/downloads>

If you have any questions about this document, please contact
DJI by sending a message to **DocSupport@dji.com**.

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