

DJI RC Pro

Quick Start Guide

Disclaimer

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This document is available in various languages. In the event of divergence among different versions, the English version shall prevail.

Important

Stay alert when using the **DJI Smart Controller V2.0** to control an Unmanned Aerial Vehicle (UAV). Carelessness may result in serious harm to yourself and others. Download and read the user manuals for the aircraft and Smart Controller V2.0 before using for the first time.

1. Fully charge the remote controller before each flight.
2. The remote controller will sound an alert if it is powered on but has not been used for five minutes. It will automatically power off after a further 30 seconds. Move the control sticks or perform any other remote controller action to cancel the alert.
3. Make sure the antennas of the remote controller are unfolded and adjusted to the proper position for optimal transmission.
4. Contact DJI Support to repair or replace the antennas if they are damaged. Damaged antennas greatly decrease performance.
5. Link the remote controller and the aircraft every time the aircraft is changed.
6. Make sure to power off the aircraft before the remote controller.
7. Fully charge the remote controller every three months.
8. Charge the remote controller immediately if the power level reaches 0%. Otherwise, the remote controller may be damaged due to being over discharged for an extended period. Discharge the remote controller to between 40% and 60% if stored for an extended period.
9. DO NOT cover the air vent or the air intake on the remote controller. Otherwise, the performance of the remote controller may be affected due to overheating.
10. DO NOT disassemble the remote controller without the assistance of a DJI authorized dealer. Contact DJI or a DJI authorized dealer to replace the components of the remote controller.

Introduction

The DJI Smart Controller V2.0 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 ^[1] at a distance of up to 12 km ^[2]. Users can connect to the internet via Wi-Fi or by using a 4G dongle and the Android operating system comes with a variety of functions such as Bluetooth and GNNS.

The built-in 5.5-in high brightness 1000 cd/m² screen boasts a resolution of 1920×1080 pixels while the remote controller comes with a wide range of aircraft and gimbal controls as well as customizable buttons and has a maximum operating time of 3 hours ^[3].

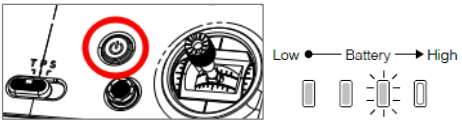
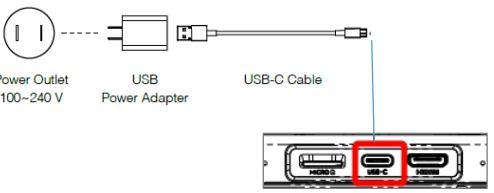

Overview

The image contains three line drawings of the DJI Smart Controller V2.0 from different perspectives: top, front, and back. Each part is labeled with a number in a blue box. The top view shows the control sticks, buttons, and the large touchscreen. The front view shows the gimbal dials, record button, status LEDs, and battery level LEDs. The back view shows the air vents, control stick storage slots, customizable buttons, speaker, and air intake.

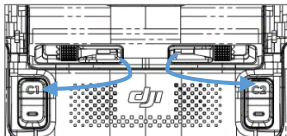
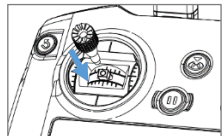
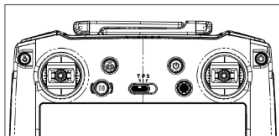
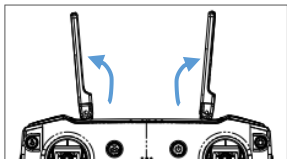
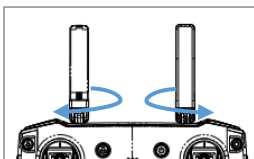
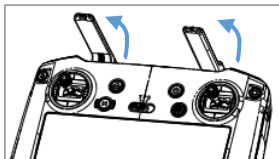
- Antennas
- Back Button/Function Button
- Control Sticks
- RTH Button
- Flight Pause Button
- Flight Mode Switch
- 5D Button
- Power Button
- Confirm Button/Customizable Button C3
- Touchscreen
- microSD Card Slot
- USB-C Port
- Mini HDMI Port
- Gimbal Dial
- Record Button
- Status LED
- Battery Level LEDs
- Focus/Shutter Button
- Camera Settings Dial
- Air Vent
- Control Sticks Storage Slots ^[4]
- Customizable C1 Button
- Speaker
- Customizable C2 Button
- Air Intake

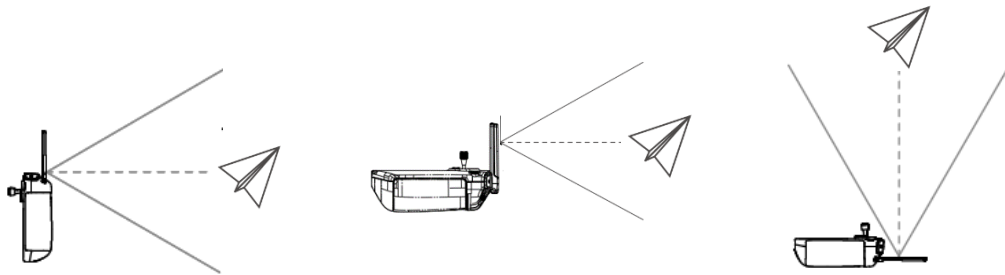
- [1] Only available with aircraft that support O3. Refer to the Specifications for more information on supported aircraft.
- [2] The Smart Controller V.2 can reach its maximum transmission distance (FCC) in a wide open area with no electromagnetic interference using a MAVIC™ 3 at an altitude of approximately 120 meters.
- [3] The maximum operating time was tested in a lab environment and is for reference only.
- [4] A pair of control sticks are stored in the control sticks storage slot before delivery. The control sticks have already been mounted to the remote controller in the illustration in the Overview section.

1. Battery Level and Charging

<p>Press the power button to check the battery level.</p> <p>Press once and then press and hold or hold for a few seconds to power the remote controller on or off.</p>	
<p>It takes approximately two and a half hours to fully charge the remote controller using a standard USB power adapter.</p>	
	<ul style="list-style-type: none"> It is recommended to use an FCC/CE certified USB power adapter 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.

2. Preparing the Smart Controller V2.0

		
<p>Remove the control sticks from the storage slots</p>	<p>Attach the control sticks and twist to secure</p>	<p>Control sticks attached</p>
		
<p>Unfold the antennas</p>	<p>Rotate the antennas</p>	<p>Lift the antennas</p>



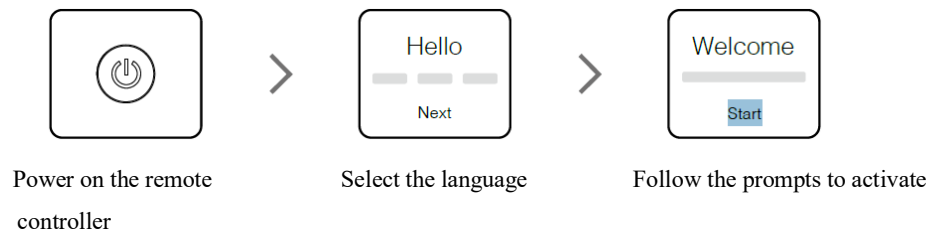
The optimal transmission range is where the antennas are facing toward the aircraft and the angle between the antennas and the back of the remote controller is 180° or 270°.

The illustrations above show situations where the operator and aircraft are far away.

	<ul style="list-style-type: none"> ● Make sure the control sticks are firmly mounted. ● 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.
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3. Activating the Smart Controller V2.0

The remote controller needs to be activated before using for the first time. An internet connection is required for activation.




	<p>Check the internet connection if activation fails. Try to activate the remote controller again if the internet connection is normal. Contact DJI if activation fails several times.</p>
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4. Linking

The remote controller is already linked to the aircraft when it is purchased together as part of a combo. Otherwise, follow the steps below to link the remote controller and the aircraft after activation.

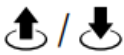
1. Power on the remote controller and the aircraft.
2. Press the customizable button C1, customizable button C2, and the record button simultaneously. The status LED will blink blue and the remote controller will beep twice to indicate linking has started.
3. Press the linking button of the aircraft. The status LED of the remote controller will turn solid green if linking is successful.

	<ul style="list-style-type: none"> ● Refer to the DJI Smart Controller V2.0 User Manual for more information about linking. ● To download the user manual, visit http://www.dji.com/dji-smart-controller
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5. Flight

-  Before takeoff, make sure that takeoff is permitted in the camera view of DJI Fly.

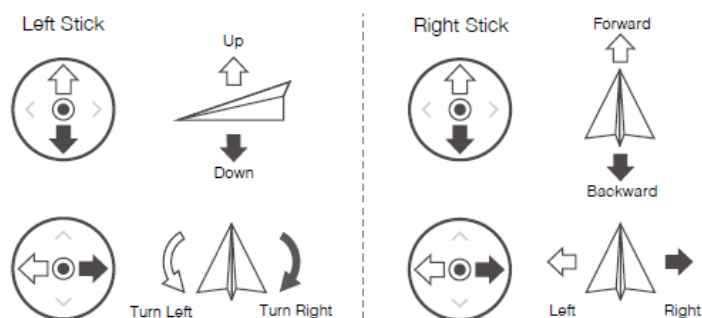
- **Auto Takeoff/Landing**


	Tap this icon in the camera view. When the prompt appears, press and hold the button to initiate auto takeoff or landing.
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- **Manual Takeoff/Landing**

<p>Perform combination stick command to start/stop the motors.</p>			
	<p>Takeoff</p> <p>Slowly push the left control stick (Mode 2) up to take off.</p>		<p>Landing</p> <p>Slowly push the left control stick down until the aircraft lands. Hold for three seconds to stop the motors.</p>

The default control stick mode is Mode 2. The left control stick controls the altitude and heading of the aircraft, while the right control stick controls the forward, backward, and sideward movements. The gimbal dial controls the tilt of the camera.



	<ul style="list-style-type: none"> ● The motors can only be stopped mid-flight when the flight controller detects a critical error. ● Make sure the remote controller is linked to the aircraft.
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Specifications

O3 (OcuSync 3.0)	
Operation Frequency Range	2.400-2.4835 GHz; 5.725-5.850 GHz*
Max Transmission Distance (Unobstructed, free of interference)	12 km (FCC); 8 km (CE); 8 km (SRRC); 8 km (MIC)

Transmission Power (EIRP)	<p>2.400-2.4835 GHz:</p> <p>32.0dBm (FCC); 18.5 dBm (CE)</p> <p>18.5 dBm (SRRC); 18.5 dBm (MIC)</p> <p>5.725-5.850 GHz:</p> <p>33.5dBm (FCC); 12.5 dBm (CE)</p> <p>18.5 dBm (SRRC)</p>
Wi-Fi	
Protocol	<p>WiFi Direct, Wi-Fi Display, 802.11b/a/g/n/ac/ax</p> <p>2×2 MIMO</p>
Operation Frequency Range	2.400-2.4835 GHz; 5.725-5.850 GHz*
Transmission Power (EIRP)	<p>2.400-2.4835 GHz:</p> <p>28.0dBm (FCC); 18.5 dBm (CE)</p> <p>18.5 dBm (SRRC); 18.5 dBm (MIC); 18.5 dBm (KCC)</p> <p>5.725-5.850 GHz:</p> <p>28dBm (FCC); 12.5 dBm (CE)</p> <p>24 dBm (SRRC); 12.5 dBm (KCC)</p>
Bluetooth	
Protocol	Bluetooth 5.1
Operation Frequency Range	2.400-2.4835 GHz
Transmission Power (EIRP)	<p>6 dBm (FCC); 6 dBm(CE)</p> <p>6 dBm (SRRC); 6 dBm (MIC); 6 dBm (KCC)</p>
General	
Battery	18650 Li-ion (5000 mAh @ 7.2 V)
Charging Type	Recommended to use USB power adapters rated 12V or 15V
Rated Power	12 W
Storage Capacity	ROM 32GB + expandable storage via microSD card
Charging Time	2.5 hours (using a USB power adapter rated 12V)
Operating Time	3 hours
Video Output Port	Mini HDMI Port
Operation Temperature Range	-20° to 40° C (-4° to 104° F)
Storage Temperature Range	<p>Less than one month: -30° to 60° C (-22° to 140° F)</p> <p>One to three months: -30° to 45° C (-22° to 113° F)</p> <p>Three to six months: -30° to 35° C (-22° to 95° F)</p>

	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**	Mavic 3, DJI Air 2S, Mavic Air 2
GNSS	GPS+GLONASS
Weight	Approx. 750 g
Model	RM510

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

** The Smart Controller V2.0 will support more DJI aircraft in future. Visit the official website for the latest information.

FCC compliance statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

ISED compliance statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes :

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The portable device is designed to meet the requirements for exposure to radio waves established by the Federal Communications Commission (USA). These requirements set a SAR limit of 4W/kg averaged over 10 gram of tissue. The highest SAR value reported under this standard during product certification for extremity condition.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The portable device is designed to meet the requirements for exposure to radio waves established by the ISED. These requirements set a SAR limit of 4W/kg averaged over 10 gram of tissue. The highest SAR value reported under this standard during product certification for extremity condition.

The user or bystander cannot touch or be within the closest distance evaluated for the SDR antennas while fully extended or in the 90 degree position.

Cet équipement est conforme aux limites d'exposition aux rayonnements de l'ised pour les environnements non contrôlés. L'utilisateur final doit se conformer à des instructions d'exploitation spécifiques afin de respecter la conformité à l'exposition aux radiofréquences. Cet émetteur ne doit pas être au même endroit ni fonctionner avec une autre antenne ou un autre émetteur.

L'équipement portatif doit être conçu de manière à satisfaire aux exigences d'exposition aux ondes radio spécifiées dans l'ised. Ces exigences fixent une limite SAR de 4 W / kg pour les tissus dépassant en moyenne 10 G. La valeur SAR la plus élevée rapportée conformément à la présente norme pendant la certification du produit dans des conditions extrêmes.

Lorsque l'antenne SDR est complètement étendue ou en position de 90 degrés, l'utilisateur ou le spectateur ne peut pas toucher ou se trouver à l'intérieur de la distance la plus proche évaluée par l'antenne SDR.