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dji RC Motion 3 B and C Camera

dji RC Motion 3 B and C Camera User Manual

Contents

dji RC Motion 3 B and C Camera

Specifications

- **Product Name:** DJI RC Motion 3
- **Version:** v1.0 2024.04

Product Information

- **Product Profile**

  The DJI RC Motion 3 is a remote controller designed for operating DJI UAVs. It features various buttons and controls for flight operations and camera control.

- **Introduction**

  The DJI RC Motion 3 provides users with precise control over their UAVs, enhancing the flying experience and enabling smooth aerial photography.

- **Overview**

  The controller includes battery level LEDs, a lock button, joystick, mode button, shutter/record button, accelerator, dial, USB-C port, power button, and lanyard hole for convenience and functionality.

- **Button Features**

  The lock button secures the controls during flight, the joystick is used for directional control, the mode button switches between flight modes, and the shutter/record button captures media.

Product Usage Instructions

Preparing DJI RC Motion 3

- **Powering On/Off:** Press and hold the power button to turn the controller on or off.
- **Charging the Battery:** Connect the controller to a power source using the USB-C port for charging.
- **Linking:** Follow the UAV's manual to link the controller to the aircraft.
- **Activation:** Activate the controller as per the manufacturer's instructions.

- **Updating Firmware:** Keep the controller's firmware up to date for optimal performance.

Using the Motion Controller

- **Flight Operations:** Perform take-offs, landings, and control aircraft orientation using the joystick and buttons.
- **Controlling Gimbal and Camera:** Use the dial and buttons to adjust camera angles and settings.
- **Switching Flight Modes:** Utilize the mode button to switch between different flight modes for varied flying experiences.
- **Motion Controller Calibration:** Calibrate the controller as needed for accurate control inputs.

FAQ

- **Q: How do I charge the battery of the DJI RC Motion 3?**
  A: Use the included USB-C cable to connect the controller to a power source for charging. Ensure the controller is powered off during charging.
- **Q: Can I use the DJI RC Motion 3 with all DJI UAV models?**
  A: The compatibility of the controller may vary with different UAV models. Refer to the product specifications or DJI's website for compatibility information.

Using the Manual

Legend

Read Before the First Flight
DJITM provides users with tutorial video and the following documents.

1. User Guide

2. User Manual

It is recommended to watch the tutorial video and read the user 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 tutorial video, which demonstrates how to use the product safely.

https://s.dji.com/guide75

Download the DJI Fly App
Scan the QR code to download the latest version.

- The Android version of DJI Fly is compatible with Android v7.0 and later. The iOS version of DJI Fly is compatible with iOS v11.0 and later.

- The interface and functions of DJI Fly may vary as the software version is updated. Actual usage experience is based on the software version used.

Download DJI Assistant 2
Download DJI ASSISTANTTM 2 (Consumer Drones Series) at: **https://www.dji.com/downloads/softwares/dji-assistant-2-consumer-drones-series**

Product Profile

Introduction
DJI RC Motion 3 (hereinafter referred to as motion controller) features a streamlined design for a comfortable grip. Paired with compatible aircrafts, the function buttons on the body enable users to easily control the aircraft and remotely change the aircraft settings. The motion controller supports intuitive body movement control, offering efficiency and ease for your flights. Paired with DJI Goggles 3 (hereinafter referred to as goggles), the motion controller can be used to control an AR cursor to navigate the menu on the screen of the goggles.

Overview
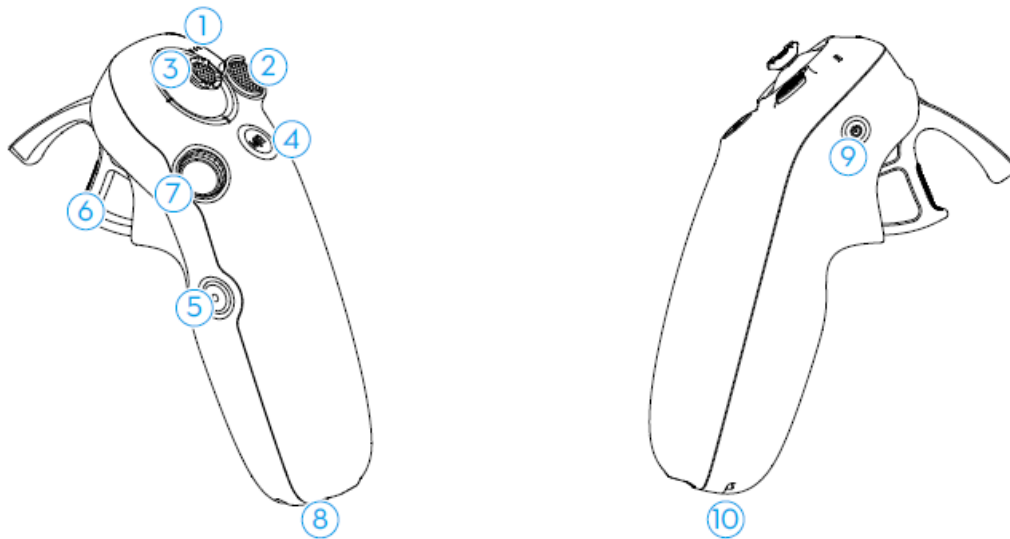
1. Battery Level LEDs
2. Lock Button
3. Joystick
4. Mode Button
5. Shutter/Record Button
6. Accelerator
7. Dial
8. USB-C Port
9. Power Button
10. Lanyard Hole

Button Features

- **Lock Button**
  - Takeoff: Press twice to start the aircraft motors, then press and hold to make the aircraft take off. The aircraft will ascend to approximately 1.2 m and hover.
  - Landing: While the aircraft is hovering, press and hold to land the aircraft and stop the motors.
  - Brake: Press during flight to make the aircraft brake and hover in place.
- **Joystick**
  - Move up or down to make the aircraft ascend or descend.
  - Move left or right to make the aircraft move left or right horizontally.
  - For aircraft that support Easy ACRO, move the joystick to perform different Easy ACRO actions when Easy ACRO is enabled.

- **Mode Button**
  - Press to switch between Normal and Sport mode.
  - Press and hold to initiate RTH. When the aircraft is performing RTH, press the mode button or lock button once to cancel RTH.
  - When the battery level is low and only sufficient to fly to the Home Point, a warning prompt will appear in the goggles and RTH will be triggered following the prompt. Press the mode button once to cancel the prompt.
- **Dial**
  - Press twice to switch between the flight liveview and Real View in the goggles.
  - Scroll up or down to tilt the camera before takeoff or during RTH and landing.
  - Scroll the dial to switch between Easy ACRO actions when Easy ACRO is enabled.
 - Press and hold the dial to recenter the cursor on the screen when using AR Cursor.

- **Shutter/Record Button**
  - Press once: Take a photo or start or stop recording.
 - Press and hold: Switch between photo and video mode.
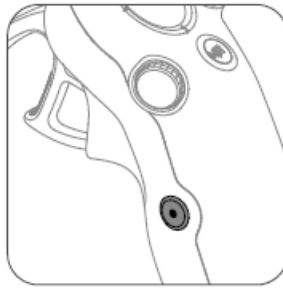
- **Accelerator**
  - The accelerator is used for controlling aircraft orientation and acceleration. There are two stops when pressing the accelerator. After gently pressing the accelerator, users will feel noticeable resistance when the accelerator reaches the first stop.
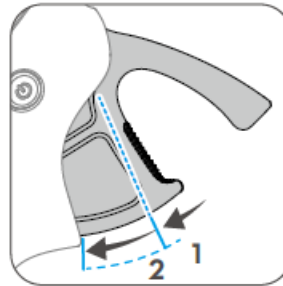

  - After gently pressing the accelerator to the first stop, users can adjust the aircraft orientation by tilting the top of the motion controller to the left or right. Note that the aircraft will not fly forward at this time.
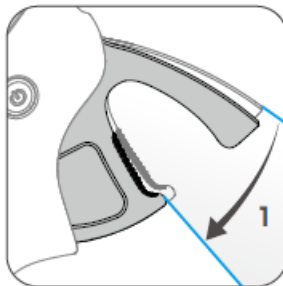
  - Press the accelerator past the first stop to fly in the direction of the circle in the goggles.
  - Push the accelerator forward to fly the aircraft backward. Apply more pressure in either direction to accelerate.
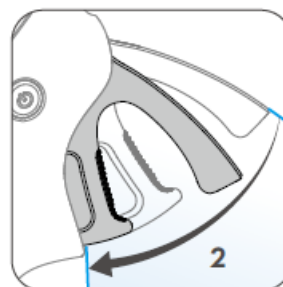
  - When the accelerator is not being pressed, the aircraft will hover.


Preparing DJI RC Motion 3
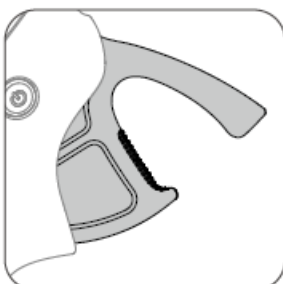
 Go to the address below or scan the QR code to watch the tutorial video before using for the first time.

**https://www.dji.com/rc-motion-3/video**

Powering On/Off

- Press the power button once to check the current battery level. Charge before using if the battery level is too low.
- Press once then press again and hold for two seconds to power the motion controller on or off.
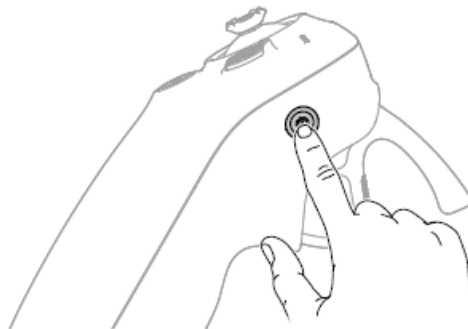
Charging the Battery
Connect the charger to the USB-C port on the motion controller, and charge the motion controller until at least three LEDs are lit up.

5V, 2A
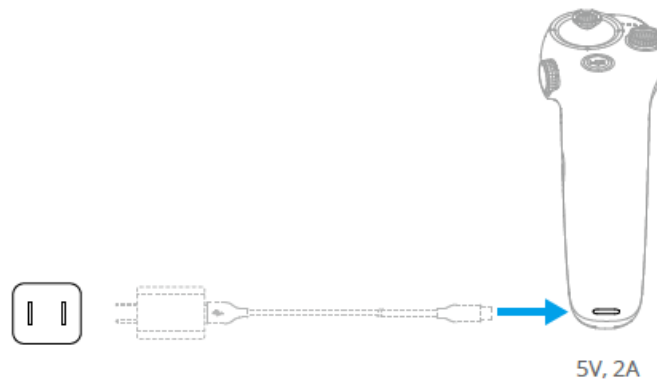
- Fully charge the remote controller before each flight. The remote controller sounds an alert when the battery level is low.
- Fully charge the battery at least once every three months to maintain good battery health.

Linking
Make sure that the devices used with the aircraft have been updated to the latest firmware version and the devices have been powered on.

1. Linking the motion controller and the goggles

   1. Press and hold the power button on the goggles until it start to beep continuously and the battery level LEDs start to blink in sequence.
   2. Press and hold the power button on the motion controller until it starts to beep continuously and the battery level LEDs start to blink in sequence.
   3. Once linking is successful, the goggles and the motion controller stop beeping and both the battery level LEDs turn solid and display the battery level.

2. **Linking the aircraft and the goggles**

   1. Press and hold the power button on the aircraft until it beeps once and the battery level LEDs start to blink in sequence.
   2. Press and hold the power button on the goggles until the goggles start to beep continuously and the battery level LEDs start to blink in sequence.
   3. Once linking is completed, the battery level LEDs of the aircraft turn solid and display the battery level, the goggles stop beeping, and image transmission can be displayed normally.

- Make sure the devices are within 0.5 m of each other during linking.
- Restart the devices if the devices fail to link. Connect the goggles to a mobile device, run the DJI Fly app, select Connection Guide, and then follow the on-screen instructions to link.
- The aircraft can be controlled with only one remote control device during flight. If your aircraft has been linked with multiple remote control devices, turn off the other remote control devices before flight.

Activation

When all devices are powered on and linked, connect the USB-C port of the goggles to the mobile device and run the DJI Fly app. The app will automatically identify the motion controller and activate it in silent mode. Users can also connect the motion controller to DJI Assistant 2 (Consumer Drone Series) to activate. Activate the device as soon as possible after purchase to avoid affecting the after-sales service.
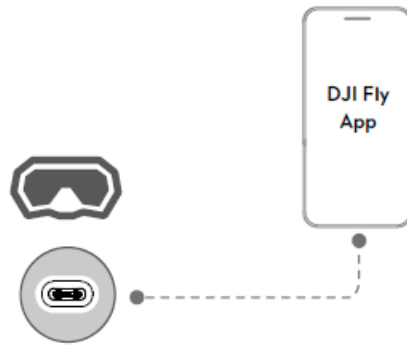
Updating Firmware

A prompt will appear in DJI Fly when new firmware is available. Update the firmware whenever prompted to ensure optimal user experience. Refer to "Updating Firmware" for more information.

Using the Motion Controller

Flight Operations

Taking Off, Braking and Landing

- Use the lock button to control the takeoff, landing, and braking of the aircraft.


  - Takeoff: Press twice to start the aircraft motors, then press and hold to make the aircraft take off. The aircraft will ascend to approximately 1.2 m and hover.
  - Landing: While the aircraft is hovering, press and hold to land the aircraft and stop the motors.
  - Brake: Press during flight to make the aircraft brake and hover in place.
- It is recommended to watch the tutorial guide in the goggles before the first flight. Go to Settings > Control > Motion Controller > Flight Control > Motion Controller Instructions.
- After the aircraft motors have been started by double-pressing the lock button, slowly push the joystick up to make the aircraft take off.
- When Easy ACRO is disabled, once the aircraft flies to the landing position, gently push the joystick downwards to land the aircraft. After landing, push the joystick down and hold in position until the motors stop.
- If an emergency occurs (such as a collision or the aircraft is out of control) during flight, pressing the lock button four times will trigger Stop Motors Mid-flight, which will stop the aircraft motors immediately. The Stop Motors Mid-flight function will cause the aircraft to crash. Operate with caution.
- To ensure flight safety when using the motion controller, press the lock button once to brake and hover before operating the goggles. Failure to do so is a safety risk and may lead to the aircraft losing control or injury.

Flying Forward and Backward

Press or push the accelerator of the motion controller to fly forward or backward. Apply more pressure when pressing or pushing to accelerate. Release to stop and hover.
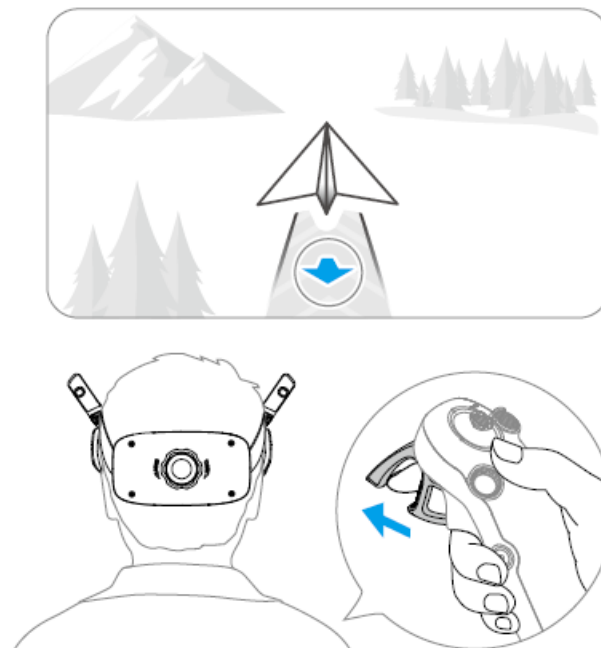
- **Flight Trajectory**
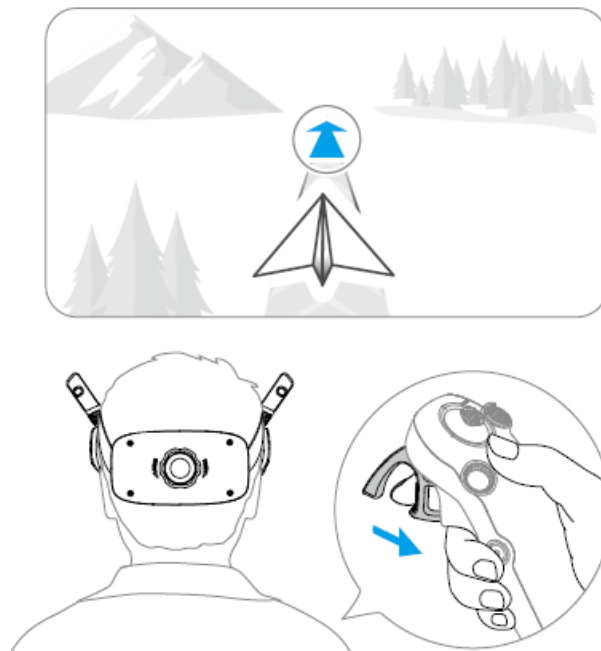
  - **Remarks**

    Press the accelerator past the first stop to fly in the direction of the circle in the goggles.

- Push the accelerator forward to fly the aircraft backward.


- **Adjusting Aircraft Orientation**

  After gently pressing the accelerator to the first stop, users can adjust the aircraft orientation by tilting the top of the motion controller to the left or right. The greater the tilt angle of the motion controller, the faster the aircraft will rotate. The circle in the goggles will move left and right and the flight liveview will change accordingly.
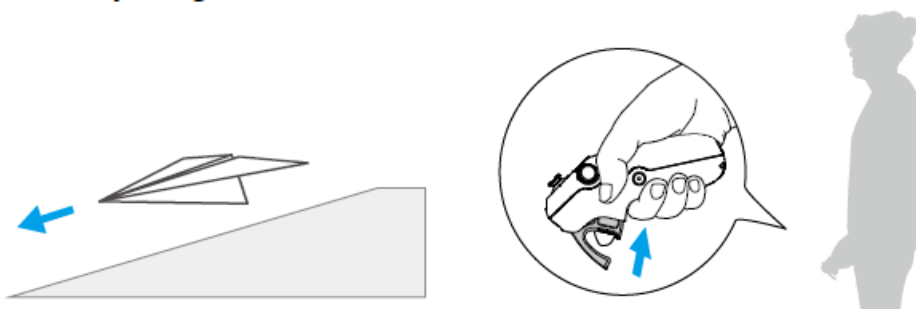
- **Making the Aircraft Ascend or Descend at an Angle**

  When the aircraft needs to fly at an upward angle, press the accelerator to the second stop while simultaneously tilting the motion controller up.
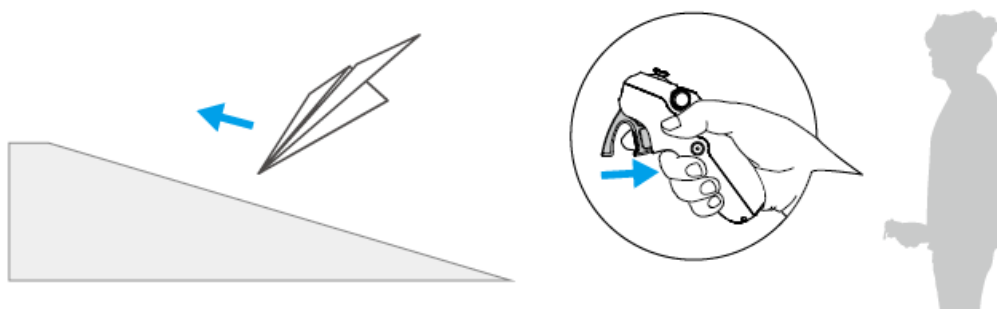

  When the aircraft needs to fly at an downward angle, press the accelerator to the second stop while simultaneously tilting the motion controller down.

- **Controlling the Gimbal and Camera**

  Tilt the motion controller up and down to control the tilt of the gimbal. The tilt of the gimbal changes with the tilt of the motion controller accordingly and is always consistent with the orientation of the motion controller. The circle in the goggles will move up and down and the flight liveview will change accordingly.
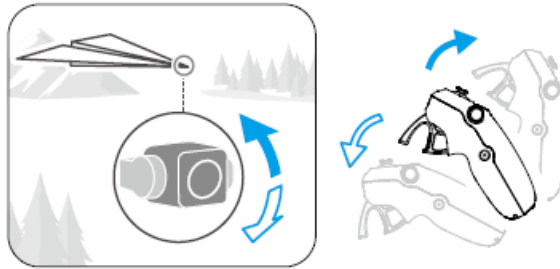
- **Switching Flight Modes**
  - The motion controller has two modes: Normal mode and Sport mode. Normal mode is enabled by default.
  - Press the mode button once to switch between Normal mode and Sport mode. While flying in Sport mode, the flight speed of the aircraft will be faster. The operation logic of the motion controller remains the same in Sport mode as it is in Normal mode.
  - Refer to the section "Flight Modes" to know more about the difference between each flight mode.


Easy ACRO (Only for Certain Aircraft)
Use the motion controller to perform Easy ACRO actions including front flip, backflip, roll, and 180° drift.
For flight safety, perform Easy ACRO actions in an open environment.

1. Open the shortcut menu and select Easy ACRO. The aircraft will be in Easy ACRO mode. Easy ACRO includes three actions: Slide, 180° Drift, and Flip. View the selected action on the left side of liveview in the goggles.
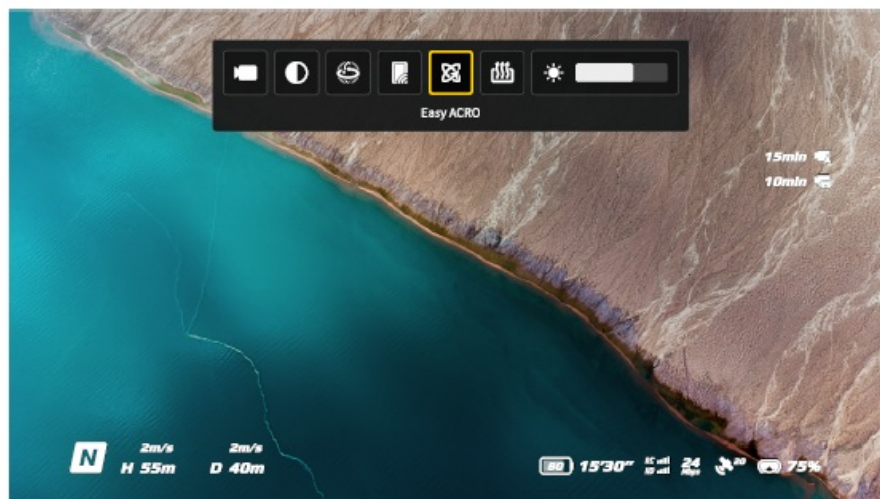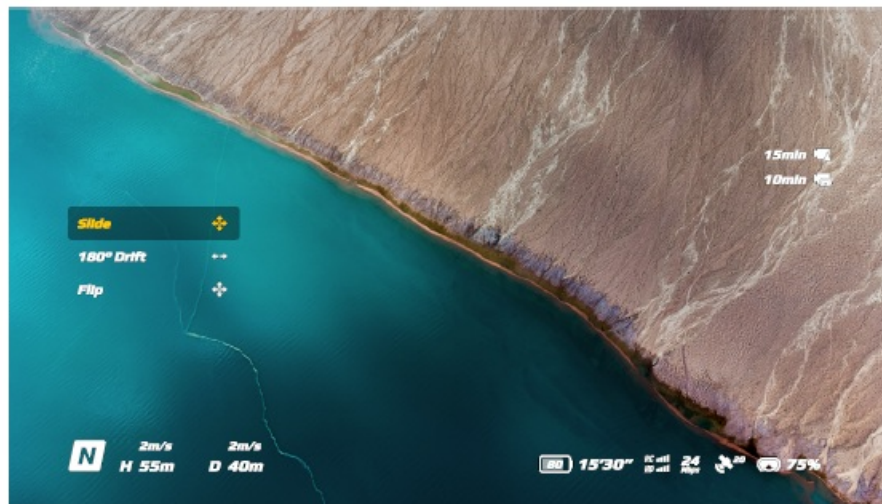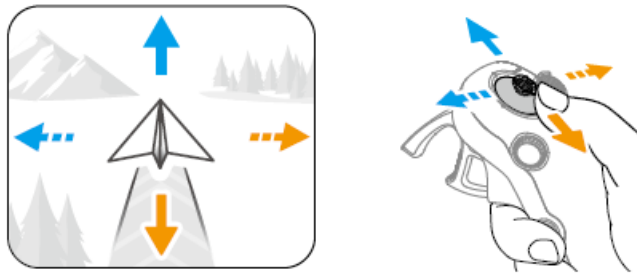
2. Use the dial on the motion controller to switch between Easy ACRO actions.

3. When Easy ACRO is enabled, move the joystick to perform different Easy ACRO actions as shown below.
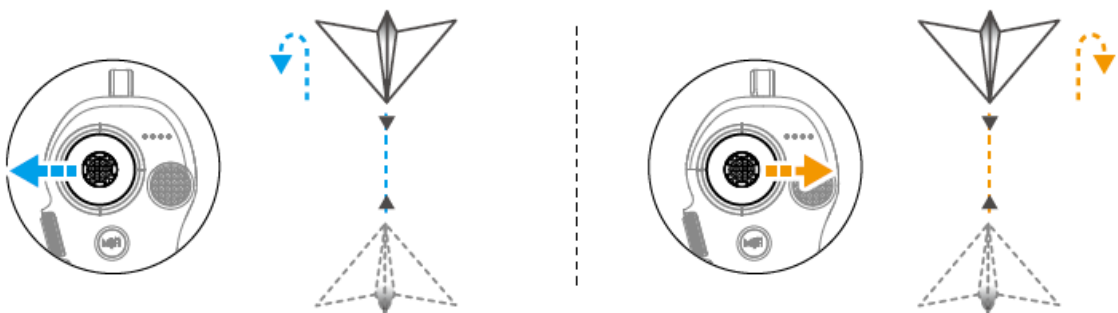
- **Slide**
  - Push the joystick up or down to make the aircraft ascend or descend.
  - Push the joystick left or right to make the aircraft move left or right horizontally.
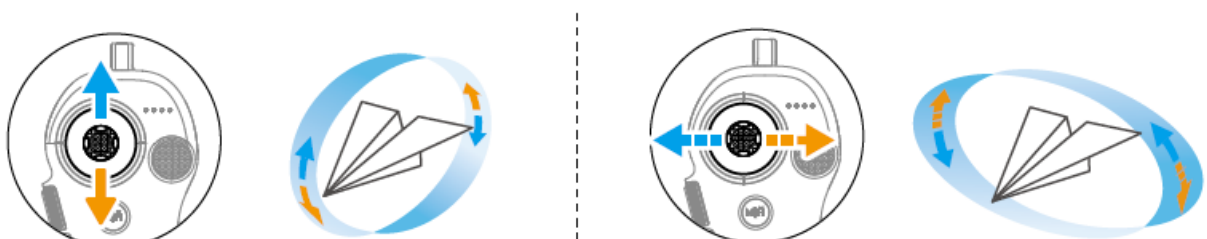

- **180° Drift**
  - Push the joystick left or right to make the aircraft 180° drift left or right.
  - The aircraft will not respond when pushing the joystick up or down in this action mode.

- **Flip**
  - Push the joystick up or down to make the aircraft perform a front flip or backflip. Push the joystick left or right to make the aircraft do one roll to the left or right.


- Easy ACRO cannot be enabled in the following situations:
  - When recording video;

- When Head Tracking is enabled;
- When used with DJI FPV Remote Controller 3.
- Pay attention to surroundings and make sure there are no obstacles nearby before performing Easy ACRO actions.
- Easy ACRO is unavailable in the following situations:
  - The aircraft is taking off, hovering, landing, or returning to home;
  - The aircraft is in Sport mode;
  - The aircraft battery level is lower than 25%;
  - The altitude of the aircraft is less than 1.5m;
  - Flying in an environment with strong wind (wind speed exceeding 10 m/s);
  - The positioning performance is not good (the GNSS signal is weak);
  - The aircraft is in a buffer zone of a Restricted Zone or an Altitude Zone, or is approaching the Max Flight Distance.
- As the attitude angle of the aircraft increases (such as when making high-speed turns or when accelerating or decelerating quickly), the aircraft altitude will also need to be increased, otherwise Easy ACRO cannot be used.
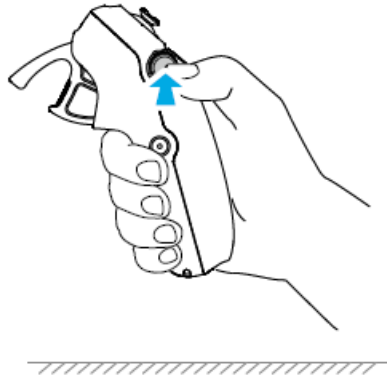
AR Cursor

- AR Cursor is only supported when used with DJI Goggles 3.
- AR Cursor cannot function properly when being used on moving objects, such as cars and ships.

Before takeoff or when using the lock button to trigger the aircraft to hover, users can use the AR Cursor (the white line with a circle at the end) to interact with the screen of the googles.
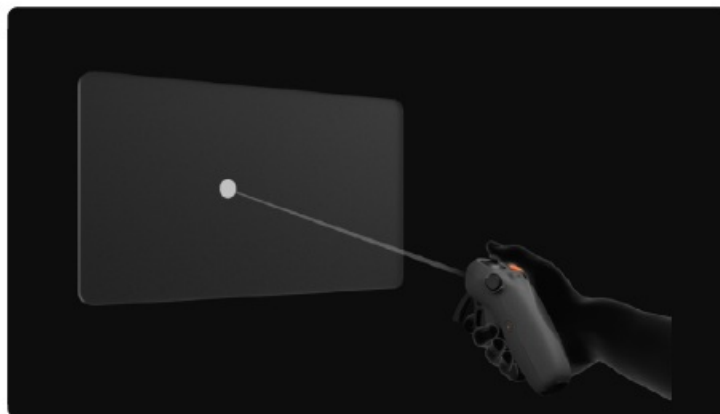

Recenter the Cursor

- If the cursor is not displayed on the screen of the goggles, hold the motion controller as shown below, and then press and hold the dial on the left side of the motion controller to reenter the cursor.

- If the cursor still cannot be found, tilt the motion controller up or down until the cursor appears on the screen.

Operating the Menu

- Using motion controller movements, move the cursor to the arrow on the left side of the screen. Gently press the accelerator to the first stop position, then the cursor will become small and the menu will be opened.
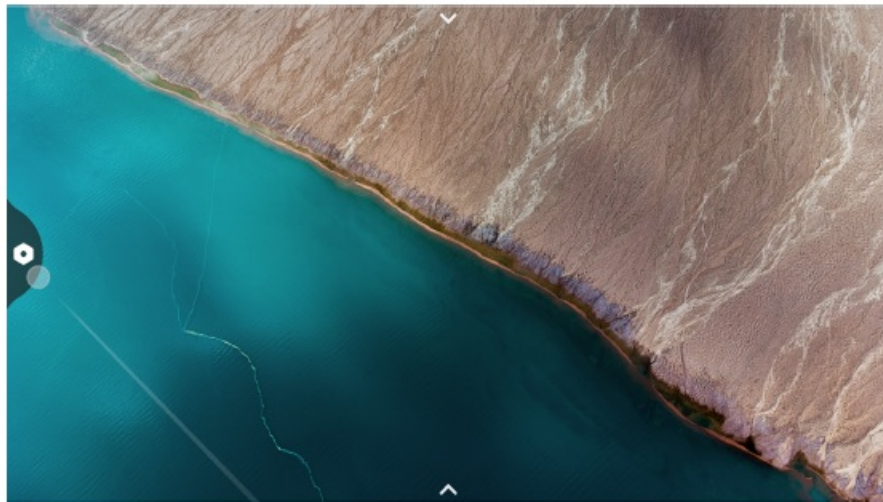
- Use the joystick on the motion controller to scroll up or down in the menu.
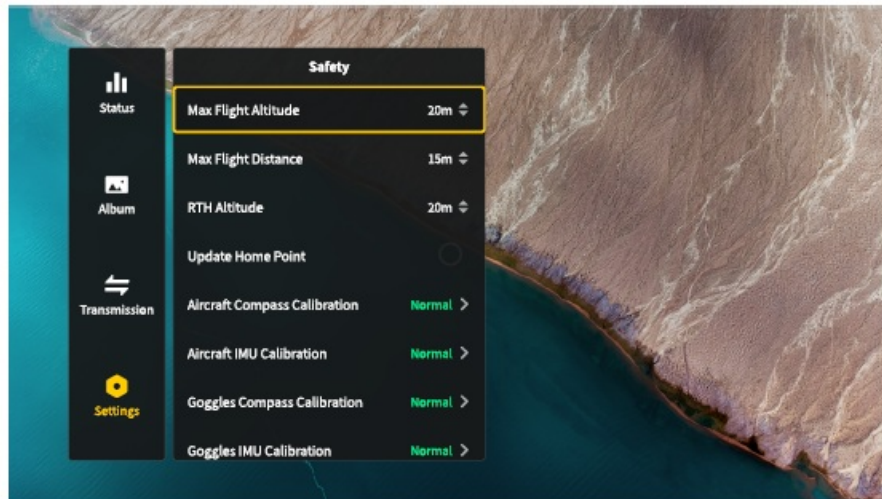
- To exit or return to the previous menu, push the accelerator forward, or gently press the accelerator when the cursor is on any empty spot on the screen.
- Move the cursor to the arrow on the top of the screen, press the accelerator to enter the shortcut menu, and configure settings such as Recording or Enhanced Display.
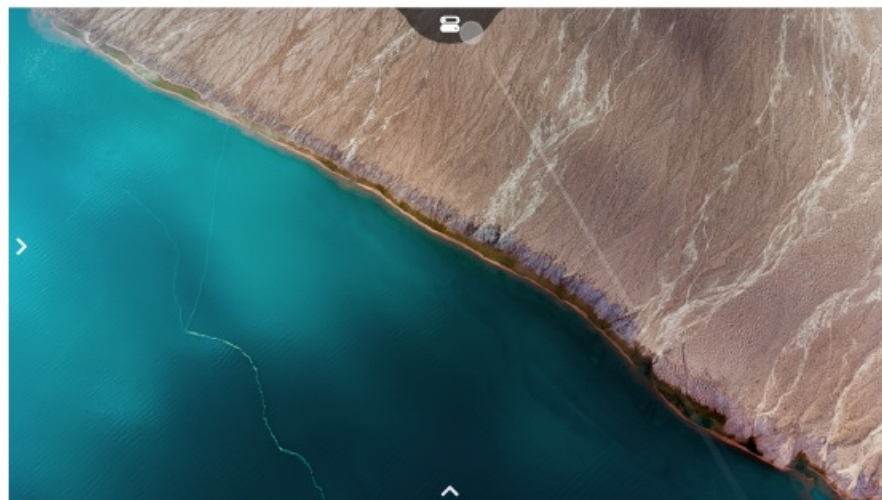
- Move the cursor to the arrow on the bottom of the screen, press the accelerator to enter camera settings, and configure settings for the parameters of the aircraft camera.
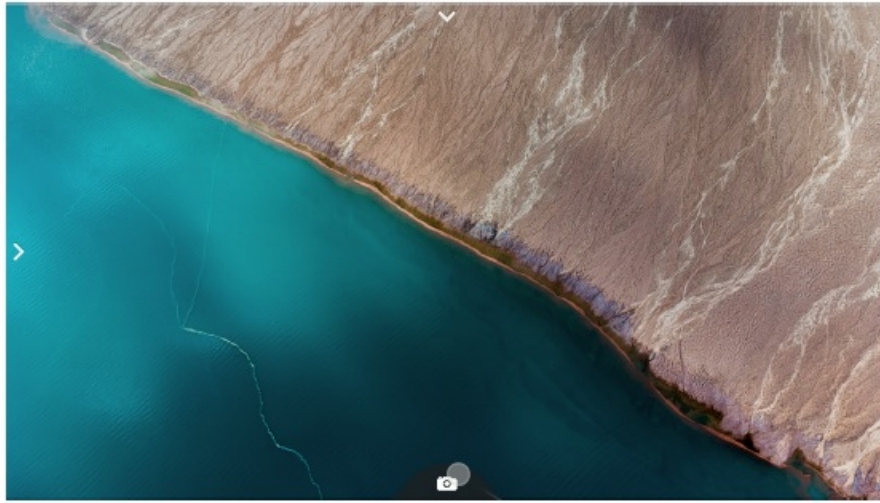
Controlling Video Playback

When previewing photos or videos stored on the microSD card of the goggles, the cursor can be used to control playback, or complete other operations such as:

- Press the accelerator to pause or continue to play, push the accelerator forward to exit.
- Move the cursor left or right while pressing the accelerator down to adjust the progress bar.
- Move the cursor to the arrow on the top of the screen, press down the accelerator to enter playback settings and adjust the screen brightness or volume.

Optimal Transmission Zone

The signal between all the devices is most reliable when the relative distance between the motion controller and the goggles is less than 3 m.

- It is recommended to use the device in an open, outdoor environment to avoid having obstacles between the motion controller and the goggles. Otherwise, the transmission may be affected.
- In order to avoid interference, DO NOT use other wireless devices on the same frequency as the motion controller.

Motion Controller Alert

The remote controller sounds an alert when the battery level is between 6% and 10%. A low battery level alert can be canceled by pressing the power button. A critical battery level alert will sound when the battery level is less than 5% and cannot be canceled. The remote controller sounds an alert during RTH, which cannot be canceled.

Motion Controller Calibration

The compass, IMU, and accelerator of the motion controller can be calibrated. Immediately calibrate any of the modules when prompted to do so:

1. Press down the 5D button in flight liveview to open the menu.
2. Select Settings > Control > Motion Controller > RC Calibration.

3. Select the module and follow the prompts to complete calibration.

- DO NOT calibrate the compass in locations with strong magnetic interference, such as near magnets, parking lots, or construction sites with underground reinforced concrete structures.
- DO NOT carry ferromagnetic materials such as mobile phones during calibration.

Appendix

Specifications

DJI RC Motion 3	
Model	TKMO3
Weight	Approx. 118 g
Operating Frequency	2.4000-2.4835 GHz
Transmitter Power (EIRP)	2.4000-2.4835 GHz: <26 dBm (FCC), <20 dBm (CE/SRRC/MIC)
Max Transmission Distance (unobstructed, free of interference) [1]	With DJI Avata 2 and DJI Goggles 3: FCC: 13 km CE/SRRC/MIC: 10 km
Operating Temperature	-10° to 40° C (14° to 104° F)
Operating Time	Approx. 10 hours* * Measured with an ambient temperature of 25° C (77° F), when connected to DJI Goggles 3, and in a stationary state.
Battery	
Charging Temperature	0° to 50° C (32° to 122° F)
Charging Time	Approx. 2 hours
Charging Type	5 V, 2 A
Battery Capacity	2600 mAh

[1] Measured in an unobstructed outdoor environment free of interference. The above data shows the farthest communication range for one-way, non-return flights under each standard. Always pay attention to RTH reminders on the goggles screen during your flight.

Compatible Products
Visit the following link to view compatible products: **https://www.dji.com/rc-motion-3/faq**

Updating Firmware
Use one of the following methods to update the firmware.

Using DJI Fly App

- **When used with DJI Avata 2:**
  Power on the aircraft, goggles, and motion controller. Make sure all the devices are linked. Connect the USB-C port of the goggles to the mobile device, run DJI Fly, and follow the prompts to update the firmware. Make sure

the mobile device is connected to the internet during the firmware update.

- **When used with other DJI aircraft:**

  Power off the aircraft. Power on goggles and motion controller Connect the USB-C port of the goggles to the mobile device, run DJI Fly, and select Profile > Device Management. Locate the corresponding goggles. Select Firmware Update and follow the on-screen instructions to update the firmware. An internet connection is required during the firmware update.

Using DJI Assistant 2 (Consumer Drones Series)

1. Power on the device. Connect the USB-C port of the device to the computer using a USB-C cable.
2. Launch DJI Assistant 2 and log in with a DJI account.
3. Select the device and click Firmware Update on the left side of the screen.
4. Select the firmware version.
5. The firmware will be downloaded and updated automatically.
6. The device will restart automatically after the firmware update is complete.

- Make sure to follow all the steps to update the firmware, otherwise the update may fail.
- Make sure the computer is connected to the internet during the update.
- Do not unplug the USB-C cable during an update.
- The firmware update will take several minutes. Please wait patiently for the firmware upgrade to complete.
- Before performing an update, make sure the device is at least 15% charged.
- Note that the update may reset the parameters. Before updating, take note of your preferred settings and reconfigure them after the update.

Visit the following link and refer to the Release Notes for firmware update information: **https://www.dji.com/rc-motion-3/downloads**

Aftersales Information
Visit **https://www.dji.com/support** to learn more about aftersales service policies, repair services, and support.

WE ARE HERE FOR YOU

Contact DJI SUPPORT

This content is subject to change.

https://www.dji.com/rc-motion-3/downloads

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

Documents / Resources

DJI RC MOTION 3 User Manual	**dji RC Motion 3 B and C Camera** [pdf] User Manual RC Motion 3, RC Motion 3 B and C Camera, B and C Camera, Camera

References

- **User Manual**