

# DJI Flight Simulator

User Manual v1.2

2019.05



### **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.

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

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## Disclaimer

Read this disclaimer and the Privacy Policy and User Agreement in DJI Flight Simulator (hereinafter referred to as “product”) carefully before using. By using this product, you acknowledge that you have read in full, and agreed to this disclaimer, the Privacy Policy and User Agreement. Please install and use this product in strict accordance with the User Manual. SZ DJI TECHNOLOGY CO., LTD. and its affiliated companies assume no liability for damage(s) or injuries incurred directly or indirectly from using this product improperly.

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## Product Profile

### Introduction

The DJI Flight Simulator is a professional pilot training software for the enterprise. Adapting DJI's leading flight control technology for simulation to simulate the aircraft models and scenarios, the Flight Simulator recreates the natural flying experience and provides enterprise users with a complete training solution, including basic skills training, free flight, and application training. The Flight Simulator is Windows-based, and is compatible with many DJI remote controllers\*. It is also available to operate in the software with the keyboard.



- Make sure that the computer has access to the Internet when using the DJI Flight Simulator.
- 

### Versions

Currently, the Flight Simulator has three versions. Free Trial version, Enterprise version, and Energy version. Details on how to access the three versions and the functions included (modules and aircraft) will be explained below.

### Free Trial Version

#### How to Access

Visit the product page on the official DJI website to download the installation file. Refer to the following text for installation and launching.

### Functions

\* Support for more DJI remote controllers will be available as testing and development continues. Visit the DJI Flight Simulator product page on [dji.com](http://www.dji.com) for the most up-to-date list. <http://www.dji.com/simulator>

## 1. Modules

Free Flight Module: Includes Free Flight-City, Free Flight-Island, and Free Flight-Hangar.

Entertainment Module: Includes Time Trial and Tunnel Run.

## 2. Aircraft Supported

Mavic 2 Pro, Mavic 2 Zoom, Mavic Air, Mavic Pro, Spark, Phantom 4 Pro, and Inspire 1 Pro.

## Enterprise Version / Energy Version

### How to Access

Visit the product page on the official DJI website and input your information at the bottom, and then wait for a DJI authorized dealer to contact with you. You will receive an activation code after successful purchase. Refer to the following text for installation and launching.

### Functions

## 1. Modules

Skills Training Module: Includes Tutorials, Hovering Test, Fly Track Test, UTC Pylon Inspection Test Process, and DJI Internal Aircraft Skill Test Process.

Free Flight Module: Includes Free Flight-City, Free Flight-Island, Free Flight-Hangar, Free Flight-Mountain, and Free Flight-Forest.

Entertainment Module: Includes Time Trial and Tunnel Run.

Application Training Module: Enterprise version includes Search and Rescue only. Energy version includes Power Line Inspection, and Search and Rescue.

## 2. Aircraft Supported

Mavic 2 Pro, Mavic 2 Enterprise, Mavic 2 Zoom, Mavic Air, Mavic Pro, Spark, Phantom 4 Pro, and Inspire 1 Pro, Inspire 2, Matrice 210 RTK.

# Instructions on Installation

## System Requirements

A computer with a Windows 10 operating system is required to run the Flight Simulator.

Your computer should meet certain hardware requirements for optimal use of the functions in the Flight Simulator.

Hardware	Minimum Requirements	Recommendations	Optimum
CPU	G4560	i5-6400	i7-7700
GPU	GeForce GTX 1050 Ti	GeForce GTX 1060 or 1070	GeForce GTX 1080 Ti
VRAM	4GB	6GB or 8GB	11GB
RAM	16GB	16GB	32GB
HDD	80GB Free	SSD+80GB Free	SSD+80GB Free

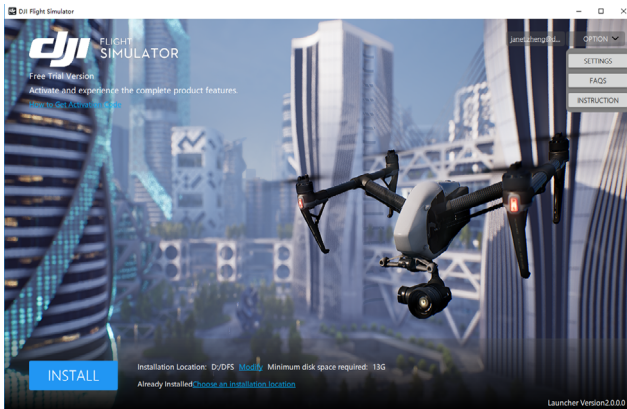
## Instructions

1. Visit the product page on the official DJI website to download the .exe file of the Launcher.
2. Run the .exe file, and install the Launcher and drivers accordingly.
3. Launch the Launcher and log in with your DJI account or register for a new account.

4. After logging in, Enterprise version or Energy version users can enter the activation code they received when purchasing, to finish activation.  
Click Free Trial to select the Free Trial version.
5. Now, the Installation page should show up. To the right of the INSTALL button, click to change the installation location. Click INSTALL and the Flight Simulator installation package download and installation will start automatically.



- The installation package is large. Make sure there is enough space in the disk chosen.
  - Updates will be prompted on this page when they become available. Click the corresponding button to update.
- 



6. Installation is complete. Click START to enter the Flight Simulator.  
Before entering it, users can configure settings and view information. Refer to the Interface section below for details.



- The instructions above apply to first-time use only. After installation, users can launch the Launcher and click START.
- 

## Connect the Remote Controller

Connect the DJI remote controller to the computer using a Micro USB cable. Power on the remote controller and it will be ready for use in the Flight Simulator.

# Interface

## Login Screen

This is the page that the Launcher leads to. Log in/out, configure settings, and view FAQ and instructions on this page with a mouse.

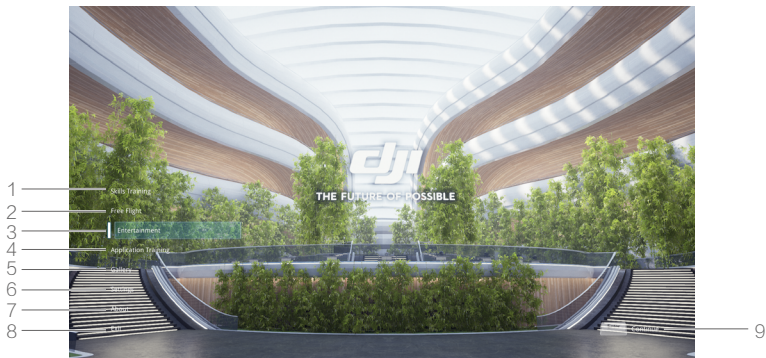


1. Log In/Out  
Click to log in with a DJI account or log out of the current account.
2. Option  
Click to show the drop-down menu for settings, FAQ and operation instructions.  
Settings: language, video quality, resolution, display mode and stick mode.  
FAQs: Click to view frequently asked questions.  
Instruction: Click to view instructions for the remote controller and keyboard, as well as aircraft control in different stick modes. It is recommended to go through these instructions to ensure the best experience.
3. Launcher Version  
Shows the version of the Launcher in use.
4. Flight Simulator Version  
Shows the version of the Flight Simulator in use and the link to release notes. There will be a prompt when a new version becomes available.
5. START  
Click to enter the Main Screen of the Flight Simulator.

## Main Screen

Only the remote controller and keyboard can be used in the Main Screen and its sub-screens. A mouse can be used only in some specific scenarios.

Action	Remote Controller Commands	Keyboard Commands
Switch between options	Push the left stick up/down/left/right	W/S/A/D
Confirm	C2 Button	Enter
Back	C1 Button	Backspace



### 1-4. Modules

Skills Training, Free Flight, Entertainment and Application Training. Enter the module and select an aircraft model. Refer to the following sections for details on each module.

### 5. Gallery

View the photos captured and videos recorded during the simulated flight.

### 6. Settings

Enter the menu for general settings, remote controller and keyboard, and advanced settings.

General Settings: languages, video quality, resolution, screen settings, maximum frame rate, sound effects and background music volume.

Remote Controller and Keyboard: To view instructions for the remote controller and keyboard and the aircraft control methods in different stick modes.

Advanced Settings: EXP settings, sensitivity, and gain values.

### 7. About

View terms and conditions, and information on the team behind the Flight Simulator.

### 8. Exit

Close the software.

### 9. Commands

Possible commands based on the control tool in use (remote controller or keyboard).



# Aircraft Models

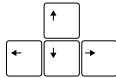
Select an aircraft to use in training modules.



## Display

The lower left section shows the basic features of the aircraft, the upper right section shows the specifications, and the bottom section shows the commands available. Use the remote controller or keyboard to switch between different sections and POVs.

## Commands

Action	Remote Controller Commands	Keyboard Commands
Switch between aircraft	Push the left stick left/right	A/D
View features	Push the left stick up/down	W/S
Adjust POV	Push the right stick in any direction	
Switch between accessories*	Video Recording button	Space

\* For the Mavic 2 Enterprise only. There are three accessories: Spotlight, Beacon, and Speaker.

# Remote Controller and Keyboard Commands

Use the remote controller or keyboard to operate the aircraft or change settings in the modules. See detailed instructions below. These instructions can also be viewed in the Login Screen (Option > Instruction) or the Main Screen (Settings > Remote Controller and Keyboard).

## DJI Lightbridge Remote Controller

The DJI Lightbridge remote controller model will be used in the Flight Simulator when connecting one of these remote controllers: Phantom 4 Advanced, Phantom 4 Pro, Phantom 4 Pro V2.0, Matrice 600, Matrice 600 Pro, and Lightbridge 2.



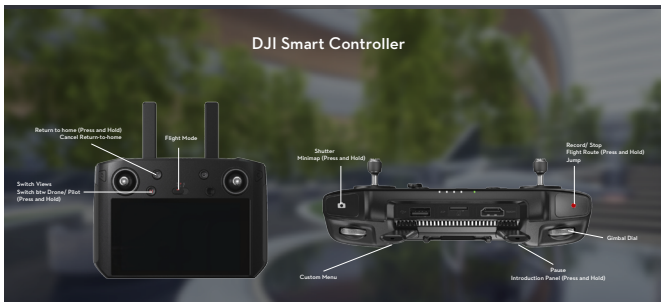
## DJI Mavic 2 Remote Controller



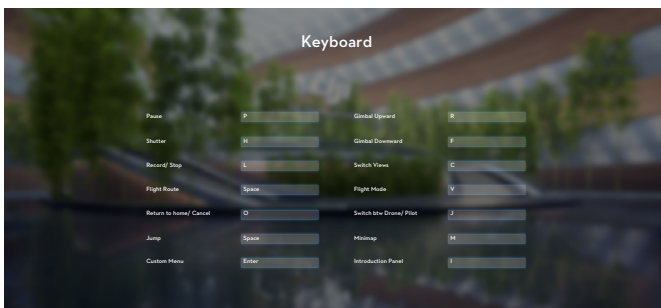
## DJI Mavic Air Remote Controller



## DJI Smart Controller

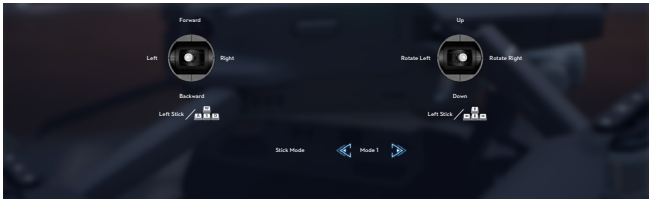


## Keyboard

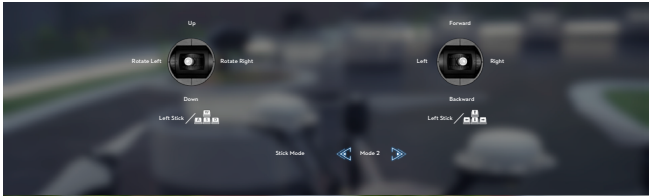


# Control Stick

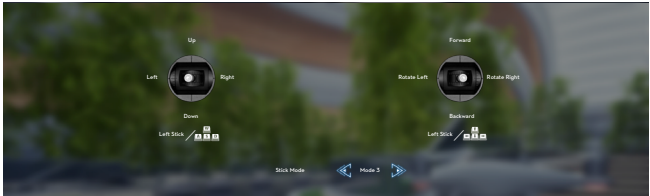
## Mode 1



## Mode 2



## Mode 3



# Training Modules

This section introduces all the modules and their corresponding modes and levels. More actions are available in some specific scenarios or with specific aircraft. Refer to the Additional Functions section for details.

## Skills Training Module

Select Skills Training in the Main Screen, and then select an aircraft to select a training. Skills Training includes Tutorials, Hovering Test, Fly Track Test, UTC Pylon Inspection Test Process, and DJI Internal Aircraft Skill Test Process. See details below.

### Tutorials

Learn the basics of piloting an aircraft.

There are three levels: Basic Flight Skills, Shooting Skills, and Flight Mode.

### Hovering Test

The hovering test provides a series of virtual testing conditions to assist you in testing and improving the hovering skills.

There are seven levels: Single Target, Multiple Targets, Fixed Orientation Hovering, Four Directions Hovering, Single Target with Wind, Multiple Targets with Wind, and Four Directions Hovering with Wind. The difficulty gradually increases with each level, also incorporating the effect of wind.

### Fly Track Test

This test is to check your control skills over the aircraft. You will be required to fly along the designated route in A-mode.

There are eight levels: Square Track(Overhead View), Square Track, Rectangle Track(Overhead View), Rectangle Track, Ring Track(Overhead View), Ring Track, Double Ring Track(Overhead View), and Double Ring Track. The difficulty gradually increases with each level.

The system will display the aircraft's actual flight route and compare it with the pre-set, standard flight route to calculate a score. In this exercise, users have to overcome parallax, which also exists in real flight.

### UTC Pylon Inspection Test Process

A series of scenarios designed for UTC pylon inspection test.

There are six levels: Preparation, Route Test, Hovering Test, Multi-dimensional Operation Test, BVR Operation Test, and End of Operation.

### DJI Internal Aircraft Skill Test Process

A series of scenarios designed for DJI internal aircraft skill test.

There are five levels: Preparation, Takeoff and Landing Test, Rectangle Track Test, Ring Track Test, Hovering Test, and End of Operation.

## Free Flight Module

Select Free Flight in the Main Screen, and then select an aircraft to select a scenario. Free Flight includes Free Flight-City, Free Flight-Island, Free Flight-Hangar, Free Flight-Mountain, and Free Flight-Forest. See details below.

### Free Flight-City

Fly in the city without limitation.

Take off from five unique locations in the five levels. Tutorials can be found in Level 1.

### Free Flight-Island

Enjoy the beautiful scenery of the island.

Take off from four unique locations in the four levels. Tutorials can be found in Level 1.

### Free Flight-Hangar

Experience and practice in the hangar location.

There is only one level. A tutorial can be found at the beginning.

### Free Flight-Mountain

Fly in mountain ranges to enjoy the stunning scenery.

There are three levels. Tutorials can be found in Level 1.

### Free Flight-Forest

Fly in a lush green forest.

There are three levels. Tutorials can be found in Level 1.

## Entertainment Module

Select Entertainment in the Main Screen, and then select an aircraft to select a mode. Entertainment includes Time Trial and Tunnel Run. See details below.

### Time Trial

Fly along designated flight paths and fly through every check point. Complete the course as fast as possible to score the most points.

There are three levels with increasing difficulty.

### Tunnel Run

Pass through energy rings to get points and gain more time. Fly faster to rank higher.

There is only one level.

## Application Training Module

Select Application Training in the Main Screen, and then select an aircraft to select a training scenario. Application Training includes Power Line Inspection and Search and Rescue. See details below.

### Power Line Inspection

Simulate a power line inspection.

There are two levels: Getting to Know the Pylon, and Inspection Practice.

### Search and Rescue

Understand and practice searching process in this forest location, and get prepared for the real SAR mission.

There is only one part: Searching for a male hiker lost in the forest.

## Additional Functions

More actions are available in some specific scenarios or with specific aircraft. Unless otherwise specified, the descriptions below apply to all the modules.

### Switch POVs

In Free Flight or Application Training modules, there are five POVs: Drone Follow View, Drone FPV, Pilot FPV, Remote Control View, and 3<sup>rd</sup> Person View. In tests, only some views are available to simulate the real tests.

#### Drone Follow View

The video camera of the Flight Simulator is behind the aircraft to follow its movements. Users cannot adjust the heading of the video camera.

Object controlled: Aircraft

Target in view: Aircraft

Switch to this POV: Press the button on the upper right corner of the remote controller or the C key on the keyboard.

#### Drone FPV

Drone FPV is what the aircraft camera sees. Real-time footage from the aircraft camera is displayed along with the app screen. The app screen is a near-duplicate of DJI applications such as DJI GO 4. Users can view the status display on the screen, the only adjustable settings are camera settings. Refer to the corresponding aircraft user manual for app display descriptions.

Object controlled: Aircraft

Source of the view: Aircraft

Switch to this POV: Press the button on the upper right corner of the remote controller or the C key on the keyboard.

Pilot FPV

Pilot FPV is the pilot's perspective looking at the aircraft. It is similar to the perspective when operating the aircraft in the real world.

Object controlled: Aircraft

Source of the view: Pilot

Target in view: Aircraft

Switch to this POV: Press the button on the upper right corner of the remote controller or the C key on the keyboard.

Remote Control View

Remote Control View is the view looking at the handheld remote controller from the pilot's perspective.

Object controlled: Aircraft

Source of the view: Pilot

Target in view: Remote Controller

Switch to this POV: Press the button on the upper right corner of the remote controller or the C key on the keyboard.

In this POV, the display is the mobile device with the app screen on it. The app screen is a near-duplicate of DJI applications such as DJI GO 4. Users can view the status display on the screen, the only adjustable settings are camera settings. Refer to the corresponding aircraft user manual for app display descriptions.

3<sup>rd</sup> Person View

3<sup>rd</sup> Person View looks at the pilot from the 3<sup>rd</sup> person's perspective.

Object controlled: Pilot

Source of the view: The 3<sup>rd</sup> person

Target in view: Pilot

Switch to this POV: Press and hold the button on the upper right corner of the remote controller, or press J key on the keyboard.

In this POV, the pilot is being controlled. Users can control his position to simulate a change in the pilot's movement in real life.

Action	Remote Controller Commands	Keyboard Commands
Forward	Push left stick up	W
Backward	Push left stick down	S
Left	Push left stick left	A
Right	Push left stick right	D
Jump	Video Recording button	Space




## Custom Settings

The Free Flight module allows users to set custom parameters to gain feedback and train more efficiently. Here are the instructions:

1. In any level in the Free Flight module, press the C2 button on the remote controller or the Enter key on the keyboard, and the custom settings menu will appear on the right screen.
2. Use the mouse to adjust parameters for control, difficulty, and environment.
3. Click Reset to reset all the parameters to default settings. Click Save to save the current settings.

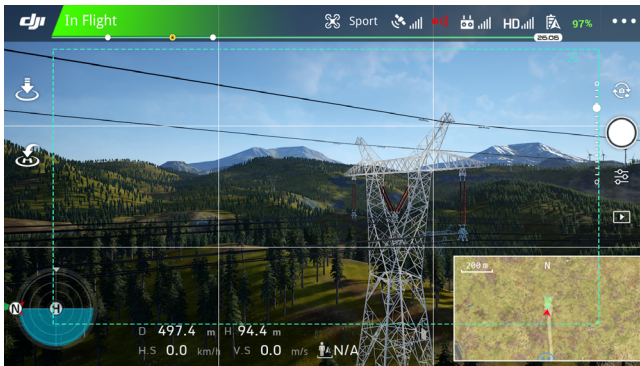
## Camera Settings

In Drone FPV or Remote Control View, use the mouse to click  on the right screen of the app to enter the camera settings menu to show or hide the grid.

## Using the Zenmuse Z30 Payload

The Zenmuse Z30 features 30x optical zoom and 6x digital zoom. When using the Matrice 210 RTK aircraft in Drone FPV or Remote Control View, use the mouse to zoom in.

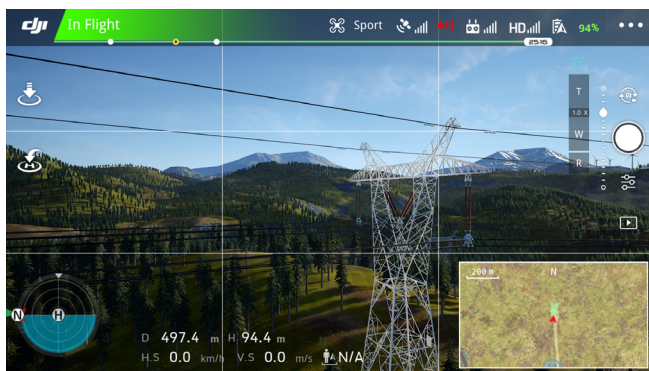
### TapZoom



Left click in the blue dotted area on the center of the screen and an icon will show up along with the image 3x zoomed-in. Click again to zoom in further. Each click zooms 3x. Clicks outside of the dotted area will not zoom.

If the aircraft position is changed manually during TapZoom, the image will go back to the original magnification.

## Manual Zoom



Click the Zoom icon in the upper right corner to pull out the menu. Click T to zoom in. Click W to zoom out. The magnification is shown on the T/W bar. Click R to reset the magnification to 1x.

## Pause Mission

In any module, press the C1 button on the remote controller or the P key on the keyboard to pause the mission and enter the Pause screen. Select an option from the menu.

Continue: go back to the level and continue.

Restart: restart the same level.

Select Level: go to the level selection page to select level.

Return to Main Menu: go back to the Main Screen.

Gallery, Settings: The same as the one in the Main Screen.

## Aircraft Functions

### Flight Modes

There are three flight modes in the Flight Simulator, P-mode, A-mode, and S-mode. Use the Flight Mode toggle on the remote controller or the V key on the keyboard to switch between the modes.

P-mode (Positioning): The aircraft uses GNSS or Vision Positioning System for positioning. It allows the aircraft to hover precisely and brake automatically.

A-mode (Attitude): Neither the GNSS nor Vision Positioning System is used for positioning. The aircraft can only maintain attitude. It is significantly more difficult to control the aircraft in this mode.

S-mode (Sport): The aircraft uses GNSS or Vision Positioning System for positioning. It allows the aircraft to hover precisely and brake automatically. The aircraft flies at a high speed. Operate with caution.

### Collision Feedback

The aircraft will crash in the simulation when it collides with objects such as buildings and trees. Two kinds of feedback will be given: the aircraft location will be reset or the mission fails. Users can continue

the mission after the reset or restart after failing.

## Return to Home (RTH)

There three types of RTH: Smart RTH, Low Battery RTH, and Failsafe RTH.

### Smart RTH

Enter RTH: Press and hold the RTH button on the remote controller or press the O key on the keyboard and then confirm to enter RTH. The aircraft will automatically return to the takeoff point. Aircraft control is unavailable during RTH.

Cancel RTH: Press the RTH button on the remote controller or the O key on the keyboard and then confirm to cancel RTH. The aircraft will hover in place, and the user will regain control.

### Low Battery RTH

Enter RTH: Low Battery RTH is triggered when the battery is depleted to a point that may affect the safe return of the aircraft. The aircraft will automatically return to the takeoff point. Aircraft control is unavailable during RTH.

Cancel RTH: Press the RTH button on the remote controller or the O key on the keyboard and then confirm to cancel RTH. The aircraft will hover in place, and the user will regain control.

After cancelling Low Battery RTH, the aircraft will land automatically when the battery level drops to 10%.

### Failsafe RTH

Enter RTH: Failsafe RTH will be automatically activated if the remote controller signal is lost. The aircraft will automatically return to the takeoff point.

Cancel RTH: During Failsafe RTH, if the lost remote controller signal is found, press the RTH button on the remote controller or the O key on the keyboard and then confirm to cancel RTH. The aircraft will hover in place, and the user will regain control.

## Image Capture and Video Recording

In Drone FPV or Remote Control View, use the remote controller or keyboard to take photos and record videos. View the photos and videos in Gallery in the Main Screen or Pause View.

Action	Remote Controller Commands	Keyboard Commands
Take photograph	Shutter button	H
Start/stop recording video	Video Recording button	L

## Flight Altitude Limit

Flight altitude limit restricts the aircraft altitude. The aircraft cannot ascend after reaching the maximum flight altitude (500 meters). All controls will function normally once the aircraft returns to altitudes below the limit.

## Signal Interference

In some scenarios, there will be random interferences that may impact the imaging or the controls. This is designed to help users train their emergency response abilities. The image display might be blurred or go dark completely. There might also be a latency in the control latency or signal interruption.

## Display

### Minimap

In the Drone Follow View or Pilot FPV, the thumbnail of the location of the drone will show up as a Minimap at the lower right corner of the screen. The Minimap can be used in all the scenarios except in the Tutorials mode in the Skills Training module and in the Entertainment module.

Press and hold the Shutter button on the remote controller or press the M key on the keyboard to open or close the Minimap display. The takeoff point and flight path will be shown in the Minimap.

### Flight Route

This function lets users to see the flight route in the air.

Press and hold the Video Recording button on the remote controller or the Space key on the keyboard to show or hide the flight route.

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

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