
PHANTOM VISION

User Manual V1.00

PVT581

Thank you for purchasing this DJI product. Please strictly follow these steps to use this product, including PHANTOM VISION and DJI VISION App.

Please regularly check the web page of PHANTOM VISION at our website www.dji-innovations.com, which is updated regularly. Product information, technical updates and manual corrections will be available on this web page. Due to unforeseen changes or product upgrades, the information contained in this manual is subject to change without notice.

This manual is only referenced for basic assembly and configuration; you can obtain more details and advanced instructions when using the Assistant software or DJI VISION App. To assure you have the latest information, please visit our website and download the latest manual and software.

If you have any problem that you cannot solve during usage, please contact your dealer.

Index

INDEX	2
DISCLAIMER & WARNING	3
BATTERY USAGE & CHARGING CAUTIONS	4
TRADEMARK	5
IN THE BOX	5
REQUIRED ITEMS	6
SYMBOL INSTRUCTION	6
ASSEMBLY	7
MOUNT THE PROPELLERS	7
MOUNT THE RANGE EXTENDER	7
VIEW OF MOBILE PHONE MOUNT	7
MOUNT THE MOBILE DEVICE MOUNTING	7
BASIC USAGE	8
BATTERY AND CHARGER KNOWLEDGE	8
<i>BatteryCharge Procedure</i>	8
<i>Battery Usage Knowledge</i>	错误！未定义书签。
TRANSMITTER KNOWLEDGE	9
<i>View of Transmitter</i>	9
<i>How to Power on the Transmitter</i>	9
<i>Transmitter State Introduction</i>	9
<i>Transmitter Operation Mode</i>	10
RANGE EXTENDER KNOWLEDGE	11
<i>View of Range Extender</i>	11
<i>Function Description</i>	11
<i>How to Use the Range Extender</i>	11
<i>How to Do the Camera & Range Extender & DJI App Rebind</i>	12
AIRCRAFT OF PHANTOM VISION KNOWLEDGE	13
<i>View of PHANTOM VISION (including aircraft and camera)</i>	13
<i>Get the Aircraft Ready</i>	13

<i>Compass Calibration Procedures</i>	14
<i>Failsafe Function</i>	16
<i>Low Voltage Protection</i>	17
CAMERAOF PHANTOM VISION KNOWLEDGE	18
<i>MainFunction Description</i>	18
DJI VISION APP	20
BEFORE USE	20
<i>Downloadand Installation</i>	20
<i>Wi-Fi Network Selection</i>	20
<i>Register and Login</i>	20
<i>Main Page</i>	21
CAMERA PAGE.....	22
<i>Basic Usage</i>	22
<i>Camera Settings</i>	24
ALBUM PAGE	26
<i>Album inCamera SD Card</i>	26
<i>Album In mobile device</i>	28
NEWS PAGE	29
SETTINGS PAGE.....	30
APPENDIX	33
ASSISTANT SOFTWARE& MC/PMU FIRMWARE UPGRADE	33
AUTOPILOT SYSTEM LED DESCRIPTION.....	33
SPECIFICATION	34
WARNING	35

Disclaimer &Warning

Please read this disclaimer carefully before using the product. By using this product, you hereby agree to this disclaimer and signify that you have read them fully. THIS PRODUCT IS NOT SUITABLE FOR PEOPLE UNDER THE AGE OF 18.

Despite the built-in autopilot system and our efforts in making the control as safe as possible, we strongly recommend users to remove all propellers when calibrating and setting parameters. Make sure all connections are good, and keep children and animals away during firmware upgrade, system calibration and parameter setup.

DJI Innovations accepts no liability for damage(s) or injuries incurred directly or indirectly from the use of this product in the following conditions:

1. Damage(s) or injuries incurred when users are drunk, taking drugs, drug anesthesia, dizziness, fatigue, nausea and any other conditions no matter physically or mentally that could impair your ability.
2. Damage(s) or injuries caused by subjective intentional operations. Any mental damage compensation caused by accident.
3. Failure to follow the guidance of the manual to assemble or operate.
4. Malfunctions caused by refit or replacement with non-DJI accessories and parts.
5. Damage(s) or injuries caused by using third party products or fake DJI products.
6. Damage(s) or injuries caused by mis-operation or subjective mis-judgment.
7. Damage(s) or injuries caused by mechanical failures due to erosion, aging.
8. Damage(s) or injuries caused by continued flying after low voltage protection alarm is triggered.
9. Damage(s) or injuries caused by knowingly flying the aircraft in abnormal condition (such as water, oil, soil, sand and other unknown material ingress into the aircraft or the assembly is not completed, the main components have obvious faults, obvious defect or missing accessories).
10. Damage(s) or injuries caused by flying in the following situations such as the aircraft in magnetic interference area, radio interference area, government regulated no-fly zones or the pilot is in backlight, blocked, fuzzy sight, and poor eyesight is not suitable for operating and other conditions not suitable for operating.
11. Damage(s) or injuries caused by using in bad weather, such as a rainy day or windy (more than moderate breeze), snow, hail, lightning, tornadoes, hurricanes etc.
12. Damage(s) or injuries caused when the aircraft is in the following situations: collision, fire, explosion, floods, tsunamis, subsidence, ice trapped, avalanche, debris flow, landslide, earthquake, etc.
13. Damage(s) or injuries caused by infringement such as any data, audio or video material recorded by the use of aircraft.
14. Damage(s) or injuries caused by the misuse of the battery, protection circuit, RC model and battery chargers.
15. Other losses that are not covered by the scope of DJI Innovations liability

Battery Usage & Charging Cautions


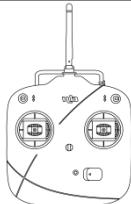
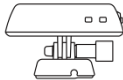
1. Do not put the battery into water; store the battery in a cool and dry environment.
2. Only use the correctly specified batteries
3. Batteries must be kept out of the reach of children; if a child accidentally swallows the battery you should immediately seek medical assistance.
4. Do not use or store the battery near fire.
5. Battery should be charged with proper standard charger.
6. Do not connect the battery reversed in positive and negative terminals in the charger or equipment.
7. Do not connect the battery directly to the wall plugs or vehicle-mounted socket.




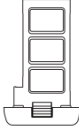
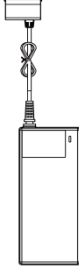




8. Do not put the battery into a fire or heat the battery.
9. Do not let the battery terminals (+and-) touch together to cause short-circuit.
10. Do not transport or store the battery together with metal objects.
11. Do not hit or throw the battery.
12. Do not weld the battery terminals together.
13. Do not drive a nail in, hit with a hammer, or stomp on the battery.
14. Do not disassemble or alter the battery.
15. Do not use or store the battery in extreme heat environments, such as direct sunlight or in the car in hot weather. Otherwise, the battery will overheat, may cause fire (or self-ignite), this will affect the performance of the battery, shorten the service life of the battery.
16. Do not use the battery in strong electrostatic areas, otherwise the electronic protection may be damaged which may cause a hazard.
17. If you get the battery electrolyte leakage into your eyes, don't rub, first wash your eyes with clean water then seek medical assistance immediately. If not handled in a timely manner, eyes could be damaged.
18. Do not use the battery when it emits an odour, high temperature, deformation, change in colour or other abnormal phenomena; if the battery is in use or charging, you should stop charging or using immediately.
19. If the battery terminal gets dirty, please clean it with a dry cloth before using. Otherwise it will cause a poor contact, thus causing energy loss or inability to charge.
20. Discarded battery could lead to a fire; you should completely discharge the battery and wrap the output terminal with insulating tape before discarding.

Trademark



DJI and PHANTOM VISION are registered trademarks of DJI Innovations. Names of product, brand, etc., appearing in this manual are trademarks or registered trademarks of their respective owner companies. This product and manual are copyrighted by DJI Innovations with all rights reserved. No part of this product or manual shall be reproduced in any form without the prior written consent or authorization of DJI Innovations. No patent liability is assumed with respect to the use of the product or information contained herein.

In the Box

PHANTOMVISION X1	5.8GHz Transmitter X1	Range ExtenderX1
		
Propellers X3	mobile device MountingX1	Assistant Wrench X1

		
Battery X8	ChargerX1	Cable X2
		
Screw X10	AC Adapter X3	Accessories Box X1
		

Required Items

Phillips Screwdriver x1	5# AA Batteries x4	Micro-SD Card
		

Symbol Instruction



Forbidden (Important)



Cautions



Tip



Reference

Assembly

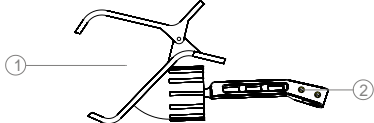
Mount the propellers

- > 准备两对配套螺旋桨；
- > 按标记提示，装配螺旋桨；
- ▲ 注意：
 - 拧紧桨夹螺母即可，请勿使用螺丝胶。



Mount the Range Extender

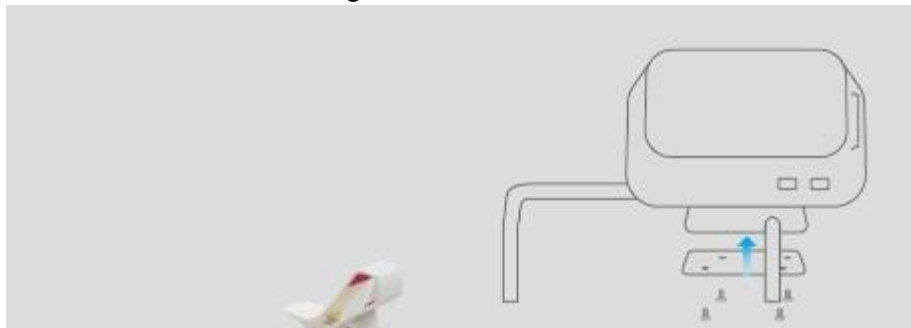
View of Mobile Phone Mount



1	For Mobile Phone Fixing
2	For Screw Fixing



Mount the Mobile Device Mounting





Basic Usage

Battery and Charger Knowledge

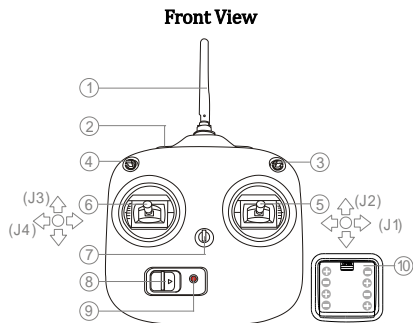
Battery Charge Procedure

1. Connect the battery to the charger.
2. Connect the charger to a wall socket AC.
3. You can use the Charger Status LED to figure out the charging status.

Charger Status LED		Charging
		Charge complete

TransmitterKnowledge

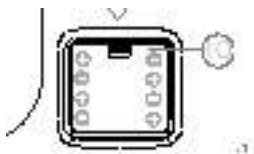
View of Transmitter



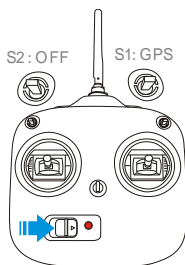
1	Antenna
2	Carrying Handle
3	Switch(S1: Control Mode: GPS/ATTI/ATTI)
4	Switch(S2: IOC Mode: OFF/CL/HL)
5	Stick(J1: Roll, J2: Pitch)
6	Stick(J3: Throttle, J4: Yaw)
7	Neck Strap Attachment
8	Power Switch
9	Power LED
10	Battery Compartment (On the back)

How to Power on the Transmitter

1. Install the 5# Batteries



2. Put the Switch S1 to the GPS stop and the S2 to the OFF stop, and then turn on the power switch.



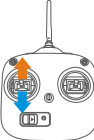
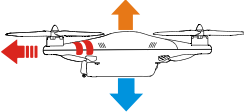
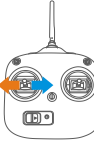
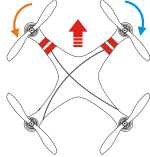
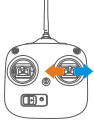
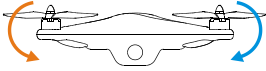
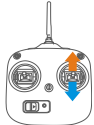





Transmitter State Introduction

Transmitter State	Introduction
Low-battery Alert (Need to change the battery)	BB.....
Linking between the Transmitter and the Receiver	●●●●●
Normal Operation	■

Transmitter Operation Mode

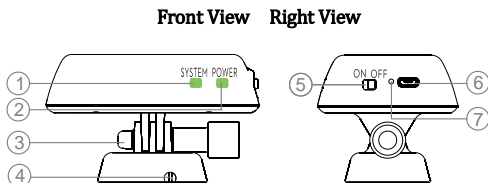
Definitions

- **Stick neutral position and stick released** means the stick of Transmitter is pushed to the central position.
- **Command Stick** means the stick of Transmitter is pushed away from the central position.

Transmitter (Mode 2)	Aircraft (← is the nose direction)	Operation Mode details
		<p>The throttle stick is for aircraft up& down control.</p> <p>The aircraft will hold the height automatically if the stick is centered. You should Push the throttle stick to the neutral position to take-off.</p>
		<p>The yaw stick is for aircraft rudder control.</p> <p>The command stick controls the angular velocity of the aircraft, with the maximum rudder angular velocity of 200°/s. The left stick command gives counter clock-wise rotation of the aircraft, & vice versa.</p>
		<p>The roll stick is for aircraft left/right control and pitch stick is for front/back control. The command stick controls the angle of aircraft. The stick neutral position is for 0°, its endpoint is 35°. The roll and pitch sticks return to the central position when released.</p>
		<ul style="list-style-type: none"> ● In GPS Mode, the aircraft will hover (hold horizontal position) when sticks released. ● In ATTI. Mode, the aircraft will keep attitude stabilizing without horizontal position (different from hover in GPS Mode).
	 <p>GPS ATTI. ATTI. ATTI. (Manual or FailSAFE is selectable in software.)</p>	<p>3-position switch (S1) on the Transmitter for mode control. Only after Compass Module connection and Compass calibration, GPS ATTI. Mode is available. Otherwise, all switch positions are for ATTI. Mode. Pay attention because the GPS ATTI. Mode is dependent on the number of GPSsatellites acquired by the main controller. Refer to the LED Indicator. When GPS signal has been lost for 3s, system enters ATTI. Mode automatically. You can enable the Manual Mode or FailSafe (also known as One-key Go-home) in the assistant software->Basic->R/C->Control Mode.</p>
	 <p>OFF Course Lock Home Lock</p>	<p>3-position switch (S2) on the Transmitter for Intelligent Orientation Control (IOC). Set the switch to OFF in basic flight. This function is defaulted to off. If you want to use this function refer to the advanced manual, and enable it in the assistant software. Use IOC when you are familiar with basic flight.</p>

Range Extender Knowledge

View of Range Extender



1	System LED
2	Power LED
3	Screw for Fixing
4	Mount Slot
5	Power Switch
6	USB Charging Port
7	Rebinding Button

Function Description

① System LED

Wifi Indicator	Description
Green blink	The Range Extender system is working normally.
LED Off	The Range Extender system is working abnormally.

② Power LED

Power Status Indicator	Description
Green Solid on	The Range Extender is working normally.
Red Solid on	Low voltage alert.
Yellow Solid on	The Range Extender is charging.

③ Screw for Fixing

④ **Mount Slot:** For mounting the Range Extender on the right side of Transmitter Carrying Handle.

⑤ **Switch:** (1) OFF – Power off

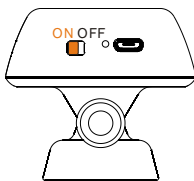
(2) ON –Power on

⑥ **USB Port:** For charge the Range Extender.

⑦ **Rebind Button:** Press to rebind system.

How to Use the Range Extender

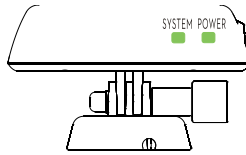
1. Turn the Power Switch of Range Extender to ON stop.



2. Wait about 20 seconds.

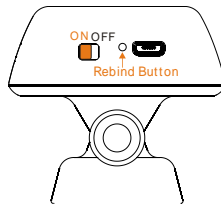
The PowerLED: solid Green means that it is fully charged.

The System LED: blinks Green means that it is normally communicating.



How to Do the Camera & Range Extender & DJI App Rebind

In the condition that your camera or range extender has been repaired or replaced by a new one, you need to rebind camera and range extender to rebuild a wifi-network, and use your DJI App to find the new wifi-network.



Step1: power on the camera and range extender, 10s later press the Rebind Button on Range Extender with a cuspidal object, 5s later the SYSTEM LED is off.

Step2: wait patiently, the WiFi system of range extender will be restored about 25s later, and the SYSTEM LED will blink green.

Step3: open DJI VISION App on your mobile device. Enter the SETTINGS->Binding, scan QR code on product packaging, and follow instructions on DJI VISION App to operate. Finally a new Mac address will be acquired, which indicates camera and range extender rebinds.

Step4: About 25s later, select the PHANTOM_xxxxxx network from WLAN of mobile device. Binding finished.

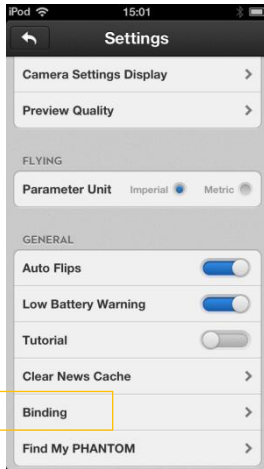


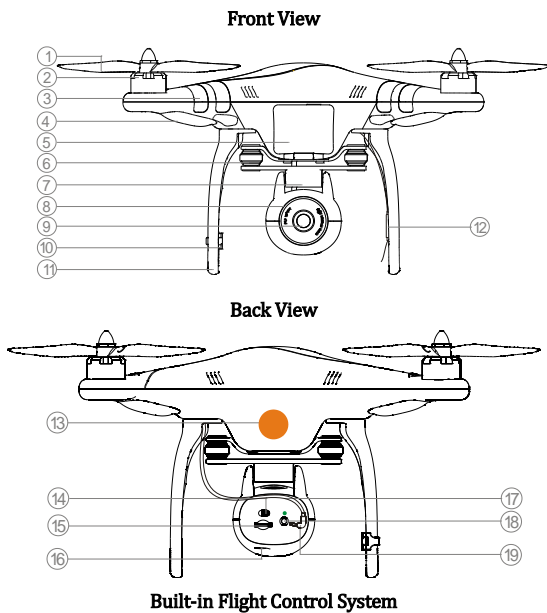
Fig.3 SETTING Page



Fig.4QR code

Aircraft of PHANTOM VISION Knowledge

View of PHANTOM VISION (including aircraft and camera)

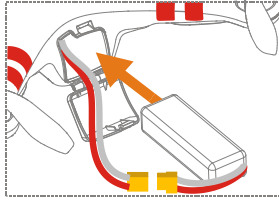


1	Propeller
2	Motor
3	Sticker
4	Nose LED
5	Battery Compartment
6	Damper
7	Camera Mount
8	Camera
9	Camera Lens
10	Compass
11	Landing Gear
12	Receiver Antenna (5.8GHz)
13	Flight LED
14	Camera Power Switch
15	Micro-SD Card Slot
16	Camera Function Button
17	Camera LED
18	Camera Power Plug
19	Camera Power Cable

Including modules: Main Controller, GPS, Compass, Receiver

Get the Aircraft Ready

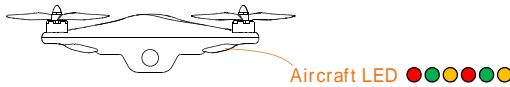
1. Put the Battery into the Battery Compartment, and make sure it is firmly fixed.



- Press the power button twice to power on the aircraft. The power LED turns solid green on and the power capacity LEDs are on showing the voltage situation. For more battery details please refer to the <Battery and Charge Knowledge> section.

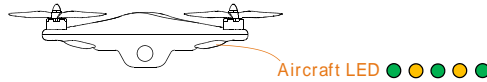


- Keep the aircraft stationary until the system start and self-check has finished.

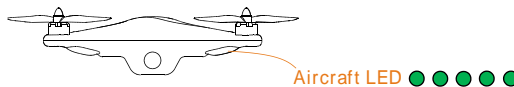


- Aircraft is warming up.

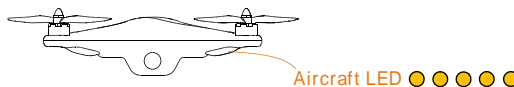
Note: Motor Start is disabled during aircraft warming up.



- Ready to Fly



Ready to fly (non-GPS)



Compass Calibration Procedures

IMPORTANT: Make sure to do the Compass Calibration for the first time use.

The built-in Compass can assist to position the aircraft, which is very important during flight. As we know, the compass is very sensitive to electromagnetic interference, which will cause abnormal compass data, and

lead to poor flight performance or even flight failure. Compass Calibration MUST be done for the first time use. It is recommended to calibrate the compass outdoors after the Controller Unit finds 7 or more GPS satellites. Regular calibration enables the compass to keep optimal performance.

Calibration Cautions

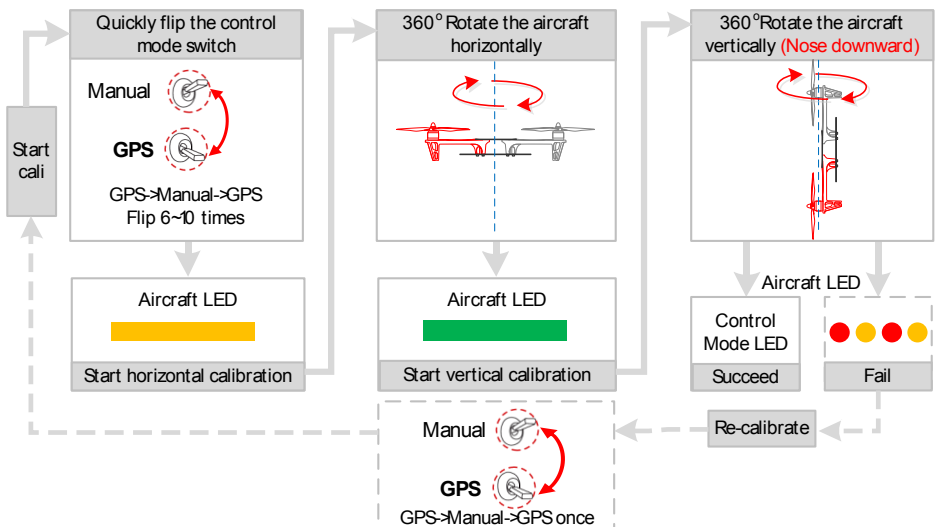
- (1) DO NOT calibrate your compass where there is strong magnetic interference, such as magnetite, car park, and steel reinforcement under the ground.
- (2) DO NOT carry ferromagnetic materials with you during calibration, such as keys or cell phones.
- (3) Compass Calibration is very important; otherwise the flight control system cannot work.

Situations that require recalibration

Situations	Descriptions
Compass Data abnormal	LED blinks red and yellow alternatively.
Flying field altered	Flying field has changed over a long distance.
Mechanical alteration	The mounting position of GPS-COMPASS PRO module changes. Electronic units such as Controller Unit, CAN-HUB, battery etc. have been added, removed, remounted or other alterations. Mechanical structures of the aircraft has changed
Drifting during flying	Evident drifts occurred in flight such as the aircraft doesn't fly straight
Attitude errors	LED often blinks error indicator when the aircraft turns around.





Calibration Procedures

Choose an open space to carry out the following procedures.

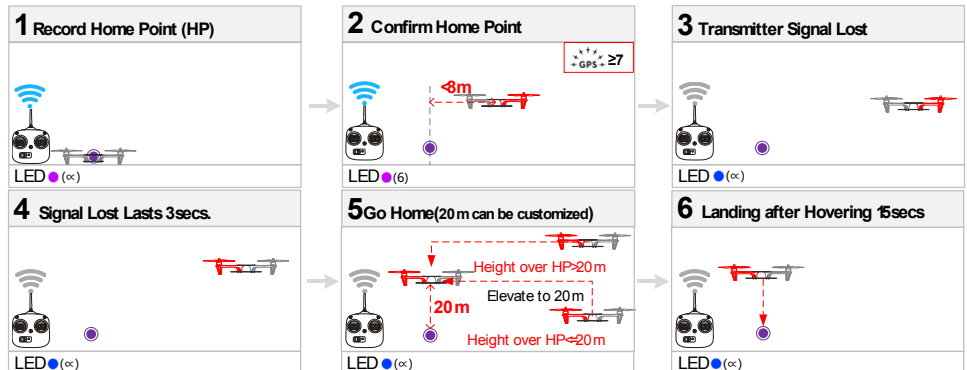



Failsafe Function

FailSafe works when the Transmitter (TX) signal is lost, the flight control system will automatically control the aircraft to reduce injuries or damage.

	TX signal		Descriptions
Home Point (HP)			30secs later after power on; 10secs later after $\text{GPS} \geq 6$ (● or no Red LED); Motors have been started; auto-record the position as home point at the first time the throttle stick is raised.
FailSafe		$\text{GPS} \geq 6$	Flight control system can automatically control the aircraft after Transmitter signal is lost. It should be set in Assistant software->Advanced->F/S , while Hover, Go-Home or Alt Go-Home is optional. Additionally, a Go-Home switch can be enabled.
One-Key Go Home			Go Home switch can be used to trigger a "go home" without FailSafe. If One-Key Go Home is enabled during flying, you no longer have control of the aircraft, the LED blinks in its Control Mode. If One-Key Go Home is disabled, you regain the control at once. If already in a Failsafe condition, then the switch will not work.

Failsafe and Go Home procedures



-  (1) The aircraft will not go home (only attitude stabilizing) in the condition that $\text{GPS} < 6$ or GPS is not working, even if Transmitter signal is lost or Go Home switch is triggered.
- (2) It is recommended to set the Go Home switch in the Assistant software. Users are suggested to enter Failsafe and go home by using the Go Home switch rather than turning off the Transmitter in emergency situations.
- (3) Make sure there are no obstacles during aircraft go home and users are familiar with the



methods to regain control.

How to regain control in FailSafe

	GPS	ATTI 2	ATTI 1	Manual
Regain control	You have to toggle the control mode switch once to regain control if the signal recovers, y.		Regain control as soon as signal recovers.	

Low Voltage Protection

Low voltage protection is used to alert low battery voltage during flight; in this case, users should promptly fly back the aircraft and land to avoid unexpected damages.

Protections	Option Selected	Conditions	LED	Aircraft
	LED	----	● (∞)	None
	First level GH & Landing	Make sure the home point is recorded and no obstacles in going home and landing path.	● (∞)	Go-Home & Landing path.
	LED	----	● (∞)	None
	Second level Descending	----	● (∞)	Descending directly

Go-Home & Landing Usage Tips

- (1) The home point recorded is the same in both Failsafe and Low voltage protection. The aircraft will not go home in the following cases :
 - a) Control mode is in Control Mode 1 (Manual or ATTI 1)
 - b) GPS signal is bad (+GPS+ < 6)
 - c) The distance between aircraft and the home point is less than 25m, and the height over the Home point less than 20m.

Descending Usage Tips

The aircraft will not hover when the throttle stick is at the mid point. Push the throttle stick to 90% of endpoint, the aircraft will still ascend slowly if you continue to pull the throttle stick, and the control of Pitch, Roll and Yaw are the same as before.



Please pay attention to the LED alert of low voltage and make sure the power is enough for go home and landing. Insufficient power reserve will cause the aircraft to crash and other consequences.

Camera of PHANTOM VISION Knowledge















Main Function Description

① Power Switch (on the back of the camera)


Three steps:

- (1) OFF – Powered off
- (2) CAM ON – Power on, Wi-Fi off
- (3) WIFI ON – Power and Wi-Fi are both on


② LED Indicator (on the back of the camera)

LED	WIFI	CAMERA
 Solid on	OFF	Power On; Idle State
 Slow Blink (0.2s on, 1.8s off)	ON	Idle State
 Fast Blink (0.1s on, 0.3s off)	ON	Accessing photos and videos in the camera
 Solid on	OFF	Recording
 Blink Once (0.2s on, 0.3s off)	ON/OFF	making a single capture
 Blink 3 Times (0.1s on, 0.1s off)	ON/OFF	making a multiple capture, 3 or 5 pictures per shot
 Fast Blink (0.1s on, 0.3s off)	ON/OFF	Firmware Upgrading
 (0.2s green, 1.8s amber)	ON	Recording
 Solid on	ON/OFF	Critical error
 Blink Slow (0.2s on, 1.8s off)	ON/OFF	Sensor error
 Blink Once (0.2s on, 0.3s off)	ON/OFF	Operation failed
 Blink 3 Times (0.1s on, 0.1s off)	ON/OFF	SD Card error
 Blink Fast (0.1s on, 0.3s off)	ON/OFF	Upgrade error
 (0.5s Green, 0.5s Amber, 0.5s Red, 0.5s Off)	ON/OFF	Camera overheat



When camera temperature goes above 80°C, the LED indicator will blink  and the camera will automatically power off when the temperature goes above 85°C



Statuses including Red  is either error or malfunction

③ Micro-SD Card Slot (on the back of the camera)

Make sure that the Micro-SD card is inserted before you take any pictures or make any videos.

④ Function Button (on the bottom of the camera)

Camera in idle state	short press (<2s)	single capture
----------------------	-------------------	----------------

	long press ($\geq 2s$)	record
Camera in non-idle state	any press	back to idle state

DJI VISION App


DJI VISION App is installed for remote control of Camera Setting, Capture and Recording, Camera Pitch Control, Aircraft Yaw Control, and GPS Assistant Orientation.

Before Use

Download and Installation


Approach 1: Scan QR code to get the DJI VISION App and install it on your mobile device 

Approach 2:

For iOS User: Search "DJI VISION" in the App Store, download and install it on your mobile device. 

For Android User: Search "DJI VISION" in the Google Play, download and install it on your mobile device. 

Wi-Fi Network Selection

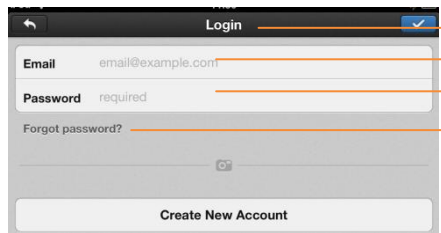
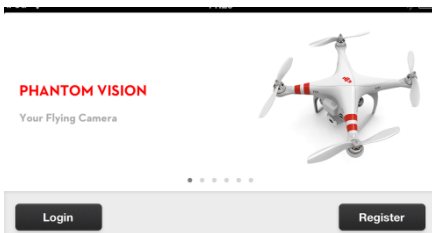


- 1) Turn on the WLAN of your mobile device and connect to the PHANTOM_XXXXXX (SSID) network for remote control by DJI VISION App.
- 2) Select a Wi-Fi network to the Internet if you want to share your photos or videos or read DJI news.

Note 1: For the first time you open the DJI VISION app, Internet accessibility is necessary for you to finish login or new account creation.

Note 2: the SSID is unique for each Camera.

Register and Login



[1] **Login Button:**

The first time you use the DJI VISION App you should login in.


Note: (1) Internet accessibility is necessary.

(2) You can change your user/password in the App Settings page.

[2] **Register Button**

Create a new account if you do not have one already.

[3] [4] [5] **Login Page**

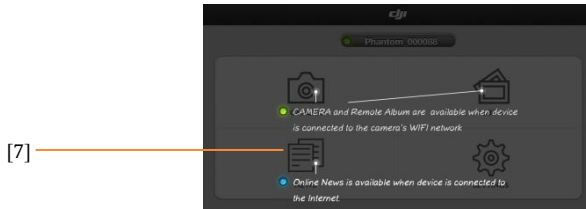
Enter your registered email address and password here. And then click  to login.

[6] **Forget Password**

If you do have an account, but forgot the password, click to retrieve it.

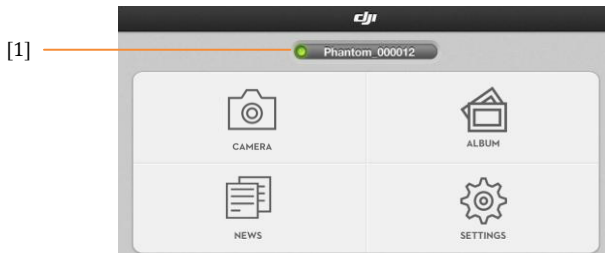
[7] Using Tips





Using tips will display for welcoming your first entering into.



Main Page

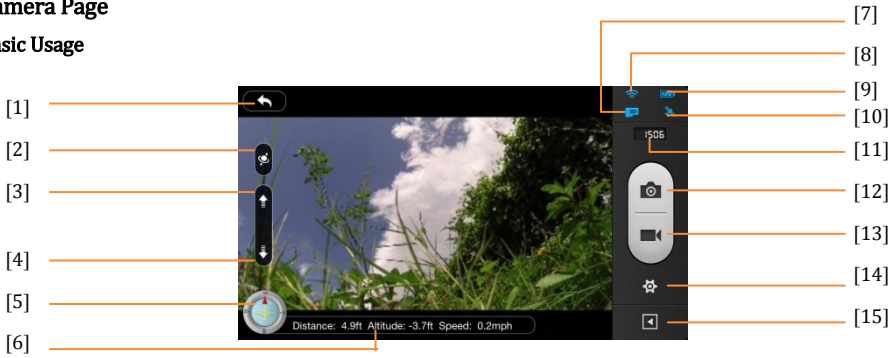
After login you will come to the main page. In this page, you can see the current Wi-Fi connection, and four icons that represent the four functionalities of this App.



[1]	Green Light ●	Camera has been connected to, and the Camera and SD Card album are available.
	Blue Light ●	Internet has been connected, photos and videos can be shared and DJI news can be refreshed.
	Gray Light ●	No Wi-Fi connection
	Camera	Click to enter the camera preview page
	Album	Click to enter the Album page
	News	Click to enter the DJI news page
	Settings	Click to enter the App settings page

Camera Page

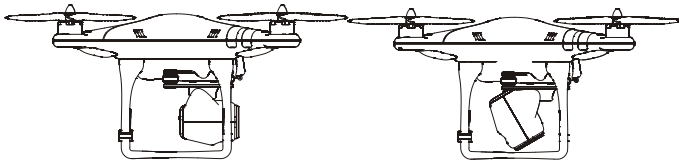
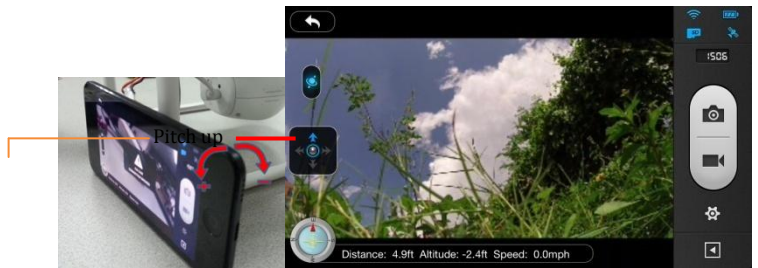
Basic Usage



[1] Return to the preview page

[2] **Camera gimbal control switch**

- 1) In normal state: the camera gimbal is controlled by the **upward arrow** [3] and **downward arrow** [4] on the preview page. Press to turn up the camera, and to turn down the camera.
- 2) In high light state (blue): the camera gimbal is controlled by the iOS's gyroscope sensor and gravity sensor.

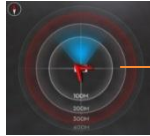


Camera Original State Camera Pitch Down

[5] **Flight attitude**

Click it to obtain the Pitch, Roll and Yaw information, which can help you find the aircraft if the aircraft fly far away

from you. It is also known as the Radar function.



[17]

[6] Flight parameters

If the connection between the camera and the NAZA is ok, these “N/A”s should be meaningful digits

[7] SD Card Status

Highlighted when a valid SD card is inserted, otherwise, grayed out.

[8] Wi-Fi Signal Intensity

The Camera is connected to the Range Extender correctly and Wi-Fi is working normally.

[9] Aircraft Battery Level

3 grids: > 11.80V

2 grids: 11.30V to 11.80V

1 grid: 11.20V to 11.30V (should fly back)

0 grid: <= 11.20V (should land immediately)

[10] Aircraft GPS status

Highlighted when more than 6 satellites are found, otherwise, grayed out.



[11] Remained shots

It is calculated based on the current selected photo size. Zero if SD card is not inserted

[12] Camera Capture Button

Capture Button is disabled during the process of recording.

[13] Camera Record Button

A red dot  blinks when the camera is recording, and the time elapsed  000:00:45 is displayed on the top right corner of the preview screen.

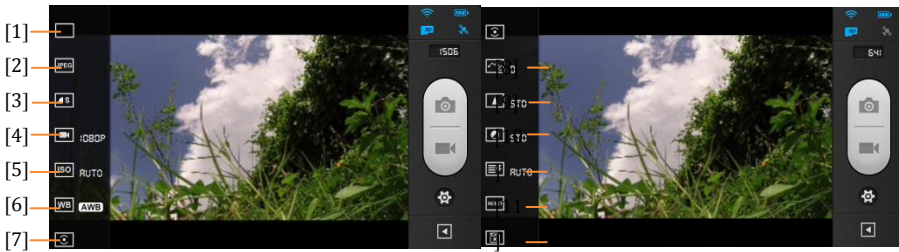
[14] Hide or show camera settings

Click to enter camera settings, and click again to exit.

[15] Hide or show flight parameters.

Click to hide flight parameters, and click again to show flight parameters.

Camera Settings



[1] Capture Mode

	Single Capture. One picture per shot.
	Multiple Captures. 3 pictures per shot.
	Multiple Captures. 5 pictures per shot.
	Continuous Capture. Also needs to select: <ul style="list-style-type: none"> a) Intervals between two shots (1~60 seconds) b) Number of shots (2~254, or infinite shots)
Note: Capture Button changes accordingly.	

[2] Photo Format

	JPEG
	Raw (one *.jpg and one *.raw will be generated simultaneously per shot when this option is selected)
Note: raw photo format is not supported by multiple capture mode or continuous capture mode.	


[3] Photo Size. Below options are supported.

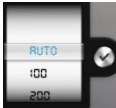
	Large: 4608 x 3456, 4:3, 16MP
	Sub-large: 4384 x 3288, 4:3, 14.4MP
	Medium: 4384 x 2922, 3:2, 12.8MP
	Small: 4384 x 2466, 16:9, 10.8MP


[4] Video Resolution. Below options are supported.


	1920x1080 60i, 16:9
	1920x1080 30p, 16:9
	1280x960 30p, 4:3

	1280x720 60p, 16:9
	1280x720 30p, 16:9
	640x480 30p, 4:3 (VGA)

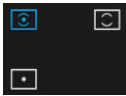
[5]  **ISO.** Below options are supported.

	AUTO
	100
	200
	400
	800


[6]  **White Balance.** Below options are supported.


	AWB (auto)
	Sunny
	Cloudy
	Indoor

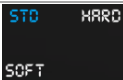
[7] **Exposure Metering.** Below options are supported.

	Center
	Average
	Spot


[8]  **Exposure Compensation.** Below options are supported.

	-2.0	2.0
	-1.7	1.7
	-1.3	1.3
	-1.0	1.0
	-0.7	0.7
	-0.3	0.3
	0	


[9]  **Sharpness.** Below options are supported.

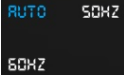
	Standard
	Hard

	Soft
--	------

[10]  **Contrast.** Below options are supported.

	Standard
	Hard
	Soft

[11]  **Anti-flicker.** Below options are supported.

	Auto
	50Hz
	60Hz

[12] **Restore Default Settings** 



Note:

- 1) Reboot is needed to make it take effect.
- 2) Restore default settings are recommended after each firmware upgrade.

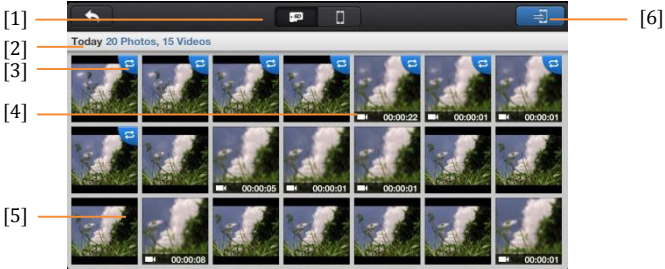
[13] **Format SD Card** 



Note: all data in the SD card will be lost after format operation, so be sure to do data backup before doing it.

Album Page

Album inCamera SD Card



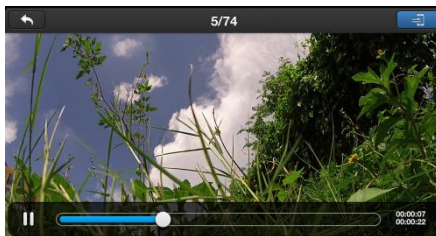
[1] **In Camera SD Card Album** 

You can browse all photos and videos in the SD card, view a selected picture or play a selected video.

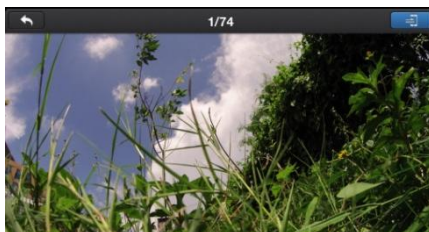
[2] Photos and Videos are listed and grouped by date.


[3] All those photos and videos that had been synchronized to the mobile device are identified .

[4] Video thumbnails, with a recorder token and time duration on them. Click a video thumbnail to **play a single video**. A play progress bar appears at the bottom of the screen.





[5] Photo thumbnails that hasn't been synchronized to the mobile device. Click a Photo thumbnail to **view a single picture**. You can slip left or right to view the previous or next picture.



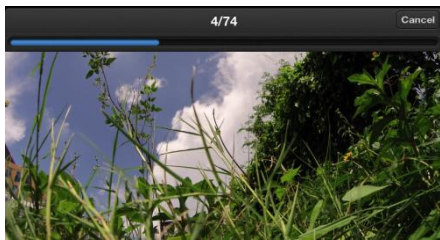
[6] **Synchronize Button** . Click this button to enter synchronize mode.



In Synchronize Mode

- (1) A synchronization progress bar (1) appears in this mode with a "tick"  on the right.
- (2) You can select photos or videos and then click , the synchronization process then begins.
- (3) You can exit synchronize mode by a click on **Cancel** button (3).

(4) You can synchronize single picture or video, or synchronize and play a video at the same time.



Synchronize a picture




Synchronize and play a video

You can also synchronize multiple pictures or videos at a time.

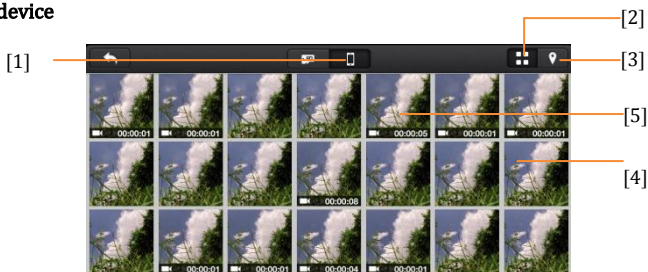


- (1) [arrow pointing to a thumbnail]
- (2) [arrow pointing to a group of thumbnails]
- (3) [arrow pointing to the selection summary bar]
- (4) [arrow pointing to the red 'X' button]

- (1) Click thumbnails to select photos or videos to synchronize to your mobile device. The thumbnails identified by this token are successfully selected.
- (2) Or you can select one or more groups to be synchronized.
- (3) The number of photos and videos that have been selected is displayed here.
- (4) **Synchronizing...**

You can click  to stop the synchronization process. Those photos and videos that have been copy to your iPhone in this synchronization process will remain there as a result.

Album In mobile device



[1] Album In mobile device

You can browse all photos and videos in the album created by the App on your mobile device, view a selected picture or play a selected video.

[2] Sorted by capture time . Pictures and videos are listed in thumbnail style

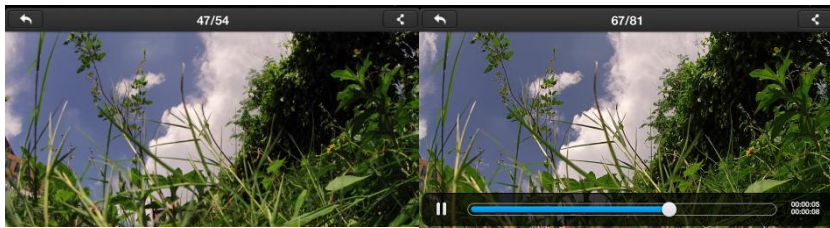
[3]Sorted by places. GPS information is embedded into the pictures and videos.

Note: Accessibility to the Internet is necessary for it to refresh the map.



[4] Click any picture to view a single picture. You can slip left or right to view the previous or next picture.

[5] Click any video to play a single video. A play progress bar appears at the bottom of the screen.



— [6]

[6] Share your pictures and videos to social network sites.

Note1: Accessibility to the Internet is necessary to share pictures or videos.

Note2: video sharing is not available currently, but it will be ready in the near future, including youtube, vimeo.



News Page

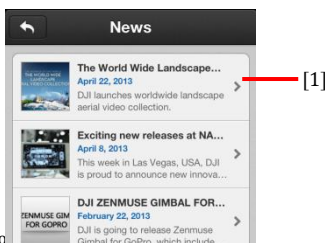
[1]News List

- (1) Scroll up to update
- (2) Scroll down to load more

Note: need connection to the Internet.

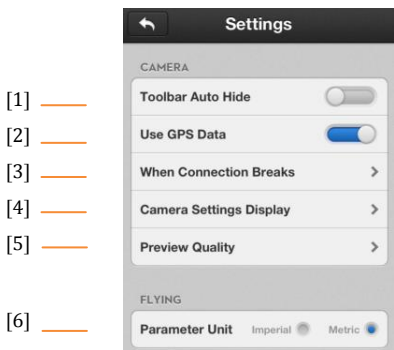
[2]News Detail

Click any item of news list to get news detail.



Settings Page

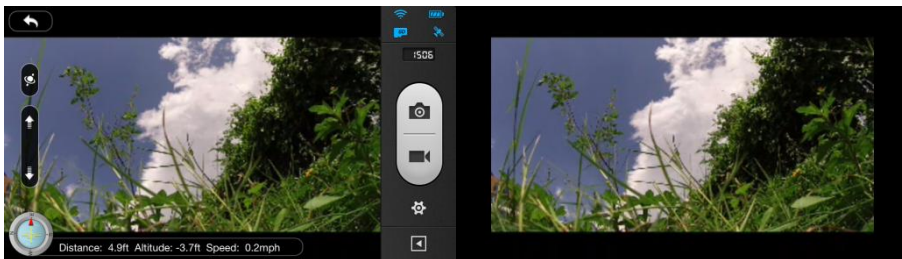
Turn the switch from left to right to enable it.



- [7] —
- [8] —
- [9] —
- [10] —
- [11] —
- [12] —
- [13] —
- [14] —
- [15] —
- [16] —



[1]Toolbar Auto Hide. Turn the switch from left to right to enable it.

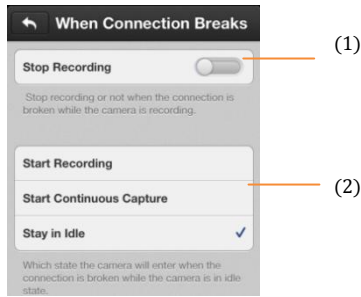


Auto HideDisabledAuto Hide Enabled

[2]Use GPS Data. Turn the switch from left to right to enable it.

When this option is enabled, your mobile device will send its own GPS information, if it has, to the camera upon its connection establishment to the camera. So the camera can have an initial GPS information in case the PHANTOM GPS module could not find enough satellites (>6). This initial GPS information may be overridden by the GPS information got from the PHANTOM GPS module by the camera afterwards.

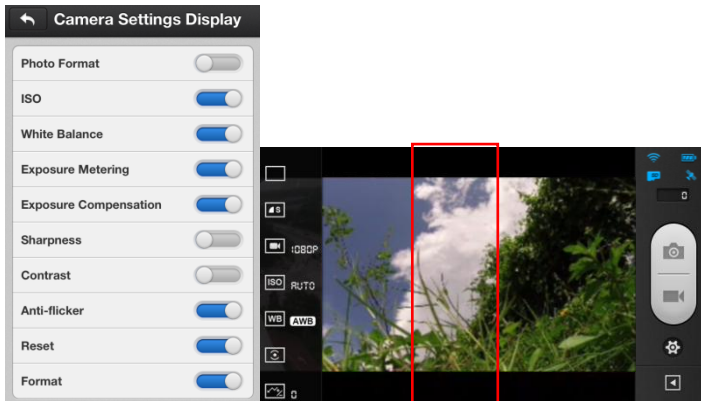
[3]When connection breaks. Click this item to enter the detailed page.



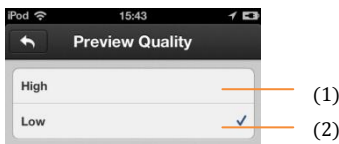
- (1) If enabled, the camera stops recording when the connection between your iPhone and the camera breaks while the camera is in recording state. If disabled, the camera keeps recording when the connection between your iPhone and the camera breaks while the camera is in recording state.
- (2) Here you can select what the camera to do when the connection between your mobile device and the camera breaks while the camera is in idle state. This is for those cases that the connection is lost but you don't want to miss the scenes that should have been taken by this flight.

[4]Camera Settings Display. Click this item to enter the detailed page.

These options determine which camera parameters will be shown in the camera parameter list in the camera preview page. For example, here disable the Photo Format item, and then it is hidden.



[5]Preview Quality. Click this item to enter the detailed page.



- (1) High: 320x240@30fps

(2) Low: 320x240@15fps, recommend to be used under weak Wi-Fi signal condition.

Note: may add an option of 640x480@30fps in the future.

[11] Binding

[12] Find MY PHANTOM



Fig.1 : Satellite mode



Fig.2 : Standard mode

Appendix

Assistant software & MC/PMU Firmware Upgrade





Before upgrade, make sure your computer is connected to the Internet and close anti-virus software and firewall during the firmware upgrade. Please follow below steps to update software and firmware.

1. Open your PC, power on PHANTOM VISION and connect it to PC with USB extender. DO NOT break connections until firmware upgrade is finished.
2. Run the Assistant software and confirm MC is connected.
3. Click "Info" to view your current software version, if there has updates you can down and install.
4. Click "Upgrade" to view your current firmware version, if there has updates you can down and install.
5. Wait until the Assistant software shows "finished" and power cycle. Up to date OK.

Note: If firmware upgrade failed, the system will enter waiting for firmware upgrade status automatically, please try again with above steps.

Autopilot System LED Description

System Status	LED Flashing
System start and self-check	
IMU abnormal data or need advanced calibration*	
Warm up after power on	
The aircraft is moved or bias of sensors too big	
Compass error too big, need recalibration.	
Transmitter (TX) signal lost, enter the FailSafe.	
TX stick(s) mid point error too big	
Low voltage alert or other abnormal alert* (e.g. Configuration error, TX data error, Enable low voltage protection without PMU, SN error or Compass abnormal work.)	
Record forward direction or home point	
Control Mode Indicator	Manual Mode**: None ATTI Mode: (stick(s) not at center) GPS Mode: (stick(s) not at center) IOC Mode**: (stick(s) not at center)

GPS Signal State Indicator (GPS/Compass Module is necessary)	GPS Signal is Best(GPS Satellite number > 6): None	
	GPS Signal is Well(GPS Satellite number = 6):	
	GPS Signal is Bad (GPS Satellite number = 5):	
	GPS Signal is Worst (GPS Satellite number < 5):	

*You can figure out the error by connecting the autopilot system to the Assistant Software.

**Should be enabled on the Assistant Software.

Specification

General	
Features	Aircraft and camera integration, less weight, multi-functions Camera remote-controlled by DJI VISION app on mobile device WIFI communicating distance enlarged to 300m by Range Extender Built-in anti-vibration gimbal High safety by Low-voltage alert and forcing landing Auxiliary GPS locating for disappearing aircraft
Electrical & Mechanical	
Working Voltage Range(Aircraft with camera)	12.4V
Power Consumption(Aircraft with camera)	Stationary after power on: 9V Start Motors: 18V
Operating Temperature	-10~40°C
Weight	Aircraft (With gimbal & camera) : Transmitter MobileDevice Mounting Range Extender
Aircraft (Flight parameters can be effected by mechanical performance and payloads)	
Supported Battery	4400mAh Lipo Battery
Flying Load	<1200g
Hovering Accuracy (GPS Mode)	Vertical : ± 0.8m ; Horizontal : ± 2.5m
Max Yaw Angular Velocity	200°/s
Max Tilt Angle	35°
Max Ascent / Descent Speed	±6m/s
Max Flying Speed	10m/s
wheelbase	350mm
Tilting Range of Gimbal	0°-60°

Transmitter	
Operating Frequency	5.728GHz~5.844GHz
Channel Numbers	16
Communication Distance (open outside)	300m
Receiver Sensitivity (1%PER)	> -93dBm
Transmitting Power	< 18dBm
Working Current/Voltage	60 mA@6V
Battery	4 AA Batteries (5#)
Operating Temperature	0°C~40°C
Camera	
Resolution	14 Mega Pixels
FOV	140 °/ 120° / 90 °
Sensor size	1/2.3'
Functions	Remote-controlled and parameter set by mobile device Support multi-capture, continuous capture and timed capture Recording supports HD,1080p30,1080i60 Single capture supports RAW and JPEG
Operating Temperature	0°C~40°C
Range Extender	
Operating Frequency	2412-2462MHz
Communication Distance (open outside)	200m
Transmitting Power	<=17dBm
Power Consumption	1.5W
Operating Temperature	0°C~40°C
DJI VISION App	
mobile device Supported	iOS 6.0 vision or above(iPhone recommended)
Functions	Camera parameters setting FOV scene real-time display Remote-control aircraft and camera Auxiliary GPS locating

Warning

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

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.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user' authority to operate the equipment.

NOTE: 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

When using the device, ensure that the antenna of the device is at least 20cm away from all persons.

CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Hereby, SZ DJI TECHNOLOGY Corporation declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

CE 0700