U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

May 15, 2015

Exemption No. 11599
Regulatory Docket No. FAA–2015–0506

Mr. Christopher Alan Frank
Rotary Image Marketing
9206 Timber Knoll Dr.
College Station, TX 77845

Dear Mr. Frank:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

By letter dated February 22, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Rotary Image Marketing (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct aerial videography and cinematography to develop community awareness for housing and business properties.

See Appendix A for the petition submitted to the FAA describing the proposed operations and the regulations that the petitioner seeks an exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner.

Airworthiness Certification

The UAS proposed by the petitioner is a Phantom 2 Vision +.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA−2014−0352), 11109 to Clayco, Inc. (*see* Docket No. FAA−2014−0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA−2014−0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A grant of exemption is in the public interest.

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, Rotary Image Marketing is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, Rotary Image Marketing is hereafter referred to as the operator.

Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or rescission of this exemption.

1. Operations authorized by this grant of exemption are limited to the Phantom 2 Vision+ when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised

documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS−80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.

11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with

14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

24. The UA must remain clear and give way to all manned aviation operations and activities at all times.

25. The UAS may not be operated by the PIC from any moving device or vehicle.

26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
    a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
    b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

    The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.

30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
    a. Dates and times for all flights;
    b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
    c. Name and phone number of the person responsible for the on-scene operation of the UAS;
    d. Make, model, and serial or N−Number of UAS to be used;
    e. Name and certificate number of UAS PICs involved in the aerial filming;
    f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
    g. Signature of exemption holder or representative; and
    h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.

31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on May 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/
John S. Duncan
Director, Flight Standards Service

Documents

- Petition of Exemption
- Acknowledgement Letter
- Phantom 2 Vision + User Manual
- Phantom Pilot Training Guide
- Phantom 2 Vision + Quick Start Guide
- UAS Flight Log
- UAS Maintenance Test Flight Log
- UAS Maintenance Log
- Copy of Rotary Pilot Certificate

PETITION OF EXEMPTION
for Rotary Image Marketing

a) Christopher Alan Frank
9206 Timber Knoll Dr.
College Station, Texas 77845
(979) 820-3096
chrisfrank83@yahoo.com

b) Request exemption from part 21, subpart H and Sections 45.23(b), 61.113(a) and (b), 91.7(a), 91.9(b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a), 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b) of Title 14, Code of Federal Regulations (14 CFR).

c) This exemption would allow Rotary Image Marketing to operate the Phantom 2 vision + quad copter unmanned aircraft system (UAS) to conduct aerial videography and cinematography to develop community awareness for those parents/students who are planning to attend Texas A&M University and individuals, companies that are unfamiliar of the geographical layout of the Bryan/College Station area for housing and business properties. This exemption would allow Rotary Image Marketing to enhance real estate, small or large business, and apartment/condo marketing.

The extent of each relief requested will be as follows:

CFR 45.23(b) Display of marks; general

I request the UAS not to be either a certificated aircraft or a certificated "experimental" aircraft. Exemption from display of marks is requested due to its size and airspace that it will operate in.

CFR 61.113(a) and (b) Private pilot privileges and limitations: Pilot in command

As I Chris Frank, currently hold a private rotary certificate with a third-class airmen medical certificate and currently a UH-60L PIC for the US Army, I understand the importance to be knowledgeable of the National Airspace System (NAS). However, I request that a non certificated pilot be able to operate the UAS with direct and written discretion of a certificated pilot with proper ground, operation and airspace training that is established by that certificated pilot. This appointed pilot would be tested in aircraft operation, maintenance, emergency procedures and the NAS before assuming operation

of the UAS. A proper training program will be in place with documentation and training logs.

CFR 91.7(a) Civil aircraft airworthiness

Given that the UAS will not require an airworthiness certificate in accordance with 14 CFR part 21, I request exemption. Also, there is no FAA regulatory standard for determining the airworthiness of an UAS. The manufacturers operating documents will be used by the operator to determine if the UAS is airworthy.

CFR 91.9(b)(2) Civil aircraft flight manual, marking, and placard requirements

Followed by exemption from CFR 45.23(b). Manufacturers operating manual shall be used and kept by the operator on location of UAS operations

CFR 91.103(b) Preflight action

While there is no approved airplane or rotorcraft flight manual available for the UAS the manufacturers operating manual is requested to be used for proper preflight. Runways and airports will not be used to deploy or recover the UAS excluding them from the preflight/planning action.

CFR 91.109 Flight introduction; simulated instrument and certain flight tests

Although the UAS does not allow operation with a dual set of controls, proper hands on training of UAS operation will be given to any operational pilot by a certificated pilot who has sufficient UAS operation hours. Simulated training may be used for sufficient operational training. All pilots will be familiar with preflight actions, routine flight operations, and emergency procedures.

CFR 91.119 Minimum safe altitudes: general

Notification of all residing tenets on which property the UAS is intended to operate on will be coordinated in advance. Tenets will be aware of the exact time and area that the UAS will be operating in.

CFR 91.121 Altimeter settings

The UAS operator will maintain a GPS that will have derived altitude capabilities to report feet AGL. Altitudes to be flown will be reported to local ATC before flight.

CFR 91.151(a) Fuel requirements for flight in VFR conditions

The UAS operator will land the UAS prior to the manufacturer's recommended minimum level of battery power of 30%. The UAS shows a low voltage warning when 30% battery life is remaining. This provides ample time for the UAS operator to land in an immediate safe area. Also, the UAS is equipped with an automated function that lands the aircraft immediately when a low battery is detected.

CFR 91.203(a) and (b) Civil aircraft: certification required

Operations of the UAS prove to be above safety standards due to its size, weight, speed, and limited operating area that it will be operated in

CFR 91.405(a) Maintenance required

This only applies to aircraft with airworthiness certificates. Maintenance of the UAS will be performed by the operator if a discrepancy is found during pre-flight and recorded on a "Maintenance Log" for personal history records.

CFR 91.407(a)(1) Operation after maintenance, preventive maintenance, rebuilding, or alteration

This only applies to aircraft with airworthiness certificates. Maintenance test flights will be performed after each maintenance discrepancy is corrected as a safety precaution and recorded on a "Maintenance Test Flight Log" for personal history records.

CFR 91.409(a)(1) and (2) Inspections

This only applies to aircraft with airworthiness certificates. Pre-flight will be performed as a safety precaution by the operator using the outlined procedures in the operating documents.

CFR 91.417(a) and (b) Maintenance records

This only applies to aircraft with airworthiness certificates. Any maintenance performed on the UAS will be recorded on a "Maintenance Log" for personal history records

d) The UAS operations would provide more detailed and adequate information to potential individuals, companies looking to relocate to the Bryan/College Station area and promote economic growth overall. Also, the aerial videography would allow small business owners a more feasible option for marketing and advertisement over the high cost of manned rotary/fixed wing aircraft as in the past. Further, the UAS operation increases the safety of patrons due to its small size and lack of combustible fuel over compared to a large manned aircraft and reduces the ambient noise level helping to prevent noise complaints. Lastly, the UAS proves to be more ecological by emitting no exhaust fumes and requires no fossil fuels for operations.

e) UAS operations will not reduce the safety of other airborne pilots, operating pilots, or patrons that are in an area of UAS operation. Conversely, the UAS increases safety as it reduces flight operations by rotary wing aircraft flying at low levels while conducting videography operations which are conducive to a pilot becoming over task saturated and not recognize other flight dangers enabling them into a dangerous situation. Additionally the UAS size, weight, and speed do not pose a threat to the public or users of the NAS.

f) **(1)** Rotary Image Marketing request exemption from the requirements of part 21, subpart H and Sections 45.23(b), 61.113(a) and (b), 91.7(a), 91.9(b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a), 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b) of Title 14, Code of Federal Regulations (14 CFR).

(2) This exemption will permit Rotary Image Marketing to operate an Unmanned Aircraft System (UAS) for the purpose of conducting real estate and business videography and cinematography throughout the Bryan/College Station area to provide a more feasible and safer option for real estate and small business owners advertising and marketing.

g) Supporting operating documents are attached.

Christopher A. Frank
February 22, 2015

Rotary Image Marketing 22 Feb 2015

To whom it may concern,

We are submitting this Petition of Exemption for the purpose of allowing businesses the financial ability to use videography and cinematography as a marketing tool for their business, property, and or house. Also, to showcase land and housing options for newcomers to the Bryan/ College Station area who may be unfamiliar to its geography My wife Jeanie Frank, is currently a real estate agent in the Bryan/College Station, Texas area and understands the needs of the local businesses and people. She works for United Country Real Estate which works largely in auction homes, large plots of land, and homes with land acreage attached. She has developed the knowledge of how to market homes from photography resources but clearly understands the effectiveness in the video marketing power that a drone can provide for properties and housing.

I myself am working on acquiring my real estate license to better understand and serve the people with a great service. I also currently am employed as an Airport Operations Manager at Easterwood Airport which is located in College Station, Texas. In my duties, it is my job to comply with FAA requirements as a Part 139 airport and be in compliance with all FAA procedures as well. I understand the notification process that drones need to take with the local airports and I currently issue NOTAMS for the airport and local airspace. Additionally, I currently serve in the United States Army Reserve as 153D UH-60A/L Blackhawk Pilot. I have served in the military for 13 years and as a pilot for the last 5 years. I have over 500hrs of multi-turbine engine rotary time and serve as a Pilot In Command (PIC).

I write this letter hoping to show that our experience allows us to realize, understand and respect the very issues that the FAA is facing with drones for commercial use. Our years of experience and knowledge make us more heightened and aware of the obstacles that lie ahead but make us respect the process. As aviation enthusiast, we look forward to developing the UAS into the marketing world.

Thank You,

Christopher A. Frank

PHANTOM 2 VISION+

User Manual V1.8

2015.01

Contents

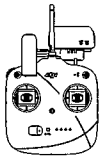
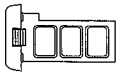
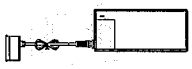
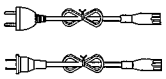
Overview

The Phantom 2 Vision+ is the next evolution of the Phantom 2 Vision. It features the same App enabled First Person View (FPV), high performance camera, remote camera control and in-flight content sharing, but adds to it a high performance 3- axial camera stabilization system. It is ideal for aerial creativity whether photo or video. In addition, it provides ground station function which allows users to plan the flight mission and enables aircraft to flight automatically.

FPV: First Person View, see the world from the perspective of the craft and feel a true flying experience.

1 In the Box

Check that all of the following items have been included in your package before use. If anything is missing, please contact your local dealer.

NO.	Name	Picture	Qty.	Remarks
1	Aircraft		1	Integrated gimbal and camera
2	Propeller Pairs		4	4 with black nut, 4 with grey
3	Micro-SD Card		1	Inserted in aircraft Micro-SD slot
4	Lens Cap		1	Fixed to camera lens
5	Gimbal Clamp		1	Attached to the gimbal
6	Prop Wrench		1	In maintenance packet
7	Remote Controller		1	Includes attached Phone Holder and Range Extender
8	AA Batteries		4	For Remote Controller
9	DJI Smart Flight Battery		1	Inside aircraft
10	Charger		1	110-240V Adaptive
11	Power Cables		2	GB & CE
12	Plug Adaptors		2	SAA & BS
13	Micro-USB Cable		1	For range extender charging and firmware upgrade

Choose between Phantom and Naza-M working modes using Phantom 2 Vision+ Assistant. If using Naza-M mode, please refer to the NAZA-M V2 Quick Start Manual for related instructions.

- Phantom: Flight settings will be selected automatically depending on whether 6 or more satellites have been found. This mode allows users to configure the Remote Controller and gain values, and use Failsafe and battery level warnings.
- Naza-M: Flight settings will be identical to the Naza-M V2. Users can choose between GPS, Attitude, or Manual mode. They can also access advanced settings including Intelligent Orientation Control (IOC). Rear LED Flight Indicators will display the flight status according to the Naza-M indicator.
- Ready to Fly: When 6 or more GPS satellites have been found, the Flight Control System will lock its home point and Rear LED Flight Indicators will blink a slow green (G·····). This mode is ideal for beginners.
- Ready to Fly (non-GPS): When less than 6 GPS satellites have been found, the Flight Control System will stabilize itself less than in full Ready to Fly mode and will require more skilled flying. Rear LED Flight Indicators will blink a slow yellow (Y·····).

Assembly and Use

Follow the below instructions to prepare for flight.

1 Removing Gimbal Clamp

Pull gimbal clamp in the direction indicated to remove.

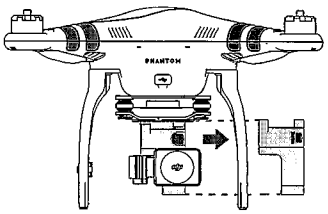


Figure 2

To avoid damage to the gimbal, remove Gimbal Clamp before powering up the Phantom.

Attach the Gimbal Clamp during transportation or long term storage to avoid damage.

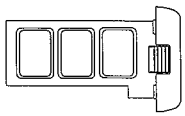
2 Preparing the Battery

Ensure all related devices are fully charged before flying the Phantom 2 Vision+.

Device	Power supply
Remote Controller	2000mAh rechargeable LiPo battery
Range Extender	Charge fully through Micro-USB slot. See Charging the Range Extender (Page 20) for details.
Aircraft (including gimbal and camera)	DJI Smart Flight Battery.
Mobile Device	Fully charge before using the DJI VISION App.

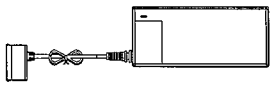
2.1 DJI Smart Flight Battery

This battery has been specially designed for the Phantom 2 series. It has a battery capacity of 5200mAh, voltage of 11.1V and charge-discharge management functionality. It can only be charged with a DJI charger or Phantom 2 Car Charger.



Smart Flight Battery

Figure 3



DJI Charger

Figure 4

Discharging process				
LED1	LED2	LED3	LED4	Current battery level
■	■	■	■	87.5%~100%
■	■	■	▒	75%~87.5%
■	■	□	□	62.5%~75%
■	■	▒	□	50%~62.5%
■	■	□	□	37.5%~50%
■	▒	□	□	25%~37.5%
■	□	□	□	12.5%~25%
▒	□	□	□	0%~12.5%
□	□	□	□	<0%

Battery life

When the battery is powered off, press and hold the Circular Power Button for 5 seconds to check battery life. Battery Level Indicators will show light up and the Battery Power Indicators will blink for 10 seconds. All lights will then turn off. For details, please see below.

Battery life				
LED1	LED2	LED3	LED4	Current battery life
■	■	■	■	90%~100%
■	■	■	▒	80%~90%
■	□	■	□	70%~80%
■	□	▒	□	60%~70%
■	□	□	□	50%~60%
■	▒	□	□	40%~50%
□	□	□	□	30%~40%
▒	□	□	□	20%~30%
□	□	□	□	Less than 20%

⚠ When batter life reaches 0, it is no longer operational.

📖 More battery information is available in the battery tab of the Phantom 2 Vision+ Assistant.

2.3 Charging the Flight Battery

(1) Connect charger to wall socket (100-240V, 50/60Hz, using the Plug Adaptors if necessary).
(2) Connect battery to charger. If the current capacity of the battery is over 75%, you should turn it on before beginning to charge.
(3) Battery Level Indicators will display current capacity level as the battery charges.
(4) Battery is fully charged when Battery Level indicator lights are off. Disconnect the charger and battery when charging is complete.

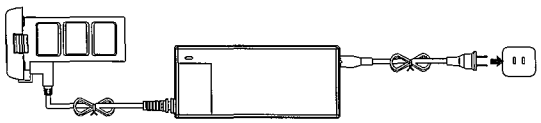


Figure 6

3 Preparing the Phantom 2 Vision+

The Phantom 2 Vision+ is a quadrotor with a built-in Flight Control System with integrated gimbal and camera. It features an FC Assistant Port, Camera Data Port and a specialized battery compartment for its flight battery. All these features make the Phantom 2 Vision+ easy to assemble and configure.

3.1 Introduction

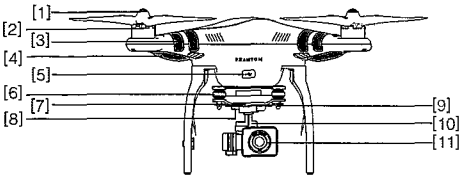


Figure 8

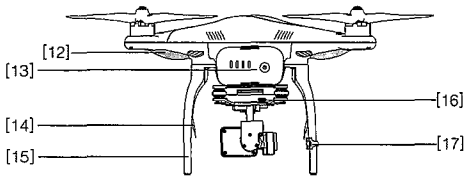


Figure 9

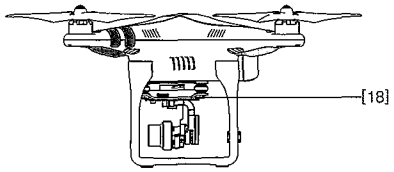


Figure 10

[1] Propeller (P15)

[2] Motor

[3] Front Sticker

[4] Front LED (P12)

[5] FC Assistant Port (Micro-USB slot) (P46)

[6] Vibration Absorber

[7] Camera LED Indicator (P15)

[8] Camera Function Button (P14)

[9] Anti-drop Kit (P13)

[10] 3-axial Stabilized Gimbal (P12)

[11] Camera Lens (P14)

[12] Rear LED Flight Indicator (P12)

[13] DJI Smart Flight Battery (P7)

[14] Receiver Antenna (P17)

[15] Landing Gear

[16] Camera Data Port (Micro-USB slot) (P14)

[17] Compass (P25)

[18] Micro-SD Slot (P13)

3.2 Built-in Flight Control System

The Phantom 2 Vision+ is equipped with a DJI Naza-M V2 Flight Control System. This provides incredible ease of use and stability. Pilots can control the Phantom's movements in many directions, including pitch (forwards and backwards), roll (left and right), elevator (up and down) and yaw (turn left or right). The flight control system also can provide IOC, Failsafe and battery level warnings.

Modules	Functions
Flight Controller	Acts as the brains of the complete flight control system, responsible for connecting and controlling all the modules together.
IMU	Has a built-in inertial sensor and a barometric altimeter that measures both attitude and altitude.
GPS & Compass	The compass reads geomagnetic information and assists the GPS (Global Position System) to accurately calculate the position and height of the aircraft.
LED Flight Indicators	Indicates the status of flight control system.

FC Assistant Port

The flight control system communicates with the PC Assistant through a Micro-USB cable between the Phantom FC Assistant Port and the PC. Users can use Assistant to configure the aircraft and upgrade the Phantom firmware. Please refer to Using the Phantom 2 Vision+ Assistant (Page 46) for details.

Gimbal specifications	
Control accuracy	±0.03°
Controllable range	Pitch : -90°~0°
Maximum angular velocity	Pitch : 90°/s

• **Non-FPV Mode:** the gimbal will stabilize across 3-axial for smooth aerial creativity.
• **FPV Mode (First Person View Mode):** Gimbal will lock to the movements of the Phantom for a FPV experience.

Anti-drop Kit

The Anti-drop Kit helps keep the gimbal and camera connected to the aircraft. Two have been mounted on delivery. If new ones are required, take the gimbal and press part [1] through the center hole of the Vibration Absorber the center hole of part [2]. Lock them together as shown in [3]. Mounting the Anti-drop Kit diagonally is recommended.

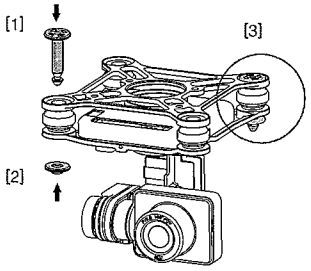


Figure 14

⚠ Once part [1] and part [2] are connected, the Anti-drop Kit cannot be disconnected and reused.

Micro-SD Slot

With flight battery powered off, make sure the Micro-SD card is inserted correctly into the Micro-SD Slot before taking any photos or recording any video.

The Phantom 2 Vision+ comes with a 4GB Micro-SD card and can support cards up to 32GB. The DJI VISION App may not be able to read some Micro-SD cards. Using the DJI VISION App to reformat new Micro-SD cards is recommended.
Refer to Format Micro-SD Card (Page 37) for details.

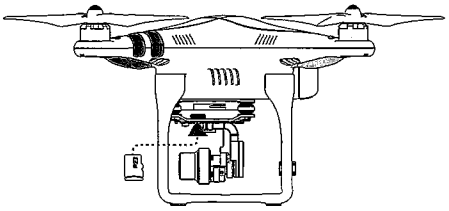


Figure 15

⊘ Do not insert or remove Micro-SD card when flight battery is powered on.

Gimbal Error Warnings

Before the aircraft takes off, if a gimbal motor error is detected or the gimbal clamp is not removed, there will be a warning prompt on the camera page of the DJI VISION App. This will disappear after the problem is resolved.

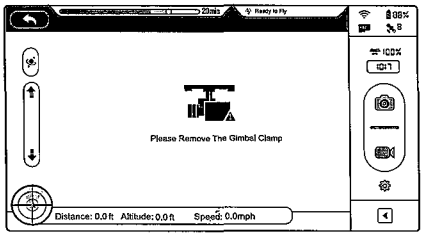


Figure 16

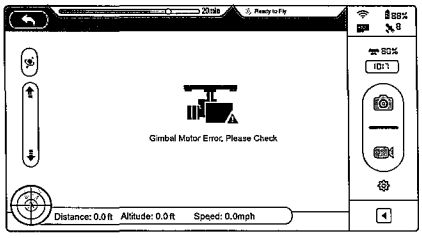


Figure 17

Camera LED Indicator

Camera LED Indicator lights up after the flight battery is powered on. It provides information on the working status of the camera.

Camera LED Indicator	Wi-Fi status	Camera status
Green Solid	OFF	Power On; Idle
Slow Green Blink (0.2s on, 1.8s off)	ON	Idle
Green Blink(0.1s on, 0.3s off, 0.1s on, 1.8s off)	ON	Micro-SD card connected to PC
Fast Green Blink (0.1s on, 0.3s off)	ON	Synchronizing
Orange Solid	OFF	Recording
Orange Blink Once (0.2s on, 0.3s off)	ON / OFF	Taking a single picture.
Orange Blink 3 Times(0.1s on, 0.1s off)	ON / OFF	Taking 3 or 5 photos per shot
Orange Fast Blink (0.1s on, 0.3s off)	ON / OFF	Firmware Upgrading
Green, Orange (0.2s green, 1.8s orange)	ON	Recording
Red Solid	ON / OFF	Critical error
Slow Red Blink (0.2s on, 1.8s off)	ON / OFF	CMOS sensor error
Red Blink Once (0.2s on, 0.3s off)	ON / OFF	Operation failed
Red Blink 3 Times(0.1s on, 0.1s off)	ON / OFF	Micro-SD card error
Fast Red Blinks (0.1s on, 0.3s off)	ON / OFF	Upgrade error
Fast Green, Orange and Red Blink (0.1s on, 0.3s off)	ON / OFF	Overheated Camera

4 Attaching the Propellers

Always use original 9-inch propellers, classified by the color of each central nut.

4.1 Introduction

Propellers	Grey Nut (9450)	Black Nut (9450 R)
Diagram		
Assembly Location	Attach to motor without black dot.	Attach to motor with black dot.
Fastening/ Un-fastening Instructions	Lock: Tighten propeller in this direction. Unlock: Loosen propeller in this direction.	

4.2 Assembly

(1) (Figure 20) Remove warning cards from motors after you have read them.

(2) (Figure 21) Spin grey marked propellers clockwise onto unmarked motors and black marked propellers anti-clockwise for black marked motors.

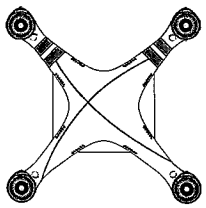


Figure 20

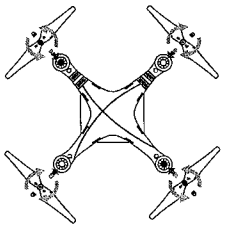


Figure 21

5.1 The Remote Controller

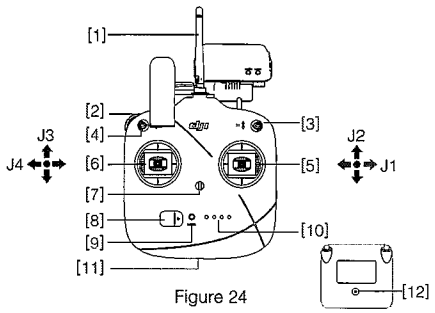
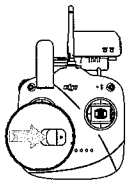


Figure 24

[1] Antenna
[2] Left Dial
[3] Switch S1
[4] Switch S2 (Reserved)
[5] Right Stick: J1, Roll [left & right], J2, Pitch [front & back]
[6] Left Stick: J3, Throttle [up & down], J4, Yaw [rotation]
[7] Neck Strap Attachment
[8] Power Switch
[9] Power Indicator
[10] Battery Charge & RC Assistant Port (micro-USB port)
[11] Battery Level Indicator
[12] Training Port (on back)

5.2 Power on the Remote Controller

(1) Set S1 and S2 switches to the upper most position and place all sticks in the mid-point.
(2) Toggle power switch to the right to switch on.
(3) There will be a power on indicator beep. If the remote controller is set to be CE compliant, then there will be one beep, while the FCC compliant version will emit two beeps. The battery level indicator displays the current battery level. The indicator will blink green quickly, indicating the remote controller and receiver are linking. Once fully linked, the power indicator will change to a solid green.



⚠ • If the low voltage warning alert sounds (refer to Remote Controller Power LED Status Information (Page 17) for details), please recharge the battery as soon as possible.
• Using the incorrect type of charging cable may cause damage.
• Following long term storage, recharge the battery before use.

5.3 Remote Controller Power LED Status Information

Power LED Indicator	Sound	Remote Controller Status
Ⓖ — Solid Green	None	Functioning normally.
Ⓡ — Solid Red	None	Charging(remote controller is powered off)
Ⓨ — Solid Yellow	None	Remote controller joysticks calibration error, need to be re-calibrate.
Ⓡ — Solid Red	BB—BB—BB	Low voltage (from 3.5V-3.53V), recharge the remote controller.
Ⓡ ····· Quick Red flashing	B-B-B.....	Critical low voltage (from 3.45V-3.5V). Recharge the remote controller immediately.
Ⓖ ····· Slow Green flashing	B--B--B.....	Alert will sound after 15 minutes of inactivity. It will stop once you start using the remote controller.

5.4 Battery Level Indicator

Built-in LiPo Battery: The remote controller includes a rechargeable LiPo battery with a capacity of 2000mAh. You can monitor the current battery level using the LED indicators on the front panel of the remote controller as the figure shown:

Battery Level Indicator

25% 50% 75% 100%

⚠ The remote controller will show a blinking LED and sound an alert when the voltage drops below 3.45V, then automatically power off after 3 seconds. This process will repeat even if you power cycle the remote controller. If this low voltage warning occurs during flight, the remote controller will automatically power off, causing the aircraft to enter Failsafe mode, which cannot be interrupted (refer to Failsafe Function (Page27) for details). It is strongly recommended that you recharge the battery immediately when the 3.45V-3.5V low voltage warning occurs.

5.5 Antenna Orientation

Keep the antennas pointing skyward, perpendicular to the ground for maximum remote controller range during flight.

⚠ • In 'Ready to Fly' mode, the Phantom will hover when all sticks are released.
• In 'Ready to Fly (non-GPS)' the Phantom will lock its altitude but will not have horizontal positioning.

5.7 Linking the Remote Controller and Receiver

A 5.8G receiver is built in to the Phantom 2 Vision+. Its link button and indicator are located on the underside of the phantom, as shown in Figure 26.
The Remote Controller and the receiver are paired before delivery. Only use this button if you have replaced your Remote Controller or receiver.

Linking Procedures

(1) Power off the Remote Controller, power on the aircraft. You will see the link indicator blinking red.
(2) Press the link button with a thin object and hold until the link indicator blinks yellow. Release the link button.
(3) Power on the Remote Controller. Link indicator will switch off, showing that a link has been successfully established.

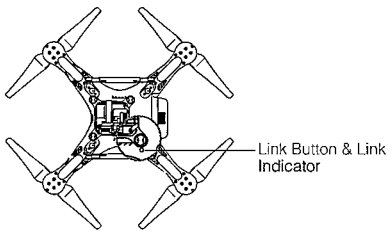


Figure 26

Link Indicator

Link Indicator	Description	Next Operation
ⓡ ····· Red flashing	No signal received.	Switch on the Remote Controller or perform a link procedure.
ⓨ ····· Yellow flashing	Ready to link.	Switch on the Remote Controller.

5.8 Compliance Version Configuration

As power levels vary between regulators, the Phantom Remote Controller's power output can be adjusted by twisting the CE/FCC Control Knob (Figure 27) on the back of the Remote Controller using a flathead screwdriver. For CE compliance, set the Remote Controller to CE with a full counterclockwise turn. For FCC compliance, set the Remote Controller to FCC with a full clockwise turn. Be sure to follow relevant local regulations.
Compliance can be configured using the PHANTOM RC Assistant. Select CE compliance version in Assistant to set it, or do the same with FCC compliance version.

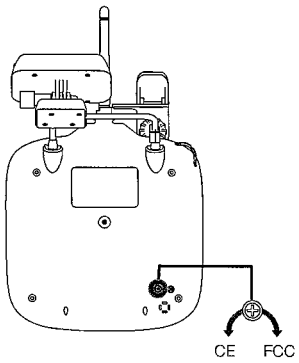


Figure 27

⚠ • Turn the CE/FCC Control Knob gently to avoid damage.
• CE compliant devices have an effective remote controller range of 400 meters in open spaces due to power limitations.
• FCC compliant devices have an effective range of 800 meters in open spaces.
• Watch your flight distance as the Phantom 2 Vision+ will enter Failsafe mode (auto-landing or go home and land) if it flies beyond the relevant range limits.
• Always follow local laws and regulations.

• It is recommended to use a Φ2.4mm flathead screwdriver for adjustments.
• There is another potentiometer for reserved use.

Powering on the Range Extender

(1) Flick the power switch to the ON position.
(2) Wait for approximately 30 seconds. The Wi-Fi signal indicator will blink green indicating the Range Extender is communicating properly.
(3) Keep the Range Extender facing the aircraft during flight for the best communication link.

⚠ Power off the Range Extender after every flight to avoid discharging the battery.

Checking the Battery Level

The battery level of the Range Extender can be checked in the camera page of the DJI VISION App as shown below. When the battery level drops to 20% or lower, the battery level icon will go red as a charging reminder.

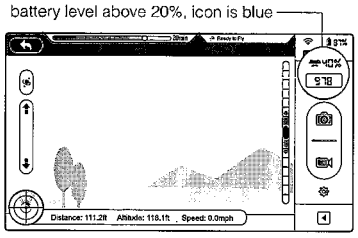


Figure 30

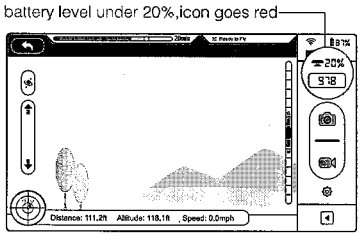


Figure 31

6.3 Rename Range Extender SSID

Make your Range Extender SSID easier to remember by changing its name.

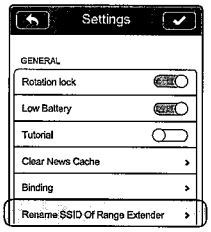


Figure 32

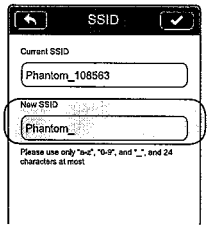


Figure 33

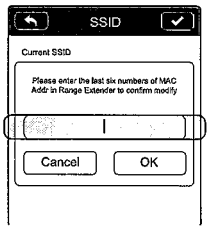


Figure 34

(1) Tap "Rename SSID of Range Extender" in the Settings page. Enter a new SSID name (e.g. Phantom_Tom) in the textbox.
(2) Tap ✔ and you will be asked to enter the last six characters of your MAC address on the Range Extender to confirm the change. The MAC address can be found on the sticker on your Range Extender. If your MAC address is 60:60:1F:60:41:E7, then enter 6041E7.
(3) Tap "OK" to confirm the change. The Range Extender will automatically restart and the App will return to the settings page. Approximately 30 seconds later, the new network name can be found in the Wi-Fi list of your mobile device. Select and connect the renamed network to use the DJI VISION App.

6.4 Binding the Phantom 2 Vision+ and Range Extender

If the connection between the Phantom 2 Vision+ and the Range Extender fails, or one of them needs to be repaired or replaced, a camera and Range Extender binding will need to be performed through the DJI VISION App.

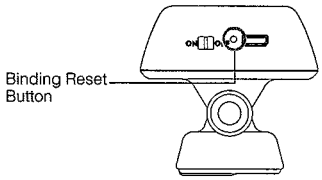


Figure 35

Supported mobile devices

iOS (iOS6.1 or above) Recommended: iPhone4S, iPhone5, iPhone5S, iPhone5C,iPhone6, iPhone6 Plus, iPod Touch4, iPod Touch5; Available but not recommended: iPad3, iPad4, iPad mini, iPad Air.

Android (4.0 or above): Samsung Galaxy S3, S4, Note2, Note3 or mobile devices of similar configuration.

DJI continues to support many mobile devices and any information from users are welcome. Please send any questions or queries to the following mailbox: phantom2vision@dji.com.

The DJI website is regularly updated. Check back often for latest App updates.

7.2 Register and Login

Access the Internet to register and login.

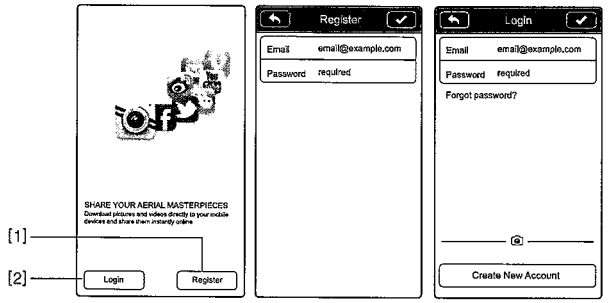


Figure 40 Figure 41 Figure 42

[1] Register

Tap 'Register' to enter the registration page. Fill in your Email and Password information and then tap ✔ to create a new account.

The DJI account works with all DJI Assistant and Apps.

[2] Login

Tap 'Login' to enter the login page. Fill in your registered Email and Password and then tap ✔ to login.

Log in to your account the first time you use the DJI VISION App.

Tap "Forgot Password" if you have forgotten your login details.

[3] Usage tips

Useful tips will display when you enter the welcome page. Tap the screen to display the next tip.

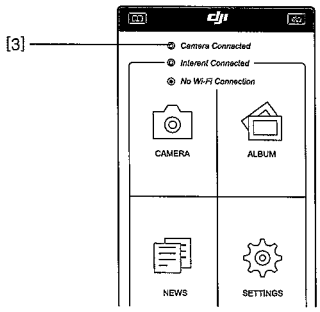


Figure 43

Flight

Once pre-flight preparation is complete, it is recommended to carry out the tasks in the Phantom Pilot Training Guide to prepare for more complex flight maneuvers and learn to fly safely. Ensure that all flights are carried out in a suitable location.

Flight Environment Requirements

(1) Do not use the aircraft in severe weather conditions. These include wind speed exceeding category 4, snow, rain and smog.
(2) Fly in open fields as high buildings or steel structures may affect the accuracy of the onboard compass.
(3) Keep the Phantom away from obstacles, crowds, high voltage power lines, trees or bodies of water when in flight.
(4) Reduce the chance of electromagnetic interference by not flying in areas with high levels of electromagnetism, including base stations or radio transmission towers.
(5) The Phantom cannot operate within the polar areas.
(6) Do not fly the aircraft within no-fly zones specified by local laws and regulations.

Preflight Checklist

(1) Remote Controller, smart battery, Range Extender and smartphone are fully charged.
(2) Propellers are mounted correctly.
(3) Gimbal clamp has been removed.
(4) Damping absorbers are in good condition, not broken or worn.
(5) Anti-drop kits have been mounted correctly.
(6) Camera lens cap has been removed.
(7) Micro-SD card has been inserted if necessary.
(8) Gimbal is functioning as normal.
(9) Motors can start and are functioning as normal.
(10) DJI VISION App can connect to the camera.

1 Calibrating the Compass

IMPORTANT: Make sure to calibrate the compass in every new flight location. The compass is very sensitive to electromagnetic interference, which can cause abnormal compass data leading to poor flight performance or even flight failure. Regular calibration is required for optimum performance.

- DO NOT calibrate your compass where there is a chance of strong magnetic interference, such as magnetite, parking structures, and steel reinforcements underground.
- DO NOT carry ferromagnetic materials with you during calibration such as keys or cellular phones.
- DO NOT calibrate beside massive metal objects.

1.1 Calibration Procedures

Choose an open space to carry out the following procedures. Watch the Phantom 2 Vision+ quick start video for more details.

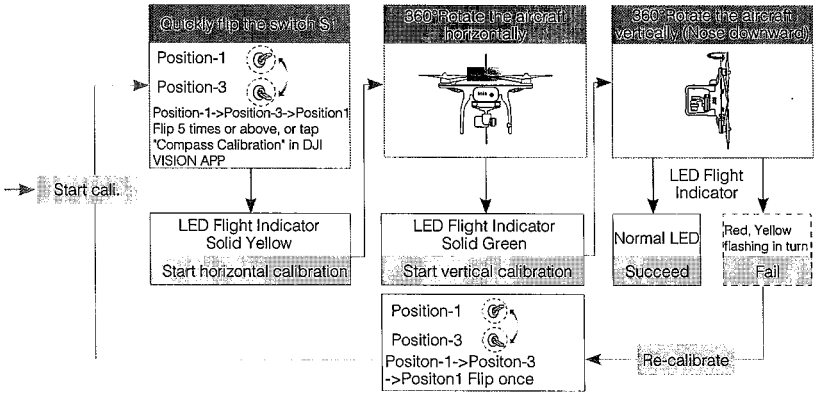


Figure 48

⚠ • When the Rear LED Flight Indicator blinks yellow rapidly during flight, the aircraft has entered Failsafe mode. Refer to Failsafe Function(Page 27) for details.
• A low battery level warning is indicated by the Rear LED Flight Indicator blinking red slowly or rapidly during flight. Refer to the Low Battery Level Warning Function(Page 28) for details.
• View tutorials about flight for more flight information:www.dji.com/phantom2visionplus/training.
• Aircraft and battery performance is subject to environmental factors such as air density and temperature. Be very careful when flying 3000 meters (9800 feet) or more above sea level, as battery and aircraft performance may be reduced.

3.2 Video Suggestions and Tips

(1) Work through the check list before each flight.
(2) Set the gimbal working mode to Stabilized.
(3) Aim to shoot when flying in Ready to Fly only.
(4) Always fly in good weather, such as sunny or windless days.
(5) Change camera settings to suit you. These include FOV, photo format and exposure compensation.
(6) Take flight tests to establish flight routes and scenes.
(7) Push the sticks gently to make aircraft movements stable and smooth.

4 Failsafe Function

The Phantom will enter Failsafe mode when its connection to the Remote Controller is lost. The Flight Control System will automatically control the aircraft to return to home and land to prevent injury or damage.

Home Point: When the Phantom enters 'Ready to Fly' from the 'Ready to Fly status (non-GPS)', the GPS coordinates will be recorded and set as the home point.
• When Remote Controller signal is lost, the aircraft will return to the recorded home point coordinates and land.
• Home point coordinates are used to calculate the horizontal distance of the aircraft (shown as "Distance" on the GUI of the DJI VISION App).
• After successfully record the home point, rear LED flight indicators blink fast green.
Dynamic Home Point: The Home point will be reset to position of the mobile device at specific time intervals.
• Enable dynamic home point in DJI Vision app or Phantom 2 Assistant.
• Dynamic home point is only available to the GPS-enabled mobile device. Turn on GPS and data service to obtain higher accuracy of the mobile device position.
• Dynamic home point is useful in situations when you are in motion and require a Home point that is different from the takeoff point.

4.1 When Will Failsafe Activate?

(1) The Remote Controller is powered off.
(2) The Phantom has flown out of effective remote controller range.
(3) The signal between the Remote Controller and the Phantom has been blocked.
(4) There is interference causing a signal problem with the Remote Controller.

4.2 Failsafe Procedure

Initiating the Failsafe mode from different flying statuses will results in different landing processes.
Ready to Fly(non-GPS) — Automatic landing
The Flight Control System will keep the aircraft level during descent and landing. It may be drift during the descent and landing process.
Ready to Fly — Automatic go home and land
The Flight Control System will automatically control the aircraft to fly back to the home point and land.

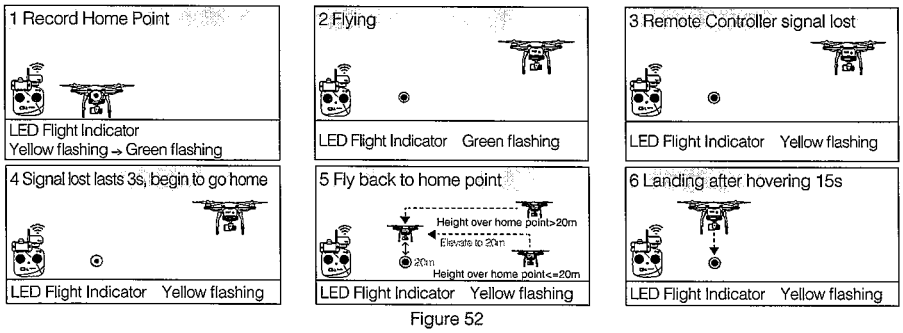
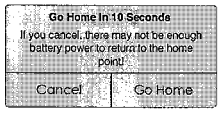


Figure 52

Battery Level Warning	Remark	Rear LED Flight Indicator	DJI VISION App	Flight Instructions
Sufficient battery level	Sufficient battery level	Green LED blinks slowly	No message prompts	Operating normally, no specific action needed.
Low battery level warning	The battery power is low. Please land the aircraft.	Red LED blinks slowly.	When "Go-Home" is selected in the Phantom Assistant, this message will appear:  Tap "Go-home" to have the aircraft return to the Home point and land automatically, or "Cancel" to resume normal flight. If no action is taken, the aircraft will automatically go home and land after 10 seconds.	Fly the Phantom 2 Vision+ back and land it as soon as possible, then stop the motors and replace the battery.
Critical Low battery level warning	The aircraft must land immediately.	Red LED blinks quickly.	The DJI Vision App screen will flash red and aircraft starts to descend.	The Phantom 2 Vision+ will begin to descend and land automatically.
Estimated remaining flight time	Estimated remaining flight based on current battery level.	N/A	N/A	N/A

Color zones on the battery level indicator reflect estimated remaining flight time and are adjusted automatically, according to the aircraft's current status.
When the critical battery level warning activates and the aircraft is descending to land automatically, you may push the throttle upward to hover the aircraft and navigate it to a more appropriate location for landing.

When these warnings are triggered, please bring the aircraft back to the Home point or land to avoid losing power during flight.

Low Battery Level Warning on the DJI VISION App

Battery level warnings will show on the camera page of the DJI VISION App when the battery level is low.
(1) A red light will flash along the edges of the app screen.
(2) Audible alarm. Make sure sound is turned on and volume is turned up on your mobile device.
(3) The aircraft battery icon will turn red.

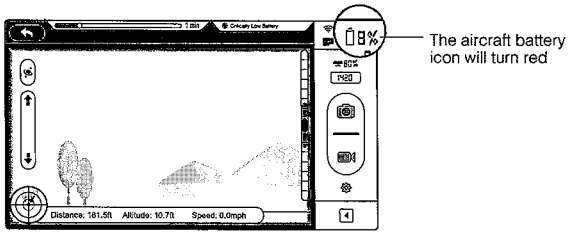


Figure 56

Category A Safety Zone

(1) The category A "safety zone" is comprised of a small "no-fly zone" and a range of "restricted-altitude zones". Flight is prevented in the "no-fly zone" but can continue with height restrictions in the restricted-altitude zone.
(2) 1.5 miles (2.4 km) around a designated safety zone is a no-fly zone, inside which takeoff is prevented.
(3) 1.5 miles (2.4 km) to 5 miles (8 km) around restricted areas are altitude restricted, with maximum altitude going from 35 feet (10.5 m) at 1.5 miles (2.4 km) to 400 feet (120 m) at 5 miles (8 km).
(4) A "warning zone" has been set around the safety zone. When you fly within 320 feet (100m) of the safety zone, a warning message will appear on the DJI Vision app.

Category B Safety Zone

(1) Category B "safety zone" is comprised of a "no-fly zone" and a "warning zone".
(2) 0.6 miles (1 km) around the safety zone is a designated "no-fly zone".
(3) A "warning zone" has been set around the safety zone. When you fly within 0.6 miles (1Km) of this zone, a warning will appear on the DJI Vision app.

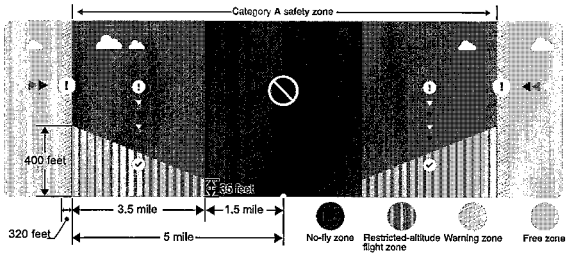


Figure 59:Category A

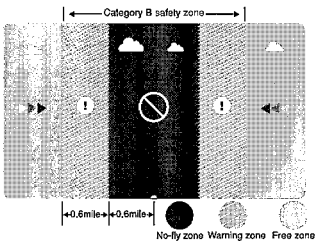


Figure 60: Category B

Ready to Fly Ⓖ……Green flashing			
Zone	Restriction	DJI VISION App Notification	Rear LED Flight Indicator
No-fly Zone ●	Motors will not start.	Warning: You are in a No-fly zone. Take off prohibited.	Ⓡ…… Red flashing
	If the Phantom enters the restricted area in Ready to Fly (non-GPS) mode but Ready to Fly mode activates, the Phantom will automatically descend to land then stop its motors after landing.	Warning: You are in a No-fly zone, automatic landing has begun. (If you are within 1.5 mile radius)	
Restricted-altitude flight zone	If the Phantom enters a restricted area in Ready to Fly (non-GPS) mode and Ready to Fly mode activates, it will descend to a safe altitude and hover 15 feet below the safe altitude.	Warning: You are in a restricted zone. Descending to safe altitude. (If you are between the range of 1.5 mile and 5 mile radius) Warning: You are in a restricted zone. Max flight height restricted to between 10.5m and 120m. Fly Cautiously.	
Warning zone	No flight restriction applies, but there will be warning message.	Warning: You are approaching a restricted zone, Fly Cautiously.	
Free zone	No restrictions.	None.	None.

Semi-automatic descent: All stick commands are available except the throttle stick command during the descent and landing process. Motors will stop automatically after landing. Users will regain control once the motors have stopped. There is no need to toggle the S1 switch.

⚠ • When flying in the safety zone, LED flight indicators will blink red Ⓡ……quickly and continue for 3 seconds, then switch to indicate current flying status and continue for 5 seconds at which point it will switch back to red blinking.
• For safety reasons, please do not fly close to airports, highways, railway stations, railway lines, city centers and other special areas. Try to ensure the aircraft is visible.

2 Camera Page

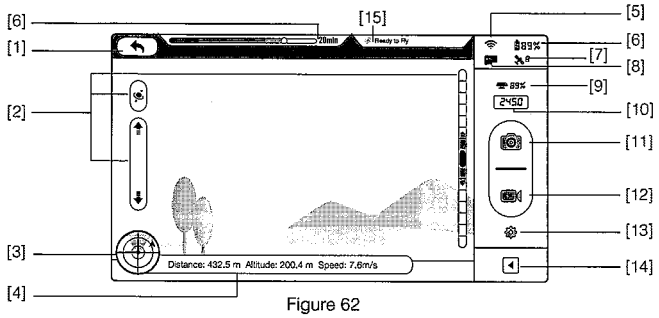


Figure 62

[1] Return [2] Camera Pitch Control [3] Flight Attitude and Radar Function [4] Flight Parameters [5] Wi-Fi Signal Strength [6] Flight Battery Level [7] Aircraft GPS Status [8] Micro-SD Card Status [9] Range Extender Battery Level [10] Remaining Shots [11] Shutter Button [12] Video Recording Button [13] Camera Settings [14] Hide or Show Flight Parameters [15] Rear LED Flight Indicator Status

[1] Return

-Return to the preview page

[2] Camera Pitch Control

-Pitch Control switch is white tap once to highlight it and enter Accelerometer Sensor Mode. Tap again to return to normal.

Normal Mode

Tap up arrow to pitch camera upwards and down arrow to pitch downwards. Green slider indicates current camera pitch.

Gimbal pitch control (Normal Mode)

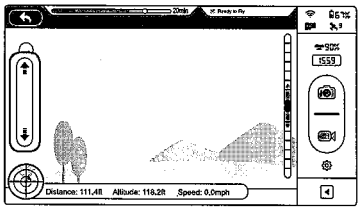


Figure 63

Gimbal pitch movement

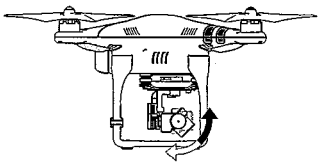


Figure 64

Accelerometer Sensor Mode

The gimbal pitch movement is controlled by moving your mobile device. Pitch forward to pitch camera down and backward to pitch camera up.

Gimbal pitch control (Accelerometer Sensor Mode)

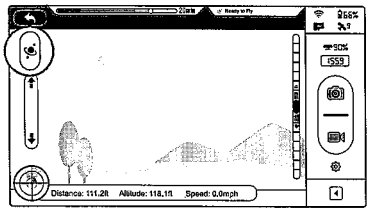


Figure 65

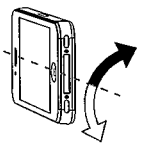


Figure 66

Gimbal pitch movement

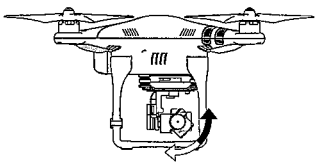


Figure 67

⚠ In Accelerometer Sensor Mode, the pitch angle indicator will show a grey area. When the green pitch indicator is inside the grey area, the camera will move according to pitch gestures. When the indicator reaches the boundary of the grey area, pitch gestures will control the camera's pitch speed at a constant rate.

(3) Micro-SD card is damaged.
(4) Connection between the DJI VISION App and camera is broken.

[11] Shutter Button

Tap to take photos.
Single capture: press once for a single capture.
Continuous capture: press once for 3 or 5 captures.
Timed capture: press once to begin a timed capture, press again to stop.

- Shutter button is disabled during video recording.
- Capture modes can be reconfigured in camera settings; refer to the Camera Settings (Page35).

[12] Video Recording Button

Start and stop video recording. Tap once to start recording. A red dot will blink to indicate recording is in progress and a time code will appear in the top right corner of the preview screen. Press again to stop recording.

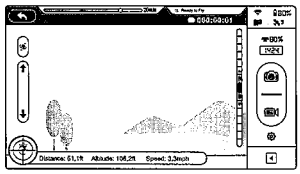


Figure 71

[13] Camera Settings

Tap to open the camera settings menu, refer to Camera Settings (Page 35).

[14] Hide or Show Flight Parameters

Tap to hide flight parameters. Tap again to show.

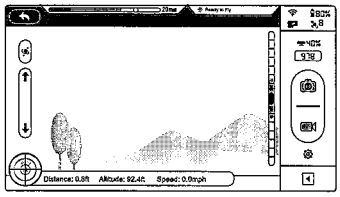


Figure 72

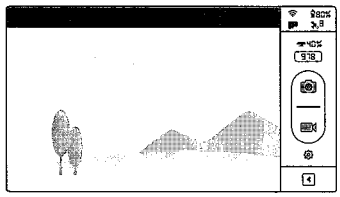


Figure 73

[15] Rear LED Flight Indicator Status

Displays the aircraft's current flight status. Tap for details.

3 Camera Settings

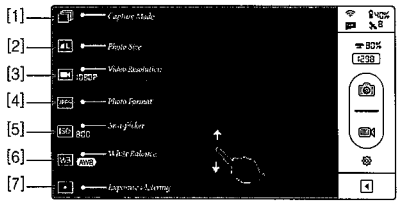


Figure 74

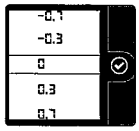
Figure 75

[1] Capture Mode [2] Photo Size [3] Video Resolution [4] Photo Format [5]ISO [6] White Balance [7] Exposure Metering [8] Exposure Compensation [9] Sharpness [10] Anti-flicker [11] Restore Defaults [12] Format Micro-SD Card

[1] Capture Mode

	Single capture.
	3 captures.
	5 captures.
	Configurable timed capture: a) Interval between shots (3~60 s) b) Number of shots (2~254, or number of picture is subject to the capacity of the memory card.)

[8] Exposure Compensation



-2.0(EV)
-1.7(EV)
-1.3(EV)
-1.0(EV)
-0.7(EV)
-0.3(EV)
0(EV)

2.0(EV)
1.7(EV)
1.3(EV)
1.0(EV)
0.7(EV)
0.3(EV)

[9] Sharpness

STD	Standard
HARD	Hard
SOFT	Soft

[10] Anti-flicker

AUTO	Anti-flicker
50HZ	50Hz
60HZ	60Hz

[11] Restore Defaults

Restores all default camera settings. Flight battery restart is needed to allow restoration to take effect.

[12] Format Micro-SD Card

Format the Micro-SD card. All data stored in the Micro-SD card will be lost after formatting. Remember to backup before formatting.

4 Album Page

The DJI VISION App has an SD Card album and a Mobile Device Photo Album. Images and videos on the SD Card album can be synchronized to the Mobile Device Photo Album.

In the DJI VISION App, tap to enter into the SD Card album and tap to enter into Mobile Device Photo Album.

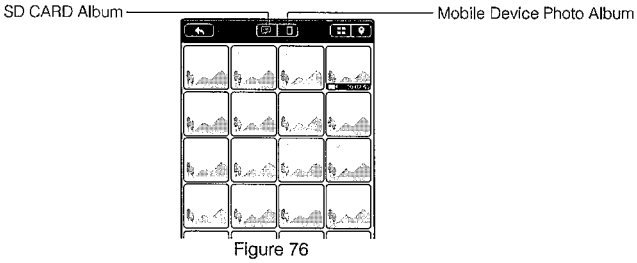


Figure 76

⚠ SD Card album is accessible when the mobile device is connected to Phantom 2 Vision+ Wi-Fi.

4.1 SD Card Album

Pictures stored in the camera are presented using Thumbnails. Tap the corresponding thumbnail to view the picture.

[1] Photos and videos are listed and grouped by date.

[2] All photos and videos that have been synced to your mobile device are marked with .

[3] Tap any thumbnail for single view mode. Tap a Photo thumbnail that hasn't been synchronized to the mobile device to view the photo. Swipe left or right to view the previous or next photo. Tap on a video thumbnail to play it and view the video length. A progress bar will appear at the bottom of the screen. Tap to enter single synchronization mode to synchronize a single photo or video, or to synchronize and play a video at the same time.

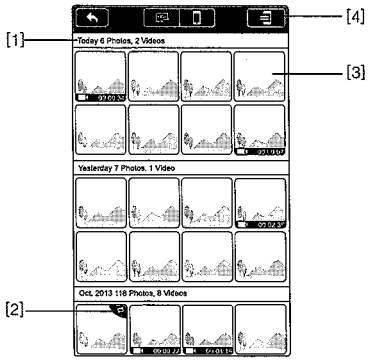


Figure 77

[4] Tap any thumbnail for single view; you can slide left or right to view the previous or next photo. Tap a video thumbnail to play a single video.

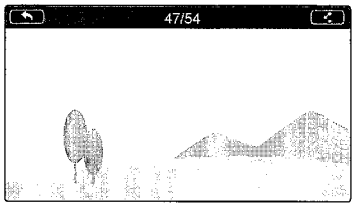


Figure 84

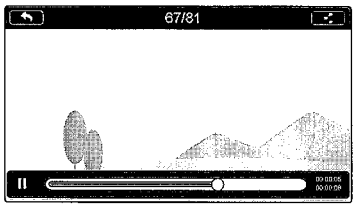


Figure 85

[5] Tap to share your photos and videos to social networks.

⚠ Access to the Internet is required for photo and video sharing.

5 News Page

View the latest DJI news. (Internet access is required.)

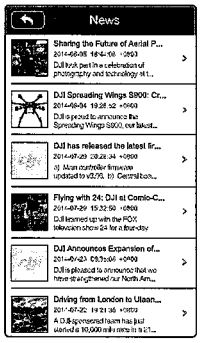


Figure 86

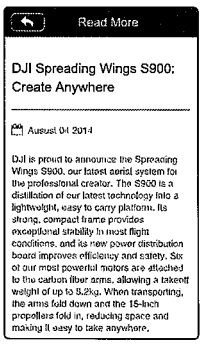


Figure 87

6 Settings Page

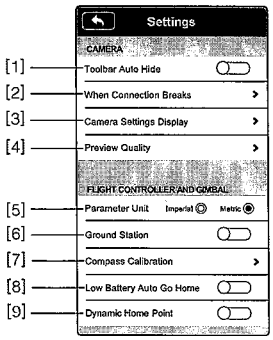


Figure 88

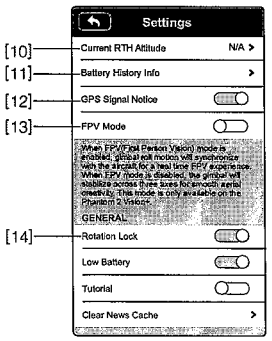


Figure 89

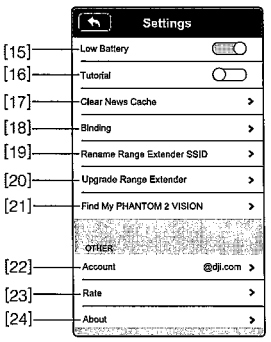


Figure 90

[5] Parameter Unit

Select imperial or metric units of measurement.

[6] Ground Station

Slide to the right to enable ground station feature.

[7] Compass Calibration

Tap to calibrate the compass. Do not calibrate the compass during flight.

[8] Low Battery Auto Go Home

Enable or disable auto go home feature when battery is low.

[9] Dynamic Home Point

When activated, the Home point will be reset to your current position at specific time intervals. The aircraft will return to the latest Home point as required.

[10] Current RTH Altitude

Default RTH altitude set to 20m. Raising the RTH altitude above 120m is not recommended.

[11] Battery History Info

Show the battery history warning records.

[12] GPS Signal Notice

If enabled, the DJI VISION App will display a pop-up tip when attempting to takeoff without a sufficient GPS signal.

[13] FPV Mode

Switched on, the gimbal will work in FPV mode. Switched off, the gimbal will work in Stabilize mode.

[14] Rotation Lock

The user interface of the DJI VISION App will rotate if rotation lock is enabled (for iOS device only).

[15] Low Battery Warning

If enabled, an alarm will sound when the battery level is too low.

> ⚠ We recommended adjusting the mobile device volume to the highest level.

[16] Tutorial

Hints and Tips

[17] Clear News Cache

Tap to flush news cache.

[18] Binding

In the event that camera and Range Extender binding is lost or an item has been repaired or replaced, binding must be performed using the DJI VISION App. Refer to Binding the Phantom 2 Vision+ and Range Extender (Page 21) for details.

[19] Rename Range Extender SSID

Tap to rename the SSID of the Range Extender. Refer to Rename Range Extender SSID (Page 21) for details.

[20] Upgrade Range Extender

When upgraded, it is possible to use a mobile device's data network to access internet functions while connected to the Phantom.
This feature is not available on Android.

[21] Find My PHANTOM 2 VISION

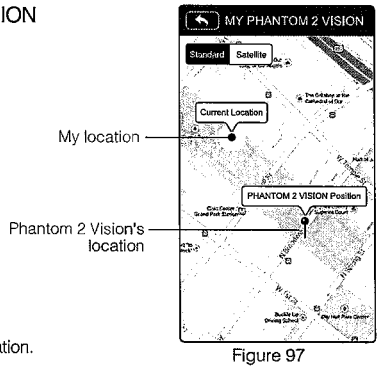


Figure 97

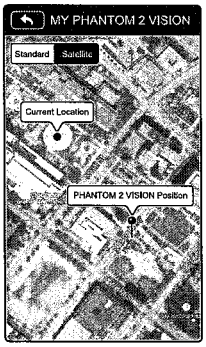


Figure 98

[22] Account

Tap to see user account information.

[23] Rate

Tap to rate the DJI VISION App. Internet access required.

> Android App does not include rating.

[24] About

Tap to see the current version of the DJI VISION App and contact information.

7.2 Using Ground Station

Step 1 Launching Ground Station:

Enable ground station in the Settings section of the DJI Vision app. A disclaimer for Ground Station will appear. Read this thoroughly before using Ground Station.

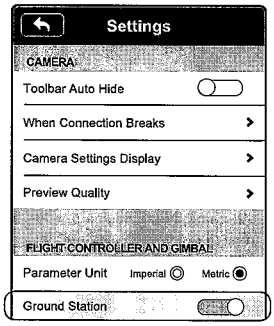


Figure 100

Ensure your mobile device has access to the Internet. Due to the map data required, Wi-Fi connection is recommended. Internet access is required to cache the ground station map, if Wi-Fi is unavailable, mobile data service is required. Open the DJI Vision app camera GUI and swipe left to launch ground station(see Figure 101). DJI Vision app cannot connect to your aircraft while it is accessing the Internet. Hence, you may prompt with the warning message such as "Connection to Phantom Failed". This message will not appear when your aircraft is re-connected to DJI Vision app. Map data of your current location will load. You can then drag the map to cache nearby areas for future use(see Figure 102).

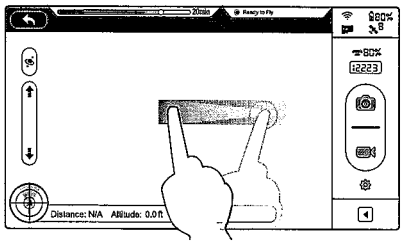


Figure 101

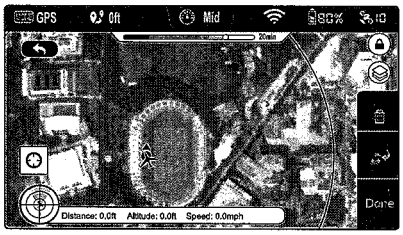


Figure 102

Step 2 Setting a Waypoint:

Disconnect from the Internet and connect the DJI Vision app to your aircraft. Check that remote controller S1 switch is in position (position-1) and the upper left corner in ground station display GPS and wait for the aircraft to enter "Ready-to-Fly" mode (LED indicator blinking green) before swiping left into ground station. Tap on the map to place a waypoint. You can place up to 16 waypoints including the Home point. Waypoints cannot be placed beyond 500m from the Home point or inside No Waypoint Areas.

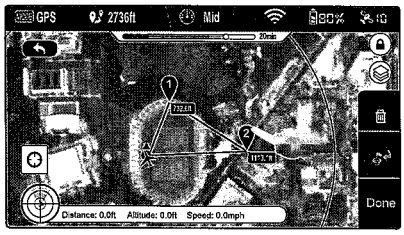


Figure 103

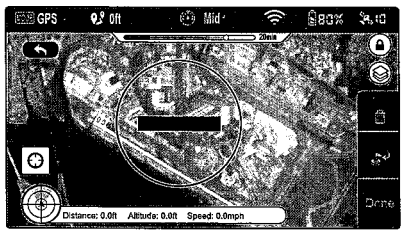


Figure 104

PC / MAC Assistant

For better use of the Phantom 2 Vision+, Phantom 2 Vision+ Assistant and Phantom RC Assistant are required. Both run on Windows or Mac OS X operating systems.

1 Installing Driver and Phantom 2 Vision+ Assistant

1.1 Installing and Running on Windows

(1) Download the driver installer and Assistant installer (.EXE) from the Phantom 2 Vision+ download page.
(2) Connect the Phantom 2 Vision+ to a PC using a Micro-USB cable.
(3) Run the driver installer and follow the prompts to finish installation.
(4) Run the Assistant installer and follow the prompts to finish installation.
(5) Double click the Phantom 2 Vision+ icon on your desktop to launch Assistant.

⚠ Supports Windows XP, Windows 7 and Windows 8 (32 or 64 bit).

1.2 Installing and Running on Mac OS X

(1) Download the Assistant installer (.DMG) format from the Phantom 2 Vision+ download page.
(2) Run the installer and follow the prompts to finish installation.

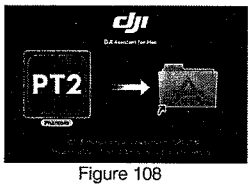


Figure 108

(3) When launching for the first time, if using Launchpad to run the Phantom 2 Vision+ Assistant, Launchpad will not allow access because Assistant has not been reviewed by the Mac App Store.

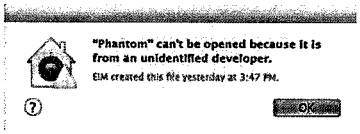


Figure 109

(4) Locate the Phantom 2 Vision+ icon in Finder, press Control then click the icon (or right-click the icon using a mouse). Choose Open from the shortcut menu, then click Open in the prompt dialog box to launch.
(5) After the first successful launch, double click the Phantom 2 Vision+ icon as normal to launch using Finder or Launchpad.

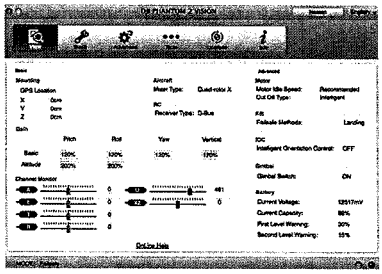


Figure 110

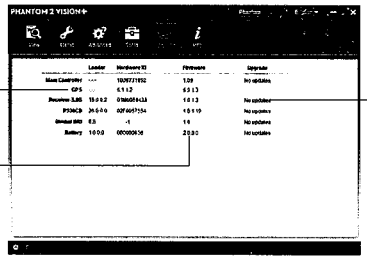


Figure 113

⚠ • An internet connection is required to upgrade the Phantom 2 Vision+ firmware.
• DO NOT power off until the upgrade is finished.
• If the firmware upgrade fails, the Flight Controller will enter a waiting for firmware upgrade status automatically. If this happens, repeat the above procedures.

Firmware upgradable items: (1)Flight Controller (2)GPS (3)5.8G Receiver (4) Main Board (P330CB) (5)Battery (6) Gimbal IMU

2.3 Using the Phantom RC Assistant

Use the Phantom 2 Vision+ Assistant to install PHANTOM RC Assistant on your Windows PC or Mac, and then follow the below steps to configure the Remote Controller.

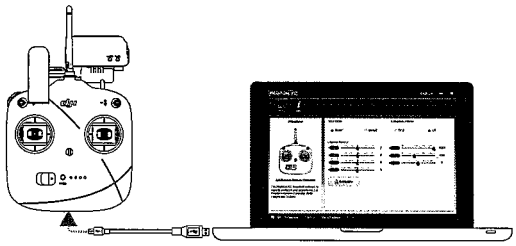


Figure 114

(1) Turn off the Remote Controller and find its Micro-USB slot.
(2) Power on PC and Remote Controller then connect Remote Controller to the PC with a Micro-USB cable. DO NOT disconnect until configuration is finished.
(3) Run the PHANTOM RC Assistant and wait for the Remote Controller to connect to Assistant. Watch the indicators Ⓡ Ⓑ on the bottom left of the screen. When connected successfully, the Computer Connection status is Ⓖ and Data Exchange Indicator blinks Ⓑ.
(4) Finish configuration in the [Main] page.
(5) Finish upgrade in the [Info] page if necessary.

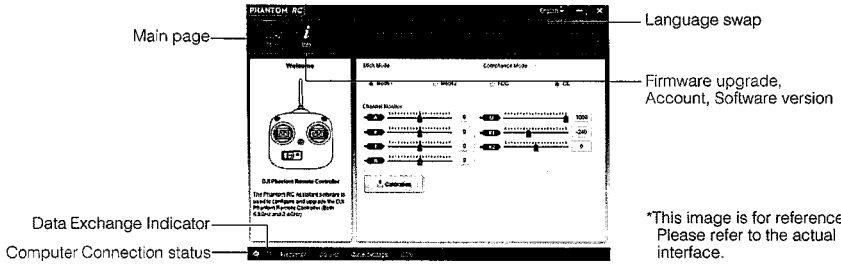


Figure 115

Remote Controller	
Operating Frequency	5.728 GHz - 5.85 GHz
Communication Distance (open area)	CE Compliance: 400m; FCC Compliance: 800m
Receiver Sensitivity (1%PER)	-93dBm
Transmitting Power (EIRP)	CE Compliance: 25mW; FCC Compliance: 100mW
Working Current/Voltage	120mA@3.7V
Battery	2000mAh rechargeable LiPo battery
Range Extender	
Operating Frequency	2412MHz - 2462MHz
Communication Distance (open area)	500m - 700m
Transmitting Power	20dBm
Power Consumption	2W

3 Troubleshooting (FAQ)

3.1 How to solve large margin(s) mid-point error?

If the Remote Controller stick(s) mid-point margin of error is too big, the motors will fail to start when you execute the CSC and the Phantom will not take off. The below are some possible fixes for this.

(1) One of the Remote Controller's stick positions (except the throttle stick) is not centered when powering on the Phantom 2 Vision+.
Solution: Place all Remote Controller sticks at their mid-point positions and then power cycle the Phantom 2 Vision+ to re-record the mid-point.

(2) The Remote Controller sticks have been trimmed, leading to a deviation in the mid-point position.
Solution: Use Assistant to perform a Remote Controller calibration.
a) Connect to Assistant, tap Basic -> RC -> Command Sticks Calibration and push all Remote Controller sticks through their complete travel range to see if any stick cannot reach its outermost position.
b) Power cycle the Phantom 2 Vision+. Power cycling is required.
c) Re-attempt Remote Controller calibration in Assistant.

If the above solutions do not solve your issue, please send your Remote Controller to DJI Customer service for repair.

3.2 How to restore a video file if power is turned off during a recording session?

Solution: Keep or place the Micro-SD card back into the camera. Power cycle the camera and wait about 30 seconds for the video file to be restored.

3.3 Failure to acquire the SSID.

Solution: Double check whether both the camera and Range Extender are powered on and the power switch of the camera is switched to "Wi-Fi ON."

3.4 What to do if Phantom 2 Vision+ is out of sight and the Wi-Fi connections is lost?

Solution: Turn off the Remote Controller to trigger the Failsafe mode and the aircraft will start to fly back, descend, and land at the Home point. Please make sure there are no obstacles between the Phantom and the home point and that you are familiar with the procedure for regaining control.

3.5 Wi-Fi connection fails all the time.

Solution: Double check the current Wi-Fi connection status of the mobile device. The mobile device may be connecting to other Wi-Fi networks after a connection breaks with the Phantom 2 Vision+.

3.6 Files fail to synchronize.

Solution: Video files that are too large (file sizes close to 4GB) cannot be synchronized to the mobile device. Some mobile devices do not support the synchronization of the 1080i60 video files.

PHANTOM PILOT TRAINING GUIDE

Earning Your Stripes V1.1

Learn More: www.dji.com

⚠ CAUTION

AGES **18+**

⚠ WARNING!
Rotating parts may cause injury

This product is not suitable for people under the age of 18. Please carefully read the "Quick Start Guide", "User Manual", "Disclaimer", and fully watch the tutorial videos before using the PHANTOM. Users should make every effort to fly regularly in order to improve their flight skills as an advanced level pilot (★★★). Please fly safely and responsibly.

Please follow these guidelines prior to flying your Phantom:

❶ Always turn on the Remote Controller prior to turning on the Phantom.
❷ Toggle S1, S2 to the top.
❸ Be sure there are no distractions when you're flying.
❹ When starting your training, be sure you are in a very large open area. Be aware of your surroundings. Always fly in areas void of obstacles and away from traffic and people.
❺ Before actually taking off, be sure you have calibrated the compass and you have full GPS satellite reception (Slow Continuous Green Flashing).
❻ Never fly higher than 400 feet.
❼ During training, stay behind your imaginary barrier and never fly behind yourself.
❽ When in doubt, gently pull down on the throttle stick and land.
❾ DO NOT PANIC.

The aircraft nose should face AWAY from the pilot before takeoff.

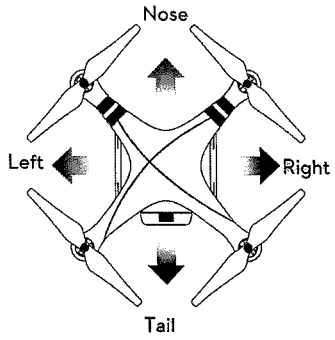

CAUTION

DO NOT fly the Phantom within a radius of 2 meters.


FORBIDDEN

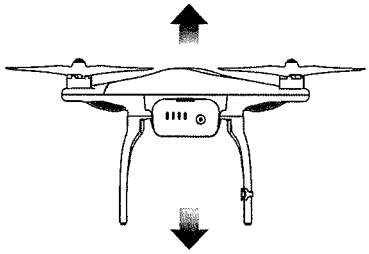
DO NOT touch the propellers after the Phantom has been started.

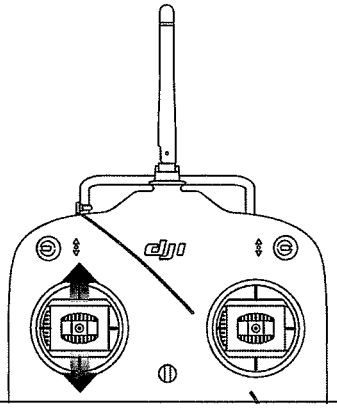

NO TOUCH



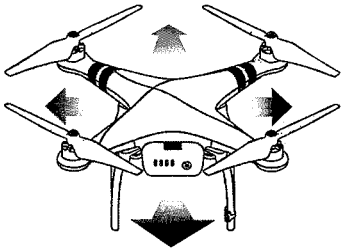
Basic Flight Maneuvers (★)

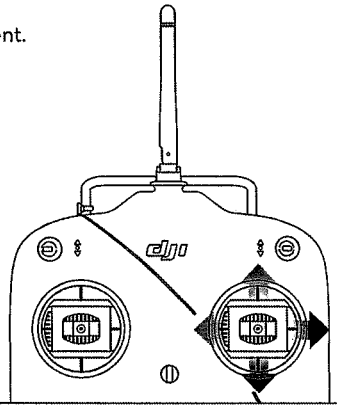
1 Take off and land with battery facing you.



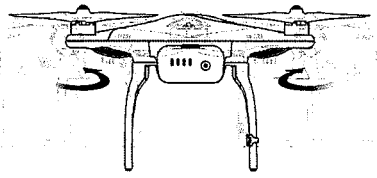


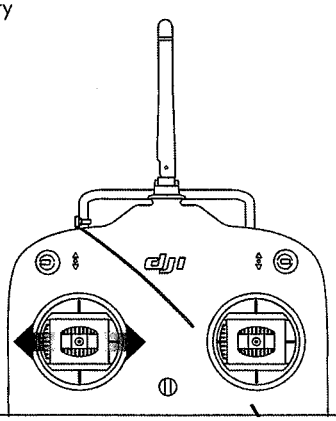
2 Hover in one spot keeping battery facing you, make sure to control Left/Right/Forward/Back movement.





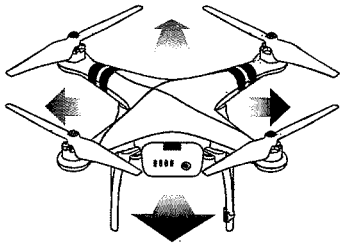
3 Rotate left, rotate right but try to keep the battery pointed at yourself.

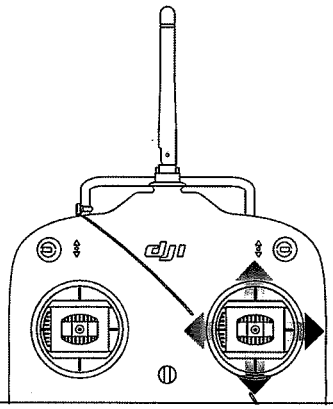




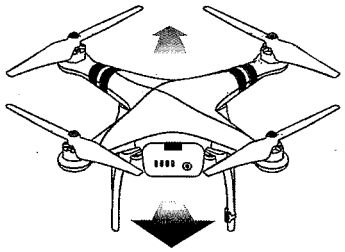
Basic Flight Maneuvers (★)

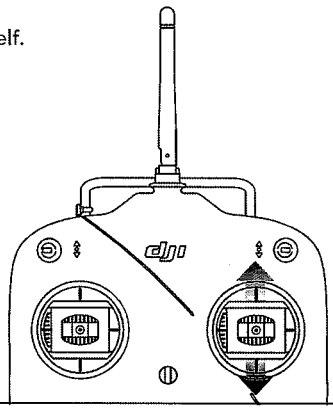
4 Slowly fly forward/back/left/right with back of Phantom pointed at yourself.



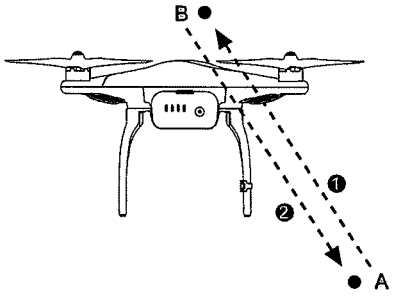


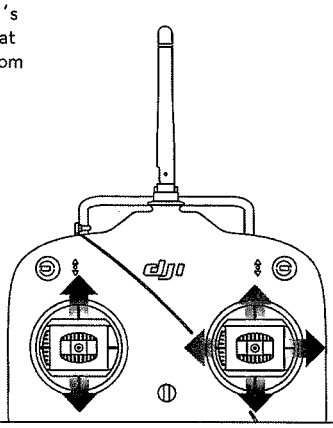
5 Fly forward to a spot 20~30 feet away.
Then fly back keeping the battery pointed at yourself.





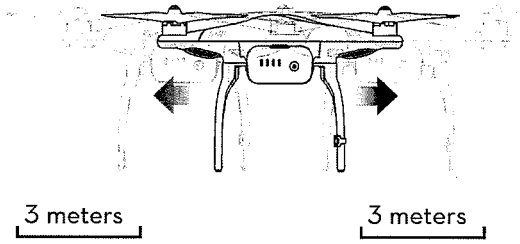
6 Mark a spot (B) on the ground 10ft away from the Phantom's take off point. Hover and fly towards that spot and land at the spot (B). Then go back into a hover and bring the Phantom back to its original position (A) and land again.

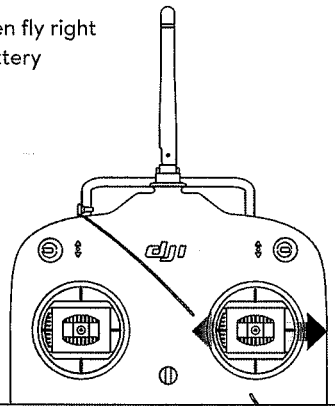




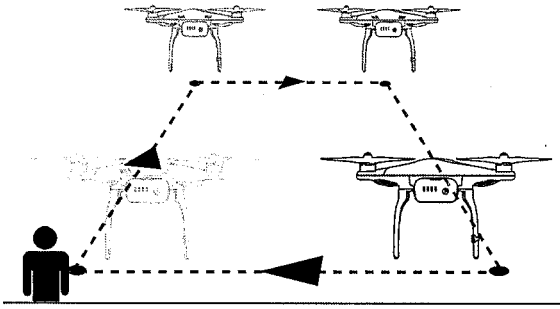
Basic Flight Maneuvers (★)

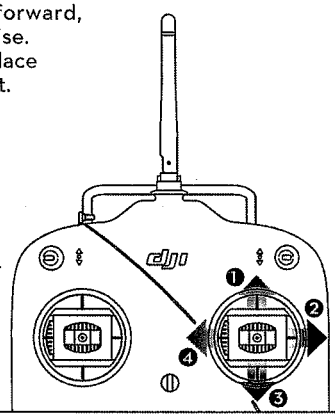
7 Fly left 3 meters away from your take-off point, then fly right 10ft from your take-off point all while keeping battery pointed at yourself.



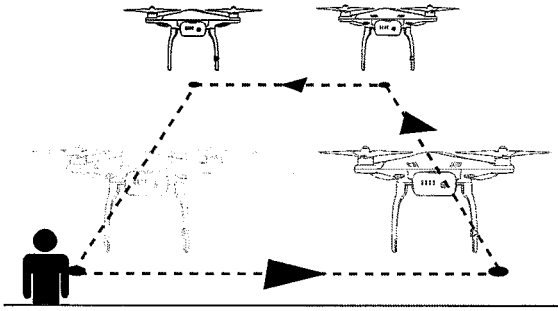


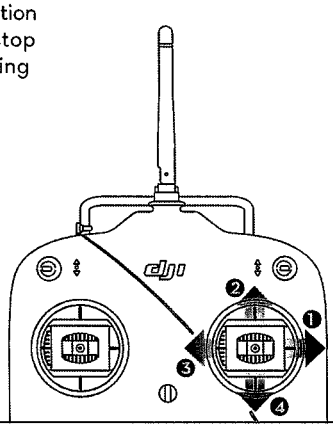
8 Then, while keeping the aircraft nose pointed forward, fly a 4 point square box formation going clockwise. Be sure to be in control and stop and hover in place at each point before proceeding to the next point.





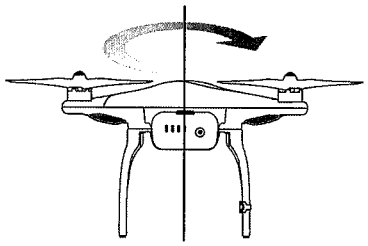
9 Do the same as above but fly the 4 point box formation counter-clockwise. Be sure to be in control and stop and hover in place at each point before proceeding to the next point.

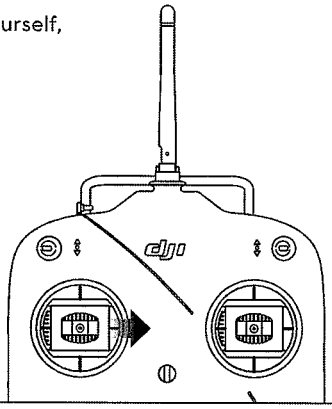




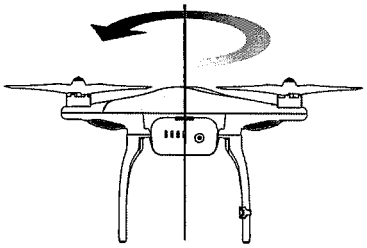
Skilled Flight Maneuvers (★★)

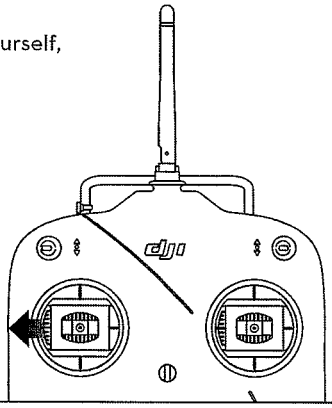
1 In a hover, starting with the battery pointed at yourself, rotate 360 degrees clockwise.



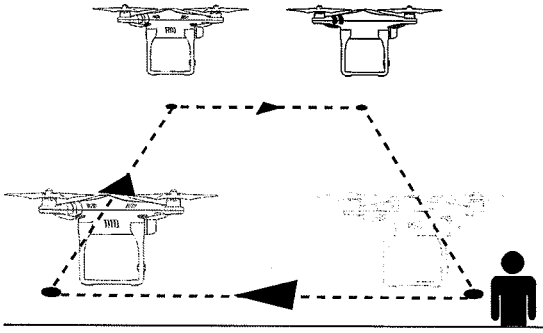


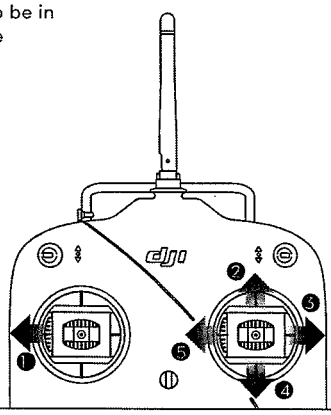
2 In a hover, starting with the battery pointed at yourself, rotate 360 degrees counter-clockwise.





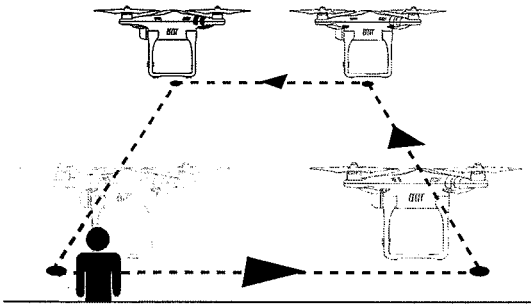
3 Starting with the battery pointed at yourself, go into a hover. Then rotate the Phantom 90 degrees facing left, and fly a 4 point square box formation going clockwise. Be sure to be in control and stop and hover in place at each point before proceeding to the next point.

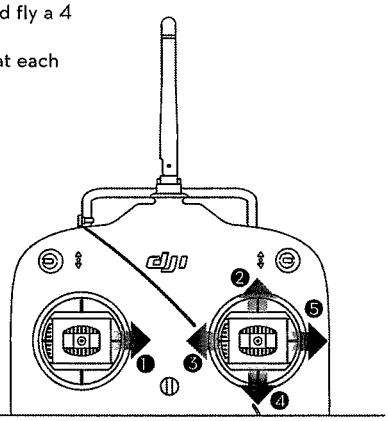




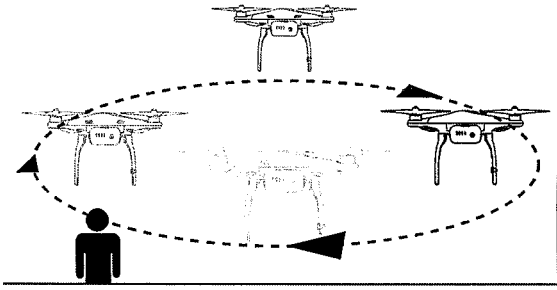
Skilled Flight Maneuvers (★★)

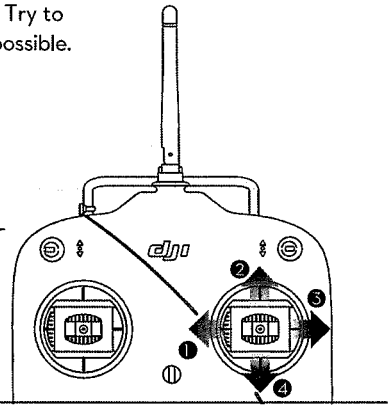
4 Starting with the battery pointed at yourself, go into a hover. Then rotate the Phantom 90 degrees facing right, and fly a 4 point square box formation going counter-clockwise.
Be sure to be in control and stop and hover in place at each point before proceeding to the next point.



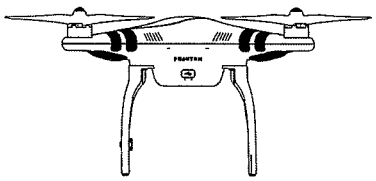


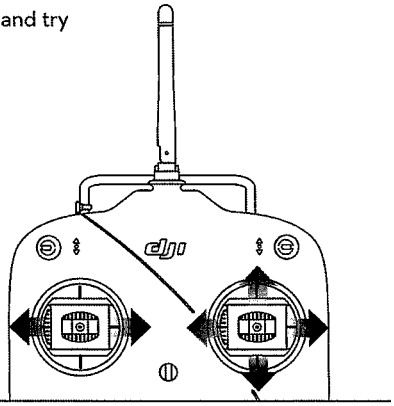
5 With the battery pointed at yourself, fly a circle. Try to keep the altitude and also the circle as uniform as possible.





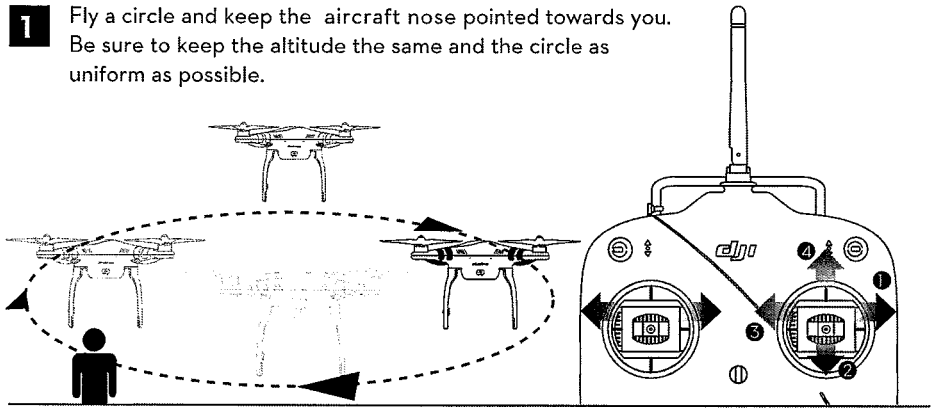
6 Hover with the aircraft nose pointed at yourself and try to keep the Phantom in one place.



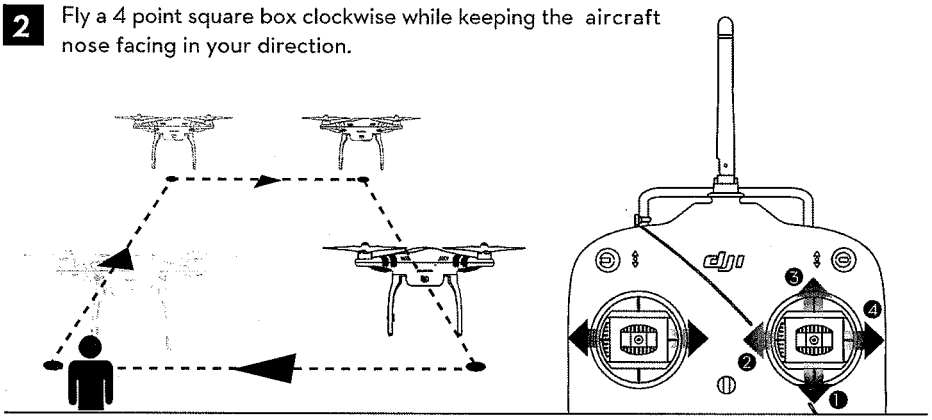


Advanced Flight Maneuvers (★★★)

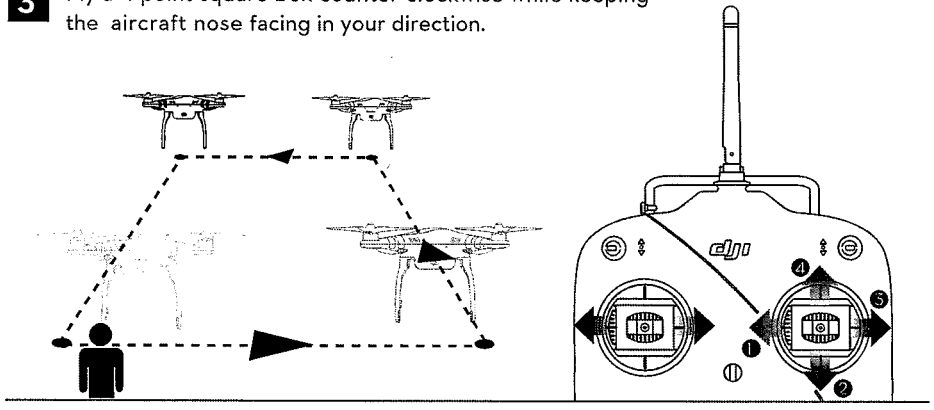
1 Fly a circle and keep the aircraft nose pointed towards you. Be sure to keep the altitude the same and the circle as uniform as possible.



2 Fly a 4 point square box clockwise while keeping the aircraft nose facing in your direction.

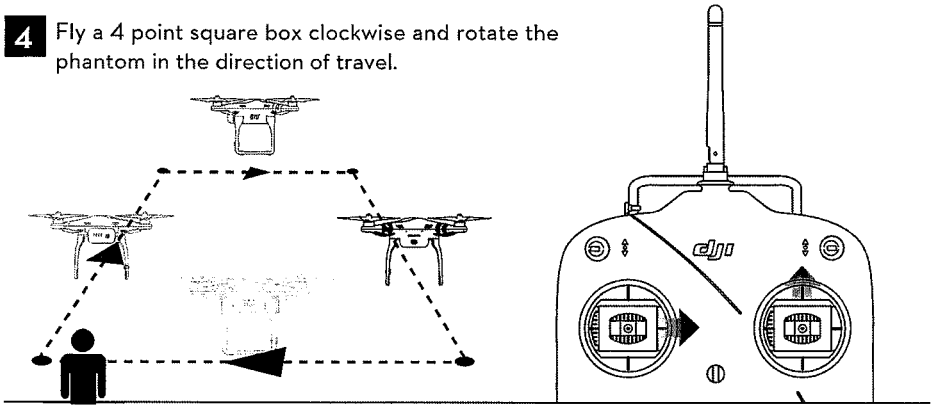


3 Fly a 4 point square box counter-clockwise while keeping the aircraft nose facing in your direction.

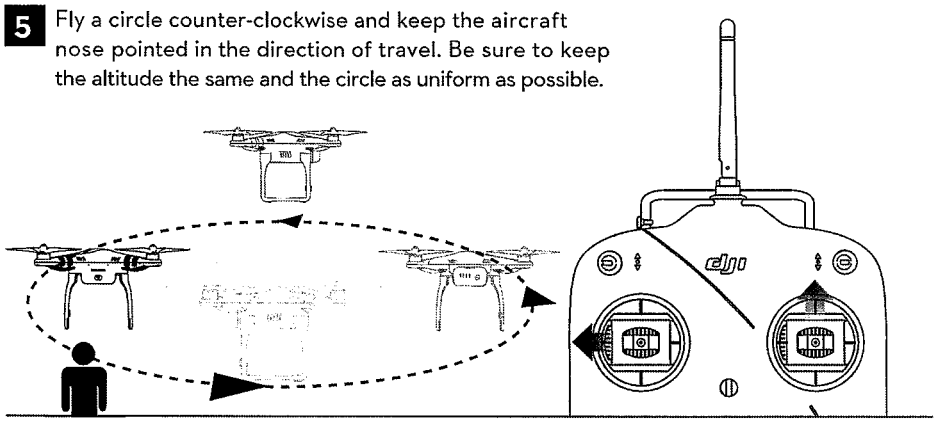


Advanced Flight Maneuvers (★★★)

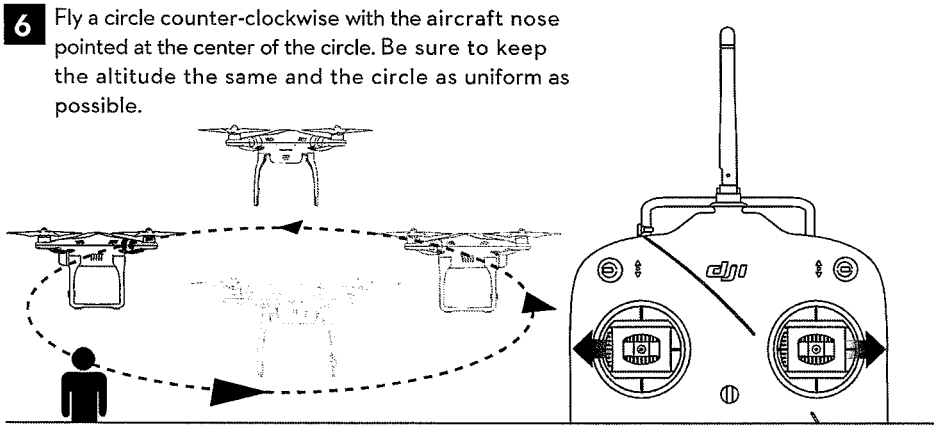
4 Fly a 4 point square box clockwise and rotate the phantom in the direction of travel.



5 Fly a circle counter-clockwise and keep the aircraft nose pointed in the direction of travel. Be sure to keep the altitude the same and the circle as uniform as possible.

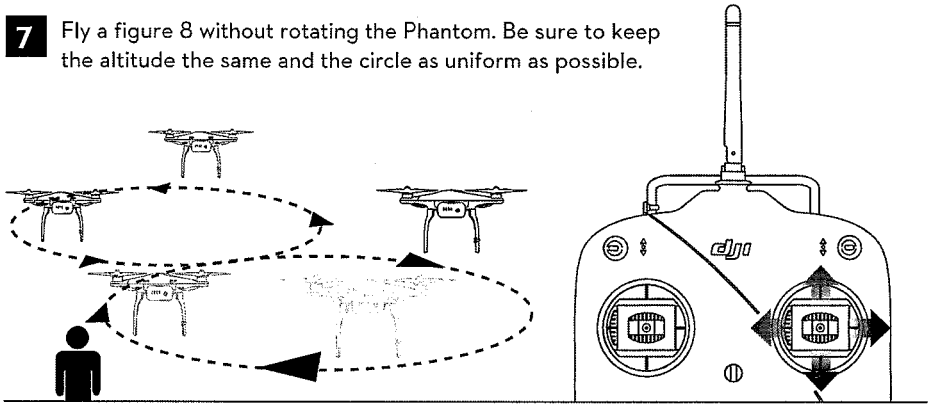


6 Fly a circle counter-clockwise with the aircraft nose pointed at the center of the circle. Be sure to keep the altitude the same and the circle as uniform as possible.

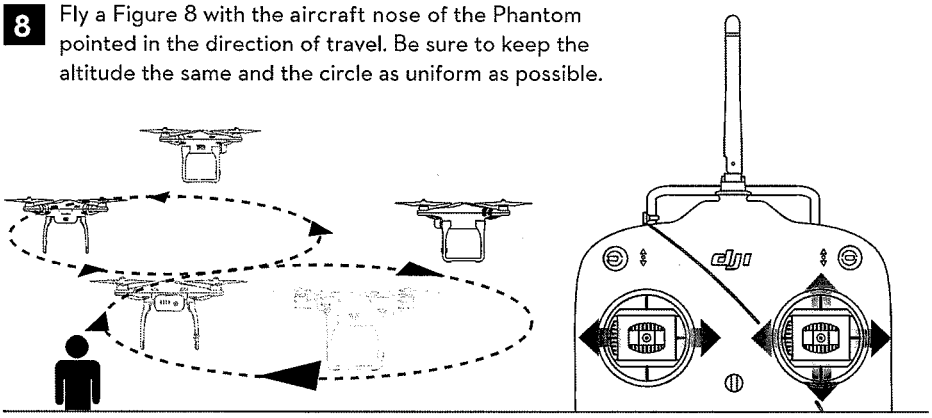


Advanced Flight Maneuvers (★★★)

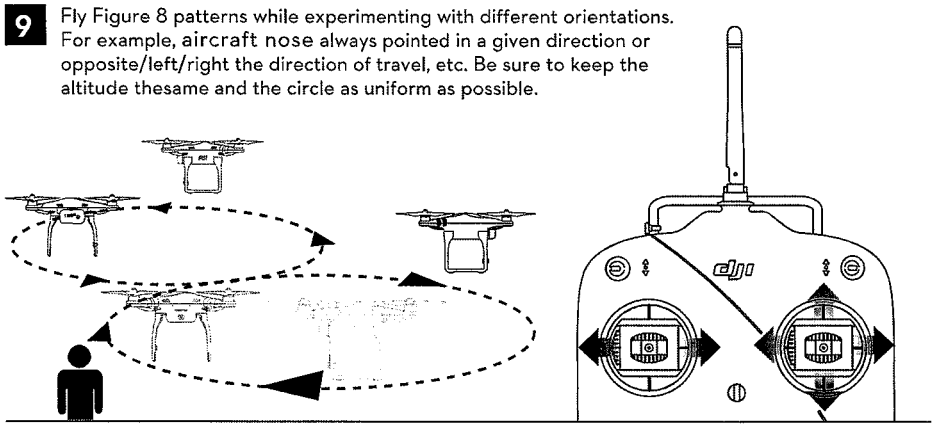
7 Fly a figure 8 without rotating the Phantom. Be sure to keep the altitude the same and the circle as uniform as possible.



8 Fly a Figure 8 with the aircraft nose of the Phantom pointed in the direction of travel. Be sure to keep the altitude the same and the circle as uniform as possible.



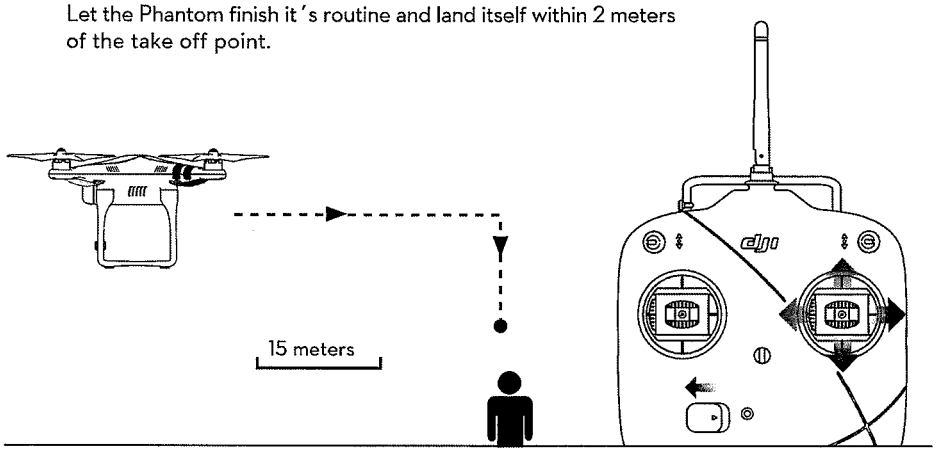
9 Fly Figure 8 patterns while experimenting with different orientations. For example, aircraft nose always pointed in a given direction or opposite/left/right the direction of travel, etc. Be sure to keep the altitude thesame and the circle as uniform as possible.



Emergency Situations

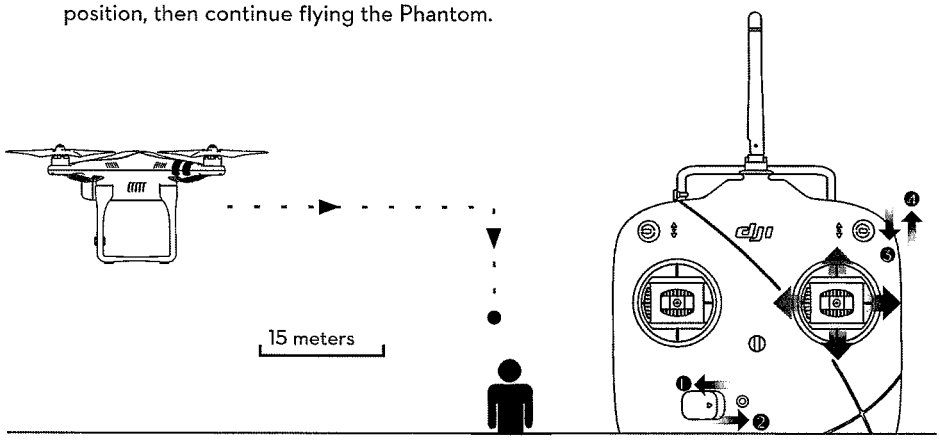
1 **Return Home & Land Mode**

Be sure you are in a large open area. Before you take off, make sure you have a good GPS lock by ensuring your LED indicators are flashing Green. Fly the Phantom at least 50ft away from your take off point. Turn off the Remote Controller. The Phantom will enter it's failsafe Return-To-Home Mode. Let the Phantom finish it's routine and land itself within 2 meters of the take off point.



2 **Intercepting Return Home & Land Mode**

Be sure you are in a large open area. Before you take off, make sure you have a good GPS lock by ensuring your LED indicators are flashing Green. Fly the Phantom 50ft away from your take off point. Turn off the Remote Controller. The Phantom will enter it's failsafe Return-To-Home Mode. When the Phantom is returning home, you can intercept RTH Mode by switching the S1 Switch from the top position to the middle or lower position, then continue flying the Phantom.



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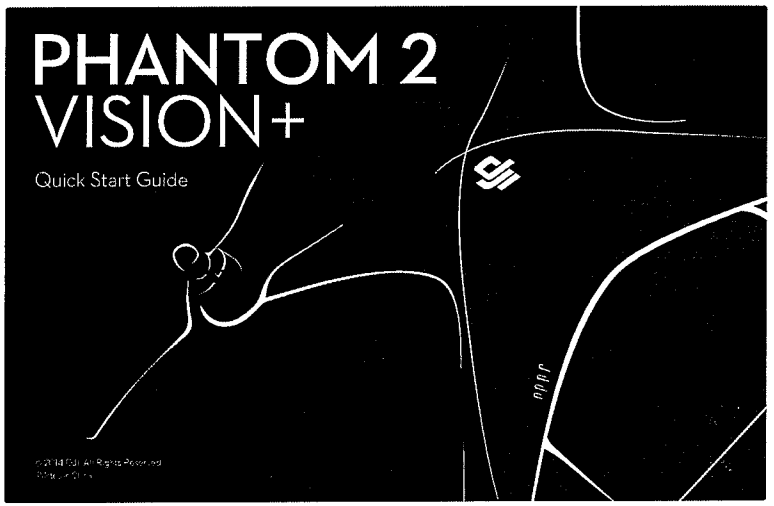
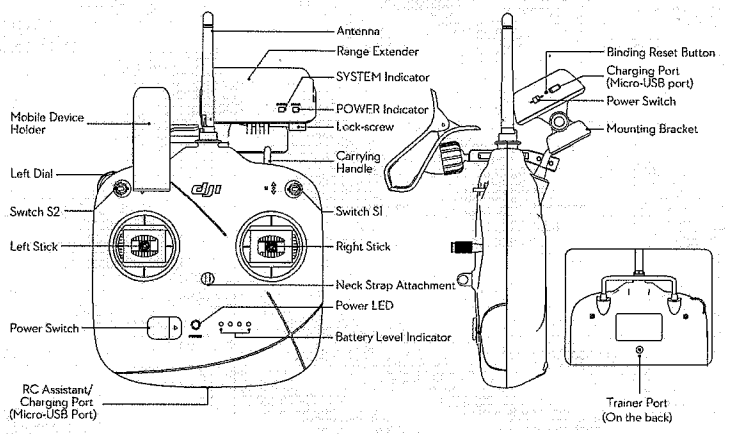
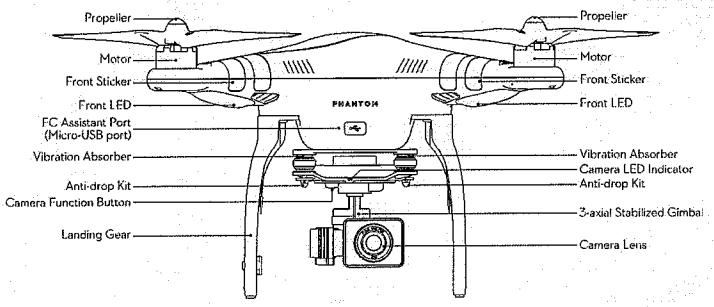
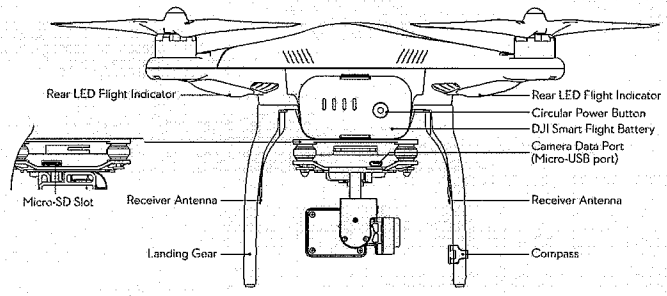
PHANTOM 2 VISION+

Quick Start Guide









PHANTOM 2 VISION+

Quick Start Guide

1 Start

- View tutorials:
  http://www.dji.com/phantom2visionplus/training
- Search **DJI VISION*** in the App Store or Google Play. Download, then launch and register for a DJI account.

Tutorials

App Store iOS 6.1+ | Google play Android 4.0+

- Ensure the Smart Flight Battery, Range Extender and Remote Control are fully charged.**

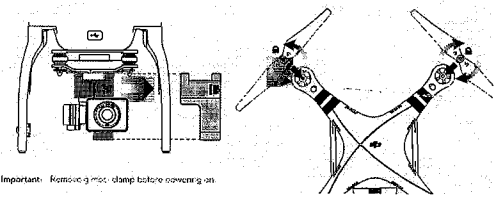
Important: For SAFETY reasons please watch tutorials, read the disclaimer and manuals thoroughly before using this product.

* DJI VISION App supports the Phantom 2 Vision and the Phantom 2 Vision+. It is compatible with iOS and Android devices.

** See step 3 4 5 for checking battery levels. Refer to user manual for charging.

2 Preparing Phantom 2 Vision +

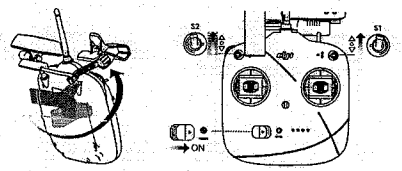
- Remove the gimbal clamp, the lens cap and the four warning cards from motors.
- Screw the propellers, clockwise for grey nuts and anti-clockwise for black nuts, onto the four motors. Be sure to match the black propeller nuts with the black dot motors.
- Make sure your Smart Flight Battery and Micro-SD card are inserted correctly.



Important: Remove gimbal clamp before powering on.

3 Preparing Remote Control

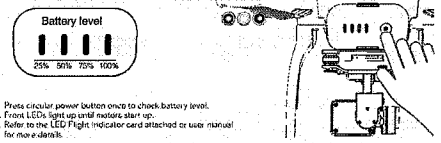
- Twist the Mobile Device Holder to face outwards and fix in position.
- Be sure S1 and S2 are switched to the upper most position. Push the Power Switch to the right to power on the Remote Control. The LED will go green if the Remote Control is functioning. The Battery Level Indicators display the current battery level.



Important: A red blinking and a continuous beeping from the Remote Control indicate LOW BATTERY VOLTAGE. Recharge the Battery when there is only one LED remains blinking.

4 Powering On Smart Flight Battery

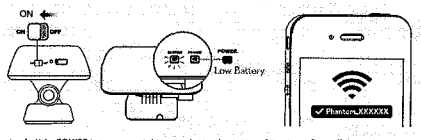
- Press the circular power button once, then press again and hold for 2 seconds to power on the Smart Flight Battery.
- Rear LED Flight Indicators light up to indicate flight status:
  - Slow green flashing: Ready to fly (GPS).
  - Slow yellow flashing: Ready to fly (Non-GPS).
  - Fast yellow flashing: Remote control signal lost.
  - Fast red flashing: Smart Flight Battery level warning.



Important:
1. Press circular power button once to check battery level.
2. Front LEDs light up until motors start up.
3. Refer to the LED Flight Indicator card attached or user manual for more details.

5 Powering on Range Extender/Linking Camera

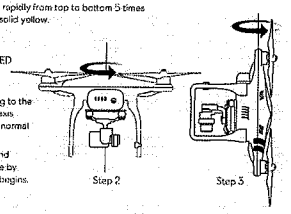
- Toggle power switch to ON position. SYSTEM indicator will blink green to show normal operation.
- Enable Wi-Fi on your mobile device then select Phantom_XXXXXX from Wi-Fi network list.
- Tap **CAMERA** icon in the DJI VISION App for a live camera view to ensure the camera is linked, then clip your mobile device into the Mobile Device Holder.



Important:
1. If the POWER indicator is red, this means battery level is low. Charge your Range Extender by Micro-USB cable.
2. Only if both Range Extender and Smart Flight Battery are powered on, you will be able to link the camera.

6 Calibrating Compass

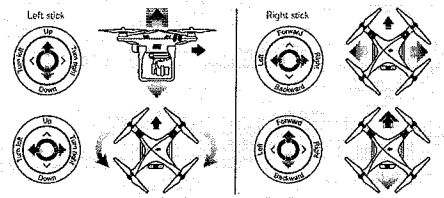
- Always calibrate compass before your flight.
- Step1 :
  To enter calibration mode, flip S1 switch rapidly from top to bottom 5 times or until Rear LED Flight Indicators turn solid yellow.
- Step 2:
  Hold Phantom horizontally then rotate 360°around the center axis until Rear LED Flight Indicators go green
- Step3:
  Hold aircraft vertically with nose pointing to the ground, rotate 360° around the center axis until Rear LED Flight Indicators resume normal blinking patterns.
- If Rear LED Flight Indicators blink red and yellow, calibration has failed. Re-calibrate by repeating Step 1-3 until normal blinking begins.



7 Remote Control Settings

Nose pointing direction

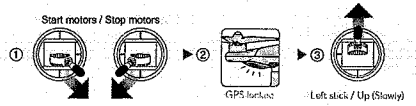
- The Remote Control is by default set to Mode 2 (left hand controls throttle).



Important: You can use PHANTOM RC Assistant to switch it to Mode1 (right hand controls throttle).

8 Taking off (Outdoors)

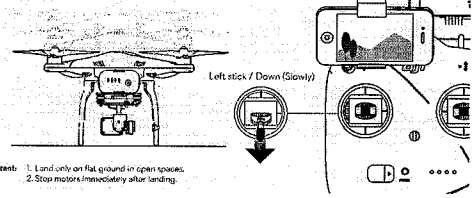
- Place the Phantom 2 Vision+ on flat ground in an open space with Rear LED Flight Indicators facing you.
- Power on the Remote Control, the Range Extender and the Smart Flight Battery mounted in Phantom 2 Vision+. Make sure that the DJI VISION App is working properly.
- Start motors by pulling both control sticks to the bottom corners. Release sticks once motors start.
- Wait until Rear LED Flight Indicators go from a slow yellow blinking to a slow green, indicating GPS locked.
- Slowly push the left (throttle) stick up to take off.



Important:
1. Beginner flyers are recommended to only fly when the slow green flashes.
2. Rear LED Flight Indicators will go from slow yellow flashing to slow green flashing if more than 6 GPS satellites have been found.
3. Never stop the motors during flight.

9 Landing (Outdoors)

- Pull down the throttle stick to descend. The stick will lock into place and the aircraft will descend slowly.
- When landing on the ground, pull both sticks to bottom corners to stop motors.
- Press the circular power button once, then press again and hold for 2 seconds to power off the Smart Flight Battery. Turn off the Remote Control and Range Extender.



Important:
1. Land only on flat ground in open spaces.
2. Stop motors immediately after landing.

UAS FLIGHT LOG

DATE	A/C IDENT	A/C CAT	HOURS	NO. LANDINGS	LOCATION	REMARKS	OPERATOR

UAS MAINTENANCE TEST FLIGHT LOG

DATE	A/C IDENT	A/C CAT	HOURS	NO. LANDINGS	LOCATION	REMARKS	OPERATOR

UAS MAINTENANCE LOG

DATE	A/C IDENT	DISCREPANCY	MAINTENANCE PERFORMED	IN