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

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

May 21, 2015

Exemption No. 11640
Regulatory Docket No. FAA–2015–0595

Mr. Jeffrey Robinson
August Aerial Imagery
N2291 Birchwood Dr.
Waupaca, WI 54981

Dear Mr. Robinson:

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 March 3, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of August Aerial Imagery (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct advertising and real estate videography and photography, precision farming, inspections, and search and rescue operations.

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 DJI Inspire 1.

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, August Aerial Imagery 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, August Aerial Imagery 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 DJI Inspire 1 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 5 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

AUGUST AERIAL IMAGERY

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March 3, 2015

Jeffrey Robinson
August Aerial Imagery
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Dear Sir or Madam,

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the"Reform Act") and 14 C.F.R. Part 11, operators at August Aerial Imagery seek an exemption from Federal Aviation Regulations detailed herein for the operation of lightweight aerial imaging equipment, also referred to throughout as Unmanned Aerial Systems (UAS), as well as their ground based operation equipment described within.

Our Aircraft:

Our operation will include a single UAS, manufacturer DJI, referred to hereinafter as the Inspire 1. (UAS manuals attached). The DJI Inspire 1 has the following flight and safety relatable features:

- Inspire 1 is a UAS Quadcopter made by DJI that has a fixed gimbal and camera attached to the bottom. Inspire 1 has a maximum weight of 6.47 lb. (2965 grams), and a maximum range of 2000m.
- Inspire 1 has built in telemetry to allow the operator to see all onboard information relating to the safety of flight including but not limited to battery percentage remaining, overall health of the operating system, built-in GPS for position hold and automatic return-to-home, and multiple fail-safes for maximum safety.
- The onboard camera allows the operator to record High Definition video, as well as take camera stills. The video is transmitted real-time to the control and operator allowing the operator to see images to all sides of the UAS utilizing an Apple iPad Air.

- DJI Inspire 1 is limited to a maximum assent rate of 5 m/s and has a maximum decent rate of 4 m/s. It also has a limitation of maximum speed of 22 m/s or 49 mph.

- The Inspire 1 will be operated with a 5700maH lithium polymer battery allowing for flight times not to exceed 22 minutes.

Our Ground Based Guidance and Control System:

- DJI Inspire 1 is controlled using a DJI transmitter, operating on a 2.4GHz frequency to a maximum range of 2km. (Specific operating range of 2.400-2.483GHz.) (See Manual Appendix page 57 for all specifications.) These specifications fall within FCC guidelines for operators. Powered by a lithium polymer battery it has a 4 hour time between charges.

- The DJI Inspire 1 transmitter has a built in GPS allowing the Inspire 1 to always know where to return to in the event of a failure.

- The Inspire 1 transmitter will be controlled by a single operator, but will utilize a Visual Observer when necessary.

Our Operator:

- August Aerial Imagery will use a single operator for each flight, and when able/necessary use a Visual Observer to assist in keeping sight of

the Inspire 1 at all times. At no time will the UAS be flown outside of visual line-of-sight and visual range.

- Our operator/owner holds a current Airline Transport Pilot rating with 10 years experience as an Airline Pilot. 8 years as an Airline Captain. (Certificate #2733774) He also has 2 years experience and over 800 hours as a flight instructor. (Certificate 2733774CFII)

- Our Operator/Pilot has a total of 7,450 hours of flight time at the time of filing. Including 6,800 hours of Pilot in Command. He also has over 4 years experience as FAR part 121 Line Check Airman, and is a qualified simulator and ground-school instructor at his current airline.

- Our Operator/Pilot currently holds and will maintain a 1st Class medical certificate.

- Our Operator/Pilot has approximately 18 years of aircraft flight experience.

- Our Operator/Pilot has approximately 20 years of Radio Control aircraft operational experience in RC airplanes, helicopters, boats, and cars.

- The only pilot allowed to operate the UAS under this exemption will be the Owner/Operator of August Aerial Imagery, ATP certificate 2733774.

<u>Our Business Intent:</u>

August Aerial Imagery will be utilizing the UAS for multiple projects for time to time. These include:

- Precision Farming

  Based in Central Wisconsin, we have a large amount of interest in using our UAS to inspect and photograph corn fields for precision farming. Utilizing a UAS to inspect fields instead of a costly traditional helicopter or airplane will not only save a significant

amount of money, but also increase safety over traditional methods that utilize gas/turbine helicopters.

- Microwave Tower Inspection

  Inspecting microwave towers (including cellular telephone towers) traditionally requires a human inspection. Utilizing a UAS to inspect these towers greatly improves safety and will prevent deaths of tower Inspectors. We have a significant amount of interest from companies doing business in Central and Northeast Wisconsin to conduct such inspections.

- Bridge Inspections

  Similar to inspecting towers with the use of UAS, the required inspections of local bridges and overpasses will see a significant amount of increased safety. We have interest from local city officials to conduct such inspections in Central and Northeast Wisconsin.

- Livestock Search and Inspection

  Searching for cattle and other livestock utilizing traditional means is both time consuming and ineffective. We plan to utilize the UAS to aid farmers and ranchers in making this process much faster, saving time and money.

- Insurance Inspections of Home and Property

  August Aerial Imagery has a significant amount of interest from local and regional Insurance companies and adjusters to utilize the UAS to conduct inspections of property and structures. By utilizing the Inspire 1 to conduct inspections of rooftops, farm fields, and other property, the insurance company stands to save a significant amount of time inspecting such property after storms. Also,

utilizing the Inspire 1 will increase safety by preventing adjusters from having to climb tall ladders and roofs to make such inspections.

- Factory Inspections (both internal and external)

  Similar to tower and bridge inspections, we plan to use the Inspire 1 to conduct inspections within and outside of manufacturing facilities. These dangerous and costly inspections will be made more safe and less expensive with use of our UAS.

- Commercial Advertising Video and Photography

  August Aerial Imagery has a significant amount of interest in taking video and photos for advertising in our local area. Utilizing the UAS will offer a significant improvement to the agency with regards to both safety and cost. Using a 6 lb. UAS compared to a gas turbine helicopter or aircraft will offer a considerable safety margin as well as cost savings advantage.

- Real Estate Photography and Videography

  Real Estate photography will see a significant impact with our services, allowing real estate agents a much more competitive product at a much lower price. Safety will also be increased as well as productivity by utilizing out services.

- Yacht Sales Photography and Videography

  August Aerial Imagery has seen a significant interest in utilizing out UAS to capture video and photos for Yacht sales near the Bay of Green Bay and Sturgeon Bay Wisconsin. We will utilize the UAS to increase scope of sales to the yacht brokers. We can offer again a more cost competitive product and a much more safe development method over the current use of airplanes and gas/turbine helicopters.

- Police/Fire/Search and Rescue

  August Aerial Imagery intends to offer our services on a voluntary and pro bono basis for multiple local services including but not limited to Police services, fire fighting services, and search and rescue. These services will increase safety associated with law enforcement and search and rescue. The services will be offered free of charge to the community.

Our Safety and Operating Plan:

Utilizing our UAS in a safe manner is of upmost importance. Safety will be the guiding principle of our operation, both with respect to the National Airspace System, as well as those on the ground. including persons and property.

Our Safety plan will start with complying with all Federal Aviation Regulations, as well as conducting audits of safety procedures set forth within August Aerial Imagery to keep up to date with the safest practices.

Our initial safety philosophy will be based on the premise of “Be Safe Before Takeoff”. We will complete preflight checklists set forth by DJI, the UAS manufacturer, as well as do thorough post-flight inspections. (see

attached for the complete checklist) We will also complete post-flight checklist and debriefs to constantly monitor our procedures and identify any changes that can be made, similar to those set forth on airline flight decks.

Maintenance and repair of our UAS will be conducted solely by the manufacturer, DJI, by its employees or designated technicians. With respect to safety, August Aerial Imagery believes the manufacturer holds higher maintenance abilities.

August Aerial Imagery will comply with the following at all times when conducting commercial operations:

1. All operations will remain outside Class A,B,C,D airspace.

2. Our operating system will be programmed before all flights to avoid airports such not to accidentally fly too close to one. The onboard system will not allow the Inspire 1 to fly into such airspace. This is an automatic safety feature within the Inspire 1.

3. Operations conducted by August Aerial Imagery will always remain within visual line-of-sight of the UAS. Never to exceed the limitations of our operator's eye sight. We will limit the maximum range of the UAS to not exceed a single persons visual eye-sight range. Utilizing the software within the UAS will help to maintain this limit, not to exceed 300m. (.186 miles)

4. Our UAS will never carry an implement not approved by the manufacturer and will never exceed a weight of 55 lb. as stated within this exemption.

5. All operations conducted by August Aerial Imagery will be at an altitude of less than 400ft AGL, while the majority of our operations will be at an altitude less than 200ft AGL. The Inspire 1 has an automatic altitude limit built in and will be set and checked by our operator prior to every flight operation as part of the pre-flight inspection.

6. August Aerial Imagery will not conduct operations with a speed in excess of 27 knots. The Inspire 1 UAS has an automatic speed limiter that will be set and checked prior to every flight by the operator as part of the pre-flight inspection checklist.

7. All operations will be conducted in Day VFR conditions. Minimum flight visibility for all operation will be 5 miles. Minimum cloud ceilings will be 2000ft OVC (overcast) or BKN (broken).

8. All operations will be conducted away from densely populated areas. August Aerial Imagery will work with local officials to make sure any required local documents or permits are attained prior to each flight.

9. Prior to each flight our operator will conduct a safety audit of the area to be flown. An assessment will be made with regards to persons, property, and weather. This assessment will allow our operator to determine whether a safe operation and outcome will be expected.

10. Our operation will utilize a single, dual-band transceiver and will maintain a "listening watch"of airspace surrounding the operations. (example, we will monitor both local frequency 122.8 as well as maintain watch of emergency frequency 121.5.) Our operator will also make traffic advisories of our operation location and maximum altitudes prior to all flights utilizing the UAS.

11. Prior to operating under this exemption, our operator will obtain a Certificate of Waiver or Authorization (COA) from the FAA Air Traffic Organization.

12. Areas of operation are attached at the bottom of this document. Part of the addendum section.

The current regulations that we seek exemption from are:

A. 14 CFR Part 21 (h) Airworthiness Certification

- Under this part we seek exemption to apply for and maintain airworthiness certification for our UAS. Model and serial number of our UAS will be provided within.

B. 14 CFR Part 91 Subpart A: Airworthiness 91.7 (a) Civil Aircraft Airworthiness

- Under this part, "no person may operate a civil aircraft unless it is in airworthy condition."

- We seek exemption from this part, as we will keep our UAS in a safe, reliable, and airworthy condition, it may not meet all standards as set for by this part of the FAR's. Our operator will assume all responsibility for determining that the UAS is in a condition safe for flight, as well as a condition that will not harm other people or property. This will be accomplished using specific guidelines from the manufacture, DJI, as well as following any guidance set for for routine maintenance.

C. 14 CFR Part 91 Subpart C: 91.203: Certifications Required

- Under this part, (a) no person may operate an aircraft unless it has within it the following; An appropriate and current airworthiness certificate. This part also includes regulations regarding the use of fuel tanks, which do not apply.

- We seek exemption from this part as an airworthiness certificate does not apply to our specific UAS.

D. 14 CFR Part 91 Subpart B; 91.119 Minimum Safe Altitude

- Under this part, (a) no person may operate an aircraft below an altitude allowing, if power fails, an emergency landing without undue hazard. (c) over other than congested areas an altitude below 500ft AGL.

- We seek exemption from this part due to the nature of the operation, as well as the safety procedures set forth will have little to no risk of damaging any person or structure.

E. 14 CFR Part 91 Subpart B; 91.121 (a)(1) Altimeter Setting

- This section pertains to setting an altimeter setting below 18000ft to a reported altimeter reporting station setting.

- We seek expedition from this part as our UAS has no way of setting an alternate altimeter setting. With a built-in barometer, the Inspire 1 uses real-time data to determine altitude each flight. Operating less than 400ft AGL, we feel our UAS will have little to no impact on other participating aircraft. Also, with flights not to exceed 16 minutes (22 minute battery, and landing at 30% battery remaining) our UAS will not need to recalibrate its altimeter while in flight.

F. 14 CFR Part 91 Subpart B; 91.151 Fuel Required for VFR flight

- This section contains requirements for fuel in VFR flight for combustion engines.

- We seek exemption from this part as our UAS operates off of battery power only. We feel our operations will not compromise safety to either the operator or property as we have set forth a procedure to land our UAS when the battery level reaches 30%, or approximately 6 minutes flight time remaining. The Inspire 1 has built in battery

telemetry that feeds information real time to the operator and an alarm notifies the operator of minimum battery level remaining. (See attached manual for more information)

G. 14 CFR Part 91 Subpart E; 91.405 Maintenance Required

- This section contains requirements for the operator to maintain and have inspected the aircraft in accordance with Part 43 of the CFR. Under this section it is required to keep maintenance logbooks with the aircraft. It also requires the aircraft to contain placards of the inoperative equipment.

- We seek exemption from this part as our UAS will not be operating with inoperative equipment and is too small to carry logbooks. We also seek exemption due to no certified maintenance technicians will work on the UAS. Under this exemption August Aerial will be completing pre-flight and post-flight inspections, and any required maintenance or repairs will be completed by the manufacturer, DJI, or one of its certified technicians.

H. 14 CFR Part 91 Subpart E; 91.407 Operation After Maintenance

- This part requires an aircraft that has undergone repair, rebuilding, alterations, or general maintenance to be approved by an authorized person required by CFR 43.9 and CFR 43.11.

- We seek exemption from this part as these inspections do not pertain to our operation of the UAS. The operator will be responsible for determining the airworthiness of the UAS prior to each flight. After maintenance provided by the manufacturer, the operator will complete test flights before any operation in the vicinity of persons or property to assure all systems are functioning normally.

I. 14 CFR Part 91 Subpart E; 91.409 Inspections

- This section provides details of the required inspection on an aircraft. No person will operate an aircraft unless in the preceding 12 months

has had (1) an annual inspection (2) an issuance of an airworthiness certificate.

- We seek exemption from this part as the inspection and airworthiness certificate to not apply to our UAS. Our operator will be responsible for the inspection and airworthiness determination prior to each flight and will have the UAS repaired by the manufacturer or one of its certified technicians, if the UAS is found to be in a state other than intended but the manufacturer.

J. 14 CFR Part 91 Subpart E; 91.417 Maintenance Records

- This section requires the owner/operator to complete and retain a list of all records pertaining to the work preformed, the date of completion, the signature of the inspector, and all work preformed on the aircraft.

- We seek exemption from this part as the inspections and technician work will not apply. Our operator will be responsible for determining the airworthiness of the UAS prior to each flight and will not operate the UAS in any condition other than intended by the manufacturer. The operator will keep records of all work completed by the maintenance facility.

K. 14 CFR Part 91 Subpart B; 91.103 Preflight Action

- This section requires each pilot prior to flight will become familiar will all available information pertaining to that flight including runway lengths, flight information, weather, etc. For any flight, runway lengths at airports of intended use, and the following takeoff and landing distance information include; all applicable information relating to aircraft performance, airport elevation, runway slope, aircraft gross weight, wind and temperature.

- We seek exemption from this part as our operator, while utilizing all available information for the safe operation of the UAS, will not have

the above information available for most flights. The operator will use good judgement and all resources available to ascertain the information necessary for the safe operation of the UAS. A preflight inspection will be accomplished according to the manufactures instructions prior to each flight.

L. 14 CFR Part 91 Subpart B; 91.105 Flight Crew members Stations

- This section pertains to the required crew members being at their stations during all phases of flight, and requires the use of seat belts and shoulder harnesses.

- We seek exemption from this section as it pertains to aircraft with flight crew member stations. Our UAS does not have such stations.

M. 14 CFR Part 91 Subpart B; 91.9 Placement of Manual

- This part states no aircraft may operate without a manual onboard the aircraft.

- Our UAS is not large enough to carry such operating manual. We will however carry a current manufacturer manual in the UAS carrying case along with the operator on all flights.

N. 14 CFR Part 45.23

- Under this part, it is required that each operator must display on that aircraft marks consisting of the Roman capital N followed by the registration number of the aircraft.

- Our UAS is too small to attach the “N” number. We seek exemption from this part as we will be attaching the registration or serial number as required on the UAS.

August Aerial Imagery and its owners are committed to a “Safety First”atmosphere. We are committed to conducting our operation in accordance with all Federal Aviation Regulations and maintaining a safety margin of at least those regulations while striving to exceed expectations set forth by the FAA. We are confident we can approach our operations with safety while adding a significant advantage to our community both through private and civil services.

August Aerial Imagery is prepared to respond to any concerns and look forward to working with you on this important exemption. Please contact us with any other questions or concerns.

Sincerely yours,

Jeffrey Robinson

August Aerial Imagery

Addendums:

Specifications

Features

- Advanced Ready-to-Fly Design
- Powerful Propulsion System
- Aerodynamic Transforming Design
- Modular, Upgradeable System
- New Camera and Gimbal System
- Live HD View
- Create Together
- Fly Indoors and Without GPS using Vision Positioning System
- Intelligent Power
- Management System
- Full-Featured App
- Dedicated Controls
- A Complete Ready-To-Fly System

Remote Controller

- Operating Frequency

922.7 ~ 927.7 MHz (Japan Only)
5.725 ~ 5.825 GHz
2.400 ~ 2.483 GHz

- Transmitting Distance (outdoor and unobstructed: 2 km

EIRP
10dBm@900M
13dBm@5.8G
20dBm@2.4G

- Output Power:9W
- Battery: 6000 mAh LiPo 2S
- Max Mobile Device Width:170mm

Camera

- Total Pixels:12.76M
- Effective Pixels:12.4M
- ISO Range:100-3200 (video) 100-1600 (photo)
- Image Max Size:4000×3000
- Lens：9 Elements in 9 groups ,Anti-distortion

Gimbal

- Model:ZENMUSE X3
- Output Power (with camera):Static：9 W；In Motion：11 W
- Angular Vibration Range:±0.03°
- Controllable Range:Pitch：-90° ~ +30°；Pan：±320°
- Mechanical Range:Pitch：-125° ~ +45°；Pan： ±330°
- Max Controllable Speed：Pitch：120°/S；Pan: 180°/s

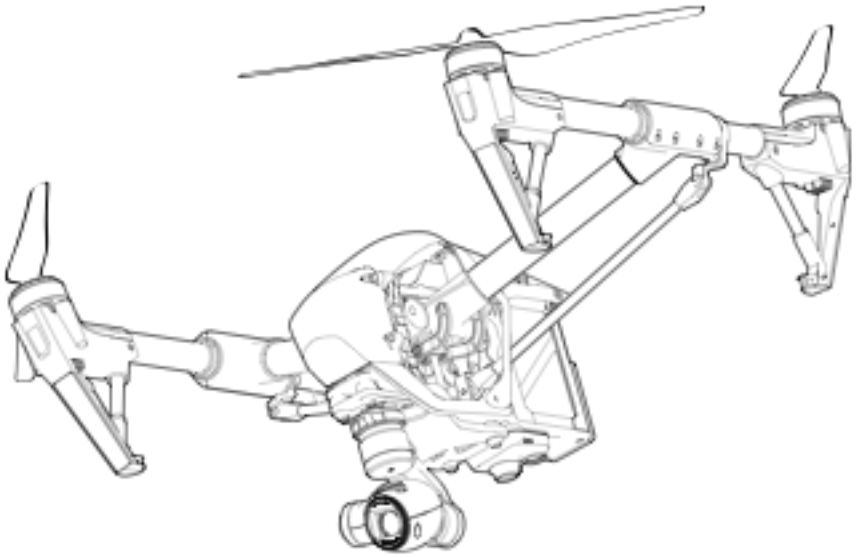
Weight
2935g (Battery Included)
Takeoff Weight
3400g
Hovering Accuracy
(GPS mode)
Vertical：0.5m；Horizontal：2.5m
Max Angular Velocity
Pitch：300°/s；Yaw：150°/s
Max Tilt Angle
35°
Max Ascent/Descent Speed
5/4 m/s
Max Speed
22m/s（ATTI mode，no wind）
Max Flight Altitude

4500m
Max Wind Speed Resistance
10m/s
Operating Temperature Range
-10°~40°C
Max Flight Time
Approximately 18 minutes
Indoor Hovering
Enabled by default

Checklists:

Preflight Checklist
1. Remote controller, aircraft battery, and mobile device are fully charged.
2. Propellers are mounted correctly and firmly.
3. Micro-SD card has been inserted if necessary.
4. Gimbal is functioning as normal.
5. Motors can start and are functioning as normal.
6. DJI Pilot app connected to the aircraft.

Operating Manual



INSPIRE 1

User Manual 2014.12

V1.0

Using this manual

Legends

Warning Important Hints and Tips Reference

Before Flight

The following tutorials and manuals have been produced to ensure you to make full use of your Inspire 1.

1.Disclaimer
2.In the Box
3.Inspire 1 Quick Start Guide
4.Safety Guidelines
5.Inspire 1 User Manual
6.Intelligent Flight Battery Safety Guidelines

Watching all the tutorial videos and reading the Disclaimer before flight is recommended. Afterwards, prepare for your first flight by using the Inspire 1 Quick Start Guide. Refer to this manual for more comprehensive information.

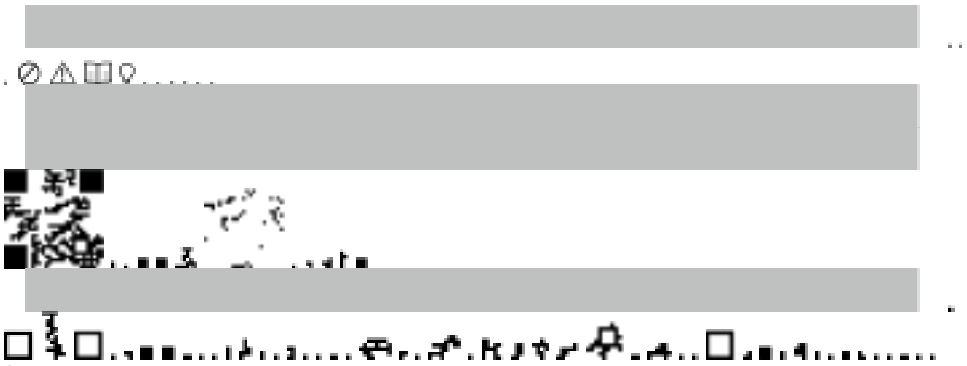
Watch the video tutorials

Please watch the tutorial video below to learn how to use Inspire 1 correctly and safely: www.dji.com/product/inspire-1/video

Download the DJI Pilot app

Download and install the DJI Pilot app before use. Scan the QR code or visit “http://m.dji.net/djipilot” to download the app.

For the best experience, use mobile device with Andriod V 4.1.2 or above.
Requires iOS 8.0 or later.



Contents

Product Profile

This chapter describes the features of Inspire 1, instructs you to assemble the aircraft and explains the components on the aircraft and remote controllers.

Product Profile

Introduction

The Inspire 1 is brand new quadcopter capable of capturing 4K video and transmitting an HD video signal (up to 2km) to multiple devices straight out of the box. Equipped with retractable landing gear, it can capture an unobstructed 360 degree view from its camera. The built-in camera has an integrated gimbal to

maximize stability and weight efficiency while minimizing space. When no GPS signal is available, Vision Positioning technology provides hovering precision.

Feature Highlights

Camera and Gimbal: Up to 4K video recording and 12 megapixel photo capture. Reserved mounting space for ND filters for better exposure control. New quick-release mount allows you to remove the camera with ease.

HD Video Downlink: Low latency, HD downlink powered by an enhanced version of the DJI Lightbridge system. It also provides dual controllers mode.

Landing gear: Retractable landing gear that enables an unobstructed panoramic view from the camera. DJI Intelligent Flight Battery: 4500 mAh DJI Intelligent Flight Battery employs new battery cells and a battery management system.

Flight Controller: The next generation flight controller system provides a more reliable flight experience. A new flight recorder stores the flight data from each flight, and Vision Positioning enhances hovering precision when no GPS is available.

⚠

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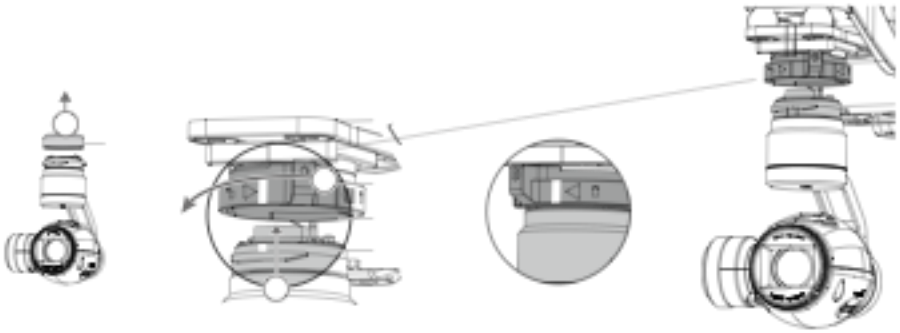


⚠

Assemble the Aircraft Unlocking Travel Mode

The aircraft is in Travel Mode during delivery. Follow these steps to change it to Landing Mode before your first flight:
1. Insert the Intelligent Flight Battery into the battery compartment.
2. Power on the Remote Controller and the Intelligent Flight Battery.

3. Toggle the Transformation Switch up and down at least four times. 4. Power off the aircraft.

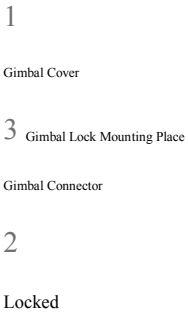
Travel Mode Toggle×4 Landing Mode

Battery must be fully charged before using it for the first time. Refer to "Charging the Intelligent Flight Battery" (P21) for more information .
If you have purchased the dual remote controller version, you must use the Master remote controller to deactivate Travel Mode. Refer to "Setting Up Dual Remote Controllers Mode" (P30) section for more infromation about Master remote controller.

Be sure to remove the gimbal from the aircraft before switch from Landing Mode to Travel Mode. Place the aircraft on the smooth and reflective surface (e.g. table or tile) before switching between the travel modes to the landing mode. Do not place the aircraft on the rough and sound-absorbing surface (e.g. carpet) before switching between the travel modes and landing mode.

Installing Gimbal and Camera

1. Remove Gimbal Cover.
2. Rotate the Gimbal Lock to the unlocked position (to the right when facing the nose of the aircraft). 3. Insert the gimbal by aligning the white mark on the Gimbal.
4. Rotate the Gimbal Lock back into the locked position.



Ensure the Micro-SD card is correctly inserted into the camera.

⚠

Attach propellers with the black nut onto motors with the black dot and spin counter-clockwise to secure. Attach propellers with gray nut onto motors without a black dot and spin clockwise to secure.

Product Profile

Place all propellers onto the correct motor and tighten by hand to ensure security before flight.

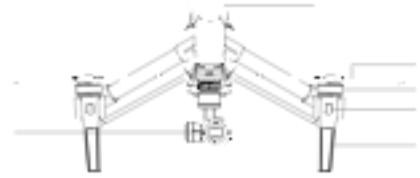
Preparing Remote Controller

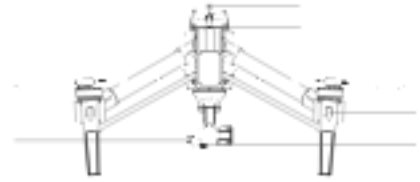
Tilt the Mobile Device Holder to the desired position then adjust the antenna as shown.

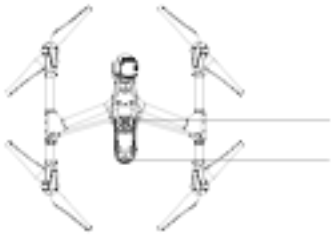
1. Press the button on the side of the Mobile Device Holder to release the clamp, adjust it to fit then attach
   your mobile device.

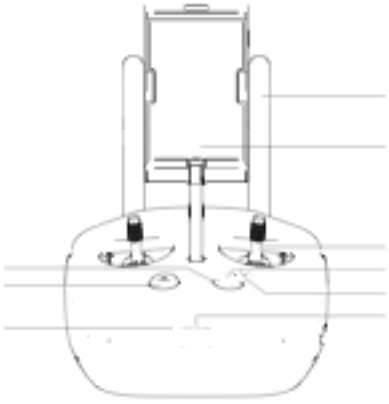
2. Connect your mobile device to the remote controller with a USB cable.

3. Plug one end of the cable into your mobile device, and the other end into the USB port on the back of
   the remote controller.









Aircraft Diagram

[6]

[11]

[1]

[7] [8]

- [1] GPS
- [2] Propeller (P17)

Remote Controller Diagram

[9] [8]

[7]

[1] [2]

[3] [4] [5] [6]

[1] Antennas (P29)

Relays aircraft control and video signal.

[2] Mobile Device Holder

Mounting place for your mobile device.

[3] Control Stick

Controls aircraft orientation.

[4] Return Home (RTH) Button (P13)

Press and hold the button to initiate Return to Home (RTH).

[5] Transformation Switch (P27)

Toggle the switch up or down to raise or lower the landing gear.

[2]
[3] [3]

Motor

[4]
[4] [5]

[9]
[10] [8]

[12]

[13]

Aircraft Micro-USB Port

. [9] Rear LED (P12)

. [10] Camera Micro-USB Port

. [11] Camera Micro-SD Card Slot (P35)

. [12] Vision Positioning Sensors (P16)

. [13] Aircraft Status Indicator (P13)

Front LED (P12) [5] Landing gear

INSPIRE 1

User Manual

Product Profile

. [6] Gimbal and Camera (P37)

. [7] Intelligent Flight Battery (P18)

[6] Battery Level LEDs

Displays the current battery level.

[7] Status LED

Displays the power status.

[10] Camera Settings Dial

Turn the dial to adjust camera settings. Only functions when the remote controller is connected to a mobile device running the DJI Pilot app.

[11] Playback Button

Playback the captured images or videos.

[12] Shutter Button

Press to take a photo. If in burst mode, the set number of photos will be taken with one press.

. [13] Flight Mode Switch
Used to switch between P, A and F mode.

. [14] Video Recording Button
Press to start recording video. Press again to stop recording.

. [15] Gimbal Dial
Use this dial to control the tilt of the gimbal.

. [16] Micro-USB Port
For connecting the remote controller to your computer.

. [17] Mini-HDMI Port
Connect an HD compatible monitor to this port to get a live HD video preview of what the camera sees.
[20]

[23] [21]

[22]

[18] CAN Bus Port

Reserved for future use.

[19] USB Port

[8] Power Button

Used to power on or power off the remote controller.

[9] RTH LED

Circular LED around the RTH button displays RTH status.

[16] [17] [18] [19]

[15] [10]

[14] [13]

[11] [12]

Product Profile

Connect to mobile device to access all of the DJI Pilot app controls and features.

[20] GPS Module

Used to pinpoint the location of the remote controller.

[21] Back Left Button

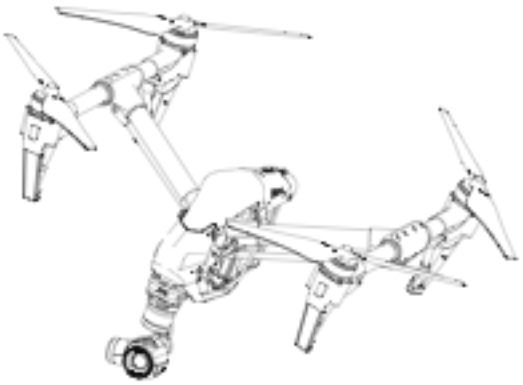
Customizable button in DJI Pilot app.

[22] Power Port

Connect to a power source to charge the remote controller’s internal battery.

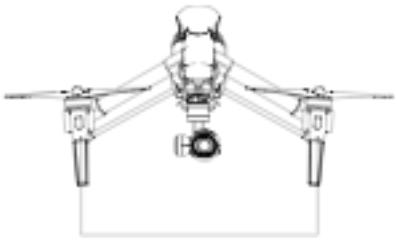
[23] Back Right Button

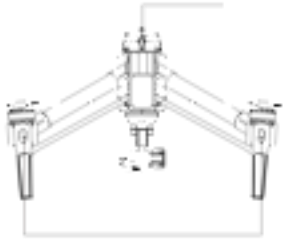
Customizable button in DJI Pilot app.



Aircraft

This chapter describes the features of the Flight Controller, Vision Positioning System and the Intelligent Flight Battery.





Aircraft

Flight Controller

The Inspire 1's flight controller is based on DJI flight controller with several enhancements such as new flight mode and new safe mode. Three safe modes are available: Failsafe, Return Home and Dynamic Home Point. These features ensure the safe return of your aircraft if the control signal is lost. A flight recorder stores crucial flight data for each flight.

Flight Mode

Three flight modes are available. The details of each flight mode are found in the section below:
P mode (Positioning) : P mode works best when GPS signal is strong. There are three different states of P mode, which will be automatically selected by the Inspire 1 depending on GPS signal strength and Vision Positioning sensors:

P-GPS: GPS and Vision Positioning both are available, and the aircraft is using GPS for positioning. P-OPTI: Vision Positioning is available but the GPS signal is not. Aircraft is using only Vision Positioning for hovering
P-ATTI: Neither GPS or Vision Positioning available, aircraft is using only its barometer for positioning, so only altitude is controlled.

A mode (Attitude): The GPS and Vision Positioning System is not used for holding position. The aircraft only uses its barometer to maintain altitude. If it is still receiving a GPS signal, the aircraft can automatically return home if the Remote Controller signal is lost and if the Home Point has been recorded successfully. F mode (Function): Intelligent Orientation Control (IOC) is activated in this mode. For more information about IOC, refer to the IOC in Appendix.

Use the Flight Controller mode switch to change the flight mode of the aircraft, refer to the "Flight Mode Switch" on P27 for more information.

Flight Status Indicator

The INSPIRE 1 comes with the Front LED, Rear LED and Aircraft Status Indicator. The positions of these LEDs are shown in the figure below:

Aircraft Status Indicator

Front LED Rear LED

The Front and Rear LED show the orientation of the aircraft. The Front LED displays solid red and the Rear LED displays solid green.
Aircraft Status Indicator shows the system status of the flight controller. Refer to the table below for more information about the Aircraft Status Indicator:

Aircraft

Green and Yellow Flash Alternatively

Aircraft warming up

Aircraft Status Indicator Description

Normal

Red,GreenandYellowFlash
Alternatively

Green Flashes Slowly

Yellow Flashes Slowly Fast Yellow Flashing

Fast Red Flashing — Solid Red

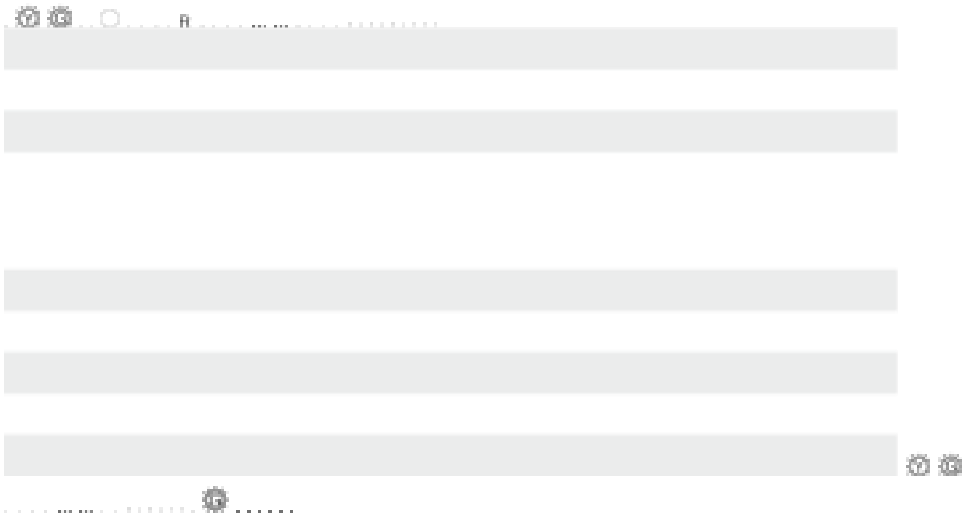
Return to Home (RTH)

Power on and self-check

Safe to Fly (P mode with GPS and Vision Positioning)

Safe to Fly (A mode but No GPS and Vision Positioning) Remote Controller Signal Lost

Critical Low Battery Warning Critical Error



X2 ……Green Flashes Twice

Safe to Fly (P mode with Vision Positioning but without GPS)

Warning

Slow Red Flashing

Low Battery Warning

Red Flashing Alternatively

IMU Error

Red and Yellow Flash Alternatively

Compass Calibration Required

The Return to Home (RTH) brings the aircraft back to the last recorded Home Point. There are three cases that will trigger RTH procedure; they are Smart RTH, Low Battery RTH and Failsafe RTH.

Home Point

Smart RTH

The Home Point is the location at which your aircraft takes off when the GPS signal is strong. You can view the GPS signal strength through the GPS icon ( ). If you are using the Dynamic Home Point setting, the Home Point will be updated to your current position as you move around and when the Aircraft Status Indicator blinks green.

GPS

Description

Using the RTH button on the remote controller (refer to “RTH button” on P28 for more information) or the RTH button in the DJI Pilot app when GPS is available to enables smart RTH. The aircraft return to the latest recorded Home Point, you may control the aircraft's orientation to avoid collision during the Smart RTH. Press the Smart RTH button once to start the process, press the Smart RTH button again to exit Smart RTH and regain the control.

Aircraft

Battery Level Warning

Remark

Aircraft Status Indicator

DJI Pilot app

Flight Instructions

Low battery level warning

The battery power is low. Please land the aircraft.

Aircraft status indicator blinks RED slowly.

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. Remote controller will sound an alarm.

Fly the aircraft 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.

Aircraft status indicator blinks RED quickly.

The DJI Pilot app screen will flash red and aircraft starts to descend. Remote controller will sound an alarm.

The aircraft
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

The low battery level failsafe is triggered when the DJI Intelligent Flight Battery is depleted to a point that may affect the safe return of the aircraft. Users are advised to return home or land the aircraft immediately when these warnings are shown. DJI Pilot app will advise user to return the aircraft to the Home Point when low battery warning is triggered. Aircraft will automatically return to the Home Point if no action is taken after 10 seconds countdown. User can cancel the RTH by pressing once on the RTH button. The thresholds for these warnings are automatically determined based on the current aircraft altitude and its distance from the Home Point.

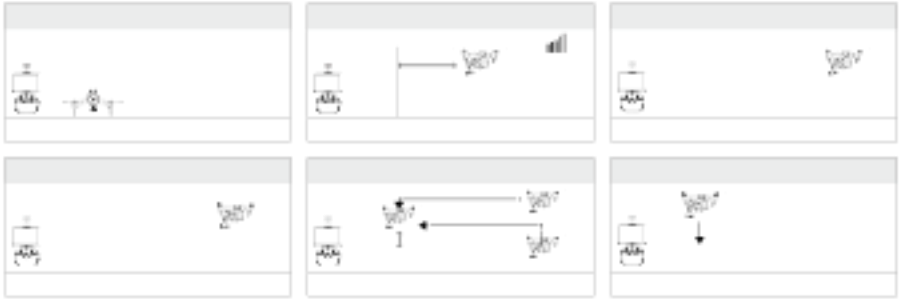
Aircraft will land automatically if the current battery level can only support the aircraft to land to the ground from the current altitude. User can use the remote controller to control the aircraft's orientation during the landing process.

The Battery Level Indicator is displayed in the DJI Pilot app, and is described below

Critical Low battery level warning(Red)
Low battery level warning
Power requires to return home
Sufficient battery level(Green)

Remaining flight time

Battery level indicator



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.
Color zones and markers on the battery level indicator reflect estimated remaining flight time and are adjusted automatically, according to the aircraft's current status.

Failsafe RTH

Failsafe RTH is activated automatically if remote controller signal (including video relay signal) is lost for more than 3 seconds provided that Home Point has been successfully recorded and compass is working normally. Return home process may be interrupted and the operator can regain control over the aircraft if a remote controller signal is resumed.

Failsafe Illustration

1 Record Home Point (HP)

Blinking Green
4 Signal Lost Lasts 3secs.

Fast Blinking Yellow

2 Confirm Home Point

<8m

Blinking Green
5 Go Home(20m can be set)

Height over HP>20m 20m Elevate to 20m

Height over HP<=20m

Fast Blinking Yellow

3 Remote Controller Signal Lost

Fast Blinking Yellow
6 Landing after Hovering 15secs

Fast Blinking Yellow

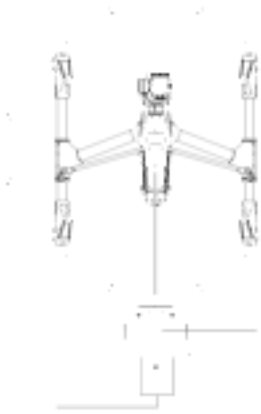
Aircraft cannot avoid obstruction during the Failsafe RTH, therefore it is important to set an reasonable Failsafe altitude before each flight. Launch the DJI Pilot app and enter “Camera” view and select “MODE” to set the Failsafe altitude.
Aircraft will stop ascending and immediately return to the Home Point if you move the throttle stick during the Failsafe.

Dynamic Home Point

Dynamic home point is useful in situations when you are in motion and require a Home Point that is different from the takeoff point. GPS module is located at the position shown in the figure below:

GPS

Ensure the space above the GPS module is not obstructed when using Dynamic Home Point.



There are two options for Dynamic Home Point.
1. Set the aircraft current coordinate as the new Home Point.
2. Set the remote controller's coordinate as the new Home Point.

Setting Up Dynamic Home Point

Follow the steps below to setup Dynamic Home Point:

1. Connect to the mobile device and launch the DJI Pilot app and go to the "Camera" page.

2. Tap" "and select" ", to reset the remote controller's coordinates as the new Home Point.

3.Tap" "andselect" ",toresettheaircraft'scoordinatesasthenewHomePoint. 4. The aircraft status indicator blinks green to show Home Point is set succesfully.

Vision Positioning System

DJI Vision Positioning is a positioning system that uses ultrasonic and image data to help the aircraft identify its current position. With the help of Vision Positioning, your Inspire 1 can hover in place more precisely and fly indoors or in other environments where there is no GPS signal available. The main components of DJI Vision Positioning are located on the bottom of your Inspire 1, including [1]two sonar sensors and[2]one monocular camera.

Aircraft

Using Vision Positioning

[1]

Vision Positioning is activated automatically when the Inspire 1 is powered on. No manual action is required. Vision Positioning is typically used in the indoor environment where no GPS is available. By using the sensors on the Vision Positioning system, Inspire 1 can perform precision hovering even when no GPS is available.

[2]

INSPIRE 1

User Manual

Follow the steps below to use Vision Positioning:
1. Toggle the switch to “P” as shown the figure to the right:
2. Place the Inspire 1 on a flat surface. Notice that the Vision Positioning system

cannot work properly on surfaces without pattern variations.
3. Power on the Inspire 1. The aircraft status indicator will flash twice in green light, which indicates the Vision Positioning system is ready. Gently push the throttle up

to lift off, and the Inspire 1 will hover in place.

The performance of your Inspire 1’s Vision Positioning System is subject to the surface you are flying over. The ultrasonic waves may not be able to accurately measure the distance over sound absorbing materials, and the camera may not function correctly in suboptimal environments. The aircraft will switch from “P” mode to “A” mode automatically if both GPS and Vision Positioning System are not available. So operate the aircraft cautiously when in any of the following situations:

Flying over monochrome surfaces (e.g. pure black, pure white, pure red, pure green). Flying over a highly reflective surfaces.
Flying at high speeds(over 8m/s at 2 meters or over 4m/s at 1 meter).
Flying over water or transparent surfaces.

Flying over moving surfaces or objects.
Flying in an area where the lighting changes frequently or drastically.
Flying over extremely dark (lux < 10) or bright (lux > 10,000) surfaces.
Flying over surfaces that can absorb sound waves (e.g. thick carpet).
Flying over surfaces without clear patterns or texture.
Flying over surfaces with identical repeating patterns or textures (e.g. tiles with same design). Flying over inclined surfaces that will deflect sound waves away from the aircraft.
In the event of loss of remote controller’s signal, the aircraft will hover for 8 seconds and then auto-land if it is in “P” mode.

Keep the sensors clean at all times. Dirt or other debris may adversely affect the effectiveness of the sensors.

The effective hovering altitudes of the aircraft is from 0 to 2.5 meters.
Vision Positioning system may not function properly when the aircraft is flying over water. Vision Positioning system may not be able to recognize pattern on the ground in low light conditions (less than 100lux).

Do not use other ultrasonic devices with frequency of 40 KHz when Vision Positioning system is in operation.
Vision Positioning system may not be able to stabilize the aircraft when flying close to the ground (below 0.5 meters) in fast speed.

Keep the animals away from the aircraft when Vision Positioning system is activated. The sonar sensor emits high frequency sound that is only audible to some animals.

Flight Recorder

Flight data is automatically recorded to the SD card. This includes flight duration, orientation, distance, aircraft status information, speed, and other parameters.

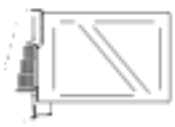
Attaching and Detaching the Propellers

Use only DJI approved propellers with your Inspire 1. The grey or black nut on the propeller indicates the rotation direction of the propeller and where it should be attached. To attach the propellers properly, match the nut with the dots on the motors of your Inspire 1:

Aircraft

!

!



Propellers

Figure

Attach On Legends

Grey cap(1345) Black cap(1345R)

Motors without a black dot Motors with a black dot

Lock : Turn the propellers in the indicated direction to mount and tighten

Unlock : Turn the propellers in the indicated direction to loosen and remove

Attaching the Propellers

1. Attach the propellers with a grey nut onto a motor without a black dot and spin the propellers clockwise to secure them in place. Attach the propellers with a black nut onto a motor with a black dot and spin the propellers counter clockwise to secure its position. Be sure to completely tighten each propeller by hand before flight.

Ensure propellers are attached to its corresponding motors, otherwise the aircraft cannot take off. Handling the propellers with care.
Manually tightent each of the propellers on the corresponding motors to ensure it is attached firmly.

Detaching the Propellers

Hold the motor still. Then spin the propeller in the unlock direction indicated on the propeller itself.

Check that the propellers and motors are installed correctly and firmly before every flight. Ensure that all propellers are in good condition before each flight. DO NOT use old, chipped, or broken propellers.
Toavoidinjury,STAND CLEARofandDONOTtouchpropellersormotorswhentheyarespinning. ONLY use original DJI propellers for a better and safer flight experience.

DJI Intelligent Flight Battery

The DJI Intelligent Flight Battery has a capacity of 4500mAh, voltage of 22.2V, and smart charge- discharge functionality. It can only be charged with an appropriate DJI approved charger.

Intelligent Flight Battery Charger

Aircraft

INSPIRE 1 User Manual Battery must be fully charged before using it for the first time. Refer to "Charging the Intelligent

Flight Battery" P21 for more information .

DJI Intelligent Flight Battery Functions

1. Battery Level Display: LEDs display the current battery level.
2. Battery Life Display: LEDs display the current battery power cycle.
3. Auto-discharging Function: The battery automatically discharges to below 65% of total power when it

is idle (press the power button to check battery level will cause battery to exit idle state) for more than 10 days to prevent swelling. It takes around 2 days to discharge the battery to 65%.It is normal to feel moderate heat emitting from the battery during the discharge process. Discharge thresholds can be set in the DJI Pilot app.

4. Balanced Charging: Automatically balances the voltage of each battery cell when charging.

5. Over charge Protection: Charging automatically stops when the battery is fully charged.

6. Temperature Detection: The battery will only charge when the temperature is between 0 °C(32°F) and
40°C (104°F).

7. Over Current Protection: Battery stops charging when high amperage (more than 10A) is detected.

8. Over Discharge Protection: Discharging automatically stops when the battery voltage reaches 18V to
prevent over-discharge damage

9. Short Circuit Protection: Automatically cuts the power supply when a short circuit is detected.
10. Battery Cell Damages Protection: DJI Pilot app shows warning message when damaged battery cell

is detected.
11. Battery Information History: Show the last 32 entries of battery information records that include warning

messages and so on.
12. Sleep Mode: Sleep mode is entered after 10 minutes of inactivity to save power.
13. Communication: Battery voltage, capacity, current, and other relevant information is provided to the

aircraft's to the main controller.

Refer to Disclaimer and Intelligent Flight Battery Safety Guidelins before use. Users take full responsibility for all operations and usage.

Using the Battery

LED4 LED2

LED3 LED1

Power Button (Bulit-in LED)

Powering ON/OFF

Powering On: Press the Power Button once, then press again and hold for 2 seconds to power on. The Power LED will turn red and the Battery Level Indicators will display the current battery level.

Powering Off: Press the Power Button once, then press again and hold for 2 seconds to power off.

Aircraft

Battery Level

LED1

LED2

LED3

LED4

Battery Level

75%~87.5% 50%~62.5% 25%~37.5% 0%~12.5%

INSPIRE 1 User Manual Low Temperature Notice:

1. The performance of the intelligent Flight Battery is significantly reduced when flying in a low temperature environments (those with air temperatures below 5°C). Ensure that the battery is fully charged and the cell voltage is at 4.43 V before each flight.

2. Using the Intelligent Flight Battery in extremely low temperature environments (those with air temperatures below -10°C) is not recommended. When flying in environments with temperatures between 5°C and -10°C, the Intelligent Flight Battery should be able to achieve the appropriate voltage levels (above 4.2 V), but it is recommended that you apply the included insulation sticker to the battery in order to prevent a rapid drop in temperatures.

3. If the DJI Pilot app displays the "Critical Low Battery Level Warning" when flying in low temperature environments, stop flying and land the aircraft immediately. You will still be able to control the aircraft's movement when this warning is triggered.

4. Store the Intelligent Flight Battery in a room temperature environment and ensure that its temperature exceeds 5°C before using it in the low temperature environment.

5. When using the Inspire 1 in a low temperature environment, begin by allowing the aircraft to hover at a low altitude, for approximately one minute, to heat the battery.

6. To ensure optimum performance, keep the Intelligent Flight Battery's core temperature above 20°C when in use.
   In cold environments, insert the battery into the battery compartment and allow the aircraft to warm up for approximately 1-2 minutes before taking off.

Checking the battery level

The Battery Level Indicators display how much remaining power the battery has. When the battery is powered off, press the Power Button once. The Battery Level Indicators will light up to display the current battery level. See below for details.

The Battery Level Indicators will also show the current battery level during charging and discharging. The indicators are defined below.

: LED is on.

: LED is off.

: LED is flashing.

87.5%~100%

62.5%~75% 37.5%~50% 12.5%~25% =0%

Battery life

The battery life indicates how many more times the battery can be discharged and recharged before it must be replaced. When the battery is powered off, press and hold the Power Button for 5 seconds to check the battery life. The Battery Level Indicators will light up and/or blink as described below for 2 seconds:

LED1

LED2

LED3

LED4

Battery Life

90%~100%

80%~90%

70%~80%

60%~70%

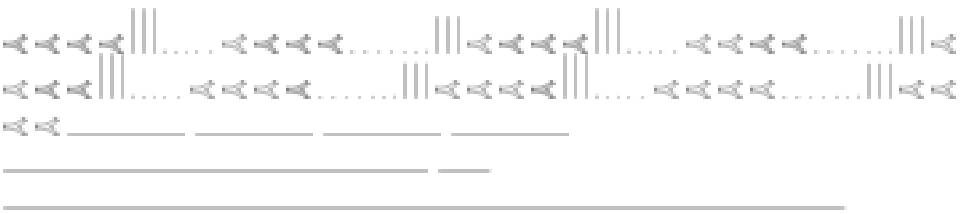
50%~60%

40%~50%

30%~40%

20%~30%

below 20%



When battery life reaches 0%, it can no longer be used.

For more information about the battery, launch DJI Pilot app and check the information under the battery tab.

Charging the Intelligent Flight Battery

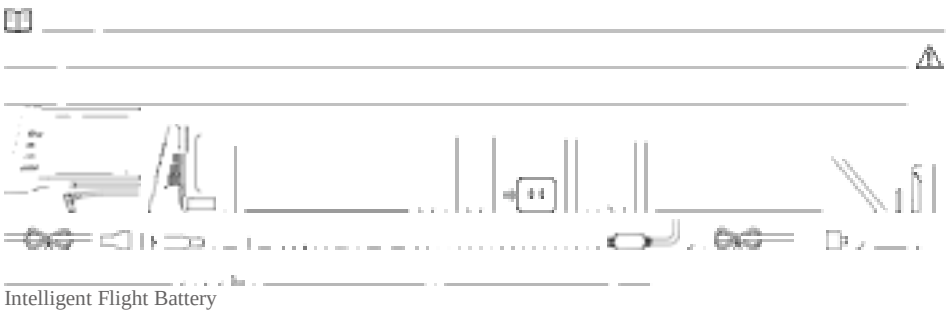
1. Connect Battery Charger to a power source (100-240V 50/60Hz).

2. Open the Protection Cap and connect the Intelligent Flight Battery to the Battery Charger. If the battery level is above 95%, turn on the battery before charging.

3. The Battery Level Indicator will display the current battery level during charging.

4. The Intelligent Flight Battery is fully charged when Battery Level Indicators are all off.

5. Air cool the Intelligent Flight Battery after each flight. Allow its temperature to drop to room temperature before storing it for an extended period.
   Do not charge the Intelligent Flight Battery and remote controller with standard charger (model: A14-100P1A) at the same time, otherwise the charger may overheat.
   Always turn off the battery before inserting it or removing it from the Inspire 1. Never insert or remove a battery when it is powered on.



Aircraft

Battery Level Indicators while Charging

LED1

LED2

LED3

LED4

Battery Level

0%~25%

25%~50% 50%~75%

75%~100%

Battery Level Indicators while Charging

LED1

LED2

LED3

LED4

Blinking Pattern

LED2 blinks twice per second

LED2 blinks three times per second LED3 blinks twice per second

LED3 blinks three times per second

Battery Protection Item

Over current detected

Short circuit detected Over charge detected

Over-voltage charger detected

LED4 blinks twice per second

LED4 blinks three times per second

Charging temperature is too high (>40°C)

Fully Charged The table below shows battery protection mechanisms and corresponding LED patterns.

Charging Protection LED Display

Charging temperature is too low (<0°C)

After any of the above mentioned protection issues are resolved, press the button to turn off the Battery Level Indicator. Unplug the Intelligent Flight Battery from the charger and plug it back in to resume charging. Note that you do not need to unplug and plug the charger in the event of a room temperature error, the charger will resume charging when the temperature falls within the normal range.

DJI does not take any responsibility for damage caused by third-party chargers.

How to discharge your Intelligent Flight Battery:

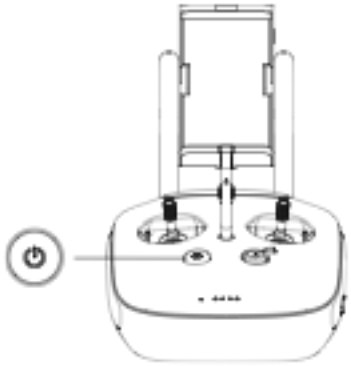
To effectively calibrate the battery capacity, it is recommended to charge and discharge the battery thoroughly for every 10 charge-and-discharge cycle. User should install the battery onto the aircraft and then power on the aircraft to initiate the discharge process, discharge the battery until the aircraft is powered off automatically. User should then fully charge the battery to ensure the battery is working at its optimal.

Slow: Place the Intelligent Flight Battery into the Inspire 1's Battery Compartment and power it on. Leave it on until there is less than 5% of power left, or until the battery can no longer be turned on. Launch the DJI Pilot app to check battery level.

Rapid: Fly the Inspire 1 outdoors until there is less than 5% of power left, or until the battery can no longer be turned on.

Remote Controllers

This chapter describes the features of the remote controller that includes aircraft and remote controller operations and dual remote controller mode.



INSPIRE 1 User Manual **Remote Controller**

Remote Controller Profile

The Inspire 1 Remote Controller is a multi-function wireless communication device that integrates the video downlink ground system and aircraft Remote Controller system. The video downlink and aircraft Remote Controller system operate at 2.4 GHz with maximum transmission distance of 2km. The remote controller features a number of camera functions, such as taking and previewing photos and video, and controlling gimbal motions. The remote controller is powered by a 2S rechargeable battery. The current battery level is displayed by LEDs on the front panel of the remote control.

Compliance Version: The Remote Controller is compliant with both CE and FCC regulations. Operating Mode: Control can be set to Mode 1 , Mode 2.
Mode 1: The right stick serves as the throttle.
Mode 2: The left stick serves as the throttle.

Do not operate more than 3 aircrafts within in the same area (size equivalent to a soccer field) to prevent transmission interference.

Remote Controller Operations Powering On And Off The Remote Controller

The Inspire 1 remote controller is powered by a 2S rechargeable battery with a capacity of 6000mAh. The battery level is indicated by the Battery Level LEDs on the front panel. Follow the steps below to power on your remote controller:
1. When powered off, press the Power Button once and the Battery Level LEDs will display the current

battery level.

2. Then, press and hold the Power Button to power on the remote controller.

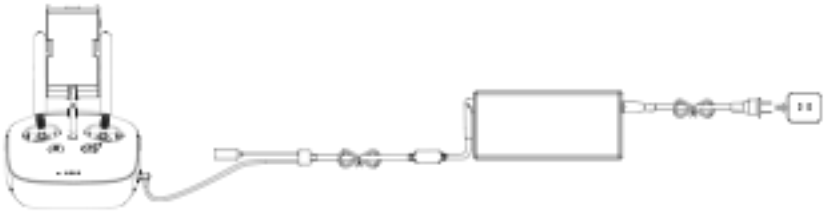
3. The Remote Controller will beep when it powers on. The Status LED will blink green (slave remote
controller blinks solid purple) rapidly, indicating that the remote controller is linking to the aircraft. The
Status LED will show a solid green light when linking is completed.

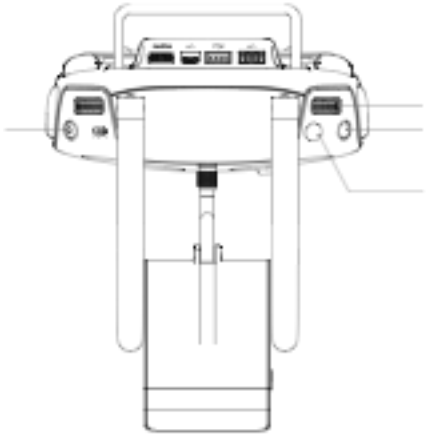
4. Repeat step 2 to power off the remote controller after finish using it.

Remote Controllers

Charging Remote Controller

Charge the remote controller via supplied charger.





Power Button

Controlling Camera

Shoot videos or images and adjust camera settings via the Shutter Button, Camera Settings Dial, Playback Button and Video Recording Button on the remote control.

[1] Camera Settings Dial

[1] [4] [2]

[3]

Turn the dial to quickly adjust camera settings such as ISO and shutter speed without letting go of the remote controller. Move the dial button to left or right to view the pictures or videos in playback mode.

[2] Playback Button

Press to view images or videos that have already been captured.

[3] Shutter Button

Press to take a photo. If burst mode is activated, multiple photos will be taken with a single press.

[4] Recoding Button

Press once to start recording video, then press again to stop recording.

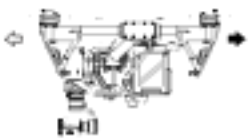
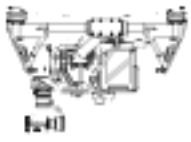
Controlling Aircraft

This section explains how to use the various features of the remote controller. The Remote Controller is set to Mode 2 by default.

Charger

Power Outlet

Remote Controllers

Stick Neutral/ mid point: Control sticks of the Remote Controller are placed at the central position.

Move the Stick: The control stick is pushed away from the central position.

Remote Controllers

Remote Controller (Mode 2)

Aircraft
(indicates nose direction)

Remarks

Moving the left stick up and down changes the aircraft's elevation.
Push the stick up to ascend and down to descend. Push the throttle stick up to takeoff.

When both sticks are centered, the Inspire 1 will hover in place.
The more the stick is pushed away from the center position, the faster the Inspire 1 will change elevation. Always push the stick gently to prevent sudden and unexpected elevation changes.

Moving the left stick to the left or right controls the rudder and rotation of the aircraft.
Push the sick left to rotate the aircraft counter clock-wise, and push the stick right to rotate the aircraft clockwise. If the stick is centered, the Inspire 1 will stay facing its current direction.

The more the stick is pushed away from the center position, the faster the Inspire 1 will rotate.

Moving the right stick up and down changes the aircraft's forward and backward pitch.
Push the stick up to fly forward and down to fly backward. The Inspire 1 will hover in place if the stick is centered.

Push the stick further away from the center position for a larger pitch angle (maximum 35°) and faster flight.

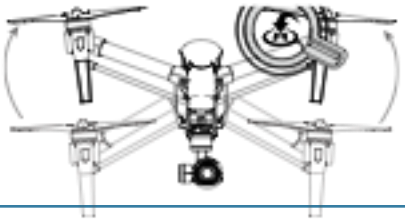
Moving the right stick control left and right changes the aircraft's left and right pitch.
Push left to fly left and right to fly right. The Inspire 1 will hover in place if the stick is centered.

Push the stick further away from the center position for a larger pitch angle (maximum 35°) and faster flight.

Gimbal Dial: Turn the dial to the right, and the camera will shift to point upwards. Turn the
dial to the left, and the camera will shift to point downwards. The camera will remain in its current position when dial is static.

▲

▼



Flight Mode Switch

Toggle the switch to select the desired flight mode. You may choose between; P mode, F mode and A mode. F

Figure Flight Mode

F Fmode A Amode P Pmode

A P

P mode (Positioning) : P mode works best when GPS signal is strong. There are three different states of P mode, which will be automatically selected by the Inspire 1 depending on GPS signal strength and Vision Positioning sensors:

P-GPS: GPS and Vision Positioning both are available, and the aircraft is using GPS for positioning. P-OPTI: Vision Positioning is available but the GPS signal is not. Aircraft is using only Vision Positioning for hovering
P-ATTI: Neither GPS or Vision Positioning available, aircraft is using only its barometer for positioning, so only altitude is controlled.

A mode (Attitude): The GPS and Vision Positioning System is not used for holding position. The aircraft only uses its barometer to maintain altitude. If it is still receiving a GPS signal, the aircraft can automatically return home if the Remote Controller signal is lost and if the Home Point has been recorded successfully.
F mode (Function): Intelligent Orientation Control (IOC) is activated in this mode. For more information about IOC, refer to the IOC in Appendix.

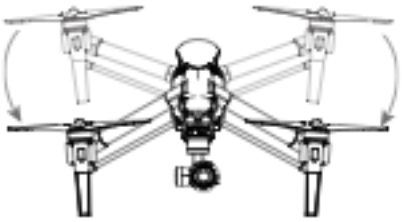
The Flight Mode Switch is locked in P mode by default. To unlock the switch, launch the DJI Pilot app, enter the "Camera" page, tap "MODE", and then activate "Multiple Flight Mode" .

Transformation Switch / RTH Button

The Transformation Switch / RTH Button combination serves two functions. Toggle the switch up or down to raise or lower the landing gear. Or, press the button to activate the Return to Home (RTH) procedure. Transformation Switch

This switch has two positions. The effect of toggling the switch to any of these positions is defined below:

1. Raise: Raise the landing gear to its upper most position.



2. Lower: The landing gear will lower to its lowest position for landing.

Do not raise the landing gear when the aircraft is on the ground. Ensure the landing gear is lowered before landing.

RTH button

Press and hold this button to start the Return to Home (RTH) procedure. The LED around the RTH Button will blink white to indicate the aircraft is entering RTH mode. The aircraft will then return to the last recorded Home Point. Press this button again to cancel the RTH procedure and regain the control of the aircraft.

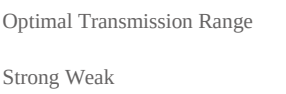
Remote Controllers

Connecting Mobile Device

Tilt the Mobile Device Holder to the desired position. Press the button on the side of the Mobile Device Holder to release the clamp, and then place your mobile device into the clamp. Adjust the clamp to secure your mobile device. Then connect your mobile device to the remote controller with a USB cable. Plug one end of the cable into your mobile device, and the other end into the USB port on the back of the remote controller.

Optimal Transmission Range

The signal transmission between aircraft and remote controller perform best within the range that displayed in the picture shown below:



Ensure the aircraft is flying within the optimal transmission range. Adjust the distance and position between the operator and the aircraft to achieve optimal transmission performance.

Dual Remote Controllers Mode

More than one remote controller can connect to the same aircraft in Dual Remote Controller mode. In Dual Controllers mode, the “Master” remote controller operator controls the orientation of the aircraft, while the “Slave” remote controller controls the movement of the gimbal and camera operation. When multiple “slave” remote controllers (max of 6) are connect to the aircraft, only the first connected “slave” remote controller is able to control the gimbal, the remaining “slave” remote controller can view the live feed video from the aircraft and set the camera parameters, but they cannot control the gimbal.

Maste Remote Slave Remote Controller Controller

Master

Slave

INSPIRE 1 User Manual

Use the gimbal dial on the remote controller to control the pitch movement of the camera in the single remote controller mode, however, you cannot control the pan movement of the camera.

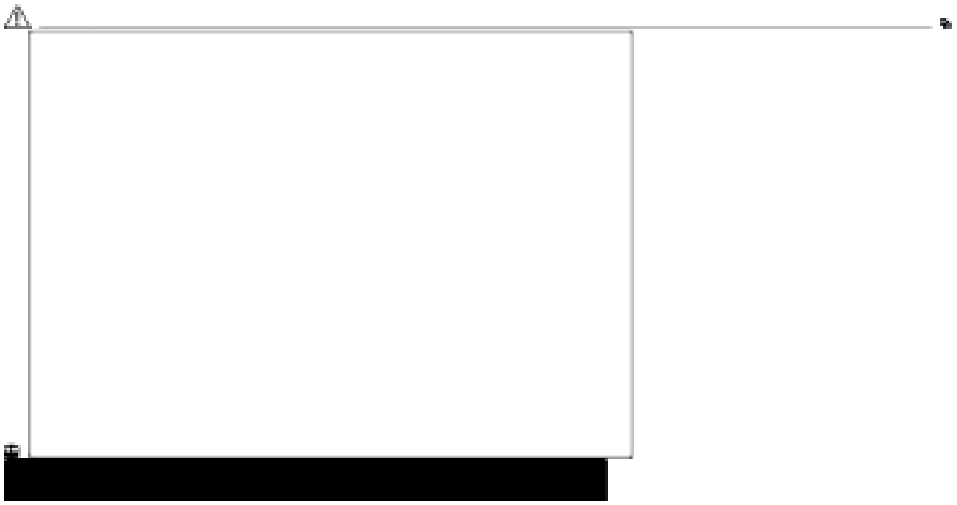
Setting Up Dual Remote Controllers Mode

Dual Remote Controllers mode is disabled by default. Users must enable this feature on the “Master” remote controller by through the DJI Pilot app. Follow the steps below for setup:

“Master” Remote Controller:

1. Connect the remote controller to your mobile device and launch the DJI Pilot app.
2. Go to the Camera page, and tap to enter the remote controller settings window.
3. Tap “Set RC Status” to enable Master-and-Slave mode.

4. Select “Master” in the “Set RC Status” section to set the remote controller as “Master” remote controller.



5. Enter the connection password for the “Slave” remote controller.

“Slave” Remote Controller:

1. Tap “Search for Master Controller” to search the “Master” remote controller.

Slave

RC Control Setting

Master and Slave Set RC Status

RC Name

Master RC List

Request Control Search for Master Controller

Remote Controllers

Remote controller cannot link to the aircraft if the remote controller is set as “Slave”. Meanwhile, the “Slave”remote controller cannot control the orientation of the aircraft. Reset the remote con- troller to “Master” in DJI Pilot app if you wish to link the remote controller to the aircraft.

2. Search the “Master” remote controller in the surrounding area in the “Request Control” section.

RC Control Settings

RC Control Settings

Master and Slave

Set RC Status

OFF

Master and Slave

Master

S88642
Request Control

RC Name

S88642

Set RC Status RC Name

Master RC List

Request Control

OFF Master

Search for Master Controller

INSPIRE 1 User Manual

Remote Controllers

RC Control Settings Master and Slave

Set RC Status

OFF Connection Password

Slave 1234

T12254

RC NameT12254 T12254 Master RC List

Slave RC List

Remote Controller Status LED

Search for Master Controller

3. Select the “Master” remote controller from the “Master RC List” and input the connection password to

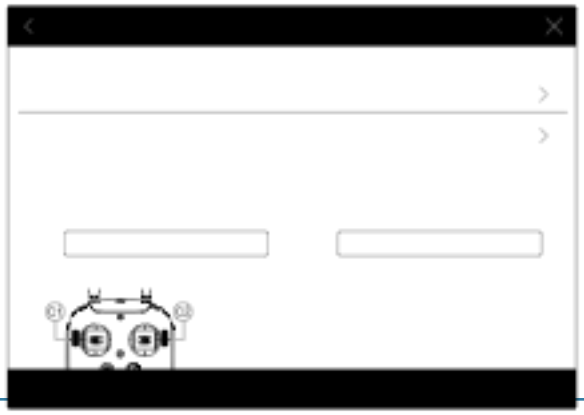
connect to the desired “Master” remote controller.

Master RC List

The Status LED reflects connection status between Remote Controller and aircraft. The RTH LED shows the Return to Home status of the aircraft. The table below contains details on these indicators.

Status LED

RTH LED



INSPIRE 1 User Manual Status LED

— Solid Red — Solid Green — Solid Purple — Solid Blue

Slow Blinking Red

/
Red and Green/ Red and Yellow Alternate Blinks

RTH LED
— Solid White

Blinking White Blinking White

Alarm chime

chime D-D-

D-D- chime D-D-D·····

None

Sound chime

D · · · DD ·· ·· ··

Remote Controller Status

The remote controller set as "Master" but it is not connected with the aircraft.

The remote controller set as "Master" and it is connected with the aircraft.

The remote controller set as "Slave" but it is not connected with the aircraft.

The remote controller set as "Slave" and it is connected with the aircraft.

Remote controller error.

HD Downlink is disrupted.

Remote Controller Status.
Aircraft is returning home.

Sending Return to Home command to the aircraft. Aircraft Return to Home in progress.

Remote Controllers

The Remote Status Indicator will blink red, sound an alert, when the battery level is critically low.

Linking the Remote Controller

The remote controller is linked to your aircraft before delivery. Linking is only required when using a new remote controller for the first time. Follow these steps to link a new remote controller:

1. Power on the remote controller and connect to the mobile device. Launch DJI Pilot app.
2. Power on the Intelligent Flight Battery.
3. Enter “Camera” view and tap on and then tap “Linking Remote Controller” button as shown below.

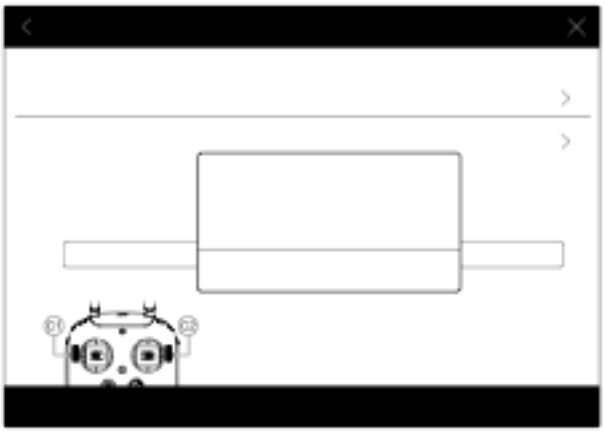
Remote Control Calibration

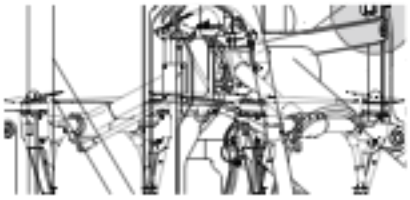
Stick Mode

Default stick mode is Mode 2, changing stick modes alters the way the aircraft is controlled. Do not change unless familiar with your new mode.

C1 Gimbal Pitch/Yaw C2 Reset gimbal yaw

You can customize the C1 and C2 buttons on the back of the remote controller.





!

INSPIRE 1 User Manual 4. The remote controller is ready to link. The Remote Controller Status Indicator blinks blue and "beep"

sound is emitted.

Stick Mode

Remote Control Calibration

Searching for aircraft frequency,
Default stick mode is Mode 2, changingtismtiecokumt oind5e4s saeltceorsndthse way the aircraft is controlled.

Do not change unless familiar with your new mode.

C1 Gimbal Pitch/Yaw C2 Reset gimbal yaw

Press the linking button on the aircraft to link this remote controller

Remote Controllers

Cancel

You can customize the C1 and C2 buttons on the back of the remote controller.

5. Locate the Linking button on the front of the aircraft, as shown in the figure shown below. Press the Linking button to start linking. The Remote Controller Status Indicator will display solid green if Link is succeed.

Remote controller cannot link to the aircraft if the remote controller is set as “Slave”. Meanwhile, the “Slave”remote controller cannot control the orientation of the aircraft. Reset the remote controller to “Master” in DJI Pilot app if you wish to link the remote controller to the aircraft. Remote controller will disconnect from the linked aircraft if a new remote controller is linked to the same aircraft.

Remote Controller Compliance Version

The remote controller is compliant with both CE and FCC requirements.

C2

Gimbal and Camera

This chapter provides the technical specifications of the camera and explains the working mode of the gimbal.

Camera and Gimbal

Camera Profile

The on-board camera supports 4K video capture up to 4096x2160p24 and 12M pixel photos capture by using the 1/2.3 inch CMOS sensor. You may export the video in either MOV or MP4 format for editing. Available picture shooting modes include burst, continuous, and timer mode. A live preview of what the camera is seeing before you shoot videos and pictures is supported through the DJI Pilot App.

Camera Micro-SD Card Slot

To store your photos and videos, plug in the micro-SD card into the slot shown below before powering on the Inspire 1. The Inspire 1 comes with a 16GB micro-SD card and supports up to a 64GB micro-SD card. A UHS-1 type micro-SD card is recommended, because the fast read and write capability of these cards enables you to store high-resolution video data.

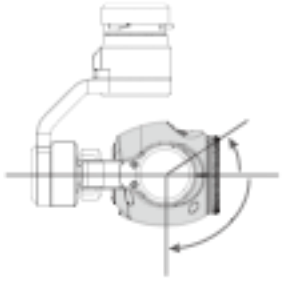
Gimbal and Camera

Do not remove micro-SD card from the Inspire 1 when it is powered on.

Camera Data Port

Power on the Inspire 1 and then connect a USB cable to the Camera Data Port to download photos or videos from the camera to your computer.

Power on the aircraft before attempting to download the files.



⚠

Use the Shutter and Record button on the remote controller to shoot the images or the videos through the DJI Pilot app. For more information about how to use these buttons, refer to “Controlling Camera” P25.

ND Filter

Attach an ND filter to the front of the camera to reduce over-exposure and “jello” effect.

Gimbal Gimbal Profile

The 3-axis Gimbal provides a steady platform for the attached camera, allowing you to capture stabilized images and video. The Gimbal can tilt the camera up to 120 degrees and rotate 360 degrees.

+30° 0°

-90°

+330° -330°

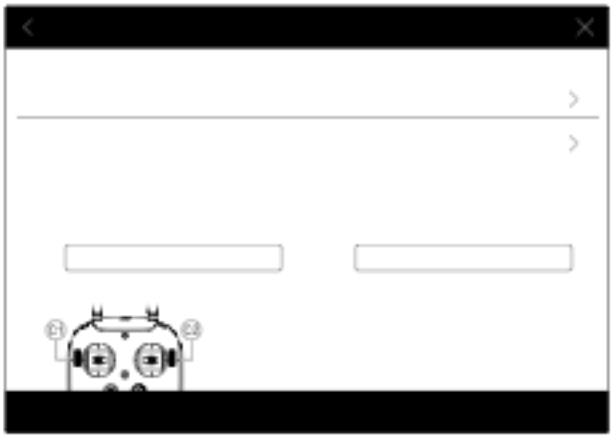
Gimbal and Camera

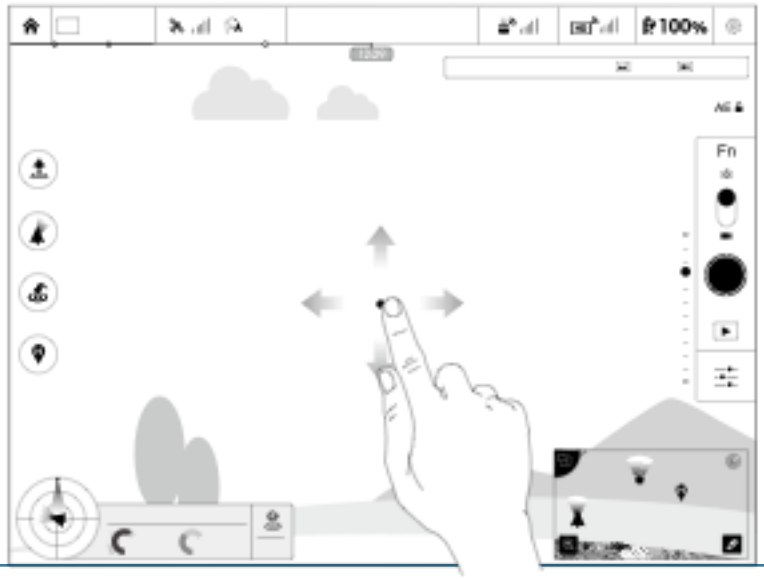
Use the gimbal dial on the remote controller to control pitch movement of the camera by default. Note that you cannot control the pan motion of the camera by default. Enable the “Master-and-Slave”mode and set the remote controller to “Slave” state if you wish to control both the pan and pitch movement of the camera.

Use the gimbal dial on the remote controller to control the pitch movement of the camera in the single remote controller mode, however, you cannot control the pan movement of the camera.

Pan Control
Follow the instructions below to use the gimbal dial to control the pan movement of the gimbal:
1. Power on the aircraft and remote control, launch DJI Pilot app and enter “Camera” page.
2. Tap “RC Control Settings” icon and select either C1 or C2 customizable button as the gimbal pitch/

yaw switching button.
3. Select “Gimbal Pitch/Yaw” from the dropdown list.




100%
Fn

Using DJI Pilot App to Control Gimbal

Follow the steps below to use DJI Pilot app to control the gimbal orientation:
1. Launch DJI Pilot app, enter “Camera” page.
2. Tap and press on the screen until a blue circle is shown.
3. Slide to control the gimbal orientation within the “Camera” page as shown below.

MODE P-GPS

OFF

Safe to Fly (GPS)

H: **2M** V.S

D: **39M** H.S

1.2M

0

8.3 M/S

24.2 M/S

Remote Control Calibration

Stick Mode

Default stick mode is Mode 2, changing stick modes alters the way the aircraft is controlled. Do not change unless familiar with your new mode.

C1 Gimbal Pitch/Yaw C2 Reset gimbal yaw

You can customize the C1 and C2 buttons on the back of the remote controller.

Press C1 or C2 button to switch from pitch mode to yaw mode. You may use the gimbal dial to pan the gimbal under yaw mode. Press C1 or C2 again to exit yaw mode.

ISO 100

1/320

Three Gimbal operation modes are available. Switch between the different operation modes on the Camera page of the DJI Pilot App. Note that your mobile device must be connected to the remote controller for changes to take effect. Refer to the table below for details:

Pitch

Follow Mode FPV Mode

Free Mode Re-alignment

Pan

The angle between Gimbal's orientation and aircraft's nose remains constant at all times. One user alone can control the pitch motion of the Gimbal, but a second user is required to control the pan motion using a second remote controller.

The Gimbal will lock to the movements of the aircraft to provide a First- Person-View flying experience.

The Gimbal's motion is independent of the aircraft's orientation. One user alone can control the pitch motion of the Gimbal, but a second user is required to control the pan motion using a second remote controller.

Tap to force the Gimbal orientation to re-align with aircraft's orientation by panning from gimbal's current orientation. Pitch angle will remain unchanged during the re-alignment.

Gimbal and Camera

Gimbal motor error may occur in these situations: (1) Gimbal is placed on uneven ground. (2) Gimbal has received an excessive external force, e.g. a collision. Please take off from flat, open ground and protect the gimbal after powering up. Flying in heavy fog or cloud may make the gimbal wet, leading to a temporary failure. The gimbal will recover when it dries out.

DJI Pilot App

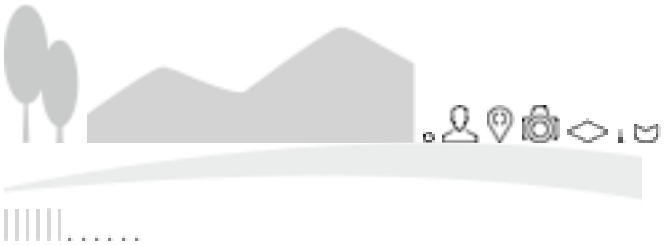
This chapter describes the four main GUI of the DJI Pilot app.

United States

Mountian View

Shot with DJI INSPIRE 1

CAMERA MAP ACADEMY USER CENTER



MODE P-GPS

CL Safe to Fly (GPS)

ISO 100

1/320 EV 0

4821 00:22:16

JPEG 4K 30

H: 2M

V.S
8.3 M/S

D: 39M

H.S
24.2 M/S 1.2M

0 00

DJI Pilot App

The DJI Pilot app is a new mobile app designed specifically for the Inspire 1. Use this app to control the gimbal, camera and other features of your flight system. The app also comes with Map, Store a User Center, for configuring your aircraft and sharing your content with friends. It is recommended that you use a tablet for the best experience.

Camera

The Camera page contains a live HD video feed from the Inspire 1's camera. You can also configure various camera parameters from the Camera page.

[1] Flight Mode

: The text next to this icon indicates the current flight mode.
Tap to enter MC (Main Controller) settings. Modify flight limits, perform compass calibration, and set the gain values on this screen.

[2] GPS Signal Strength

: This icon shows the current strength of GPS signals. Green bars indicates adequate GPS strength.

[3] IOC Settings

: This icon shows which IOC setting that the aircraft has entered when in F Mode. Tap to enter IOC setting menu and select Course Lock, Home Lock or Point of Interest Lock.

[4] System Status

: This icon shows current aircraft system status, such as GPS signal health.

[5] Battery Level Indicator

: The battery level indicator dynamically displays the battery level. The color zones on the battery level indicator represent different battery levels.

[6] Remote Controller Signal

: This icon shows the strength of remote controller signal.

[7] HD Video Link Signal Strength

: This icon shows the HD video downlink signal strength between the aircraft and the remote controller.

[8] Battery Level

: This icon shows the current Intelligent Flight Battery level.

Tap to enter battery information menu, set the various battery warning thresholds and view the battery warning history in this page.

[9] General Settings

: Tap this icon to enter General Settings page. Select parameter units, reset the camera, enable the quick view feature, adjust the gimbal roll value and toggle flight route display on this page.

[10] Camera Operation Bar Exposure Lock

: Tap to enable or disable the camera exposure lock.

Function

: Tap to adjust camera settings, such as video format and digtial filters.

Shutter

: Tap this button to take a single photo.

: Tap once to start recording video, then tap again to stop recording. You can also press the Video Recording Button on the remote controller, which has the same function.

Playback

: Tap to enter playback page. You can preview photos and videos as soon as they are captured.

Camera Settings and Shooting Mode

: Tap to enter the Camera Settings page and switch from camera shooting mode from manual to auto.

[11] Map

Display the flight path of the current mission. Tap to switch from the Camera GUI to the Map GUI.

[12] Vision Positioning

: This icon shows the distance between the surface and the Vision Positioning System's sensors.

[13] Flight Telemetry

Vision Positioning Status

Icon is highlighted when Vision Positioning is in operation.

Flight attitude is indicated by the flight attitude icon.

(1) The red arrow shows which direction the aircraft is facing.
(2) Light blue and dark blue areas indicate pitch.
(3) Pitching of the boundary between light blue and dark blue area shows roll angle.

[14] Home Point Settings

: Tap this button to reset the current home point. You may choose to set the aircraft take-off location, the remote controller’s current position, or the aircraft’s current position as the Home Point.

[15] Return to Home (RTH)

: Initiate RTH home procedure. Tap to have the aircraft return to the latest home point.

[16] Gimbal Operation Mode

Refer to "Gimbal Operation Mode" P38 for more information.

[17] Auto Takeoff/Landing

/ : Tap to initiate auto takeoff or landing.

[18] Back

: Tap to return to the main GUI.

Map

User can view the current flight route in a larger map view in this page. You can also perform Auto take- off and Landing in the page. 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 map, if Wi-Fi is unavailable, mobile data service is required.

Academy

Download user manual, view online videos. Also you can use the flight simulator to practice your flight skills.

User Center

You can sync the picture and videos to the mobile device, view the flight records and check your DJI account status in the User Center. Use the DJI registered account to login to the User Center.

Flight

This chapter describes the flight safety and flight restrictions.

Flight

Once pre-flight preparation is complete, it is recommended to use the flight simulator to learn how 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 10m/s , snow, rain and smog.

2. Only fly in open areas. Tall buildings and steel structures may affect the accuracy of the on-board compass and GPS signal.

3. Avoid from obstacles, crowds, high voltage power lines, trees or bodies of water.

4. Minimize electromagnetic interference by not flying in area with high levels of electromagnetism,
including mobile phone base stations or radio transmission towers.

5. Aircraft and battery performance is subject to environment factor such as air density and temperature.

Be very careful when flying 14700 feet (4500 meters) or more above sea level as battery and aircraft

performance may be reduced.
6. The Inspire 1 cannot operate within the polar areas in “P” mode.

Flight Limits and Flight Restriction Area

Flight limits on height and distance can be set. The details of these flight limits are described in the following section.
All unmanned aerial vehicle (UAV) operators should abide by all regulations from such organizations as the ICAO (International Civil Aviation Organization), FAA and their own national airspace regulations. For safety reasons, the flight limits function is enabled by default to help users use this product safely and legally. The flight limits function includes height limits, distance limits and No Fly Zones.

When operating in P Mode, height, distance limits and No Fly Zones work together to manage flight. In A mode only height limits work and flights cannot go higher than 120 meters.

Max Height & Radius Limits

Max Height & Radius limit flying height and distance, and the user may change these settings in the DJI Pilot App. Once complete, your Inspire 1 will fly in a restricted cylinder that is determined by these settings. The tables below show the details of these limits.

Max Height

Max Radius Home Point

Height of aircraft when powered on

Flight

GPS Signal Strong ……Blinking Green

Max Height

Flight altitude must be under the set height.

Warning: Height limit reached.

None.

GPS Signal Weak

Blinking Yellow

Flight Limits

DJI Pilot App

Max Height

Flight height restricted to 120m and under.

Warning: Height limit reached.

None.

No limits

Max Radius

Flight Limits

Flight distance must be within the max radius.

DJI Pilot App

Warning: Distance limit reached.

Aircraft Status Indicator

Rapid red flashing when close to the

max radius limit.

Aircraft Status Indicator

If you fly out of the limit, you can still control the Inspire 1, but cannot fly it further.
If the Inspire 1 flies out of the max radius in Ready to Fly (non-GPS) mode, it will fly back within range automatically.

Flight Restriction of Restricted Areas

Restricted areas include airports worldwide. All restricted areas are listed on the DJI official website at http://www.dji.com/fly-safe/category-mc. Restricted areas are divided into category A and category B. Category A areas cover major international airport such as LAX and Heathrow, while category B areas includes smaller airports.

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 Pilot 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 Pilot App.

Flight
GPS Signal Strong Blinking Green

Zone

Restriction

DJI Pilot App Prompt

Aircraft Status Indicator

No-fly Zone

Motors will not start.

Warning: You are in a No-fly zone. Take off prohibited.

Red flashing

If the aircraft enters the restricted area in A mode but P mode activates the aircraft 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 aircraft enters the restricted area in A mode but P 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.

When flying in the safety zone, aircraft status indicator 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.

Preflight Checklist

1. Remote controller, aircraft battery, and mobile device are fully charged. 2. Propellers are mounted correctly and firmly.
3. Micro-SD card has been inserted if necessary.
4. Gimbal is functioning as normal.

5. Motors can start and are functioning as normal. 6. DJI Pilot app connected to the aircraft.

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 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.

Calibration Procedures

Choose an open space to carry out the following procedures.
1. Ensure the compass is calibrated. If you did not calibrate the compass in the Checklist, or if you

have changed your position since last calibrating it, tap “MODE” in the app and select “Compass

Calibration” to calibrate the compass. Then follow the on-screen instructions.
2. Hold and rotate the aircraft horizontally 360 degrees, and the Aircraft Status Indicator will display a

solid green light.

3. Hold the aircraft vertically with nose pointing downward, and rotate it 360 degrees around the center
axis. Recalibrate the compass if the Aircraft Status Indicator show solid red.

Flight

If the Aircraft Status Indicator blinks red and yellow after the calibration, move your aircraft to a different location to carry out compass calibration.

Calibrate the compass before each flight. Launch DJI Pilot App, follow the on-screen instruction to calibrate the compass.

When to Recalibrate

1. When compass data is abnormal, and the Aircraft Status Indicator is blinking red and yellow.

2. When flying in a new location, or a location that is different from your last flight.
3. When the mechanical structure of the Inspire 1 has changed, i.e. changed mounting position of the

compass.
4. When severe drifting occurs in flight, i.e. the Inspire 1 does not fly in straight lines.

Auto Take-off and Auto Landing

Auto Take-off
Use auto take-off to take off your aircraft automatically if the Aircraft Status Indicator displays blinking green. Follow the steps below to use auto take-off:
1. Launch DJI Pilot app, enter “Camera” page.
2. Ensure the aircraft is in “P” mode.
3. Go through the pre-flight checklist.
4. Tap“ ”, and confirm flight condition. Slide to confirm and take-off.
5. Aircraft takes off and hovers at 1.5 meters above ground.


①
②

Auto-Landing
Use auto-landing to land your aircraft automatically if the Aircraft Status Indicator displays blinking green. Follow the steps below to use auto-landing:
1. Ensure the aircraft is in “P” mode.
2. Check the landing area condition before tapping “ ”, to perform landing.
3. Aircraft lowers the landing gear and proceed to land automatically.

Starting/Stopping the Motors Starting Motors

The Combination Stick Command (CSC) listed below are used to start the motors instead of simply push- ing the stick up. Ensure that you perform the CSC in one motion.

OR

Stopping Motors

There are two methods to stop the motors.
Method 1: When the Inspire 1 has landed, push the throttle down immediately. Release both sticks once motors stop.
Method 2: When the aircraft has landed, push the throttle down and hold. The motors will stop after 3 seconds.

OR

Do not perform CSC when aircraft is in midair, otherwise the motors will be stopped.

Flight Test
Take off/Landing Procedures

1. Place the aircraft on open, flat ground with battery indicators facing towards you.
2. Power on the remote controller and your mobile device, then the Intelligent Flight Battery.
3. Launch the DJI Pilot App and enter the Camera page.
4. Wait until the Aircraft Indicator blinks green. This means the Home Point is recorded and it is safe to fly

now. If it flashes yellow, it means Home Point is not recorded, and you should not take off.
5. Push the throttle up slowly to take off or using Auto Take-off to take off.
6. Shoot photos and videos using the DJI Pilot app.

7. To land, hover over a level surface and gently pull down on the throttle slowly to descend.
8. After landing, execute the CSC command or hold the throttle at its lowest position for 3 seconds or

more until the motors stop.
9. Turn off the Intelligent Flight Battery first, followed by the Remote Controller.

, then conduct CSC

. Motors will stop

When the Aircraft Status Indicator blinks yellow rapidly during flight, the aircraft has entered Failsafe mode.
A low battery level warning is indicated by the Aircraft Status Indicator blinking red slowly or rapidly during flight.

Watch video tutorials about flight for more flight information.

Video Suggestions and Tips

1. Work through the checklist before each flight.
2. Select desired gimbal working mode in the DJI Pilot app.
3. Aim to shoot when flying in P mode only.
4. Always fly in good weather, such as sunny or windless days.
5. Change camera settings to suit you. These include photo format and exposure compensation. 6. Perform flight tests to establish flight routes and scenes.
7. Push the sticks gently to make aircraft movements stable and smooth.

FAQ

Troubleshooting (FAQ)

1. How can I put a GoPro camera on the Inspire 1?

The Inspire 1 does not currently support GoPro attachments. The gimbal is designed to hold DJI cameras only.

2. When will ground station functionality be available?

The Inspire 1 does not currently support ground station. Ground station will be available with future firmware updates.

3. Is the camera's exposure automatic?

The exposure can be set to Auto, for automatic changes, or Manual, if you wish to use a specific setting.

4. Can I see the size of images through the app?

Yes, you can preview image or video sizes through the DJI Pilot app.

5. How much weight can the Inspire 1 carry without its included camera?

We do not recommend flying with any payload other than the included DJI gimbal and camera.

6. Do you have an LCD monitor available for the Inspire 1?

No, DJI does not sell LCD or HD monitors for the Inspire 1. However, you can output the live streaming video to a compatible monitor or mobile device of your own.

7. How long does it take to charge the battery? Does it comes with a charger?

Yes, all Inspire 1 units come with standard TB47 charger.
With the standard TB47 100W charger, it takes 85min to fully charge a 4500mAh battery.

8. Are the two remote controllers the same? Should I setup the remote controllers in the app or somewhere else to control the camera and aircraft separately?

The two remote controllers are physically identical. You can set the remote controllers to either "Master" or "Slave" through the DJI Pilot app if you wish to use dual controller mode.

9. Where can I find info on the simulation application that plugs into the trainer port? Can you suggest a simulation program?

There is no trainer port on the remote controller for the Inspire 1.

10. Can the mobile device holder be used on the Phantom 2 series remote controller?

No, it cannot. The mobile device holder can only be used with the Inspire 1 remote.

11. Does the Inspire 1 have a SD card included?

The Inspire 1 comes with a 16GB micro-SD card. It supports SD cards up to 64GB.

12. Can I upgrade and buy a second remote controller if I only buy a single remote controller now?

Yes.

13. How big is the Inspire 1?

Its length x height x width dimensions without the propellers attached are 44 x 30 x 45cm (17.3 x 11.8 x 17.7in).

14. What flight controller does the Inspire 1 use?

The Inspire 1 uses its own new flight controller.

15. Which motors and propellers does the Inspire 1 come with?

The Inspire 1 uses 3510 motors and 1345 propellers.

16. Aircraft frame arm joints appear loosen, is that normal?

The space of the joins shown in the below figure is normal and it will not affect the performance of aircraft, do not adjust the position of the screws on your own.

17. Failed to complete self-check?

Place the aircraft on the flat surface before powering on. Do not move the aircraft during the self- check.

Appendix

Appendix

Specifications

Model
Hovering Accuracy (P Mode)

Max Tilt Angle
Max Descent Speed
Max Flight Altitude
Max Flight Time
Propeller Model
Operating Temperature Range Dimensions
Model
Operating Current
Mounting

Mechanical Range

T600

Vertical: 0.5 m Horizontal: 2.5 m

35°
4 m/s
4500 m
Approximately 18 minutes
DJI 1345
-10° to 40° C
438x451x301 mm
ZENMUSE X3
Station: 750 mA;Motion: 900 mA Detachable

Pitch: -125° to +45° Pan: ±330°

Aircraft

Weight (Battery Included)

2935 g

Max Angular Velocity

Pitch: 300°/s Yaw: 150°/s

Max Ascent Speed

5 m/s

Max Speed

22 m/s (ATTI mode, no wind)

Max Wind Speed Resistance

10 m/s

Motor Model

DJI 3510

Indoor Hovering

Enabled by default

Diagonal Distance

559 to 581 mm

Gimbal

Output Power (With Camera)

Static: 9 W;In Motion: 11 W

Angular Vibration Range

±0.03°

Controllable Range

Pitch: -90° to +30° Pan: ±320°

Max Controllable Speed

Pitch: 120°/s Pan: 180°/s

Appendix

Camera

Model

FC350

Effective Pixels

12.4M

ISO Range

100-3200 (video) 100-1600 (photo)

FOV (Field Of View)

94°

Lens

20mm (35mm format equivalent) f/2.8 focus at ∞) 9 Elements in 9 groups
Anti-distortion

Video Recording Modes

UHD (4K): 4096x2160p24/25, 3840x2160p24/25/30 FHD: 1920x1080p24/25/30/48/50/60
HD: 1280x720p24/25/30/48/50/60

Supported File Formats

FAT32/exFAT
Photo: JPEG, DNG
Video: MP4/MOV (MPEG-4 AVC/H.264)

Operating Temperature Range

0° to 40° C

Remote Controller

Operating Frequency

922.7MHz~927.7 MHz (Japan Only) 5.725~5.825 GHz;2.400~2.483 GHz

EIRP

10dBm@900m, 13dBm@5.8G, 20dBm@2.4G

Power Supply

Built-in battery

Dual User Capability

Host-and-Slave connection

Name
Total Pixels
Image Max Size Electronic Shutter Speed CMOS

Still Photography Modes

Max Bitrate Of Video Storage

Supported SD Card Types

Name

Transmitting Distance Video Output Port Charging

X3
12.76M
4000x3000
8 s to 1/8000 s Sony EXMOR 1/2.3”

Single shoot
Burst shooting: 3/5/7 frames
Auto Exposure Bracketing (AEB): 3/5 bracketed frames at 0.7EV Bias
Time-lapse

60 Mbps

Micro SD
Max capacity: 64 GB. Class 10 or UHS-1 rating required.

C1

2 km (Outdoor And Unobstructed) USB, Mini-HDMI
DJI charger

Appendix

Mobile Device Holder Operating Temperature Range

Charging Temperature Range

Model
Rated Power Name Capacity Battery Type Net Weight

Storage Temperature Range

Max Charging Power Name
Capacity
Battery Type

Net Weight
Storage Temperature Range

Tablet or Smart Phone -10° to 40° C

0-40° C

A14-100P1A

100 W

Intelligent Flight Battery

4500 mAh

LiPo 6S High voltage battery

570 g

Less than 3 months: -20° to 45° C More than 3 months: 22° C to 28° C

180 W
Intelligent Flight Battery 5700 mAh
LiPo 6S
670 g

Less than 3 months: -20 to 45° C More than 3 months: 22° to 28° C

INSPIRE 1

User Manual

Output Power

9W

Storage Temperature Range

Less than 3 months: -20° to 45° C More than 3 months: 22° to 28° C

Battery

6000 mAh LiPo 2S

Charger

Voltage

26.3 V

Battery (Standard)

Model

TB47

Voltage

22.2 V

Energy

99.9 Wh

Operating Temperature Range

-10° to 40° C

Charging Temperature Range

0° to 40° C

Battery (Optional)

Model

TB48

Voltage

22.8 V

Energy

129.96 Wh

Operating Temperature Range

-10 to 40° C

Charging Temperature Range

0° to 40° C

Appendix

Vision Positioning

Altitude Range

5-500 cm

Operating Range

0-250 cm

DJI Pilot App

Supported Mobile Devices

* iPhone 6 Plus, iPhone 6, iPhone 5S, iPad Air 2, iPad Mini 3, iPad Air, iPad Mini 2, iPad 4;* Samsung Note 3, Samsung S5, Sony Z3 EXPERIA;* Note: It is recommended that you use a tablet for the best experience

Course Lock (CL)

Its forward direction is pointing to the nose direction when recording, which is fixed until you re-record it or exit from CL.

Point of Interest (POI)*

Point of Interest. Record a point of interest (POI), the aircraft can circle around the POI, and the nose always points to the POI.

Modes IOC

GPS enabled

GPS

Flight Distance Limits

Home Lock

Yes

Aircraft ≥10m Home Point

 Max Charging Power

Velocity Range Operating Environment

Mobile Device System Requirements

180 W
Below 8 m/s (2 m above ground) Brightly lit (lux > 15) patterned surfaces

iOS version 7.1 or later;Android version 4.1.2 or later

Intelligent Orientation Control (IOC)

IOC allows users to lock the orientation of aircraft in different fashions. There are three working modes for IOC and you may select the desired IOC modes from the DJI Pilot app. IOC only works under F mode, and user must toggle the flight mode switch to "F" mode to activate IOC. Refer to the table below:

Home Lock (HL)*

Record a Home Point (HP), and push Pitch stick to control the aircraft far from or near to the HP.

*Home Lock and Point of Interest feature are coming soon.

Prerequisites of IOC

Use the IOC feature under the following condition: Course Lock No None

POI Yes

Using IOC

Aircraft

None

5m~500m Point of Interest

Enable the IOC feature by tapping “Enable IOC” in the setting page of the DJI Pilot app. Toggle the Flight Mode Switch to “F” mode and follow the on-screen instruction to use IOC feature.

How to Update Firmware

Follow the steps below to upgrade your Inspire 1’s firmware, including the firmware for the remote controller and battery.

Updating the Aircraft Firmware

Step 1- Check Battery and SD Card Capacity

Ensure the Intelligent Flight Battery and Remote Controller have at least 50% power and there is at least 100MB of free space on the SD card.

Step 2- Prepare the Firmware Update Package

1. Download the firmware update package from the official DJI website (http://www.dji.com/product/ inspire-1).

2. Insert the SD into your PC. Extract the all downloaded files into the root directory of the SD card. Remove the SD card from your PC and insert it

into the SD card slot on the Inspire 1 camera.

Step 3- Update the Aircraft

1. Connect your mobile device to the remote controller, power on the remote controller, and launch the DJI Pilot app to obtain information about firmware update progress. Confirm you wish to update within the app to continue. Note the upgrade will begin automatically after power cycling the aircraft if the DJI Pilot app is not launched.

2. It will take approximately 25 minutes to complete the firmware update. During the upgrade process, DJI Pilot app will display update progress and gimbal will sound a fast beeping sound(D-D-D-D). A message windows of "Upgrade Completed, Aircraft will restart in 5 seconds" will prompt in DJI Pilot app and gimbal will sound a slow beeping sound (D--DD) to indicate the update is complete, aircraft will then restart automally. Note that user will need to manually power cycle the aircraft if DJI Pilot app is not launched prior to the upgrade.

3. Try update again if gimbal sounds a long beeping sound.

Updating the Remote Controller Firmware

Step 1- Check Battery

The remote controller firmware is included in the aircraft firmware update package. Use the same update file that is downloaded from the official DJI website. Ensure the remote controller’s remaining battery level is at least 50%.

Step 2- Prepare the Firmware Update Package

1. Extract all downloaded files into the root directory of an SD card or USB thumb drive.

2. With the remote controller powered off, insert the SD card into a SD card reader and plug the reader into the USB port on the remote. Or if using a USB thumb drive, plug it directly into the remote’s USB port. If you do not have a SD card reader or USB thumb drive, you may insert the SD card into the
gimbal and connect the gimbal to the remote controller with a USB cable.

Step 3- Update the Remote Controller

1. Power on the remote controller and wait 60 seconds until the upgrade begins. Do not power off the remote controller during the update.

2. It will take approximately 10 minutes to complete the firmware update. The Inspire 1's camera will emit a beeping sound and the Status LED on the remote controller will show a solid blue light to indicate

the update is in progress. The Status LED on the remote controller will show a solid green light and the beeping sound will stop when the upgrade is complete. The Status LED on the remote controller will show a solid red light if the upgrade fails. In this case, try the update again.

Updating Intelligent Flight Battery Firmware

The Intelligent Flight Battery's firmware is updated during the aircraft firmware update process. Simply keep the update package files on your SD card and update the Intelligent Flight Battery firmware if prompted in the DJI Pilot app. The update will start automatically if the aircraft is not connected to the DJI Pilot app after power cycling the aircraft.

Do not perform firmware update while the aircraft is still flying in the air. Only carry out firmware update when the aircraft is landed.
Be sure to update the remote controller's firmware to the latest version after you upgrade the aircraft's firmware.

The remote controller may become unlinked from the aircraft after updating. Re-link the remote controller and aircraft.
Confirm the update results according to the gimbal sounds. It is normal for the aircraft to sound or the LED to blink during the update process. The on-screen rate of progress is for reference only.

Ensure there is only one firmware package file stored on your SD card.
Only storage devices that are formatted for FAT32 and exFAT file systems are

supported for aircraft and remote controller firmware updates.
Delete any automatically generated txt files (xxx_GS.TXT) in the SD card when updating multiple remote controllers.

FCC Compliance FCC Compliance

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

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

Compliance Information FCC Warning Message

Any Changes or modifications not expressly roved by the party responsible for compliance could void the user’s authority to operate the equipment.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator&

transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

IC RSS warning

This device complies with Industry Canada licence-exempt RSS standard (s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference,including interference that may cause undesired operation of the device.
Le présent areil est conforme aux CNR d'Industrie Canada licables aux areils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:
(1) l'areil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'areil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC Radiation Exposure Statement:

This equipment complies with IC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.

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

KCC Warning Message

"해당무선설비는 운용 중 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다 ." "해당 무선설비는 운용 중 전파혼신 가능성이 있음"

NCC Warning Message

低功率電波輻射性電機管理辦法 第十二條經型式認證合格之低功率射頻電機,非經許可,公司、商號或使用者均不得擅自變更頻率、加 大功率或變更原設計之特性及功能。 第十四條低功率射頻電機之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應改善至無 干擾時方得繼續使用。前項合法通信,指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Appendix

The content is subject to change.

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Maintenance Manual

V1.0 2015.2

To ensure that your aircraft continues to offer optimal performance and to ensure flight safety, it is recommended that comprehensive maintenance be performed after every 200 flights or 50 flight hours. This manual is intend to help users maintain their aircraft and maximize its continued reliability.

I. Checking the Battery

1. Check the battery for damage and deformities. If there are any signs of damage to the battery, stop using it and discharge the battery to 10% or below for disposal. Do not disassemble the battery for any reason.

2. Check the battery pins and rub them clean with an eraser if any residue is observed. This will help to ensure a more reliable connection.

3. Check the metal battery power connectors for damage. If the connectors appear burnt, try to clear them. This can be done by inserting a piece of sandpaper (1mm thick) into the connectors to polish the metal.

4. Check the contact pins in the battery compartment to ensure that the pins are clear. They should be able to establish easy contact with the battery connectors and should not be bent.

5. Check the electrodes on the battery. If they appear burnt, polish them with sandpaper. If there is serious erosion, send the battery in for repairs.

6. Check the plastic components of the battery bracket to see it is in good condition and that all screws are secure. This prevents the battery from becoming loose during flight.

7. Check the power cables between the arms and the center plate, if the cables are worn, contact DJI to arrange repairs.

8. For long term storage, please refer to the "Intelligent Flight Battery Safety Guidelines" and check the battery once a month to prevent the battery cell from being damaged.

9. Run the DJI Pilot App to confirm that all battery cells are at similar voltage levels and stay at the same level when the battery is fully charged. If all cells maintain voltage levels above 3.7V but any cell is 0.2V higher or lower than the others, contact DJI for analysis. You can also check the battery cell warning history. If any warning are reported, contact DJI.

II. Checking the Transformation System

1. Check the servomotor cables for wear. Also confirm that the connection points are still in good condition.

2. Check the lead screws and contact DJI Support to arrange repairs if any bending or damage is discovered. Clean the lead screws with WD-40 spray if they show signs of rust.

3. Listen to the servomotors during the transformation, if there is abnormal noise, it may indicate that the servomotors worn.

4. After the landing gear rises, check the lead screws and bearings. If any dirt or dust is found, clean and grease the bearings.

5. Check the lead screws. If there is any scratches, dents, or plastic particles underneath them, contact DJI Support to arrange repairs.

III. Checking the Aircraft

1. Confirm that all the screws are still adequately tightened.

2. Check the aircraft for breaks or damage. If there is any reason to believe that detectable damage might affect flight safety, consult with DJI Support.

3. Check the carbon tubes of the arms for damage.

4. Check the dampers on the landing gears. If they are loose, secure them with 502 glue.

5. Ensure that there are no obstacles on or around the GPS module or around the antennas on the landing gear. Remove any obstacles (such as tapes with conductive material) that might affect or block the signal.

6. Check that the right and left landing gear rest at the same tilt angle.

IV. Checking the Motors

1. Check the rotors to confirm that they have not become loose.

2. Detach the propellers and start the motors. Listen carefully. If there is any abnormal noise, please replace the motors. This may be a sign that the bearings have been worn out.

3. Detach the propellers and start the motors. Carefully examine the edge of the rotor and confirm that the shaft is perfectly centered on the motor. Check for any abnormal or excessive vibration. If any problems are detected, contact DJI Support to order replacement motors.

4. Check for deformities by confirming that the gap between the motor and motor base is even. If not contact DJI Support to order replacement motors.

5. Ensure that the screws used to secure the motor base are tight and the plastic components around the motors are in good condition. If not please tighten the screws and contact DJI to repair any broken plastic components.

V. Checking the Propellers

1. Check the propellers. If there is any bending, breakage or cracking on a propeller, do not use it.

2. Attach the propeller to the motor, turn on the aircraft, and place it on the ground. Stand 1 meter away from the aircraft and observe the rotating propellers. If you can see two distinct propeller outline layers, when looking at a spinning propeller from the side, this propeller is damaged and should not be used.

VI. Checking the IMU

1. Open DJI Pilot app to check the condition of the IMU and perform an advanced IMU calibration. Please place the aircraft in a cool environment and on a flat, stable surface (if the landing gear is damaged, support the aircraft with four objects of equal height). Do not touch the craft during the calibration.

2. Turn on the aircraft and listen for any abnormal noise or vibration from the fan located on the front of the aircraft. If any irregularity is detected, replace the fan.

VII. Checking the Control and Video Transmission System

1. Check the 4 antennas on the landing gear to ensure that they are secure. Also check for any bending or damage.

2. Check the antennas of the remote controller for damage

3. Check the neck strap for damage or wear, replace if necessary.

VIII. Checking the Gimbal and Camera

1. The quick-mount connector for the camera is a particularly vulnerable component. If the gimbal fails to initialize when turned on, fails to work after initialization, or fails to transmit video to the app (while OSD data is displayed), the quick-mount connector may be worn. In this case, replace the rubber mat, circuit board, and/or connector on the gimbal quick-mount.

2. Check the metal contacts on the quick mount connector board, if any contact is bent, replace the quick-mount connector.

3. Check the contact pins on the quick-mount connector board, if there is any dirt, rub it clean with an eraser. If any contact pins are worn out it should be replaced.

4. Confirm that the gimbal is able to properly stabilize itself. If its stabilizing performance deteriorates, contact DJI to arrange repairs.

5. Listen for any abnormal noise from the fan when the gimbal is turned on. This may indicate unusual vibration and the fan should be replaced.

IX. Checking the Vision Positioning System

1. Check the lens of the camera. If any dirt or residue is detected, gently clean the lens.

2. Check for and remove objects that might block the sensors.

3. Ensure that the Vision Positioning System is securely installed on the aircraft.

4. Detach the propellers and turn on the aircraft. Hold the aircraft 1-2 meters above a surface with rich patterns, under good lighting conditions. Change the Flight Mode switch to P Mode on the controller and check the DJI Pilot app. If the app displays an altitude value and indicates that P-OPTI mode is active, the Vision Positioning System should function normally.

Support Center Contact Info:

http://www.dji.com/support

The content is subject to change.

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Areas of Operation