



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

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

August 20, 2015

Exemption No. 12552
Regulatory Docket No. FAA-2015-2061

Mr. Patrick Heaphy
Liberty Post, LLC
2 Hartshorn Lane
West Nyack, NY 10994

Dear Mr. Heaphy:

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 May 18, 2015, you petitioned the Federal Aviation Administration (FAA) for an exemption. You requested to operate an unmanned aircraft system (UAS) to conduct aerial imaging and videography.

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 collection¹. 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, Mr. Patrick Heaphy 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, Mr. Patrick Heaphy is hereafter referred to as the operator.

¹ Aerial data collection includes any remote sensing and measuring by an instrument(s) aboard the UA. Examples include imagery (photography, video, infrared, etc.), electronic measurement (precision surveying, RF analysis, etc.), chemical measurement (particulate measurement, etc.), or any other gathering of data by instruments aboard the UA.

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 five minutes or with the reserve power recommended by the manufacturer if greater.
21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.
22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N-Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.
24. The UA must remain clear and give way to all manned aviation operations and activities at all times.
25. The UAS may not be operated by the PIC from any moving device or vehicle.
26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
 - a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
 - b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

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

27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.
28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.nts.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 August 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan
Director, Flight Standards Service

Enclosures

May 18, 2015

U. S. Department of Transportation
Docket Management System
1200 New Jersey Ave.,
Washington, DC 20590

RE: Exemption Request Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations

Dear Sir or Madam:

Pursuant to the Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act"), Patrick Heaphy (the "applicant"), operator of an Unmanned Aircraft Systems ("UAS") seeks an exemption from the Federal Aviation Regulations ("FARs") to allow for commercial operation for aerial imaging and video for regional tourism and real estate in the lower Hudson Valley of New York and Northern New Jersey.

As described herein I, Patrick Heaphy, an insured member of the AMA (Academy of Model Aeronautics) am experienced in flying hobby helicopters for recreational purposes. A television professional with over 25 years experience, I am also an experienced videographer from both fixed winged aircraft and helicopters and have provided those services for use by local and state governments.

Applicant:

Patrick Heaphy
Liberty Post, LLC
2 Hartshorn Lane
West Nyack, NY 10994

Attachments

DJI Inspire 1 Safety Guidelines

Regulations from which the exemption is requested:

14 CFR Part 21 subpart H
14 CFR 45.23 (b)
14 CFR 91.7 (a)
14 CFR 91.9 (b) (2)
14 CFR 91.103
14 CFR 91.109
14 CFR 91.119 (c)
14 CFR 91.121

14 CFR 91.203 (a) and (b)
14 CFR 91.405 (a)
14 CFR 91.407 (a) (1)
14 CFR 91.409 (a) (2)
14 CFR 91.417 (a) and (b)

Extent of relief I seek, and why

14 CFR Part 21 subpart H

The UAS to be operated carries neither pilot nor passenger and carries no explosive materials or flammable liquids. Given the size, weight, speed, and limited operating area associated with the aircraft to be utilized, I request exception. In the restricted environment and under the conditions proposed operation will be at least as safe, or safer, than a conventional aircraft operating with an airworthiness certificate without said restrictions.

14 CFR 45.23 (b)

Due to the size of this UAS it does not have a cockpit, cabin, or pilot station on which to market certain words or phrases. Lettering would be very difficult to place on such a small aircraft and dimensions would need to be smaller than required minimum. Understanding the importance of lettering I will mark my UAS with the largest possible letters by placing the word "Experimental" or assigned number or name, based on request/ruling of FAA, on UAS fuselage. The equivalent level of safety will be provided by having the UAS marked on its fuselage as required.

14 CFR 91.7 (a)

As there will be no airworthiness certificate for the aircraft, should this exemption be granted, no FAA regulatory standard will exist for determining airworthiness. Given the size of the aircraft for maintenance and use of safety check list prior to each flight an equivalent level of safety will be provided.

14 CFR 91.9 (b) (2)

Given the size and configuration, the UAS has no ability to carry a flight manual on the aircraft. There is no room, capacity, or pilot on board to adequately carry flight manual. A equivalent level of safety will be maintained by keeping the flight manual at ground control point where the pilot will have immediate access to it.

14 CFR 91.103

As FAA approved flight manuals will not be provided for the aircraft an exemption will be needed. Normal procedures including but not limited to; reviewing weather, flight battery requirement, landing and takeoff distances, along with all of those found in attachment "DJI Pilot Training". An equivalent level of safety will be provided by preflight protocol to properly match the machine.

14 CFR 91.109

UAS and remotely piloted aircraft do not have fully functional dual controls. Flight control is achieved through the use of a control box that communicates with the aircraft via radio communications. The equivalent level of safety provided because neither a pilot nor passenger will be carried in the aircraft, and by the speed and size of the aircraft.

14 CFR 91.113 (a) and (b)

I can achieve an equivalent level of safety as achieved by current regulations because my UAS does not carry pilot nor passenger. While helpful, a pilot's license will not ensure remote control piloting skills.

14 CFR 91.121

The UAS may not have a barometric altimeter, but instead does have a GPS altitude read out. I believe an exemption may be needed. An equivalent level of safety is achieved by the operator receiving live flight data monitoring and confirming current altitude along with altitude of launch site shown on GPS altitude indicator.

14 CFR 91.203 (a) and (b)

Similar to, 14 CFR 91.9 (b) (2), given the size and configuration, the UAS has no ability to carry certificate and registration documents on the aircraft. There is no room, capacity, or pilot on board to adequately such documents. An equivalent level of safety will be achieved by keeping these documents, to the extent they are applicable to the UAS, at the ground control point where pilot has immediate access to them.

14 CFR 91.405 (a), 14 CFR 91.407 (a) (1), 14 CFR 91.409 (a) (2), 14 CFR 91.417 (a) and (b)

Given these section only apply to aircraft with an airworthiness certificate, theses sections do not apply to this applicant. As a safety precaution, operator will perform preflight inspections and ensure UAS is in working condition before initiating each flight.

Patrick Heaphy is seeking relief from all FARs above preventing applicant from conducting aerial photography and video of real estate taken at levels less than 400ft, at a speed less than 50 mph, and with a maximum flight time of 18 minutes,. The drone to be used is a DJI Inspire 1. At 6.74 pounds the weight of the UAS meets the definition of "small unmanned aircraft" found in section 331 "The Reform Act". In order to obtain high quality photography and video the UAS will be used at speeds less than it's top speed of 50 mph. Due to the UAS being battery powered there are no combustible fuels onboard. Maximum flight time for this particular UAS is 18 minutes battery life, flights to be terminated with 25% battery life remaining. Given the size, weight, speed, and limited operating area associated with the aircraft to be utilized I find this exception to be reasonable with an equivalent, or greater, level of safety to be reached by the operator.

Saftey

*Please see attachment "DJI Pilot Training" for safety precautions I use for every flight. Aside from these practices I was given a hands on training course when I purchased my UAS.

Additionally:

- 1) I do not operate within 5 miles of an airport unless prior contact to Air Traffic Control or the airport manager has been made.
- 2) I land my UAS prior to manufacturer recommended minimum level of battery power
- 3) I pilot my UAS through remote control by line of sight
- 4) My UAS uses GPS and a flight safety feature whereby it returns to a preprogrammed position and then slowly lands if communication with the remote control pilot is lost
- 5) I actively analyze flight data and other sources of information to constantly update and enhance safety protocols.
- 6) I conduct extensive pre-flight inspections and protocol, during which safety carries primary importance.
- 7) I always obtain all necessary permissions prior to operation; and,
- 8) I have procedures in place to abort flights in the event of safety breaches or potential danger.

Public Interest

The use of an UAS in tourism provide businesses and local governments with a much lower cost solution to highlight aspects of their businesses and communities in turn generating more visitors. UAS in the real estate industry provides both buyers and sellers a higher level of service. For a buyer a higher level of marketing and advertising is achieved, appealing to more buyers, resulting in a quicker sale of their home. Quicker home sales also helps accelerate the economy as a whole. Buyers experience the benefit of encompassing a whole property, sometimes several acres, in one photo or a short video. Not only does this benefit the specific home seller or home buyer, but it benefits the general public because it is much more efficient than traditional ways of using a plane or helicopter to achieve the same result. We can now provide this level of service while being conservative with fuel, time, emissions, noise, and other resources. Considering size, weight, speed, and absence of combustible fuels, my UAS will pose much less of a safety concern for the general public when compared to larger manned aircraft.

Thank you for your consideration.

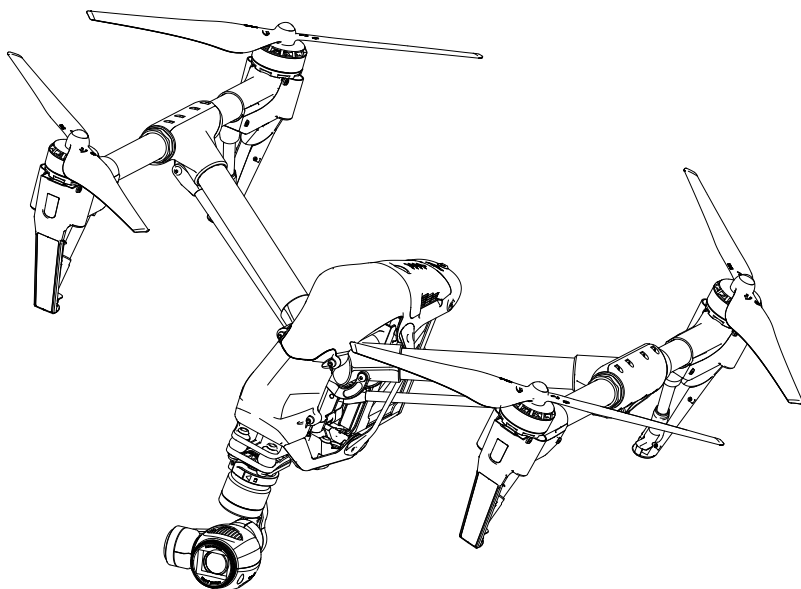
Patrick Heaphy
Liberty Post, LLC
2 Hartshorn Lane
West Nyack, NY 10994

INSPIRE 1

Safety Guidelines

安全使用指南

V1.0 2014.12



Reading Inspire 1 Manuals

The following tutorials and manuals have been produced to help you make full use of your DJI Inspire 1:

1. In The Box
2. Disclaimer and Warning
3. Intelligent Flight Battery Safety Guidelines
4. INSPIRE 1 Safety Guidelines
5. INSPIRE 1 Quick Start Guide
6. INSPIRE 1 User Manual

Check all of the included parts listed in the In The Box document. Read the Disclaimer and Warning, Intelligent Flight Battery Safety Guidelines, and INSPIRE 1 Safety Guidelines before flight. Then prepare for your first flight by using the INSPIRE 1 Quick Start Guide and watching all of the tutorial videos. If you have questions, refer to the INSPIRE 1 User Manual for more comprehensive information. Experienced users, particularly those who have previously used DJI products, may choose to skip to the Inspire 1 Quick Start Guide to begin preparing for flight.

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Individual Parts

Remote Controller

1. Linking is required if you wish to replace your remote controller or receiver, or add a new remote controller. Refer to the user manual for more information about how to link the aircraft.
2. If the remote controller is powered on and has not been used for 5 minutes, it will sound an alert. After 10 minutes it will automatically power off. Move the sticks or perform some other action to cancel the alert.
3. A Slave remote controller cannot be linked with the aircraft and cannot control the aircraft's flight. You may change it to a Master remote controller via the DJI Pilot app, and then link it to the aircraft to control flight.
4. Ensure the Mobile Device Holder is firmly in place and does not slip.
5. For the GPS in the remote controller to function properly, and the Dynamic Home Point to be accurate, ensure the DJI logo is facing the sky and keep the remote controller away from any metal objects.
6. Repair or replace the remote controller if damaged. A damaged remote controller antenna will greatly decrease performance.
7. When on the go, you may charge the remote controller from the aircraft's Intelligent Flight Battery.

Camera

1. Photos or videos cannot be transmitted or copied from the camera if the Intelligent Flight Battery is powered off.
2. Be sure to power off the Intelligent Flight Battery correctly, otherwise your camera parameters will not be saved and any recorded videos may be damaged.
3. Test the camera by shooting a few test images to check that it is operating correctly before shooting important pictures.
4. Respect the privacy of others when using the camera. Make sure you comply with local privacy laws, regulations and moral standards.
5. Check camera settings before use to make sure you can adjust them to fit your needs.

Gimbal

1. The gimbal and gimbal connector are very delicate. Handle with care and do not touch the gimbal connector, as any damage will cause it to function abnormally.
2. A gimbal motor error may occur if: (1) The aircraft is placed on uneven ground or other objects obstruct the gimbal's full range of motion, or (2) The gimbal has undergone an excessive impact, e.g. a collision. Please only takeoff from flat, open areas and protect the gimbal after powering up.
3. Hold the gimbal firmly when detaching or reattaching it, so it does not drop.
4. Do not add any payloads to the gimbal, as this may cause the gimbal to function abnormally, or even

lead to motor damage.

5. Precision elements in the gimbal may be damaged by a collision or impact, which will cause the gimbal to function abnormally.

Compass

1. Ensure the compass is calibrated before every flight. Failure to calibrate may lead to a poor flight performance or even failure.
2. DO NOT calibrate your compass where there is a chance of strong magnetic interference. This includes areas where there are massive metal objects, parking structures, steel reinforcements underground, or under bridges.
3. DO NOT carry ferromagnetic materials with you during calibration, such as keys or mobile phones.
4. The compass should always be recalibrated when moving from indoor spaces to outdoor spaces.
5. If the rear LED shows a solid red light, compass calibration has failed. Please recalibrate.
6. After successful calibration, the compass may become abnormal when you put the aircraft on the ground. This is because of magnetic interference that may be underground. Move the aircraft to another location and try again.

EN

Parameter Settings

The Inspire 1 features a built-in flight control system to make operation as safe as possible. However, it is good practice to remove all propellers before switching it on for calibration or changing other parameter settings.

Battery

Refer to the Intelligent Flight Battery Safety Guidelines and battery sticker for usage and maintenance information.

Storage and Transportation

1. Store the Intelligent Flight Battery and remote controller in a cool, dry place away from direct sunlight, to ensure the built-in LiPo battery does not overheat. Recommended storage temperature: between 22°C and 28°C for storage periods of more than three months. Never store in environments outside the temperature range of -20°C to 45°C.
2. Do not allow the camera to come into contact with, or become immersed in, water or other liquids. If it gets wet, wipe dry with a soft, absorbent cloth. Turning on an aircraft that has fallen into water may cause permanent component damage. Do not use substance containing alcohol, benzene, thinners or other flammable substances to clean or maintain the camera. Do not store the camera in humid or dusty areas.
3. Always keep all parts out of the reach of children, as the cables, straps or small parts may be dangerous if swallowed. If swallowed, go to the hospital immediately.
4. Detach the gimbal from the Inspire 1 when storing for a long period of time or transporting over long distances. Also replace the Gimbal Cover when storing.

Maintenance and Upkeep

1. Check every part of the aircraft if it is violently impacted. If you have any problems or questions, please contact a DJI authorized dealer.
2. Old, chipped, or broken propellers or motors should never be used.
3. Regularly check the Battery Level Indicators to see the current battery level and overall battery life. When the battery life reaches 0%, it can no longer be used.
4. After every 50 hours of flight time, DJI recommends you perform a thorough inspection of your Inspire 1 and all of its parts and components to ensure the safe operation of your aircraft.

Flight Environment Requirements

1. Do not use the aircraft in severe weather conditions. These include wind speed exceeding 10m/s, snow, rain, smog, heavy wind, hail, lightning, tornado or hurricane.
2. Do not use the aircraft in dust or sandstorms.
3. Fly in open areas, as tall buildings or steel structures may affect the accuracy of the onboard compass and block the GPS signal.
4. Keep the aircraft away from obstacles, people, animals, high voltage power lines, trees, and bodies of water when in flight.
5. Avoid interference between the remote controller and other wireless equipment. Make sure to turn off the Wi-Fi on your mobile device.
6. Do not fly near areas with magnetic or radio interference. These include but are not limited to: high voltage lines, large scale power transmission stations, mobile base stations and broadcasting towers. Failing to do so may compromise the transmission quality of this product, cause remote controller and video transmission errors may affect flight orientation and location accuracy. The aircraft may behave abnormally or fall out of control in areas with too much interference.
7. P mode is unavailable in polar zones. Users can use ATTI mode instead.
8. Do not fly the aircraft within no-fly zones specified by local laws and regulations.

Flight Warnings

Failsafe and Return to Home

1. Return to Home will not work if the GPS signal is insufficient or GPS is not active.
2. Press the RTH Button on the remote controller to bring the aircraft back to the Home Point instead of turning off the remote controller.
3. Tall buildings may adversely affect the Failsafe function. Please adjust the aircraft location, altitude and speed while returning home to avoid obstacles.
4. Make sure to always fly the aircraft within the transmission range of the remote controller.
5. When updating the Home Point, do not block the GPS signal of the remote controller and ensure the new Home Point is correct on the live map.
6. Do not update the Home Point near tall buildings, as the GPS may be blocked and lead to an incorrect location being stored.
7. Only use the Failsafe and Return to Home functions in case of emergency, as they may be affected by the weather, the environment, or any nearby magnetic fields.

Low Battery

1. When the Critical Battery Level Warning activates and the aircraft is descending automatically, you may push the throttle upward to hover the aircraft and navigate it to a more appropriate location for landing.
2. When battery warnings are triggered, please bring the aircraft back to the Home Point or land to avoid losing power during flight.

Vision Positioning System

1. The Vision Positioning System cannot work properly over surfaces that do not have pattern variations. The effective altitude for Vision Positioning System to function correctly is less than 2.5 meters.
2. Vision Positioning System may not function properly when the aircraft is flying over water.
3. Vision Positioning System may not be able to recognize patterns on the ground in low light conditions (less than 100 lux).
4. Keep your pets away from the aircraft when Vision Positioning System is activated, as the sonar sensors emit high frequency sound that is only audible to some pets.
5. Note that Vision Positioning System may not function properly when the aircraft is flying too fast or too low.

Transformation Function

1. Ensure the landing gear is lowered before landing.
2. Stay away from the aircraft when it is transforming to prevent injury.
3. DO NOT attempt to catch the aircraft, as the landing gear will lower if the Visual Positioning system detects an object and may cause injury.
4. Keep the aircraft arms clean, otherwise transformation may be affected.
5. Never apply lubricants to aircraft arms.

Others

1. If you are using a phone as your mobile display device, be sure to continue flying safely if you receive an incoming call.
2. Land as soon as possible if there is an alert shown on the DJI Pilot app.
3. Upon landing, power off the aircraft first, then switch off the remote controller.

Preflight Checklist

1. Check that all parts are in good condition. Do not fly with aging or damaged parts.
2. Remote controller, Intelligent Flight Battery and mobile device are all fully charged.
3. Propellers are mounted correctly and securely.
4. Lens is clear.
5. Micro-SD card has been inserted, if necessary.
6. Gimbal is functioning as normal.
7. Gimbal is correctly attached to the aircraft.
8. Motors can start and are functioning as normal.
9. The DJI Pilot app can connect to the camera and all firmware has been updated to the latest version.

INSPIRE 1 手册使用指南

DJI 为 Inspire 1 用户提供了教学视频和以下文档资料：

1. 《物品清单》
2. 《免责声明》
3. 《智能飞行电池安全使用指引》
4. 《INSPIRE 1 安全使用指南》
5. 《INSPIRE 1 快速入门指南》
6. 《INSPIRE 1 用户手册》

建议用户使用《物品清单》进行核对。首先阅读《免责声明》，再观看教学视频、使用《INSPIRE 1 快速入门指南》了解使用过程，飞行前务必仔细阅读《INSPIRE 1 安全使用指南》和《智能飞行电池安全使用指引》。获取更多产品信息请参考《INSPIRE 1 用户手册》。对于已使用过 DJI 产品的用户，请阅读《INSPIRE 1 快速入门指南》。

产品部件使用注意

遥控器

1. 如更换遥控器，需要重新对频才能使用。具体对频步骤请参考《INSPIRE 1 用户手册》。
2. 遥控器闲置 5 分钟后将发出报警，闲置超过 10 分钟将自动关机。拨动摇杆可让遥控器恢复为正常工作状态。
3. 如果遥控器被设置为从机，则无法与飞行器对频，也不可用来控制飞行器飞行。若要实现上述操作，请先连接 App 将遥控器改为主机模式。
4. 使用遥控器上的移动设备支架时，务必压紧避免移动设备滑落。
5. 遥控器顶端内置 GPS，请勿遮挡。为获得较准确的遥控器所在地图位置信息，特别在使用动态返航点功能时，请尽量让印刷有“DJI”标志的位置朝向开阔天空，且尽量让移动设备支架上的金属设备远离。
6. 遥控器天线如有损坏将影响使用性能，请及时返修。
7. 在外场飞行时，如果遥控器没电，可使用遥控器户外充电线进行充电。

相机

1. 必须开启智能飞行电池，才能拷贝相片或者视频。
2. 请正确关闭飞行器电池，否则相机的参数将不能保存，且正在录制的视频会损坏。
3. 在使用本设备拍摄重要影像时，请在实际拍摄之前进行数次测试拍摄，以确保设备处于正常的工作状态。
4. 使用相机时，请遵守关于隐私的相关法律法规与道德标准。
5. 使用相机前请先检查相机设置，防止拍摄内容时不在用户可控范围内。

云台

1. 禁止使用任何方式触碰云台安装座内的连接器，否则可能导致连接器损坏而引起云台工作异常。请保护好此装置。
2. 云台电机异常，可能是由于飞行器放置在凹凸不平的地面或草地上时地面物体碰到云台，或者云台受到过大的外力作用（例如被碰撞或被掰动）。起飞前请将飞行器放置在平坦开阔的地面上，请勿在云台上电后碰撞云台。
3. 请先用手握住云台，然后旋转云台锁扣至解锁状态。由于云台锁扣解锁后，相机云台会在重力作用下脱落，拆除云台相机时请用手扶好，防止云台跌落而受损。
4. 请勿在相机云台上增加任何物体，否则可能会影响云台性能，甚至烧毁电机。
5. 云台含有精密部件，若受到碰撞或损伤，精密部件会损坏，可能会导致云台性能下降。请爱护相机云台免受物理损伤。

指南针

1. 指南针校准非常重要，校准结果直接影响飞行安全性。如更换到新的环境，请重新校准指南针。未校准可能导致飞行器工作异常，指南针错误时无法执行返航功能。
2. 请勿在有铁磁性物质的区域校准，如大块金属、磁矿、停车场、桥洞、带有地下钢筋的建筑区域等。
3. 校准时请勿随身携带铁磁物质，如钥匙、手机等。
4. 如果在室内校准了指南针，则更换到室外飞行时切记重新校准指南针，防止两个区域的磁场差异太大而导致飞行数据异常。
5. 如果校准后机尾 LED 指示灯红灯常亮，则表示校准失败。请重新校准指南针。
6. 校准成功后放在地面上，出现指南针异常，很有可能是因为地面上有钢筋，请换位查看异常是否消除。

参数设置

尽管本产品已安装智能控制系统，能够在上电时处于最安全的工作状态，但我们仍然强烈建议您在校准和设置参数时取下螺旋桨。

电 池

电池属危险品，亦属易耗品，请仔细阅读《智能飞行电池安全使用指引》和电池贴纸上的说明进行使用和保养。

储存环境和运输条件

1. 请勿将智能飞行电池、遥控器（内部有锂电池）置于潮湿、阳光直射、接近热源或高温环境储存，尽量储存于避光、阴凉和干燥的环境。推荐储存环境温度：相对稳定的室温（22° C 至 28° C）可存放时间大于 3 个月，在极端环境温度（-20° C 至 45° C）可存放时间小于 3 个月。
2. 禁止使机载摄像设备接触或浸没于水或其它液体中。若其外表接触到液体或潮湿空气，请用柔软吸水的干布擦拭。曾落入水中的设备如果带水上电，有可能造成器件的永久损坏。禁止使用含有酒精、挥发油、稀释剂或其它可燃剂的物质清理或者保养设备。
3. 请将设备置于儿童无法触及之处，电源线、背带或误吞食细小部件都可能导致儿童窒息，如有意外需马上就医。
4. 长途运输或者长期不使用的情况下，请将智能飞行电池、云台相机从 Inspire 1 上拆除。

维护与保养

1. 飞行器若受到猛烈冲击碰撞，请检查各个部件，如不能确认请返厂维修。
2. 电机、螺旋桨为易损耗品，如有异常或破损，请马上更换配件。
3. 请通过电量指示灯查看电池寿命，一旦电池寿命显示为 0%，请更换电池。
4. 飞行时间满 50 小时后，建议保养 Inspire 1，以确保飞行器工作在最佳状态。

飞行环境要求

1. 恶劣天气下请勿使用，如大风（风速五级及以上）、下雪、下雨、沙尘暴天气等。
2. 较大灰尘或者细砂石会导致电机卡住，请避免在这样的场所飞行。
3. 选择开阔、周围无高大建筑物的场所作为飞行场地，大量使用钢筋的建筑物会影响指南针工作，且建筑物会遮挡 GPS 信号，导致飞行器定位效果变差甚至无法定位。
4. 飞行时，请远离障碍物、人群、树木遮挡、水面、高压线等。
5. 请远离其它有无线信号的设备，以保证通讯正常。注意关闭您的移动设备的 Wi-Fi 功能。
6. 请勿在电磁环境复杂的地方使用，比如高压线附近、大型电力设备附近、移动通讯基站附近、电视广播

塔附近等。这可能影响本产品的通信，导致遥控器传输通讯异常，或者影响飞行器航向判别与定位准确度，或者导致 GPS 无法定位。如发生此情况，飞行器将会自由漂浮在空中而无法控制，直到飞行器脱离干扰区域。

7. 无法在南北极圈内使用 P 模式飞行，可以使用 ATTI 模式飞行。
8. 请勿在相关法律或规定限制的禁飞区域飞行。

飞行过程使用注意

失控返航

1. GPS 信号极低、GPS 不工作或者指南针报错时，无法实现返航（包括智能返航、智能电量返航以及失控返航）。
2. 建议通过智能返航而不是关闭遥控器以实现返航过程。
3. 确保返航过程无高大建筑物遮挡。如有遮挡，在遥控器可工作的情况下，用户可调整飞行器的位置和返航速度。
4. 确保飞行器落在遥控器的最佳通信范围内。
5. 如果将返航点更新到遥控器位置，请勿遮挡遥控器顶端（内置 GPS），并在地图上确认该位置正确。
6. 不建议在高大建筑物附近动态更新返航点，GPS 可能因为被遮挡而定位不准确。
7. 返航（包括智能返航、智能电量返航以及失控返航）受天气环境和周围磁场影响，建议只在紧急情况下使用。

低电量报警

1. 当出现低电量报警时，请您尽快返航降落，以避免飞行器失去动力而坠落或者导致其它危险！
2. 当出现严重低电量报警时，飞行器将自行下降，用户可自行寻找合适的迫降地点以安全地降落飞行器。

视觉定位

1. 由于视觉定位系统依赖地表图像来获取位移信息。请确保飞行场景光源充足，地面纹理丰富，高度低于 2.5 米。
2. 在无 GPS 的情况下，飞行器在水面上飞行很可能无法悬停。
3. 在无 GPS 的情况下，夜间或者光线昏暗的环境（光线照度低于 100 lux 的情况下）里，视觉定位系统将无法工作。
4. 由于视觉定位系统会发出人耳无法识别的超声波，该超声波或会引起宠物不安。使用时请远离宠物。
5. 注意当飞行器距离地面高度过小或者飞行速度太快会导致视觉定位系统失效。

变形功能

1. 飞行器降落前务必先放下起落架。
2. 使用变形功能时，小心夹手。
3. 请勿用手接住飞行器，超声波如果检测到物体会放下起落架，可能会出现螺旋桨打伤手的情况。
4. 保持变形机构上的丝杆清洁，否则会影响变形功能使用。
5. 请勿自行涂抹润滑油到丝杆上。

其它

1. 使用手机作为显示设备，飞行过程请勿接听、拨打电话，以及进行与显示无关的操作，时刻注意飞行安全。
2. 如果 DJI Pilot app 出现报错，请尽快降落。
3. 着陆后先关闭飞行器电源，再关闭遥控器。

飞行前检查

1. 请务必检查各零件是否完好，如有部件老化或者损坏，请不要飞行。
2. 遥控器，智能飞行电池以及移动设备是否电量充足。
3. 螺旋桨是否正确安装并拧紧。
4. 镜头是否有污损。
5. 若需拍照和录影确保已插入 Micro-SD 卡。
6. 上电后相机和云台是否正常工作。
7. 开机后电机是否能正常启动。
8. 确认云台已经锁紧。
9. DJI Pilot app 是否能正常运行，显示的所有固件版本为最新。

The content is subject to change.

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