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

April 23, 2015

Re: Request for Exemption under Section 333 of the FAA Modernization and Reform Act of 2012 and Part 11 of the Federal Aviation Regulations from Certain Provisions of 14 C.F.R.

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, Antonelli Law files this petition for exemption on behalf of Burns & McDonnell Engineering Company, Inc. ("Burns & McDonnell"), an operator of Small Unmanned Aircraft Systems ("UAs") in order to conduct utility and infrastructure inspections. Specifically, petitioner seeks an exemption from the Federal Aviation Regulations ("FARs") listed in Appendices A and B to allow commercial operation of its UAs, so long as such operations are conducted within and under the conditions outlined herein or as may be established by the FAA in a grant of this petition. This request is substantially similar to other data collection petitions previously approved, and should be considered under the expedited summary grant procedure.

Approval of the exemption for petitioner will allow commercial operation of (1) the DJI Inspire 1, approved for commercial operations in Exemption Nos. 11279, 11280, 11288, 11295, 11303, 11313, 11314, and 11318; (2) the Draganflyer X4-ES, approved for commercial operations in Exemption No. 11281; and (3) the senseFly eBee, approved for commercial operation in Exemption Nos. 11170, 11194, 11227, 11257, 11263, 11266, 11273, and 11285; in Class G airspace nationwide unless otherwise prescribed by an Air Traffic Organization (ATO) issued COA. The UA operations contemplated by this petition are in the public interest because they clearly satisfy the "Four D's" of exemplary uses of UAs: to replace work that is Dangerous, Difficult, Dull, or Dirty, and at the same time provide an equivalent or greater level of safety than alternative manned aircraft operations. The UAs covered by this petition are small battery-powered craft, with the DJI Inspire 1 weighing approximately 6.5 lbs. (2.9 kg.), the Draganflyer X4-ES weighing approximately 5 lbs. (3.2 kg.), and the senseFly eBee weighing approximately 1.52 lbs. (0.69 kg.), inclusive of battery and payload. Operation of the UA under the strict conditions proposed below will provide an equivalent level of safety, as Congress intended, while still allowing commercial operations. Operations using these UAs are far safer than conventional operations conducted with helicopters and fixed-wing aircraft that weigh thousands of pounds, carry highly flammable fuel, and operate in close proximity to the ground, trees, infrastructure, and people.

Congress directed the FAA to consider seven factors in deciding whether to approve Section 333 exemption petitions - size, weight, speed, operational capability, proximity to airports, proximity to populated areas, and operation within visual line of sight. In this case, each factor supports the exemption request. In particular, the UA is small, and will operate at slow speeds and close to the ground. It will be able to more safely and efficiently conduct operations that would otherwise involve risk of injury or death. The substantial increase of safety and decrease of risk to human life and to property weighs heavily in favor of granting the exemption.

Pursuant to 14 C.F.R. §11.35, petitioner requests confidential treatment for certain information provided with this request for exemption. Specifically, petitioner is submitting proprietary documentation from Draganfly Innovations and senseFly, documentation regarding the training of its PICs, as well as its Canadian Special Flight Operations Certificate Application and Approval documentation, and its Insurance Certification as Exhibits 1-2, 6-7, and 17-35. It requests that the information contained in those exhibits not be made public because they are trade secrets whose disclosure would harm the owner of the information, either petitioner or the UA manufacturer. They contain valuable commercial data that is not publically available and are protected from release under the Freedom of Information Act, 5 U.S.C. §552(b)(4).

For your ease in reviewing this petition, please refer to the table of contents which begins on page 3. If we can provide any additional information to assist your understanding or review of this document, please do not hesitate to contact us at 312-201-8310 or via email at jeffrey@antonelli-law.com.

Thank you,

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Exhibit List

Burns & McDonnell Engineering Company, Inc. Exhibits

DJI Inspire 1 Exhibits

Draganfly Innovations Draganflyer X4-ES Exhibits

senseFly eBee Exhibits

Exhibits 1-2, 6-7, and 17-35 have been submitted confidentially to the FAA and are not available to the public.

I. Publishable Summary

Pursuant to 14 C.F.R. §11, the following summary is provided for publication in the Federal Register, should it be determined that publication is needed:

Petitioner seeks an exemption from the following rules:

14 C.F.R 21(h); 14 C.F.R. 43.7; 14 C.F.R. 43.11; 14 C.F.R. 45.11; 14 C.F.R. 45.27; 14 C.F.R. 45.29; 14 C.F.R. 61.23(a) and (c); 14 C.F.R. 61.101(e)(4) and (5); 14 C.F.R. 61.113(a); 14 C.F.R. 61.315(a); 14 C.F.R. 91.7(a); 14 C.F.R. 91.9(b)(2); 14 C.F.R. 91.9(c); 14 C.F.R. 91.103(b)(2); 14 C.F.R. 91.105; 14 C.F.R. 91.109; 14 C.F.R. 91.113(b); 14 C.F.R. 91.119 (c); 14 C.F.R. 91.121; 14 C.F.R. 91.151(a); 14 C.F.R. 91.203(a) and (b); 14 C.F.R. 215; 14 C.F.R. 91.403; 14 C.F.R. 91.405(a); 14 C.F.R. 91.407(a)(1); 14 C.F.R. 409(a)(1) and (2); and 14 C.F.R. 91.417(a) and (b) to operate commercially small unmanned aircraft systems (UAs) (6.5 lbs. or less).

Approval of the exemption requested by petitioner will allow commercial operation of the DJI Inspire 1, the Draganflyer X4-ES, and the senseFly eBee for the purpose of utility and infrastructure inspections in Class G airspace nationwide, unless otherwise prescribed by an ATO-issued COA. The requested exemption should be granted because operation of small UAs, with the DJI Inspire 1 weighing approximately 6.5 lbs. (2.9 kg.), the X4-ES weighing approximately 5 lbs. (3.2 kg.), and the senseFly eBee weighing approximately 1.52 lbs. (0.69 kg.), inclusive of battery and payload, conducted in the strict conditions outlined below, will provide an equivalent level of safety, while still allowing commercial operations. The lightweight aircraft covered by the exemption are far safer than conventional operations conducted with helicopters and fixed-wing aircraft weighing thousands of pounds and carrying highly flammable fuel, and operating in close proximity to the ground and people. The seven factors Congress directed the FAA to consider when approving Section 333 exemption petitions - size, weight, speed, operational capability, proximity to airports, proximity to populated areas, and operation within visual line of sight – each support the request. In particular, the aircraft are small, and will operate at slow speeds, and close to the ground. The substantial increase of safety and decrease of risk to human life, coupled with the low risk use of UAs to conduct these operations, weigh heavily in favor of granting the exemption.

II. Petitioner's Contact Information

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III. Petitioner

Burns & McDonnell Engineering Company, Inc. ("Burns & McDonnell") is a full-service engineering, architecture, construction, environmental and consulting services firm. Burns & McDonnell is headquartered in Kansas City, Missouri and has more than 4,800 employees.

Currently, Burns & McDonnell offers services to the electrical transmission and distribution industries in the United States nationwide. Services include utility and infrastructure inspection, project controls, engineering, procurement, and construction of electrical transmission and distribution facilities.

IV. Proposed Operations

A. The UAs

The requested exemption will permit petitioner to operate (1) the DJI Inspire 1; (2) the Draganflyer X4-ES; and (3) the senseFly eBee.

This petition, along with Exhibits 1, 3-5, 8-16, 18-35, and 28-34 which include the supporting documentation of the UAs, are hereinafter referred to as the "operating documents." The specific conditions of the proposed exemption that relate to the characteristics of the UAs are numbers 1, 5, and 16-20 in Section VI below. Each has been adopted or imposed by the FAA in numerous previous grants of Section 333 exemption petitions.

The Inspire 1 and the Draganflyer X4-ES have the ability to hover and move in the vertical and horizontal planes simultaneously. Please refer to the following chart for the technical specifications of these UAs:

Airframe	DJI Inspire 1	Draganflyer X4-ES	senseFly eBee
Control System	Internal to the Inspire 1. This includes the main controller (MC), which receives the battery voltage, capacity, and current, the internal measurement unit (IMU), which receives telemetry data, compass, and GPS	Internal to the X4-ES helicopter. This includes three solid state Micro-Electro-Mechanical-Systems (MEMS) gyros, three solid state MEMS accelerometers, a 3-axis magnetometer, a barometric pressure sensor, and GPS	Internal to the eBee which includes the Main Controller (MC), Internal Measurement Unit (IMU) with a built-in internal sensor, barometric altimeter (which measures attitude and altitude), compass, GPS, and radio receiver.
Maximum Speed	43 knots	26 knots	49 knots

Airframe	DJI Inspire 1	Draganflyer X4-ES	senseFly eBee
Weight, inclusive of battery and technical payload	6.5 lbs. (2.9 kg.)	5 lbs. (3.2 kg.)	1.52 lbs. (0.69 kg.)
Transmitter (Tx)	DJI Inspire Remote Control	Draganflyer X4-ES handheld ground control system (GCS)	senseFly system with 2.4 GHz
Receiver (Rx)	Internal to the control system	Internal to the control system	Internal to the control system
Motors	DJI 3510	Electric brushless motors	Electric brushless motor with nominal static thrust of 6.2 N
Propeller(s)	13” x 4	16” x 4	7” x 1
Data Link	HD Lightbridge Video Downlink	2.4GHz	2.4 GHz USB ground modem
Video Link	HD Lightbridge Video Downlink	5.8 GHz	No video link on eBee
Gimbal	Zenmuse X3 Gimbal	2-Axis Brushless Gimbal	No Gimbal on eBee
Batteries	Lithium Polymer 6S High voltage battery with 4500-5700 mAh capacity	Lithium Polymer batteries with capacity of 5400 mAh	Lithium Polymer batteries with capacity of 2150 mah
Telemetry Display	DJI Pilot App	Draganflyer GCS home screen, which displays aircraft flight information including battery level and altitude.	senseFly eMotion 2 software, which allows live telemetry to be displayed, including the battery level and altitude
Automatic Return to Home Procedure	If Tx signal is lost for more than three seconds and the UA is under 65 ft. (20 m.) AGL, the UA will rise to 65 ft. AGL, travel horizontally to the pre-designated home spot, hover for 15 seconds, then land. If the UA is above 65 ft. AGL, travel horizontally to the pre-designated home spot, hover for 15 seconds, then land.	Prior to each operation, the PIC will determine whether, in a lost link situation, it will be safer for the UA to either (a) automatically land; or (b) return to the pre-designated home location and land. The PIC will program this into the UA before launching it.	In communication between the ground control station and the UA is lost for more than 180 seconds, the UA will automatically return to the pre-designated home spot.
Corresponding Exhibits	8-16	18-25	28-35

Airframe	DJI Inspire 1	Draganflyer X4-ES	senseFly eBee
Previously Approved Exemption Nos.	11279, 11280, 11288, 11295, 11303, 11313, 11314, 11318	11281	11170, 11194, 11227, 11257, 11263, 11266, 11273, 11285

B. The Crew

The crew will consist of a pilot in command (PIC) and a visual observer (VO). The PIC and VO will have been trained in operation of UAs generally and received up-to-date information on the UAs to be operated pursuant to this grant. The PIC will receive UA-specific training as indicated in Exhibits 17, 27, and 35.

The specific conditions of the proposed exemption that relate to the training and characteristics of the crew are numbers 3 and 6-9 in Section V below. Each has been adopted or imposed by the FAA in numerous previous grants of Section 333 exemption petitions.

C. Flight Conditions

The UA will be used for utility and infrastructure inspections in Class G airspace (unless otherwise prescribed by an ATO-issued COA) under 400 feet above ground level ("AGL") and under controlled conditions over restricted property. Petitioner will work with the local FSDO when planning operations. Petitioner will only operate its UA in visual meteorological conditions (VMC). The UA will at all times be no less than 500 feet below and no less than 2,000 feet horizontally from a cloud, and petitioner will not conduct operations unless visibility is at least 3 statute miles from the PIC. The flight crew will always make a safety assessment of the risk of every operation, and will only operate when it is determined that no undue hazards are present.

Please refer to the following sections of Exhibit 1 for more information about the flight conditions:

Section 4.0: Standard Operating Procedures
Section 5.0: Type & Purpose of Operation
Section 7.0: Emergency Contingency Plan

The specific conditions of the proposed exemption that relate to the flight conditions in which the UA will be operated are numbers 2, 4, 16, and 28-29 in Section V below. Each has been adopted or imposed by the FAA in numerous previous grants of Section 333 exemption petitions.

D. Flight Operations

The purpose of the UA flights for which exemption is requested will be to conduct utility and infrastructure inspections.

Every UA flight will use at minimum a two person flight crew: a PIC and a VO. The standard operational procedures that they will follow are set out in the operating documents. Please refer to the following exhibits for information pertaining to operations:

Exhibit 20
Exhibit 29, Section 5.4: Detailed Flight Planning

Exhibit 31
Exhibit 32
Exhibit 33

The specific conditions of the proposed exemption that relate to flight operations are numbers 11-12, 17-25, and 32-35 in Section V below. Each has been accepted or imposed by the FAA in numerous previous grants of Section 333 exemption petitions.

V. Aircraft and Equivalent Level of Safety

Petitioner proposes that the exemption apply to UAs that have the characteristics and that operate with the limitations proposed herein. These limitations provide for a level of safety at least equivalent to or higher than manned aircraft operations under the current regulatory structure. Section V below identifies the limitations and conditions to which petitioner agrees to be bound when conducting commercial operations under a grant of this petition. Appendix A contains a matrix connecting (i) the specific proposed condition with (ii) the FAR provision for which it provides an equivalent level of safety and (iii) one or more recent Section 333 exemption grants in which the FAA recognized this equivalent level of safety.

Approval of the commercial operations outlined in this petition presents no national security issue. Petitioner is willing to require its PICs to undergo a background check, including the proposed Transportation Security Administration Vetting process, to ensure that no national security threat is present. Operation and Certification of Small Unmanned Aircraft, 80 Fed. Reg. 9543 at 9572 (proposed Feb. 23, 2015 (to be codified at 14 C.F.R. Parts 21, 43, 45, et al.).

VI. Proposed Conditions of the Exemption

1. The UAs, including battery and technical payload will weigh no more than approximately:
    a. DJI Inspire 1: 6.5 lbs. (2.9 kg.):
    b. Draganflyer X4-ES: 5 lbs. (3.2 kg.); and
    c. senseFly eBee: 1.52 lbs. (0.69 kg.)

2. UA operations under this exemption will be limited to conducting operations for the purpose of utility and infrastructure inspections in Class G airspace nationwide, unless otherwise prescribed by an ATO issued COA.

3. Flights will be operated within line of sight of a PIC and VO.

4. Flights will be operated at an altitude of no more than 400 feet AGL, as indicated by the procedures specified in the operating documents. All altitudes reported to ATC must be in feet AGL.

5. The UA will not be flown at an indicated airspeed exceeding:
    a. DJI Inspire 1: 43 knots;
    b. Draganflyer X4-ES: 26 knots; and
    c. senseFly eBee: 49 knots.

6. Minimum flight crew for each operation will consist of the UA PIC and a VO.

7. The PIC will have completed UA-specific training prior to commercial operations.

8. The petitioner will not permit any PIC to operate unless the PIC meets its qualification criteria and demonstrates the ability to safely operate the UA in a manner consistent with how the UA 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 will be logged in a manner consistent with 14 CFR §61.51(b). A record of the PIC training will be documented and made available upon request by the Administrator. Training operations will only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations will be considered nonparticipants, and the PIC will operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

9. The VO will not perform any other duties beyond assisting the PIC with seeing and avoiding other air traffic and other ground based obstacles/obstructions, and will not be permitted to operate the camera or other instruments.

10. The PIC will be designated before the flight and will not be allowed to transfer his or her designation for the duration of the flight. The PIC will ensure that the VO can perform the functions prescribed in these conditions and the operating documents.

11. A briefing will be conducted in regard to the planned UA operations prior to each day's activities. It will be mandatory that all personnel who will be performing duties in connection with the operations be present for this briefing.

12. Prior to each flight, the PIC will inspect the UA, including the Ground Control Station, to ensure it is in a condition for safe flight. If the inspection reveals a condition that affects the safe operation of the UA, the PIC will not operate the UA until the necessary maintenance has been performed and the UA is found to be in a condition for safe flight. All maintenance and alterations will be properly documented in the aircraft records.

13. Petitioner will conduct a functional flight test on any UA that has undergone maintenance or alterations that affect the UA operation or flight characteristics, e.g. replacement of a flight critical component. The PIC who conducts the functional test flight will make an entry in the aircraft records.

14. The petitioner will carry out its maintenance, inspections, and record keeping requirements, in accordance with the UA manufacturer's aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements set forth in the operating documents. Maintenance, inspection, alterations, and status of replacement/overhaul component parts will be noted in the aircraft records, including total time in service, description of work accomplished, and the signature of the authorized person returning the UA to service. The authorized person will make an entry in the aircraft record of the corrective action taken against discrepancies discovered between inspections.

15. The UA will be operated within visual line of sight (VLOS) of the PIC and VO at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses. PIC and VO will at all times be able to communicate verbally. They will not be permitted to use electronic messaging or texting to communicate during flight operations.

16. The PIC will not begin a flight unless (considering wind and forecast weather conditions) there is enough power to fly at normal cruising speed to the intended landing point and prepare to land with at least 25% battery power remaining.

17. Actual total flight time for each operational flight will result in no less than a 25% battery reserve.

18. The UA will have the capability to abort a flight in case of unexpected obstacles or emergencies.

19. The UA will be programmed so that if it loses communications or loses its GPS signal, it will return to a pre-determined location within the planned operating area and land or be recovered in accordance with the operating documents

20. If the UA and its radio control link disconnect during flight, the system's failsafe protection will be triggered and the multirotor will return to home and land automatically, rather than flying off uncontrollably or landing at an unknown location.

21. The operating documents required under 14 CFR §§ 91.9 and 91.203 will be maintained and available to the PIC at the Ground Control Station of the UA any time the UA is operating. These documents will be made available to the Administrator or any law enforcement official upon request. If a discrepancy exists between the conditions and limitations in the exemption grant and the procedures outlined in the operating documents, the grant conditions and limitations will take precedence and will be followed. Otherwise, the petitioner will follow the procedures outlined in its operating documents. If it updates or revises its operating documents, it will present updated and revised documents to the Administrator upon request. If the petitioner determines that any update or revision would affect the basis upon which the FAA granted the exemption, then the Petitioner will petition for an amendment to the grant of exemption.

22. Petitioner will obtain written and/or oral permission from the landowners/authorized agents of the landowners over which flights will be conducted.

23. Petitioner will obtain all required permissions and permits from territorial, state, county or city jurisdictions, including local law enforcement, fire, or other appropriate governmental agencies.

24. UA operations will not be conducted during night, as defined in 14 CFR § 1.1. All operations will be conducted under visual meteorological conditions (VMC). Flights will not be conducted under special visual flight rules (SVFR).

25. The petitioner will obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations under the grant of exemption. Petitioner will request a Notice to Airman (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to the operation. All operations will be conducted in accordance with airspace requirements in the ATO issued COA, including class of airspace, altitude level and potential transponder requirements.

26. The UA will not be operated within 5 nautical miles of an airport reference point as denoted on a current FAA-published aeronautical chart unless a letter of agreement with that airport's management has been obtained, and the operation is conducted in accordance with a NOTAM as required by the operator's COA. Any letter of agreement with the airport management will be made available to the Administrator upon request.

27. The UA will 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.

28. All operations shall be conducted in Class G airspace or as otherwise prescribed in an ATO issued COA.

29. All aircraft operated in accordance with this exemption will 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 will be as large as practicable.

30. Before conducting operations, petitioner will ensure that the radio frequency spectrum used for operation and control of the UA complies with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

31. The UA will remain clear and yield the right of way to all manned aviation operations and activities at all times.

32. The UA will not be operated by the PIC from any moving device or vehicle.

33. Petitioner will conduct all flight operations at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless one of the following three conditions is met:

    a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The petitioner will 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, the PIC will ensure that flight operations cease immediately.

    b. The aircraft is operated near vessels, vehicles or structures where the owner/controller of such vessels, vehicles or structures has granted permission 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.

    c. Operations nearer to the PIC, VO, operator trainees or essential persons do not present an undue hazard to those persons per § 91.119(a).

34. Petitioner will report any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA to the FAA's UAS Integration Office (AFS-80) within 24 hours. Petitioner will report accidents to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

VII. Privacy

There is little concern that the proposed flights will cause invasions of privacy because all flights will occur over private property. When a UA is being flown, the onboard cameras will be focused on the ground beneath it, and thus turned so as to be facing away from any occupied structures that may be in the area to minimize inadvertent video or still images of uninvolved persons.

All data collected will be for private use only and will not be distributed through public channels. If such data is later made available for public view, all images containing uninvolved persons will be blurred or blacked-out. No attempt will be made to identify any individuals filmed during the flights except in cases where they are trespassing upon or damaging customer property, or interfering with the petitioner's or its customers' operations.

VIII. Public Interest and Safety

The planned UA use will increase ground safety for utility and infrastructure inspections. This type of data collection has previously been done by manned aircraft or by individuals on the ground. Both are more time consuming and are more expensive than using a UA. Use of manned aircraft poses enhanced risk to the pilot and onboard crew, who would be several hundred feet in the air. Additionally, manned aircraft carry highly flammable fuel.

The enhanced safety and reduced environmental impact achieved using a UA 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 UA operation enabled by this exemption is in the public interest.

Satisfaction of the criteria provided in Section 333 of the Reform Act of 2012 – size, weight, speed, operating capabilities, proximity to airports and populated areas and operation within visual line of sight and national security – provide more than adequate justification for the grant of the requested exemption allowing commercial operation of petitioner's UA in the utility and infrastructure inspection industries, pursuant to Burns & McDonnell's rules of operation.

IX. Regulations from Which Exemption is Requested

Appendix A: FARs as to which Burns & McDonnell wishes the same determination to be made as has been made previously.

FAR Provision	Applicable condition(s) in Section 5 of petition	FAA Exemption Decision
21(h)	1, 2, 3, 4, 5, 16, 25, 28, 29	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11111, 11110, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11189, 11191, 11192, 11193, 11195
43.7	13, 14	No. 11208
43.11	12	No. 11208
45.11	29	No. 11208
45.27	29	No. 11188
45.29	29	Nos. 11136, 11157, 11170, 11185, 11193
61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a),	7	See Appendix B for argument regarding why petitioner should be exempted from the private pilot license requirement
91.7(a)	12	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11177, 11178, 11184, 11185, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.9(b)(2)	22	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11174, 11177, 11178, 11184, 11185, 11189, 11192, 11193, 11195
91.9(c)	30	Nos. 11136, 11170, 11171, 11174, 11185
91.103(b)(2)	3, 9, 15, 16, 17, 18, 19, 20	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11138, 11150, 11153, 11156, 11158, 11160, 11161, 11166, 11167, 11171, 11172, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.105	6	No. 11185
91.109	7, 8	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11112, 11136, 11138, 11150, 11153, 11156, 11157, 11166, 11167, 11170, 11171, 11174, 11177, 11184, 11185, 11189, 11191, 11192, 11193, 11194, 11195, 11206, 11208

FAR Provision	Applicable condition(s) in Section 5 of petition	FAA Exemption Decision
91.113(b)	3, 31	No. 11238
91.119(c)	4, 33	Nos. 11162, 11163, 11164, 11165, 11166, 111080, 111109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11160 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11178, 11185, 11188, 11189, 11190, 11193
91.121	4	Nos. 11162, 11163, 11164, 11165, 11166, 111080, 111109, 11136, 11138, 11150, 11153, 11156, 11160 11161, 11166, 11167, 11170, 11171, 11174, 11176, 11178, 11185, 11188, 11189, 11190, 11193
91.151(a)	16, 17	Nos. 11110, 11153, 11156, 11161; 111109, 11110, 11112, 11136, 11138, 11150, 11153, 11156, 11160 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11178, 11185, 11188, 11189, 11190, 11193
91.203 (a) and (b)	22	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195
91.215	25, 26	No. 11185, 11195
91.403	12, 13, 14	No. 11185
91.405(a)	12, 13, 14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.407(a)(1)	14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.409(a)(1)	12, 13, 14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204

FAR Provision	Applicable condition(s) in Section 5 of petition	FAA Exemption Decision
91.409(a)(2)	12, 13, 14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.417(a)	12, 13, 14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204
91.417(b)	12, 13, 14	Nos. 11062, 11063, 11064, 11065, 11066, 11067, 11080, 11109, 11110, 11111, 11112, 11114, 11136, 11138, 11150, 11153, 11156, 11157, 11158, 11160, 11161, 11166, 11167, 11170, 11171, 11172, 11174, 11176, 11177, 11178, 11184, 11185, 11188, 11188, 11189, 11191, 11192, 11193, 11195, 11204

Appendix B: Burns & McDonnell's argument for exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a).

Burns & McDonnell requests an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), so that the PIC of the UA will not be required to possess any pilot license (sports, recreational, private or commercial). As the FAA and numerous other national airspace regulators have recognized, UA operations conducted by persons who do not hold a pilot's license can still achieve the equivalent level of safety of current operations by manned aircraft with pilots holding any level of pilot's license.

Although it recognizes that a pilot's license is unnecessary for safe UA operation, the FAA has to date declined to allow grant exemptions under Section 333 that would permit individuals who possess any pilot license (sports, recreational, private or commercial) to conduct commercial UA operations. It has specified two reasons for declining to do so. First, it has stated that it does not possess the authority under Section 333 to exempt individuals from the requirement under 49 U.S.C. §44711 to hold an airman certificate authorizing the airman to serve in the capacity for which the certificate was issued. Exemption No. 11110 at 14. Second, the FAA has concluded that the Department of Homeland Security (DHS) security screening required of all certified airmen meets the statutory requirement in Section 333 that operations not pose a threat to national security. Exemption No. 11110 at 15.

Burns & McDonnell respectfully requests that the FAA reconsider its position. There is no dispute that it is unnecessary for an operator of a UA to go through the rigorous process of becoming a certified pilot in order to safely operate a UA. In addition, the FAA does have the authority to exempt UA operators from the requirement in 49 U.S.C. §44711to hold an airman certificate for "serv[ing] in the capacity for which the certificate was issued." Indeed, it has exercised that authority repeatedly in the Section 333 process. Finally, the FAA's security concerns can be addressed by a variety of methods involving operator background checks to be conducted by government agencies.

1. **The FAA and foreign regulators recognize that obtaining a manned aircraft pilot license is unnecessary for safe operation of a UA.**

The FAA, like the other national airspace regulators that have considered the issue, has concluded that UA operations conducted by persons who do not hold a pilot's license can still achieve the equivalent level of safety of current operations by manned aircraft with pilots holding any level of pilot's license. In its recent UAS NPRM, the FAA stated:

> "While these airman certification requirements are necessary for manned aircraft operations, they impose an unnecessary burden for many small UAS operations. This is because a person typically obtains a private or commercial pilot certificate by learning how to operate a manned aircraft. Much of that knowledge would not be applicable to small UAS operations because a small UAS is operated differently than manned aircraft. In addition, the knowledge currently necessary to obtain a private or commercial pilot certificate would not equip the certificate holder with the tools necessary to safely operate a small UAS… Thus, requiring persons wishing to operate a small UAS to obtain a private or commercial pilot certificate imposes the cost of certification on those persons, but does not result in a significant safety benefit because the process of obtaining the certificate does not equip those

> persons with the tools necessary to mitigate the public risk posed by small UAS operations." Operation and Certification of Small Unmanned Aircraft, 80 Fed. Reg. 9543 at 9550 (proposed Feb. 23, 2015 (to be codified at 14 C.F.R. Parts 21, 43, 45, et al.).

The FAA's conclusion that manned aircraft flying experience is unnecessary for the operation of a UA is supported by research by the FAA and the Army Research Laboratory. They demonstrate that UAs, even those much larger than the UAs proposed by Burns & McDonnell, can be safely flown by non-certificated pilots with a small amount of training. For example, one Army Research Laboratory study concluded:

> "[T]he specific motor skills needed to control the radio-controlled UAV would have to be learned by aviators independently of the motor skills learned in flying an aircraft. In particular, the somatic and visual cues that pilots use during aircraft landings would not be useful (and perhaps even counter-productive) for the different skill sets and perceptual viewpoint necessary for radio-controlled landings."[1]

Additional research reports lend further support for the exclusion requested. For example, a report sponsored by the FAA concluded that "We know that certain systems, like the U.S. Army Hunter and Shadow systems, are successfully flown by pilots with no manned aircraft experience."[2]

In addition, foreign government airspace regulators that have examined the issue have consistently recognized that the skills required to fly a manned aircraft are irrelevant to operating a UA. For that reason, they have concluded that UA operators do not need to have a private or commercial pilot's license. Canada, for example, does not require a pilot's license to operate a UA. Transport Canada requires training of UA operators, but that training is limited to pilot ground school and flight operation training on UAs, not manned aircraft.[3] Moreover, Canada allows this training to be "provided by other pilots, manufacturers, [UA] flight training organizations or . . . self taught."[4] Petitioner has a number of potential PICs who have completed Transport Canada's

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[1] Michael J. Barnes, Beverly G. Knapp, Barry W. Tillman, Brett A. Walters & Darlene Veliki, *Crew systems analysis of unmanned aerial vehicle (UAV) future job and tasking environments*, Technical Report ARL-TR-2081, Aberdeen Proving Ground, MD: Army Research Laboratory, page 12 (2000), *available at* http://www.dtic.mil/dtic/tr/fulltext/u2/a374230.pdf.

[2] Kevin W. Williams, *Unmanned Aircraft Pilot Medical Certification Requirements*, Report DOT/FAA/AM-07/3, FAA Civil Aerospace Medical Institute, page 2, (2007), *available at* http://fas.org/irp/program/collect/ua-pilot.pdf. While the authors speculated that UA use in populated areas may change this assessment, indicating further research was needed to address this concern, this concern is inapplicable as TourFactory's flights will not be in congested areas. *See also* Jason S. McCarley & Christopher D. Wickens, *Human Factors Implications of UAVs in the National Airspace*, Institute of Aviation, Aviation Human Factors Division, University of Illinois at Urbana-Champaign, 13 (2004), *available at* http://www.tc.faa.gov/logistics/grants/pdf/2004/04-G-032.pdf.

[3] *See* Civil Aviation, Standards, Transport Canada, Advisory Circular: Guidance Material for Operating Unmanned Air Vehicle Systems under an Exemption at 14 and 18-22, (Nov. 27, 2014) *available at* http://www.tc.gc.ca/media/documents/ca-opssvs/ac-600-004.pdf.

[4] *Id.* at 14.

requirements for commercial UA operation yet have no manned aircraft certification. These individuals – qualified to operate commercial UAs in Canada – should also be allowed to operate commercial UAs in the United States. Please refer to Exhibit 7 for the training syllabus for the ground school course these individuals took to qualify them to operate commercial UAs in Canada.

Similarly, the United Kingdom's Civil Aviation Authority (CAA) recognized that determining "Remote Pilot qualification requirements on the same basis as manned aircraft may yield requirements that are too inflexible, too onerous and inappropriate for UAS operations."[5] As a result, the CAA only requires UA operators to demonstrate UA operator competence.[6] While there are a variety of ways to demonstrate competence, the most common is to complete a course that will lead to a ground exam and flight test Australia, too, requires only passage of a UA-specific ground school program in lieu of a manned airman certificate.[7] Finally, more than a dozen countries, including Germany, Italy, France, Spain and the Netherlands, have adopted the National UAS Certificate for Small Unmanned Aircraft (BNUC-S) Standard for UA pilot certification.[8] This standard results in a type-specific UA certificate and does not require the operator to have a pilot's license. The process involves taking a short ground school course, passing a ground school test and then passing a practical test on commercial operation of the specific UA per the UA manufacturer's operations manual.

All of this experience and evidence indicates that the proposed exemption will provide a greater level of safety than operations under 14 C.F.R. §61.113. In this instance, the PICs will have gone through training as described above in Section III B. This training and education is focused on UAs generally, and in particular on the aircraft to be operated, rather than taking additional time and risk to train on a manned aircraft, weighing several thousand pounds and carrying highly flammable fuel.

The FAA has concluded in the NPRM that such UA-specific training is more than sufficient to provide an equivalent level of safety for UA operations. Sometime in the next 18-24 months, that position will be enshrined in a valid regulation. However, in the meantime, the FAA claims it lacks the authority to relax the requirement to possess a pilot certificate. As we show in the next section, that position is both incorrect and contradicted by the FAA's recent decisions.

2. The FAA does have, and has already, exercised the authority to exempt petitioners from the airman certificate requirement.

The FAA claims that it lacks authority to exempt UA operators from the requirement of 49 U.S. §44711 to hold an airman certificate authorizing the airman "to serve in the capacity for which the certificate was issued." See, e.g., Exemption No. 11110 at 14. This claim is inconsistent with both (i) the statutory language of that section and Section 333, and (ii) numerous recent FAA

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[5] Civil Aviation Authority, Safety Regulation Group, Unmanned Aircraft System Operations in UK Airspace – Guidance, Section 2, Chapter 5, Page 2 (Aug. 10, 2012), *available at* https://www.caa.co.uk/docs/33/CAP722.pdf.

[6] Civil Aviation Authority, Unmanned Aircraft and Aircraft Systems, *available at* http://www.caa.co.uk/default.aspx?catid=1995&pagetype=90.

[7] Australian Government Civil Aviation Safety Authority, *available at* http://www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_100374.

[8] *See* EuroUSC International, "Pilot Qualification," *available at* http://eurousc.com/services/pilot-qualifications/.

decisions.

The operative part of 49 USC §44711 provides that a "person may not . . . serve in any capacity as an airman with respect to a civil aircraft, . . . used, or intended for use, in air commerce — (A) without an airman certificate authorizing the airman to serve in the capacity for which the certificate was issued . . . " If the FAA's interpretation were correct, this language would require that any person wishing to operate a UA for commercial operations have an airman certificate authorizing the person to serve as an airman in commercial operations.

However, in all of its recent grants of Section 333 petitions, the FAA has – without explicitly acknowledging the fact - exempted commercial UA operators from the §44711(A) requirement that they hold an airman certificate authorizing them "to serve in the capacity for which the certificate was issued." It has done so by allowing them to operate UA so long as they hold a private pilot's or sport pilot's authorization, even though such a certificate does not permit commercial operations. Exemption No. 11062 at 15-18; Exemption No. 11110 at 14-16; Exemption No. 11191 at 3-5; and Exemption No. 11229 at 3 and 8.

The FAA argues that it cannot exempt petitioners from the requirements of §44711 because, while the specific language of Section 333 grants it limited statutory flexibility relative to 49 U.S.C. §44704 for the purposes of airworthiness certification, Section 333 does not provide flexibility relative to §44711 and other sections of Title 49. Exemption No. 11110 at 14. This argument ignores the plain language of Section 333. The relevant language of Section 333 is:

> (a) IN GENERAL.—Notwithstanding any other requirement of this subtitle, and not later than 180 days after the date of enactment of this Act, the Secretary of Transportation shall determine if certain unmanned aircraft systems may operate safely in the national airspace system before completion of the plan and rulemaking required by section 332 of this Act or the guidance required by section 334 of this Act.
>
> (b) ASSESSMENT OF UNMANNED AIRCRAFT SYSTEMS.—In making the determination under subsection (a), the Secretary shall determine, at a minimum—
>
> (1) which types of unmanned aircraft systems, if any, as a result of their size, weight, speed, operational capability, proximity to airports and populated areas, and operation within visual line of sight do not create a hazard to users of the national airspace system or the public or pose a threat to national security; and
>
> (2) whether a certificate of waiver, certificate of authorization, or airworthiness certification under section 44704 of title 49, United States Code, is required for the operation of unmanned aircraft systems identified under paragraph (1).
>
> (c) REQUIREMENTS FOR SAFE OPERATION.—If the Secretary determines under this section that certain unmanned aircraft systems may operate safely in the national airspace system, the Secretary shall establish requirements for the safe operation of such aircraft systems in the national airspace system.

The language of Section 333(b) is permissive: it requires that the Secretary "determine, at a minimum . . . whether a certificate of waiver, certificate of authorization, or airworthiness

certification under section 44704 of title 49, United States Code, is required for the operation of unmanned aircraft systems identified under paragraph (1)." Nothing in (b) precludes the Secretary from determining whether or not a pilot's license is required for operation of a UA identified under paragraph (b)(1).

Indeed, the FAA has implicitly conceded the point by granting exemptions from the requirement that commercial UA operators hold a commercial pilot certificate. From an analytical standpoint, there is no difference between granting an exemption from the commercial pilot's license requirement and granting an exemption from the private or sport pilot's license requirement. Both are clearly exemptions from a specific statutory requirement in 49 U.S.C. §44711. If the FAA has the statutory authority under Section 333(b) to do the former, it has the same authority to do the latter.[9]

[9] The FAA has not specifically identified the statutory provision that underpins its authority to grant the exemptions from the commercial pilot's license requirement. Whether the statutory basis is Section 333 or some other provision makes no difference. If there is a basis for a partial exemption from in 49 U.S.C. § 44711, that basis also justifies an exemption from the entire provision.

Academy of Model Aeronautics National Model Aircraft Safety Code

Effective January 1, 2014

A. **GENERAL**: A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. It may not exceed limitations of this code and is intended exclusively for sport, recreation, education and/or competition. All model flights must be conducted in accordance with this safety code and any additional rules specific to the flying site.

1. Model aircraft will not be flown:
   (a) In a careless or reckless manner.
   (b) At a location where model aircraft activities are prohibited.
2. Model aircraft pilots will:
   (a) Yield the right of way to all human-carrying aircraft.
   (b) See and avoid all aircraft and a spotter must be used when appropriate. (AMA Document #540-D.)
   (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport without notifying the airport operator.
   (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
   (e) Not exceed a takeoff weight, including fuel, of 55 pounds unless in compliance with the AMA Large Model Airplane program. (AMA Document 520-A.)
   (f) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft. (This does not apply to model aircraft flown indoors.)
   (g) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
   (h) Not operate model aircraft while under the influence of alcohol or while using any drug that could adversely affect the pilot's ability to safely control the model.
   (i) Not operate model aircraft carrying pyrotechnic devices that explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property.
   Exceptions:
   - Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
   - Rocket motors (using solid propellant) up to a G-series size may be used provided they remain attached to the model during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code but may not be launched from model aircraft.
   - Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document. (AMA Document #718.)

   (j) Not operate a turbine-powered aircraft, unless in compliance with the AMA turbine regulations. (AMA Document #510-A.)
3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:
   (a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event.
   (b) An inexperienced pilot is assisted by an experienced pilot.
4. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

B. **RADIO CONTROL (RC)**

1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
2. A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
3. At all flying sites a safety line(s) must be established in front of which all flying takes place. (AMA Document #706.)
   (a) Only personnel associated with flying the model aircraft are allowed at or in front of the safety line.
   (b) At air shows or demonstrations, a straight safety line must be established.
   (c) An area away from the safety line must be maintained for spectators.
   (d) Intentional flying behind the safety line is prohibited.
4. RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
5. RC model aircraft will not knowingly operate within three (3) miles of any pre-existing flying site without a frequency-management agreement. (AMA Documents #922 and #923.)
6. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flightline.
7. Under no circumstances may a pilot or other person touch an outdoor model aircraft in flight while it is still under power, except to divert it from striking an individual.
8. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times. Hand-held illumination systems are inadequate for night flying operations.
9. The pilot of an RC model aircraft shall:
   (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
   (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.
   (c) Fly using the assistance of autopilot or stabilization system only in accordance with the procedures outlined in AMA Document #560.

C. **FREE FLIGHT**

1. Must be at least 100 feet downwind of spectators and automobile parking when the model aircraft is launched.
2. Launch area must be clear of all individuals except mechanics, officials, and other fliers.
3. An effective device will be used to extinguish any fuse on the model aircraft after the fuse has completed its function.

D. **CONTROL LINE**

1. The complete control system (including the safety thong where applicable) must have an inspection and pull test prior to flying.
2. The pull test will be in accordance with the current Competition Regulations for the applicable model aircraft category.
3. Model aircraft not fitting a specific category shall use those pull-test requirements as indicated for Control Line Precision Aerobatics.
4. The flying area must be clear of all utility wires or poles and a model aircraft will not be flown closer than 50 feet to any above-ground electric utility lines.
5. The flying area must be clear of all nonessential participants and spectators before the engine is started.

"SEE AND AVOID" GUIDANCE

A. General:

1. The primary means to avoid collisions between all aircraft flying within our National Airspace System (NAS) is "See and Avoid."

2. Vigilance must be maintained by each person operating an aircraft (whether model or manned) so as to "see and avoid" other aircraft.

3. Model aircraft must avoid manned aircraft. Our privilege to fly model aircraft in the NAS depends on our commitment to remain "well clear" of manned aircraft.

4. Simply avoiding an actual collision is not enough. A "near miss" is not acceptable.

5. Unless flying at a mixed-use site where manned and model aircraft routinely share airspace through their own site-specific rules, model aircraft must fly sufficiently far away from manned aircraft so as not to create a collision hazard.

6. Model aircraft flying must not only be safe, it must be perceived to be safe by the greater manned aviation community. Modelers must continually demonstrate their respect for the safety of manned aircraft by remaining vigilant and well clear.

7. Whenever a potential conflict arises between model aircraft and manned aircraft, the pilot of the model aircraft must always give way to the manned aircraft.

8. The pilot of a model aircraft must never assume the pilot of a manned aircraft can see the= model or will perform any maneuver to avoid the model's flight path.

9. Visual Line of Sight is required by the Safety Code. It means that visual contact with the aircraft must be maintained without enhancement other than by corrective lenses prescribed for the model aircraft pilot. All RC flying must remain clear of clouds smoke or any other obstruction to the line of sight.

10. "Blue Sky" is a term used to explain the method used to increase separation between a model and a manned aircraft in the same vicinity. The modeler should maneuver the aircraft in such a way as to increase the amount of blue sky perceived between the model and the manned aircraft. By increasing the blue sky separation, the question about depth perception is taken out of the equation and the modeler need not worry whether the model is closer to him than the manned aircraft or further away. Increasing the blue sky between the model and the manned aircraft automatically increases separation between them.

11. A modeler should never place any consideration for the well-being of the model aircraft above the safety of manned aircraft. Maneuvering to avoid the conflict may require that the model aircraft be sacrificed.

12. Free flight models should not be launched with relatively low altitude manned aircraft in sight and downwind or headed downwind from the launch site.

B. Spotters:

1. Before a flight, the pilot must insure that the spotter understands his/her duties and expectations.

2. A spotter should be used to assist in monitoring the surrounding airspace for manned aircraft whenever a flight is expected to exceed 400 feet above the ground and that operation is expected to be in proximity to known manned aircraft traffic such as at a mixed-use facility or within three miles of an airport. The spotter must have sufficient visual acuity and be mature enough to take this responsibility very seriously.

3. A spotter should also be prepared to assist his/her pilot in the event that another model aircraft or spectators become endangered or in turn are perceived to be a danger to the pilot or the pilot's model aircraft.

4. If a model aircraft pilot experiences what he or she considers a near miss with a manned aircraft, that model aircraft pilot should notify AMA Headquarters with a written report of the incident, including action taken by the model aircraft pilot to avoid the manned aircraft. This report is intended to help the modeler, the club, and the AMA capture as much detail as possible so that it may be used to assist all parties in recalling the particulars of the incident at a later time. Call 1-800-435-9262 (1-800-IFLYAMA) extension 230 or 251 for assistance with this report.

Academy of Model Aeronautics
AMA Advanced Flight Systems Committee
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Radio Controlled Model Aircraft Operation Utilizing Failsafe, Stabilization and Autopilot Systems

1. DEFINITION OF TERMS:

Please refer to Page 3, section 7 which contains an alphabetical listing of the definitions of the terms in italics that are used in this document.

2. GENERAL:

All model aircraft flights utilizing *stabilization* and *autopilot* control systems must be conducted in accordance with AMA's current National Model Aircraft Safety Code and any additional rules specific to a flying site/location.

3. OPERATIONS – REQUIREMENTS – LIMITATIONS:

a) AMA members flying radio controlled model aircraft equipped with flight *stabilization* and *autopilot* systems must maintain *VLOS* with the aircraft at all times including programmed autopilot waypoint flight.

b) *AMA Pilots* must be able to instantaneously deactivate programmed flight of *autopilot systems* at any time during flight and resume manual control of the model aircraft.

c) *AMA Pilots* must perform an *R/C Test Flight* of a model aircraft before activating a newly installed *autopilot* or *stabilization system* and/or after any repairs or replacement of model aircraft *essential flight systems*.

d) Model aircraft exceeding 15lbs and/or 70mph may only use an *autopilot* for a programmed "return to launch" (RTL) flight and not for programmed waypoint flying of a predetermined course.

e) STABILIZATION & AUTOPILOT SYSTEMS MAY BE USED FOR/TO:

- Stabilization/automatically stabilize aircraft to level flight when control sticks are centered.
- Recovery/activate TRX switch to recover an out of control aircraft to level flight.
- Heading/activate TRX switch to hold a model aircraft's heading for precision flight path.
- Altitude/activate TRX switch to maintain fixed aircraft altitude while allowing directional control.
- Return GPS/activate TRX switch to return aircraft via GPS to launch point.
- Return FSS/failsafe activated from radio signal loss to return aircraft via GPS to launch point.
- Fixed circle/activate TRX switch to circle aircraft at point of activation at fixed altitude.
- Waypoint/activate TRX switch to initiate an autopilot programmed flight path via waypoints.
- Fencing/autopilot programed to display site unique boundaries on video monitor/goggles.

4. RANGE – ALTITUDE – WEIGHT – SPEED:

a) One of the requirements in Federal Law (Public Law 112-95 Sec 336 (c) (2) February 14, 2012) for model aircraft to be excluded from FAA regulations is that model aircraft be flown within *VLOS* of the operator.

b) Model aircraft must be flown at or below 400 feet AGL when within 3 miles of an airport as stated in the AMA Safety Code.

c) Model aircraft utilizing an *autopilot* for waypoint flying are limited to a maximum weight (including fuel, batteries, and onboard *autopilot systems*) of 15lbs and a speed of 70mph.

5. RECOMMENDATIONS & INFORMATION:

a) If your radio system lacks *failsafe* capability, consider using programmable digital servos or auxiliary *failsafe* modules. In the event of a radio signal failure these components will activate desired safe servo settings or an *autopilot* for return to base/launch (RTL).

b) When using an *autopilot system* the "return to launch" (RTL) feature should be programmed to return the aircraft to a safe location and safely terminate the flight should manual control of the aircraft be lost. When using RTL, pay particular attention to the manufacturer's throttle recommendations to prevent stalling.

c) The use of *stabilization systems* is recommended when flying FPV to improve flight stability and video quality.

d) Pilots usually choose to incorporate *stabilization* and *autopilot systems* for model aircraft flying to enhance flight performance, correct bad tendencies of the model aircraft, maintain stability in windy weather, establish precision heading holds for takeoffs/landings, flight training for novice pilots, create a steady flight platform for cameras, and generally just to make an airplane easier and safer to fly.

e) When purchasing *stabilization* and *autopilot systems*, always try to select quality equipment from reputable dealers, ensure for compatibility with other onboard systems, and install components according to manufacturers' instructions.

6. PRIVACY PROTECTION SAFEGUARDS:

The use of imaging technology for aerial surveillance with radio control model aircraft having the capability of obtaining high-resolution photographs and/or video, or using any types of sensors, for the collection, retention, or dissemination of surveillance data or information on individuals, homes, businesses, or property at locations where there is a reasonable expectation of privacy is strictly prohibited by the AMA unless written expressed permission is obtained from the individual property owners or managers.

7. DEFINITIONS OF TERMS:

AMA Pilot is an AMA member who is capable of manually operating an R/C transmitter to control a model aircraft's flight path within its safe intended *flight envelope* without losing control or having a collision.

Autopilot Systems incorporate programmable flight *stabilization* with an altitude sensor and a GPS receiver for accurate positioning and to navigate/control a radio controlled model aircraft's flight path. Advanced systems offer software for entering navigable waypoints. The flight data waypoints may be saved to autopilot's/GPS memory for programmed flight.

Essential Flight Systems are any systems or components necessary to maintain stable flight within a model aircraft's *flight envelope*. (This includes primary R/C systems and any *stabilization* or gyros required to maintain stability and heading in certain types of model aircraft that would be uncontrollable/unstable without their use).

Failsafe Systems are designed to minimize or prevent damage and safely terminate a flight when a radio controlled model aircraft loses radio signal. Modern radio systems can be programmed to position servos to a desired control setting in the event of radio signal failure.

First Person View (FPV) refers to the operation of a radio controlled (R/C) model aircraft using an onboard camera's cockpit view to orient and control the aircraft. (AMA Document #550).

Flight Envelope is defined as the range of airspeeds, attitudes and flight maneuvers which a model aircraft can safely perform/operate for its intended use.

Non-Essential Flight Systems are any systems or components that are not necessary to maintain stable flight within the model aircraft's intended flight envelope. (This includes *autopilot* or *stabilization systems* that can be activated and deactivated in flight by the pilot without affecting manually controlled stable flight).

R/C Test Flight requires an AMA Pilot to manually operate an R/C transmitter to control a model aircraft's flight path and determine if the aircraft is capable of maintaining stable flight within its safe intended *flight envelope*.

Stabilization Systems are designed to maintain intended model aircraft flight attitudes. The pilot can install, program and/or activate a system to stabilize yaw, pitch, or roll or any one attitude or combination of attitudes. Systems are often based on rate/heading hold gyros or inertial motion sensors utilizing multi-axis gyros and accelerometers for attitude stabilization.

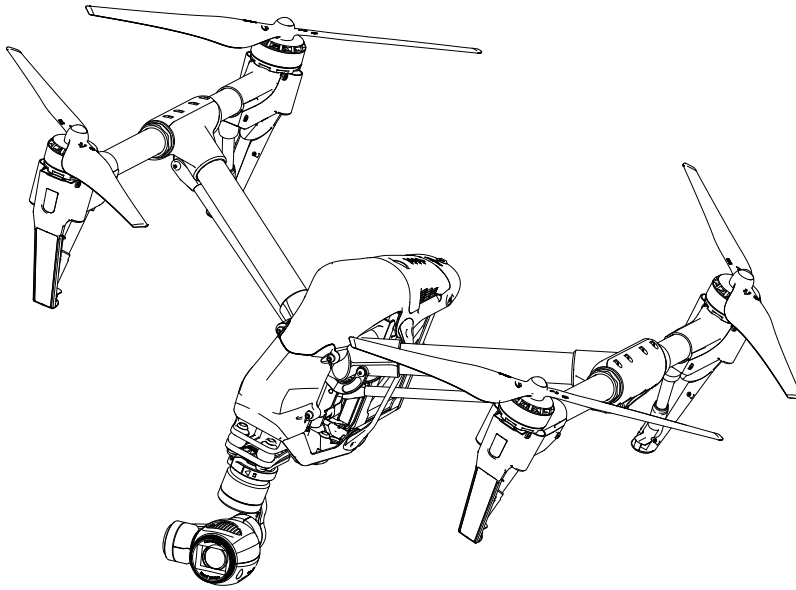
Visual Line of Sight (VLOS) is the distance at which the pilot is able to maintain visual contact with the aircraft and determine its orientation and attitude without enhancements other than corrective lenses.

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.

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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.

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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 Visual 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.

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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》。

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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. 禁止使用任何方式碰触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，请换位置查看异常是否消除。

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。

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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，超声波如果检测有物体会放下起落架，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。

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The content is subject to change.

Download the latest version from

www.dji.com/support

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PRÉCAUTIONS D'USAGE
HAFTUNGSAUSSCHLUSS
免责声明

2014.12

CONTENTS

DISCLAIMER & WARNING

Please read this disclaimer carefully before using this product. This product is not suitable for people under age of 18. By using this product, you hereby agree to this disclaimer and signify that you have read it fully. You agree that you are responsible for your own conduct and content while using this product, and for any consequence thereof. You agree to use this product only for purposes that are proper and in accordance with local regulations, terms and any applicable polices and guidelines DJI may make available.

1. DJI reserves the right to update this Disclaimer & Warning. Any part of this disclaimer is subject to change, please visit www.dji.com and check your email periodically for the latest version.

2. This disclaimer is made in various language versions; in the event of divergence among different versions, English version shall prevail.

EN

INSTRUCTIONS

Please read international and domestic airspace regulations and rules before using this products, should never use this product in a way that infringes upon or contravenes international or domestic laws and regulations. You agree that you are solely responsible for your own conduct and content while using this product, and for any direct or indirect consequences caused by not following this manual, violate or disregard any other applicable local laws, administrative rules and social habits thereof.

This product is a flying camera that offers easy flight both indoors and out when powered normally and in a good working order.

1. This product works most efficiently with genuine DJI accessories. DJI shall not be liable for any damage or legal responsibilities to this product and/ or accidents resulting from malfunctions of non DJI accessories.
2. This product features a built-in flight control system and we have made its operation as safe as possible. However, it is good practice to remove all propellers before switching it on for calibration and parameter setting.
3. Flight restriction is imposed when fly around the airport. Those who purchased and use this product are considered abiding all regulations from ICAO (International Civic Aviation Organization) and local policy. DJI assumes no responsibility from any violations against the these regulations .
4. Be sure to check all connections and keep children and animals a safe distance away during firmware upgrades, system calibration and parameter setting.

EN

LIMITATION OF LIABILITY

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

1. DJI takes no responsibility for any misuse arising from failure to follow the Inspire 1 Quick Start Guide, Disclaimer, Intelligent Flight Battery Safety Guidelines, Inspire 1 Safety Guidelines, In the Box, Inspire 1 User Manual or instructions and warnings found on www.dji.com.
2. Damage(s), injuries or any legal responsibilities incurred when users are drunk, taking drugs, under the influence of anesthesia, dizziness, fatigue, nausea and any other conditions both physical and mental that could impair your ability.
3. Damage(s), injuries or any legal responsibilities caused by subjective intentional operations.
4. Any mental damage compensation caused by accident.
5. Damage(s), injuries or any legal responsibilities caused by flying in no-fly zones such as natural reserve.
6. Malfunctions caused by refit or replacement with non-DJI accessories and parts.
7. Damage(s), injuries or any legal responsibilities caused by using third party products or fake DJI products.
8. Damage(s), injuries or any legal responsibilities caused by improper operation or subjective misjudgment.
9. Damage(s), injuries or any legal responsibilities caused by mechanical failures due to product aging.
10. Damage(s), injuries or any legal responsibilities caused by continued flying after low battery alarm is triggered.
11. Damage(s), injuries or any legal responsibilities caused by knowingly flying the aircraft in abnormal conditions (such as when water, oil, soil, sand or other unknown material are inside the aircraft, incomplete assembly, the main components have obvious faults, obvious defect or missing accessories).
12. Damage(s), injuries or any legal responsibilities caused by flying in the following situations such as the aircraft in magnetic interference areas (such as high voltage lines, power stations, broadcasting towers and mobile base stations), radio interference areas, government regulated no-fly zones, if the pilot loses sight of the aircraft, suffers from poor eyesight or is otherwise not suitable for aircraft operation.
13. Damage(s), injuries or any legal responsibilities caused by using in bad weather, such as a rain, heavy wind, snow, hail, lightning, tornadoes and hurricanes.

14. Damage(s), injuries or any legal responsibilities caused when the aircraft is in the following situations: collision, fire, explosion, floods, tsunamis, subsidence, ice trapped, avalanche, debris flow, landslide, earthquake, etc.
15. Damage(s), injuries or any legal responsibilities caused by infringement such as any data, audio or video material recorded by the use of aircraft.
16. Damage(s), injuries or any legal responsibilities caused by the misuse of the battery, protection circuit, RC model and battery chargers.
17. Consequential damages, injuries or any legal responsibilities caused by any malfunction of an equipment or accessory, including memory cards, that result in the failure of an image or video to be recorded or to be recorded in a way that machine readable.
18. Operators disobey local laws or regulations.
19. Any legal responsibilities, personal or property damage or environmental damages caused by operator noncompliance with local laws and regulations.
20. Damage(s), injuries or any legal responsibilities caused by risky operator behavior without sufficient training.
21. Damage(s), injuries or any legal responsibilities caused by flying in the areas prohibited by laws, regulations, or related entities.
22. Other losses that are not covered by the scope of DJI liability.

WARNING

FCC Warning:

Any Changes or modifications not expressly approved 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 & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or 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.

1. When using this product, ensure that the antenna of the device is at least 20 cm from any person. Due to the used enclosed material, this product shall only be connected to a USB interface of version 2.0 or higher. The connection to so called "power USB" is prohibited.

CAUSTION: RISK OF EXLPOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTION.

DJI hereby declares that this product is in compliance with the essential requirements and other relevant provision of Directive 1995/5/EC.

2. Please note that this product is intended for personal use and should never be used in a manner that infringes upon or contravenes international or domestic law and regulations.
   You shall not use this product to:

   a) Defame, abuse, harass, stalk, threaten or otherwise violate the legal rights (such as right of privacy and publicity) of others;
   b) Photograph people on private property without their consent or photograph in areas where photography is prohibited without prior authorization.
   c) Use this product for any illegal or inappropriate purpose other than general personal use (such as spy, military operation , unauthorized investigation and unauthorized detection);
   d) Violate or disregard applicable local laws, administrative rules and social habits.

   Please be advised that in certain areas, the copying of images and videos from events, performances, exhibitions, or commercial properties by means of a camera may contravene copyright or other legal rights even if the image or video was shot for personal use. In addition, remote control aircraft are banned from conducting commercial activities in certain countries and regions.

If you have any problem you cannot solve during installation, please contact DJI authorized dealers.

PRÉCAUTIONS D'USAGE

Merci de lire entièrement ce document avant d'utiliser le produit. Ce produit ne peut être utilisé par des personnes de moins de 18 ans. En utilisant ce produit vous acceptez tacitement ces précautions d'usage et certifiez les avoir lues entièrement. Vous agréez être responsable de votre conduite et du contenu produit, ainsi que de toutes les conséquences pouvant en résulter. Vous vous engagez à utiliser ce produit à des fins qui lui sont propres et en conformité avec les termes et les politiques ou directives applicables que DJI a mis à votre disposition.

En lisant, vous acceptez également:

1. DJI se réserve le droit d'actualiser cette déclaration de protection de données et semonce. Toute partie de cet avertissement est soumis au changement, s'il vous plaît visitez www.dji.com et vérifier votre email périodiquement pour la dernière version.

2. Ce document existe en plusieurs langues, en cas de différences, la version en anglais prévaut.

FR

INSTRUCTIONS

Merci de vous renseigner sur la réglementation internationale et domestique avant d'utiliser ces produits. L'utilisation de ces produits ne doit jamais aller à l'encontre des réglementations et lois internationales et domestiques. Vous êtes responsable de votre équipement et de ce qu'il emporte. Vous êtes tenu pour responsable de toute incident, direct ou indirect, résultant du non respect des précautions, des lois et de la réglementation, des règles administrative et/ou des us et coutumes.

Ce produit est une caméra volante qui offrira de superbes vols en intérieur comme en extérieur si celui-ci est utilisé et entretenu dans des conditions normales.

1. Ce produit a été développé pour fonctionner avec des accessoires de la marque DJI. DJI ne peut être tenu responsable pour tout dommage causé à ce produit et/ou accident dû à un disfonctionnement d'un accessoire autre que la marque DJI.
2. Ce produit est équipé d'un contrôleur permettant le pilotage automatique et nous essayons de toute faire pour que celui-ci soit le plus sûr possible quand la batterie principale est connectée; toutefois, nous recommandons vivement de retirer les hélices de l'appareil quand vous calibrez ou paramétrez celui -ci.
3. Assurez-vous que tout est bien branché, et garder les enfants et les animaux éloignés quand vous effectuez une mise à jour, un paramétrage ou une calibration.

FR

LIMITATION DE RESPONSABILITÉ

DJI ne pourra être tenu responsable des dommages et blessures découlant directement ou indirectement de l'utilisation de ce produit selon les conditions suivantes:

1. Des dommages, blessures ou de problèmes légaux causés par le non-respect des instructions contenues dans ce document, sur www.dji.com, sur la notice produit, sur le guide de prise en main, et sur les précautions d'usage DJI.
2. Des dommages et blessures quand l'utilisateur est sous l'emprise de l'alcool, de drogue, d'anesthésiant, de vertiges, de fatigue, de nausées ou de toute autre condition altérant vos capacités physiques ou mentales.
3. De dommages causés intentionnellement.
4. De tout dommage psychologique suite à un accident.
5. De tout dommage, blessure et responsabilité légale causés suite à un vol dans une zone interdite au vol de drone.
6. A un mauvais fonctionnement dû à l'utilisation d'un produit autre que de la marque DJI.
7. Des dommages causés via l'utilisation des produits d'un tiers ou de faux produits DJI.
8. Des dommages ou blessures causés par une erreur de jugement ou de prise en main.
9. Des dommages ou blessures causés par un produit abimé ou ayant été longuement utilisé (plus de 100 heures de vol).
10. Des dommages et blessures causés par un appareil qui était en alarme batterie faible, ou si l'avertisseur de batterie faible a été retirée.
11. Des dommages et blessures causés par un appareil dans un état anormal (notamment un appareil qui présenterait des substances externes dans son mécanisme (eau, huile, sable, terre etc) ou un problème au niveau du montage).
12. Des dommages ou blessures causés alors que l'appareil volait à proximité d'un champs magnétique, d'une zone d'interférence, d'une de vol réglementé, d'une zone d'exclusion aérienne. Mais aussi si le pilote est à contre-jour, est bloqué, a une vue floue ou une mauvaise vue ou si celui-ci n'est pas apte à piloter.
13. Des dommages et blessures causés lors de mauvaises conditions météorologiques comme la pluie, le vent, la grêle, les tempêtes etc.
14. Des dommages et blessures causés lorsque l'appareil est dans les situations suivantes, collision, incendie, explosion, inondation, tsunami, glace, avalanche, coulée de boue, glissements de terrain, séismes, etc.

15. Des dommages et blessures causés lors d'une atteinte à la vie privée grâce au matériel vidéo présent sur l'appareil.
16. Dommages ou blessures causés par une mauvaise utilisation de la batterie, des composants, de la radiocommande ou du chargeur.
17. Les dommages indirects causés par un dysfonctionnement d'un équipement ou d'un accessoire, y compris les cartes mémoire SD, entraînant l'échec de l'enregistrement d'une image ou d'une vidéo, ou l'impossibilité de lire un fichier enregistré.
18. Une infraction au niveau des lois en vigueur dans le pays où le vol a lieu.
19. Les responsabilités juridiques, dommages corporels, matériels ou environnementaux causés par la non-conformité de l'opérateur avec les lois et règlements locaux.
20. Des dommages, blessures ou de problèmes légaux causés par un comportement risqué ou un entrainement insuffisant.
21. Des dommages, blessures ou de problèmes légaux causés par un vol dans une zone interdite de survol par les lois, les normes, ou les autorités de régulation.
22. Et tout autre dommage ou blessure qui ne sont pas couverts par le champ d'application de la responsabilité DJI.

FR

MENTIONS LÉGALES

Ce produit respecte les normes d'expositions aux radiofréquences FCC RF pour un environnement non contrôlé. Les changements ou modifications non expressément approuvés par la partie responsable de la conformité pourraient annuler l'utilisateur de autorisation d'exploiter l'équipement.

Ce produit respecte la partie 15 des normes FCC. Son fonctionnement est soumis aux deux conditions suivantes:
(1) Ce produit ne doit en aucun cas causer d'interférence, et
(2) ce doit produit doit accepter toute interférence reçue, quand bien même celle-ci pourrait causer un fonctionnement non désiré.

NOTE: Le Fabriquant n'est pas responsable des interférences causées par des modifications ou des changements sur ce produit. Ces modifications ou changements pourraient annuler le droit à utiliser le produit.
NOTE: Ce produit a été testé et certifié conforme avec les limites pour un appareil digital de classe, en concordance avec la partie 15 des normes FCC. Ces limites ont été créées afin d'éviter toute interférence dans les lieux résidentiels. Ce produit génère, utilise et peut émettre des ondes à haute fréquence et, s'il n'est pas utilisé en concordance avec les règles utilisations et d'entretiens, Il peut causer de fortes perturbations de fréquence. Toutefois il n'est pas garanti qu'aucune interférence n'intervienne sur des utilisations spécifiques. Si ce produit est soupçonné de causer de lourdes interférences radio ou télévisuelles, ceci peut être déterminé en allumant et en éteignant le produit. L'utilisateur est fortement encouragé à résoudre ce problème via les mesures suivantes:

- Réorienter ou replacer l'antenne de réception.
- Augmenter la distance entre les composants et le récepteur.
- Connecter l'équipement à un autre circuit que celui où est placé le récepteur.
- Consulter votre revendeur ou un technicien spécialisé.

1. Quand vous utilisez ce produit, assurez-vous que la radiocommande se trouve à au moins 20 centimètres de toute personne. Dû à la technicité du matériel utilisé, veuillez connecter le drone à une interface USB 2.0 ou supérieure. La connexion USB simple (1.0) est prohibée.

   ATTENTION: RISQUE D'EXPLOSITION SI LA BATTERIE EST REMPLACEE PAR UN MODELE NON COMPATIBLE. RECYCLEZ LES BATTERIES EN VEILLANT AU RESPECT DES INSTRUCTIONS CONTENUES DANS CE DOCUMENT.

Par la présente, DJI déclare que cet appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/EC.

2. Notez que ce produit est destiné à un usage personnel et ne doit jamais être utilisé d'une manière qui porte atteinte aux lois et règlements internationaux ou nationaux.
   Vous ne devez pas utiliser ce produit pour:

   a) Diffamer, harceler, menacer ou violer tout autre droit légal (comme le droit à la vie privée) de la population;
   b) Photographier des individus sur une propriété privée sans leur consentement ou photographier dans les zones où la photographie est interdite sans autorisation.
   c) Utiliser ce produit pour toute utilisation illégale ou inappropriée (comme l'espionnage, les opérations militaires, ou des investigations ou détections non autorisées);
   d) Violer ou ne pas tenir compte des lois locales en vigueur, des règles administratives et des habitudes sociales.

   Notez que, dans certains cas, la tournage d'images et de vidéos à partir de performances, expositions, ou des propriétés commerciales au moyen d'une caméra ou d'un autre dispositif peut contrevenir à la législation concernant les droits d'auteur ou autres droits légaux, même si l'image ou la vidéo a été tournée pour un usage personnel. De plus, les aéronefs télépilotés ne peuvent être utilisés dans le cadre d'une activité commercial dans certains pays.

Si vous n'arrivez pas à résoudre un problème, contactez DJI ou un de ses vendeurs agrées..

HAFTUNGSAUSSCHLUSS

Bitte lesen Sie diesen Haftungsausschluss sorgfältig durch, bevor Sie das Produkt benutzen. Dieses Produkt ist für Personen unter 18 Jahren nicht geeignet. Durch die Nutzung dieses Produktes akzeptieren Sie den Haftungsausschluss und bestätigen, diesen in vollem Umfang gelesen und verstanden zu haben. Sie bestätigen ausserdem, die vollständige Eigenverantwortlichkeit durch die Nutzung und Handhabung Ihres Produktes und deren Konsequenzen. Weiterhin bestätigen Sie, dieses Produkt angemessen und nur für die dafür vorgesehene Zwecke zu verwenden und jegliche veröffentlichten Richtlinien, Gesetze und Bedingungen einzuhalten und zu beachten.

Weiterhin bestätigen Sie:

1. DJI behält sich das Recht vor, diese Datenschutzerklärung & Warnung aktualisieren. Für jeden Teil dieses Haftungsausschlusses sind Änderungen vorbehalten, besuchen Sie bitte www.dji.com und überprüfen Sie Ihre E-Mails regelmäßig auf die neueste Version.

2. Dieser Haftungsausschluss wurde in mehrere Sprachen übersetzt, bei Abweichungen in den verschienen Versionen, gilt die englische Originalversion.

ANWEISUNGEN

Bitte machen Sie sich mit den internationalen und nationen Flugverkehrsvorschriften vertraut, bevor Sie dieses Produkt benutzen. Benutzen Sie niemals dieses Produkt, in dem Sie gegen die internationalen oder nationalen Gesetze und Regulierungen verstossen oder zuwiderhandeln. Sie bestätigen bei Benutzung des Produktes, für Ihr Verhalten selbst verantwortlich zu sein, auch für jegliche direkte oder indirekte Konsequenzen bei Nichtbefolgung dieses Haftungsausschlusses, bei brechen oder missachten von Gesetzen, Regelungen und sozialem Verhalten.

Dieses Produkt ist eine fliegende Kamera, die, wenn vollständig aufgeladen und unter guten Bedingungen genutzt, innerhalb und ausserhalb geschlossener Räume leicht zu fliegen ist.

1. Dieses Produkt besitzt nur dann einwandfreie Flugfähigkeiten, wenn es mit Teilen oder Accessoires, ausschließlich aus dem Hause DJI, geflogen wird. DJI ist nicht rechtlich haftbar für Schäden am Artikel und/ oder bei Unfällen, die daraus resultieren, dass keine DJI Accessoires verwendet wurden.
2. Trotz eines eingebauten Autopilotensystems und unserem Einsatz, das Produkt so sicher wie möglich zu gestalten, empfehlen wir dem Benutzer, bei Kalibrierungsvorgängen oder Einstellen der Parameter vorher alle Propeller zu demontieren, sobald es an die Batterie angeschlossen wurde.
3. Stellen Sie sicher, dass alle Anschlüsse richtig verbunden sind und halten Sie Kinder und Haustiere in sicherer Entfernung, während Sie ein Firmware Upgrade, Systemkalibrierungen oder Parametereinstellungen vornehmen.

DE

HAFTUNGSBESCHRÄNKUNG

DJI übernimmt keinerlei Haftung bei Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen durch die Benutzung des Produktes, insbesondere bei folgenden Faktoren:

1. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch Nichtbeachten der Bedienungsanleitung oder Hinweise auf www.dji.com, Produktinformationen, Schnellstartanleitung oder der DJI Haftung.
2. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch den Einfluss von Alkohol, Drogen, Medikamenten oder sonstigen Betäubungsmitteln, welche die Konzentration des Benutzers beeinflussen. Das gleiche gilt bei Krankheiten, die Auswirkung auf die Konzentration des Benutzers haben (Schwindel, Müdigkeit, Übelkeit, etc.), oder anderes, das die physischen und körperlichen Befähigungen beeinflusst.
3. Vorsätzlich herbeigeführte Schäden, Verletzungen oder Missachtung der gesetzlichen Verpflichtungen.
4. Jegliche mentale Schadenersatzforderung verursacht durch einen Unfall.
5. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch die Benutzung des Produktes in einer Flugverbotszone, wie etwa einem Naturschutzgebiet.
6. Fehlfunktionen des Produktes, verursacht durch Nachrüstung oder Austausch mit Bauteilen, die nicht aus dem Hause DJI stammen.
7. Schäden oder Verletzungen verursacht durch die Verwendung von Nachbauteilen (keine Originalteile).
8. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch Fehlbedienung oder Fehleinschätzung.
9. Schäden oder Verletzungen verursacht durch beschädigte und nicht gewechselte Verschleißteile.
10. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch Ignorieren der Unterspannungswarnung des Akkus.
11. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch wissentliches Fliegen mit einem beschädigten oder fluguntauglichen Modell, z.B. durch Verschmutzung, Wassereindringen, Sand, Öl oder einem nicht korrekt oder komplett montierten Modell, wenn die Hauptkomponenten erkennbare Schäden, Defekte oder fehlende Teile haben.
12. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch den Betrieb des Modells in einem magnetischen Umfeld (z.B. Hochspannungsleitungen, Elektizitäts-/ Umspannwerke, Rundfunktürme, Mobilfunkmasten, etc.), einer funksignalstarken Umgebung, Flugverbotszonen, schlechten Sichtverhältnissen des Piloten, bei Schwersichtigkeit oder

anderenBeinflussungen etc.

13. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch den Betrieb des Modells bei nicht geeigneten Wetterverhältnissen, wie z.B. Regen, Wind, Schnee, Hagel, Gewitter, Tonados, Hurricanes etc.
14. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch Situationen und höhere Gewalt, wie z.B. Kollision, Feuer, Explosion, Überflutung, Tsunamis, Erdrutsche, Lawinen, Erdbeben oder anderen Naturgewalten.
15. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch rechtswidrige oder sittenwidrige Nutzung des Modells, wie z.B. durch Aufnahme von Videos oder Daten, welche die Privatsphäre anderer Personen stören oder verletzen.
16. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch unsachgemäße Handhabung der Akkus, Schutzkreis, Ladegeräte oder des Fluggerätes.
17. Folgeschäden verursacht durch Fehlbedienungen von Equipment jeglicher Art, insbesondere der Memory Card, wodurch fehlerhaftes Bild- oder Videomaterial aus der Maschine hervorgerufen werden kann.
18. Der Bediener missachtet die lokal geltenden Gesetze oder Bestimmungen.
19. Jegliche Missachtung der gesetzlichen Verpflichtungen, Körperbeschädigungen, Sachbeschädigungen und Umweltschäden bei Benutzung und Nichteinhaltung der örtlichen Gesetze und Bestimmungen.
20. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht durch gefährliches Benutzen ohne ausreichende praktische Übungen.
21. Schäden, Verletzungen oder bei Missachtung der gesetzlichen Verpflichtungen verursacht duch Fliegen in gesetzlich festgelegen Flugverbotszonen.
22. Weitere Verluste, die nicht unter den Anwendungsbereich der DJI Haftung fallen.

WARNUNGEN

Dieses Produkt erfüllt die dargestellten Regelungen der FCC Funkstrahlung für eine unkontrollierte Umwelt. Dieses Produkt erfüllt Teil 15 der FCC Richtlinien. Änderungen oder Modifikationen, die nicht ausdrücklich von der Partei genehmigt für die Konformität des Benutzers ungültig werden Genehmigung für das Gerät zu betreiben. Der Betrieb unterliegt den folgenden zwei Bedingungen:

(1) Dieses Produkt verursacht keine schädlichen Störungen und
(2) Dieses Produkt wird nicht beeinflusst von Störungen jeglicher Art, insbesondere Störungen hervorgerufen durch unerwünschten Betrieb;

HINWEIS: Der Hersteller dieses Produktes ist nicht verantwortlich für jegliche Funk- oder TV Störungen, hervorgerufen durch unbefugte Modifikationen oder Änderungen am Equipment. Besagte Modifikationen oder Veränderungen führen zum Verlust der Betriebserlaubnis.

HINWEIS: Dieses Produkt wurde getestet und erfüllt die dargestellten Regelungen für das Produkt Klasse B digitaler Geräte, gemäß Teil 15 der FCC Richtlinien. Diese Regelungen bestätigen entsprechenden Schutz gegen schädliche Störungen in Wohngegenden. Dieses Produkt erzeugt, verwendet und strahlt Hochfrequenzenergie ab. Falls nicht, gemäß den Anweisungen und Anleitungen installiert und genutzt, kann dies zu Störungen in der Funkverbindung führen. Jedoch kann bei bestimmten Installationen eine Störung nicht ausgeschlossen werden. Verursacht das Produkt, durch den Ein- oder Ausschaltevorgang, jegliche schädliche Störung im TV- oder Radioempfang, wird empfohlen, folgende Maßnahmen zur Beseitigung der Störungen zu ergreifen:

- Verändern Sie die Ausrichtung der Antenne.
- Vergößern Sie den Abstand zwischen Equipment und Empfänger.
- Verbinden Sie Ihr Equipment mit einem anderen Ausgang eines weiteren Kreislaufs, welcher nicht mit Ihrem Empfänger verbunden ist.
- Kontaktieren Sie Ihren Händler oder einen erfahrenen Radio/TV-Techniker, um Hilfe zu bekommen.

2. Stellen Sie sicher, während der Nutzung, die Antenne des Gerätes mindestens 20cm entfernt von Personen zu halten. Aufgrund des verwendeten Materials, schließen Sie das Gerät bitte ausschließlich an eine USB Schnittstelle der Version 2.0, oder höher, an. Die Verbindung zu sogenannten Power USB Schnittstellen ist verboten.

WARNUNG: ES BESTEHT EXPLOSIONSGEFAHR, FALLS NICHT ORIGINALE AKKUS ANGESCHLOSSEN WERDEN. ENTSORGEN SIE VERBRAUCHTE AKKUS GEMÄß DEN ANWEISUNGEN UND GELTENDEN RICHTLINIEN.

Hiermit erklärt DJI, dass dieses Proudukt den erforderlichen Vorraussetzungen und weiteren Bestimmungen gemäß Richtlinie 1999/5/EC unterliegt.

3. Bitte beachten Sie, dass dieses Produkt ausschließlich für den persönlich privaten Gebrauch vorgesehen ist und die geltenden nationalen und internationalen Gesetze und Bedingungen eingehalten werden müssen. Sie sollten dieses Produkt nicht nutzen zu:
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1. DJI 保留更新本免责声明的权利。最新的免责声明，请以 www.dji.com 官网上及您邮件接收的版本为准。

2. 不同语言版本的免责声明可能存在语义差异，以英文版为准。

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产品说明

本产品是一款优秀的多旋翼飞行器，在供电正常及部件未损坏的情况下，能够在户外低空或较大的室内空间提供卓越的飞行与摄影体验。

1. 本产品的出色性能依赖于 DJI 的原厂配件。DJI 对因不使用原厂配件而造成的任何损失与损害不承担任何的法律责任。
2. 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。
3. 本产品在特殊区域限制了部分飞行功能。一旦使用本产品，即视为您已仔细阅读国际民航组织和当地空域管制规定以及无人机管理规定的相关条例，凡违反当地法律规定使用本产品所产生的相关法律责任，DJI 概不负责。
4. 使用过程中请确保供电系统及其他功能模块连线正确，并使飞行器远离人群和易损、易碎及危险物品。

责任限制

使用本产品时，因下列原因造成直接或间接人身伤害、财产损失等，DJI 不承担赔偿责任与法律责任。

1. 未仔细阅读《INSPIRE 1 快速入门指南》、《免责声明》、《智能飞行电池安全使用指引》、《INSPIRE 1 安全使用指南》、《物品清单》、《INSPIRE 1 用户手册》、DJI 官方公布在官网的信息使用本产品所造成的损害。
2. 飞行员在饮酒、吸毒、药物麻醉、头晕、乏力、恶心等其他身体状况不佳或精神状况不佳的情况下操作飞行器所造成的损害。
3. 飞行员的主观故意造成人身伤害、财产损失与法律责任等。
4. 因事故发生而引起的任何有关精神损害的赔偿。
5. 因操作者在自然保护区等禁止飞行区域操作造成的损害。
6. 自行改装或更换非 DJI 生产的配件或零件，致使整个飞行器运行不良而造成的其它损害。
7. 使用非 DJI 生产的产品或仿制 DJI 的产品，造成的损害。
8. 飞行员操作失误或主观判断失误造成的损害赔偿。
9. 飞行器自然磨损（飞行时间达到 100 小时及以上未保养）、朽蚀、线路老化等造成飞行器本身的运行不良。
10. 飞行器发出低电量报警，仍不降落飞行器，导致飞行器坠落。
11. 飞行器处于非正常状态（如进水、结露、油、土、沙等其它不明物质以及组装未完成，主要部件发生明显故障，配件存在显而易见的缺损或缺失），仍然强制飞行而造成的损害。
12. 飞行器处于磁场干扰区、无线电干扰区（如高压电线附近、大型电力设备、广播电视发射塔、手机基站等区域）、政府规定的禁飞区域或飞行员视野处于背光、被障碍物遮挡、视线模糊、视力不良等不适合操控以及其它不适合操控的状况下飞行，造成的损害。
13. 在恶劣天气下飞行，如雨天或刮风（5 级或以上）、下雪、冰雹等不良天气下飞行。
14. 飞行器遭遇碰撞、倾覆、火灾、爆炸、雷击、暴风、龙卷风、暴雨、洪水、海啸、地陷、冰陷、崖崩、雪崩、雹灾、泥石流、滑坡、地震等。
15. 飞行员使用飞行器取得的任何数据、音频或者影像资料等，因侵权而发生的损害。
16. 因保护电路、电池组、充电器的匹配使用不当导致的电池损害。
17. 由于设备或配件（包括存储卡）的问题而造成的任何间接损失与法律责任，例如图像或视频无法被保存。
18. 未按使用说明操作的一切飞行和拍摄。
19. 飞行员未遵守当地的法律法规而造成的法律责任、或由此引发的一切人身财产损失，又或者是对生态环境造成的破坏。
20. 飞行员在未完成足够的飞行训练而鲁莽地进行冒险不安全的飞行而造成的损失与法律责任。

21. 飞行员在法律法规或者相关管理单位明令禁止的地方尝试飞行。
22. 其它不属于 DJI 责任范围内的损害。

警 告

FCC 认证：

对设备进行非法修改及更变所导致的任何无线及视频的干扰，制造商对此类事件不负有责任。因为这些修改及更变已经超出了用户的操作权限。

本产品遵从 FCC 中第 15 部分规定，其包含两个方面：

(1) 产品工作不会对外产生有害干扰；

(2) 同时产品能够承受可能会导致产品异常工作的有害干扰。

FCC 无线射频声明：

本产品与外界环境能够互相兼容，满足 FCC 中对无线视频方面的限定要求。当使用本产品时，确保产品天线离人的距离不小于 20cm。本产品不可与其他天线及发射器混合使用。

注意：本产品已经通过测试，并已证明符合 FCC 中第 15 部分对 B 类数字产品规定要求。这些规定是为了确保产品在安装使用时，不会对居民环境造成有害影响。本产品工作时会对外辐射射频能量，若未按指令去安装使用本产品，可能造成对无线通信的干扰。然而，在一些特定的安装使用场合，这里并不保证干扰不会产生。用户可以通过对产品的开关机，来确定一些干扰是不是由本产品所引起。假如产品确实已经对无线及视频接收设备产生了干扰，鼓励用户采取以下一些纠正措施：

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- 适当调整接收天线的方位。
- 增加本产品与接收设备之间的距离。
- 将本产品与其他接收机连接进行测试。
- 向经销商或有经验的无线 / 视频技术员寻求帮助。

1. 当使用本产品时，确保产品天线离人的距离不小于 20cm。遥控器内部的 USB 接口，以及飞机的 USB 接口只能与 USB 2.0 及以上通信接口相连。禁止与 USB 电源接口相连。
   请选用正确型号的电池，使用其它型号的电池，会有爆炸的危险。同时，请按照指令正确处理使用过的电池。
   因此，DJI 承诺本产品符合 1999/5/EC 中规定的基本要求和其它一些相关指令要求。
2. 本产品仅限个人使用用途，严禁使用本产品进行任何违反国际及当地法律法规的行为。
   请勿使用本产品进行以下活动（仅为示例，不限于此）：
   (1) 诽谤、滥用、骚扰、跟踪、威胁或以其它方式侵犯他人的合法权利（如隐私权和公开权）；
   (2) 未经许可拍摄他人照片或私人区域；
   (3) 将本产品用于除一般商业目的之外的其它违法或不恰当的用途（如用于间谍、军事活动，或未经授权的侦查与调查等）；
   (4) 违反本产品使用地区的任何法律、行政法规以及相关的社会习俗。

   请注意：(1) 在某些情况下，出于私人目的拍摄或者摄录表演、展会或其它商业建筑，也可能造成对他人知识产权的侵害；(2) 在某些地区和国家，小型航拍模型亦被禁止参与任何商业行为。

如果您在安装过程中遇到无法解决的问题，请与 DJI 正式授权的代理商或 DJI 技术支持取得联系。

The content is subject to change.

Download the latest version from

www.dji.com/support

INTELLIGENT FLIGHT BATTERY

Safety Guidelines

智能飞行电池

安全使用指引

V1.0 2014.12

English

Battery Use

- **Never use non-DJI batteries.** Go to www.DJI.com to purchase new batteries. DJI takes no responsibility for any accidents caused by non-DJI batteries.
- Never use or charge a swollen, leaky or damaged battery. If so, contact DJI or its designated dealers for further assistance.
- **Never install or remove the battery from the aircraft when it is turned on.** Do not insert or remove batteries if the plastic cover had been torn or compromised in any way.
- The battery should be used in temperatures from -10°C to 40°C. Use of the battery above 50°C can lead to a fire or explosion. Use of battery below -10°C can lead to permanent damage.
- Do not use the battery in strong electrostatic or electromagnetic environments. Otherwise, the battery control board may malfunction and a serious accident may happen during flight.
- Never disassemble or pierce the battery in any way, or the battery may catch fire or explode.
- Electrolytes in the battery are highly corrosive. If any electrolytes splash onto your skin or eyes, immediately wash the affected area with fresh running water for at least 15 minutes then see a doctor immediately.
- Check the condition of the battery if it falls out of the aircraft. Make sure the battery is **NOT damaged or leaking** before putting it back to the aircraft.
- Land the aircraft immediately when the low battery level warning activates in the DJI Pilot app.
- **Do not allow the batteries to come into contact with any kind of liquid.** Do not leave batteries out in the rain or near a source of moisture. Do not drop the battery into water. If the inside of the battery comes into contact with water, chemical decomposition may occur, potentially resulting the battery catching on fire, and may even lead to an explosion. If the battery falls into water with the aircraft during flight, take it out immediately and put it in a safe and open area. Maintain a far distance from the battery until it is completely dry. **Never use the battery again, and dispose of the battery properly as described in Battery Disposal below.**
- Do not heat batteries. Put out any battery fire using sand or a dry powder fire extinguisher. Never use water to put out a battery fire.
- Do not charge the Intelligent Flight Battery and remote controller at the same time, otherwise the charger may overheat.
- Do not leave batteries in a microwave oven or in a pressurized container.
- Do not place loose battery cells on any conductive surface, such as metal-toppled table.
- Do not put the loose cells in pocket, bag or drawer where they may short-circuit against other items or where battery terminals could be pressed against each other.
- Do not drop or strike batteries. Do not place heavy objects on batteries or charger. Avoid dropping batteries.
- Clean battery terminals with a dry and clean cloth.

Charging the Battery

- Do not attach the batteries to the wall or car charger sockets directly, **always use a DJI approved adapter**. DJI takes no responsibility if the battery is charged using a non-DJI charger. Never leave the battery unattended during charging. Do not charge the battery near flammable materials or on flammable surfaces such as carpet or wood. Do not charge battery immediately after flight, because the battery temperature may be too high. Do not charge the battery until it cools down to near room temperature. Charging battery outside of the temperature range of 0°C-40°C may lead to leakage, overheating, or battery damage.
- Charge and discharge the battery completely once every 20 charge/discharge cycles. Discharge the battery until there is 0% of power or until it can no longer be turned on, then recharge it to the maximum capacity. This power cycling procedure will optimize the battery life.
- DJI intelligent battery is designed to stop charging when it is full. However it is good practice to monitor charging progress and disconnect the batteries when fully charged.
- Disconnect charger when not in use. Examine charger regularly for damage to the cord, plug, enclosure or other parts. Do not clean the charger with denatured alcohol or other flammable solvents. Never use a damaged charger.

Battery Storage

- Keep batteries out of the reach of children and pets.

- Do not leave the battery near heat sources such as a furnace or heater. Do not leave the batteries inside of the vehicle on hot days. The ideal storage temperature is 22°C-28°C.
- Keep the battery dry. Never drop the battery into water.
- Do not drop, strike, impale, or manually short-circuit the battery.
- Keep the battery away from metal objects such as necklaces and hairpins.
- Discharge the battery to 30%-50% of the battery level if it will not be used for 7 days or more. This can greatly extend the battery life.
- Battery discharges automatically to below 65% when it is idle for more than 10 days to prevent the battery from swelling. It takes around 2 days to discharge the battery to 65%, It is normal that you may feel moderate heat emits from the battery during the discharge process. Set the discharging thresholds in the DJI Pilot app.
- The battery will enter hibernation mode if depleted and stored for a long period. When in hibernation mode, if you try to power on the battery, the battery power LED will show a solid red light and the battery level LEDs will all be off. You cannot manually turn off the battery power LED in this state. Leave the battery unattended for 5 minutes, and then it will power off. Recharge the battery to bring it out of hibernation.
- Remove batteries from the aircraft when stored for an extended period.

Battery Disposal

- Dispose of the battery into specific recycling boxes only after a complete discharge. Do not place the battery into regular rubbish bins. Strictly follow your local disposal and recycling regulations of batteries.
- If the power on/off button of the Intelligent Flight Battery is disabled and the battery cannot be fully discharged, please contact a professional battery disposal/recycling agent for further assistance.

Notice

- Before carrying the Intelligent Flight Battery on a airline flight, it must first be fully discharged. This can be done by using it in your Inspire 1 or by connecting your remote controller to the battery using the Remote Controller Charging Cable. Only discharge the battery in a fireproof location.
- Store Intelligent Flight Batteries in a ventilated location.
- Should you require to carry the battery onto the plane, it is recommend to discharge the battery to the range between 10% and 20% in order to ensure the safety of the battery.

中 文

使 用

- **严禁使用非 DJI 官方提供的电池**。如需更换，请到 DJI 官网查询。因使用非 DJI 官方提供的电池而引发的电池事故、飞行故障，DJI 概不负责。
- 在将电池安装或者拔出于飞行器之前，请保持电池的电源关闭。**请勿在电池电源打开的状态下，拔插电池，否则可能损坏电源接口。**
- 电池应在环境温度为 -10℃ 至 40℃ 之间使用。**温度过高，会引起电池着火，甚至爆炸。**温度过低，电池寿命会受到严重损害。
- 禁止在强静电或者磁场环境中使用电池。否则，**电池保护板会失灵，导致飞行器发生严重故障。**
- 禁止以任何方式拆解或用尖利物体刺破电池。否则，会引起电池着火甚至爆炸。
- 电池内部液体有**强腐蚀性**。如有泄露，请远离。如有溅射到人体皮肤或者眼睛里，请立即用清水冲洗至少 15 分钟，并立即就医。
- 若电池从飞行器中摔落，再次使用前，务必确保电池外观**无损，无破损、无漏液、无变形**等问题。
- 若飞行器进入低电量报警模式，**应尽快降落并停止飞行**，更换新电池或者对电池进行充电。
- **请勿将电池浸入水中或将其弄湿。**电池内部接触到水后可能会发生分解反应，引发电池自燃，甚至可能引发爆炸。如果电池在飞行器飞行过程中或其它情况下意外坠入水中，请立即拔出电池并将其置于安全的开阔区域，这时应远离电池直至电池完全晾干。**晾干的电池不得再次使用，应该按照本文的废弃方法妥善处理。**
- 若电池发生起火，应立即采用“窒息灭火法”，如使用沙子或固体或干粉灭火器进行灭火。**严禁用水来灭火。**
- 电池若出现膨胀、破损等情况，请勿继续使用，否则会有起火、爆炸等危险。如果出现此情况应做废弃处理。
- 请勿将电池直接连接到墙上插座或车载点烟式插座上。
- 禁止将电池投入火中或放在高温环境下。
- 禁止用导线或其它金属物体致使电池正负极短路。
- 如果电池发出异味、发热、变形、变色或出现其它任何异常现象，不得使用；如果电池正在使用或充电，应立即从用电器或充电器上取出并做废弃处理。
- 如果电池的端子变脏，使用前用干布擦干净。否则电池会接触不良，从而引起能量损耗或无法充电。

充 电

- 电池必须使用 DJI 官方提供的专用充电器进行充电。对于使用非 DJI 官方提供的充电器进行充电所造成的一切后果，DJI 将不予负责。
- 请留意充电过程以防发生意外。充电时请将电池和充电器放置在水泥地面等周围**无易燃、可燃物**的地面。
- **禁止在飞行器飞行结束后，立刻对电池进行充电。**此时，电池处于高温状态，强制充电会对电池寿命造成严重损害。建议待电池降至室温，再对电池进行充电。理想的充电环境（0-40℃）可大幅度延长电池的使用寿命。
- 电池每经过约 20 次充放电后，需要进行一次完整的放电和充电过程（将电池充满电，然后放电至电量为 0% 或电池自动关闭，再充满电）以保证电池工作在最佳状态，否则电池电量显示不准确。
- 请留意充电过程以防发生意外。充电时请确保周围没有易燃、可燃物。

储 存

- 禁止将电池放在靠近热源的地方，比如阳光直射或热天的车内、火源或加热炉。电池的理想的保存温度为 22℃ - 28℃。
- 存放电池的环境应保持干燥。请勿将电池置于水中或者可能会漏水的地方。
- 请将电池存放在儿童接触不到的地方。如果儿童不小心吞咽电池，应立即寻求医疗救助。
- 禁止机械撞击电池、碾压、坠落、人为短路、刺穿电池。
- 禁止将电池与金属项链、发夹或者其他金属物体一起贮存或运输。
- 超过 7 天不使用电池，请将电池放电至 30%-50% 电量存放，可大大延长电池的使用寿命。
- 若长时间不使用电池，建议将电池充电至高于 65% 电量并开启存储自放电模式，存放在专用电池箱内。每隔 3 个月左右重新充放电一次以保持电池活性。切勿将电池放完电长时间存储，以避免电池进入过放电状态，无法恢复使用。
- 若电池电量严重不足且闲置时间过长，则电池将进入深度睡眠模式。在该模式下，电源开关指示灯显示红色常亮，但电量指示灯熄灭，而且即使按下电源开关也无法关闭电池，此为正常现象。在该模式下静置电池 5 分钟后，所有指示灯将熄灭。若需要将电池从深度睡眠中唤醒，需对电池充电以启动唤醒程序。

废 弃

- **务必将电池彻底放完电后，才将电池置于指定的电池回收箱中。**电池是危险化学品，**严禁废置于普通垃圾箱。**相关细节，请遵循当地电池回收和弃置的法律法规。
- 如电池因为电源开关失灵而无法完成彻底放电，请勿将电池直接弃置于电池回收箱，应联系专业电池回收公司做进一步的处理。
- 当电池寿命为 0% 时，建议更换电池。对于报废电池，请先将电池放电至电量为 0 再进行废弃处理。

备 注

- 如果需要**将电池彻底放电**，可使用遥控器户外充电线对遥控器充电的方式。操作时请将电池放在无可燃物的区域进行。
- 不使用的电池一定要妥善保管，不要随意放置。防止一些非主观因素导致的意外起火（如压在杂物下）。
- 电池是一种高危高能的化学品，为了您和他人的安全，带上飞机或邮寄前一定要确保电池电量在 10% -20%之间，可杜绝起火的风险。

The content is subject to change.

Download the latest version from

www.dji.com/support

INSPIRE 1

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.

Download the latest version from
http://www.dji.com/product/inspire-1/download

INSPIRE 1

INSPIRE 1

DJI's most advanced technology comes together in an easy to use, all-in-one flying platform that empowers you to create the unforgettable.

TRANSFORMING DESIGN

Strong carbon fiber arms lift out of sight, transforming the way you shoot. Get a full, unrestricted 360º view of the world below and create images like never before.

4K CAMERA

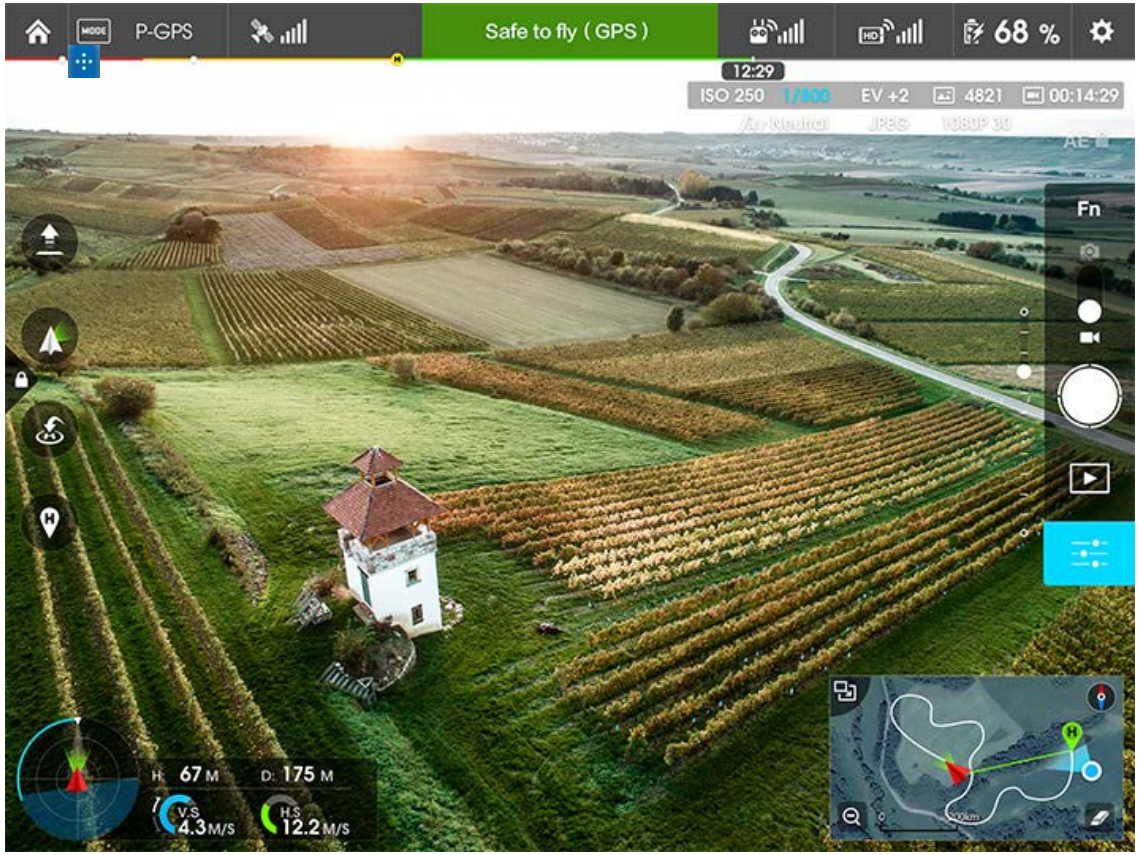
Shoot up to 4K video and capture 12 megapixel photos with the Inspire 1 camera. The lens consists of 9 separate elements, including an aspherical element, for extreme clarity, while Adobe DNG RAW support gives you the power to make every shot a masterpiece.

4K Video @30FPS

9 Element Lens

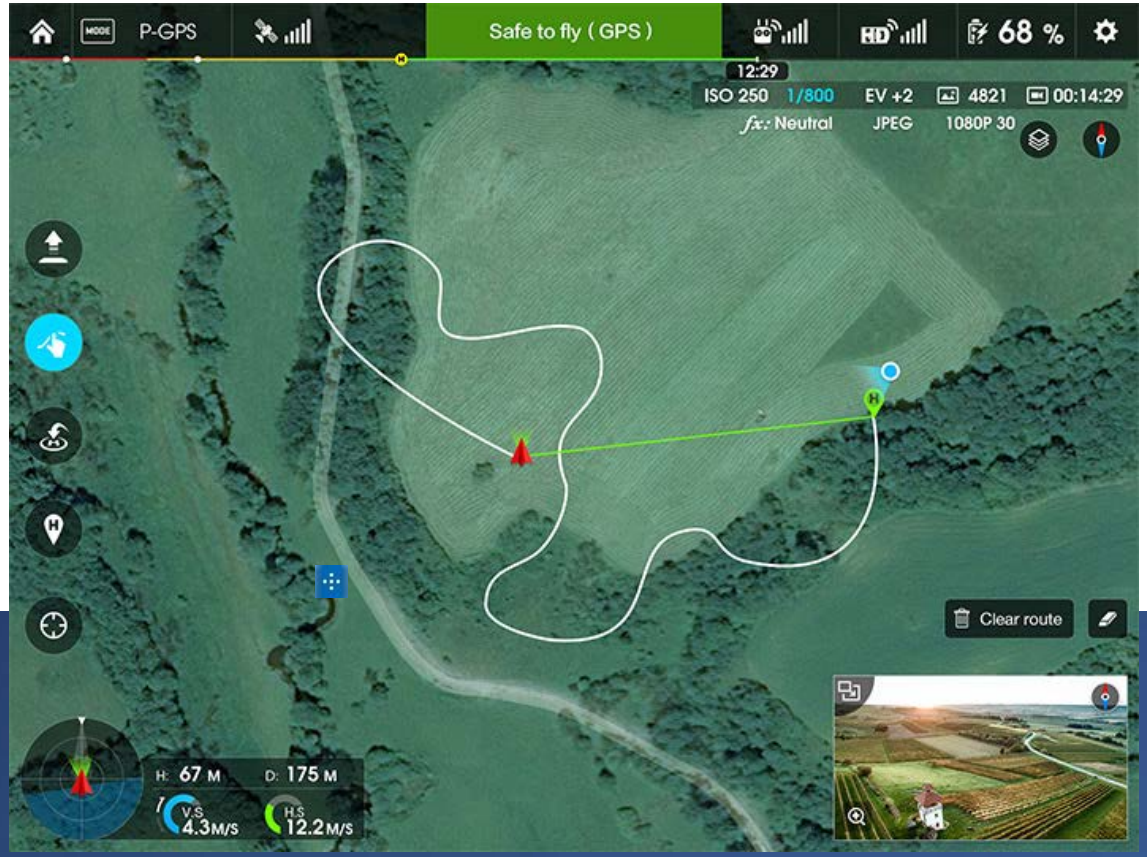
12 Million Pixels

Adobe DNG Support



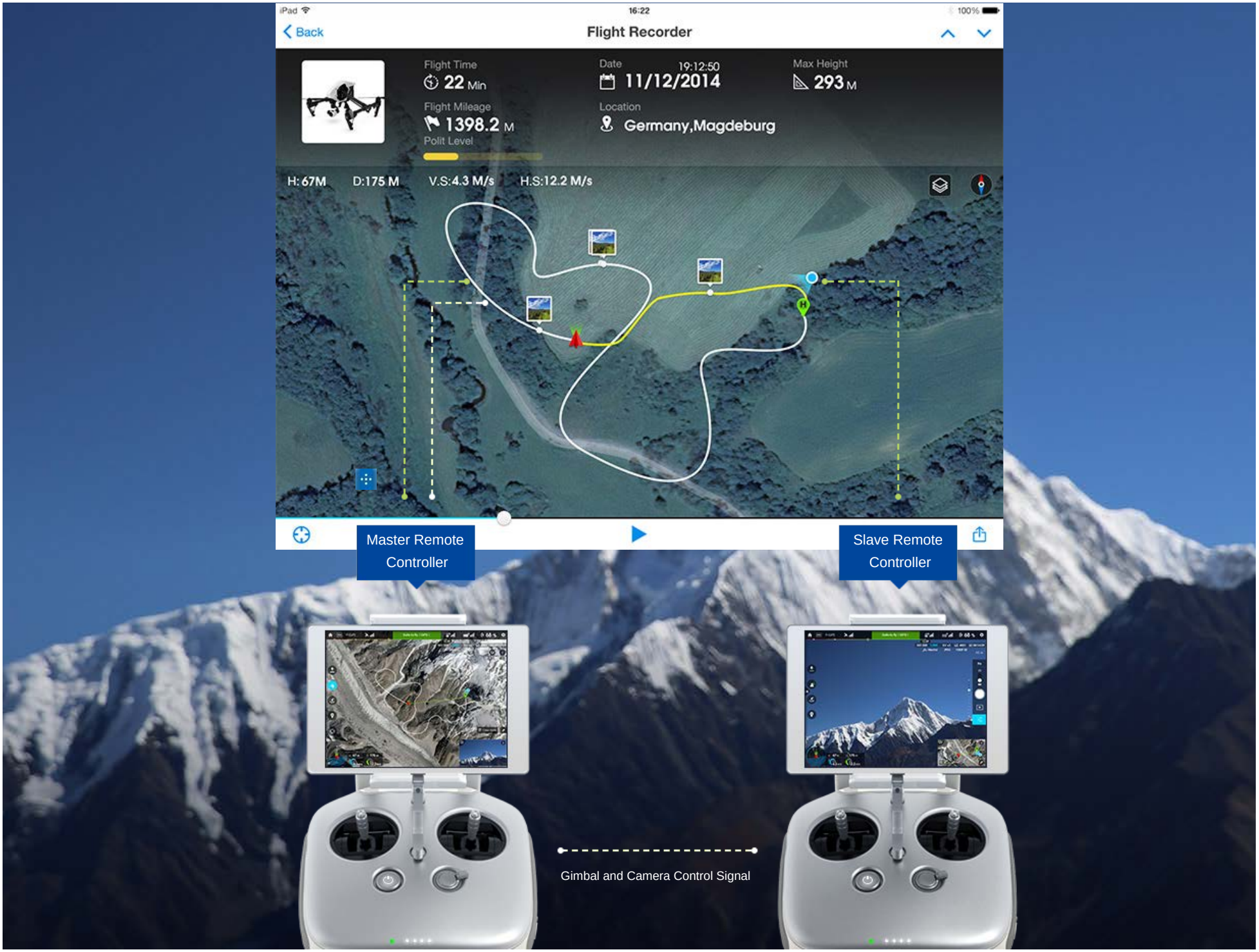
FULL-FEATURED APP

Take complete control of your camera and flight system with a comprehensive mobile app. Everything from manual camera controls to flight telemetry and even auto takeoff and landing are just a tap away, with more functions and updates coming soon.



OPTIONAL DUAL-OPERATOR CONTROL

Fly with a friend and share your vision. Achieve shots that never would have been possible alone by using two remote controllers. One person flies, while the other controls the camera.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Polit Level
H: 67M
D:175 M
V.S:4.3 M/s
H.S:12.2 M/s
Master Remote Controller
Slave Remote Controller
Gimbal and Camera Control Signal

VISION POSITIONING SYSTEM

Flying indoors is easier than ever with Vision Positioning technology that provides accurate position holding even when GPS is unavailable. The sensors determine your Inspire 1's location and altitude and lower the legs automatically when landing.

More Features

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INSPIRE 1

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INSPIRE 1

Everything you need for aerial filmmaking, integrated into an elegant, ready-to-fly system.

ADVANCED, READY-TO-FLY DESIGN

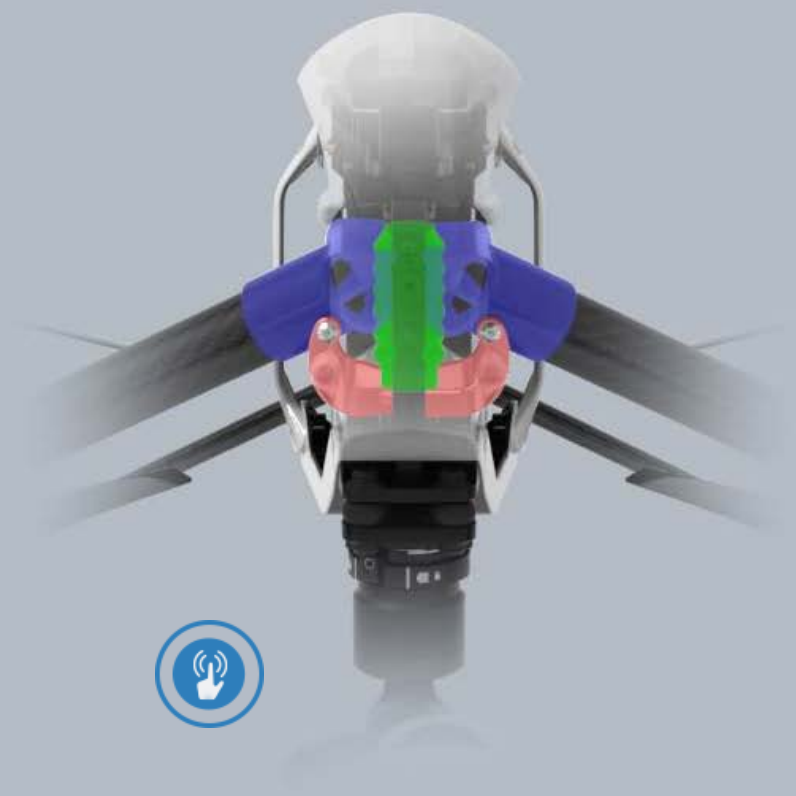
Imagine holding the future in your hands. Designed to be powerful while lightweight, flexible while providing the stability you need, the Inspire 1 is DJI's most advanced complete package. All of the latest aerial technology is packed into one simple, ready-to-fly system, putting you in the sky within minutes.

LEARN MORE

POWERFUL PROPULSION SYSTEM

The Inspire 1's propulsion system is unique among all flight platforms. We re-engineered and re-built the system to handle the demands of advanced flight, while increasing efficiency and reliability.

LEARN MORE



AERODYNAMIC TRANSFORMING DESIGN

Carbon fiber arms give you the strength to maneuver in the air and they transform, moving out of the camera's way at the flick of a switch. With a full 360º unobstructed view, you now have the freedom to capture shots independent of the direction you are flying.

Every part, every component of the Inspire 1 was engineered to be durable and lightweight. The body's aerodynamic design cuts through the sky and further enhances your control over the aircraft. This ensures long flight times and a long operational life.

MODULAR, UPGRADEABLE SYSTEM

Inspire 1's gimbal and camera system can be removed from the aircraft for safe transport and future upgrades.

NEW CAMERA AND GIMBAL SYSTEM

Get crystal clear images with DJI's most advanced camera to date. The gimbal holding your camera is the result of DJI's years of expertise in camera stabilization, giving you smooth, stable footage in any flight conditions.

- Video: 4K @ 24-30 fps, or 1080p @ 24-60fps,
- Photos: 12 Megapixels
- Lens: 9 elements in 9 groups including an aspherical element
- 1/2.3 inch CMOS sensor
- 94º wide-angle FOV
- 3-axis, 360 rotating gimbal

LEARN MORE

LIVE HD VIEW

A beautiful, 720p HD view shows you exactly what your camera sees at all times. Frame your shots and fly as though you're in the sky yourself.

This is made possible by an all new and improved version of DJI's Lightbridge technology which can transmit video from up to 2km away.

CREATE TOGETHER

For an even greater level of precision, use a second remote controller and fly with a friend. With two operators controlling the same Inspire 1, one person pilots the flight path while the other aims the gimbal and camera.

Each user can have their own screen to see exactly what is being shot in real-time. By working in tandem, you're capturing shots that are more complex and artistic than ever before.

LEARN MORE

FLY INDOORS AND WITHOUT GPS USING VISION POSITIONING SYSTEM

Indoor flight has always been a true test of skill for all levels of pilots. DJI's new Vision Positioning technology uses a specially designed camera as well as sonic waves to bring simplicity to flying indoors. This technology allows the Inspire to hold its position, stop when the controls are released, and respond to your commands even when GPS is unavailable.

LEARN MORE

INTELLIGENT POWER MANAGEMENT SYSTEM

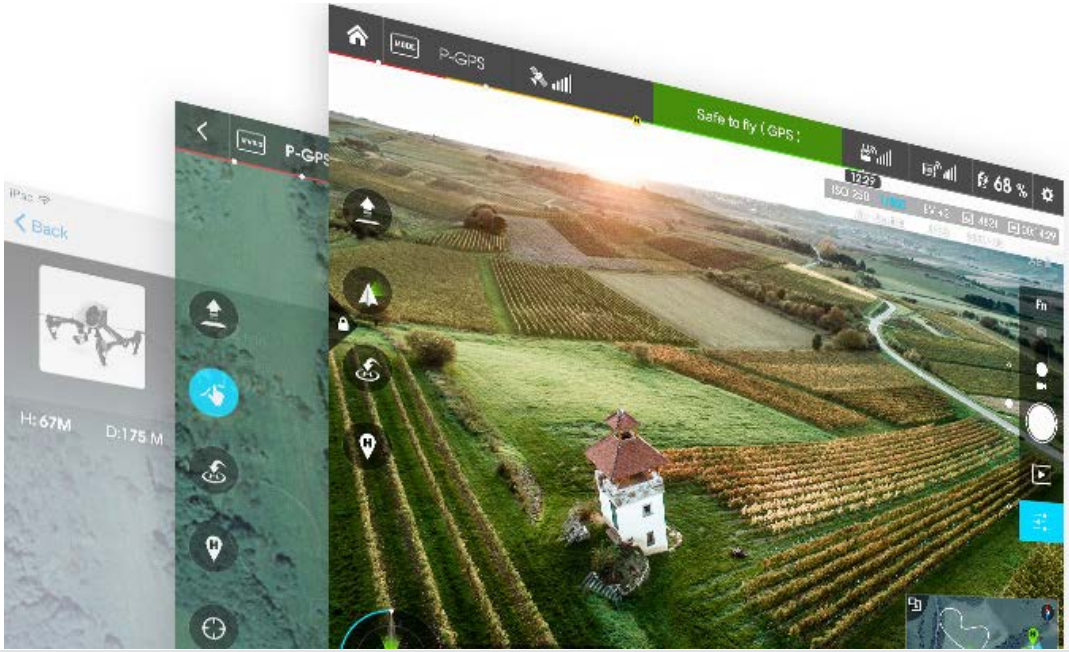
A fully integrated intelligent battery powers your Inspire 1 and virtually manages itself.

When in flight, your remaining battery power is shown live, letting you know how long you can continue to fly. Advanced algorithms calculate the distance of your aircraft and estimated time to return home, letting you know when it's time to fly back.

The battery reports the voltage of each cell, the total lifetime charges and discharges, and the overall health and battery status. All this helps you keep your Inspire 1 in the air and flying for years to come.

FULL-FEATURED APP

Install the mobile app onto your phone or tablet and you'll see what your Inspire 1 sees while taking control of its camera and flight settings.



MANUAL MODE

Change all of your camera settings, including ISO, White Balance, Exposure, and more on the fly ensuring every shot looks exactly the way you want.

LIVE MAP AND RADAR

See precisely where your Inspire 1 is at all times on the live map. The map can be enlarged when needed and shows your most recent flight path.

DYNAMIC HOME POINT

When GPS signal is available on the remote, the Home Point automatically refreshes. This becomes useful while traveling in a car or on a boat allowing the return-to-home point to move where the operator goes. Multiple configurations are available via the Dynamic Home Point function.

AUTO-TAKEOFF AND LANDING

Takeoff and landing is easier than ever before, with both functions just a tap away. Tap once to takeoff and your Inspire 1 will hover and transform, ready to start filming. Then tap again to make it transform into landing mode and auto land.

FLIGHT TELEMETRY

All of the information you need to fly safely is just a glance away. Altitude, flight speed, distance, and more are right at your fingertips.

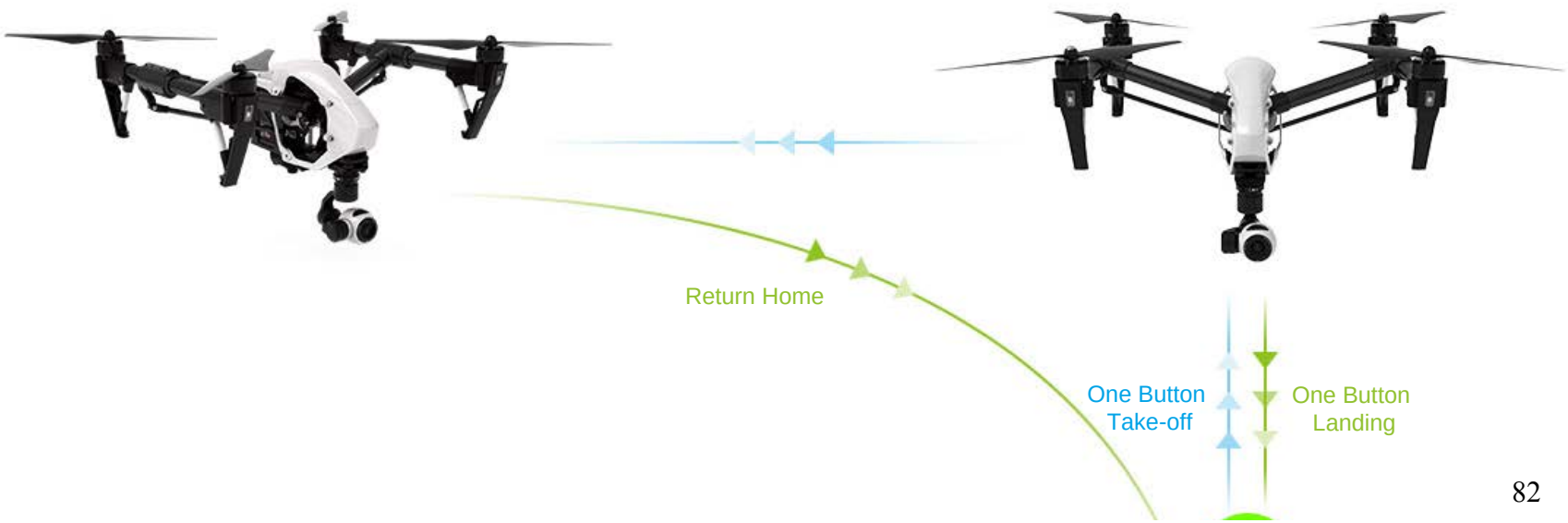
REMOTE CONTROL CUSTOMIZATION

Put yourself in charge by tailoring the Inspire 1's controls to your personal needs. This way, your Inspire 1 moves and responds in ways you're most comfortable with.

THE COMPLETE PACKAGE,
AND THE LATEST TECHNOLOGY,
FROM THE MOST TRUSTED NAME IN AERIAL PLATFORMS,
DJI.

DEDICATED CONTROLS

Take absolute control of your Inspire 1 with DJI's most sophisticated remote controller to date. Featuring dedicated buttons for photo and video capture, a gimbal control dial, an integrated rechargeable battery and more, it's easy and intuitive to fly. The controller has an mini-HDMI and USB port allowing you to connect mobile devices or compatible screens.



EASY, SAFE FLIGHT

Even if you've never flown before, taking off and landing your Inspire 1 is easy and safe. It takes just one tap to make your Inspire 1 takeoff and transform, ready to start filming. Then tap again to have it transform into landing mode and land.

When GPS is available, the Home Point (the location you are standing) automatically refreshes, so your Inspire 1 always knows where you are even if you move around. When you tell it to come back, or in case of an emergency, it knows exactly where to go and land safely.

A COMPLETE READY-TO-FLY SYSTEM

Everything you need is included and ready to go, offering you a complete aerial filmmaking tool in one box. Just add your mobile device or other screen to use the live HD view.

INSPIRE 1 CAMERA MOUNT

Take the Inspire 1 camera from the air to the ground with this handheld system.
Coming soon.

INSPIRE 1

Aircraft

Model	T600
Weight (Battery Included)	2935 g
Hovering Accuracy (GPS Mode)	Vertical: 0.5 m Horizontal: 2.5 m
Max Angular Velocity	Pitch: 300°/s Yaw: 150°/s
Max Tilt Angle	35°
Max Ascent Speed	5 m/s
Max Descent Speed	4 m/s
Max Speed	22 m/s (ATTI mode, no wind)
Max Flight Altitude	4500 m
Max Wind Speed Resistance	10 m/s
Max Flight Time	Approximately 18 minutes
Motor Model	DJI 3510
Propeller Model	DJI 1345
Indoor Hovering	Enabled by default

	Operating Temperature Range	-10° to 40° C
	Diagonal Distance	559 to 581 mm
	Dimensions	438x451x301 mm
Gimbal	**Model**	ZENMUSE X3
	Output Power (With Camera)	Static: 9 W In Motion: 11 W
	Operating Current	Station: 750 mA Motion: 900 mA
	Angular Vibration Range	±0.03°
	Mounting	Detachable
	Controllable Range	Pitch: -90° to +30° Pan: ±320°
	Mechanical Range	Pitch: -125° to +45° Pan: ±330°
	Max Controllable Speed	Pitch: 120°/s Pan: 180°/s
Camera	**Name**	X3
	Model	FC350
	Total Pixels	12.76M
	Effective Pixels	12.4M
	Image Max Size	4000x3000
	ISO Range	100-3200 (video) 100-1600 (photo)

	Electronic Shutter Speed	8s 1/8000s
	FOV (Field Of View)	94°
	CMOS	Sony EXMOR 1/2.3”
	Lens	20mm (35mm format equivalent)f/2.8 focus at ∞ 9 Elements in 9 groups Anti-distortion
	Still Photography Modes	Single shoot Burst shooting: 3/5/7 frames Auto Exposure Bracketing (AEB): 3/5 bracketed frames at 0.7EV Bias Time-lapse
	Video Recording Modes	UHD (4K): 4096x2160p24/25, 3840x2160p24/25/30 FHD: 1920x1080p24/25/30/48/50/60 HD: 1280x720p24/25/30/48/50/60
	Max Bitrate Of Video Storage	60 Mbps
	Supported File Formats	FAT32/exFAT Photo: JPEG, DNG Video: MP4/MOV (MPEG-4 AVC/H.264)
	Supported SD Card Types	Micro SD Max capacity: 64 GB. Class 10 or UHS-1 rating required.
	Operating Temperature Range	0° to 40° C
Remote Controller	**Name**	C1
	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
	Video Output Port	USB, mini-HDMI
	Power Supply	Built-in battery

	Charging	DJI charger
	Dual User Capability	Host-and-Slave connection
	Mobile Device Holder	Tablet or Phone
	Max Mobile Device Width	170mm
	Output Power	9 W
	Operating Temperature Range	-10° to 40° C
	Storage Temperature Range	Less than 3 months: -20° to 45° C More than 3 months: 22° to 28° C
	Charging Temperature Range	0-40° C
	Battery	6000 mAh LiPo 2S
Charger	**Model**	A14-100P1A
	Voltage	26.3 V
	Rated Power	100 W
Battery (Standard)	**Name**	Intelligent Flight Battery
	Model	TB47
	Capacity	4500 mAh
	Voltage	22.2 V
	Battery Type	LiPo 6S High voltage battery

	Energy	99.9 Wh
	Net Weight	570 g
	Operating Temperature Range	-10° to 40° C
	Storage Temperature Range	Less than 3 months: -20° to 45° C More than 3 months: 22° C to 28° C
	Charging Temperature Range	0° to 40° C
	Max Charging Power	180 W
Battery (Optional)	**Name**	Intelligent Flight Battery
	Model	TB48
	Capacity	5700 mAh
	Voltage	22.8 V
	Battery Type	LiPo 6S
	Energy	129.96 Wh
	Net Weight	670 g
	Operating Temperature Range	-10° to 40° C
	Storage Temperature Range	Less than 3 months: -20 to 45° C More than 3 months: 22° to 28° C
	Charging Temperature Range	0° to 40° C
	Max Charging Power	180 W
Vision Positioning	**Velocity Range**	Below 8 m/s (2 m above ground)

	Altitude Range	5-500 cm
	Operating Environment	Brightly lit (lux > 15) patterned surfaces
	Operating Range	0-250 cm
DJI Pilot App	**Mobile Device System Requirements**	iOS 8.0 or later Android 4.1.2 or later
	Supported Mobile Devices	* Compatible with iPhone 5s, iPhone 6, iPhone 6 Plus, iPad Air, iPad Air Wi-Fi + Cellular, iPad mini 2, iPad mini 2 Wi-Fi + Cellular, iPad Air 2, iPad Air 2 Wi-Fi + Cellular, iPad mini 3, and iPad mini 3 Wi-Fi + Cellular. This app is optimized for iPhone 5s, iPhone 6, and iPhone 6 Plus. * Samsung S5, Note 3, Sony Xperia Z3, Google Nexus 7 II, Google Nexus 9, Mi 3, Nubia Z7 mini *Support for additional Android devices available as testing and development continues