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

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

August 25, 2015

Exemption No. 12589
Regulatory Docket No. FAA−2015−2321

Mr. Robert Naylor
NAYLOR SOLUTIONS INC.
24165 IH-10 West
Suite 217-456
San Antonio, TX 78257

Dear Mr. Naylor:

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

By letter dated May 11, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of NAYLOR SOLUTIONS INC. (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial videography and photography.

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

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

Airworthiness Certification

The UAS proposed by the petitioner is a DJI Inspire 1.

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

The Basis for Our Decision

You have requested to use a UAS for aerial data collection[1]. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA−2014−0352), 11109 to Clayco, Inc. (*see* Docket No. FAA−2014−0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA−2014−0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

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

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

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, NAYLOR SOLUTIONS INC. is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a)

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

and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, NAYLOR SOLUTIONS INC. is hereafter referred to as the operator.

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

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

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

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

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

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

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

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating

documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS−80) may be contacted if questions arise regarding updates or revisions to the operating documents.

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

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

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

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

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

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal

government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

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

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

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

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

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

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

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The

exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

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

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

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

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

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

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

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

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be

reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

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

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

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

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

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

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

Sincerely,

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

Enclosures

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May 11, 2015

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

Re: Exemption Request Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations from 14 C.F.R. 45.23(b);14 CFR Part 21;14 CFR 61.113 (a) & (b); 13 C.F.R. 61.133(a); 91.7 (a);91.9 (b) (2);91.103(b); 91.109;91.119; 91.121; 91.151(a);91.203(a) & (b);91.405 (a); 91.407(a) (1);91.409 (a) (2);91.417 (a) & (b).

Dear Sir(s)/Madam(s):

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 ("**Reform Act**") and 14 C.F.R. Part 11, Naylor Solutions Inc., a Texas based company and the operator of a DJI Inspire 1 ("UA"), seeks an exemption from the Federal Aviation Regulations ("**FARs**") as listed and discussed below.

Naylor Solutions Inc.'s team has flown its UAS, for recreational purposes, for hundreds of hours without incident. Naylor Solutions Inc.'s UAS are equipped to take aerial videography and photography to enhance awareness for those individuals and companies unfamiliar with the geographical layout of certain areas and augment real estate listings and promote the use of certain real estate properties which provides an enhancement to academic research being performed in certain geographical areas ("***purpose***").

Naylor Solutions Inc.'s exemption request will permit the operation of comparatively inexpensive UAS in tightly controlled, predetermined and limited airspace. This airspace will include areas away from general public, airports, heliports and vehicular traffic for community videos, and within property boundaries for real estate listing videos and photos.

Currently, similar lightweight, remote controlled UAS are legally operated by unmonitored and untrained amateur hobbyists with no safety plan or controls in place to prevent catastrophic events. Naylor Solutions Inc. has safety protocols and controls in place to avoid and prevent public hazards as well as preventing the interference with manned aircraft which could cause a hazard or catastrophe. This acts to enhance safety protocols unique to Naylor Solutions Inc.'s lightweight UAS being utilized specifically for real estate videography and photography. Naylor Solutions Inc. hopes to be able to record flight data and other information gained through permitted flight operations which may be shared with the FAA through any required FAA reports to assist with the development of future FAA protocols and safety regulations.

The use of Naylor Solutions Inc.'s UAS for these purposes reduces the need to operate conventional aircraft, typically needed to perform these types of operations, provides an economic benefit to the business consumer as the Naylor Solutions Inc. UAS provides higher quality imagery at a fraction of the cost of aerial videography and photography using conventional aircraft. These savings result in not only enhanced efficiency and productivity for the affected activities but added environmental and safety benefits to the public at large.

As described more fully below, Naylor Solutions Inc.'s requested exemption would authorize commercial operations of aerial videography and photography, using Naylor Solutions Inc.'s UAS, which will be operated under controlled conditions at an altitude of no greater than three hundred (300) feet AGL in airspace that is limited in scope and will have automated control features. Naylor Solutions Inc.'s UAS will also be operated by an individual who has passed an FAA approved ground training exam, if required by the FAA. As outlined below, the airspace in which Naylor Solutions Inc.'s UAS will operate within will be disclosed to the FAA in advance to flight operation. Finally, Naylor Solutions Inc.'s UAS will be used in lieu of comparatively hazardous operations now conducted with fixed wing and rotary conventional aircraft which should reassure the FAA that these operations will achieve at least an equivalent level or greater level of safety.

In the interest of economic efficiency and public safety, Naylor Solutions Inc. hereby respectfully applies for an exemption from the listed FARs to allow commercial operations of Naylor Solutions Inc.'s UAS, so long as such operations are conducted within and under the conditions outlined herein or as may be established by the FAA as required by Section 333. Approval of this exemption would thereby enhance safety and fulfill the Secretary of Transportation's ("Administrator") responsibilities under Section 333(c) of the Reform Act to "establish requirements for the safe operation of such aircraft systems in the national airspace system."

As discussed above and more fully described below, the requested exemption would permit the operation of small, unmanned and relatively inexpensive UAS under controlled conditions in airspace that is limited and predetermined. Approval of this exemption would thereby enhance safety and fulfill the Administrator responsibilities to "...establish requirements for the safe operation of such aircraft systems in the national airspace system." Please see Section 333(c) of the Reform Act.

The name and address of the applicant is:

NAYLOR SOLUTIONS INC.
24165 IH-10 West, Suite 217-456
San Antonio, Texas 78257
(210) 336 0174

REGULATIONS FROM WHICH THE EXEMPTION IS REQUESTED

14 C.F.R. Part 21
14 C.F.R. 45.23(b)
14 C.F.R. 61.113(a) & (b)
13 C.F.R. 61.133(a)
14 C.F.R. 91.7(a)
14 C.F.R. 91.9(b)(2)
14 C.F.R. 91.103
14 C.F.R. 91.109
14 C.F. R. 91.119
14 C.F.R. 91.121
14 C.F.R. 91.151(a)
14 C.F.R. 91.203(a) & (b)
14 C.F.R. 91.405(a)
14 C.F.R. 91.407(a)(1)
14 C.F.R. 91.409(a)(2)
14 C.F.R. 91.417(a) & (b)

This exemption application is expressly submitted to fulfill Congress' goal in passing Section 333(a) through (c) of the Reform Act. This law directs the Secretary of Transportation to consider whether certain unmanned aircraft systems may operate safely in the national airspace system (NAS) before completion of the rule making required under Section 332 of the Reform Act. In making this determination, the Secretary is required to determine which types of UAS do not create a hazard to users of the NAS or the public or pose a threat to national security in light of the following:

- The UA's size, weight, speed, and operational capability;
- Operation of the UAS in close proximity to airports and populated areas; and
- Operation of the UAS within visual line of sight ("VLOS") of the operator.

Reform Act§ 333 (a).

Lastly, if the Secretary determines that such vehicles "may operate safely in the national airspace system, the Secretary shall establish requirements for the safe operation of such aircraft in the national airspace system." Id. §333(c) (emphasis added).1

The Federal Aviation Act expressly grants the FAA the authority to issue exemptions. This statutory authority by its terms includes exempting civil aircraft, as the term is defined under §40101 of the Act; that includes UAS, from the requirement that all civil aircraft must have a current airworthiness certificate.

The Administrator may grant an exemption from a requirement of a regulation prescribed under subsection (a) or (b) of this section or any sections 44702-44716 of this title if the Administrator finds the exemption in the public interest. 49 U.S.C. §44701(f). See also 49 USC §44711(a); 49 USC §44704; 14 CFR §91.203 (a) (1).

Naylor Solutions Inc.'s UAS are rotorcraft weighing less than five (5) pounds (2.26796 Kg) including energy source(s), equipment and any payload. They operate, under normal conditions at a ground speed of no more than thirty (30) knots and have the capability to hover, and move in the vertical and horizontal plane simultaneously. The UAS will operate only in line of sight and within safe operations. Such operations will insure that the UA will "not create a hazard to users of the national airspace system or the public."3

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1 Naylor Solutions Inc. interprets this provision to place the duty on the Administrator to not only process applications for exemptions under Section 333, but for the Administrator to craft conditions for the safe operation of the UA, if it should be determined that the conditions set forth herein do not fulfill the statutory requirements for approval. 3 Reform Act Section 333 (b).

Given the small size of the UAS involved and the restricted environment within which they will operate, Naylor Solutions Inc. falls squarely within that zone of safety (an equivalent level of safety) in which Congress envisioned that the FAA must, by exemption, allow commercial operations of UAS to commence immediately. Also due to the size of the UAS and the restricted areas in which the relevant UAS will operate, approval of the application presents no national security issue. Given the clear direction in Section 333 of the Reform Act, the authority contained in the Federal Aviation Act, as amended; the strong equivalent level of safety surrounding the proposed operations, and the significant public benefit, including enhanced safety, reduction in environmental impacts, including reduced emissions associated with allowing UAS for aerial videography and photography operations, the grant of the requested exemptions is in the public interest. Additionally, there is economic efficiency created with the use of Naylor Solutions Inc.'s UAS as the typical cost to perform aerial videography and photography with helicopters and airplanes heavily multiplies the cost to business consumers and government agencies, including law enforcement, for the services which are to be provided by Naylor Solutions Inc..

THE EXTENT AND BASIS OF THE RELIEF SOUGHT BY NAYLOR SOLUTIONS INC.

Naylor Solutions Inc. submits this application in accordance with the Reform Act, 112 P.L. 95 §§ 331-334, seeking relief from any currently applicable FARs operating that presently prevents Naylor Solutions Inc. from contemplated commercial video-graphic, photographic and other flight operations within the national airspace system. The Reform Act in Section 332 provides for such integration of civil unmanned aircraft systems into our national airspace system as it is in the public's interest to do so. Naylor Solutions Inc.'s UAS meet the definition of "small unmanned aircraft" as defined in Section 331 and therefore the integration of Naylor Solutions Inc.'s ultralight weight UAS is expressly contemplated by the Reform Act. Naylor Solutions Inc. would like to operate its ultralight weight UAS prior to the time period by which the Reform Act requires the FAA to promulgate rules governing such craft. Thereby, providing direct experience and valuable information for formal regulation that can be administered uniformly to all real estate related UA aerial videography and photography. The Reform Act guides the Administrator in determining the types of UAS that may operate safely in our national airspace system. These considerations include: weight, size, speed and overall capabilities of the UAS; whether the UAS will be operated near airports or heavily populated areas and; whether the UAS will be operated by line of sight. [4]Each of these items is favorable to the grant of an exemption to Naylor Solutions Inc.. Naylor Solutions Inc.'s UAS utilize four (4) counter-rotating propellers for balance, control and stability. Naylor Solutions Inc. UAS are equipped with GPS and auto return safety technology. Naylor Solutions Inc.'s UAS weigh less than five (5) pounds including camera and gimbal assembly.

[4] 112 P.L. 95 § 333 (a).

Naylor Solutions Inc. puts safety first when considering any UA flight. Naylor Solutions Inc's, small UAS are designed to hover in place via GPS and operate in less than a 24 knot (27 mph) wind. In order to increase safety plus stability and limit harm and financial loss of property, Naylor Solutions Inc. will not fly its UAS in winds exceeding 15 knots (17 mph). Naylor Solutions Inc.'s established safety systems include a GPS mode that allows its UAS to hover in place when radio controls are released. Naylor Solutions Inc.'s UAS have three modes to choose from, Naylor Solutions Inc. utilizes the Intelligent Orientation Control (IOC) Flight (with GPS & compass module)[5] for aerial videography and photography. This mode is the safest, most reliable and stable mode to prevent accidents and being a hazard to others. When pilot communication is lost, Naylor Solutions Inc.'s UAS are designed to return then slowly descend to the point of takeoff. Naylor Solutions Inc. does not operate its UAS near airports, hospitals, police heliports or news channel heliports. Naylor Solutions Inc. does not operate its UAS in areas where general public is within fifty (50) to one hundred (100) yards depending on location, conditions and weather. Naylor Solutions Inc.'s pilots and observers are constantly on alert for any manned aircraft and prepared to immediately abort and land the UA at the nearest and safest ground point in the event a manned aircraft approaches or the Naylor Solutions Inc. pilot or observer suspects a manned aircraft may approach the operating area of a Naylor Solutions Inc.'s UA. Naylor Solutions Inc's UAS are capable of vertical and horizontal operations, and are flown only within my line of sight of the pilot. Naylor Solutions Inc.'s UA flights generally last fifteen (15) minutes with an altitude under three hundred (300) and utilize battery power rather than combustible fuels. Naylor Solutions Inc. does not operate its UAS below the manufacturer's recommended minimum charge levels for operation preferring to remain well within a safe operating range to insure adequate communication between radio control and the UAS to eliminate potential for crashes, loss of control or hazard. Fully charged reserve batteries are on hand with to insure replacement for a sufficiently safe level of operation. Naylor Solutions Inc. operates very conservatively and does believe in taking risks that may cause a crash or that could create hazard to the public, property and manned aircraft. Naylor Solutions Inc.'s pilots have logged numerous practice flights in order to simulate flights for future commercial use to gain familiarization with the characteristics of this specific UA's performance under different temperature and weather conditions.

Naylor Solutions Inc. is extremely cautious when operating of its UAS and will not "create a hazard to users of the national airspace system or the public."[6] Given the small size and weight of Naylor Solutions Inc.'s UAS, they fall well within Congress's contemplated safety zone when it promulgated the Reform Act and the corresponding directive to integrate UAS into the national airspace system. Naylor Solutions Inc.'s UAS, utilized in hobby flight, has a demonstrable safety record and do not pose any threat to the general public or national security.

5 Intelligent Orientation Control (IOC) Flight (with GPS & compass module) includes safe circle for operation, position hold, self-leveling, altitude command, GPS, return home feature, and safety control to return home or land in the event of communication interruption between RC transmitter and UAS. See Exhibit "1" - Inspire 1 User Manual.

6 112 P.L. 95 § 333 (b).

NAYLOR SOLUTIONS INC.'S REQUEST WILL BENEFIT THE PUBLIC AT LARGE

Aerial videography and photography for geographical awareness and for real estate marketing and promotion has been around for a long time through the use of manned fixed wing aircraft and helicopters. The challenge of smaller real-estate companies and average landowners is that the expense related to manned videography and photography is cost prohibitive. Typically, only large businesses, large high end real estate companies and high net worth landowners are able to absorb such an enormous expense. This deprives non-luxury landowners and small revenue real estate companies from the enjoying the benefit of this valuable marketing and promotional tool. Manned aircraft pose a clear threat to the general public through potential catastrophic crashes that may occur. The rear many documented events where a manned aircraft has crashed into populated areas with the size and combustibility of these manned aircraft causing large property damage, human injuries and loss of life. Naylor Solutions Inc.'s UAS pose no such threat since size and lack of combustible fuel alleviates any of these potential threat to the public.

With the passage of the Reform Act, Congress has already proclaimed that it is in the public's interest to integrate commercially flown UAS into the national airspace system. The grant of the exemption request by Naylor Solutions Inc. furthers the public interest through academic and visual awareness of the geographical benefits of certain areas and by making this cost effective alternative available to small real estate companies and the average landowner. Naylor Solutions Inc.'s ultralight UAS are battery powered and create no emissions that may harm the environment. In the unlikely event of a Naylor Solutions Inc. UA crash, the consequence is far less than a full size helicopter or fixed wing aircraft, which are heavy and contain combustible fuel, crashing and causing catastrophic devastation to the public.

The public's interest is furthered as Naylor Solutions Inc. minimizes ecological and crash threat by permitting aerial videography and photography captured through Naylor Solutions Inc.'s battery operated ultralight UA's. Permitting Naylor Solutions Inc. to immediately fly within national air space furthers not only public safety but economic growth.

Granting Naylor Solutions Inc.'s exemption request substantially furthers the economic impact for any community and for companies looking to relocate or build in a certain community as well as individuals looking to relocate to a community for career advancement through academic and geographical awareness provided by Naylor Solutions Inc.. In the end, the granting of this exemption to Naylor Solutions Inc. will serve as a benefit and stimulus to any community.

NAYLOR SOLUTIONS INC.'S EXEMPTION WILL NOT ADVERSELY AFFECT SAFETY AND WILL PROVIDE A LEVEL OF SAFETY AT LEAST EQUAL TO EXISTING FAA STANDARDS

Naylor Solutions Inc.'s exemption will not adversely affect safety, as it will in fact enhance safety. Naylor Solutions Inc.'s ability to log significant, controlled and monitored flight time in FAA controlled airspace will allow Naylor Solutions Inc. to contribute to the innovation and implementation of new, novel and undiscovered safety protocols for realtors that may be embraced by the NAR[2] through consistent and ongoing cooperation with the FAA. Additionally, the FAA may utilize the new safety protocols for the use of UAS in FAA controlled airspace for all industries.

Naylor Solutions Inc. submits the following representations of enhancements to current aerial videography and photography:

- Naylor Solutions Inc.'s UAS weigh less than 5 pounds (2.26796 Kg) complete with the camera and gimbal assembly;
- Naylor Solutions Inc. will only operate its UAS below three hundred (300) feet which is well within the four hundred (400) feet ceiling having been established by the Reform Act of2012;
- Naylor Solutions Inc.'s UAS only operate for fifteen (15) minutes per flight;
- Naylor Solutions Inc. lands its UAS prior to manufacturer's recommended minimum level of battery power;
- Naylor Solutions Inc.'s pilots operate the UAS through Visual Line of Sight only;
- Naylor Solutions Inc.'s UAS have a GPS flight safety feature whereby the UA hovers and then slowly lands if communication with the pilot is lost;

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2 National Association of Realtors, http://www.realtor.org/

- Naylor Solutions Inc. actively analyzes its flight data and other sources of information to constantly update and enhance its safety protocols;

- Naylor Solutions Inc. only operates in reasonably safe environments which are strictly controlled and away from power lines, elevated lights, airports and actively populated areas;

- Naylor Solutions Inc. conducts extensive pre-flight inspections and protocol to ensure safety remains the primary concern;

- Naylor Solutions Inc. always obtains all necessary permissions from the FAA and landowners prior to the operation its UAS and;

- Naylor Solutions Inc. has established safety procedures in place to abort flights in the event of safety breaches or any potential danger.

Naylor Solutions Inc.'s safety protocols provide a level of safety equal to or exceeding existing FAA rules. It is important to note that absent the integration of commercial UAS into our national airspace system, manned fixed wing airplanes and helicopters are the primary means of aerial videography and photography for community awareness and real estate uses. While the safety record of such helicopters is outstanding, there have been incidents involving loss of life as well as extensive property damage due to crashes of these manned aircraft and it is far safer and less expensive to operate a battery powered Naylor Solutions Inc.'s ultralight UAS to accomplish the same task. The potential for loss of life is great diminished with a UA as Naylor Solutions Inc.'s UAS carry no people or fuel on board and the UAS are also very small and versatile which allows Naylor Solutions Inc. to avoid hazards quickly and safely.

Accordingly, Naylor Solutions Inc. respectfully requests that the FAA grant the requested exemption without delay.

AIRCRAFT AND EQUIVALENT LEVEL OF SAFETY

Naylor Solutions Inc. proposes that the exemption requested herein apply to civil aircraft that have the characteristics and that operate with the limitations listed herein. These limitations provide for at least an equivalent or even higher level of safety to operations under the current regulatory structure because the proposed operations represent a safety enhancement to the operations conducted with conventional aircraft. The FAA has noted in past exemptions that "Conventional aerial video operations, using jet or piston-powered aircraft present risks associated with aircraft that weigh in the neighborhood of 5,000 to 7,000 pounds or more, carry large quantities of fuel, passengers, and, in some cases, cargo. Such aircraft must fly to and from the survey location. Please see FAA Exemption 11110.

These limitations and conditions to which Naylor Solutions Inc. agrees to be bound when conducting all operations under an FAA issued exemption include:

1. The UAS will weigh less than five (5) pounds (2.26796 Kg).

2. Maximum total flight time for each operational flight will be fifteen (15) minutes. Flights will be terminated at thirty percent (30%) battery power reserve should that occur prior to the fifteen (15) minute limit.

3. Flights will be operated at an altitude of no more than three hundred (300) feet AGL.

4. Minimum crew for each operation will consist of the UA Pilot and a Visual Observer ("VO").

5. The UASwill only operate within a safe area.

6. A briefing will be conducted with regard to the planned UA operations prior to flight operations. It will be mandatory that all personnel who will be performing duties with regard to the flight operations be present for this briefing.

7. The Pilot and VO will have been trained in operation of UAS generally and received up-to-date information on the particular UA to be operated and the UA will be operated in conformity with Naylor Solutions Inc.'s protocols.

8. The PILOT and VO will at all times be able to communicate via voice communication.

9. Written and/or oral permission from the relevant property holder(s), or their authorized representative(s), will be obtained.

10. All required permissions and permits will be obtained from territorial, state, county or city jurisdictions, including local law enforcement, fire, or other appropriate governmental agencies.

11. If the UA loses communications or loses its GPS signal, the UA will return to the launch site of the UA, or another more appropriate site, and land.

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

14 C.F.R. PART 21, SUBPART H: AIRWORTHINESS CERTIFICATES 14 C.F.R. §91.203 (A) (1)

Subpart H, entitled Airworthiness Certificates, establishes the procedural requirements for the issuance of airworthiness certificates as required by FAR §91.203 (a) (1). Given the size and limited operating area associated with the aircraft to be utilized by Naylor Solutions Inc., an exemption from Part 21 Subpart H meets the requirements of an equivalent level of safety under Part 11 and Section 333 of the Reform Act. The Federal Aviation Act (49 U.S.C.§44701 (f)) and Section 333 of the Reform Act both authorize the FAA to exempt aircraft from the requirement for an airworthiness certificate, upon consideration of the size, weight, speed, operational capability, and proximity to airports and populated areas of the particular UA. In all cases, an analysis of these criteria demonstrates that the UA operated without an airworthiness certificate,

in the restricted environment and under the conditions proposed will be at least as safe, or safer, than a conventional aircraft (fixed wing or rotorcraft) operating with an airworthiness certificate without the restrictions and conditions proposed.

The UAS to be operated hereunder is less than five (5) pounds (2.26796 Kg) fully loaded, carries neither a pilot nor passenger, carries no explosive materials or flammable liquid fuels, and operates exclusively within a secured area. Unlike other civil aircraft, operations under this exemption will be tightly controlled and monitored by both the operator, and under the requirements and in compliance with local public safety requirements, to provide security for the area of operation as is now done with conventional aerial videography and photography. Lastly, application of these same criteria demonstrates that there is no credible threat to national security posed by the UAS, due to its size, speed of operation, location of operation, lack of explosive materials or flammable liquid fuels, and inability to carry a substantial external load.

14 C.F.R. § 45.23 (B). MARKING OF THE AIRCRAFT

The regulation requires:
When marks include only the Roman capital letter "N" and the registration number is displayed on limited, restricted or light-sport category aircraft or experimental or provisionally certificated aircraft, the operator must also display on that aircraft near each entrance to the cabin, cockpit, or pilot station, in letters not less than 2 inches nor more than 6 inches high, the words "limited," "restricted," "light-sport," "experimental," or "provisional," as applicable.

Even though the UAS will have no airworthiness certificate, an exemption may be needed as the UAS will have no entrance to the cabin, cockpit or pilot station on which the words "limited," "restricted," "light-sport," "experimental," or "provisional," may be placed. Given the size of the UAS, two-inch lettering will be impossible. The word "experimental," or any other term as is so required, will be placed on the fuselage of the UAS in compliance with §45.29 (t).

The equivalent level of safety will be provided by having the UAS marked on its fuselage as required by §45.29 (t) where the pilot, observer and others working with the UAS will see the identification of the UAS as "Experimental." The FAA has issued the following exemptions to this regulation to Exemptions Nos. 10700, 8738, 10167 and 10167A.

14 C.F.R. § 61.113(A) & (B); 61.133(A): PRIVATE PILOT PRIVILEGES AND LIMITATIONS; PILOT IN COMMAND; COMMERCIAL PILOT PRIVILEGES

AND LIMITATIONS: PILOT IN COMMAND

Section 61.113(a) & (b) limit private pilots to non-commercial operations. Unlike a conventional aircraft that carries a pilot, passengers, and cargo, the UA in this case is remotely controlled with no passengers or property of others on board. Section 61.133(a) requires an individual with a commercial pilot's license to be pilot in command of an aircraft for compensation or hire. Naylor Solutions Inc. respectfully proposes that operator requirements should take into account the characteristics of the particular UA. Naylor Solutions Inc.'s UAS have various built-in technical capabilities that strictly limit the potential for operation outside of the operating conditions set forth in the exemption application including a fly back to launch point to terminate the flight. Since hobbyists are not required to have a pilot license, Naylor Solutions Inc. requests exemption for the need of the pilot to be licensed as a pilot by the FAA.

- Detection of lost GPS or of insufficient satellites initiates an immediate return to launch location.
- Low power on the aircraft triggers escalating alarms at 30% and 15% levels.
- The aircraft weighs less than five (5) pounds (2.26796 Kg), fully loaded.

Given these safety features, Naylor Solutions Inc. proposes that operators of the UAS should only be required to hold a private pilot's license and not a commercial pilot's license.

Naylor Solutions Inc. notes that the FAA has found that safety factors permitted operation of UAS by operators with these qualifications in the case of operations pursuant to public COAs where the mandatory operating conditions specified above are present. Please see Federal Aviation Administration, Notice N-8900.227, Unmanned Aircraft Systems (UAS) Operational Approval, at 20-21 (July 30, 2013). The FAA has the statutory authority, granted at 49 U.S.C.§44701(f) to waive the pilot requirements for commercial operations.

Given these conditions and restrictions, an equivalent level of safety will be provided by allowing operation of Naylor Solutions Inc.'s UAS without a commercial pilot's license, under the conditions set forth herein.

The risks associated with the operation of Naylor Solutions Inc.'s UAS (given its size, speed, operational capabilities, and lack of combustible fuel) are so diminished from the level of risk associated with private pilot operations or commercial operations contemplated by Part 61 with conventional aircraft (fixed wing or rotorcraft), that allowing operations of the UAS as set forth above meets or exceeds the present level of safety provided under 14 C.P.R. § 61.113(a) &

(b) and does not rise to the level of requiring a commercial pilot to operate the aircraft under §61.133(a).

Sections 61.113 (a) & (b) limit private pilots to non-commercial operations. Because the UAS will not carry a pilot or passengers, the proposed operations can achieve the equivalent level of safety of current operations by requiring the PILOT operating the aircraft to have a private pilot's license rather than a commercial pilot's license to operate these small UAs. Unlike a conventional aircraft that carries the pilot and passengers, the UAS are remotely controlled with no living thing on board. The area of operation is controlled and restricted, and all flights are planned and coordinated in advance. The level of safety provided by Naylor Solutions Inc.'s exceeds that provided by a single individual holding a commercial pilot's certificate operating a conventional aircraft. The risks associated with the operation of the UAS are so diminished from the level of risk associated with commercial operations contemplated by Part 61 when drafted, that allowing operations of the UAS as requested with a private pilot as the PILOT exceeds the present level of safety achieved by 14 C.P.R. §61.113 (a) & (b).

14 C.F.R. §91.7(A): CIVIL AIRCRAFT AIRWORTHINESS

The regulation requires that no person may operate a civil aircraft unless it is in airworthy condition. As there will be no airworthiness certificate issued for the aircraft, should this exemption be granted, no FAA regulatory standard will exist for determining airworthiness. Given the size of the aircraft and the requirements for maintenance and use of safety check lists prior to each flight.

14 C.F.R. § 91.9 (B) (2): CIVIL AIRCRAFT FLIGHT MANUAL IN THE AIRCRAFT

Section 91.9 (b) (2) provides:

> No person may operate a U.S. registered civil aircraft ...
>
> (2) For which an Airplane or Rotorcraft Flight Manual is not required by §21.5 of this chapter, unless there is available in the aircraft a current approved airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof.

The UAs, given their size and configuration has no ability or place to carry such a flight manual on the aircraft, not only because there is no pilot on board, but because there is no room or capacity to carry such an item on the aircraft.

The equivalent level of safety will be maintained by keeping at the ground control point where the pilot flying the UAS will have immediate access to it. The FAA has issued the following exemptions to this regulation: Please see FAA Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, 10167A, 10602,32827, and 10700.

14 C.F.R. § 91.103: PREFLIGHT ACTION

This regulation requires each pilot in command to take certain actions before flight to insure the safety off light. As FAA approved rotorcraft flight manuals will not be provided for the aircraft an exemption will be needed. An equivalent level of safety will be provided. The PILOT will take all actions including reviewing weather, flight battery requirements, landing and takeoff distances and aircraft performance data before initiation of flight.

14 C.F.R. §91.109: FLIGHT INSTRUCTION

Section 91.109 provides that no person may operate a civil aircraft (except a manned free balloon) that is being used for flight instruction unless that aircraft has fully functioning dual controls.

UAS and remotely piloted aircraft, by their design do not have fully functional dual controls. Flight control is accomplished through the use of a control box that communicates with the aircraft via radio communications. The FAA has approved exemptions for flight training without fully functional dual controls for a number of aircraft and for flight instruction in experimental aircraft. Please see FAA Exemption Nos. 5778K & 9862A. The equivalent level of safety is provided as neither a pilot nor passengers will be carried in the aircraft and by the size and speed of the aircraft.

14 C.F.R. §91.119: MINIMUM SAFE ALTITUDES

Section 91.119 establishes safe altitudes for operation of civil aircraft. Section 91.119(d) allows helicopters to be operated at less than the minimums prescribed, provided the person operating the helicopter complies with any route or altitudes prescribed for helicopters by the FAA. As this exemption is for UAS that are a helicopter and the exemption requests authority to operate at altitudes up to three hundred (300) feet AGL, an exemption may be needed to allow such operations. As set forth herein, except for the limited conditions, the UAS will never operate at higher than three hundred (300) feet AGL. It will however be operated in a restricted area with security perimeter, where buildings and people will not be exposed to operations without their pre- obtained consent.

(a) Except as provided in § 91.715, no person may operate a civil aircraft unless it has within it the following:

(1) An appropriate and current airworthiness certificate. . . .

(b) No person may operate a civil aircraft unless the airworthiness certificate required by paragraph (a) of this section or a special flight authorization issued under §91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew.

The UAS fully loaded weight is no greater than five (5) pounds (2.26796 Kg) and is operated without an onboard pilot. As such, there is no ability or place to carry certification and registration documents or to display them on the UA.

An equivalent level of safety will be achieved by keeping these documents at the ground control point where the pilot flying the UA will have immediate access to them to the extent they are applicable to the UA. The FAA has issued numerous exemptions to this regulation. A representative sample of other exceptions includes Exemption Nos. 9565, 9665, 9789, 9789A, 9797, 9797A, 9816A, and 10700.

14 C.F.R. §91.405 (A); 407 {A) (1); 409 (A) (2); 417(A) & (B): MAINTENANCE INSPECTIONS

These regulations require that an aircraft operator or owner "shall have that aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter...," and others shall inspect or maintain the aircraft in compliance with Part 43.

Given that these section and Part 43 apply only to aircraft with an airworthiness certificate, these sections will not apply to Naylor Solutions Inc.. Maintenance will be accomplished by the operator pursuant to the flight manual and operating handbook. An equivalent level of safety will be achieved because these small UAS are very limited in size and will carry a small payload and operate only in restricted areas for limited periods of time. If mechanical issues arise the UAS may land immediately and will be operating from no higher than three-hundred (300) feet AGL. The operator will ensure that the UAS are in working order prior to initiating flight, perform required maintenance, and keep a log of any maintenance performed. Moreover, the operator is the person most familiar with the aircraft and best suited to maintain the aircraft in an airworthy condition to provide the equivalent level of safety.

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

Naylor Solutions Inc. seeks an exemption from the following rules:

14 C.F.R. §21, subpart H; 14 C.F.R 45.23(b);14 C.F.R. §§ 61.113(a) & (b);91.7 (a); 91.9 (b) (2);91.103(b);91.109; 91.119; 91.121; 91.151(a);91.203(a) and (b); 91.405 (a); 91.407 (a) (1); 91.409 (a) (2); 91.409 (a) (2) and 91.417 (a) & (b) to operate commercially a small unmanned vehicle weighing less than fifty-five (55) pounds (25 Kg) in its operations.

Approval of exemptions allowing commercial operations of UAS in the purposes outlined above (or similar operations) will enhance safety by reducing risk. Conventional aerial videography and photography operations, using jet or piston power aircraft, operate at extremely low altitudes just feet from the object being photographed and often in extreme proximity to people and structures; and present the risks associated with vehicles that weigh in the neighborhood of four thousand (4,000) pounds, carrying large amounts of jet A or other fuel (one hundred and forty (140)gallons for jet helicopters). Such aircraft must fly to and from the site's location. In contrast, a UA weighing less than five (5) pounds (2.26796 Kg) pounds and powered by batteries eliminates virtually all of that risk given the reduced mass and lack of combustible fuel carried on board.

The UA is carried to the site of the purposes outlined above (or similar operations) and not flown to the site. The UA will carry no passengers or crew and, therefore, will not expose them to the risks associated with manned aircraft flights.

The operation of small UAS, weighing less than five (5) pounds (2.26796 Kg), conducted in the strict conditions outlined above, will provide an equivalent level of safety supporting the grant of the exemptions requested herein, including exempting Naylor Solutions Inc. from the requirements of Part 21 and allowing commercial operations. These lightweight aircraft operate at slow speeds, close to the ground, and in a sterile environment and, as a result, are far safer than conventional operations conducted with turbine helicopters operating in close proximity to the ground and people.

PRIVACY

All flights will occur over private, controlled or approved property with the property owner's, or their authorized representative, prior consent and knowledge. The aerial videography and photography will be of structures and property whose owner, or authorized representative, has consented to the aerial videography and photography or otherwise have agreed to be in the area where aerial videography and photography will take place. The grant of this exemption request will provide improved safety in all operations.

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 ranting of the requested exemptions allowing commercial operation of Naylor Solutions Inc.'s UAs.

SUMMARY OF Naylor Solutions Inc.'S REQUEST FOR AN FAA EXEMPTION

1. Naylor Solutions Inc.'s UAS must weigh less than five (5) pounds (2.26796 Kg), including energy source(s) and equipment. Operations authorized by the grant of an exemption are limited to the following aircraft: Naylor Solutions Inc.'s UA aircraft variant, bearing serial **#W13DCB14020600** onward as additional UAS are utilized by Naylor Solutions Inc. provided the additional UAS are of the same or similar specifications as the UA bearing serial **#W13DCB14020600**. Any proposed operations of any other aircraft will require a new petition or a petition to amend this grant.

2. Naylor Solutions Inc.'s UAS may not be flown at a ground speed exceeding thirty (30) knots.

3. Naylor Solutions Inc.'s flights must be operated at an altitude of no more than three hundred (300) feet above ground level (AGL), as indicated by the procedures. All altitudes reported to ATC must be in feet AGL.

4. Naylor Solutions Inc.'s UAS must be operated within the VLOS of the PILOT at all times. This requires the PILOT to be able to use human vision unaided by any device other than corrective lenses.

5. All Naylor Solutions Inc. operations must utilize a VO. The VO may be used to satisfy the VLOS requirement as long as the PILOT always maintains VLOS capability. The VO and PILOT must be able to communicate verbally at all times.

6. Prior to each flight the PILOT must inspect the UA 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 aircraft is prohibited from operating until the necessary maintenance has been performed and the UA is found to be in a condition for safe flight. A Ground Control Station, if utilized, must be included the preflight inspection. All maintenance and alterations must be properly documented in the aircraft records.

7. Any UA that has undergone maintenance or alterations that affect the UA's operation or flight characteristics, e.g. replacement of a flight critical component, must undergo a functional test flight. The PILOT who conducts the functional test flight must make an entry in the UA's aircraft records of the flight.

8. Naylor Solutions Inc. must follow the manufacturer's UA aircraft/component, maintenance, overhaul, replacement, inspection, and life limit requirements. When unavailable, aircraft maintenance/component/overhaul, replacement, and inspection/maintenance requirements must be established and identified. At a minimum, requirements for the following may be included in protocols and controls to be established by Naylor Solutions Inc.:

a. Actuators/Servos;
b. Transmission (single rotor);
c. Power plant (motors);
d. Propellers;
e. Electronic speed controller;
f. Batteries;
g. Mechanical dynamic components (single rotor);
h. Remote command and control;
1. Ground control station (if used); and
J. Any other components as determined by Naylor Solutions Inc..

10. Prior to operations conducted for the purposes outlined above (or similar operations), the PILOT must have accumulated and logged, in a manner consistent with 14 CFR § 61.51(b), a minimum of twenty-five (25) hours of total time as a UA rotorcraft pilot (single blade or multi-rotor) and at least ten (10) hours logged as a UA pilot with multi-rotor UA which is similar to the UA to be utilized pursuant to this exemption. Prior documented flight experience that was obtained in compliance with applicable regulations may satisfy this requirement. Training, proficiency, and experience-building flights must be conducted under an exemption to accomplish the required flight cycles and flight time. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PILOT must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

11. Prior to operations conducted for the purposes outlined above (or similar operations), the PILOT must have accumulated and logged, in a manner consistent with 14 CFR § 61.51(b), a minimum of five (5) hours as a UA pilot operating the make and model of UAS to be utilized for operations under the exemption and three (3) take-offs and three (3) landings in the preceding ninety (90) days. Training~ proficiency, experience-building, and take-off and landing currency flights can be conducted under the grant of exemption to accomplish the required flight time and ninety (90) day currency. During training, proficiency, experience-building, and take-off and landing currency flights all persons not essential for flight operations are considered nonparticipants, and the PILOT must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

12. Naylor Solutions Inc. shall not permit the PILOT to operate the UAS for the purpose of aerial videography or photography (or similar operations), unless the PILOT has demonstrated and logged in a manner consistent with 14 CFR 61.51 (b), the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles and structures.

13. The UA may not be operated directly over any person, except authorized and consenting personnel and persons, below an altitude that is hazardous to persons or property on the surface in the event of a UA's failure or an emergency.

14. At all times, those persons must be essential to the purposes outlined above (or similar operations). Because these procedures are specific to participating persons, no further FSDO or aviation safety inspector approval is necessary for reductions to the distances specified in Naylor Solutions Inc.'s manuals.

15. Naylor Solutions Inc.'s flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:

a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately and/or;

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 PILOT has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard, and;

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

16. If the UAS lose communications or loses its GPS signal, the UAS must return to a pre-determined location within the security perimeter and land or be recovered.

17. The UAS must abort the flight in the event of unpredicted obstacles or emergencies.

18. Each UA operation must be completed within fifteen (15) minutes flight time or with thirty percent (30%) battery power remaining, whichever occurs first.

19. Naylor Solutions Inc. must obtain an Air Traffic Organization (ATO) issued Certificate of Waiver or Authorization (COA) prior to conducting any operations under this grant of exemption. This COA will also require Naylor Solutions Inc. to request a Notice to Airman (NOTAM) not more than seventy-two (72) hours in advance, but not less than forty- eight (48) hours prior to the operation.

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

21. Naylor Solutions Inc. has developed procedures to document and maintain a record of the UA ' s maintenance, preventative maintenance, alterations, status of replacement/overhaul component parts, and the total time in service of the UAs.

22. Each UA operated under this exemption must comply with all manufacturer Safety Bulletins.

23. The preflight inspection section in Naylor Solutions Inc.'s Confidential Protocols and Controls Exhibit includes the following requirement: The preflight inspection must account for all discrepancies, i.e. inoperable components, items, or equipment, not covered in the relevant preflight inspection.

24. Before conducting operations, the radio frequency spectrum used for operation and control of the UA must comply with the Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

25. The documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PILOT at the Ground Control Station, if utilized, of the UA at any time the UA is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

26. Naylor Solutions Inc.'s UAS must remain clear and yield the right of way to all other manned operations and activities at all times (including, but not limited to, ultralight vehicles, parachute activities, parasailing activities, hang gliders, etc.).

27. Naylor Solutions Inc.'s UA operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

28. Naylor Solutions Inc.'s UAS may not be operated by the PILOT from any moving device or vehicle.

29. Naylor Solutions Inc.'s UAS may not be operated less than five-hundred (500) feet below or less than two-thousand (2,000) feet horizontally from a cloud or when visibility is less than three (3) statute miles from the PILOT.

30. Naylor Solutions Inc.'s UA may not operate in Class B, C, or D airspace without written approval from the FAA. The UA may not operate within five (5) nautical miles of the geographic center of a non-towered airport as denoted on a current FAA-published aeronautical chart unless a letter of agreement with that airport's management is obtained, and the operation is conducted in accordance with a NOTAM as required by the Naylor Solutions Inc.'s COA. The letter of agreement with the airport management must be made available to the Administrator upon request.

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

32. Naylor Solutions Inc.'s UAS, the UA's PILOT, and the UA's operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

Therefore, Naylor Solutions Inc. respectfully requests the FAA grant an exemption pursuant to its application as outlined above. Thank you for your consideration to this request.

Sincerely,

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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.

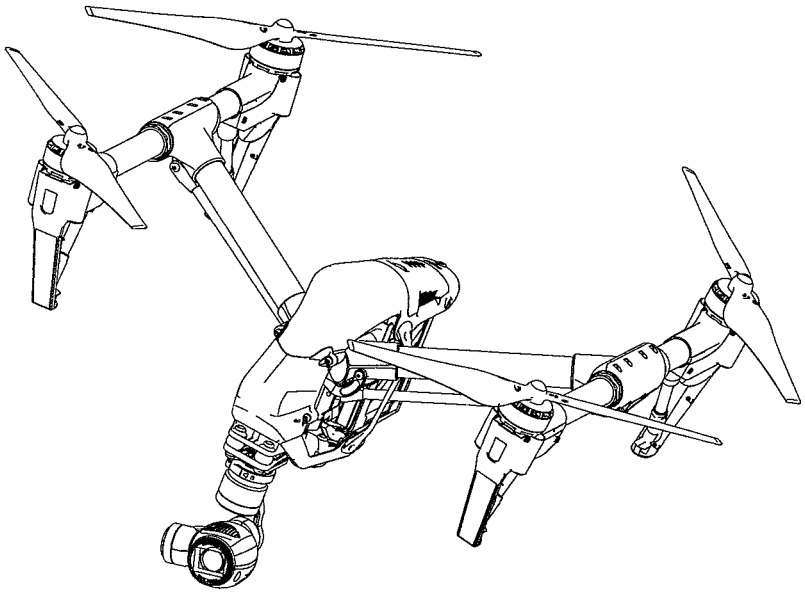
Download the latest version from
http://www.dji.com/product/inspire-1/download

INSPIRE 1

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.

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.

Parameter Settings

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

Battery

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

Storage and Transportation

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

Maintenance and Upkeep

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

Flight Environment Requirements

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

Flight Warnings

Failsafe and Return to Home

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

Low Battery

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

Vision Positioning System

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

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.

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 + C iPad mini 2, iPad mini 2 Wi-Fi + Cellular, iPad Air 2, iPad Air 2 Wi-Fi + Cellular, iPa 3, and iPad mini 3 Wi-Fi + Cellular. This app is optimized for iPhone 5s, iPhone 6, iPhone 6 Plus. * Samsung S5, Note 3, Sony Xperia Z3, Google Nexus 7 II, Google Nexus 9, Mi 3, Z7 mini *Support for additional Android devices available as testing and development continues