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

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

September 2, 2015

Exemption No. 12724
Regulatory Docket No. FAA−2015−2506

Mr. Timothy A. Selman
Realistic Image
1111 Classic Drive
Valrico, FL 33594

Dear Mr. Selman:

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 June 2, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Realistic Image (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography and videography for inspections, sales, advertising, free services to public services, and nature monitoring.

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, Realistic Image is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

[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.

Conditions and Limitations

In this grant of exemption, Realistic Image 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 September 30, 2017, unless sooner superseded or rescinded.

Sincerely,

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

Enclosures

June 2, 2015

Timothy A. Selman

Realistic Image
1111 Classic Dr.
Valrico, FL. 33594

Dear Sir or Madam,

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

Realistic Image Aircraft:

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

• Inspire 1 is a UAS Quadcopter made by DJI that has a fixed gimbal and camera attached to the bottom. Inspire 1 has a maximum weight of 6.47lbs. (2965 grams), and a maximum range of 2000m.

• Inspire 1 has built in telemetry to allow the operator to see all onboard information relating to the safety of flight including but not limited to battery percentage remaining, overall health of the operating system, built-in GPS for position hold and automatic return-to-home, and multiple fail-safes for maximum safety.

• The onboard camera allows the operator to record High Definition video, as well as take camera stills. The video is transmitted real-time to the control and operator allowing the operator to see images to all sides of the UAS utilizing an Apple iPad Air as a monitor for operations.

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

• The Inspire 1 will be operated with a 5700maH lithium polymer battery allowing for flight times not to exceed 22 minutes. (The Inspire allows for a pre-set to indicate 30% Battery remaining, which will be set to this as a warning reminder to allow for safe landing times).

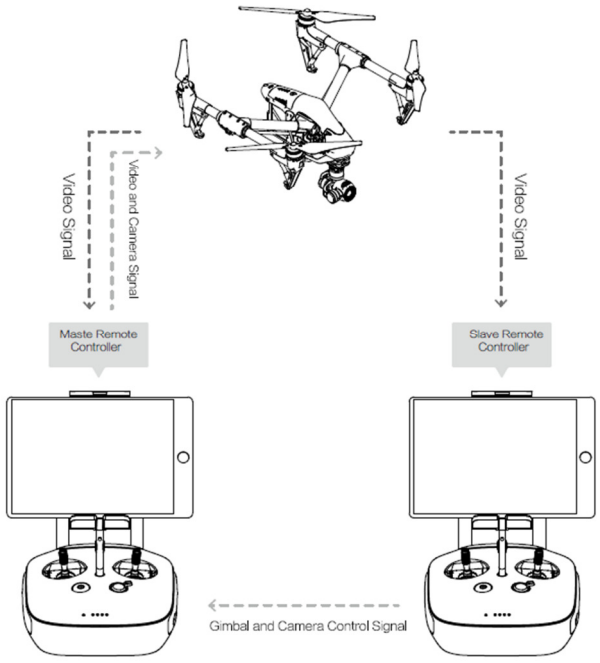
Ground Based Guidance and Control System used with the Inspire 1 :

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

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

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

Flight Control Operator :



• The exclusive operator will be the owner of the Inspire 1. (Timothy A. Selman)

• Over 15 years of remote control experience for controlling small unmanned flight systems.

• Spending over 5 years operating quad rotor units similar to the Inspire 1, and very familiar with **Dji** (Manufacture of the Inspire) and the operation of the Inspire 1 and all phantom units as well.

Unrelated, however may provide character information and intent.

• Certified NRA Firearms Instructor, for over 4 years. Practicing safety is of utmost concern.

• Over 35 years of professional Video & Photography experience working with camera cranes, electronics & aerial video from conventional and rotor aircraft.

NOTE: 2nd Control System may be used by another operator for control of the **camera ONLY**, and will have no influence on the operation of the flight system or flight path.

PRE-FLIGHT CHECK LIST:

This Pre-Flight Check List will be performed prior to every flight for the safety of people and the unit itself.

Prior to proceeding to fly always check area and be sure flight path is clear of obstructions and out of flight restricted area.

1) ---Fully charge remote and battery
2) ---close ALL apps in Ipad AND put it in airplane mode to avoid all interference.
3) ----make sure the DJI pilot app is closed.
4) ----Make sure prop locks are secure
5) ----Turn Remote on FIRST Then Power up Inspire 1.
6) ----Turn ios app on
7) ----Make sure all firmware is up to date and the app confirms it
8) ----Check for interference in Lightbridge, adjust channel as required.
9) ----Check Altitude settings and Distance limit.
10) ----Press Camera button and be sure you have a link.
11) ----Calibrate Compass
12) ----Be certain that both RX & TX get a good sat lock on GPS a min of 6 satellites.
13) ----Be certain that you are not in a restricted flight area.
14) ----Press both sticks inwards and down ..mark your home – **BE SURE TO CONFIRM HOME POSITION!**

Ready to FLY

Realistic Image will comply with the following at all times when conducting commercial operations:

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

2. Our operating system will be programmed before all flights to avoid airports such not to accidentally fly too close to one. The onboard system will not allow the Inspire 1 to fly into such airspace. This is an automatic safety feature within the Inspire 1. However we will also do a map inspection for local airports and be sure to mark the area.

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

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

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

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

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

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

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

10. Areas of operation and intended use are attached to this document.

Our Intended use for the UAS (Inspire 1):

Realistic Image will be utilizing the UAS for multiple video and photo projects.
Including:

- **Insurance Inspections of Home and Property**

Florida is known for storm damage, we provide photography for this type of disaster already. However, using a UAS to conduct inspections of property and structures could save a significant amount of time and add a safety factor in many cases as to not sending a human in these environments and rubble. Realistic Image can use the UAS for an overview of the situation and provide documentation of the event that took place.

- **Large Structure Roofing Inspections**

Large Structure such as warehouse and buildings with thin tin roofing require safe methods for inspection. UAS provides a much safer alternative to having a person walk on the roofing.
The report feedback from video and photos can aid significantly in providing a cost summary for repair or the need for repair. With Florida weather there is a great need for this type of inspection.

- **Yacht Sales Photography and Videography**

In the State of Florida Realistic Image has found a great need to use UAS to capture video and photos for Yacht sales throughout the state. The use of UAS will offer our customers a cost effective alternative to conventional aircraft. Using the Inspire will provide a safer alternative and a much lower altitude method of capturing images.

- **Commercial Advertising Video and Photography**

Realistic Image has a significant amount of interest in taking video and photos for advertising in the central Florida area. Utilizing the UAS will offer a significant improvement to our company with regards to both safety and cost. A planned view from a higher perspective captured with a much safer alternative to ladders, helicopter or other methods of capturing this type of image.

- **Real Estate Photography and Videography**

We currently specialize in Real Estate photography and Florida is one of the fastest growing areas in America. By capturing images using a UAS, we can capture images to provide people with a more cost effective method. Currently we use boats for ocean views, by using the Inspire we can cut expense and provide a safer alternative.

- **FREE services offered to our community, firefighter and state officials.**

Our services will be offered if the need is required for after storm search, wild fire feedback to firefighters and additional services which may require a quick to dispatch low altitude monitoring system. These services will increase safety associated with law enforcement and search and rescue. The services will be offered free of charge to the community.

- **Nature Monitoring**

Florida is known for it's amazing array of bird population, by using a UAS to for aiding in studies will provide valuable feedback on population, breeding stats and other important information. The Inspire can fly at a low altitude distance away from them to offer this information without interference to the bird community. Realistic Image would provide this as a FREE service to select students of our local colleges. We truly enjoy working with the community when we can.

The current regulations that we seek exemption from are:

A. 14 CFR Part 21 (h) Airworthiness Certification

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

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

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

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

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

• Under this part, (a) no person may operate an aircraft unless it has within it the following; An appropriate and current airworthiness certificate. This part also includes regulations regarding the use of fuel tanks, which do not apply to the Inspire 1 because it operates on battery power only.

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

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

• Under this part, (a) no person may operate an aircraft below an altitude allowing, if power fails, an emergency landing without undue hazard.

(c) over other than congested areas an altitude below 500ft AGL.

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

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

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

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

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

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

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

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

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

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

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

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

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

I. 14 CFR Part 91 Subpart E; 91.409 Inspections

• This section provides details of the required inspection on an aircraft. No person will operate an aircraft unless in the preceding 12 months has had (1) an annual inspection (2) an issuance of an airworthiness certificate.

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

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

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

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

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

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

• We seek exemption from this part as our operator, while utilizing all available information for the safe operation of the UAS, will not have the above information available for most flights. The operator will use good judgement and all resources available to ascertain the information necessary for the safe operation of the UAS. A preflight inspection will be accomplished according to the manufactures instructions prior to each flight.

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

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

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

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

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

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

N. 14 CFR Part 45.23

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

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

DJI Inspire 1 Platform Specs

Camera

- 4K video at 24-30 fps
- 1080p video at 24-60fps
- 360 degree rotation, 135 degree tilt (using second controller)
- 12 megapixel photographs
- Burst shooting up to 7 shots per second
- 3-axis gimbal
- 1/2.3 in CMOS sensor
- Video formats: MOV or MP4
- Photo formats: JPEG and RAW
- Field of view: 94°

DJI Pilot App

- Live streaming HD view from camera
    - Low latency 1080p video from up to 1km away
- Manual mode camera controls, including ISO, white balance, exposure, file format, and filters
- Auto-takeoff and landing
- Dynamic home point
- Remaining battery life w/ return time estimates
- Live map with flight route and radar
- Flight telemetry data

Battery

- 18 minutes flight time
- 6-cell battery
- 4500 mAh
- Auto-discharge to prevent swelling

Remote Controller

- Operating frequency: 2.420GHz - 2.483GHz
- 6000 mAh rechargeable battery
- Dedicated buttons for photo and video capture
- Gimbal tilt control dial (top left)
- Camera settings control dial (top right)
- USB and HDMI ports active, with reserved micro-USB and CAN ports

Flight System

- Dimensions
    - Length: 44cm (17.3 inches)
    - Height: 30cm (11.8 inches)
    - Width: 45cm (17.7 inches)
    - Diagonal with arms lowered: 55.9cm (20 inches)
    - Diagonal with arms raised: 58.1cm (22.9 inches)
- Arms raise up during flight, allowing for 360° rotation without landing gears in the shot
- Weight: 2935g (almost 6.5 pounds) with camera, gimbal and battery
- Max takeoff weight: 3000g (6.6 pounds)
- Max horizontal flight speed: 22m/s (almost 50 mph)
- Max vertical flight speed:
    - Ascent: 5m/s (11.1 mph)
    - Descent: 4m/s (8.9 mph)
- Hover accuracy:
    - Vertical: 0.5m (1.6ft)
    - Horizontal: 2.5m (8.2ft)
- Max yaw angular velocity:
    - Pitch: 300°/s
    - Yaw 160°/s
- Max tilt angle: 30°
- Integrated no-fly zones
- Optical flow stabilizer
    - Allows stable indoors or non-GPS flight
    - Downward camera and ultrasonic sensors
    - Only usable at flight altitudes below 5 meters (16 feet)
    - Requires rich pattern surface with adequate lighting (Lux > 15)

Thank you for considering these exemptions.

If there is any additional information required please contact us.

Sincerely,

Timothy A. Selman
Realistic Image

tim@realisticimage.com