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

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

August 28, 2015

Exemption No. 12653
Regulatory Docket No. FAA–2015–1565

Mr. Joel Bredow
CEO
IR DISTRO INC
1142 Brabbs Street
Burton, MI 48509

Dear Mr. Bredow:

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 April 25, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of IR DISTRO INC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial photography, videography, research and development, and demonstrations.

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. However, the FAA received three comments in support of the petition made to the docket.

Airworthiness Certification

The UAS proposed by the petitioner are the ProSearch XLF Hex, ProCargo XLF x8, and the DJI Phantom 3.

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, IR DISTRO 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) and (b), to the

[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.

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, IR DISTRO 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 ProSearch XLF Hex, ProCargo XLF x8, and the DJI Phantom 3 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

IR DISTRO INC
1142 Brabbs St.
Burton MI 48509
1-248-240-3247
email: joel@irdistro.com
Joel Bredow
CEO

DATE: April 25, 2015

Re: Exemption Request Pursuant to Section 333 of the FMRA and Part 11 of the Federal Aviation Regulations, Seeking Exemption from:
14 C.F.R. Part 21 Subpart H
14 C.F.R. § 21.191(a)
14 C.F.R. § 45.23(b)
14 C.F.R. § 45.27
14 C.F.R. §§ 61.113(a) and (b)
14 C.F.R. § 91.l 19(c)
14 C.F.R. § 91.121
14 C.F.R. § 91.151(a)
14 C.F.R. § 91.405(a)
14 C.F.R. § 91.407(a) (l)
14 C.F.R. §§ 91.409(a) (l) and (2)
14 C.F.R. §§ 91.417(a) and (b)

Dear Sir or Madam:
Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA) and 14 C.F.R. Part 11, IR DISTRO INC hereby applies for an exemption from the listed Federal Aviation Regulations (" FARs") and any other necessary to allow operation of its small Unmanned Aircraft Systems ("UAS") for commercial photography, video, research/development and demonstration for thermal imaging cameras to police, search and rescue, fire departments, energy industry. Also many other uses like finding wildlife and agriculture monitoring.

Description of Petitioner

IR DISTRO INC is a manufacturer of cameras with spectrum of work includes integrating the thermal IR cameras into drones. We do live demos for potential government and non-government buyers. Thermal cameras can see in complete darkness and we need to demonstrate that, so we need to be able to fly at night after dark which requires an exemption. Also we provide a search and rescue service on as needed basis so a commercial exemption would be helpful to communicate with local Government Emergency Responders to supply them with thermal camera equipment. Also be a resource for developing night operation flight safety. IR DISTRO INC is asking for this exemption based on taking the human element out of harm's way in order to gather valuable data for critical decision making.

Research and Development

14 C.F.R. § 91.151(a): Fuel Requirements for Flight in VFR Conditions
Petitioner requests an exemption from 14 C.P.R.§ 91.151(a)'s fuel requirements for flight in VFR conditions. Section 91.151 states:
(a) No person may begin a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed -
(1) During the day, to fly after that for at least 30 minutes; or
(2) At night, to fly after that for at least 45 minutes.

Here, the technological limitations on UAS battery power means that no meaningful flight operations can be conducted while still maintaining a 30 minute reserve. IR DISTRO INC proposes that all flights comply with this requirement by mandating that the aircraft be safely landed with no less than 25% of battery life remaining. IR DISTRO INC thermal camera's requires continuous Research and development. We need to do night testing frequently in different areas to see how the camera reacts to different environments and conditions.

Equivalent Level of Safety

IR DISTRO INC has developed a product that incorporates two emerging technologies: remotely piloted UAS and thermal imaging. We seek to fly at night for 2 hours after dark below 200ft and less than 300ft from home point. This will be achieved by preprograming Height and distance with in Pixhawk Flight controller. IR DISTRO INC will conduct night time flight operation on private property lots of open space and not over any populated areas. IR DISTRO INC is asking for 2 hours after complete darkness to gather camera performance data. For night Operations a PIC and 2 Observers will be used to insure the highest level of safety. All night flights will be way beyond 5 miles from any airport; all local authorities will be notified prior to night flight operations. These precautions will meet the level of safety for FAA. IR DISTRO INC team consists of individuals who have been active members of the UAS hobbyist's community and have a combined team experience of over 10 years operating small UAS. As a result, they have a keen awareness of issues affecting the safe use of UAS and the importance of thorough planning for both normal operations and for contingencies that might affect the safety of flight.

This petition for exemption is submitted in accordance with the Section 333(a) through (c) of the FAA Modernization and Reform Act of 2012. Congress has directed the FAA "to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system." Pursuant to Section 333 of the Reform Act, the FAA Administrator is to permit unmanned aircraft systems to operate in the National Airspace System ("NAS") where it is safe to do so base on the following considerations:

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

Additionally, the FAA Administrator has general authority to grant exemptions from its safety regulations and minimum standards when the Administrator decides a requested exemption is in the public interest. *See* 49 U.S.C. § 106(f) (defining the authority of the Administrator); 49 U.S.C. § 44701(f) (permitting exemptions from§§ 44701(a), (b) and§§ 44702-44716, *et seq.).* A party requesting an exemption must explain the reasons why the exemption: (1) would benefit the public as a whole, and (2) would not adversely affect safety (or how it would provide a level of safety at least equal to the existing rules).

IR DISTRO INC research and development is a benefit to its emergency first responders, energy industries and agricultural industry: this technology will keep human lives safe by providing a proven product that has been tested to meet the highest safety standards for the use by government and non-government entities. Industry will have a resource on how to operate thermal cameras and how to conduct night operations safely and responsible. Sharing knowledge to keep people safe is an opportunity IR DISTRO INC will provide.

IR DISTRO INC. PROPOSED UAS OPERATIONS MEET THE REQUIREMENTS OF SECTION 333 OF THE REFORM ACT

The proposed operations in this petition for exemption qualify for expedited approval under Section 333 of the Reform Act. Each of the statutory criteria and other relevant factors are satisfied.

A. Approval is Warranted Based on the UAS's Size, Weight, Speed, and Operational Capability IR DISTRO INC will employ the ProSearch XLF Hex, ProCargo XLF x8 (four arms with 8 props) and the Phantom 3 quadcopter for its thermal camera platform drone operations. The ProSearch XLF and ProCargo XLF UAS have a maximum take-off weight of 12 pounds. The DJI Phantom 3 UAS has a maximum take-off weight of 2 pounds. The UAS's flight speed will not exceed 55 miles per hour, and it will not be flown in controlled airspace or at an altitude that exceeds 200 feet AGL. All flights will be flown in such a way that they can be safely terminated with a reserve battery power of 25% maximum charge. Both UAS does not carry any flammable propellant or fuel.

The Prosearch/ProCargo XLF also has redundant motor capabilities (added safety for night operations), and the vehicle is still capable of flight in the event a motor fails unexpectedly. The vehicle is capable of compensating for an engine loss automatically, and action is not required by the PIC. The Prosearch/ProCargo XLF also has features that can alert the PIC to the possibility of a lost link before it occurs. Because the video link is at a shorter wavelength than the control links, it is more susceptible to loss than the control link. Loss of the video signal warns the PIC that action should be taken to ensure continued control. In the event the control link is lost, the UAS is also equipped with LIDAR terrain following capabilities, Dual GPS system offering redundancy of 50-100% better resolution than current GPS modules. The Pixhawk controller is the market leading autonomous control. Also added safety features Strobe, GPS tracker, 3G/4G telemetry over IP network and Aircraft detection beacon for air space integration control a failsafe setting that permits the vehicle to return to a preselected home point.

The DJI Phantom 3 is a light weight UAS platform made of Plastic body with no sharp or hard edges characterized by a high level of pre-programmed controls and various built-in technical capabilities (programming of a geo-fence and height limitations) that prevent the operator from doing a mission outside of the operating limits. All flights are Pre-programmed with DJI Pilot App, 6 satellites are needed to initiate take off with GPS guidance and do not require human intervention; nevertheless human override is possible by clicking one of the multiple “action” buttons or by using the remote controller provided with each DJI system. The New DJI Phantom 3 has ground detection sonar to maintain GEO space location if GPS is lost. In the case of unplanned events either the autopilot reacts immediately, or the operator can choose between different pre-programmed or manual actions. Those procedures include a Flight Termination System (emergency landing procedure, triggered by the autopilot or the operator in charge: given its very light weight, the DJI Phantom 3 will initiate auto land sequence).

Operational Restrictions Set Forth:

1. The UAS will weigh 55 pounds or less.
2. Flights will be operated within line of sight of a pilot and observer’s.
3. Maximum total flight time for each operational flight will be limited to the amount of time the UAS can be flown and still maintain a reserve battery power of no less than 25%.
4. Flights will be operated at an altitude of no more than 200 feet AGL(for night) and will not be conducted within navigable airspace.

5. Flights will be operated at a lateral distance of least 300 feet from any inhabited structures, buildings, vehicles or vessels, or from people not associated with the operation who have not given permission in advance of the operation.
6. Minimum crew for each operation will consist of the UAS Pilot, one(daytime) and two(night) Visual Observers as necessary to safely conduct the mission.
7. The Pilot in charge will have the required training and instruction prior to any flight in accordance with the training syllabus attached to the Operations.
8. The observer designated for any operation will be required to complete the training course as set forth in the Operations Manual before performing his duties on any flight.
9. The UAS will operate in accordance with the safety and operational requirements of the Manual.
10. Prior to the operation, a Mission Plan will be created setting forth the limitations for the flight as well as contacts and hazard information.
11. Pilot and Visual Observers will at all times be able to communicate by voice.
12. Local Authorization will be obtained prior to flight.
13. All required permissions and permits will be obtained from state, county or city jurisdictions, including local law enforcement, fire or other appropriate governmental agencies.
14. The operator will coordinate all flights with the appropriate Flight Standards District Office.
15. If the UAS loses communications or loses its GPS signal, the UAS will have the capability to return to a pre-determined location within the operational area and land.
16. Contingency plans will be in place to safely terminate flight if there is a loss of communication between the pilot and the observer.
17. The UAS will have the capability to abort a flight in case of unpredicted obstacles or emergencies.

Summary the FAA may publish in the Federal Register:
14 C.F.R. 21 and 14 C.F.R. 91: Airworthiness Certificates, Manuals and alike. 14 C.F.R. 21, Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary airworthiness certificates in relation to FAR§ 91.203(a)(l). The size, weight and enclosed operational area of IR DISTRO INC permit exemption from Part 21 because IR DISTRO INC meets an equivalent level of safety pursuant to Section 333 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the Act (49 U.S. C. § 44701(f)) and A. Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UAS's from the airworthiness certificate requirement in consideration of the weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. IR DISTRO INC meets or exceeds each of the elements.
14 C.F.R. 91.7 (a) prohibits the operation of an aircraft without an airworthiness certificate. As no such certificate will be applicable in the form contemplated by the FARs, this Regulation is inapplicable.
14 C.F.R. § 91.9 (b) (2) requires an aircraft flight manual in the aircraft. As there are no pilots or passengers, and given the size of the UAS's, this Regulation is inapplicable. An equivalent level of safety will be achieved by maintaining a Flight log.
14 C.F.R. § 91.121 regarding altimeter settings is inapplicable in so far as IR DISTRO INC UAS's utilize electronic global positioning systems and internal gyroscopes to provide spatial coordination. Also preprogram height and distance.

14 C.F.R. § 91.203 (a) and (b) provides for the carrying of civil aircraft certifications and registrations. They are inapplicable for the same reasons described above. The equivalent level of safety will be achieved by maintaining such information buy flight log at the IR DISTRO INC Office.
14 C.F.R. § 45.23(b): Marking of the Aircraft. Applicable Codes of Federal Regulation require aircraft to be marked according to certain specifications. IR DISTRO INC is, by definition, unmanned. They therefore do not have a cabin, cockpit or pilot station on which to mark certain words or phrases. Further, two-inch lettering is difficult to place on such small aircraft.
14 C.F.R. § 61.113(c): Private Pilot Privileges and Limitations. PIC Pursuant to 14 C.F.R. §§ 61.113 (a) & (b), private pilots are limited to non-commercial operations. IR DISTRO INC can achieve an equivalent level of safety as achieved by current Regulations because IR DISTRO INC does not carry any pilots or passengers.
Further, while helpful, a pilot license will not ensure remote control piloting skills, though IR DISTRO INC pilot vetting and training programs (based upon completion of an FAA Approved Ground School and a self-administered UAS flight training program and internal procedures) will. All Further, the risks attendant to the operation of IR DISTRO INC is far less than the risk levels inherent in the commercial activities outlined in 14 C.F.R. § 61, et seq.
14 C.F.R. 91.119(c): Minimum Safe Altitudes 14 C. F. R. § 91.119 prescribes safe altitudes for the operation of civil aircraft. It allows Helicopters to be operated at lower altitudes in certain conditions. IR DISTRO INC will never operate at an altitude greater than 400 AGL. IR DISTRO INC will, however, operate its UAS's in sectioned off areas with security perimeters, providing a level of safety at least equivalent to those in relation to minimum safe altitudes. Given the size, weight, maneuverability and speed of IR DISTRO INC, an equivalent level of safety will be achieved.
14 C.F.R. 91.405 (a); 407 (a) (1); 409 (a) (2); 417(a) & (b): Maintenance Inspections
The above-cited Regulations require, amongst other things, aircraft owners and operators to "have [the] 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." These Regulations only apply to aircraft with an airworthiness certificate. They will not, therefore, apply to IR DISTRO INC should its requested exemption be granted. IR DISTRO INC conducts an extensive maintenance program that involves regular software updates and constant inspection for assessment of any damaged hardware.

Summary
IR DISTRO INC seeks an exemption from the following Regulations: 14 C.F.R. 21, subpart H; 14 C.P.R. 45.23(b); 14 C.F.R. §§ 61.113 (a) & (b); 14 C.F.R. § 91.7 (a); 14 C.F.R. § 91.9 (b)(2); 14 C.F.R. § 91.103(b); 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) and (b); 14 C.F.R. § 91.405 (a); 14 C.F.R. § 91.407 (a) (1); 14 C.P.R.§ 91.409 (a)(2); 14 C.P.R. § 91.409 (a)(2); and, 14 C.P.R.§§ 91.417 (a) & (b) to operate its UAS for research, development and demonstration to government/non-government, Community education. IR DISTRO INC will offer education to change the present and change the future. America’s economic future is bright if IR DISTRO INC is granted the opportunity to educate our communities to be respectful and responsible operators as hobbyist and future professionals of UAS. Granting IR DISTRO INC request for exemption will reduce current risk levels and

thereby enhance safety. Further IR DISTRO INC operates at lower altitudes and in the line of sight. IR DISTRO INC owners will be a good resource for Government and communities to be educated if exemption is granted. UAS's and therefore the likelihood of death or serious bodily injury are significantly limited.
IR DISTRO INC respectfully requests that the FAA grants its exemption request without delay. The FAA has the authority to issue the exemption sought by IR DISTRO INC.

Sincerely,

Joel Bredow
CEO