



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

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

August 18, 2015

Exemption No. 11432A
Regulatory Docket No. FAA-2015-0179

Mr. Hayden Howard
Vice President
Compass Data, Inc.
12353 East Easter Avenue
Centennial, CO 80112

Dear Mr. Howard:

This letter is to inform you that we have granted your petition for an amendment. It explains the basis for our decision, describes its effect, and lists any changes to the original conditions and limitations.

By letter dated May 23, 2015 you petitioned the Federal Aviation Administration (FAA) on behalf of Compass Data, Inc. (hereinafter petitioner or operator) for an amendment to your current exemption. That exemption from §§ 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) of Title 14, Code of Federal Regulations (14 CFR) allows the petitioner to operate a UAS to perform aerial data collection. You requested an amendment to add the Swift Radioplane Lynx M, DJI Phantom 2 Vision+, DJI Phantom 3, DJI Inspire 1, and DJI S1000 aircraft to your exemption.

In your petition, you indicate that there has been no change in the conditions and reasons relative to public interest and safety that were the basis for granting the original exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested amendment to the exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner. The unmanned aircraft authorized in the original grant are comparable in type, size, weight, speed and operating capabilities to those in this petition.

Airworthiness Certification

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 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.

Our Decision

The FAA has determined that the justification for the issuance of Exemption No. 11432 remains valid and is in the public interest. Therefore, under the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, the operator is granted an amendment to add new aircraft to its UAS operations.

The operator shall add this amendment to its original exemption.

Conditions and Limitations

All conditions and limitations within Grant of Exemption No. 11432 remain in effect except as follows. Condition No. 1 has been updated to reflect the additional aircraft.

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 Trimble UX5, Swift Radioplane Lynx M, DJI Phantom 2 Vision+, DJI Phantom 3, DJI Inspire 1, and DJI S1000 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.

This exemption terminates on April 30, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

May 23, 2015

Addendum

U.S. Dept. of Transportation, Docket Operations
West Building Ground Floor, Room w12-140
1200 New Jersey Avenue, SE.,
Washington, DC 20590

Exemption No. 11432

Regulatory Docket No. FAA-2015-0179

Submitted Electronically via the Federal Docket Management System (FDMS)

Re: Addendum to add additional Unmanned Aerial Systems to current Exemption No. 11432

Dear Sir or Madam:

I Hayden Howard, Vice President of Compass Data, Inc., have prepared the following addendum to our Current Exemption No. 11432 approved on April 22nd 2015.

This Addendum allows for the inclusion of one additional Fixed Wing system and four additional Vertical Take-Off and Landing (VTOL) Multi-Rotor UA's as follows:

- A SwiftRadio Planes LYNX M Fixed Wing, Under 9lb Single Motor UA
- A DJI Phantom 2 Vision +, Under 3lb (4 Motor) Multi-Rotor UA
- A DJI Phantom 3, Under 3lb (4 Motor) Multi-Rotor UA
- A DJI Inspire 1, Under 7lb (4 Motor) Multi-Rotor UA
- A DJI S1000, Under 10lb (8 Motor) Multi-Rotor UA

THE UNMANNED AIRCRAFT (UA):

Fixed Wing components:

- The Swift-Radio Planes Lynx M is a lightweight (under 55lb gross weight), battery operated Fixed Wing UA
- The Lynx is hand launched, and can land in small areas due to its deep stall landing capabilities
- The Lynx is comprised of foam and Carbon Fiber with a wingspan of 7.5'
- The Lynx can carry various camera payloads which are interchangeable in the field
- The Lynx utilizes the Pixhawk autopilot complete with GPS, magnetometer, IMU, airspeed sensor, and telemetry radios

VTOL Multi-Rotor's components:

- The DJI Models: Phantom 2 Vision +, Phantom 3, Inspire 1, and S1000 are lightweight (under 55lb gross weight), battery operated Multi-Rotor VTOL aircraft
- Each uses an on-board flight computer with GPS navigation and location ability that receives signals for flight controls from a ground-based transmitter/controller
- The Phantom 2 Vision +, Phantom 3 and Inspire 1 have an on-board camera attached to the UA via a three axis gimbal, capable of capturing full color, high definition imagery
- The S1000 can be configured to include a gimbal mount and supports various camera options

- The DJI models all have an on-board telemetry system that delivers flight data from the on-board flight computer to the on-board radio transmitter including; altitude (AGL), horizontal and vertical speed, compass direction of flight, and direction back to its launch site

THE GROUND STATION-BASED PART OF THESE SYSTEMS:

- A Pilot in Command (PIC) in operational control of a flight operation from beginning to end and who controls the UA while in the air
- A radio transmitter/controller operated by the (PIC) to control the UA while in flight
- A Ground Station (Laptop, Tablet or Smart Phone based App) which receives and displays real time system telemetry and imagery from the UA
- A Visual Observer (VO) is a person who provides a second pair of eyes to visually track the UA while in flight.

INTENDED USE:

The requested exemption would allow us to use the UA for aerial image acquisition to support various mapping and surveying applications as well as video documentation for the public good. Typical applications would include, but are not limited to:

- Aerial Photography
- Aerial Surveys
- Volumetric Surveys
- Architectural Surveys
- Bridge Inspections
- Utility Corridor Vegetation Management
- Building Inspection Surveys
- Disaster Response

This Addendum makes no other changes to the original request including exemptions sought, reasons for exemption request, and/or operating parameters. Compass Data will operate these additional UA's under the same conditions and limitations provided in Exemption No. 11432

The name and contact information of the applicant remains the same:

Sincerely,

Hayden Howard
Vice President
Compass Data, Inc.
Phone: 303.627.408
Email: compassdatainc.com

Appendix A – User's Manual (Swift-Radio Planes Lynx M)

Appendix B – Users Manuals (Phantom 2 Vision +, Phantom 3, Inspire 1, and S1000)

APPENDIX A – USERS MANUALS (Swift-Radio Planes Lynx M)

This addendum incorporates by reference confidential manuals and materials filed by Swift Radioplanes, LLC (“Swift Radioplanes”) in connection with our petition for exemption under Section 333 of the FAA Modernization and Reform Act of 2012 (“FMRA”) to allow commercial operations of unmanned aircraft for precision aerial survey. Swift Radioplanes has requested confidential treatment of those materials under the trade secrets and proprietary business information exemption of the Freedom of Information Act (“FOIA”). (See 5 U.S.C. § 552(b)(4).)

Attached separately

APPENDIX B – USERS MANUALS (DJI PHANTOM 3, INSPIRE 1, and S1000)

Users Manuals for each of these systems can be downloaded here

<http://www.dji.com/product/phantom-2-vision-plus/download>

<http://www.dji.com/product/phantom-3/download>

<http://www.dji.com/product/inspire-1/download>

<http://www.dji.com/product/spreading-wings-s1000/download>