



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

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

June 17, 2015

Exemption No. 11844
Regulatory Docket No. FAA-2015-0404

Mr. Scott Dennison
Manager of Risk and Crowd Services
SFX Entertainment
13622 East Westland Road
Scottsdale, AZ 85262

Dear Mr. Dennison:

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.

The Basis for Our Decision

By letters dated February 17 and April 4, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of SFX Entertainment (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct monitoring of traffic flow and parking lots to assist state and local enforcement agencies in traffic management at outdoor music festivals.

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 S900.

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. 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, SFX Entertainment 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.

Conditions and Limitations

In this grant of exemption, SFX Entertainment 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 S900 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.nts.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 June 30, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

Project Officer: _____

**SCOTT DENNISON
MANAGER OF RISK AND CROWD SERVICES
SFX ENTERTAINMENT
13622 EAST WESTLAND ROAD
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APPLICATION/PETITION FOR EXEMPTION (Drone "UAV" Use)

Manager of Risk and Crowd Services

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STATED SECTION(S) FOR RELIEF SOUGHT

COMES NOW, SFX Entertainment, Inc. herein after referred to as SFX, and does hereby submit and request exemptions to FAA Rules for drone (UAV) usage, and seeks an exemption Filed under Section 333 to grant relief from and an airworthiness Certificate under the FAA Modernization and Reform Act of 2012, Public Law 112-95 FEB 14, 2012, Section 333. SFX is a domestic public company that specializes in the production of large Music Festivals around the United States. At all times, SFX carries insurance, is fully legal in all States and has NEVER operated a UAV at any time, prior to this application being filed. Our use of the DJI 900 is less than 3.3kg and does not fly over 35 mph and does not operate in proximity to airports and populated areas, and operation is within a visual line of sight does not create a hazard to users in the national airspace system or the public or pose a threat to national security.

Exemption under the Requirements of 14CFR 11.81

SFX will conduct UAV operations safely to minimize risk to the NAS or to persons and property on the ground. SFX will use its UAV to conduct monitoring of traffic flow and parking lots in order to assist State and Local Law Enforcement agencies in traffic management at our outdoor music festivals. The cost incurred by obtaining a helicopter is excessive and the monitoring of traffic using a UAV is an economic advantage to all parties concerned. In fact many local law enforcement agencies do not have access to helicopter for this purpose.

We have included in this submission a copy of the DJI 900 a commercially available UAV that has been used extensively in the United States with an excellent safety record.

SFX has an ongoing relationship with FAA headquarter (Mr. Brian Thoorp brian.thoorp@faa.gov) for limiting overflights at our concert venue and also DHS (**JONATHAN D. RICHESON**, Security Specialist Commercial and Government Facilities Section, Sector Outreach and Programs Division Department of Homeland Security).

Prior to any flight a complete pre-flight is conducted, weekly operational inspections and an annual inspection by an authorized DJI service center to insure that all operational components are in proper factory specifications. (See Attached manual)

The Radio Frequency spectrum that is used for control and its associated equipment is in the 2.4 giga hertz range and complies with the Federal Communications Commission requirements.

Pilot in Command

The UAV for SFX will only be operated by Mr. Scott Dennison the Manager of Risk and Crowd Services. Mr. Dennison is a licensed commercial pilot with instrument and multi-engine rating with over 7000 hours of flight time in a variety of aircraft (Certificate number 579623050). Mr. Dennison also has a BS degree in Aviation Technology from Purdue University. In addition Mr. Dennison is also a former Special Agent for FAA and Federal Air Marshall. Mr. Dennison also is actively involved with many Federal Agencies to include DHS.

Mr. Dennison has taken a variety of significant courses offered by DJI the manufacturer of the UAV on its operation and safety requirements.

Mr. Dennison knows the safety threat these vehicles can pose to air traffic, the general public and others, and as such, since he has a working, and real world knowledge, his operation of a UAV is far superior than that of an operator that merely buys a UAV and then operates it outside the confines and guidelines/regulations of the FAA.

Proposed Operations:

SFX has 5 major outdoor festivals a year located in remote communities. The Manager of Risk works closely with Federal, State and Local Law Enforcement to insure a safe environment for our employees, patrons and the local community. In this effort the proper management of traffic into and out of the event is of major concern to law enforcement and the local community.

In order to properly manage traffic operations information must be passed to State and Local law enforcement on the flow of traffic into and out of the event along with the current status of parking lot capacities. Due to the limited number of police officers available to monitor traffic operations and the excessive cost of renting a helicopter the UAV offers immediate information to all involved at an economical cost.

The UAV will be operated at altitudes not to exceed 300 feet and a forward speed of less than 25 mph. Minimum flight visibly will be set at 3 miles. The UAV is not intended to be flow over persons but only to monitor traffic operations. If winds exceed 25 mph the UAV will not be used. Safety measures in place for the UAV are contained in the operations manual of the DJI900. In addition the DJI900 used by SFX is equipped with a deployable parachute that can be remotely operated. All flights by the SFX UAV will be line of sight with an observer and the pilot, during daylight conditions, inside Class G (uncontrolled) airspace and more than five miles from any airport or other location with aviation activities.

Operational Area

The UAV use is intended solely for the footprint of the venue for each music event on a conditional use permit granted by the county or city of the event. Prior to any operational use a complete risk assessment is done to determine any obstructions to the proposed flight paths that would be involved.

The UAV will not be operated within 5 miles of any airport.

Visual line of site will be accomplished by the Pilot and his observer watching the aircraft at all times. Information is relayed to local law enforcement officials via 2 way radio. In addition SFX operates with the cooperation of Federal, State and Local Law Enforcement officials and Incident Command Post (ICP). All flight operations are cleared with the ICP prior to departure and prior to landing. This is in accordance with Section 333 (b)(1)

Pre Flight Safety Risk Assessment:

A pre-flight a safety risk assessment is done in accordance with 14CFR 91.7(b). This information is contained in the DJ900 operations manual. In addition to this SF Risk Department conducts a total assessment of all flight paths, take off locations and landing zones. The SFX risk Department has meteorologist on site at all times to insure the weather conditions are proper for the safe UAV flight operations. No operation of the UAV can occur till such time as the on-site meteorologist has approved the flight based on local conditions. , shall at all times, and as a minimum, observe all applicable regulations of 14 CFR parts 61 and 91. This document is intended to identify alternate methods of compliance with the regulations when evaluating proposed UAS operations. In this case, the applicant himself, that was in fact, is an accomplished pilot and former FAA Official, the applicant understands and has working knowledge of the rules of flight, air traffic patterns, safety standards, aeronautics, which SFX would argue is way beyond that of the typical and relevant average operator now existing and making use of an UAV.

SUMMARY

WHEREFORE, the applicant, SFX (Scott Dennison), respectfully requests a (24) month exemption to lawfully, within the stated regulations of the FAA and others, and as stated, operate a UAV for the sole purpose of traffic management for music festivals in support of State and Local Law Enforcement. FURTHER, it is stated and affirmed here, that SFX (Sean Murphy) has made application for the required COA.