

NTSB HEARING

AIR SHOWS & AIR RACES

Location: Washington, DC

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Aviation Safety– Flight Standards Service

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Federal Aviation
Administration



OVERVIEW

- Air Event Definitions
- Air Show vs. Air Race
- Regulatory Requirements
- Event Approval Process
- Upcoming Changes



Definition of an Aviation Event

FAA Order 8900.1, Volume 3, Chapter 6, Section 1

“Aviation events include *air shows, closed course air races, parachute demonstration jumps, balloon meets, and fly-ins* conducted before an invited assembly of persons, for which the FAA issues a Certificate of Waiver or Authorization”



Air Show vs. Air Race

- **Air Show:** An Aviation Event where aerial demonstrations, including aerobatic demonstrations, are conducted by one or more aircraft before an invited assembly of persons.
- **Air Race (Closed Course):** An Aviation Event where aircraft fly over a fixed, short-distance racecourse for either time (one aircraft time trial through chicanes) or place (around a set course).



Regulatory: Aircraft Requirements

- Exhibition and Air Racing Aircraft are covered by 14 CFR Part 21
- Operating limitations are issued as part of the airworthiness certificate
- Operating limitations dictate how the aircraft is to be operated
- Annual Program Letter



Regulatory: Operating Requirements

- Compliance with 14 CFR part 91 flight rules is required
- Certain operations require waivers from part 91 rules. 14 CFR §91.905 lists rules that may be waived, including the following regulations:
 - Use of Safety Belts (Wing Walkers) §91.107
 - Aircraft Speed §91.117
 - Minimum Safe Altitude §91.119
 - Altimeter Setting §91.121
 - Basic VFR Weather Minimums §91.155
 - Aircraft Lights §91.209
 - Aerobatic Flight §91.303



FAA Event Approval Process

Approval Process Overview:

- 1) Evaluate request
- 2) Issue waiver or authorization
- 3) Event oversight



FAA Event Approval Process - Continued

1) FAA evaluates request:

- Type of Event requested:
 - Air Show
 - Air Race
 - Balloon Meet or Competition
 - Parachute Demonstration
- Site plan
- People and buildings
- Safety and emergency plans
- Effective times and extent of activities
- Event control



FAA Event Approval Process - Continued

2) Issue waiver or authorization

- All requirements have been satisfied:
 - Issue Certificate of Waiver or Authorization (7711-1) signed by FSDO manager
 - Includes Special Provisions to ensure safety
 - Commonly used Special Provisions listed in 8900.1
 - Site specific Special Provisions can be developed to meet the safety requirements of that event (approved by region)



FAA Event Approval Process - Continued

3) FAA event oversight:

- Inspector In Charge (IIC) responsibility at the event is to ensure that the regulations, and Special Provisions of the waiver are followed.
- Note: “FAA personnel will not manage, control, or direct any portion of the event when acting as IIC.” (FAA Order 8900.1)



FAA Event Approval Process - Continued

3) FAA event oversight - Continued:

- The IIC's authority allows them to approve:
 - Changes to effective times
 - Adding or removing performers
 - Changes to ceiling, visibility or wind limitations (with no effect on safety)
 - And the ability to directly cancel or delay any act in the interest of safety



FAA Event Approval Process - Continued

3) FAA event oversight - Continued:

- Surveillance of event (including practice day)
 - Safety Briefings daily, conducted by Air Boss and generally attendance required by all
 - “Responsible Person,” performers, Crash Fire and Rescue Chief, pyrotechnic technicians, skydivers, jet truck drivers, narrator, ATC, aircraft Marshaller’s chief, maintenance, crowd control, EMS, jump/tow pilots
 - Pilot qualifications (certification, authorization, recent experience)
 - Airspace authorizations



FAA Event Approval Process - Continued

3) FAA event oversight - Continued:

- Surveillance of event (including practice day)
 - Aircraft airworthiness
 - Review of aircraft records to determine general condition of the aircraft
 - Physical inspection of aircraft to verify any safety of flight issues
 - Assure compliance with the operating limitations issued for the aircraft



Upcoming Changes

- FAA Guidance (8900.1) Changes
 - Updating air show guidance, including required experience levels for an IIC
 - Making Air Race guidance its own section
 - Reviewing “scatter pattern” formulas
- Review and approval of the updated ICAS Aerobatic Competency Evaluator Manual
- Change to the Parachute AC on the Automatic Activation Device section
- Development of an FAA Online course on approval of aviation events (supplement the current FAA course for IICs)

