

M-494.4
AC 91-45B Obsolete

DATE 8/5/81

ADVISORY CIRCULAR



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Washington, D.C.

Subject: WAIVERS - AIRSHOWS/CONTESTS/RACES

1. PURPOSE. This advisory circular (AC) provides prospective airshow sponsors with the information necessary to assist in planning for and conducting safe, aerial demonstration events. It also provides information for requesting a Certificate of Waiver necessary for certain aircraft operations.
2. CANCELLATION. This circular cancels AC 91-45A, Airshow Waivers, dated May 16, 1977.
3. BACKGROUND. Hundreds of waivers are issued by the Federal Aviation Administration (FAA) each year. The experienced sponsor of an aerial demonstration event is well acquainted with the requirements and procedures for obtaining the necessary waivers. However, in some instances, individuals or organizations attempting to sponsor an event for the first time are not aware that a waiver is required. Some new sponsors have had this requirement brought to their attention the day before the show, by exhibition pilots asking to review the terms and conditions of the waiver.
4. FAA WAIVER POLICY FOR AERIAL EVENTS. The FAA has adopted a policy with respect to requests for waivers for staging airshows, contests, or races that "anytime the agency determines a proposed event will be in the public interest in terms of safety, and environmental concerns, a waiver will be issued." Regardless of the purposes for which an event is sponsored, unsafe events or sites will not be accepted.
5. PLANNING. Thorough planning will have a direct bearing on the success and safety of any event. Therefore, it is in everyone's best interests to develop an effective plan for all facets of the event. Thorough planning related to the subjects discussed below is necessary for most events.
 - a. Type of Event. What sort of routines will be staged? Will there be demonstrations by small, slow-speed aircraft only, or will high performance aircraft be involved? Will military demonstration teams participate? Certain precision aerobatic teams will insist that the sponsor obtain a waiver to permit low altitude aerobatics on arrival at the site a day or more prior to the scheduled event. Will

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the event open with hot air balloon ascensions? Will a parachute demonstration be staged? Will there be model airplane demonstrations in the event? Such decisions must be reached before it can be determined which sections of the Federal Aviation Regulations (FAR) need to be waived. Also, these factors will affect the site selection.

b. Status of Performers. Will the demonstrations be performed by professional pilots? Before FAA will approve any pilot to perform low-level aerobatics in close proximity to spectators or other persons on the surface, their competency to safely perform individual routines must be verified. Professional demonstration pilots should have no difficulty in this respect, but if a demonstration pilot does not hold an FAA Statement of Aerobatic Competency, the FAA will require a demonstration of the routine prior to validation of the waiver.

c. Site Selection. Selection of a site for an event is of the utmost importance. If the selected site will not permit the minimum separation distances discussed in Section 3 of Appendix 1 of this circular, the application for a waiver will not be approved. If the local airport environment will provide these separation distances, it should be given first consideration as a probable site since demonstration pilots prefer a runway within gliding distance of the demonstration area.

(1) Airport sites. Not every airport in the country is suitable for any type demonstration. Generally, however, airports are the best sites for aerial demonstrations, because all performers are available to the person(s) controlling events, and aerial demonstrations are more visible to spectators. Nevertheless, the needs of the public and spectator safety must be served, therefore, the airport and the terrain surrounding it should be inspected to ensure that it will be acceptable.

(2) Fairground sites. In some instances sponsors have selected fairgrounds as sites in lieu of attempting to stage an event at a less than ideal airport site. From the sponsor's viewpoints, these sites offer certain advantages not normally found at an airport. The grounds are generally well fenced, making crowd control a simple task. Also, frequently, grandstands or bleachers, concession stand areas, well-marked first aid stations, police and sometimes a fairground fire department are readily established. In addition, the typical fairground is better able to cope with the vehicular traffic generated by an event than the typical airport that may have only one or two access roads.

(3) Other sites. A lake or other open area bordering the edge of town, or at a park where open area could be found may provide a desirable site for certain aerial demonstrations. In any case, the area over which the aerobatic demonstrations are to be conducted must be void of inhabited structures.

(4) Charts/photographs of sites. Even if the FAA inspector is familiar with the area, the task of evaluating site suitability can be greatly simplified by furnishing an up-to-date chart of the area. Even better would be aerial photographs showing the airport or center of the site, and ranging out for a radius of from one-half to two and one-half miles, depending upon the type of event planned.

Appropriate deadlines (as discussed in Section 3, Appendix 1), spectator areas, control center, location of emergency facilities, etc., should be depicted and a copy should accompany FAA Form 7711-2, Application for Certificate of Waiver or Authorization, described in Section 2, Appendix 1.

d. Policing. Depending upon the type of spectator-restraining fences or barriers available, crowd control personnel may be necessary. If the local law enforcement agency will furnish personnel for crowd control, they are more desirable and effective than untrained individuals. The FAA does not require uniformed police to control spectators. Boy Scouts, Civil Air Patrol Cadets, or others may be used. However, if crowd control is lost to the extent that safety is jeopardized, the control centers should be so advised, and the event should be halted until control is regained. On a few occasions in the past, the sponsor was unable to regain control of the crowds, and the waiver had to be cancelled, thereby stopping the activities completely. FAA does not control crowds. This is one of the responsibilities of the holder of a certificate of waiver.

e. Emergency Facilities. Section 2, Appendix 1, covers what is generally considered the necessary minimum. The FAA will not require emergency medical treatment facilities for persons who might be injured by barbed wire fences, the collapse of bleachers, the explosion of a hot coffee urn, or all other injuries that could occur that are not the result of any of the aerial activities. Some professional performers will not accept a contract or an invitation unless the sponsor obtains liability insurance, provides adequate first aid and emergency medical transportation, etc. Other performers might demand that, for their own protection, a fire truck with trained personnel be provided. Generally, the FAA will not require much more in terms of emergency facilities than are normally found at airports. Off-airport sites can be another matter, and before selecting such a site, serious consideration should be given to emergency facilities at such sites.

f. Normal Airport Traffic. If the event will be at an airport served by scheduled air carrier, the schedule of events must accommodate the arrivals and departures of the air carrier. Most demonstrations last 2 to 3 hours but the airport manager should be able to provide airline schedules for the period.

g. Vehicular Traffic Problems. The problem of controlling vehicular traffic to and from the airshow site is often overlooked. If part of a road, street, river or open overwater area has to be blocked off during the show, it is essential that there be adequate traffic control officers to ensure that the street or other surface vehicular movement area remains closed. There have been cases of waived events being interrupted because a car, which was parked on the shoulder of a site access road to enjoy the routines, was directly beneath the aerobatic area. Cooperation from the local police is essential and they should be contacted during the initial planning.

6. APPLICATION. Forms used to apply for a Certificate of Waiver can be obtained from any FAA General Aviation/Flight Standards District Office. Included are instructions for completing the form, but if there are any questions, such as the regulations which need to be waived, the area of operation, emergency facilities, etc., call the district office which will be responsible for approving or denying

the waiver for guidance. Application for a waiver should be submitted well in advance of the date of the event. This will allow sufficient time to correct any discrepancies which become evident during the approval process. When feasible, submit the application at least a month in advance of the event date.

7. PRESHOW ACTIVITY. Things have a tendency to get hectic prior to the start of even a properly planned event, e.g., performers asking when and where the briefing is to take place, fire department personnel trying to find out where their trucks and ambulances are to be stationed, concession stand operators looking for electrical outlets, etc. If you have not delegated responsible people to handle each and every aspect of the numerous functions associated with a successful event, last minute problems will appear. One thing that is required of all waivers for aerial demonstrations is the briefing of all performers. For performing teams, it is permissible for the team leader to attend in lieu of every member and assume the responsibility for briefing each member of the team. Nevertheless, it is imperative that the briefing cover every aspect of the event. If ground-to-air signals are to be used, they must be clearly understood by all participants. The signals used to discontinue a routine or recall performers should be emphasized. Locations of "deadlines" must also be known to all performers if a safe event is to be ensured. The FAA is not responsible for conducting the briefing. But it is responsible for seeing that it is conducted properly. If the event is to be conducted at a nonairport location, special procedures for the briefing of the performers must be established.

8. RUNNING THE EVENT. Experienced, successful sponsors have learned the value of establishing a central control station manned by one individual. This is the controller, who is assigned the responsibility for seeing that the event is run properly and that all terms and limitations of the waiver are complied with. The controller must be fully familiar with the waiver, as well as being aware of other individuals assigned the responsibilities of crowd control, emergency facilities, transient aircraft lookouts, etc. In the event the crowd gets out of control, it is the controller's responsibility to discontinue the aerial demonstrations until control is regained. If a transient aircraft enters the local area, it is the controller's responsibility to advise pilots performing aerial demonstrations to discontinue and avoid the transient aircraft.

9. POST-EVENT PLANNING. Some sponsors have failed to make arrangements for post-event activities that were sufficiently attractive to ensure an orderly disassembly of spectators from the event site. At airport sites, they have found that many of the pilots who had flown in to enjoy the show wanted to be the first to take off for home. With the disappearance of crowd control personnel, hundreds of spectators would begin dodging in and around the airplanes being taxied to the runway. With numerous vehicles in the parking lot filled with drivers impatient to get moving, the result was often chaotic. Successful sponsors spend much effort planning for post-event attractions. They have learned that the more spectators you can keep at the site for 30 or 40 minutes after the main attraction the safer it is. There are many ways to keep the spectators around. It is a good idea to have the exhibition pilots agree not to mingle with the crowd during the show because their presence can detract from ongoing routines. A request that pilots stay around after the show to sign autographs and have their pictures taken may be an advantage. Volunteer fire

departments frequently like to raffle off something or other. Suggest that they hold the raffle drawing 30 minutes after the show ends, which will give them an opportunity to sell more raffle tickets. If there is a display line of antique aircraft, announce to the crowd that after the main event, they can get a closer look provided they do not touch. If none of these attractions are available, consider model airplane kits; in advertising, tell the spectators to keep their admission ticket stubs for model airplane prize drawings after the event. Efforts to keep part of the crowd around after the show will be well worth it.

10. INDUSTRY ASSISTANCE. Some would-be sponsors do not know that industry organizations can provide expert guidance in planning for and conducting safe, effective aerial events. The International Council of Air Shows (ICAS), P. O. Box 499, Menomonee Falls, Wisconsin 53051, is comprised of airshow sponsors and performers from all over the world. The ICAS can provide very valuable assistance and guidance to the would-be airshow sponsor. There are also clubs and associations formed by airshow performers that can be of assistance. In addition, there are several commercial airshow groups that offer a wide variety of services, ranging from assisting to actually contracting to stage an entire airshow for any interested organizations. Virtually all of these clubs, associations, and commercial groups are affiliated with the Experimental Aircraft Association (EAA), P. O. Box 229, Hales Corners, Wisconsin 53130. For further information, a sponsor may wish to contact the EAA.



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APPENDIX 1. WAIVERS - AIRSHOWS/AEROBATIC CONTESTS/AIR RACES

SECTION 1 - GENERAL INFORMATION

1. FEDERAL AVIATION REGULATIONS (FAR). In general, the rules which must be waived for aerial demonstrations are contained in Part 91, General Operating and Flight Rules, and Part 105, Parachute Jumping. Prospective event sponsors may wish to purchase copies of these or other FAR by addressing their request to Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

2. REGULATIONS AFFECTED. There are several factors which the prospective sponsor should consider that will directly affect the rules to be waived. These include show site, type aircraft maneuvers to be performed, etc. Some events will require nothing more than waiving Section 91.71(d) to permit aerobatic flight at less than 1,500 feet above the surface. Sections of the FAR that should be waived for some other events in certain locations or that are more complex are:

- a. Section 91.70, Aircraft speed;
- b. Section 91.79(a), Minimum safe altitudes;
- c. Section 91.85, Operating on or in the vicinity of an airport;
- d. Section 91.87, Operations at airports with operating control towers;
- e. Section 91.89, Operations at airports without operating control towers; and
- f. Section 91.90, Terminal control areas.

3. REGULATIONS WHICH WILL NOT BE WAIVED. To meet FAA's safety obligations, the following regulations will not be waived for aerial demonstrations:

a. Section 91.71(a) and (b), Acrobatic Flight. Regardless of altitude, aerobatic flight will not be permitted over any congested area or open air assembly of persons. For the purpose of aerial demonstration waivers, "Aerobatic flight means an intentional maneuver involving an abrupt change in an aircraft's attitude, an abnormal attitude, or abnormal acceleration, not necessary for normal flight."

b. Section 91.79(a), (b), and (d), Minimum safe altitudes. Waivers of the 500-foot rule (91.79(c)) may be issued only to allow flight closer than 500 feet to property on the surface, but never to allow operations closer than 500 feet to persons on the surface or overflight of the spectator area.

SECTION 2 - APPLICATION

4. GENERAL. FAA Form 7711-2 (Application for Certificate of Waiver or Authorization), OMB No. 04-R0073, is used for application. It is a general purpose form which is self-explanatory but for certain operations every item on the form may not be applicable. However, in other cases, additional information may have to be furnished by the applicant. A sample of FAA Form 7711-2 is in Appendix 2.

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5. APPLICATION FORM (FAA FORM 7711-2). Items from the form are discussed below for purposes of clarity and uniformity of its use.

a. Items 1 and 2, Name of Organization/Name of Responsible Person. If the applicant is a representative of an organization, then that organization name should appear in item 1 and the name of the individual representing the organization for application purposes should appear in item 2. If the applicant is not representing others, the term N/A should be entered in item 1 and the applicant's name in item 2.

b. Item 4, FAR Section and Number to be Waived. In many instances the applicant will not know which sections of the FAR are involved. A conference with the FAA inspector prior to submitting the application may be time saving.

c. Item 5, Detailed Description of Proposed Operation(s). It will suffice to use the words "airshow," "aerobatic contest," or "air race" in item 5 for these type events.

d. Item 6, Area of Operation(s). Most events are held at, or immediately adjacent to an airport. An increasing number, however, are held offshore, over water, in the vicinity of a state fairground or at other nonairport-related locations. The applicant should list the exact area over which the aerial demonstrations are to be conducted. The description must describe the flight maneuvering area as a cubic or cylindrical cell of airspace; e.g., a rectangle bounded by the N/S runway (or other definable geographical reference) and a point 5,000 feet east from the surface to 7,000 feet. At off-airport sites, the boundaries should be described using rivers, roads, or other easily identifiable land marks. In most cases, it will be preferable that the applicant furnish an (up-to-date) chart, map, drawing, photograph, etc., on which the area is shown. In this event, item 6 should indicate that the area of operation is shown on an attached photo, map, etc. The applicant should understand that all flight operations conducted under the waiver will be limited to the area defined in the application as approved by the FAA.

e. Item 7, Time Period. Self-explanatory, except that some sponsors have had sufficient experience to know that they can avoid a lot of confusion by asking for an alternate event date. For example, if the sponsor plans a show on a Saturday and asks for an alternate date for the following week to cover the possibility of being rained out, both dates should be listed.

f. Item 8, Aircraft Make and Model.

(1) In most cases, the applicant will know in advance what aircraft are to be used. If so, they should be listed. However, the sponsor of an open contest which includes competitive aerobatic events may not know in advance just what aircraft will be entered. If necessary, this item may be accepted with a statement, "list of aircraft to be furnished on (date)."

(2) Pilots. The applicant may not always know the names of all pilots that may show up for a competitive event. As discussed above, just as supplemental lists of aircraft may be accepted, so may supplemental lists of pilots.

g. Item 9, Sponsorship. Not every event is sponsored by a specific organization. An individual may sponsor an event. That concern is not who sponsors an event, but what measures should be taken to ensure that it will be a safe event. The applicant assumes responsibility for compliance with the waiver.

h. Item 10, Permanent Mailing Address of Sponsor. Self-explanatory.

i. Item 11, Policing. See paragraph 5d, page 3, of this circular for guidelines.

j. Item 12, Emergency Facilities. Providing emergency facilities can pose problems for sponsors. As discussed previously, the application form serves as an all-purpose form and, therefore, contains items that may or may not be appropriate to emergency facilities. It would be wise for every sponsor to provide for emergency medical service even though past history has shown that this service has not been necessary because of injuries from aerial demonstrations. Normally, the following rules of thumb are adequate:

(1) Physician. Except for events that are an excessive distance (in surface vehicle time) from a hospital or medical clinic, an emergency rescue squad or first aid station can be substituted for a physician.

(2) Ambulance. If an emergency rescue squad is provided, an ambulance will be provided. If there is a physician in attendance, any vehicle acceptable to the doctor for emergency transportation is sufficient. In fact, many communities rely on the sheriff's station wagon as their only means of ambulance service, and it would be improper to prohibit use of a similar vehicle to serve as an ambulance for the event.

(3) Fire truck. For the most part, the only reason for having a fire truck at an event is to benefit the performers, not the spectators. If the performers are willing to accept a pick up truck with fire extinguishers, the FAA should require no more.

(4) Crash wagon. Most of the locations where events are conducted will not have crash wagons available. The FAA will not require a sponsor to obtain one from a facility that might be hundreds of miles away. Again, crash wagons are to serve the performers, not the public.

(5) Other. Seldom does a sponsor fill in this block. The following is an example of how the "other" block might prove useful. In one event the sponsor had a helicopter and pilot continually ready for emergency transportation of spectators who might be injured on the airport, or become ill during the event. Additionally, a military-trained fire fighter was standing by the helicopter with extinguishers in case one of the aircraft had an accident anywhere in the aerobatic area. In this particular case, by describing this "other" emergency facility, the applicant could have been relieved of having to show anything in the other blocks.

NOTE: Aerobatic school activities or aerobatic meets may occur which are not airshows, contests, or races, even though a waiver must be issued. At

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these school activities or meets that are not advertised as airshows, it may not be necessary to provide public airshow policing and emergency facilities.

k. Item 13, Air Traffic Control. Air traffic control for aerial events can be handled in many ways. Naturally, if the airport is served by a control tower, this problem will be negligible. Radio communications or prearranged ground-to-air signals can handle traffic control. Even if every aircraft in the event is equipped with a two-way radio, it would be advisable to have a ground-to-air recall signal provision. If the airport is served by a scheduled air carrier, arrangements must be made for the arrival and departure of such aircraft. Generally, it is adequate to schedule a break in the activities to allow for scheduled arrivals and departures.

l. Item 14, Schedule of Events. A schedule of events is important in several respects. Without a schedule of events, it is difficult to evaluate the application. The schedule does not have to be in sufficient detail to serve the needs of an announcer, but it does have to be adequate for the assigned person in charge to keep track of the events. In many cases, identification of aircraft and performers in sequence of their appearance will be satisfactory. However, the schedule may require a brief description of aerobatic demonstrations when dealing with unknown performers. Any amendment to the schedule of events that adds an event should normally be submitted to the FAA 48 hours in advance. Cancellation of events will not require advance notice.

NOTE: Any time attachments such as maps, photographs, or supplements are provided, they should be identified in this section of the form.

SECTION 3 - STANDARD LIMITATIONS

6. GENERAL. Naturally, the event site and activity to be conducted must be evaluated to determine what separation distances are needed. To assist in these determinations, the following minimum distance or standard limitations are provided:

a. "Deadline" - separation from spectator areas. Aircraft (aerobatic) that have a cruise speed (75% power straight and level) in excess of 180 m.p.h. (156 knots) must be kept at least 1,500 feet from designated spectator areas. Aircraft with lower cruise speeds (again at 75% power straight and level) may be allowed to perform aerobatics at a 500-foot minimum separation. "Deadlines" should be clearly visible from the air. Rivers, roads, and runways all make excellent deadlines. For example, if there is a runway or road 600 feet from the spectator area, it would be far better to use it as the deadline for slow speed aircraft rather than try to establish a "deadline" by use of a row of parked buses, cars, or boats. Others have spread snow fences on the ground to establish deadlines.

b. Takeoff and Landings Areas. Spectator areas must be at least 200 feet from active runways or other takeoff and landing areas, with the exception of runways used by airplanes with normal landing speeds in excess of 100 knots, which should be 500 feet or more from the spectators. In addition, the "flying farmer" or "drunken spectator" airshow acts or other routines involving excessive maneuvering immediately after takeoff or just prior to landing, must be separated from spectators by at least 500 feet.

c. Engine Run Areas. Areas where turbines, propellers, or rotors will be turning must be at least 100 feet from the spectator area unless they are enclosed by a barrier that will prevent entry by unauthorized personnel.

d. Helicopter Demonstration Separation Distances. Helicopter demonstrations do not require deviation from the FAR; but in the interest of safety, a routine consisting of no more than two helicopters should be kept at least 200 feet from the spectators. Routines, such as a "square dance" involving several helicopters, should be kept 500 feet from the spectators.

e. Other Considerations. During certain events, there will be helicopters taking VIP's for rides or serving as emergency vehicles. The landing and takeoff areas used by these aircraft should be enclosed in a manner that will prevent unauthorized persons from entering the helipad area. The pads should be located so the pilot will not have to pass over spectators during takeoff or landing. The same considerations should be given helipads that a police helicopter might use during an event. Regardless of the reasons behind the police helicopter operation, spectators must not be endangered.

SECTION 4 - SPECIAL PROVISIONS

7. GENERAL.

a. All aerial event waivers must contain special provisions to ensure adequate public and air traffic (non-show traffic) safety. Naturally, there will be a wide variation in the type of special provisions called for. Some events require extensive and highly detailed special provisions, whereas others can be fairly simple. In addition to variations between events, local conditions have much to do with what special provisions may be necessary.

b. Special provisions should pertain to protective measures and control requirements which are not specifically covered by the FAR. In addition, it may be necessary to increase one regulatory minimum in order to safely authorize deviation of another. In order to permit aerobatic flight in a control zone or near a busy airport, it might be necessary to increase the minimum VFR visibility requirements.

c. To provide the person or organization responsible for compliance with the special conditions (holder of the Certificate of Waiver), a list of typical special provisions that may be appropriate to different events follow:

(1) Authority to deviate from the FAR is limited to the specific regulations shown on the Certificate of Waiver or Authorization. All other applicable FAR must be fully complied with.

(2) Section 91.71(a) and (b) have not been waived. However, this does not prohibit normal flight of aircraft conducted in accordance with Section 91.79. Routine positioning turns and maneuvers made away from designated spectator area(s) following passes in front of such areas in order to permit aircraft to return over the field are not considered aerobatic maneuvers. Except when necessary to position

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the aircraft for landing, abnormal break maneuvers (banks exceeding 90 degrees) will be considered aerobatic.

(3) Persons or aircraft not shown on the waiver application or not approved by the Certificate of Waiver or Authorization may not participate without prior permission of the FAA.

(4) Ceiling, visibility, and wind limitations, as appropriate to the type of exhibitions involved, should be included. For example, a minimum visibility of 5 miles for events near busy airports or a wind direction and velocity limitation for parachute jumps may be appropriate.

(5) Aerobatic demonstrations at speeds of 156 knots or less shall be performed no closer than 500 feet horizontally from a designated spectator area. Aerobatic demonstrations at speeds over 156 knots shall be performed no closer than 1,500 feet horizontally from a designated spectator area. Normal takeoffs and landings are not considered as a part of the demonstration. However, no takeoff or landing shall be made toward or over the designated spectator area. No takeoff or landing operations shall be conducted within 200 feet horizontally from the designated spectator area (500 feet for high speed aircraft).

NOTE: THE AIRSPEEDS MENTIONED ABOVE ARE CRUISE SPEEDS AT 75% POWER, AND NOT THE MAXIMUM SPEED THAT MIGHT BE REACHED AT THE BOTTOM OF A LOOP.

(6) Generally, aerobatic maneuvers may not be directed toward the designated spectator area. Certain related maneuvers and procedures, however, may be authorized as outlined below:

(i) Rolling 360° turns with a segment toward the spectator area but beyond the required minimum distance and altitude.

(ii) Maneuvers completed beyond a point such that the rollout and trajectory of the aircraft will not endanger the spectators.

(iii) High speed passes at or above 1,000 feet altitude AGL over the "deadline" or the spectator area.

(iv) Maneuvers on an oblique line that pass 500 or 1,500 feet as appropriate to speed (156 knots or more for the 1500 foot limitation) to either side of a spectator area.

(7) No aerobatic demonstrations will be authorized or scheduled during such time as a suspension of airport traffic or diversion of other aircraft traffic will cause a hardship to scheduled air carrier operations.

(8) All aircraft shall operate at subsonic speed.

(9) Adequate oral or visual communications capability shall be provided to advise spectators and participants that the aerial demonstration has been halted or canceled, or to otherwise communicate with these parties as required to maintain a safe operation.

(10) A physical barrier and adequate policing shall be provided to confine spectators to designated areas. (The number of policing personnel will depend upon the type of barrier.)

(11) The demonstration shall be halted when unauthorized persons or aircraft enter the operations area, or for any other reason in the interest of safety. Only persons necessary to support operations should be authorized in the operating areas. The holder of the Certificate of Waiver assumes responsibility for persons that enter the operations area.

(12) Certain precision aerobatic teams request approval for an "arrival demonstration" for public relations purposes. The "arrival demonstration" is not authorized unless an "advance member" of the demonstration team has been briefed on the "deadlines" and pertinent Special Provisions of the Waiver, and this information is relayed to the team leader prior to the demonstration.

(13) The holder of the waiver shall ensure participants are thoroughly briefed on special field rules, manner and order of events, and are available for briefing on provisions of the waiver prior to beginning the activities. No person may participate in any event unless that person has received a specific briefing on provisions of the waiver.

(14) A "deadline" (man-made or natural) clearly visible to the performers and pilots shall be provided to assist them in compliance with the approved distances from the spectator area.

(15) Aircraft engines shall not be started nor aircraft taxied in designated spectator area or static display areas unless appropriate measures are taken to preclude creating a hazard to spectators.

(16) The holder of the Certificate of Waiver shall retain sole responsibility for safeguarding persons and property on the ground and shall inform the issuing FAA office in writing of the person named to ensure overall safety of the event.

(17) The following are facilities that shall be provided and readily available at the demonstration site:

<u>Ambulance</u>	<u>Fire Truck</u>	<u>Crash Wagon</u>
<u>Physician</u>	<u>Other</u>	

(18) A control point shall be established from which the holder or his or her representatives shall direct the demonstration and be continuously available to the FAA and the person designated as responsible for overall safety of the event.

(19) Prior to beginning activities, the holder shall obtain a statement signed by all participants stating that they have read, understand, and will comply with the conditions of the Certificate of Waiver. The officer in charge of military demonstration teams shall sign for those participants under his or her command.

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(20) The holder shall notify the FAA (FSS) of the date, time, place, areas, altitudes, nature, and duration of the operations and request that a Notice to Airman (NOTAM or AIRAD) be disseminated. Such action shall be accomplished at least 48 hours prior to the demonstration time.

(21) All civil aircraft and pilots participating in the demonstration shall be available for FAA inspection prior to the event.

(22) If the event is conducted at an airport location, a closed field signal in the form of a large "X", colored aviation yellow, and readily visible from 3,000 feet above the surface, must be displayed on the landing area(s) when aerial demonstration is in progress (necessary at most uncontrolled airports—may not be required at FAA controlled facilities).

(23) The holder of the Certificate of Waiver shall ensure that roads under the flight maneuvering area, as specified below, are devoid of vehicular traffic or spectators.

(24) The waiver shall be considered void upon completion of the authorized schedule of events, or at the latest time shown on the face of the Certificate of Waiver, whichever occurs earlier.

(25) The FAA has the authority to cancel or delete any or all acts or events if, in its opinion, the safety of persons or property on the ground or in the air is in jeopardy, or there is a contravention of the terms of the waiver.

(26) Only required (by aircraft operating limitations) crewmembers will be carried on aircraft engaging in aerial demonstrations authorized by this waiver. (Stunters, wing walkers, etc., should be considered as necessary flight crewmembers for the purposes of the waiver.)

(27) Failure to comply with any special provision is a violation of the terms of the Certificate of Waiver or Authorization and justification for cancellation of that certificate or other appropriate actions.

(28) Racing flight operations are not authorized when the reported (or observed) flight visibility is less than three miles (this value should be adjusted upward for racing speeds above 300 knots).

(29) In the event of an accident considered to be the result of a course deficiency or racing procedures, flight operations will be cancelled until the deficiency has been corrected and accepted by the person designated responsible for the overall safety of the event.

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Appendix 2APPENDIX 2. SAMPLE FAA FORM 7711-2, APPLICATION FOR
CERTIFICATE OF WAIVER OR AUTHORIZATION (FRONT)No certificate may be issued unless a completed application
form has been received (14 C.F.R. 91, 101, and 105).

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION APPLICATION FOR CERTIFICATE OF WAIVER OR AUTHORIZATION		Form Approved: O.M.B. No. 04-R0073		
		APPLICANTS - DO NOT USE THESE SPACES		
		Region		Date
		Action <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved - Explain under "Remarks" Signature of authorized FAA representative		
INSTRUCTIONS Submit this application in triplicate (3) to any FAA Office. Applicants requesting a Certificate of Waiver or Authorization for an air meet will complete all items and certification on this form and will attach a properly marked map or diagram of the operations area. This map or diagram must be to scale, and distances must be shown. It must include race courses, obstructions, grandstands, congested areas, parking areas, dead lines, police stations, ambulance, fire-truck, crash wagon, and control stations. Application for air meets should be submitted not less than thirty (30) days prior to the requested beginning date of the proposed operation. Applicants requesting a Certificate of Waiver or Authorization for activities other than an air meet, will complete items 1 through 8 only and the certification, item 15, on the reverse.				
1. Name of organization		2. Name of responsible person		
3. Permanent mailing address	House number and street or route number	Post Office/City	State and ZIP code	Telephone No.
4. FAR section and number to be waived				
5. Detailed description of proposed operation (Attach supplement if needed)				
6. Area of operation (Location, altitudes, etc.)				
7a. Beginning (Date and hour)		b. Ending (Date and hour)		
8. Aircraft make and model (a)	Aircraft identification No. (b)	Color (c)	Owner (d)	Address of owner (Street, city, State) (e)
While being flown by the following pilots				
Name (f)	Home address (Street, city, State) (g)		Certificate number and rating (h)	

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8/5/81

SAMPLE FAA FORM 7711-2, APPLICATION FOR CERTIFICATE
OF WAIVER OR AUTHORIZATION (BACK)

ITEMS 9 THROUGH 14 TO BE FILLED OUT FOR AIR SHOW WAIVER REQUESTS ONLY.			
9. The air meet will be sponsored by --			
10. Permanent mailing address	House number and street or route number	Post Office/City	State and ZIP code Telephone
11. Policing (Describe provisions to be made for policing the meet.)			
12. Emergency facilities (Mark all that will be available at time and place of air meet.)			
<input type="checkbox"/> Physician <input type="checkbox"/> Fire truck <input type="checkbox"/> Other - Specify _____ <input type="checkbox"/> Ambulance <input type="checkbox"/> Crash wagon _____			
13. Air traffic control (Describe method of controlling traffic, including provision for arrival and departure of scheduled aircraft)			
14. Schedule of Events (Include arrival and departure of scheduled aircraft and other open port periods; unforeseen changes and revisions to be subject to approval of local inspector.)			
Hour (a)	Date (b)	Event (c)	Pilot rating (d)
If sufficient space is not available, the entire schedule of events may be submitted on separate sheets, in the order and manner indicated above.			
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">Please read</div> <div> The undersigned applicant accepts full responsibility for the strict observance of the terms of the Certificate of Waiver or Authorization, and understands that the authorization contained in such certificate will be strictly limited to the above described operation. </div> </div>			
15. Certification - I CERTIFY that the foregoing statements are true.			
Date		Signature of applicant	
Remarks			

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

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