



Procedures for assigning temporary A/G frequencies for Air Shows

**Federal Aviation Administration
Spectrum Engineering Services
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1. General Information

The Spectrum Engineering Services group at the Federal Aviation Administration supports temporary aviation events such as air shows by engineering and assigning frequencies that are used for communication between the aircraft that participate in the event and air traffic controllers and event managers (Air-Boss).

Controllers can be located in existing or temporary towers. When existing towers are used, frequencies already allocated for the tower are generally used for the air show but additional frequencies could be requested if needed. In airports with no towers, a temporary tower can be installed for the air show. For temporary towers, new frequency requests are always required.

Air shows are recurring events and with few exceptions, a frequency assigned by the FAA for an air show may only be used for the particular event. It is the responsibility of the sponsor to ensure that frequencies assigned for an air show are used within the assign parameters, at the authorized location, within the designated operational airspace, and within the authorized time period.

The frequency coordination requirements for air shows fall into one of three categories based on the entity that uses the assigned frequency to communicate and control the aircraft (i.e. the entity that keys the microphone) and it should not be confused with the entity that sponsors or coordinates the event. These categories are:

1. FAA controllers
2. Military controllers
3. Non-Federal/Civilian Entity/Air-Boss

License requirements and procedures depend on these categories.

2. Frequency license requirements

2.1. FAA controllers in temporary towers

If an FAA or FAA-contract controller is controlling the aircraft for the air show (i.e. keying the microphone), the license required to transmit is a temporary Frequency Transmit Authorization (FTA) submitted by the FAA Spectrum Engineering group.

2.2. Military controllers in temporary towers

If military controllers are controlling aircraft for the air show (i.e. keying the microphone), the license required to transmit is a temporary license obtained through the appropriate Department of Defense (DOD) National Frequency Management Office.

2.3. Non-Federal/Civilian Entity/Air-Boss

If neither the FAA nor the military are controlling the aircraft for the air show, the license required to transmit has to be obtained from the Federal Communications Commission (FCC).

3. Procedures to obtain a frequency license

An air show applicant has to coordinate with two offices in the FAA, Flight Standards District Office (FSDO) and Air Traffic Organization (ATO) Service Area Office. The FSDO is responsible for air show waivers, air show performer credentials and air show safety review. The ATO Service Area Office is responsible for operational planning and coordination with air traffic facilities, NOTAMs and Temporary Flight Restrictions (TFR). An air show applicant should request a temporary frequency license thru the ATO Service Area air show coordinator. Refer to Section 7 for FAA Points of Contact (POC).

3.1. FAA controllers in temporary towers

- 1) The FAA ATO air show coordinator submits a frequency request for an air show to the Service Area Frequency Management Officer (FMO). Refer to Section 5 for the Application Form that has to be completed and submitted to the FMO.
- 2) The FMO validates the information provided and engineers a frequency (or frequencies) and enters them into the Automated Frequency Manager (AFM) database using an air show temporary (AS T) prefix for the serial number. Note that all temporary air show assignments shall be deleted from the AFM once the air show dates have passed.
- 3) The temporary assignment must contain the Start and End date indicated in the Application Form. The End date should also be entered in the expiration (EXP) field. In order to accommodate practice days and/or time for coordination of arrival and departure, the dates in the Application Form may be a day or two before and after the air show actual dates.
- 4) The Spectrum Assignments and Engineering Team at Headquarters reviews and approves the assignment after completing any international coordination as needed.

- 5) The FMO provides a temporary FTA to the FAA ATO air show coordinator which contains the service volume and valid dates of the assignment.

3.2. Military controllers in temporary towers

- 1) The military requestor contacts the FAA ATO air show coordinator.
- 2) The FAA ATO air show coordinator submits a frequency request for an air show to the Service Area FMO. Refer to Section 5 for the Application Form that has to be completed and submitted to the FMO.
- 3) The FMO validates the information provided and engineers a frequency (or frequencies) and enters them into the AFM using an air show temporary (AS T) prefix for the serial number. Note that all temporary air show assignments shall be deleted from the AFM once the air show dates have passed.
- 4) The temporary assignment must contain the Start and End date indicated in the Application Form. The End date should also be entered in the EXP field. In order to accommodate practice days and/or time for coordination of arrival and departure, the dates in the Application Form may be a day or two before and after the air show actual dates.
- 5) Spectrum Assignments and Engineering Team at Headquarters reviews and approves the assignment after completing any international coordination as needed.
- 6) The FMO provides the temporary serial number (AS T) and frequency to the FAA ATO air show coordinator.
- 7) The FAA ATO air show coordinator provides the (AS T) coordination number and frequency to the military requestor.
- 8) The military requestor must obtain a temporary assignment for the air show frequencies through the appropriate DOD National Frequency Management Office. The DoD National Frequency Management Office follows the Special Temporary Authorization (STA) process to get the frequencies approved through the National Telecommunications and Information Administration (NTIA).
- 9) The military can start using the frequencies only after a temporary license or authorization has been approved by NTIA and issued by the DOD National Frequency Management Office.

3.3. Non-Federal controllers/Air-Boss

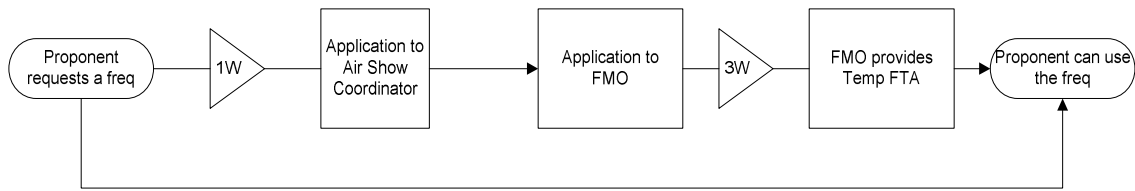
- 1) The non-federal requestor contacts the FAA ATO air show coordinator.
- 2) The FAA ATO air show coordinator submits a frequency request for an air show to the Service Area FMO. Refer to Section 5 for the Application Form that has to be completed and submitted to the FMO.
- 3) The FMO validates the information provided and engineers a frequency (or frequencies) and enters them into the AFM using an air show temporary (AS T) prefix for the serial number. Note that all temporary air show assignments shall be deleted from the AFM once the air show dates have passed.
- 4) The temporary assignment must contain the Start and End date indicated in the Application Form. The End date should also be entered in the EXP field. In order to accommodate practice days and/or time for coordination of arrival and departure, the dates in the Application Form may be a day or two before and after the air show actual dates.
- 5) The Spectrum Assignments and Engineering Team at Headquarters reviews and approves the assignment after completing any international coordination as needed.
- 6) The FMO provides a response to the FAA ATO air show coordinator indicating the frequency (or frequencies) that have been assigned for the air show and the (AS T) coordination number. Refer to Section 6 for a sample of a response Coordination Memorandum.
- 7) The non-fed requestor must obtain a temporary license for the air show frequencies from the FCC. Refer to Section 8 (Appendix) for instructions the proponent has to follow to obtain the FCC license.
- 8) The non-fed proponent can start using the frequencies for the air show only after a temporary license has been issued by the FCC.

4. Timeline

An air show frequency request should be submitted as far in advance as possible. The average time it takes to process a request for the different air show categories is shown below.

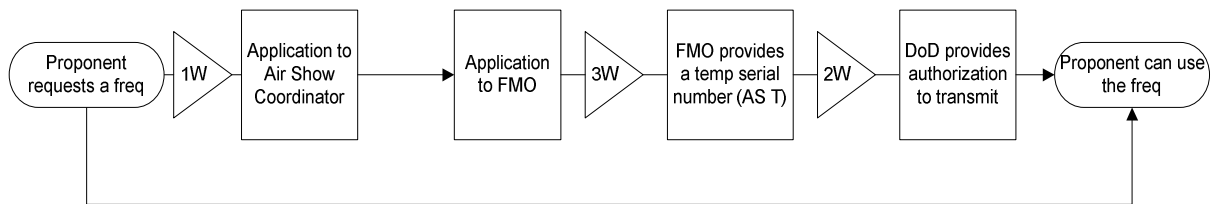
For air shows with non-Federal/Air-Boss controllers, the Service Area FMO should receive the frequency requests **at least 45 days prior** to the “need date”.

4.1. FAA controllers in temporary towers



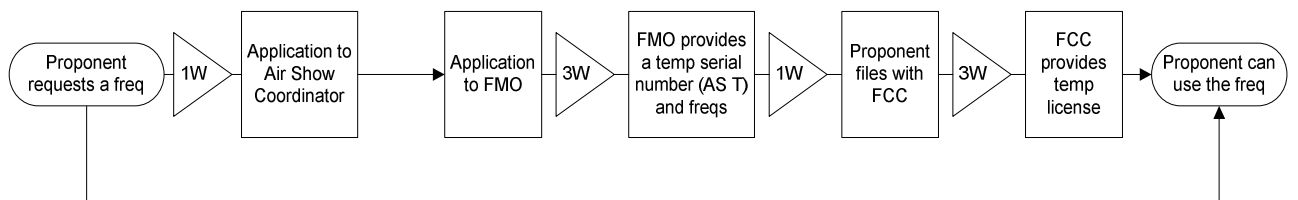
Total Estimated Time is 4 Weeks

4.2. Military controllers in temporary towers




Total Estimated Time is 6 Weeks

4.3. Non-Federal controllers/ Air-Boss



Total Estimated Time is 8 Weeks

5. Information required from an air show proponent:

<h1>Airshow Frequency Application</h1>					
Date	<input type="text"/>				
1. Event Contact Information					
Name of Event	<input type="text"/>	POC <input type="text"/>			
Mailing Address	<input type="text"/>	Phone Number <input type="text"/>			
		Email <input type="text"/>			
2. Dates and Hours of Operation					
Start Date	<input type="text"/>	End Date <input type="text"/>			
Daily Hours of Operation	<input type="text"/>				
3. Frequency Function					
Local Control	<input type="checkbox"/>	Clearance Delivery <input type="checkbox"/>	Ground Control <input type="checkbox"/>	Air Boss <input type="checkbox"/>	
Airport/FAA ID	<input type="text"/>	Radius of Operation(NM)	<input type="text"/>	Max Flight Level (ft)	<input type="text"/>
4. Transmitter		5. Controller			
Transmitter City	<input type="text"/>	State	<input type="checkbox"/>	FAA	
Transmitter Latitude	<input type="text"/>			<input type="checkbox"/>	DOD
Transmitter Longitude	<input type="text"/>			<input type="checkbox"/>	NON-FED
Terrain Elevation(ft)	<input type="text"/>			<input type="checkbox"/>	Air Boss
Transmitter Equipment	<input type="text"/>				
Power(W)	<input type="text"/>				

Airshow Frequency Application Federal Aviation Administration (FAA) Instructions:

Date: Enter date that application is created.

Section 1: Event Contact Information

Name of Event: The full event name of the airshow for which you are requesting frequencies.

POC: The name of the point of contact for the request.

Phone Number: Supply the area code and phone number of the point of contact for the request.

Email: The email address of the point of contact for the request.

Mailing Address: The mailing address where the point of contact can receive mail.

Section 2: Dates and Hours of Operation

Start Date: Start date that frequency (ies) will be used. It may be prior to the first day of the event.

End Date: End date that frequency (ies) will be used. It may be after the last day of the event.

Daily hours of operation: Provide detailed hours of operation for each day of airshow.

Section 3: Frequency Function

Local Control, Clearance Delivery, Ground Control, Air Boss. Enter or select the number of frequencies in the dropdown field in each category.

Airport/FAA ID: The Airport Name or "Three letter ID" (e.g. ORD, DFW).

Radius of Operation (NM): The radius of operation in nautical miles (NM) for use of the requested frequency (ies).

Flight Level (ft): The maximum aircraft altitude in feet (ft) that will use the requested frequency (ies).

Section 4: Transmitter

Transmitter City: The name of the city in which the transmitter or transceiver is located.

State: Select the name of the state in which the transmitter or transceiver is located.

Transmitter Latitude: The latitude of the transmitter or transceiver location.

Transmitter Longitude: The longitude of the transmitter or transceiver location.

Terrain Elevation (ft): The terrain elevation in feet (ft) at the transmitter or transceiver location.

Transmitter Equipment: The description of the equipment being used. (e. g. Motorola PET 2000, ICOM IC-A200).

Power (W): The maximum power in Watts (W)

Section 5: Controller

Who will be using the frequency (ies) (i.e. keying the microphone). Select all that apply.

Print Form: Launches printer dialog box.

Note: Communication to the airshow aircraft on a requested frequency (ies) must be limited to the radius and flight level specified.

6. Sample of a response to a non-Fed air show proponent (Coordination Memorandum)

Subject: Coordination of Frequencies for Special Aeronautical Events
From: Service Area Frequency Management Office
To: Aviation Special Event Sponsor

This Memorandum is not an authority to transmit; it only satisfies the prerequisite to coordinate with the Federal Aviation Administration (FAA). A transmit authorization or license needs to be obtained from the Federal Communications Commission (FCC); you MUST NOT transmit on these frequencies until the license is received. Please include the FAA Coordination Number on the FCC application to expedite the processing.

In response to your request, the FAA has engineered three Very High Frequencies (VHFs). If authorized by the FCC, operation by the Sample Regional Airport on these frequencies for Local Control, Ground Control and Clearance Delivery is limited to the area and conditions indicated below:

Initial and end dates (for temporary requests):

Airport ID or FAA Facility ID (if applicable):

City:

State:

Coordinates:

Terrain Elevation (MSL in ft):

Equipment Nomenclature:

Power (W):

FAA Coordination number:

Frequency:

Function/Hours of operation:

Radius/Flight Level:

7. Points of Contact

7.1. Eastern Service Area (ESA): CT, ME, MA, NH, RI, VT, DE, MD, DC, NY, NJ, PA, VA, WV, AL, FL, GA, KY, MS, NC, SC, TN, PR, US possessions in the Caribbean, Virgin Islands

Function	Name	Telephone	Email
FAA ATO Air Show Coordinator for ESA	Armando Castro	404-305-5590	armando.castro@faa.gov
	Debra Fay	404-305-5043	debra.fay@faa.gov
	Lynda Otting	404-305-5577	lynda.g.otting@faa.gov

Table 1: FAA ESA Air Traffic Organization (ATO) Air Show Coordinator Points of Contact

Function	Name	Telephone	Email
ESA Spectrum Manager	Stephanie Thomas	404-305-6674 404-558-7060 (c)	stephanie.thomas@faa.gov
ESA Spectrum FMO POC	Phalla Keo	404-305-6563	phalla.keo@faa.gov

Table 2: FAA ESA Spectrum Points of Contact

7.2. Central Service Area (CSA): AR, IA, IL, IN, KS, LA, MI, MN, MO, ND, NE, NM, OH, OK, SD, TX, WI

Function	Name	Telephone	Email
ATO Air Show Coordinator for CSA	Winston Dixon	817-321-7728	winston.dixon@faa.gov
	DeLisa Kik	817-321-7718	delisa.kik@faa.gov
	Ron Laster	817-321-7741	ron.ctr.laster@faa.gov

Table 3: FAA CSA Air Traffic Organization (ATO) Air Show Coordinator Points of Contact

Function	Name	Telephone	Email
CSA Spectrum Manager	Mark Gallant	817-222-4761 817-301-4505 (c)	mark.r.gallant@faa.gov
CSA Spectrum FMO POC	Nashaat Nassr	847-294-7363	nashaat.nassr-dr@faa.gov

Table 4: FAA CSA Spectrum Points of Contact

7.3. Western Service Area (WSA): CA, NV, AZ, WA, OR, ID, UT, CO, WY, MT, AK, HI, all CA offshore islands

Function	Name	Telephone	Email
ATO Air Show Coordinator for WSA	Gary Winn	425-203-4561	gary.ctr.winn@faa.gov
	Holly Delay	425-203-4521	holly.delay@faa.gov
	Dale Richards	425-203-4549	dale.ctr.ricahrds@faa.gov

Table 5: FAA WSA Air Traffic Organization (ATO) Air Show Coordinator Points of Contact

Function	Name	Telephone	Email
WSA Spectrum Manager	James Motley	310-725-3474 310-600-6718 (c)	james.motley@faa.gov
WSA Spectrum FMO POC	Phuong Duong	310-725-3669	phuong.duong@faa.gov

Table 6: FAA WSA Spectrum Points of Contact

7.4. FAA Headquarters Spectrum Assignments and Engineering Team

Function	Name	Telephone	Email
Manager	Jerrold Sandors	202-267-9720 202-439-0215 (c)	jerrold.sandors@faa.gov
A/G Communication Assignments Lead	Lorena Carvajal	202-267-0751 202-507-0598 (c)	lorena.carvajal@faa.gov
A/G Communication Assignments Contractor Support	Mario Jimenez	321-267-1098	mario.ctr.jimenez@faa.gov

Table 7: FAA HQ Spectrum Points of Contact

8. Appendix: Instructions to apply for an air show temporary license from the FCC

The following are the steps a non-Fed proponent has to follow to obtain a Special Temporary Authorization (STA) for the frequencies assigned by the FAA for an air show.

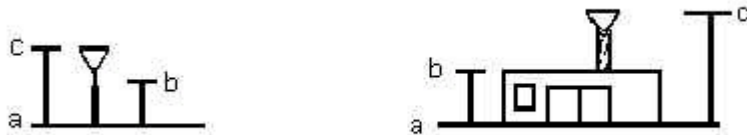
- 1) Obtain an FCC Registration Number (FRN). If the proponent does not have an FRN, one can be obtained thru the FCC website (<http://wireless.fcc.gov/uls>). In the website, select "Register" and in the FCC Registration page, select "Register" again. Enter the information requested and follow the instructions until the registration process is complete and the FRN number is issued.
- 2) Apply for an FCC license (FCC Form 601) in the FCC website (<http://wireless.fcc.gov/uls>). In the website, select "Log In" and use the FRN and password from step (1) to access the application form.
- 3) Select "Apply for a New License" and for Radio Service select "AF – Aeronautical and Fixed". Click on "Continue" and accept any prompts for the Java applets if necessary.
- 4) Once the application opens, complete the following sections. Note that the suggested responses are in ***bold and italic***:

- **Application Information** tab:

- "Application Purpose": ***NE***
- "If this application is for a Developmental License, Demonstration License or a Special Temporary Authorization (STA)...": ***S***
- "If this application is for Special Temporary Authority due to an emergency...": ***No***
- "Does this application include a request for Waiver...": ***No***
- "Are attachments being filed with this application?": ***Yes***
- "Regulatory Status": ***Private Internal Users***
- "Type of Radio Service": ***Fixed***
- "Fee Status": (as it pertains to each applicant but most of the time it should be ***No***)

- *Leave blank the rest of check boxes in this section*
- At the bottom of the page, click on “Attachment”. A new window will open to allow you select and upload a document. Complete the information as follows:
 - “Type”: *Other*
 - “File”: (click on “Browse” and locate the Coordination Memorandum provided by the FAA)
 - “Description”: *FAA Coordination Memo for Air Show*
- Click on “Add Attachment” and close the window to get back to the FCC Form 601.
- In addition to the FAA Coordination Memorandum, the proponent should also attach a document with a brief explanation of the need for a STA.
- Complete all pertinent sections in the **Applicant, Ownership Questions, and General Certification Statements** tabs.
- Skip the **Control Point** tab
- **Administrative** tab:
 - “Station Class”: *FAC*
 - “For Ground only, will the service...”: *Yes*
 - “FAA Coordination Info”: (Enter the FAA Coordination Number from the Coordination Memorandum)
 - “Date Notified”: (Enter the date in the FAA Coordination Memorandum in MM/DD/YYYY format)
 - *Leave blank the rest of fields and check boxes in this section*
- Skip the **Coast and Ground Certifications** tab
- **Location** tab:
 - Select “Add” and enter the location information. Required fields are:
 - “Location Description”: *F Fixed*
 - “FCC Antenna Structure...” *N/A*

- Enter “Latitude/Longitude”, “Street Address”, “City”, “State”, and “County”. This information must be the same as the information provided in the FAA Coordination Memorandum.
- Refer to the following diagram and enter in meters: “Elevation of the Site.... (a)”, “Overall Ht AGL (b)”, “Overall Ht AGL with appurtenances.... (c)”. ***This section is required but approximate values will be accepted.***



- “Support Structure Type”: ***Building (or any other option that applies)***
- “Would a Commission grand of Authorization.....”: ***No***
- ***Leave black the rest of fields and check boxes in this section***
- **Antenna tab:**
 - Select a “Location”, then click on “Add” and enter the actual antenna height from the ground to the tip of the antenna in the “Antenna Ht to Tip (meters)” field. Complete the rest of fields, if known, but they are not required.
 - Repeat this step for all the antennas that will be used in the air show. The most common configuration is to use one antenna per frequency. In this case, if more than one frequency is requested for the air show, select “Location” again and “Add” another antenna.
- **Frequency tab:**
 - Select a “Location” and an “Antenna” then click on “Add Freq” and enter the frequency information as follows:
 - “Frequency Carrier”: (frequency provided by the FAA in the Coordination Memorandum)
 - “Output Power”: (as indicated in the FAA Coordination Memorandum)
 - “Hours of Operation”: (as indicated in the FAA Coordination Memorandum)
 - “Frequency Type”: (Use ***L*** for Local Control, ***G*** for Ground Control, ***O*** for Clearance Delivery or Air Boss)

- *Leave black the rest of fields in this section*
 - Click on “Save Freq”
 - Click on a frequency number in the “Select Frequency” box and in the “Select Emission” section, click on “Add Emission”
 - In the “Emission Designator” field, enter the following emission designator:
6K00A3E
 - If more than one frequency is requested for the air show, select the next “Antenna” and repeat all the steps for the next frequency. If the same antenna is used for more than one frequency, select the same “Antenna” and repeat all the steps for the next frequency.
 - Once the application is complete, click on “Submit”.
- 5) The following websites might be useful when filing the FCC form 601:
- <http://esupport.fcc.gov/index.htm>. FCC Licensing Division Support team. They should provide guidance to the proponent during the filing process and address any questions or concerns. They can also be contacted at 877-480-3201 option 2.
 - <http://wtbwww05.fcc.gov/appletHelp/help601.html#application>. Detail instructions for filing the on-line FCC Form 601 provided by the FCC.
 - <http://transition.fcc.gov/Forms/Form601/601.pdf>. Paper copy of FCC Form 601 and instructions.