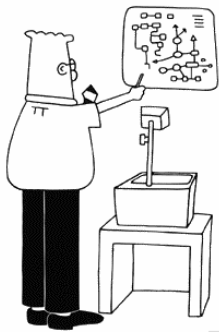


Professional airSHOW Narration

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Every touring airshow performer has been to a two-plus-hour airshow briefing that degenerated into an egomaniac contest between some of the participants. This type of briefing is unprofessional, unsafe but not unheard of. In fact, some well-run briefings fail to present the necessary information for the conduct of a safe, well controlled show.

Presented here is an annotated rehash of the FAA's airshow briefing procedure. It covers the important points related to the conduct of an airshow and can serve as the basis of an excellent show briefing.

THE AIRSHOW BRIEFING

Developed from FAA material with annotation by Hugh Oldham.

Every Airshow Waiver requires that a Preshow Briefing be held and attended by ALL SHOW PARTICIPANTS. It is contrary to FAA policy for FAA representatives to conduct the Briefing, but the FAA Safety Monitor will ensure that specific safety issues be covered. All participants will be required to sign the Waiver thereby attesting that they will comply with all limitations, conditions, and special limitations set forth in the Waiver (Team Leaders may sign for the entire Team).

The Briefing should be conducted in a clear, concise, business like manner. The fashion in which the Briefing is conducted will establish the tone for all activities during the event.

Although a relaxed presentation is preferable, the Briefing must be thorough, covering what is and what is not expected to occur during the Airshow. Therefore, during the Briefing, a certain level of formality and discipline must be observed.



For the Airshow's management, the Briefing is the best tool to insure the level of safety before, during, and after the show. During the Brief, the show's management will discuss the actual events that should take place; the who, what, where, when, and how of the show. Moreover, just as importantly, management must effectively communicate what to do when things do not go as planned.

This is particularly important for the "non-professional" participants. Most of your people are not normally involved in airshow production. This can include pilots, the FAA, Air Traffic Control (ATC), Security, Crash Fire and Rescue (CFR), crowd control, and other volunteers. For

these people, the Airshow is an exceptional event. It doesn't happen every day, therefore all of these people must be well briefed to eliminate as many accident potentials as possible. The "professional" airshow performers, although more in tune with what is happening, will need to be acquainted with conditions particular to this show, and what they are likely to encounter during the event.

The Pre-Show Briefing is where all the prior planning comes together, where all participants meet to cover all the angles, one last time, before we go out and do it for real. This is the time to discover problems with the performer taxi plan, or problems with smoke oil logistics, or any of the other thousand possible problem areas. The Briefing is the last time the Airshow's management will have a chance to meet eye-to-eye with all the players. It's a lot easier to solve a problem at the Brief than after the flag has dropped.

The preparation for the Briefing started with the planning of the Airshow itself. Like a good Airshow, a good Briefing does not just happen, it is planned in advance.

THE BRIEFING AGENDA

BEFORE THE START OF THE BRIEFING.

A packet of material should have been prepared and passed out to each performer as he or she first arrives at the show site (or mailed to the performer in advance).

This packet should contain:

1. A reproduction to the Area and Site map/s.
2. A copy of the proposed show schedule.
3. Assigned radio frequencies.
4. Emergency recall signals.
5. A copy of the show's Disaster Plan.
6. Performer passes/badges (don't forget the FAA personnel).
7. Vehicle and ramp passes for performers cars/trucks

Additionally, it is also a good idea to include in this packet:

8. Food/drink chits.
9. Local area road map.
10. Motel/Billeting information.
11. Restaurant/Dining Facility information.
12. Social events schedule with maps of locations.

Also include information on the show's corporate sponsors so that the performers: (1) know who the sponsors are; (2) can speak with the sponsors and media from a knowledgeable position about the sponsor's product and/or service.

The EMS, CFR, and POL crews should have been briefed on all aspects of their responsibilities

BEFORE the general briefing. This includes their responsibilities under the show's Disaster Plan. If the EMS, CFR, or POL crews have any questions about specific aircraft/performance requirements, ensure that these questions are fully answered before or during the general briefing.

TOOLS AND MATERIALS.

The diagrams, charts and maps used during the initial Airshow site analysis and Waiver Application should be enlarged to sufficient size for the Briefing purposes. A large wall map of the Airshow Area and the Airshow Site should be available for use during the briefing. This map/s should be marked to show the location of: airshow "show lines", control point, fire trucks and ambulances, obstructions to flight, and any "no over fly areas".

TIME OF THE BRIEFING.

Two to three hours before the scheduled show time. The time of the Airshow Briefing should be selected to provide ample opportunity for morning routines, breakfast, etc., with sufficient time following the Briefing for aircraft pre-flight and Airshow performer preparations.

LOCATION.

An indoor location should be chosen which is free from distractions, well lighted and comfortable. Reasonable access and space for all personnel and briefing materials is required. Ensure that all attendees will be able to see and hear the Briefing. Refreshments are optional, and a Restroom, with running water, is necessary.

BRIEFER: The briefing should be conducted by persons with good to excellent verbal communications skills. These persons should be knowledgeable in airshow operations, FAA Regulations, local airport and surrounding area conditions, the performance and operating limitations of the aircraft and airman participating in the show.

Let's walk through the Briefing process, using the agenda suggested in the following "Airshow Briefing Checklist".

REQUIRED ATTENDEES:

The following person should attend the Briefing; some personnel may perform more than one job function:

- Air Traffic Control Representative**
- Airshow Air Operations Manager**
- Airshow Ground Operations Manager**
- Airshow Narrator**
- Airport/Base Authority**
- All Performers (Team Leaders can attend in lieu of the entire team)**
- Crash Fire & Rescue (CFR)**
- Emergency Medical Service (EMS)**
- FAA Safety Monitor**
- FAA Waiver Holder**

Refueling and Smoke Oil Personnel (POL)
Security and Crowd Control Supervisors
Safety Coordinator

Air Traffic Control Representative. If the show's location has an Air Traffic Control Tower (ATCT) or a Radar Approach Control (RAPCON) some type of coordination must exist between that facility and the show's management. An ATC representative needs to be at the Briefing to ensure that any last minute coordination problems are worked out. The Shift Supervisor, of the shift working the Airshow, is a logical choice.

Airshow Ground and Air Operations Managers. Self-explanatory. These are the people who will be running the show.

Airshow Narrator. The narrator needs to understand all aspects of the show's operation. In this way, the narrator can better perform the informational portion of the narrator function. It also gives the narrator a last minute chance to meet with the Airshow performers and gather performer information or last minute changes in routine due to weather, obstructions, or restrictions at this particular site. In case of an emergency, the narrator will be your prime link to the spectators. With proper planning, the narrator can assist in crowd control and media relations during unplanned events.

Airport/Base Authority. Someone from the Airport or Base, who can make decisions, must be available, in the event changes are necessary.

All Performers. Self-explanatory. These are the people who will be The Show.

Crash Fire & Rescue & Emergency Medical Service Representatives. These people need to be on top of everything from a stumped toe, to a heart attack in the spectator area, to a major accident on or off the site. They must be informed as to the overall plan of action in the event of unplanned events.

FAA Safety Monitor. Self-explanatory. It is contrary to FAA policy for FAA representatives to conduct the Briefing, but the FAA Safety Monitor will ensure that all specific safety issues are covered during the Briefing.

FAA Waiver Holder. This is the person that signed the Waiver Application and "owns" the air space for the Airshow. The airshow or event chairman may **NOT** be the best person to be the Waiver Holder. The air side operations of an airshow is a full time job of show day. Any changes to the Waiver, made by the FAA, will have to be instituted by this person.

Refueling and Smoke Oil Personnel (POL). It is sometimes necessary to re-fuel and re-smoke the show aircraft during the show. This may have to be

performed on the operational side of the crowd line and these people will be responsible for accomplishing these tasks in a safe and effective manner.

Security and Crowd Control Supervisors. Security and Crowd Control are critical to the safe operation of the show. Again, these are people that must be informed as to the overall plan.

Safety Coordinator. At some locations (DoD installations, etc.) there is a person whose sole job is to ensure that safety is paramount at all times. This person can make important input as to the safe operation of the show. Use this resource.

INTRODUCTIONS: Simple courtesy and it allows everyone to meet all the players.

START PASSING AROUND COPY OF WAIVER: Simultaneously with the verbal briefing, the FAA Airshow Waiver and any Special Limitations/Provisions should be passed around to all performers for them to review. Each performer should acknowledge the contents by their signature on the bottom or back of the last page. This signed copy of the waiver should be retained by the waiver holder to certify that the performers did, indeed, attend the briefing.

NOTAM: The required Notice To Airman (NOTAM) relative to the closure of the airport and airshow area of operations must be issued by the Airport Manager or Base Ops, at least 48 hours prior to the waived operational time. **NOTE: The NOTAM MUST be issued by the Airport Manager, not the waiver holder.**

WEATHER BRIEF: A Weather Brief should be prepared with the latest Local Hourly Observations, and the Local Forecast, and Forecast Winds Aloft. This does not have to be a detailed briefing, just the information necessary to give the participants on what to expect for the local weather during the show period. The actual weather **MUST** be at or above the minimums specified in the FAA Waiver.

WAIVER & SPECIAL PROVISIONS DISCUSSION: DO NOT read the waiver to the participants. Respect the intelligence of your participants. Most FAA Waivers are standard documents, the performers will scan the Waiver as it is passed around, and ask questions if they find any areas confusing or unclear. Simply highlight any areas of concern in the Waiver or the Special Provisions.

TIMES THE WAIVER IS IN EFFECT: Several important factors. Is there time for the performers to practice at the site or provide media rides in waived airspace? How much time will we have if there is a weather hold? Remember, when the last event on the Waiver's Schedule of Events is completed, the Waiver is voided. If you need to hold that airspace, for any reason, now is the time to coordinate with the FAA Monitor and/or ATCT and/or ATC Center personnel. Make sure there is a clear understanding as to when you will release your airspace.

AREA OF OPERATION: The Waiver defines both the horizontal and vertical area within

which the FAR's are wavier. The performers must have a clear picture of this area.

OBSTRUCTIONS TO FLIGHT WITHIN THE OPERATIONAL AREA: There are many things within the Waviered Airspace that can cause problems for the performers. Examples: ILS, NDB, and Communications antennas, Wind measurement equipment, Tall towers near the show site, etc. The performers should be briefed on the location and height of these obstructions.

NOISE SENSITIVE AREAS: Within the Operational Area, there may be places that it is best to avoid due to political or operational reasons. These could include: schools, hospitals, churches, nursing homes, or the airport neighbor who always is complaining about noise. The performers will make every effort to avoid these areas if they are informed about them.

SHOW CENTER LINE FOR EACH CLASS OF AIRCRAFT: At many shows, three show lines are in effect. This can be confusing from the air. Carefully brief the performers on the location and markings for each show line. Additionally, the parachute jumpers may be required to land in a certain area; brief accordingly.

LOCATION OF SUPPORT SERVICES AND NAME OF PERSON: During the show, the performers will need support services. Introduce the person responsible for each service and point out where they will be located or how the performer is to contact them. Brief the support personnel as to which aircraft/performer will be requiring their service and when and where they will require that service. The performers should be provided a dedicated restroom facility, co-located with the performers aircraft staging area. Brief the location. Ensure that adequate supplies of food, soft drinks, ice and water are provided for all airshow staff, support personnel, and performers. Brief the locations of these supplies and ensure that the support personnel will maintain these locations with usable quantities.

COMMUNICATIONS: The need for good communications at an Airshow is necessary to properly manage the show. The need to be able to communicate with the performing aircraft is essential. The Airshow performer ground-to-air communications frequencies should be a discrete, unpublished, and unlisted. Assign radio frequencies to be used and monitored for each activity of the Airshow. Do not over load your freq.'s with many functions. Brief the need for strict radio discipline, emphasize that the Airshow frequencies must be kept clear for operational control and/or emergencies. Blocked freq.'s and no radio/radio failure (NORDIO) procedures must be discussed and visual signals briefed and/or demonstrated for use when necessary. Discuss the need to keep the performer's ground-to-air freq.'s clear. The performers should not be subjected to any distracting radio chatter while flying their performance. Only priority/emergency traffic should be passed to the performers during this time.

OPERATIONAL AREA'S "X'ed": As a provision of the Wavier, at uncontrolled airports, it will be necessary to place X's on the runway. Brief the location and method of placement of the X's. Ensure that no takeoffs or lands are scheduled during the time the support personnel are placing or removing the X's.

SPECTATORS CONFINED TO DESIGNATED AREAS: As a provision of the FAA Wavier, the spectators must be kept a defined distance from the aircraft. Brief the need of proper

crowd control. Introduce the person in charge and how they can be contracted during the show. Brief the procedures to be used if crowd control is lost during the aerial events. It may be necessary to stop the show, re-gain crowd control, and re-start the show.

TAXI PLAN/INSTRUCTIONS: This is an area of special concern. The movement of all aircraft before, during, and after the show will present several challenges. **It is imperative that no aircraft, under power, taxi through the designated spectator areas while spectators are present.** The effects of prop/jet blast property located in such areas can be devastating, the effect of a spinning propeller on the human body is catastrophic. Again, under no circumstances should an aircraft move through the spectator area, if it is necessary to move aircraft within this area, it should be towed and taxi directors and wing walkers assigned and properly briefed to avoid endangering spectators or property.

The Taxi Plan should include well planned, and clearly marked routes for use by both static and performing aircraft. Provisions for necessary Ground Support Equipment (power cards, fire bottles, etc.) must be included. The plan should also consider wheel loading requirements, FOD, and obstructions.

During the Briefing, taxi routes, visual aids and markers, parking areas, run-up and takeoff positions must be explained and noted by all participants. Provisions for the movement of performing aircraft from the overnight parking areas to the Airshow staging areas must be coordinated. The Briefing offers the opportunity to identify any special ground operational requirements or difficulties which a performer and/or Ground Operations Manager (GOM) may have not previously identified. These problems can then be solved due to the presents of the necessary people.

PERFORMER VEHICLE AND AIRCRAFT PARKING: Throughout the Airshow period, the performers will require vehicular access to their aircraft. This includes the period, during the show, when the aircraft are parked in the show staging area. The performers need this vehicular access due to the operational requirements of both the aircraft and the Airshow routines. The need to transport tools, equipment, removal aircraft parts, etc. make it imperative that they be able to park their cars in close proximity to their aircraft.

Brief the locations for vehicular ramp access, routes to and from the different parking areas, and need for Security arrangements for use by the performers.

EMERGENCY PROCEDURES: The Briefer should specify the procedures for all aircraft to use in the event an aircraft operational emergency occurs during the Airshow. Such procedures should include: radio frequencies and disciplines, flight patterns and divert information. In the event of radio failure, either aircraft of ground based, visual signals should be identified to all participants for purposes of stopping the show and requesting aircraft to land or divert. Bail Out areas should be coordinated with the CFR personnel and identified to the participants.

CFR & EMS CREWS BRIEFED: It will be necessary to ensure that all CFR and EMS personnel have been briefed on the necessary procedures and precautions for aircraft rescue and recovery techniques. Due to the unusual or unique nature of some performing aircraft, it will be

necessary for the CFR crews to receive a special Brief, by aircraft type, relative to these techniques. The Briefer should ensure that these Briefing have taken place or coordinate the necessary meeting at this time.

IN THE EVENT OF AN INCIDENT ... MEDIA: The Briefer should identify the spokesperson who would be responsible for ALL INFORMATION released to the media personnel in the event of an unusual occurrence or emergency.

CONFIRM AIRSHOW EVENTS SCHEDULE: A good schedule is an aid to the presentation of a professional Airshow as well as the safety of the event. Proper scheduling prevents haste, misconducted operations, overlooked pre-flights and forgotten items on a checklist.

During the Briefing, the published schedule must be reviewed, checked, revised and emphasized. The performers should be aware of the times when the air field is open for normal traffic operations, and when the FAA waiver is in effect. Participants should be briefed as to the expected times for engine start, taxi, takeoff and landing. There may be times when no engine should be running, such as during an opening speech, invocation, parachute jump, etc., these times need to be briefed and emphasized.

In the event of schedule changes, a means of communication must be briefed to establish to advise all participants of time changes. This system, using radio and personal contact should provide sufficient opportunity for the performers to adjust and prepare for their performance. Alternate acts should be planned in the event of last minute cancellations due to mechanical problems, performer illness, or other unknown/unplanned occurrences.

Weather limitations, for each act, must be understood by the Air Operations Manager, Briefer, Announcer, and Performers. Procedures and rescheduling, in the event of weather delays or other delays, must be briefed and fully understood by all participants.

The need for In-Show departures, by performers and/or other aircraft, must be planned and coordinated. Early Post-Show departures, by performers and/or static aircraft, will need to be coordinated by the Air Operations Manager and Air Traffic Control.

COMMENTS FROM FAA REPRESENTATIVES: The FAA Safety Monitor, ATCT representative, and other FAA personnel present should be given the opportunity to make germane comments of the Airshow operations.

QUESTION PERIOD: An ample time for questions from the participants should be allowed to ensure that all personnel are clear on the activities for the event. The Briefer must ensure that all participants understand the proposed operations. Any areas of possible misunderstanding must be sought out and clarified. The Briefer must not ASS/UME that the participants understand the program.

WAIVER SIGNED AND RETURNED: Has everyone required to sign the FAA Waiver done so?

TIME HACK: Ensure that all watches are coordinated to the correct local time.

ANNOUNCE TIME AND PLACE OF FAA PILOT CREDENTIALS CHECK & AIRCRAFT INSPECTION: While it is the individual performers responsibility to provide evidence of proper pilot certification and aircraft documentation to the FAA Monitor, it is recommended that the Airshow sponsor obtain such documentation in advance of the Airshow Briefing. The individual inspection of pilot certificates and aircraft records can consume a great deal of time.

Suggestion: Send a checklist of the required documentation to all the Airshow's participants. Ask them to provide Certified or Notarized copies of the documentation which is then sent to the FAA Monitor in advance of the Airshow.

Coordination and communication between the designated FAA Monitor, the Airshow Operations Manager's staff, and the performers will resolve many of the certification/documentation difficulties prior to the General Briefing. Any remaining unresolved certification or documentation problems can then be cleared up immediately after the General Briefing.

ADJOURN TO SPECIAL BRIEFINGS AS NECESSARY: Adjourn the General Briefing, convene any necessary Special Briefing for the Warbirds, Jumpers, Special Act coordination, etc. Due to the number of key Airshow personnel present at the General Briefing, adjourn that Briefing as soon as possible to allow these people to return to their jobs. Convene Special Briefings, as necessary, to complete the coordination of all events.

The Special Briefing is very important for the "non-professional" airshow performer such as: warbirds, commercial flybys, local non-touring performers, etc.

The Flight Patterns used by the Warbirds and Commercial exhibitors are of special importance. The patterns to be flown should be depicted on the Area, Site, and Airport charts using visible landmarks. The Briefer should establish, consistent the FAA Waiver, the minimum/maximum altitudes, airspeeds, and crowd distances to be used during the flybys as well as the distance between each aircraft or formation. If, because of performance characteristics of the aircraft, more than one pattern is used, the Briefer must devote specific attention to the planning of these patterns to eliminate aircraft approaching head on or without visibility of the other aircraft. The Briefer should separate the patterns by both altitude and geographical area. In establishing minimum altitudes for any pattern, it should be remembered that an aircraft flying very low to the ground cannot be seen by many of the spectators. Experience indicates that 200 feet provides the minimum altitude for spectators to observe the aircraft and provides an adequate margin of safety for the aircraft during the flyby. The Briefer should identify the number and type of flybys to be made for each pattern and each aircraft.

AIRSHOW BRIEFING CHECKLIST

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PRESENCE REQUIRED:

All Performers

FAA Safety Monitor

FAA Waiver Holder

Air Traffic Control

Airshow Air Operations Manager

Airshow Ground Operations Manager

Airshow Announcer

Airport/Base Authority

Security and Crowd Control Supervisors

Airshow Director/Safety Coordinator

Emergency Medical Service (EMS)

Crash Fire & Rescue (CFR)

Refueling and Smoke Oil Personnel (POL)

INTRODUCTIONS:

Briefer (self intro)

Air Show Staff present

Air Operations Manager (AOM)

Ground Operations Manager (GOM)

FAA-FSDO, Tower, ATC

Airport/Base Authority

Crash Fire Rescue Representative

Security Representative

Performers/Participants

POL Personnel

AIRSHOW BRIEFING CHECKLIST

Page: 2 of 4

- (1) **START PASSING AROUND COPY OF WAIVER.**
- (2) **NOTAM** was disseminated 48 hrs prior to the event.
- (3) **WEATHER BRIEF** quick overview of show time local weather and expected trends.
- (4) **WEATHER MINIMUMS** _____ ceiling _____ vis
Per FAA Airshow Waiver
- (5) **OVERVIEW OF THE WAIVER AND SPECIAL PROVISIONS.**
- (6) **DISCUSS ANY "NON STANDARD" SPECIAL PROVISIONS.**
- (7) **TIMES THE WAIVER IS IN EFFECT.**
Use Local Time
- (8) **AREA OF OPERATIONS AS DEFINED IN THE WAIVER**
Use Area Map
- (8) **OBSTRUCTIONS TO FLIGHT WITHIN THE OPERATIONAL AREA.**
Use Area & Site Map
- (10) **NOISE SENSITIVE AREAS AND/OR AREAS TO BE AVOIDED DURING THE DEMONSTRATION.**
Use Area Map
- (11) **SHOW CENTER LINE FOR EACH CLASS OF AIRCRAFT**
500 foot center line
1,000 foot center line
1,500 foot center line
Parachute Jumper Landing Area

Use Site Map or Runway Diagram

AIRSHOW BRIEFING CHECKLIST

page: 4 of 4

**(20) IN THE EVENT OF A INCIDENT, ONLY AUTHORIZED PERSONNEL
WILL MAKE STATEMENTS TO MEDIA!**

Name of person authorized _____

(21) CONFIRM AIRSHOW EVENTS SCHEDULE

Sequence of events

In show departures

Early post show departures

(22) COMMENTS FROM FAA REPRESENTATIVE/S

Include Control Tower Chief &/or Shift Supv.

(23) QUESTION PERIOD

(24) WAIVER SIGNED AND RETURNED?

(25) TIME HACK

**(26) ANNOUNCE TIME AND PLACE OF FAA PILOT CREDENTIALS CHECK &
AIRCRAFT INSPECTION**

(27) ADJOURN TO SPECIAL BRIEFINGS AS NECESSARY

Adjourn to Special Briefing for Warbirds

Jumpers, Opening Flag Jump, etc. if necessary

SPECIAL NOTES:

The TOTAL TIME for the COMPLETE General briefing should be approximately 15 to 30 MINUTES.