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Photographing Airshows

By Hutch Hutchison
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Photographing Air Shows

U.S. Airforce Thunderbirds precision team flying in a tight formation

By Hutch Hutchison

Each year over 10 million Americans attend air shows, more than any other pastime. There are countless, relatively small shows at local airports around the country to top tier venues featuring civilian performers and precision military teams such as the Navy Blue Angels. Given the excitement, drama and so many people enjoying these events, you would be right to assume there might be a few cameras in the audience. Unlike most similar major events, beginner to

pro level photographers all have equal access and opportunity to capture the action from the best locations on site.

I like to arrive early to get first chance to secure a spot at the front of the flight line before the crowd arrives. There are very few bad places to view high level flight performances, but low-level passes and interesting activities on the runway can be blocked by spectators if you are behind the front row.

Being at or near center can be advantageous as climbs, turns or other maneuvers often take place there. Some prefer being closer to the approach end of the field where planes bank as they make their approach. The other far end of the field allows extra time to locate and lock the plane in the viewfinder



A close shot with a wide angle lens gives this Navy F-18 a unique perspective



Expert skydivers often perform an aerial ballet at airshows

before it passes by. Afternoon angles to the sun should also be considered. Be careful to give speaker stands or other obstacles a wide berth in your field of view.

Early arrival also provides an opportunity to photography interesting “static” exhibits before the throngs of people fill in. A variety of equipment will work for this part of the show, from cell phone to DSLR. My favorites are human interest and medium telephoto focused on airframe details, textures, patterns and color. Wide angle lenses are useful in tight aircraft interior spaces or to exaggerated exterior angles.

Advanced ticket purchases are usually available online at a discount and this avoids waiting in long lines. Some shows offer a limited number of photographer and/or special event to the public. Early access, preferred parking, exclusive shooting locations, food, beverages and/or more are some of the possible benefits. Just the opportunity to photograph gleaming aircraft at sunrise can make the extra cost well worthwhile. General parking can often be a distance away requiring a long walk or shuttle so preferred parking is also a great option. It is often close enough so that heavier, afternoon aerial show gear can be left secured in the car until later when needed. Avoid grandstand or box seating with tight rows of chairs.

A little planning in advance can make a long, five to eight hour day both successful and comfortable. First and foremost, always check the airshow website for any options or restrictions

that may be unique to that venue! The following is a suggested minimum checklist of items, if allowed:

- Camera bodies and lenses to cover the variety of shooting opportunities while keeping weight, bulk and practicality in mind.
- Extra memory cards and batteries. If it's your first airshow, you will likely need more than expected!
- Sunscreen, hat, moist wipes and appropriate clothing for weather conditions
- A small cooler with water, snacks or lunch. Otherwise be prepared for some fun, but expensive food and refreshments. I freeze a couple water bottles the night before to keep the cooler cold and a refreshing drink later in the afternoon.
- A folding, canvas sling chair. Ideally one with a flip up top or place to attach a small umbrella for shade between performances.
- A small wagon or wheeled cart
- Tripod or monopod if you must, but not something I recommend.

Aerial photography from the ground presents a myriad of challenges. Among them, choosing the right shutter speed to keep propellers blurred so a plane doesn't look like a toy hanging from a string. Or, keeping a fast moving jets in sharp focus. So, what are the techniques and equipment that contribute to success?

DSLR cameras equipped with continuous burst mode capability and fast focusing telephoto lenses



Hutch Hutchison

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The U.S. Navy Blue Angels execute a "fleur de lis" maneuver



F-16 fighter shows off its glowing afterburner



Slow shutter panning technique illustrates the speed of this low flying plane



Early morning shots provide great flight line sunrise photos

are your best bet. Planes will be flying anywhere from 500 feet to over a mile away from you so a minimum focal length of at least a 300mm is generally necessary. As a practical matter 400mm to 500mm or longer is desirable. My favorite for aerial photography is a 100–400mm zoom that not only lets me get long distance shots, but also closer passes. Light can vary dramatically at different directions, so I always shoot RAW, tend to use matrix metering and correct in post processing if necessary.

Shutter Priority mode set between $1/60^{\text{th}}$ to $1/250^{\text{th}}$ should be used when shooting propeller planes with consideration for the type of aircraft and specific situation. The faster end of this range may produce very little blur in the props and should only be used when the planes are flying at high speed or are equipped with high RPM turbo props. Conversely Idling planes on the ground may need to be slowed below the minimum. $1/125^{\text{th}}$ is a good starting point. The type of aircraft and engine sound give a hint at propeller rotation speed.

Slow shutter speeds require a smooth technique, without pause when squeezing the shutter. Tuck elbows in tight, cup your hand under the lens and follow the plane by turning smoothly from the waist using the camera's tracking modes. High overhead aerobatics require little panning motion, but it can be difficult maintaining a near vertical position shooting with heavy equipment. A seated position, leaning back in these situations can help keep the camera steady and is much easier on arms and body. Even if you feel steady as a rock there's a tendency to dip the lens while pushing the shutter so shoot in bursts and don't be surprised if your



U.S. Navy Thunderbird goes up, up and away fast



Aerobatic demonstrations make colorful photos

keeper rate is low. Often the second or third shot in a burst will be the best.

Maximizing shutter speed is a must when photographing jets and aperture priority is the best way to accomplish that. I generally start at ISO 100 at f/8.0 aperture hoping to get the sharpest images possible. I then preview the scene to see what the minimum resulting shutter speed will be. I generally look for a shutter speed of 1/1,000th or more.

A tripod or monopod is of little use in a tight working space with planes passing quickly from various directions and altitudes. Image Stabilization or Vibration Reduction lenses can be a big help, but read your manually carefully to determine if it has optional settings for panning or it can make things worse. Many “IS” lenses are equipped with a specific horizontal panning mode intended for fast moving subjects such as passing planes. A normal horizontal/vertical can be very effective shooting high overhead aerobatics or planes approaching near head on.

In many areas of the country Airshow season means dull, cloudless skies. The purists may prefer to leave their images just as shot, but I have a collection of various interesting sky images I’ve previously taken to drop in using Photoshop to add drama and dimension. If you do so, just remember to match the direction of light in the blended images.

Most important is to just enjoy the show, look around and be prepared for all the myriad of photo opportunities in addition to airplanes in the sky. ■



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Classic wing walker performances are often featured at airshows



Aerobatic performances often feature frightening close maneuvers