

Fireworks photography basics

[How to capture the rockets' red glare...and more!](#)

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No matter what kind of camera you own or your level of photographic knowledge, you can capture stunning fireworks this 4th of July!

It's fireworks season! The summer brings many opportunities to photograph fireworks, starting with the Fourth of July. Capturing fireworks is easy if you plan in advance and bring the right gear. Here are some tips to help you take great fireworks photos.



Michael Snow shot this multi-blast scene with his Fujifilm FinePix S5000 [EVF camera](#) by using a 2-second exposure and setting his aperture to f/8.

What you need

[A camera.](#) While an SLR is best because it gives you the most control over exposure, a simple point-and-shoot will do in many cases. Ideally your camera should have both exposure and aperture controls. Most compact cameras have some form of manual override. These can come in very handy.

[A lens.](#) Really, any lens will do, depending on the effect you're after. If you want a panorama that includes an interesting landmark or land form, use a [wide angle](#). If you want to fill your frame with fireworks, use a [telephoto](#). Not sure? Bring a [wide-to-tele zoom](#)! There are many long-range SLR zoom lenses on the market these days that can cover your needs quite well.

[A tripod.](#) Handheld fireworks photos simply don't work because the most effective fireworks photos are long exposures, and humans can't keep a camera still for the one-second exposure you will likely need. The lines that trace the path of the bursts will be jiggly and detract from the beauty of the blasts. Even optical image stabilization won't help much (it might help a little). To eliminate shakes, the camera must be mounted on a stable support--and a tripod's the best.

What gear do I need?

The answer to that question depends on how much you are willing to invest, your level of experience and your interest in photography. We've put together three possible kits for photographers with different needs. Why type describes you?

Basic: I'm a snapshotter and I just want my fireworks photos to come out clearly.

Camera: At a minimum, you need a camera that lets you set the shutter speed manually (shutter priority mode), or has a "Fireworks" exposure setting. It should also have the ability to record relatively long exposures.

Tripod: You needn't spend a mint on a tripod, but since lower-cost tripods may not be as rock steady as pricier models, hang your gadget bag from the center post to give it a stronger center of gravity.

Hobbyist/enthusiast: I want to take prizewinning photos of fireworks that I can blow up to 11x14 or bigger and proudly hang on my wall.

Camera: An advanced compact or low to middle-range DSLR camera will give you sufficient exposure control and decent resolution and overall image quality for a fine blow-up.

Suggested lenses (for DSLRs): A good general-purpose zoom lens should be sufficient, as fireworks typically fill the sky if you're standing in the designated viewing area. Check out [standard wide-to-tele zooms](#).

Committed/Pro: I want to shoot marketable fireworks photos that I can sell as wall art, market as a poster, or licence out for use as stock photography.

Camera: Advanced metering and exposure control, high resolution, and fast burst rates will help you capture exactly the right moments at the correct exposure. Prosumer and pro cameras will get you there with no doubts.

For a lens, use a better quality midrange zoom (read [Bob Atkins' article about how to tell the difference](#)) and a good, steady tripod.



Zoom out and show your location: *Water's a great way to add an extra dimension to your fireworks photos, and if the fireworks are being launched on the water, you'll be able to see the rockets streaking skyward and smoke below, which adds another element of interest. Photo © Ruslan Gilmanshin / istockphoto.com.*

Where to Stand

Before the fireworks start, find out where the fireworks will be taking place, and scout around the area. Here are the best kinds of locations:

Good: An unobstructed view of the sky, upwind of the action. Make sure there are no buildings or trees in the way. Look for an elevated position so you don't have the heads of the people in front of you in the shot. Why upwind? You don't want the smoke blowing towards you because it can block the view--and do you really want to smell that?

Better: An unobstructed view with water. A body of water can result in interesting reflections of the fireworks.

Best: An unobstructed view with a landmark. Fireworks blazing against the profile of a well-known (and hopefully well lit) building or natural landmark can add a point of interest (and possibly salability) to your image.



Dramatic, yes--but tricky: *The sunset meant a shorter exposure of around 1/8 sec, since the background is brighter than usual for fireworks--hence the smaller burst trails. In tricky light like this just the sun dipped below the horizon, choose a small aperture and the lowest ISO setting available so you can get the longest exposure possible. If your camera has auto bracketing, use it! Photo © Jacom Stephens / iStockphoto.com*



Exposure tips

Aperture: Most photographers use ISO 100 and an aperture of between f/8 and f/16. The smaller aperture intensifies the colors of the fireworks and prevents overexposure. Experiment and see how the different aperture setting changes the look of your image.

Shutter speed: Use your camera's "B" (bulb) setting. Start your exposure at the moment the burst begins, and end it when the burst reaches its peak. How long is long enough? For a single blast, a second or two should be sufficient.

Some photographers leave their camera on B and block the lens until there's a burst, and repeating the process over several bursts. This results in a multiple exposure that can fill the frame with fireworks.



Scott Laliberte used his [Canon Digital Rebel XT](#) and [Canon 70-300mm f/4.5-5.6 DO IS USM](#) lens to capture this amazing blast.

Color balance: Daylight is fine, but if you have lit buildings you should set color balance based on how they are lit.

What about auto-everything cameras?

If your camera lacks manual settings, you can still get reasonably good fireworks shots. Set it to Landscape mode so it focuses on infinity. Disable the flash. Start the exposure before a blast if possible and the lens will remain open longer.

To reduce lag time (a delay between when you press the shutter release and the camera takes the picture), keep your finger on the shutter release, pressing it halfway down.

Reducing noise

If your camera has a noise reduction feature, by all means use it. The long exposures are bound to overheat the image sensor, which results in digital artifacts ("noise") that look a bit like grain in your photograph. The black sky will look muddy or worse. There is also software and there are techniques for reducing grain in Photoshop--but that's another story.

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Fireworks

Last year (2010) I got some pretty good results over the Los Angeles South Bay area using 1/30 sec., F/2.8 (since I didn't feel that depth-of-field was an issue), ISO-400, and AWB (not something I usually do but it works for this), and on a tripod for some stability. I left the tripod head loose so I could rotate to follow the shots. I'll try the lower ISO and smaller aperture that you suggest.

Thanks Mason for your tips.

by **Ron** in **Westminster, California** on July 3, 2011

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Fireworks Photography

A very helpful tip about fireworks photography, i wanna share my fireworks photos using some of this tips. Just visit to <http://www.bantillo.com/photos/>

by **rabant** in **Philippines** on March 17, 2011

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