

# Photographing Fireworks

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Creating great images of fireworks displays can be rewarding, fun, and relatively uncomplicated. Follow these tips to de-mystify the whole process – it's simpler to do than it is to read through what follows.

## **What you'll need:**

**Camera** with manual control of focus, exposure and white balance. (Use of a digital camera is assumed. Film can be used, but shooting fireworks digitally gives you several options that are difficult to realize with film.)

**Very solid tripod.** Don't be tempted to wimp out here by leaving your good tripod at home and using that lightweight thing in the back of the closet. Yes, you may have to walk some distance to get close to a really popular fireworks display from the far-out parking area, and a beefy tripod can be heavy to carry. But camera movement can spoil your best shots, so suck it up and carry the stout tripod. You'll thank me later.

**Lens or lenses.** If you're close to the fireworks, you'll probably need a wide-angle lens or a zoom lens that can reach down into wide-angle territory. If in doubt, carry more lenses rather than fewer. It would be frustrating to wait months for a good fireworks display, then not be able to realize the shot of your dreams because you left the "right" lens at home. In 35mm full-frame equivalents, focal lengths of 20mm to 50mm are usually most useful. If you're shooting from farther away, longer focal lengths will allow you to reach out and still get good image sizes.

**Remote shutter release.** Nowadays that usually means a switch on the end of a cable, with a connector designed for your specific camera. Some like to use wireless triggers for convenience, and that will probably work just fine. I would be a bit concerned about interference from other photographers nearby using their wireless devices (there will be a LOT of cameras set up if you're near a good fireworks show), but if a wireless remote is all you have, use it.

**Memory cards or film.** You'll probably take a lot more exposures than you plan to, so be prepared and you won't run out just as the big finale starts. If you are going to shoot film, either 100 ISO color negative or 100 ISO daylight-balanced transparency film will do the trick, depending on your desired final use. 100 ISO black and white films would work, too, but what's the point? Shoot color. If you decide you want a black and white image later, it's much easier to take the color out than it is to wish that you'd shot color in the first place.

**Small flashlight.** Makes it much easier to adjust camera settings in the dark. A keychain LED light will do fine.

**Larger flashlight.** Very helpful in getting safely back to where you parked the car when it's all over.

**Sun tan lotion.** You do plan to stake out your claim to a good shooting position in daylight before someone else gets it, don't you? To this add bug spray if you might need it, drinks and snacks to fuel you through the several hours that lie ahead, folding chairs or blanket, etc.

**Gaffer tape or other non-residue-leaving tape.** A few inches will do it. Explained later.

**You won't need flash**, unless you intend to use it to light nearby subjects. Don't use it for the fireworks!

## Techniques

Although you don't want to set up your camera too early (it'll just catch heat from the sun and gather dust) you will want to be ready before the fireworks actually start.

Set up the tripod where its legs aren't likely to be tripped over (think folks wandering about in the dark). You're going to be looking through the viewfinder and at the rear LCD screen a lot, so make your camera height as close to eye-level as practical. Your back and neck will thank you later. If your tripod's too short to achieve this, an angle finder can help with the viewfinding part. But it won't ease the LCD-looking part, so you might have to settle for a seated shooting posture. (This could be the time to celebrate your coming photographic success by getting the tripod you've always known you really need.)

Once the camera is firmly mounted on the tripod, you won't really know exactly where to aim it until the fireworks start. But estimate the angle based on your location relative to where the fireworks will be set off. If you're using a 3-way tripod head and find that you can't tilt the camera up high enough, re-mount the camera 180° around, with the tripod head's tilt handle pointing away from you instead of its usual orientation coming toward you. In this position it'll be awkward to adjust that handle, but you will be able to aim for the sky.

Here are camera settings to start:

- ISO 100 (or 200 if that's your camera's lowest ISO setting)

- Daylight white balance

- Shutter on "Bulb" or "Time"

- Lens aperture f/8

- Flash OFF

Manual focus. Pre-focus on something that's about the same distance away as you expect the fireworks displays to burst, like a distant tree or building. Now take that short bit of gaffer tape and tape the lens focus ring so you can't inadvertently shift it later in the excitement of the moment. Set focus to Manual. If you're using a zoom lens that has a tendency to "creep" or shift its focal length setting when the camera is pointed up, save half of the gaffer tape to lock that setting down later.

Once the fireworks start, act quickly to adjust camera aim and lens focal length if necessary.

How to expose: When you see one or more rockets fired skyward, open the shutter right away. Leave it open until that burst of flashes is over, or until you feel that you have enough bursts recorded. You'll get the hang of "how many bursts are enough" with practice; my suggestion is to close the shutter sooner rather than later. If you find that your compositions are skimpy and you need to combine multiple bursts with your image editing software later, that's doable. If your exposures are too crowded, though, it's difficult-to-impossible to remove the excess. Exposures usually don't need to be longer than 5 to 10 seconds each. Check the LCD to be sure you're not over-exposing. Adjust the f/stop or ISO if necessary to correct exposure; you'll be changing the shutter's open time to control how many bursts your record only. If you let exposures go on too long, you'll begin to get light in the sky instead of the inky black background you want. Digital noise will probably become a challenge as well. If you have Long Exposure Noise Reduction turned on, you'll find that after each exposure the camera will be processing that image for a time about equal to the exposure time. Put another way, if you shoot a 10-second time exposure,

you won't be able to take the next image until the camera has been "thinking" for about 10 more seconds afterward. Consider turning Long Exposure Noise Reduction off for your fireworks shoot.

Above all, have fun and enjoy the pyrotechnics. With a little experience, you'll be making prize-winning fireworks images that'll bring back good memories for years to come.