

Photographing Fireworks

By Chuck Palmer

Whatever your traditions on the 4th of July, I suspect most of us can't wait to go watch the inspiring fireworks display. Of all the photo opportunities on July 4th, taking great fireworks photos is probably the most challenging for photographers. Let's look at a few tips for capturing great fireworks photos.



Getting Ready for the Show

Arrive early to capture a great vantage point. You don't need to be close to the fireworks launch position but make sure you have a clear unobstructed view of open sky. Being downwind from the fireworks launch point is usually not a pleasant experience. Smoke and ash from the show is not very healthy for you or your camera, so pay attention to wind direction. Bring a lawn chair, mosquito repellent, and don't forget water and refreshments!

Essential Camera Equipment

Bring your camera, wide-angle, and telephoto lenses, a cable or wireless remote release, your tripod, and a small flashlight. And of course, memory cards and fully charged batteries. Although

a flash unit is not necessary, it might come in handy when capturing the family enjoying the show. You might also consider bringing a baseball cap to help with longer exposures (see Camera Techniques below).



Camera Settings

- Exposure Mode – Manual. You will need to be in full control of shutter speed, and aperture.
- ISO – Set your ISO setting to the lowest possible native sensitivity. Typically, ISO 100
- Lens Aperture – There is no absolutely “correct” aperture for shooting fireworks. In general, with the longer shutter speeds involved, you will need to stop the lens down to smaller apertures. Typically, f/11 to f/22 depending on how close you are to the fireworks, and how much of the frame is filled with fireworks bursts. Tip: Start at f/16 for your first test shot. Don’t pay any attention to your camera metering. The night sky should be black or near black, and the burst of fireworks should not be overexposed or blown out.
- Shutter Speed – Normally you will use long exposures at slow shutter speeds. Experiment with different shutter speeds from 2 to 30 seconds. You will likely find that 6-15 seconds will be ideal for capturing multiple bursts. Although you can set specific long exposure shutter times, it will be easier to set your camera to Bulb shutter mode, and use your remote release to first open the shutter, then close the shutter after the final burst. Time your first test capture for 15 seconds (See Camera Techniques below)
- Focus Mode – Manual Focus. Try focusing your camera on a far-away object near the fireworks launch point, or set your focus to infinity, but be sure your camera is set to manual focus mode. After you set your focus, set Auto Focus off.
- White Balance – If you shoot in raw format, you can easily modify White Balance settings in post-processing software. Many photographers will suggest you use a

Daylight setting for fireworks. However, I find a Tungsten White Balance setting typically provides more vivid colors.

- Shooting/Drive Mode – Set to Cable Release or Wireless Remote Release mode to prevent camera shake. If you don't have a remote release, you can use your self-timer set to 2 seconds to initiate a long exposure, but timing your shot is much more challenging.
- Lens Image Stabilization – Turn this feature off while photographing from a tripod.

Camera Technique

With your camera on your tripod, set it up as described above in Bulb Shutter mode. Get ready... watch for a fireworks shell to be launched. Press your remote release immediately upon launch to open the shutter, and keep it open as the burst lights up the sky. Wait a few moments after the initial burst to record streaks and any other smaller bursts to occur. Then close your shutter using your remote release (6 – 25 seconds typical) Count to yourself to estimate how long your shutter is open. Experiment with longer exposures to capture multiple launches of fireworks shells and bursts. You will notice that multiple bursts build up and can easily run into over-exposure. Adjust your aperture accordingly. If your light trails are overexposed, increase your f-stop number to a higher number (smaller opening). If your light trails are not showing up clearly, lower your f-stop number (larger opening). Sometimes you might find there is considerable time between shell launches. In this case, you can leave your shutter open for longer periods in Bulb mode to capture multiple bursts by covering your lens with an opaque baseball cap during the wait time.



Composing for Impact

Remarkable fireworks photos really start with a great composition. But it's a real challenge since you can't see your final subject until the fireworks shell explodes! Some of the more compelling fireworks images provide a wider-angle view with the city skyline, or foreground reflection of the light. Consider horizontal and vertically composed images. Try including spectators or family members in silhouette watching the light display to add interest. Use your camera's live view to watch a series of bursts to optimize composition before you begin taking photos. The most important thing is to mix things up as you shoot the entire show. Change camera settings, alter the number of bursts in a single frame, vary your zoom settings capturing just the bursts, then switch to wider angles to include foreground details. The more variety you include in your photos the better the chances you come home with some very remarkable images.

See you at the fireworks display and may the remarkable fireworks photos be yours.

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