

Get Ready for the Fireworks!

Photographing fireworks is always a challenge, but with a little pre-planning and a proper camera set up you can capture stunning images. Here's my recommended set up for shooting fireworks.

Step One - Have the right equipment. You'll need a Nikon DSLR, fully charged battery, a lens in the 24mm to 70mm range (depending upon how far away you are from the display), lens hood, sturdy tripod, cable release, spare memory cards, one foot by one foot piece of black foam core and a small flashlight (optional). If your camera has the INFO screen feature use instead of a flashlight to see the rear screen.

Step Two - Preplanning. Go earlier in the day and scout out the perfect location. Parking lots that are not lit at night are great. The best vantage points are locations where your line of sight will not be blocked by buildings, trees, power lines, billboards and telephone poles. Avoid bright lights from street lights or buildings, because they will clip out on the image. If possible, select a location that is up wind from the fireworks display to avoid the smoke and haze from the firework explosions. Since fireworks do not explode in the exact same spot every time, plan on using your wide angle lens and frame the photograph wider than you would normally. Since you'll be composing in a loose manner you'll probably need to crop your images in post-production.



Step Three - Setting Up Your Camera. Set up your camera before it gets dark so that you are not trying to remember where the different settings are located in the dark. Attach your cable release and tighten the connector so it doesn't come loose while you are shooting. Use your camera's (D90, D7000, D300, D700, D3s & D3X) Info Screen feature to make adjustments instead of the top read-out panel.

Camera Set Up:

- Exposure Mode: Manual**
- Shooting Mode: Single**
- Exposure Compensation: 0.0**
- Shutter Speed: Bulb**
- Aperture Setting: F/11 to F/16**
- ISO: 200 (Turn Auto ISO off)**
- Picture Control: Neutral**
- Turn Active D-Lighting Off**
- Image Quality: NEF (if you'll post-process your images) or JPEG**
- Auto-Focus Mode: Manual Focusing (Auto-Focus will not work on a black sky)**
- Auto-Focus Area Mode: Single**
- Matrix Metering Mode**
- White Balance: Daylight will emphasize the reds, tungsten will give you cooler colors. If you are capturing NEF images you can change the WB setting in post-processing to see which setting you prefer.**
- Lens Focusing Ring: set to infinity (a small piece of duck tape on the lens barrel will prevent you from accidentally changing the focus in the dark during your shoot)**
- If your camera has the Live View feature use the Tripod Mode to compose your photograph.**

Step Four - Framing the image. When photographing fireworks spend less time looking in the viewfinder and more time looking at the sky where the bursts will occur. As a result, it's important to remember the size of your framing and composition, and keep your attention to the segment of the sky where the burst will appear in your framing. Doing this will also help you anticipate the right time to trip the shutter because you'll be able to see the light trails of shells shooting into the sky. Spread the legs of the tripod and stand between them, compose the image and tighten down the tripod adjustments so the camera doesn't move during the photo session.

Step Five - Setting Exposure and Capturing the Image. Fireworks create a very bright light and the amount of light created by each firework burst during the display varies greatly. The first few explosions are generally far enough apart to give you enough time to fine tune your camera position, lens settings and recompose the image if needed. Review your test photos on the playback screen and make any necessary adjustments.

When you hear the fireworks fire, hold the black foam core in front of the lens, press and hold the cable release button. The black foam core will block any unwanted light from entering the lens thus allowing you to keep the lens open for an extended period of time to capture multiple bursts of fireworks on one frame. Watch the firework as it approaches its peak, lower the black foam core so the camera can capture the explosion, then move the foam core back in front of the lens while holding the shutter release button. If the explosions are occurring in rapid order leave the foam core down. This method allows you to capture multiple explosions on one exposure. If you only want one explosion per image then eliminate the foam core and press, hold and release the cable release for each shot. When you have recorded enough explosions release the cable release button, then repeat the process to record your next image. Remember when the shutter speed is set to Bulb, the shutter will remain open for as long as you keep the cable release pressed. Exposure will be determined by ISO, Aperture Setting and the length of time the Shutter is left open. When capturing multiple burst you can control the exposure by stopping down the aperture. Noise can become an issue with exposures over 20 to 30 seconds. If noise is a concern with long exposures, turn on the **Long Exposure Noise Reduction** setting in the **Shooting Menu**. Make sure and turn this setting off after the fireworks session.



Experiment with different exposure times. The longer you leave the shutter open or the foam core down in front of the lens, the longer and bigger the fireworks burst and the longer the light trails will be on the image. Try some longer and shorter exposures. Get creative and try using the **Multiple Exposure** feature in the **Shooting Menu** to create images with multiple explosions. When using **Multiple Exposure** turn the **Auto Gain** feature on.

Step Six - Fireworks finale at the end of the show. Before the finale begins check how much space you have left on your memory card. If needed change the card. When the fireworks display reaches its finale there will be a lot more light and the shells will be exploding in rapid succession. In order to make an image from this situation you will need to change the Aperture setting from F/11 to F/16 or F/18 to decrease the exposure. With a stopped down aperture you'll have more than enough Depth of Field for the explosions to be in focus.

Step Seven - Process your images and create a slide show complete with music. Try using the **Image Overlays** feature in the Retouch menu to create some interesting effects. Create a montage of your images. Amaze your friends at work after the holiday with your creative images.

Additional tips:

- ☑ Determine the Direction of the Wind - You want to photograph from a position of being up wind from the smoke. This will put the smoke in the background. Otherwise your images will look very hazy.
- ☑ It's digital so take more pictures than you'd think necessary. That way, you'll improve your chances of getting the "perfect" exposure and composition."
- ☑ Set up and be ready to photograph before the fireworks show begins. The first explosions are usually the sharpest looking because there is little smoke in the air.
- ☑ You only need to focus once but its a lot easier to take a few test photos before the show starts and check the composition and focus carefully. It is much easier to do this in advance rather than wait until the show has started when you're trying to adjust focus instead of watching fireworks and photographing.





Enjoy Your 4th of July

Express Yourself Creatively