

Fireworks Photography

Brief

Firework photography is no different to any other photography in its setup, you still have to consider many things before pressing that shutter. With regards to the following picture, do you think that there is anything wrong with it?



Well there's nothing really wrong with it at all, it shows fireworks, reflections and some of the environment. There is definitely nothing wrong with it but when you compare it with this shot which has clearly been thought about a little more, it really stands out as nothing more than a mobile phone grab shot.



So, what are the things we must consider when taking firework shots at night?

Equipment

Well, there is equipment and we already know that for night photography we need a sturdy tripod so here is a list of required equipment:

- Camera capable of manual mode and longer exposure times such as 1 – 30 seconds.
- Mid to wide angle lens around 16 – 70mm
- **STURDY** tripod with a universal ball head.
- Remote shutter release.
- **CHARGED** battery.
- Warm clothing especially a light proof hat such as a beanie, I'll explain why later.
- Flask of coffee or tea.

Situation

- **Get There Early**
Scouting your location is essential for good shots and to beat the crowds into the best position.
- **Wind direction**
This important because fireworks generate a lot of smoke and if the smoke blows towards you it will obscure the display and ruin your shots.
- **Location**
You need to have several options so that you can relocate if the wind isn't favourable at your favourite spot.
- **Sturdy Base**
Remember that wooden platforms and floating platforms can move when taking longer exposures.
- **Background**
It is important that your background is suitable for your shots, no big bright lights and ugly distractions like cars and trucks etc.
- **Smoke**
Try and shoot all of your shots early on as the sky may fill with smoke and haze.

Settings

Camera setup is important and some things can be done prior to leaving home and some need to be done onsite.

- **ISO**
As we are shooting on a tripod, ISO can be set to its lowest usually 100 or even 50 on some cameras. High ISO introduces noise into images and noise generally lives in dark and blue areas which night photography has a lot of. Also noise builds up in longer exposures which compounds the problem so keep the ISO low.
- **Long Exposure Noise Reduction**
Nikon users please note, turn this setting off (at home) if you want to capture a lot of firework shots. Yes this does reduce noise in images however, we have a limited time to capture the fireworks and what this setting does is double the time your camera is unavailable for taking shots. For e.g. a 10 second exposure will have a further 10 seconds of

noise reduction so won't be available for 20 seconds for a 10 second exposure. If your shot is 60 seconds then the camera is unavailable for 120 seconds and so on.

- **Live View**

Turn live view off, this uses up too much battery, save the battery for taking pictures especially if you have forgotten to charge your battery.

- **Shooting Mode**

You need to set your camera onto manual mode, remember we are capturing movement and therefore making an artistic choice therefore we need to control what the camera is doing. Shutter priority will not work here because we need the aperture to remain constant.

- **Aperture**

Set the aperture to f/5.6 or f/8.0 because these are optimal for fireworks as the streaks are controlled by the aperture. Too narrow and the light trails will be thinner and too wide and they will become too large and possibly overexposed, f/8.0 is my preference.

- **Shutter Speeds**

Usually the shooting time is between 1 and 10 seconds. The best thing here is to take a test shot before the fireworks start and adjust the exposure time accordingly. Shutter speed is the way in which you control the exposure of the shots and you need to be able to adjust this on the fly, please see the image below.



ISO 100, f/10, 1 second – notice the bursts don't really make a nice arch? A longer exposure will make your trails longer. You choose how you want them to appear and adjust accordingly.

- **Focussing**

The last thing you need is for your camera to be trying to focus when the fireworks are happening. Find out where the fireworks will be coming from and pre-focus your camera there and then switch to manual focus. You shouldn't need to refocus unless you change position or wish to focus somewhere else.

- **Filters**

You can use neutral density filters to get longer exposures if it isn't 100% dark and you cannot get the nice arcs as seen in many good shots because your shutter speed is too fast.

Taking the Shots

- **Framing**

Don't forget the horizon is still there even if you can't see it, set your camera level. Make sure that you leave enough space in your frame for the height of the opened bursts. Adjust as necessary if you miss your first shot, trial and error is the name of the game. I always shoot wide and narrow the shot down as required. Try both horizontal and vertical orientation and a good tripod head will help here.

- **Timing**

Timing your shots takes practice, don't expect to get it right first time. A good tip is to have multiple bursts in each exposure but not too many or you'll overexpose the shot. Another tip is to listen for the fireworks being launched.

- **Darker Sky**

Shooting East instead of West will give you darker skies nearer dusk because the sun may still be lighting the sky a little in the West. You may of course prefer the lighter sky, the choice is yours.

- **Telephoto Shots**

You can try some longer shots to get some different effects using a telephoto lens.

- **Review Your Shots**

Review your images constantly so that you can make camera adjustments as you go, if you have a loupe use it to check focus and exposure.

- **Using Your Hat**

A good tip for taking multiple burst in one exposure is to set the camera to exposure in Bulb mode and cover the lens with your hat. Then when you wish to capture a burst just remove the hat and replace it when you've got what you need. Then take it off again for the next burst etc. You can test this before the fireworks start. See how long it takes to expose the background correctly and then you have that amount of "Hat Off" time to get your bursts. For e.g. if it takes 15 seconds to expose the background you can remove your hat for three 5 second exposures or 5 3 second exposures etc. This is a tricky thing to master so get your single burst shots before trying this technique. **NOTE*** we use a soft hat to reduce camera movement and ensure we stay aligned for all the exposures.

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