Long Exposure Photography

Tips for Nighttime & Daytime Exposures

By Gary Thurman
What constitutes a “Long Exposure”?

- Any exposure a 1/4 second or longer
- Any exposure that requires a tripod
- Use of filters to slow shutter speed
- Water/Waterfall softness (Polarizing Filter)
- Daytime Exposures (Neutral Density Filter)
- Motion Blurring (Car Trails)
- Light Painting (Flashlight)
- Bulb Mode (For exposures greater than 30 sec)
- Star Trails (Hours of multiple exposures)
What Equipment Do You Need?

- Sturdy Tripod
- Cable release, 2 second camera timer, or remote trigger
- Lens Hood (to block stray side-light)
- Filters (for daylight exposures – Polarizer/ND)
- Viewfinder cover (stops stray back-light from entering in through the back of the camera)
- Special software to put “Star Trails” images together
Nighttime Exposures

f/25
4 second exposure
ISO 100
Tips & Tricks for Nighttime

- Use a **sturdy Tripod**
- Make sure your lens IS (Image Stabilization) is turned **OFF**!
- Use “Manual Focus”
- Block light from entering rear viewfinder (Tape/Door/Cork)
- Enable **Mirror Lockup** on your camera (Sharper Images)
- Enable **Long Exposure Noise Reduction** for exposures over 30 seconds, except with Star Trails (Dark Frame Subtraction)
- Use AWB (Auto White Balance)
- Shoot your images in RAW
- Use your Cameras back LCD Screen to judge composition
- Bring fully charged spare batteries (Cold nights/Long Exp)
- Bring a small flashlight (Camera settings/Walking in Dark)
**Nighttime Camera Settings**

**Exposure Mode:** Full Manual Mode (BULB Mode if over 30 sec exposures) - Manual Shutter Speed, Aperture, ISO and Focus. You need to be aware that as the light is dropping, you’ll need to increase the shutter time as it gets darker.

**ISO:** To get long exposures with less noise, you’ll have to keep your ISO setting as low as possible. Usually this means ISO 100.

**Aperture:** What you set here depends on the effect you want. If you stop down the aperture to f/22, any bright points of light will turn into stars because the light hits the aperture blades and becomes diffused.

**Quality:** Shoot in RAW. RAW files will give you more room in post processing.

**LCD Preview:** Use your LCD screen for composition, but remember that at night, it will look much brighter (backlit) than it really is because the ambient light is low. You may find that you have underexposed images when you look at them back on the computer. Learn to read your histogram.

**Overexpose:** You can get some really dramatic results by over-exposing a nighttime scene. This will make everything look brighter than it really is, but the result can be stunning.
f/8 – 1.5 second exposure – ISO 200
f/18 – 4 second exposure – ISO 400
The “Blue Hour”

When it comes to night photography, the best time for these photos is often in the "blue hour" which is during twilight when it's neither light nor dark, and where the quality of light is stunning. This is usually about half an hour after sunset.

At this time you get:

Nicely lit buildings

Color in the sky

Ambient light to fill in unlit parts where there is just darkness later

Shooting at this time also avoids a yellow cast that happens when tungsten street and city lights (which have a different color temperatures) overpower the ambient light later on.
f/22 – 25 second exposure – ISO 100
f/22 – 30 second exposure – ISO 100
f/4
30 second exposure
ISO 3200
f/9 – 59 second exposure – ISO 400
Tips & Tricks for Daytime

- Use a **sturdy Tripod**
- Make sure your lens IS (Image Stabilization) is turned **OFF**!
- Use “Manual Focus”
- Block light from entering rear viewfinder (Tape/Door/Cork)
- Enable **Mirror Lockup** on your camera (Sharper Images)
- Use AWB (Auto White Balance)
- Shoot your images in RAW
- Use your Cameras back LCD Screen to judge composition after image is displayed.
- Bring fully charged spare batteries (Long Exposures)
Daytime Exposures

f/22
1 second exposure
ISO 100
Polarizer
Daytime Camera Settings

Exposure Mode: **Aperture Priority Mode First without ND Filter** (remember shutter speed), Full Manual Mode (BULB Mode if over 30 sec exposures) - Manually **Adjusted** Shutter Speed from conversion chart, Aperture (f/22), ISO (100) and Manual Focus. Carefully place your ND Filter on your lens, cover/block viewfinder, and take image.

**ISO:** Daytime ISO 100.

**Aperture:** I use f/22 to make sure the Landscape image is in focus throughout.

**Quality:** Shoot in RAW. RAW files will give you more room in post processing.

**LCD Preview:** Use your LCD screen for composition. Learn to read your histogram.

**Overexpose:** You can easily over expose your images (to much exposure time), so watch your histogram and adjust exposure times. Also having your exposure “Highlights Warning” option turned on helps (Binkies'). You can adjust with your Exposure Compensation (+ or -)
Neutral Density Conversion Chart

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All calculations are in seconds unless otherwise noted.
Made by Shirk Aaron
SoundDesign Photography Services
f/20 – 1 second exposure – ISO 100
f/18 – 10 second exposure – ISO 100 – ND 10 Stop
f/18 – 13 second exposure – ISO 100 – ND 10 Stop
f/18 – 15 second exposure – ISO 100 – ND 10 Stop
f/22 – 15 second exposure – ISO 100 - Polarizer
8 Tips for Long Exposure Photography
http://digital-photography-school.com/8-tips-for-long-exposure-photography

Long Exposure Photography Nighttime Tips
http://www.exposureguide.com/long-exposure-photography-tips.htm

How to Take Long Exposure Shots in Daylight

Long Exposure Photography Ideas
http://www.alexwisephotography.net/blog/2013/06/02/long-exposure-photography-ideas/

How to Increase Sharpness in Long Exposure Photography
http://www.photographyblogger.net/how-to-increase-sharpness-in-long-exposure-photography/

4 Steps To Creating Star Trails Photos Using Stacking Software
http://digital-photography-school.com/4-steps-to-creating-star-trails-photos-using-stacking-software