

# Light Painting Part One – the Photography



I teach a night photography class and I find that many people who've never tried it imagine it to be a lot harder than it really is to get spectacular results. In this two part series I'm going to take you through step by step how I created the image above using light painting techniques that are actually quite easy.

## **PART ONE – THE PHOTOGRAPHY**

In this article, Part One, I'm going to go through everything you need to know so that you can go out and create some images using this technique. In Part Two I'll take you through combining multiple exposures, like I've done for this shot, using Photoshop to create the final photograph. It's really not that hard and I'll do it one step at a time so you can follow along with my screen shots after each step.

# WHAT YOU'LL LEARN IN THIS ARTICLE

- Recommended equipment
- Camera basics (how to set up your camera)
- Finding a good subject
- Getting started (set up, preparation and starting points)
- Lighting, how to do light painting and some tips
- Potential problems and how to avoid them

## EQUIPMENT FOR NIGHT PHOTOGRAPHY

Night photography is not that difficult but there are a few essential pieces of equipment needed to do the job right. Here is a list of mandatory and optional items:

### The “Must Haves”

- a DSLR, or camera with **manual settings that include “Bulb”**
- a camera that shoots **RAW format images** (not mandatory but highly suggested)
- a **sturdy tripod** that is not affected by wind
- an **electric cable release or remote trigger** (could be called either) with a locking mechanism or timer
- at least **one extra battery** for your camera (long exposures and cold eat up batteries quickly so you may run through two or more in a night)
- a **lens hood** or shade for your lens

### The “Really Nice to Haves” – not essential, but sure handy

- a **digital watch or timer** (or remote that has a timer) I use my iPhone
- a **penlight or small flashlight** (your cell phone can work in a pinch) to be able to check camera settings and find an item in the bottom of your bag **OR a headlamp** like the kind hikers wear, is a better option for hands free operation

- **a powerful flashlight like a [Maglite](#) for light painting** (I use an incandescent one, LED will produce a bluer tone light)
- **a speedlight or portable flash** unit can also be used for light painting (you don't need a fancy one, even an old Vivitar 283 or 285 will do the trick)
- **rain covers for your camera bag, camera, and yourself** (weather can change quickly at night but you can get some great shots in bad weather if you're prepared – you dry easier than your camera, keep that in mind!)
- **A friend to tag along. Helpful if you're doing night photography in an urban setting.** It's someone to help pass the time, but also watch that your gear doesn't grow legs and walk off while you're digging in the camera bag for something. Or someone to stand guard over the camera gear while you're off painting with light in the scene.

## CAMERA SETTINGS

- **File format** – shoot raw whenever possible lighting at night can be odd colors
- **White balance** – I generally choose “incandescent” or “tungsten” White Balance Preset when doing light painting because I know that will balance correctly for my flashlight. I let the rest of the scene fall where it may color wise
- **Focus** – your camera has a hard time focusing at night and will “hunt” unless you find focus and lock it for all your exposures. If your camera has back button focus capabilities I'd suggest using that, if not you can focus and then turn it to manual focus so it doesn't attempt to refocus when you hit the shutter release. You can try to focus using manual but keep in mind if your camera can't see in the dark, neither can you! So to achieve focus use your flashlight, and if you have a friend along, get them to light up the part of the object you want to focus on. Then either use your auto focus and lock it, or manually focus and then don't touch it!



- **Manual mode or BULB** – for exposure set it to manual. That way the camera is not trying to guess the correct exposure. We'll be setting it and leaving it for the most part – just like our focus. For exposures longer than 30 seconds (30" on your camera) you'll need to find and use your BULB setting. On many cameras it is right after 30 seconds on the shutter speed scale, on some there's a B option on your mode dial on top of your camera.
- **ISO** – how low can you go?! This is where it gets counter intuitive because your gut may be telling you that it's dark out so you need a higher ISO, right? Well in certain situations like shooting the moon, a starry sky, or northern lights where you want a faster shutter speed – then you might need a higher ISO. But for this purpose and most of the times you are on a tripod it is always best to choose the lowest ISO possible. Noise in your image increases with changes in 3 things: higher ISO, long exposures and in blue or dark areas of your scene. We're already pushing the long exposure boundaries and night is ALL blue – so keeping the ISO low will minimize the noise best we can.



# FINDING A GOOD SUBJECT

Night photography can produce some great images, but it can be a bit tricky to find a location and compose your shots in the dark. It is best to go out ahead of time and find a spot, then return to it later, about 30 minutes before you actually want to start shooting. That will give you time to find it, get set up and be ready. Here are some tips for finding a good night subject suitable for painting with light.

- **Old barns and abandoned cars and trucks** in fields make great subjects, and often are appropriate for some painting with light. If you need to cross someone's land to get to there, make sure to get permission **BEFORE** you head out. Trespassing is not cool and could lead to a lot of problems including getting arrested, or worse, which you certainly don't want.
- If you want to **shoot the moon, star trails, or do light painting you'll need to get out of the city**. You may have to drive quite a while to get far enough away so that the city lights do not contaminate your shot. As you will be exposing for several minutes or longer, the city lights may show up on the horizon if you are not far enough away. (the city lights are a factor in my example in this article which gave me some limitations, and the orange fire in the sky – more on that later)
- **Start with a smaller subject that you can light in one exposure and work your way up to bigger ones** like this firetruck or an old barn that will take a few shots and need compiling. An old bicycle is a great starter subject. Buy one at a flea market or junk yard and take your own prop wherever you want and plop it into your scene. Just remember to take it with you as you'll want it again later and littering isn't cool either.



## **GETTING STARTED – SETTING UP**

1. **Set up your camera on tripod** with remote attached or set up to fire the camera
2. **Turn off any image stabilization (IS or VR)** on your lens
3. **Turn OFF “long exposure noise reduction”** unless you have a lot of patience. What it does it takes a second exposure of equal length of just black, then merges it with your shot to get rid of the noise. But if you’re doing a 2 minute exposure, you have to wait another 2 minutes to review your image and be able shoot again. I don’t use it, and because we’re on a low ISO noise shouldn’t be a big factor
4. **ISO low – ideally 100 or 200**
5. **Aperture – start around f/5.6** – depending on your scene, then adjust from there if you want more or less depth of field. Keep in mind the smaller aperture you use, each stop you close down doubles the amount of time you need to be painting and exposing. So a 60 second exposure at f/5.6 becomes an 8 minute exposure at f/16!
6. **Shutter speed – start around 60 seconds.** I’ve done enough night



photography to know that'll get you pretty close for most moonlit scenes. You may have to adjust faster (shorter exposure) or longer depending on whether it's a full moon, or there's some stray light in the scene, and how bright your flashlight is.

7. **Focus using the flashlight** – then lock your focus.

## **LIGHT PAINTING – HOW TO DO IT**

Basically what you do is set your camera on Bulb, open the shutter using your locking release and walk into your scene and start lighting the objects in the camera view using your flashlight. It sounds simple but can be quite tricky to get just the right amount of light in different places, not get yourself in the image, and still get a good overall exposure. Here are a few tips or starting points, then you just need to experiment and adjust as you go.

### **Setting up your base exposure**

- **Before you start “painting” take a test shot**, without the flashlight, of the scene as it is with no additional light added
- **Review that image and make sure you have a good overall exposure** of the scene, with it perhaps just a little on the dark side (histogram should be mostly inclined to the left side)
- When you are happy with the exposure, **adjust your settings so that you have a long enough shutter speed** to easily get into the scene and light the subject with your flashlight before the shutter closes (at least 30 seconds). You may have to go to a smaller aperture to do so.
- **Once you know your exposure and your shutter speed is at least 30 seconds long, you can get started.** If you can bring a friend along they can press the shutter release for you, so you can go in and out of the scene without returning to the camera after each shot to press it again. Or a wireless remote comes in handy here too.



My first shot to establish the base exposure. ISO 100, f/5.6 for 30 seconds.

## **Adding the flashlight – tips for light painting**

- **To keep yourself invisible, always make sure the flashlight is aimed at the subject**, and that you do not light up yourself, dark clothing helps too. Also keep moving during the whole exposure. Don't stand in one place for more than a couple seconds or you will show up as a ghost in that spot.
- **Don't aim the flashlight back towards the camera**, unless you want what I call "light bugs". Sometimes you can use that technique on purpose to create streaks of light and outline your subject, and that can work well also. See the image of the little red wagon above for an example of light bugs. I believe I accidentally had my headlamp on while I painted and it made the light bugs – but I kind of liked it so I kept it. Happy accidents are great!
- **Keep the light moving the whole time** so as not to create any harsh lines or bright spots. I like to make outlines of the shape of my subject or



parts of it. Discover what works for you.

- **For a more defined and abstract look to your light painting you must come in a REALLY close** to the subject! By that I mean about 1-2 feet away from the subject. YES you are going to get right into the scene. But if you keep moving, and keep your light moving you will not show up in the photo. (see the b/w of the old shack above for an example of this look and technique). Also make sure your flashlight beam is focused to a small area – that’s why I like the Maglites, they focus down to a small spot.
- **For a broader more even light keep the flashlight beam wide and stand back from the subject** a bit (4-8 feet) and light it from the side to create a nice cross light and texture on the subject. (see the color image of the old wooden shack below for an example of this affect)



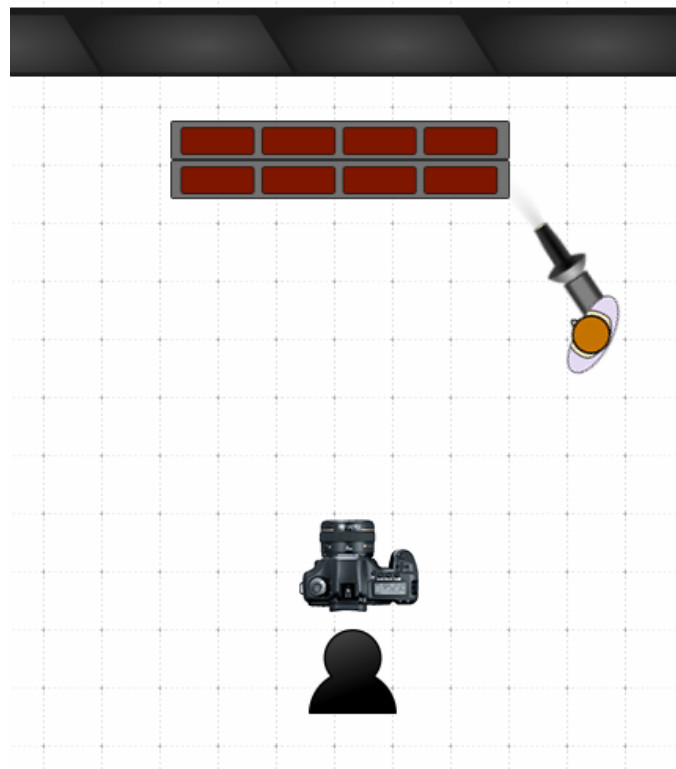
Light painted from a few feet away from the shack with a wider beam flashlight

**REVIEW YOUR IMAGE AND DO IT ALL AGAIN**

Back in the days of film, painting with light was much harder. There was no way to determine if any of the exposures were correct or not. To paint a whole scene you had to get it right in one frame or exposure. Now with digital we have the benefit of testing and seeing what we're doing and compensating on the next shot. You can even paint a scene in stages, or sections, and build them all into one image later in Photoshop. I'll cover how to do that in Part Two.

### **The things you want to look for in your first image are:**

- **How did you do with your flashlight painting?** If it was too bright in one area and not bright enough in another, just be conscious of how much time you spend on one spot and adjust accordingly.
- **If it is overall too dark or light**, you may need to adjust your exposure time or your aperture.
- If the flashlight isn't showing up well enough **you might need a longer exposure time** (just go from 30 seconds to 60 and try again) to allow you to paint slower and cover more areas better.
- **If you want the light more even**, back up and use a wider beam.
- **If you want it more focused** and like outlines, get closer.
- **Did you get any light bugs** you didn't want? (turn off your headlamp!)
- **Did you get a ghost of yourself** or a body part?
- **Generally look for any problems** or areas you want to correct. Take note and do it again, and again, and again – until you're happy with it.



Set up showing how close I got to the firetruck

## **MAKING A MULTIPLE IMAGE COMPOSITE – SHOOTING FOR IT**

Now that you're ready to progress to a larger subject we'll look at how to shoot multiple images of the same subject, so that you can merge them together in Photoshop later. The **ONLY** thing you're going to do different than what you just did in the lessons above – is paint the subject in sections. That's it!

For the firetruck image I actually shot about 30 different exposures. I didn't end up using them all but I wanted to make sure I had my bases covered and had options. That's the beauty of putting them together later – you do **NOT** have to get it perfect in one shot! Let's take a look at a few of my images from that shoot.





Lighting the back area where the hoses are and the back tire



Lighting the side panel and running board, notice how I've highlighted



certain areas



Lighting the front grill and headlights – to get headlights to look like they're on, put the flashlight right up to the glass and just rotate it around for a bit. Notice the light bugs on the right here? We'll handle those in part two.



Lighting up the windows from the inside! A little of the tree branch too.



Lighting the fence behind the truck to give it separation



Turing on the cherry light that makes it a firetruck! Don't forget the details like this!



Lighting the “cherry” from behind to make it glow red

You get the idea right? Cover it well, then just to be sure, do it again. I think we were there (my husband was the button pusher, I ran the flashlight) about an hour and a half just doing this one shot. It was such a unique subject, and we had full permission to be there and be photographing it at night that I wanted to take full advantage of it. That it was a beautiful night and this stuff is just so much fun for me that once I get started, I lose all track of time.

## **Wrapping up**

Well I was a bit long winded on this tutorial, I hope you are still with me. I wanted to make sure you had all the details you need to go out and try this yourself. I fully expect you to do so and be ready with some images for Part Two when we are going to take our multiple shots and combine them to get something that looks like this in the end.

## **Action plan steps**

1. get the right gear
2. find a good subject, get permission if need be
3. set up your camera using the starting settings
4. take your base exposure test shot
5. add your flashlight and light painting
6. review and continue

**[CHECK OUT PART 2 OF THIS SERIES HERE](#)**





“1956 Le France Pumper” Corpus Christi, Texas