

Long Exposure Case Study #4

LIGHT PAINTING

by Kent DuFault

Long exposure light painting, in its purest form, is to simply turn on a light source that is facing the camera while the shutter is locked open and move it around.

This image here is an example of how easy it is to achieve an interesting abstract photograph by doing this simple technique.

In some of the previous case studies, we touched upon some forms of light painting.

In this case study, we will look at specific examples and techniques for different forms of light painting, and I will also give you some tips on how to get started with this unique genre of long exposure photography.





Start with something simple. Look at the image above. You can see the light trail as the light source was moved throughout the scene. You can also see detail in the snow and the trees. This was achieved by turning the light source away from the camera and then using it to illuminate the background elements.

Essential Tip: In light painting, the light source can create trails of light within the frame. It can also be used to illuminate details within the frame. The best images will be when you do a combination of both. This takes some practice, as you must learn how each step will affect the combined exposure.



In most parts of the world, you can find particular forms of fireworks, which in my area we call, a 'sparkler' see the image above. You light the coated end of a sparkler with a match, and it emits sparks for a given period.

Sparklers are an excellent tool for the beginning long exposure light painting photographer.

- They have a bright light intensity.
- The brightness will be consistent from one sparkler to the next.
- They have a set timeframe that they will stay lit, and this doesn't vary much from one sparkler to the next. This is a great tool to get your timing down. How much can you do with a light tool in a set time.
- They're easy to use and not dangerous. Just be wary as the small metal stick you hold at the bottom of the sparkler can get hot sometimes.

This image was a straightforward application of light painting with a sparkler. I want you to notice a couple of things.

- 1) The sparkler illuminated the subject nicely and even cast a bit of a glow on the background.
- 2) Do you know why there is a light trail that moves past the man's arm and off the frame? That light trail was caused by the man moving the sparkler off-frame before it was done burning. Why would he do that? If he hadn't, the photograph would have been overexposed. He apparently didn't have a way to close the shutter, from his position as the subject, without moving.



Key Tip: Light painting sources are often brighter than you realize. Start with the following camera settings. Set the ISO to 800. Start with aperture f/4. Set the shutter speed dial to Bulb. If your camera doesn't have the Bulb setting, use the most extended exposure on the shutter speed dial: typically, 30 seconds.

The image above took the sparkler technique to a higher level by moving it around an object. This is very easy to do and can lead to some exciting

results. Simply light the sparkler, and then trace the outline of an object. Get creative with your choice of subject.

Essential Tip: In this image above, notice that there is still some light in the sky. Be sure to experiment with background lighting. Light painting without background light takes on a complete abstract effect. If you include background light, your image will have a sense of reality.



You may have seen images such as this one here (see above) and wondered how this was accomplished. This is also a form of light painting, but one I suggest you not partake in. My reasoning is that it can be dangerous. A photograph like this is created using burning steel wool.

Unlike sparklers, which are designed to be held by a human, burning steel wool is not. It attains very high temperatures. It can quickly burn you, your clothes, your camera gear, or any other nearby object.



Photographing fireworks is a form of light painting. When the firework bursts into color and the various flaming elements streak through the sky, they can expose a frame. You can get very creative with fireworks photography. The image above is a fantastic example.



Once you have the basics of light painting down, and when I say the basics, I'm primarily talking about exposure, timing, and subject selection, you can now begin trying advanced techniques. One of the first advanced techniques is to try different light sources.

Different light sources will have a different color balance. They will also have different light intensities. How you move the light source throughout the scene will also affect how it records on your frame.



This image was created using a lightsaber. In this case, the photographer is moving the light while the model stands still in a pose. A new idea for you to try! He also made use of water to reflect the light painting. Another great idea!

Notice how the motion of the light source changes the effect. Behind the model, the photographer spun the lightsaber in a circle. He then held it out steady by her hand to mimic a sword of fire.

There are two critical considerations for you here.

- Determining exposure is going to take some trial and error. It takes

experience. So, don't become disenchanted if your efforts don't work out immediately.

- Secondly, when choosing the area that you want to photograph in, look around for light pollution. These are light sources such as streetlights or lit signage. When doing the extended long exposures required for light painting, it's effortless for these light pollution sources to ruin your shot. Sometimes, you can use them for creative effect. However, most of the time, the darker, the better.



In the above image, why is the tree blurry and the word love sharp? The word love was light painted. The entire shot was created with the camera being handheld. The room was dark, and once the word 'Love' was written with a flashlight, that light source was turned off. However, the camera

shutter remained open. It was light pollution from the next room over that created the blurred tree. This is an example of light pollution being put to use. The photographer wanted the tree to be exposed and blurry.



This image also light paints a word into the picture. However, this shot is quite sophisticated. Let's break it down.

There are three light sources in this picture.

- A flashlight is light source one.
- The light inside the tent is light source two.

- The stars in the sky are light source three.

The photographer had to determine the exposure for all three light sources. Plus, light source one was used in two different ways. Each way would have required a different length of time for exposure.

The first step would have been to set an ISO setting. I would use ISO 800 as a starting point.

The second step would be to set an aperture. I would use f/4 on a wide-angle lens, and then using manual focus, set the focus point just in front of the tent.

Now, figure out the length of time for a proper exposure on the tent, followed by the flashlight while writing the word 'Hello,' followed by the flashlight illuminating the foreground, and finally the Milky Way in the sky.

For a shot like this, you must have zero light pollution.

- 1) All the lights are off. Given the camera settings, the Milky Way will likely take an exposure time of 60 seconds. So, you have 60 seconds to accomplish the other steps. With a complicated shot such as this, a helper is a real asset.
- 2) First, the tent light goes on and then off for proper exposure.

- 3) Then, paint the foreground with the flashlight. Make sure to leave an area of black for the word 'Hello' to be light painted in. Turn the flashlight off when you're done painting the foreground.
- 4) Position yourself in front of the black area with the flashlight now facing the camera. Turn it on and write out the word. Writing words in light painting is a developed skill. Don't feel bad if your initial efforts look a little sloppy. When the writing is done, turn the flashlight off.
- 5) Check the time.
- 6) Close the shutter when the Milky Way is completely exposed.

As you can see. It can be complicated and fun. Don't be afraid to create some extravagant and complicated light painting scenarios!

Your Challenge

Select three light sources that you will use for this Challenge. Some possibilities could include different flashlights, sparklers, plugin lamps of varying sizes, etc. Plan three shoots with each one to be completed in a different location. Two locations should be outdoors and one place indoors. Scout your locations for potential light pollution. For your first outdoor location, do simple light painting photography. Think of the images on the first and second page as your inspiration. For your second shot, go indoors. Create a light painting photograph using at least two light sources. For example, one could be a flashlight, and the latter could a plugin lamp. Get creative with your choices. Plan your exposures so that you see some detail of the room. Keep everything sharp. For your third Challenge, go back outdoors. Plan a shoot that involves at least three light sources. On one source, use a colored gel. Think of the images on page 4 and page 10 as your inspiration. Get creative with your exposures, movement, color, and length of time.

Evaluation

Of the three Challenge assignments, which one worked out best for you? Why do you believe that one has the best result? What could you change for the other two assignments to achieve a better outcome? Did you have fun completing this Challenge? What would you like to do with light painting now? If you didn't include a human element for your Challenge, why not give that a try. Think of the image featured on page 8 as your inspiration.