

Torch light and Light Painting Techniques - Liz Hammond - 6th Nov 2024

Using artificial light sources in a dark environment to create a photo.

This a great time of year to play with these techniques with short dull days and long nights.

Torch lit: Where we use a light source to light a subject, generally the light source will not appear in the photo

Light Painting: The light source entirely or partially forms the image in the photo



Warning:

Do not use lasers

These can damage or break your sensor

Online debate over which lasers and how long before damage happens - why risk it?

General Equipment:

- Camera / mobile capable of long exposures and manual focus
- Lens suitable for the subject or image you intend to create
- Tripod
- Remote release can be helpful
- Light sources - torches, lamps, fairy lights, mobile, EL (electroluminescent) wires, any light you can think of
- A dark space
- Dark clothing - hat / gloves - depending on how much of you is going in front of the camera

Tips:

- Practice changing your camera settings in the dark, including ISO, shutter speed and aperture but also setting the timer for shutter release and white balance.
- Avoid turning on main lights where that is an option, you will lose your night vision
- Check your histogram - your eyes and brain will make things much brighter
- Check your focus regularly it's easy to knock the lens
- Different lights have different colours. Some lights / mobile apps allow you to alter the colour of the light
- If you need light during the session, use a red light, e.g. on a head torch as this has less impact on your night vision

Torch lit:

Use a torch or other light source to light a subject.

- Inside we tend to use smaller torches / lights often for stilllife or portraits
- Outside, same technique, just bigger torches, longer exposures and more running about! Be aware of how bright the moon is. Use PhotoPills, or The Photographers Ephemeris to check in advance. Phase and setting / rising times.

Why do this?

- Dark darks in background / old master feel
- No need for expensive lights
- Outside can be great for interesting foreground in astro shots
- It's fun

How?

1. Set up your subject. Try to make the distance between the still life set up and any walls as far away as practicable. At home you may need a dark back ground e.g. a velvety coat / a dark sheet / dark card
2. Choose your light. Torches often spill light - use black card and black tape to modify where it lights. Can also use white plastic bags to defuse and soften the light. Consider the direction(s) you want to light from.
3. Set your initial camera settings.
 - a. Frame up and focus on the subject using auto focus and then switch to manual focus.
 - b. Set the camera to Manual mode (PASM dial). Start with
 - i. Lowest ISO (normally 100),
 - ii. Aperture that gives required depth of field - for still life f8
 - iii. Shutter speed 30s.
 - iv. A specific white balance e.g. shady. If shooting raw you can change this later, but it helps to get consistent effects. If shooting jpg you may want to play with this setting as we do more exposures
 - v. If you are going to be lighting the subject as well as taking the shot, use the timer to give yourself a few seconds to get into position before the exposure starts.

Olympus users might want to use the Live Composite mode that will let them see the image build in real time and stop the exposure when they are satisfied.

If you find the subject you are shooting requires longer exposures you can move to Bulb mode. This is very often necessary when shooting outside as trying to light a building in 30s can be challenging. Also, for outside shooting, using the timer can be helpful as this gives you a few seconds to get into position before the exposure starts.

4. Lights Off!
5. Start the exposure and begin painting
6. Review the first image - including the histogram
 - a. Too dark - Options
 - i. Wider aperture move to f5.6 (narrower depth of field)
 - ii. Get closer with your light sources
 - iii. Higher ISO raise ISO to 200
 - iv. Longer shutter speed (you may need to go to bulb mode for longer than 30s)
 - b. Too light - Options
 - i. Narrower aperture move to f11 (greater depth of field)
 - ii. Get further away with your light sources
 - iii. Shorter shutter speed e.g. move to 20s (if you can complete the lighting required in that time)
 - iv. Reduce your ISO
 - c. You missed a bit
 - i. Make sure you light that bit next time! You can merge shots in editing using the lighten blend mode. Or just keep going till you get a single image that you are happy with.
 - d. Blown highlights
 - i. Take care with reflective surfaces as torchlight can give very bright highlights. Avoid directly pointing the light at that surface.
 - e. Not in focus
 - i. Light part of the subject with a torch and adjust your manual focus
7. Back to step 5 - Take another shot until you are happy with what you have
8. Try different lighting - diffuse the light for a softer effect, different torches etc Play!

Light painting:

The light source entirely or partially forms the image in the photo. The light(s) we use will be in the picture. We can

- write or draw things.
- run the lights over subjects for creative effect.
- outline our subject to get a cartoon type outline.
- Move with lights attached to us (dancing in the dark)
- PLAY!

Method is the same as for torch lit, but because we have light in the frame, the exposure time will likely need to be shorter... but you never really know until you try.

Light writing:

- Decide what you want to write - e.g. Happy New Year 2025! or draw - e.g. flowers
- Decide what you want to write with. Finger torches can be good for this (at home it's a good time of year for sparklers)
- If you are not lighting the background, you can write the correct way and flip it in post processing so it reads correctly
- Do individual words and combine them in editing (lighten blend mode)
- If you are wanting to combine this into a scene where the back ground is lit, you will need to learn to write it so it appears correctly in camera. Hats off to anyone who manages that!
- If you need gaps in letters either use push button torch and turn off or use hand to cover the light
- Suggested initial setting f16, ISO 100, 10s
 - Person doing the light writing to use a timer to start their exposure
 - Person doing the light writing can move further away if the light is too bright (as well as the other options)

Light subject EL wire / fibre light / LED or finger-light outlines:

- spend a few mins setting up a still life
- a reflective surface as the base can be fun
- if using a person be aware of safety - keep eyes closed, take glasses off
- have a few practice tries running the EL wires/ fibre over the display or outlining the subject- if they disturb the set up you can use glue dots to stabilise the bits that move easily.
- Suggested initial setting f16, ISO 100, 5s (EL wire) 20s (fibre light), 10s (LED / finger-light)
- Experiment
 - with moving the light at different speeds. How does this affect the picture?
 - If your light has flashing options try those
- If you like, you can combine this with some torchlight to get the desired effect

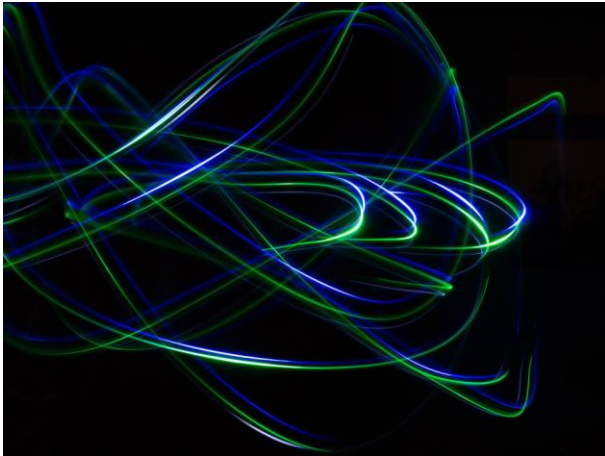
EL wires can be quite fragile so try to avoid pulling on the connections or being too ferocious with them.

If you have a Maglite torch with a candle bulb you can also use this for outlining subjects effectively

Torchlit Examples:



Light Painting Examples:



Fire spinning:

