



Long Exposure Photography

or....

Time Exposure Photography

or....

Slow Shutter Photography

# Long Exposure Photography

- Definition
- Subjects
- Technique
  - Keeping the camera steady
  - Shooting Modes
  - Metering Mode
  - Exposure
  - Focus
- Special Effects

# Long Exposure – a Definition

- Any exposure where the shutter speed is too slow to hand-hold the camera
- Any exposure which uses a long shutter speed to capture sharply the stationary elements of a subject while blurring, smearing or obscuring the moving elements. (Wikipedia)

# Subjects for Long Exposure

- Any low light subject



# Subjects for Long Exposure

- Any low light subject
- Shots where maximum depth of field is desired





# Subjects for Long Exposure

- Any low light subject
- Shots where maximum depth of field is desired
- Night shots



Tartan Weaving Mill & Exhibition

The Scotch Whisky Experience

The Scotch Whisky Experience

# Subjects for Long Exposure

- Any low light subject
- Shots where maximum depth of field is desired
- Night shots
- Light trails



# Subjects for Long Exposure

- Any low light subject
- Shots where maximum depth of field is desired
- Night shots
- Light trails
- The Night Sky

Images removed for copyright reasons!  
Just search for Night Sky in Google image  
search for many examples

# Subjects for Long Exposure

- Any low light subject
- Shots where maximum depth of field is desired
- Night shots
- Light trails
- The Night Sky
- Water







# Subjects for Long Exposure

- Any low light subject
- Shots where maximum depth of field is desired
- Night shots
- Light trails
- The Night Sky
- Water
- Vehicles

HIGH STREET

ALE HOUSE

THE FERRY TAP

ALE HOUSE

OUR LUNCHEONS  
SERVED DAILY  
QUIZ NIGHT THURS

Burger  
BAND PINT  
Beer



DOG  
Welcome

SPORT

QUIZ

GUEST  
ALE

No parking  
at any time



# Subjects for Long Exposure

- Any low light subject
- Shots where maximum depth of field is desired
- Night shots
- Light trails
- The Night Sky
- Water
- Vehicles
- People



# Subjects for Long Exposure

- Any low light subject
- Shots where maximum depth of field is desired
- Night shots
- Light trails
- The Night Sky
- Water
- Vehicles
- People
- And many more!

# Long Exposure Technique

- Keeping the camera steady
- Shooting Modes
- Metering mode
- Exposure
- Focus



# Technique - Keeping the Camera Steady

- Use a tripod
- Make sure the camera is secure
- Enable mirror lockup or use Live View (or use a mirrorless camera!)
- Use the timer or a remote control to take the picture

# Technique - Shooting Modes

- Tv (Shutter priority) – set the shutter speed and let the aperture setting look after itself
- Av (Aperture priority) - set the aperture and let the shutter speed look after itself
- Manual – set the aperture AND the shutter speed
- All of these work – which you use will depend on the effect you are looking for

# Technique - Metering Mode

- Low light subjects can often fool your camera's light meter
- I use **centre weighted average** metering which averages the light over the entire image area but gives priority to light in the centre of the image.

# Technique – Exposure 1

- The objective is to have control over your shutter speed so you have the ability to set a slow or very slow shutter speed
- Set the ISO to its lowest value. This will be different for different cameras
- Use a neutral density filter – this can reduce your shutter speed by up to 10 stops (or more!)
- Use a polarising filter – this can reduce your shutter speed by up to 2 stops

# Technique – Exposure 2

- Select your shooting mode and set the shutter speed and/or aperture to get the desired effect
- Different shutter speeds and apertures will give different effects
- With some subjects, a shutter speed which is:
  - **not slow enough** - can make the subject look out of focus



1/6 seconds  
f22

# Technique – Exposure 2

- Select your shooting mode and set the shutter speed and/or aperture to get the desired effect
- Different shutter speeds and apertures will give different effects
- With some subjects, a shutter speed which is:
  - **not slow enough** - can make the subject look out of focus
  - **too slow** - can burn out highlights



3.2 seconds  
f22



# Technique – Exposure 2

- Select your shooting mode and set the shutter speed and/or aperture to get the desired effect
- Different shutter speeds and apertures will give different effects
- With some subjects, a shutter speed which is:
  - **not slow enough** - can make the subject look out of focus
  - **too slow** - can burn out highlights
- A very small aperture such as f22 will give a starburst effect on points of light.



# Technique – Exposure 3

- With most cameras your meter will offer exposures of up to 30 seconds
- Use the B (Bulb) mode for longer exposures
  - Guess the exposure, take a shot, then check the histogram and adjust accordingly
  - set your ISO to a high value eg 1600 and make a note of the exposure time. Reset to 100 ISO and recalculate the time

# Technique – Exposure 4

## Example

- 1600 ISO      4 seconds
- 800 ISO      8 seconds
- 400 ISO      16 seconds
- 200 ISO      32 seconds
- 100 ISO      64 seconds

# Technique – Exposure 3

- With most cameras your meter will offer exposures of up to 30 seconds
- Use the B (Bulb) mode for longer exposures
  - Guess the exposure, take a shot, then check the histogram and adjust accordingly
  - setting your ISO to a high value eg 1600 and making a note of the exposure time. Reset to 100 ISO and recalculate the time
- **BEWARE!!!** Very long exposures can cause your sensor to overheat!

50.0 seconds  
f16



# Technique - focus

- Focussing is often difficult in low light
- Auto focus – move the focussing point to find a point of focus.
- Manual focus (Live view?)
- If you are using ND filters, consider setting the focus manually BEFORE attaching the ND filter

# Special Effects - ICM

- Intentional Camera Movement (ICM) is where you deliberately move the camera during a long exposure.





5.0 seconds  
f10



0.3 seconds  
f8

# Special Effects - Zooming

- Method 1: leave the camera alone for approximately  $\frac{4}{5}$  of the exposure and then zoom smoothly to the opposite end of the zoom range during the last  $\frac{1}{5}$  of the exposure



6.0 seconds  
f11

2.5 seconds  
f16



# Special Effects - Zooming

- Method 1: leave the camera alone for approximately  $\frac{4}{5}$  of the exposure and then zoom smoothly to the opposite end of the zoom range during the last  $\frac{1}{5}$  of the exposure.
- Method 2: zoom the lens part way several times during a long exposure. Try to zoom at equal intervals and leave the lens stationary for at least a couple of seconds between zooms



THE SSE HYDRO

THE SSE HYDRO  
THE SSE HYDRO  
THE SSE HYDRO

8.0 seconds  
f14

2.5 seconds  
f22





# Special Effects - Zooming

- Method 1: leave the camera alone for approximately  $\frac{4}{5}$  of the exposure and then zoom smoothly to the opposite end of the zoom range during the last  $\frac{1}{5}$  of the exposure.
- Method 2: zoom the lens part way several times during a long exposure. Try to zoom at equal intervals and leave the lens stationary for at least a couple of seconds between zooms
- Both methods tend to work better when zooming from wide angle to telephoto

# Special Effects - Chaos Theory

- Method 1: Swing the camera around and around in a completely unplanned way

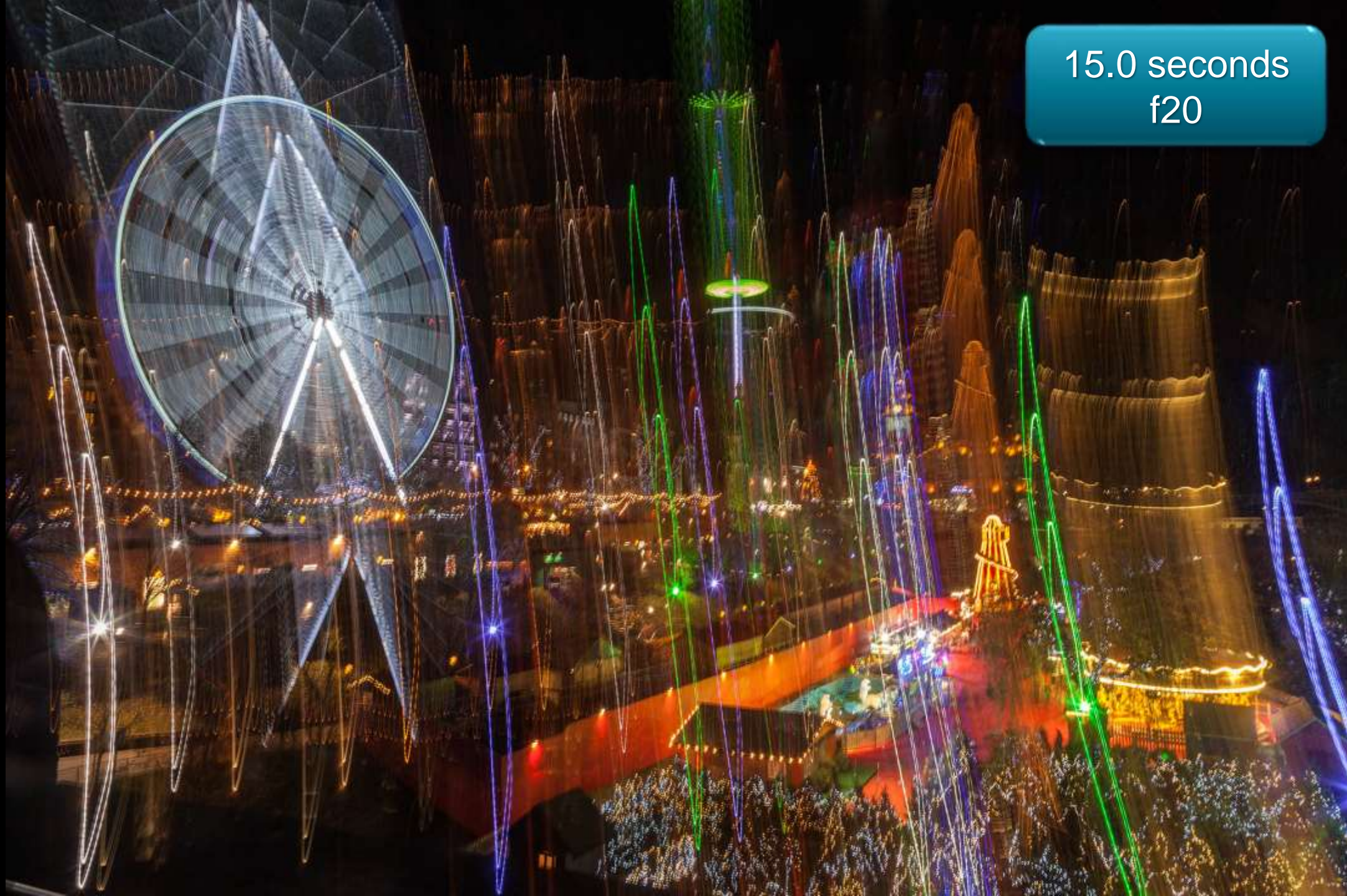
A complex network visualization consisting of a dense web of thin, overlapping lines. The lines are primarily blue and green, with some red and orange lines interspersed. The overall structure is highly interconnected and appears to be a large-scale network graph. The lines are most concentrated in the lower half of the image, with a more sparse distribution in the upper half. The background is black, which makes the colored lines stand out prominently.

0.5 seconds  
f22

# Special Effects - Chaos Theory

- Method 1: Swing the camera around and around in a completely unplanned way
- Method 2: Start a long exposure, wait a bit and then forget the shutter is still open, pick up the tripod and walk off!

15.0 seconds  
f20



# Summary

- Secure the camera
- Make appropriate camera settings
- Compose the shot
- Take the shot

# Experiment!

