



AN INTRODUCTION TO EXTERNAL FLASH

ROB DAY

BISHOPS WALTHAM PHOTOGRAPHIC SOCIETY

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CONTENTS

- Intro; why & when to use flash
- Types of flash
- Typical setups / walk-throughs
 - On-camera
 - Off-camera
- Closing points
- *Break*
- Practice!

A COUPLE OF DEFINITIONS:

- External flash: any flash device other than the one that is built in to the camera
- Off-camera flash: a flash device that isn't attached to the camera

QUICK AUDIENCE POLL

- Who uses the built-in flash on their camera?
- Who uses an external, add-on flash, attached to the camera?
- Who uses off-camera flash?

TONIGHT'S OBJECTIVE:

*Simply, to encourage more of us to try using
external or off-camera flash*

WHY USE FLASH?

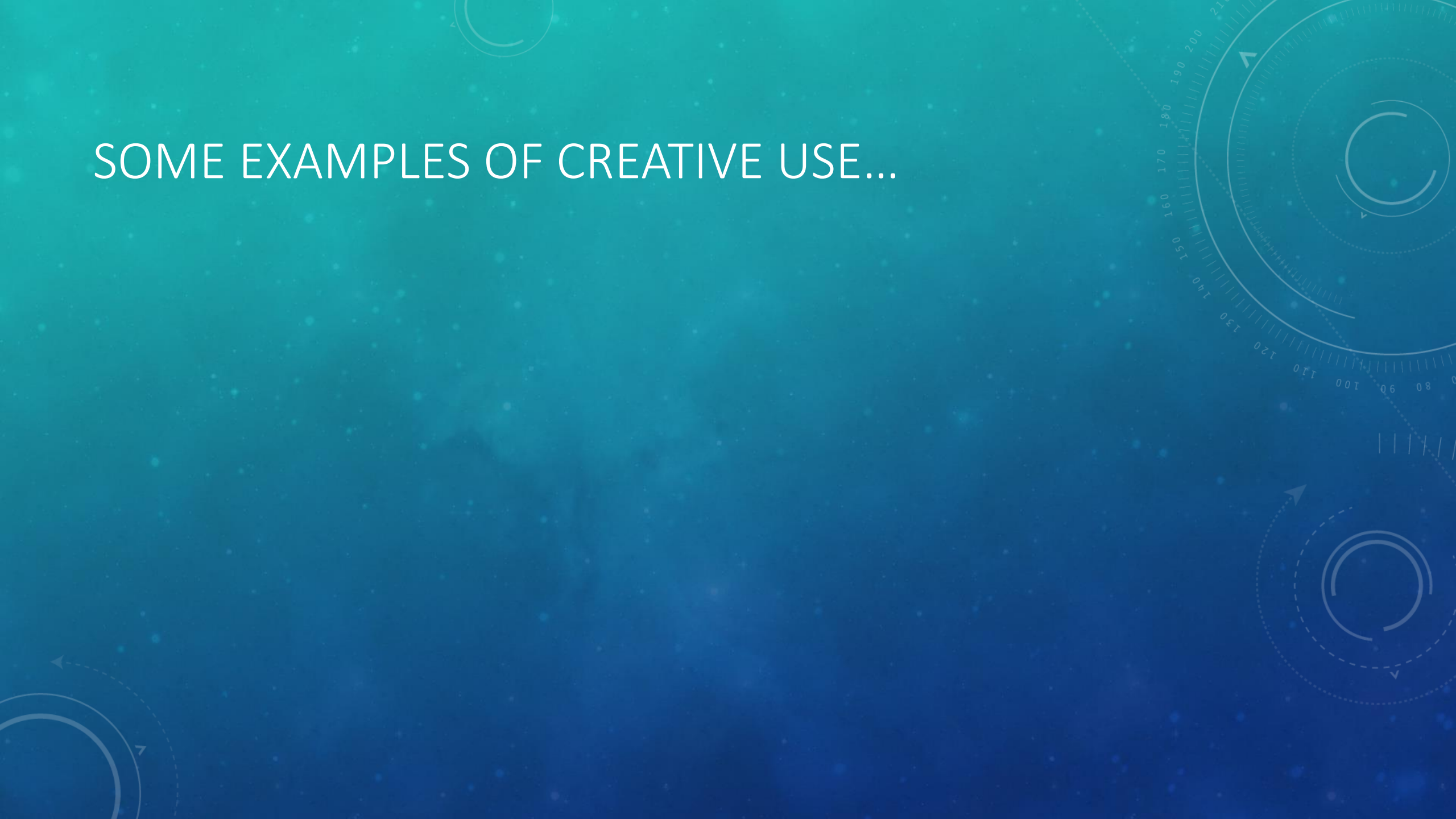
- Because there isn't sufficient light from other sources
- Because there isn't enough light where you want it
- For creative / artistic effect
- To freeze motion

Using flash opens up a huge number of possibilities

WHEN TO USE FLASH?

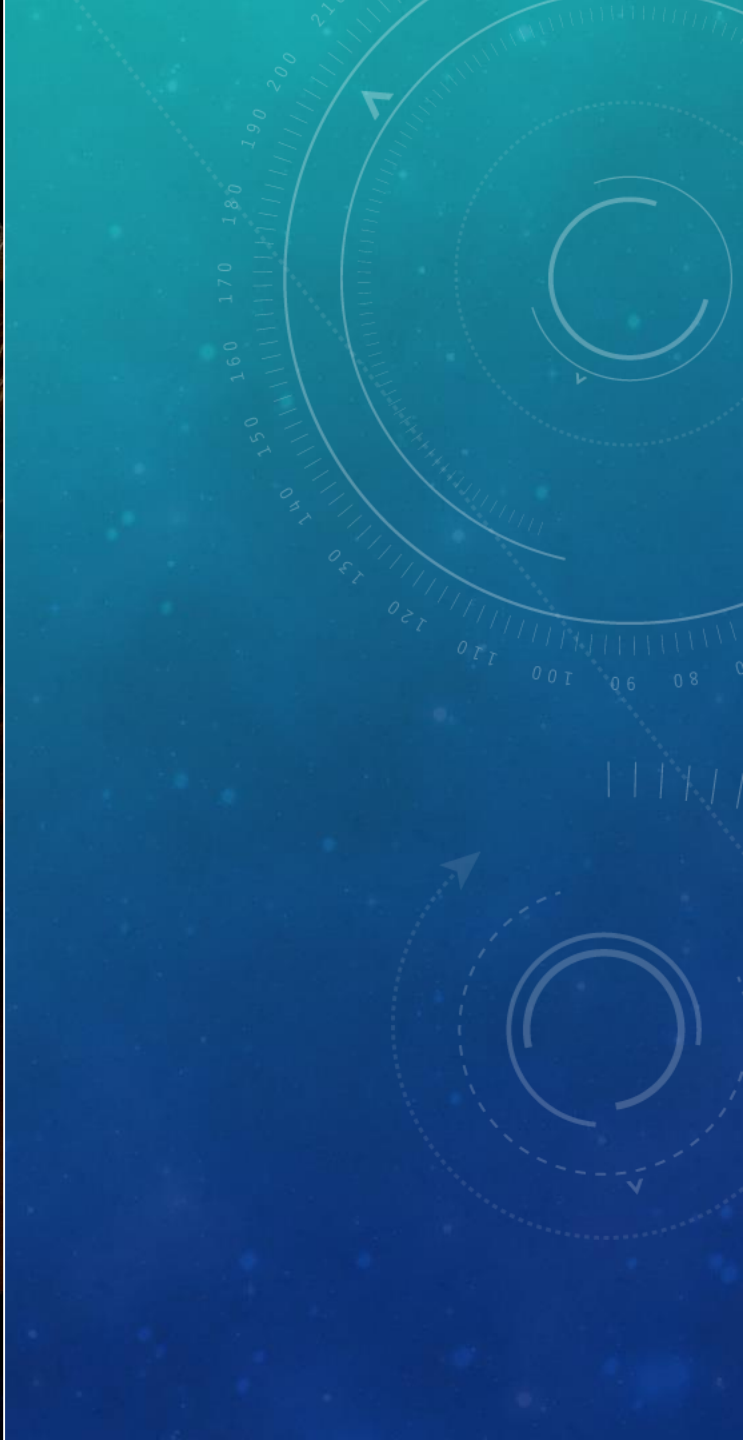
- When there isn't sufficient light from other sources?
 - If you must – but it can be difficult to get attractive results
- When there isn't enough light where you want it
 - Definitely - especially on a bright, sunny day!
- For creative / artistic effect
 - Definitely – this is perhaps the easiest and most fun!
- To freeze motion
 - Yes – but that is (mostly) a topic for another workshop

SOME EXAMPLES OF CREATIVE USE...









WHY USE AN EXTERNAL FLASH?

Not all cameras have a built-in flash.
If they do have one, it:

- ...is low power
- ...has no directional control
- ...is very close to the camera's lens
- ...possibly has limited settings/control options

Whereas a good external flash:

- Has lots of power
- Has tilt and swivel directional control (more, if used off-camera)
- Is further from the lens
- Has many manual power levels
- Probably has zoom / wide-angle

WHAT FLASH DO YOU BUY?

- Nikon, Canon, Pentax etc. all make a range of (expensive) flash guns...
- ...but, third parties like Sigma, Metz, Nissin make cheaper models...
- ...and brands like Neewer, Yongnuo, Godox make them even cheaper
- So what do you need?
- As with all photography gear – it depends on what you want to do
- Let's go through the main options...

BASIC ADD-ON FLASH

- Useful increase in power
- Small size, moderate cost
- Some increase in distance between flash and lens
- Limited tilt options
- Limited control options – could be automatic only
- *Might* have off-camera capability
- Canon / Nikon / Pentax – around £130 - £160
- Third-party (e.g. Metz, Nissin) – around £100



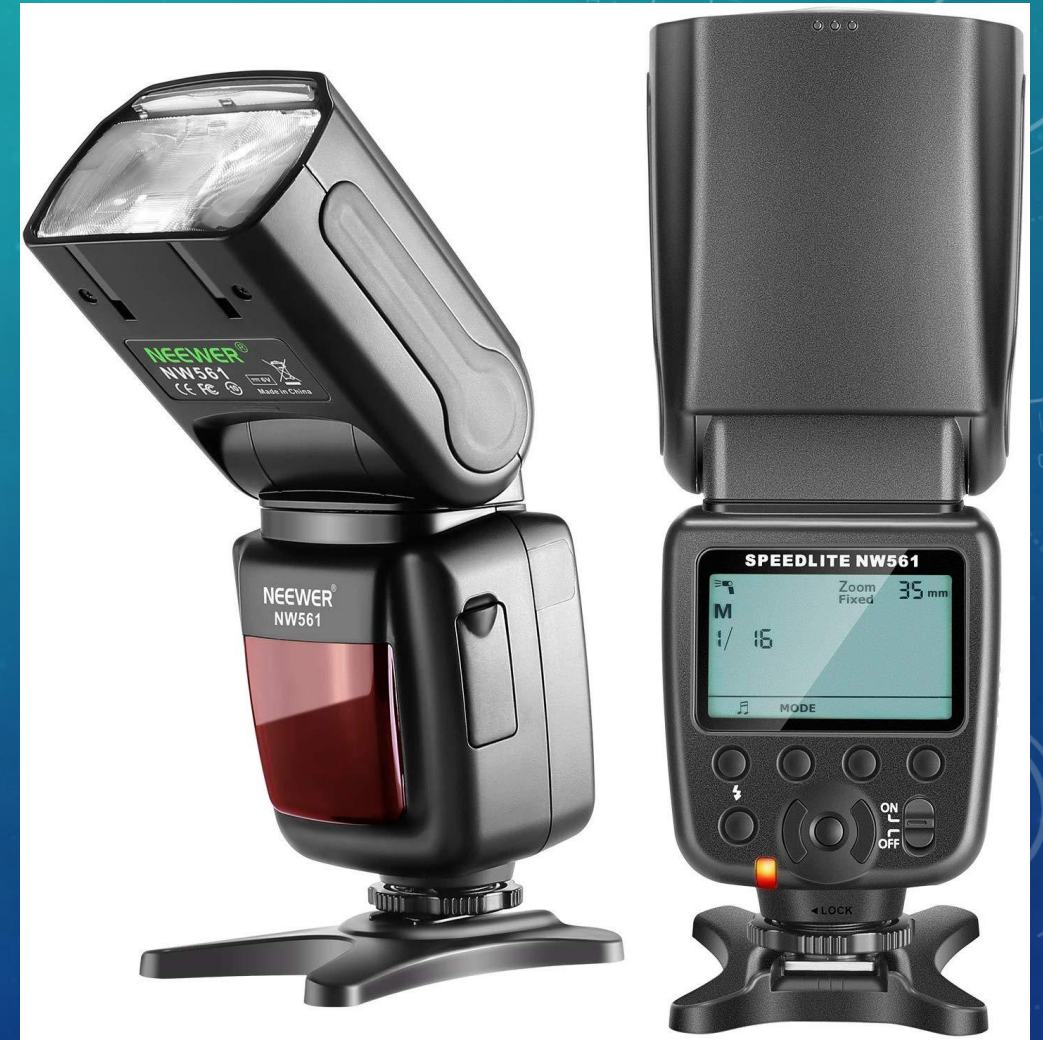
MORE CAPABLE ADD-ON FLASH

- Significantly more power
- Greater distance from lens
- Full tilt, swivel & probably zoom
- Full automatic and manual controls
- Likely to have off-camera capability
- More bulky & expensive
- Canon / Nikon / Pentax – around £250-£600
- Third-party (e.g. Metz, Nissin) – around £200-£400



THE CHEAPER OPTION

- Inexpensive third-party flash - £30 upwards!
- E.g. Yongnuo, Neewer, Godox, (Lumopro?)
- Has tilt & swivel
- Has lots of power, and full manual settings
- Used to be largely manual control
- Now – far more capable – can be camera-specific
- Build quality sometimes less robust
- Instructions less well written



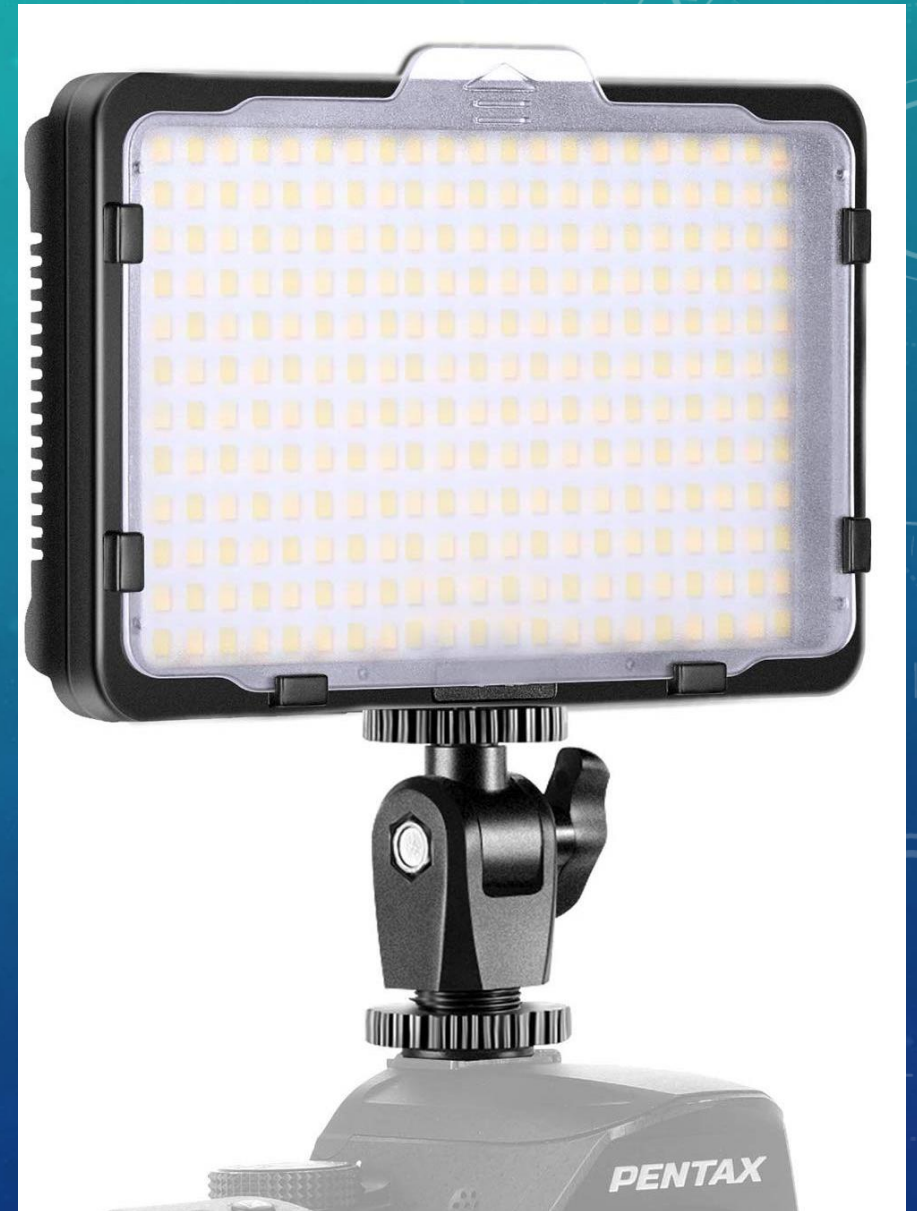
OTHER TYPES OF FLASH

- Studio flash (~£250+/-)
 - Lots of power
 - Very fast recycle time
 - Relies on accessories to control light
- Ring flash (~£300)
 - Most used for macro / close-up
 - Fits on front of lens
 - Uniform illumination with no lens shadow



WHAT ABOUT LED LIGHTS?

- Many LED light units on the market
- Often very cheap
- Easy to use – just turn it on
- Good for video
- Can be a useful alternative but:
- Will not have the same power as a true flash
- Quite likely to get less images per set of batteries
- Light colour can be less predictable



USING EXTERNAL FLASH

Let's walk through how to make use of an external flash, mounted on the camera

Key point: don't be put off by detailed settings – experimentation is the best way to learn

SETTINGS FOR INTERNAL / ONBOARD FLASH

- This section is all shot using automatic metering for the flash (“TTL” mode)
- Camera left in aperture priority mode (generally at f8.0)
- Shutter speed is set by camera – when it knows we are using flash, it will select a shutter speed based on the focal length of the lens, not the exposure
- Normal “exposure compensation” control doesn’t really work – need to use the “flash compensation” setting
 - Looks much the same; makes the flash give more or less power than the automatic
 - At close distances, I usually have to use some negative compensation

AMBIENT LIGHT ONLY

9488

3 second exposure and ISO800

Couldn't hand-hold this



BUILT-IN FLASH

9492

Glare and hard shadows are inevitable

Red-eye *might* be reduced with “red-eye”
setting (pulses flash to constrict pupils)

Typical party / pub photo!



EXTERNAL FLASH, AIMED STRAIGHT AT THE SUBJECT

9495

Glare & shadows are inevitable; red-eye is still likely

At close distance, subject is not fully covered



EXTERNAL FLASH, AIMED STRAIGHT UP

9502

f8, flash power -1.0

Using “bounce” off ceiling for illumination

No hard shadows or red-eye

Top-down lighting looks more natural

Whole subject is illuminated

Much less drop-off of light on background
– subject and background similar distance



EXTERNAL FLASH, AIMED
STRAIGHT UP, PLUS
CATCHLIGHT CARD

9503

Tiny difference – “catchlights” in the eyes

Also fills some shadows e.g. neck

Probably won't cause noticeable red-eye,
due to height of card above lens



EXTERNAL FLASH, REAR BOUNCE

9506

Clearly a frontal illumination – less shadow, features flattened

Not as natural as the ceiling bounce but could be useful e.g. when the ceiling is too high

Beware – illumination will take the colour of the bounce surface!



FLASH ACCESSORIES / MODIFIERS

- Accessories can be added to the flash to modify the light
- Typical examples are “diffusers”, “reflectors”, “softboxes” and “snoots”
- Larger diffusers/reflectors can be in the form of umbrellas
- You can also use filters on the flash to colour the light

EXTERNAL FLASH, STRAIGHT UP WITH A DIFFUSER

9507

Somewhere between the straight-on flash
and the ceiling / wall bounce – as you
might expect

Quite a flat illumination but still some
shadows

Results will depend on ceiling height etc.

Big catchlights in the eyes



EXTERNAL FLASH, UP & RIGHT, WITH A DIFFUSER

9508

Harder, asymettric shadows

This is very dependant on what the light
was bouncing from

No rules here – just experiment!



EXTERNAL FLASH, WHITE FLASHBENDER

9509

The Flashbender gives the flash a much greater area for a softer lighting effect, especially at close distances

Still allows a lot of light to bounce from the ceiling (depends on how you shape it) so background is well lit

Catchlights are almost like a window



EXTERNAL FLASH, SILVER FLASHBENDER

9510

Changing the Flashbender from white to silver gives a slightly harder light

Reduces contrast in face – heading back towards the onboard flash look



EXTERNAL FLASH, FLASHBENDER SOFTBOX

9512

The softbox stops light reaching the ceiling – giving more of a frontal light again

It's more diffuse than just using a reflector – hence soft shadows

Background is darker – because of little/no light off the ceiling

Texture of scarf looks less natural



EXTERNAL FLASH, FLASHBENDER SNOOT

9515

The snoot setup constrains where the light reaches; the shape of the shadow comes from the shape of the end of the snoot

This is not a brilliant example – but it shows the kind of dramatic effects you can achieve



USING THE FLASH OFF-CAMERA

- We need to trigger and control the flash settings (power)
- My setup is very simple:
 - Basic “slave” triggering, using the built-in flash
 - Manual adjustment of the flash power
- You can also use wireless transmitter / receiver arrangements
 - Own-brand flash might do this direct with your camera
 - Third-party flash might require an additional wireless transmitter & receiver
 - Multiple flash units can “talk” to each other

AN INEXPENSIVE OFF-CAMERA SETUP

Neewer 565 kit for Canon or Nikon

Includes a wireless transmitter and receiver

Claims to have full range of automatic and manual settings

All for £60!

Metz wireless trigger - £150+

Nikon wireless controller - £350



USING THE FLASH OFF-CAMERA

Let's walk through how to make use of an external flash, mounted away from the camera

DETAILED SETTINGS FOR OFF-CAMERA FLASH

- Ideally, use manual exposure (or aperture priority)
- Shutter speed below “sync” speed; with low ambient light, shutter speed has little effect
- Low ISO & small aperture – if you have enough flash power
- Manual flash power setting
- Typical starting point: ISO200, f8.0, 1/80s, flash set to 1/8 power
- Dial flash power up or down until you get the result you want

WHERE WE'D GOT TO:
EXTERNAL FLASH, SILVER
FLASHBENDER

9510



FLASH OFF TO THE RIGHT, AIMED STRAIGHT AT SUBJECT

9525

Hard shadows, half illumination – a very different effect

Pretty much “Rembrandt” lighting – note highlight on cheek on shadowed side of face

Much of the scarf is shadowed

Manual setting of flash power at 1/32

Camera: f8.0, 1/80 sec, ISO200



FLASH FURTHER OFF TO THE
RIGHT, AIMED STRAIGHT AT
SUBJECT

9527

Shifted the background shadows

Lost the “Rembrandt” cheek highlight

Background is lighter – flash moved closer
to it, but same distance from subject



FLASH MOVED CLOSE TO THE SUBJECT

9530

Very hard shadows, high contrast

Background is dark – because it is so
much further from the flash than the
subject is



FLASH HIGH & TO THE RIGHT

9532

A different effect – almost creates a
different facial expression

Key lesson is to try it and see – don't be
constrained in where you position the
flash



FLASH LOW & TO THE RIGHT

9533

Another dramatically different effect



FLASH DISTANT RIGHT, WITH
SILVER FLASHBENDER
FITTED

9536

Soft illumination but enough shadows to
give depth and texture

An additional flash from the front, on very
low power, could create catchlights



WHAT ABOUT “FILL-IN FLASH”?

- “Fill-in flash” is use of flash add light to areas of shade
- E.g. for better illumination of faces with bright backgrounds
 - Means the subject doesn’t have to face into the sun
- Can balance any subject with a brighter background
- Simply expose for the background & add flash for the result you want
 - Reduce flash power to avoid over-exposing
 - As with all flash, max shutter speed depends on specific camera and flash

EXPOSED FOR THE BACKGROUND

9552

If anything, background is slightly over-exposed but foreground is definitely under-exposed



AUTO EXPOSURE WITH BUILT-IN FLASH

9553

Typical flash auto exposure – slightly over exposed; very flat; possible re-eye

Background now too dark (auto-exposure setting shutter speed too high)



EXTERNAL FLASH

9556

Camera exposure set manually (f8.0, 1/15s) for the background

Flash either automatic (TTL) with –ve compensation set, or low manual power setting



OFF-CAMERA FLASH

9559

Manual exposure on flash – set for the background

Manual power setting on flash – trial and error, start at e.g 1/8 power, ended up at 1/32 power

Note: flash exposure compensation has e.g. ± 2 stops; power setting goes to -7 stops in 1/3 increments!



SOME FINAL POINTS

- Everything I've shown here can be done with multiple flash devices
 - Light subject(s) and background independently
 - Use creative backlighting, possibly with colours
 - Create high contrast with fill-in where needed
- The built-in flash could be one of the devices

Most importantly: with digital photography, learning by experimenting only costs time; images come free.

A QUICK COMPARISON WITH WHERE WE STARTED

Built-in flash

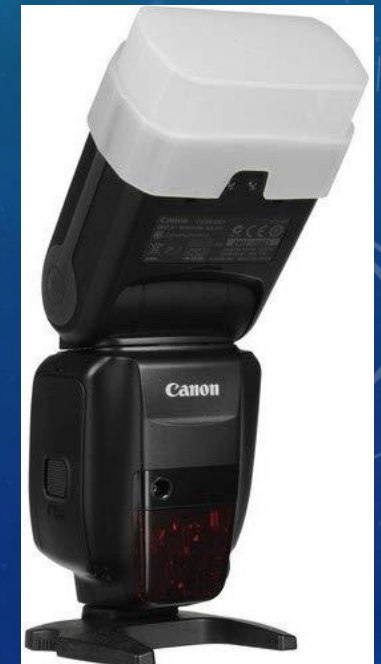


Off-camera flash & Flashbender



OTHER KIT I'VE MENTIONED

- Diffuser (Metz Mecabounce / Stofen Omnibounce) - £8 - £20
- Rogue Flashbender softbox - £55
- Rogue Flashbender reflector only - £32
- Set of 8x AA NiMH & charger - £25-£35 depending on capacity & speed
- Nikon SG-3 IR panel - £12
- Light tent / pop-up studio - £25/£50/£100+



SOME OTHER SOURCES OF INFORMATION

- <https://www.geofflawrence.com/index.html> – some really good, easy to understand pages of advice.
- <https://strobist.blogspot.com/> - “*Strobist is the world's most popular resource for photographers who want how to learn to use their flashes like a pro.*” Start with “*Lighting 101*”.
- <https://rogueflash.com/collections/videos> - training videos based around Rogue products but more broadly applicable

DID I MEET THE OBJECTIVE?

Does anyone now feel motivated to try using external or off-camera flash?

