

General

We were delighted to welcome Jean Simons at our meeting.

George, fresh from his holiday trip on a narrowboat, was able to attend.

On 10th July we (PPG) had a session, in which we celebrated, the contributions that the late John Simons had made to our group & Phoenix in general. On 17th we all agreed that we would produce a photo book containing a selection of John Simon's images that we had used.

At today's meeting George Thatcher was able to present the photo book to Jean. We hope that it will bring happy memories to her & her children.

CPS

Tim has asked me to let you know that the Cannock Photographic Society (www.cannockcps.co.uk) meet every Thursday at 19:45 to 22:00 (Sept – May) at Norton Canes Community Centre Brownhills Rd, Norton Canes.

N.B. Note that it says "Sept – May", so don't go there yet! Note also that the Trent Valley Photographic Society (Slitting Mill) meets the same day.

Photo Themes

Our photo themes (managed by Ian Halstead) are:

Rolling topic:

Summer

Holiday Snaps

Main Themes

Flowers & Insects

Wildlife

Architecture

Please send your images to Ian Halstead as usual.

Next Meeting on 7th August

Our next meeting will be in two parts: A talk by Anton Mans & a practical session which is part 2 of our 2 part flash photography session.

Anton Mans – I Did It My Way

Next meeting our member, Anton Mans, who is a competent photographer & for want of a better phrase "knows his stuff" (a statement that he denies) will be giving us an illustrated & entertaining talk about his images & photography that he has called:

I Did It My Way

Anton assures me that he will not launch into a vocal impersonation of Frank Sinatra!

Talks by our members about their own photography, like this one by Anton, are always great. In my opinion there are

few things better in our photographic meetings than seeing the works of a fellow member & hearing their stories.

Anton cut his photographic teeth on film before going digital, so we can expect a very interesting presentation.

Flash Photography - Part 2

Covering "Flash photography" is like trying to cover "using your camera". It is too big a subject for a single meeting.

Successful flash photography requires two things:

- ✓ An understanding of the basic concepts (what is going on) so that you can be in control, &
- ✓ Learning how to do it on your camera (hands-on).

Your car has a very comprehensive handbook that tells you what all the buttons, levers, pedals & knobs do. But even if you have read it, you still have to learn & know how to drive & know where you want to go.

The same is true with flash photography

We had part 1 on Monday, which was all about understanding what is going on (see "Last Meeting").

We got as far as we could on Monday & will continue with the second part on 7th August.

Part 1 was the information. Part 2 is the practical where you have a go at it & try things out.

As a show of hands proved, most of us struggle to get the flash photographs we want, but get underexposed or overexposed bits in our images.

Flash Made Difficult

There are plenty of books with titles like "XXXXX made easy." Anyone reading a manual for a Canon, Nikon or other dedicated flashgun is allowed to think that the title should be "Flash Made Difficult". The handbooks on dedicated flashguns are almost as big as the camera manuals!

Flash photography is simple in concept. There is a short burst of light that you can vary and you set an aperture that will give you a correctly exposed image.

Unfortunately the computers in modern cameras do lots of clever things & they can outthink us, making it hard to know what is happening. This makes learning how to use your flash difficult.

But it gets worse, because we don't use flash as much as we use our cameras & so when we do need to use flash we have either forgotten how to set things, or never got round to it & haven't got the time to find that bit in the handbook, let alone read it.

Part 2 on 7th August will be about you trying things out.

Please bring your camera & any flashguns that you have.

If you have gadgets to fit your flashgun, light stands, flash umbrellas, flash remote controls & such like, please feel free to bring them along if you want to find out more.

ABOVE ALL BRING YOUR CAMERA & FLASHGUN MANUALS - cameras & flashguns vary!

Also bring a tripod. Make sure that your flashgun(s) have charged batteries!

We will do shots indoors & (weather permitting) fill-in flash shots outdoors.

Last Meeting: 31st July

Flash Photography Part 1

The meeting was about understanding Flash Photography. I do not intend to replicate it all here, but just a few important points that you do need to understand to get the best out of flash photography.

Features of Electronic Flash

- Very fast: 1/400s to 1/20,000s
- “Daylight” colour temperature (5,500 K) (set camera to flash symbol)
- Very powerful output compared to continuous lighting or sunlight.
- The flash does the exposing, not the shutter speed.
- The combination of flash strength & aperture controls the flash exposure.

Setting How Your Flash Works

- If you set your camera to AUTO it will decide if flash is needed & use it.
- If you set your camera to P or any other mode then you choose to use flash or not.

Flash Symbols

Many cameras (not all) will give you a choice of flash mode like this:



They are from left to right

Auto – the camera decides whether or not to use the flash.

Flash On – you have chosen to turn on the flash & it will always fire (if it is charged up).

Flash Off - you have chosen to turn off the flash & it will not fire.

Note that if your camera has a built-in flash, it will use battery energy every time that you use it, so you will not get as many shots on a single battery charge (the handbook usually tells you).

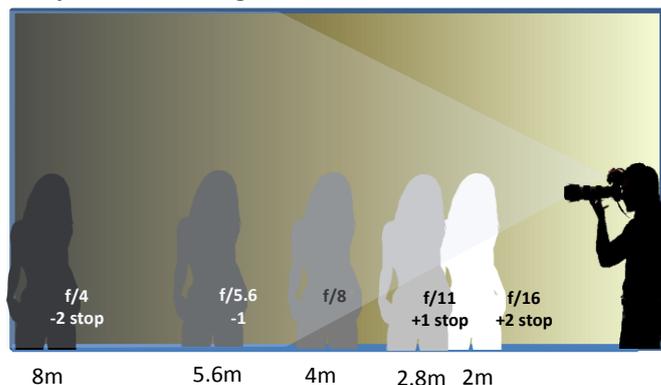
Inverse Square Law

The Inverse Square Law is a fundamental law of Physics & applies to light, gravity, magnetism & many other things. It describes how illumination decreases with distance.

When a beam of light (like a torch beam) hits a surface it produces a circle of illumination. Move the torch twice as far away & the circle doubles in width & height. The same quantity of light is now spread over 4 times the area. This is the inverse square law. Illumination falls with the square of the distance.

This is important in photography because if you get the right exposure for your subject, objects that are only 30% closer to the light will be over-exposed & objects that are only 40% further away will be under-exposed.

This rapid change of illumination with distance is why people & objects in the foreground get burnt out & people & objects in the background are dark.



There are three main ways to overcome this (to some degree):

1. Use more than one light source (ambient light or extra flashguns)
2. Bounce the light off the ceiling. The bright area on the ceiling becomes the light source; it is large & the distance from this blob of light to each subject will vary less.
3. Go further back with the flashgun so that the relative distances between near & far object is not so great.

Demo

We demonstrated the fall off in illumination using some targets on the table. The length of the table from the flashgun to the furthest target was 7m. At that distance (with our flash settings) a correctly exposed shot needed a wide f/2.8.

Distance (m) from Flashgun	Aperture for Correct exposure
7.00	f/2.8
4.95	f/4
3.50	f/5.6
2.47	f/8
1.75	f/11
1.24	f/16
0.88	f/22

Put another way, when we got the flash right for Arthur, who was sitting at about 1.75 m from the flashgun (highlighted in yellow), everyone 500mm closer to the flash was over exposed because they were too near. Anyone 750mm further away was underexposed because the illumination was too weak.

This rapid change in illumination with distance is the reason why many flash photos don't look good & why many less experienced photographers give up on using flash.

Guide Number

Guide Number is a measure of how powerful the flashgun is. The higher the number the more powerful it is. In the days of film photography you used the Guide Number to work out what aperture you needed based on the distance from the flashgun to the subject. Now the camera can do it.

$$\text{Guide number} = \text{distance to subject} \times f\text{-number}$$

It is quoted for a specific ISO (usually 100) & in metres (or feet). Example a Canon 550EX says it has: GN (at ISO 100 in metres) = 55; meaning a Guide Number of 55 metres at ISO 100.

This means that if I have an 105mm lens & set it to f/2.8, I can get enough flash power to fully illuminate a subject 20 metres away.

My little but powerful compact camera has a flash with a lower guide number & cannot adequately illuminate a subject more than 7m away.

You won't have to use this yourself, but your camera does.

IMPORTANT STUFF ABOUT LIGHTING – READ THIS BIT & THE NEXT BIT

In a normal “flash” situation you have two main sources of light:

- **The ambient light:**

Might not be sufficient for a fast enough shutter speed for shake-free hand held exposure.

Sunlight might cast harsh shadows on faces that you want to soften & fill in with flash.

- **The flash:**

Powerful enough to illuminate the subject & fast enough to freeze action.

But it changes rapidly with distance, so it won't illuminate the background & foreground is too bright.

The result can look harsh with just one flashgun & low ambient light.

It can look “unrealistic”.

Controlling the result:

Think of the picture being two “images” that are superimposed.

- One is the image that you would get if you did not use flash at all, just ambient light.
- The other is the image you would get if there was no ambient light & you only had light from the flashgun.

How you (or the camera) set the aperture & shutter speed & flash power determines how these two “images” combine to give you what you want.

- **Altering the FLASH POWER & the APERTURE changes the “flash” exposure of the subject. The shutter speed has no effect.**
- **Once the aperture is set, changing the SHUTTER SPEED alters the exposure of the ambient light.**

Whether you do this yourself or the camera does it automatically (as best as it can) depends on how you set your camera.

But note that, whilst the flash will freeze motion in the subject, the ambient light exposure might need a long shutter speed & anything that moves (people & camera shake) will have motion blur. But slight blur is usually preferable to horribly under-exposed things in the background.

In our demo, to get a balanced photo (with the window curtains closed), we needed a 3 second exposure.

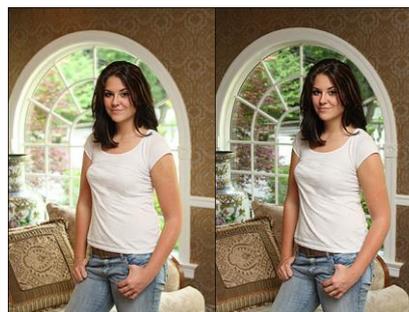
Exposure Modes

When you set the Exposure Mode on your camera, you decide how the camera will work with & control your flashgun:



- **Manual** - you set the aperture & shutter speed. If flash is in E-TTL mode (auto), the camera/flash has to work out how much power is required to illuminate the subject. In Manual flash power mode you are in full control.
- **Tv** – Similar but the camera can only change the Aperture & the flash power to achieve the best compromise. The camera will try to select a flash power & aperture to get a compromise between the flash & the ambient light.
- **Av mode, Program or Auto** - the camera works out what exposure is needed for the ambient conditions (it will probably be a slow shutter speed) & works out how to fill in with the flashgun. The subject is illuminated as before & frozen, by the flash of light. Objects in the background are now exposed for longer (& might suffer camera shake).
- **Scene Modes** – If your camera has these settings, these use the flashgun in the way that the manual says. For example the night scene mode assumes that you are photographing a subject against a nightscape with city lights, etc.

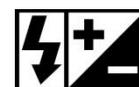
Here are two photos. In each case the flash power & aperture are the same, giving the same flash exposure, but in the left image the shutter speed was longer, increasing the exposure of the ambient light. In the photo on the right the shutter speed was chosen to be correct for the view outside the window.



Flash Exposure Compensation

If non-flash pictures come out too light or too dark, you can alter the camera setting by twiddling with the EXPOSURE COMPENSATION dial.

There is an almost identical FLASH EXPOSURE COMPENSATION control that will turn down or up the flash power.



If your fill-in flash is too strong, turn The Flash EC down -1 or -2. In the unlikely event that you want it to be stronger, turn it up. But be warned, the control is very similar to the exposure compensation control & might use the same bar graph. It is easy to set the wrong one!

Paul Davies

Paul very kindly did a short illustrated talk.

Paul had observed that his father & some others were not making full use of the information that is displayed in camera viewfinders.

Information in the viewfinder



There is a bar graph that tells you two things:

1. What the camera thinks is the right exposure (the middle upper blob on the bar graph in the centre).
2. What you have set. This is the green mark under the bar chart.

The lower green mark will move left or right if you change settings (e.g. in manual mode, exposure compensation, etc.) If it lines up with the top mark then the exposure is correct (according to the camera) if it is somewhere else it tells you how under-exposed or over-exposed the shot will be.

The numbers on the left to right) are the shutter speed (1/200 s) & aperture (f/8.0). The ISO setting is shown on the right (800) next to the word ISO.

There are various other bits of information, such as the green blob (focus confirmed).

Focus Points

Paul also showed the focus points in his camera viewfinder, and how he would turn all but one off to be sure of focusing only on what he wanted.

He used this to good effect to ensure that he focused only on the blue tit in the next photo & subsequent photos.

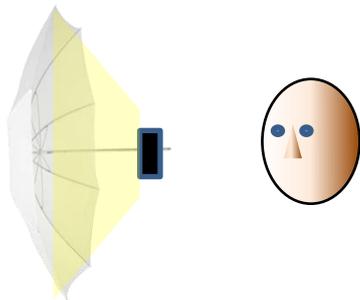


Thank you Paul.

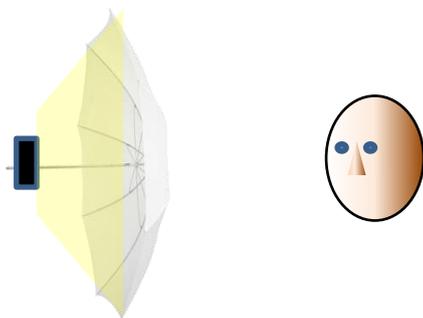
Roy Alexander

Roy very kindly demonstrated his flash brolly and stand.

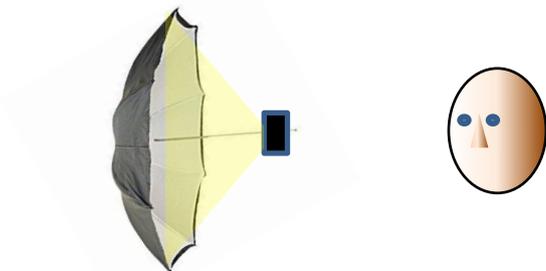
It could be used either as a reflector, like this...



...or, because they are translucent, turned through 180 degrees as a diffuser...



Some brollies are only reflectors.



As Roy explained, these and their stands are inexpensive devices that you can use with any flashgun.

Benefit of using a brolly

The brolly produces a bigger area of light. This softens the shadows by creating a more diffuse light.

Firing the flash

You can fire the flash by plugging it into:

- a) A slave trigger that fires when it detects a burst of light from another flashgun.
- b) A wireless trigger that has a receiver that connects to the flash & a transmitter that you fit onto the camera hot shoe. The transmitter fires the flash when you press the shutter.
- c) A dedicated wireless transmitter. These are expensive but will control a dedicated flashgun as if it was on the camera.

Reflector

Roy also demonstrated his pop-up reflector. This is a simple circular reflector that has a spring frame around the edge. It fits into a very small flat carry case and, when you

take it out, it will spring into its circular shape. One side was white and the other silver finish.



Roy demonstrated its use. A subject illuminated by the window to one side had harsh modelling across the face. By holding the reflector on the opposite side to the window, light from the window was reflected, reducing the fierce shadows & improving the modelling.

Roy explained that these collapsible round light reflectors are very handy & are inexpensive – you could buy them on eBay for under £10 (Inc. postage).

Many thanks to Roy for his superb contribution

Members' Photos

By Paul Davies – using studio flash & a catchlight flash to highlight the hair.



