Steyning Camera Club Number 35
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Ice Hotel, Sweden,
Rotorua and Mitre Peak, New Zealand
by Malcolm Bull



VIEWFINDER

Editorial

Welcome to the new season.

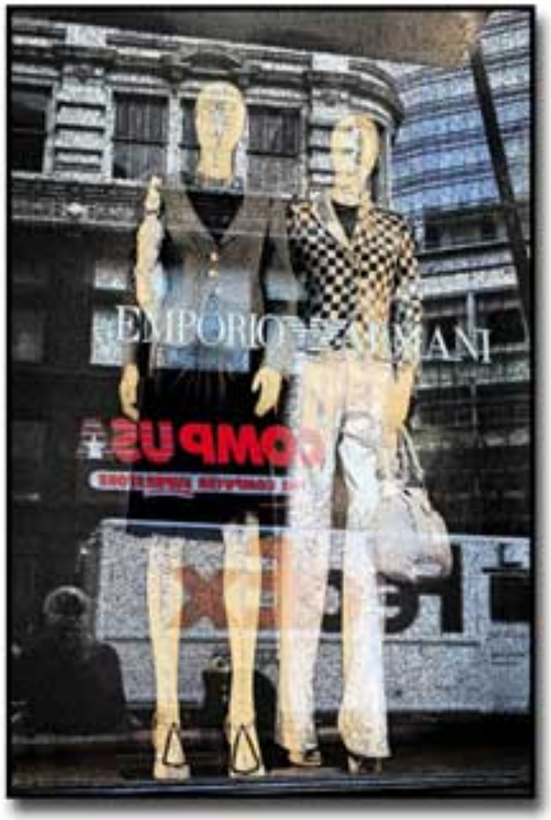
This year we will see many changes, mainly as a result of the influence of digital imaging in the photographic world. Most will be welcomed by the majority but it will be tinged with a great deal of sadness by all, as it is part of the move away from using transparencies as bedrock of Camera Club life.
There can be no denying the fact that the projected slide still has the highest resolution, the most subtle gradation and sharpness but digital projection is improving in leaps and bounds. Unfortunately slide film will become more expensive as world production plummets and even buying from your local shops will cause problems. Many are finding this situation is already happening.
The benefits of digital are numerous and I will mention just a few. Those of us that have spent years in darkrooms with smelly, dangerous chemicals that "oxidise" before the mix can be finished and have to be disposed of down the "drain" will appreciate being able to work in daylight, whenever it is convenient, answer the phone, have a meal or a break when appropriate and being able to produce prints with no retouching or spotting.
Not only this but it means virtually anybody now has the means to produce their own prints at home. A computer is a very useful piece of kit but it is not essential as most printer manufacturers make machines that will enable the photographer to print A4 prints on the dining room table!
Eventually we will all get used to putting our competition images onto CD's, USB pens or finding those tiny 16Mb cards that came with the camera of great use to convey those image files to the competition secretary. More of this in articles in this and subsequent Viewfinders.
Please remember that help will be on hand for those experiencing digital imaging for the first time, remember we all had to start somewhere.

The next part of Mike Warren's comprehensive article on Flash is in this Viewfinder and the Autumn edition will include the final page. Thanks Mike and I hope the members are finding the article beneficial.

More articles from members are always welcomed, as are your favourite images. Please have word with Cliff if you have any ideas you would like to share with our other members.

File names for digital entries to competitions

Each digital competition will have a code (initials of West Sussex Gazette Cup for example would be - WSG), followed by R1 (for Round 1) R2 or R3, then 01 0r 02 (for the your preferred order of projection), next will be your title for the image and finally your initials.
Please include dashes - in the places shown below, with no spaces except between the words of your title.
Example should look like this:- **WSG-R1-01-This Is My Title-YI.jpg** YI should be your initials and the .jpg refers to the file format in which to save the image.
Other competitions will be: Lewis Cup entries will be LC - Viewfinder Trophy will be VT - Image of the Year (formerly Slide of the Year) will be IOY.



Selling Fashion

As a man who hates shopping, it is strange that, having moved on from railways, I find myself building a collection of images on selling fashion.
Several years ago, Liz and I were with a choir in Lille, and, during free time, I happened to notice Liz's reflection between two display models in a Weddings Shop window. I snapped, as you do. I still like the result.
Two years later, I was in Oxford Street in pursuit of my infamous digital projector. As I crossed a sidestreet, making for John Lewis, I noticed a window-designer, dressing a model just by me. I also noted the reflection of a red bus and, behind that, the BHS building. That was the shot that got me thinking. It hangs now on someone else's wall.
Thereafter, I started consciously looking out for similar opportunities. The windows themselves were fascinating, and sometimes these seemed to be no need for reflections as the subjects were rich enough in themselves. I first made a specific trip last year to Western Road, Brighton. Since then there have been pictures from Portugal, Cadiz, Tunbridge Wells, London, Totnes, San Francisco among others. Not Worthing, yet!
I admire the artistry of the window-designers; I hardly notice the clothes! I am intrigued by the faces, mostly female, but not all. I love the surprises of the reflections, and try to include a person, a dog, a vehicle in a blank space in a shot. Subdued lighting is sometimes a boon.
A bit of mystery is definitely a plus.
Interestingly, at Littlehampton for the Photohunt, I went into the main shopping area, but failed to take a good Reflections shot there, so practice does not always make perfect.

Graham Smith







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Hardware

You may burn your image files to CD - any discs are suitable for this purpose as they can now be bought incredibly cheaply and these will not be used for archiving your precious images, only transfer to the competition secretary. All will be returned to the authors as soon as is practicable. Alternatively, USB data sticks or pens, floppy discs and those small 16 or 32 Mb memory flash cards, so often supplied with cameras, are to be preferred as they are all re-usable.
The image file should be renamed in the way described and dragged from it's existing folder on your computer onto an empty compactflash, smartmedia, SD, etc. memory card that has been inserted into a card reader or onto a USB data pen.
Please note -The competition secretary can download from the following memory cards at present:-
Compactflash - Smartmedia - Secure Digital (SD)/MMC or Memory Stick.

File Format

Files should be resized to a maximum of 1400 pixels width and 1050 pixels height, with a resolution set to 72 pixels/inch and must be submitted in high quality jpeg or jpg format. All image management programs will have a resizing facility, even the most basic and we will demonstrate the procedure during club sessions, if requested.
Examples: landscape could be 1400w x 600h pixels and a portrait 800w x 1050 h, sizes will be adjusted automatically if the constrain box is ticked and selected in the resizing dialogue box of Elements or whichever programme you are using. In most programs, set the resolution first, and then set the image dimensions in pixels. You can safely ignore print size. Make sure you save your image as a separate copy using the file naming convention mentioned earlier, so as not to overwrite your original file.

Set Subject Reminder for next season's competition

18th October - "Past its Best" - appraised by JEAN HOLMWOOD
3rd January 2007 - "People at Work" - appraised by tba
7th March - "Patterns in Nature" - appraised by STEFAN SEGSCHNEIDER

This competition will be open to traditional slides and digital images for projection. We will try to use a normal slide projector together with a digital projector for showing the entries each competition evening and request that the appraiser takes this into consideration.
Also as a reminder here is a copy of the changes made at the 2006 AGM
The restructure provides a set of competitions as follows:

Competition	Medium	Groups	Trophy
Open Prints	Prints A	advanced	Matanle Shield
Open Prints	Prints B	beginner / int	Penfold Cup
Open Slides	Transparencies	Combined	Steyning Bowl
Set Subjects	Projected	Combined	Lewis Cup
Open Digital	Digital Proj A	advanced	West Sussex Gazette Cup
Open Digital	Digital Proj B	beginner / int	Viewfinder Trophy
Image of the Year (Projected Images)			
	Any source	Combined	Slide of the Year
Print of the Year			
	Prints	Combined	Print of the Year

Aspects of Flash Photography {continued}

TTL (through the lens) flash metering.
As noted above, the earliest electronic flashes required the photographer to perform distance calculations by hand. Later, the first generation of automatic electronic flash units relied upon external sensors to determine the flash exposure setting. These sensors, mounted on the front of the flash unit, simply recorded the flash bulb's light, reflected back from subject, and cut off the power when enough light for a satisfactory exposure was determined. The venerable Vivitar 283 still sold today works this way, in fact.
But , such external sensors were easily fooled. The sensor might, for example, cover more or less area than the lens currently in use. So Olympus pioneered through-the-lens flash metering in the mid 1970s with the OM2. Canon introduced their version of TTL flash metering with the T90 a decade later, then incorporated the feature as standard with the EOS line of film cameras. Other camera manufacturers have developed their own versions for their single lens reflex cameras.
TTL flash metering works by measuring the pulse of flash-generated light bouncing back off the subject and entering the lens. It actually measures this light reflecting off the surface of the film itself in real-time, by using an off the film (OTF) sensor. The light from the flash bulb is quenched when the sensor determines enough light has been produced to achieve a satisfactory flash exposure to get a mid-toned subject. Since digital cameras do not have film, digital EOS cameras do not support TTL. For those interested, the OTF sensor is buried deep in the camera body, and is visible if you put the camera in bulb mode (ie: flip up the mirror and open the shutter) and open the camera back. It's a small lens pointing back at a 45° angle towards where the film surface would be, and is located at the bottom of the camera in the ridged black area right in front of the shutter curtain. The rectangular or cross-shaped hole or holes immediately in front of it are the autofocus sensors.
The TTL sequence of operation is as follows:
* When the shutter release is depressed halfway the current ambient light levels are metered by the camera as usual. Shutter speed and aperture are set by the camera or user depending on the current mode - P, Av, Tv or M. In P mode the camera sets the shutter speed to a value between 1/60 and X-sync. In the other modes it meters normally. (except on certain cameras which have a custom function that can lock the camera to X-sync in Av mode)
* When the shutter release is pressed all the way the camera flips up the mirror and opens the shutter, exposing the film.
* The flash unit sends power to the flash tube, illuminating the scene. The start time of the flash triggering depends on whether first or second curtain sync has been set.
* Duration of the flash pulse is determined by the OTF sensor, which meters for an average scene. If the photo is being taken under bright lighting conditions (10 EV or brighter), auto fill reduction is applied. (unless it has been disabled by a custom function, as is possible on some bodies) This can reduce the flash output by anywhere from 0.5 to 1.5 stops.
* As soon as the flash unit determines that the foreground subject has been adequately lit - by this real-time measurement of reflected flash light - it cuts off the power to the flash tube and the light from the flash unit is immediately quenched.
* The shutter stays open for the full duration of the shutter speed time.
* The shutter closes and the mirror flips back down. If the flash unit has a flash exposure confirmation light and if the flash metering was deemed adequate then the light glows.
N.B. - since the sensor records light reflecting off the surface of the film itself all cameras with TTL flash are calibrated to work with the emulsion characteristics of typical colour print film and there may, therefore, be very subtle differences in flash metering when you use slide film.
Refinements to Through The Lens Metered flash
TTL metering is more reliable than systems which rely on external sensors, but it can still be fooled. For example, a highly reflective subject or a subject in white surroundings can result in a lot of light reflecting back, so the resulting picture may well be underexposed as the camera quenches the flash too soon. An off-centre subject poses similar problems. Another issue is that the flash metering occurs while the shutter is open, so the camera can't accurately factor flash in with ambient light metering. Canon refined TTL control on their multiple focus point cameras by adding a feature they call AIM,

which is basically multiple-segment flash metering. This lets the camera bias the flash exposure to the currently selected focus point, thereby increasing the chances of getting accurate flash exposure for off-centre subjects.
The AIM system means that it's best to rely on selecting off-centre focus points for flash photography rather than using the centre point and then recomposing the image.

Nikon improved their TTL flash metering system by incorporating subject distance into flash calculations - their "3D" system. This system determines distance information by reading the current focussing distance from the lens. Canon did not incorporate a similar distance-data system in their flash technology until 2004, with the introduction of E-TTL II. However, while distance data is valuable, it's important to keep in mind that distance data isn't very useful when using a flash in bounce mode or when using any diffusion system in which the light from the flash unit does not travel directly to the subject, since both cases increase the flash to subject distance over the lens to subject distance.
A-TTL (advanced TTL).
Canon's first step in altering flash exposure design was the creation of A-TTL, or "advanced through the lens" flash metering, which was introduced with the T90 camera and continued on to the EOS series of film cameras.
A-TTL flash units send out a brief burst of light during the metering phase. (ie: when the shutter release button is pressed halfway) This pre-flash is recorded by an external sensor on the front of the flash and used to determine a reasonable aperture to ensure adequate depth of field, particularly at short distances. The flash unit then sends out the actual scene-illuminating flash once the shutter has opened.
The A-TTL sequence of operation is as follows:
* When the shutter release is depressed halfway the current light levels are metered by the camera. In P and Tv modes the ambient aperture value is determined and stored, but not set. In Av and M modes the ambient aperture value is user-set.
* The flash unit fires a pre-flash (either near-infrared light from a front-mounted secondary flash bulb or white light from the main flash bulb, depending on the flash unit and operating mode) in conjunction with the ambient light metering, in order to determine the approximate distance from the flash to the main subject. In P mode only, the correct aperture value to expose the main subject is then calculated.
* In P mode only, the two aperture values (ambient and flash) are compared when the shutter release is fully depressed. The camera typically sets the smaller of the two apertures, particularly if the distance to the subject is determined to be fairly close. In Av and M modes the aperture is determined by the user setting and in Tv mode the aperture is determined by the ambient light meter settings.
* If the photo is being taken under bright lighting conditions (10 EV or brighter), auto fill reduction is applied. (unless it has been disabled by a custom function, as is possible on some bodies) This can reduce the flash output by anywhere from 0.5 to 1.5 stops.
* Finally, the camera flips up the mirror and opens the shutter, exposing the film.
* The flash unit then sends out the actual scene-illuminating flash. The start time of the flash pulse depends on whether first or second curtain sync has been set. Duration of the flash pulse is determined by the standard OTF sensor - exactly the same as TTL flash.
* The shutter stays open for the full duration of the shutter speed time.
* The shutter closes and the mirror flips back down. If the flash unit has a flash exposure confirmation light and if the flash metering was deemed adequate then the light glows.
Since the A-TTL sensor is on the front of the flash unit - behind a recessed plastic lens and not inside the camera, metering through the camera lens, it's conceivable that a very heavy filter on the lens might result in some metering problems since the filter doesn't cover the sensor as well. And, speaking of the flash-mounted sensors, be sure not to block it with your hand or anything for the same reason. Some flash diffusers can also present a problem in that the light spilling downwards from the diffuser can enter the A-TTL sensor inadvertently.
Finally, despite the additional complexity of the pre-flash circuitry, A-TTL simply ends up setting a

(To be concluded in the next Viewfinder)

Mike Warren



Dawn, Adur Valley by Mike Warren



Sand Sculpture by Mike Williams



Henfield Poppy by Gail Bell



Butterfly by Joan Hornsby

Trees by Margret Preece ARPS

