A BIT FLASH

How do you go about achieving the "light" touch for your photos? Adrian Hatwell talks to the experts

There's nothing more important in the world of photography than light. We are lucky to live in times where the photographer has greater ability to control light than ever before, though mastering that technology can be daunting.

D-Photo chats with lighting experts Rory Laubscher from Firefly Photography and Bret Lucas from Fstop Studios to guide us through the first steps of light mastery – graduating from built-in to external flash.

Why go external?

Because most cameras are built so well these days you might wonder why you would bother shelling out for an external, or hot-shoe, flash when even an entry-level compact can automatically light a scene. The key difference between a built-in flash and an external unit is power and flexibility.

According to Laubscher, since many photographers evolve from point-and-shoot cameras to DSLRs they often lack a solid grasp on flash fundamentals. "Most people get into flash because it is what you use when there is not enough light, but when you get into it you start realising it's a hell of a lot more versatile than that. You can start doing things with a flash that you just can't do without it."

Lucas explains that the concept of lighting in photography is to create the illusion of three-dimensionality on a two-dimensional medium using shadow. "On-camera flash gives little control over where you place shadows, resulting in images that remain as flat as the medium you are shooting for and can cast hard shadows on your subject. So the question should be 'why wouldn't a burgeoning photographer move away from built-in flash?' "

Fill flash

Fill is what most people will commonly use a flash for – filling a shadowed area with light. Understanding how fill flash works will give you a good grounding in the light elements that need to be managed in any flash photography.

Consider a scene where your subject in the foreground is in shadow but the background is very brightly lit, such as sitting indoors in front of a window on a sunny day. Without a flash you will either under-expose your subject, over-expose your background or hit a very unhappy medium, Laubscher explains.

"The idea is that invariably your subject is going to be in the foreground so the flash fills the foreground area, which is mostly shadow, with light. With your camera exposure set for the ambient light, by adding a puncture light for the foreground you get everything working out the way it should, no hassle, no worry."

You need not upgrade to an external flash to achieve the fill technique, but once you understand the mixing and balancing of both ambient and flash light sources, you are on your way to more advanced light play.

Rory Laubscher runs Firefly Photography in Auckland and runs teaching workshops on flash photography and off-camera flash techniques.
Bret Lucas runs Auckland's FStop Studio, one of the largest for-hire photographic studios in New Zealand.


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1 This image has one speed light placed high camera left of the model Chevy creating hard shadow under the nose. This type of lighting is called loop or modified butterfly lighting, and creates a different mood than that created by a larger light source.

2 This image uses the same speed light but the light is being bounced off a large rectangular panel. Now you can see a soft shadow under the nose and chin. It is still loop or modified butterfly lighting but the shadow is now "soft".

3 This image is made using a large silver reflector in front of Chevy at about waist height. Attention is now drawn to the eyes; the shadows have been opened up due to the placement of the reflector and, in essence, is another light source.

4 The previous images were created by one light source, bouncing the light off two light modifiers, with this one another panel camera right of Chevy is added, which allows the shadows on the camera right side of Chevy's face to open up further.

Bouncing the flash

Lucas says he sees a lot of photographers move to an external flash only to be disappointed with the hard shadows that result and ditch the equipment altogether, however these unflattering results can be avoided by bouncing the flash.

"The whole idea of bouncing the flash off a surface is to make the light source larger to create soft shadows and to move the light source away from the camera, allowing you to control where you place shadows."

Without the moveable head of an external flash, which can be angled vertically, horizontally and in some cases backwards, your only option is to shoot the flash directly at the subject, producing what Laubscher calls the 'deer in the headlights' effect.

"In an ideal situation you're bouncing light off a uniform white wall because it will pick up any colour it bounces off, so if you bounce it off a blue wall on to somebody you're going to turn them into a smurf."

In order to get the desired level of light exposure you need to take into account the inverse square law, which states if you move your light source twice the distance away from the subject you will diminish the amount of light falling on the subject to a quarter of what it was. This simply means light diminishes greatly over distance and you will need to learn to compensate for that when bouncing.

Second-curtain synch

Flash synch techniques open up further creative options with an external flash but require a fundamental knowledge of the way a DSLR's shutter curtain travels over the image sensor and its relation to the flash.

"A modern SLR camera has a dual curtain that usually slides from top to bottom. By dual curtain I mean one curtain opens, sliding from top to bottom, and a second curtain closes behind it, also from top to bottom," Lucas explains. In standard use the flash would fire just as the first curtain has travelled all the way up.

With the second-curtain synch the photographer instead chooses to fire the flash as the second curtain begins to move up the sensor. "Essentially with second-curtain synch we opt to fire the flash at the end of the exposure. This gives you that trail-behind movement, a creative effect you see in magazines a lot," says Laubscher.

For this technique to work will you need to be using longer shutter speeds on a dark day or in the evening in order to avoid burning out the background.

High-speed synch

As you move into higher shutter speeds, as you might for sports photography, the curtain mechanics change slightly; climbing higher than 1/250th of a second will mean the second curtain is forced to start moving before the first has reached the top.

"The best way to think of it is, at those higher shutter speeds the curtain becomes a 'slit' that travels across the frame – the higher the shutter speed, the narrower the slit," Lucas explains. "If you try to take a normal flash photo while the camera is operating in 'slit mode' you will actually capture a photograph of the shutter itself."

In order to use the flash to light the shot at such high speeds you need to use high-speed synch, which causes the flash to fire off a series of strobing blasts as the slit travels up the sensor.

"For each pop of light your flash is going to need to recycle, so your flash power dives down amazingly, so it's just not going to work as effectively as it can," warns Laubscher.

Take your time getting to grips with flash fundamentals, play around with some of these techniques and D-Photo will bring you some more advanced lighting tools to try next issue. D

This image was taken using two bare flashes, off-camera using high-speed sync allowing flash at a fast shutter speed of 1/3200s at f/3.2. This results in a marked loss of flash power, necessitating the use of a second flash.