

INDOOR PHOTOGRAPHY

FIRST EDITION

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Goals

The goal of this doc is to help you create images of properly exposed subjects, free of movement and blur, while ensuring that backgrounds are not overly bright or overly dark.

Camera Settings

0 – Mode

Manual Mode (M) provides me a level of consistency and exposure control that just can't be matched by the automatic modes such as Av, Tv and Green Mode. The stated goal of the camera meter is to render both white wedding dresses and black tuxedos as 18% grey. The camera meter doesn't know what our subject is, or what it should look like, so it's frequently wrong. In particular, the automatic modes tend to choose shutter speeds which are lower than what we can handhold, or they'll choose apertures which have no depth-of-field.

1 - ISO

Start with ISO 400. If you find that the lighting conditions result in unacceptably long shutter speeds, change to something higher. Modern cameras can usually produce usable images at ISOs of 3200, and the best cameras can be used with even higher ISOs.

2 - Aperture

In an indoor situation, we usually want to select an aperture of $f/8 - f/2.8$. Using an aperture smaller than $f/8$ is likely to result in shutter speeds that can't be hand-held. Use $f/8$ for a multi-row group, $f/5.6$ for general 1-2 person shots, and larger apertures in lower-light conditions.

3 - Shutter Speed

The shutter speed controls the brightness of the *background*. In a normally-lit room, the shutter speed should be between $1/120\text{sec}$ and $1/40\text{sec}$. If the shutter speed is shorter than this, select a lower ISO to reduce digital noise artifacts. If the shutter speed is longer than this, select a higher ISO.

To reduce blurred images, spend some time learning what shutter speeds you can comfortably hand-hold. Repeat this for each lens you intend to hand-hold indoors.

In a very dark room, such as a wedding reception, it is possible to use a much longer shutter speed to allow any available lighting to fill in the background. The light sources might be slightly blurred, but that's usually acceptable. The flash will stop any movement of the subject during the exposure. Again, this only works if there isn't any other significant source of light falling on the subject.

We can control the brightness of the subject with respect to the background, so we can choose to place emphasis on the subject by slightly underexposing the background / available light.

4 - Flash Exposure Compensation

The Flash Exposure Compensation controls the brightness of the *subject*. Start with the exposure compensation at 0. If the subject is too bright, change the flash exposure compensation to a negative value (like -1). If the subject is too dark, change the flash exposure compensation to a positive value (like +1).

Note: This only works with a flash which is dedicated to your camera.

Focal Length

If the camera is hand-held, it's best to use a wide angle to normal focal length lens. We're using slow shutter speeds, and this reduces the possibility of blurred pics caused by camera movement during the exposure. If you use a telephoto lens, consider using a tripod or buying a telephoto lens with Image Stabilization.

Available Light

Our primary goal with available light photography is to ensure that the subject is properly exposed. We have less control over the relative brightness of the background. To balance the subject and background brightness, make sure the subject is placed in the same light that is falling on the background. If this isn't possible, then properly expose the subject and let the background underexpose or overexpose.

If you have a choice, turn on the lights in the room. Lights from the side are usually more flattering than lights from above.

If it is daytime and there's a window or outside door in the room, consider using the window or door as a large, diffuse source of light which is very flattering. If you have the choice, use a north-facing window or door. Use a lens with large maximum aperture (a 50mm 1.4 or 1.8 is a great choice and also cheap). Position the subject as close as possible to the window, facing the window. The photog should stand between the window and the subject.

Subject Positioning

If possible, place the subject(s) at least 6ft from the background. This reduces unwanted shadow and gives autofocus a better chance to guess the subject. When using flash, distance from flash to subject is critical. Make groups as shallow as possible, placing all subjects as close to the same distance from the flash as possible.

Focusing

Focus on the nearest eye of the nearest subject. If photographing a multi-row group, it's always good practice to view the image on the camera's LCD screen – zoom in and look at people in all rows. If one row appears out-of-focus, choose a smaller aperture.

Equipment

Tripods are generally more hindrance than help if you're working with a flash. If you don't have a flash, or aren't allowed to use a flash (during a wedding ceremony, for example), then a tripod will hold the camera steady during a long exposure.

A white Sto-fen flash dome does a great job of diffusing the output of the flash. I've tried other novelties such as bounce cards and the Fong diffusers, and ended up eBaying them.

Flash brackets and off-camera cords are an excellent accessory for indoor photography. They move the flash so that shadows cast by the subject are lower and hidden behind the subject, and help to eliminate the red-eye phenomenon. It's possible to improvise by adjusting the flash positioning.

The color of the room lighting is usually different from the color of light the flash produces. Color correction filters can help correct for this problem.

Lens hoods are still useful indoors. They can eliminate unwanted light from overhead lighting, as well as light streaming in through windows from striking the front element of the lens and dramatically reducing contrast.