

High ISO testing For Long Exposures

Unlike film, digital sensors do not suffer from reciprocity failure. This makes high ISO testing for long exposures a simple and effective way to determine the correct length of long exposures without waiting ten or fifteen minutes for a test shot at optimum ISO. When working in moonlight, or other very low light level environments, temporarily raising the ISO and doing a short exposure, and then translating it into a longer exposure at optimum ISO will save you a lot of time.

The only risk is forgetting to reset your ISO to the camera's optimum ISO setting. Almost every Night Photographer has stories about the best photograph they ever took being inadvertently shot at ISO 3200! If your camera has customizable shooting modes that allow you to preprogram exposure settings, this is a convenient way to quickly and easily switch back and forth between high and optimum ISO settings. Efficiency can further be increased by choosing test exposure settings that allow for second to minute translations. Find your camera's maximum and minimum ISO settings from one of the charts on the next page, and keep the one equation that is relative to your camera taped to your tripod leg. That way, you'll never have to get bogged down with calculations in the field.

For example, cameras that have a maximum ISO setting of 6400 allow for a direct translation from seconds to minutes. One second at ISO 6400 is equal to 1 minute at ISO 100 at any aperture. Accordingly, 10 seconds at ISO 6400 is equivalent to 10 minutes at ISO 100 at any aperture. If your camera's highest ISO setting is 1600, and lowest is 100, you'll need to open up the aperture 2 stops to make up for the last 2 stops of sensitivity. For example, 1 second at ISO 1600 at f4 is equivalent to 1 minute at ISO 100 at f8. If your camera's native or optimum ISO is 200, then you will also need to make an aperture adjustment as well as an ISO adjustment to switch between second and minute exposures. An camera with an optimum ISO of 200, and maximum ISO of 1600 would use the following calculation: 1 second at ISO 1600 is the same exposure as 1 minute at ISO 200- 3 stops. If you are fortunate enough to have a camera that has an ISO range of 100-6400 high ISO exposure testing is a piece of cake. It's important to be aware that this technique only works for ambient light exposure testing, but not for light painting. The purpose is to quickly determine your ambient exposure and to check your composition.

Canon, and other 100 ISO Cameras

	1 SECOND	2 SECONDS	4 SECONDS	8 SECONDS	15 SECONDS	30 SECONDS	1 MINUTE
Maximum ISO	ISO 6400	ISO 3200	ISO 1600	ISO 800	ISO 400	ISO 200	ISO 100
	ISO 3200	ISO 1600	ISO 800	ISO 400	ISO 200	ISO 100	ISO 100 - 1 stop
	ISO 1600	ISO 800	ISO 400	ISO 200	ISO 100	ISO 100 -1 stop	ISO 100 - 2 stops

Nikon, and other 200 ISO Cameras

	1 SECOND	2 SECONDS	4 SECONDS	8 SECONDS	15 SECONDS	30 SECONDS	1 MINUTE
Maximum ISO	ISO 6400	ISO 3200	ISO 1600	ISO 800	ISO 400	ISO 200	ISO 200 - 1 stop
	ISO 3200	ISO 1600	ISO 800	ISO 400	ISO 200	ISO 200 - 1 stop	ISO 200 - 2 stops
	ISO 1600	ISO 800	ISO 400	ISO 200	ISO 200 - 1 stop	ISO 200 - 2 stops	ISO 200 - 3 stops