JOURNAL ENTRY 5 - USING A LIGHT METER

In this journal entry I will take a look about the benefits of bringing a light meter to a production or photoshoot. I will also take a look at how to understand the readout and how it relates to the camera equipment. I will be using the Sekonic L-308S[1] light meter, available from Media Factory stores.

Why use a light meter?

Using a light meter can help you get an exact reading of the light that is falling on a subject[2]. A camera's sensor measures the light being reflected back from the entire scene. This means that to expose correctly for the ambient light, the camera exposes to a "middle grey"[3]. This means that any highlights could be blown out or any blacks crushed. By knowing exactly how much incident light is falling onto the scene, you can correctly expose for it. The Sekonic L-308S also provides the option of removing the 'lumisphere'[4] and measuring the light reflected off a certain part of the scene. This would be useful if you were, for example, taking a portrait image of someone; you could measure the light reflected off the face and correctly expose the image, ignoring the light in the background.

Incidence Metering vs Reflective Metering

I have spoken about incident light and reflective light. Before today I did not know what these two terms mean and I will explain what I have found out. Incident light is any light that has come directly from a light source, for example, light coming from three LED lamps in a three-point lighting setup. In this case, you would hold the meter in front of the subject[5] to measure the amount of light hitting them. This is closely related to ambient light, where you measure the amount of light falling onto the sensor. This would be good for exposing for a landscape or a scene somewhere with uncontrollable lighting.

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[1] Sekonic L-308S Quick Guide (no date) Available at: http://www.sekonic.com/downloads/l-308s_quick_english.pdf (Accessed: 1 November 2015).

[2] Gil B (2012) Advantages to using a light meter and some basics on how they work. Available at: https://www.youtube.com/watch?v=iR5frW5-onE (Accessed: 1 November 2015).

[3] Sekonic (no date) Incident and reflected light | photography how to articles – what's your specialty? Photographer. Available at: http://www.sekonic.com/whatisyourspecialty/photographer/articles/incident-and-reflected-light.aspx (Accessed: 1 November 2015).

[4] Sekonic FLASHMATE L-308S Operating Manual (no date) Available at: https://portal.uclan.ac.uk/bbcswebdav/pid-1540271-dt-content-rid-2476963_1/courses/TE3078_201516_1_9/l-308s_engish_manual.pdf?target=blank (Accessed: 1 November 2015).

[5] Graham Houghton (2011) Using the Sekonic L308S incident/flash lightmeter. Available at: https://www.youtube.com/watch?v=5dKNAzkeiWA (Accessed: 28 October 2015).

Reflective metering measures light reflected back of the subject. For example in the three point lighting example I mentioned earlier in this section, you could measure the subject's face to correctly expose for their facial features.

Using the light meter[6]

I would mainly use this light meter for video. The shutter speed[7] is set to 50fps at 1080i on the Sony NX3s. Gain is the equivalent of ISO[8] on the camcorders. A user by the name of 'Floris van Eck' on www.dvinfo.net did some testing to compare gain in dB and ISO.[9][10]

-3db is the equilivant of ISO 200
0db is the equilivant of ISO 320
+3db is the equilivant of ISO 400
+6dbis the equilivant of ISO 800
+12db is the equilivant of ISO 1250
+18db is the equilivant of ISO 2500+

Using these values along with the 50fps shutter speed, I can use the light meter to work out what F-Stop I need to set the iris to.

I can take this knowledge of the light meter to improve my productions drastically. I think I will always be booking a light meter with my kit from now on! I wish we had leant about them in year 1!

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[6] Sekonic (2011) Sekonic L-308S: Getting started [Quick start guide part 1 of 4]. Available at: https://www.youtube.com/watch?v=3WLjPig-btU (Accessed: 1 November 2015).

[7] Introduction to ISO, aperture & shutter speed for DSLR video (2014) Available at: http://www.imagechaser.com/introduction-to-iso-aperture-shutter-speed-other-advanced-settings-for-dslr-video/ (Accessed: 1 November 2015).

[8] What is the difference between gain and ISO? (no date) Available at: http://www.videouniversity.com/articles/what-is-the-difference-between-gain-and-iso/ (Accessed: 1 November 2015).

[9] How to compare 5D ISO to GAIN (dB) in video cameras at DVinfo.net (2005) Available at: http://www.dvinfo.net/forum/canon-eos-full-frame-hd/475642-how-compare-5d-iso-gain-db-video-cameras.html (Accessed: 1 November 2015).

[10] Setting a Sekonic lightmeter for the canon XL-H1 - page 2 at DVinfo.net (2004) Available at: http://www.dvinfo.net/forum/canon-xl-h-series-hdv-camcorders/83349-setting-sekonic-lightmeter-canon-xl-h1-2.html (Accessed: 1 November 2015).

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3. How to compare 5D ISO to GAIN (dB) in video cameras at DVinfo.net (2005) Available at: http://www.dvinfo.net/forum/canon-eos-full-frame-hd/475642-how-compare-5d-iso-gain-db-video-cameras.html (Accessed: 1 November 2015).

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5. Sekonic (2011) Sekonic L-308S: Getting started [Quick start guide part 1 of 4]. Available at: https://www.youtube.com/watch?v=3WLjPig-btU (Accessed: 1 November 2015).

6. Sekonic FLASHMATE L-308S Operating Manual (no date) Available at: https://portal.uclan.ac.uk/bbcswebdav/pid-1540271-dt-content-rid-2476963_1/courses/TE3078_201516_1_9/l-308s_english_manual.pdf?target=blank (Accessed: 1 November 2015).

7. Sekonic L-308S Quick Guide (no date) Available at: http://www.sekonic.com/downloads/l-308s_quick_english.pdf (Accessed: 1 November 2015).

8. Sekonic (no date) Incident and reflected light | photography how to articles – what's your specialty? Photographer. Available at: http://www.sekonic.com/whatisyourspecialty/photographer/articles/incident-and-reflected-light.aspx (Accessed: 1 November 2015).

9. Setting a Sekonic lightmeter for the canon XL-H1 - page 2 at DVinfo.net (2004) Available at: http://www.dvinfo.net/forum/canon-xl-h-series-hdv-camcorders/83349-setting-sekonic-lightmeter-canon-xl-h1-2.html (Accessed: 1 November 2015).

10. What is the difference between gain and ISO? (no date) Available at: http://www.videouniversity.com/articles/what-is-the-difference-between-gain-and-iso/ (Accessed: 1 November 2015).