Exposing HD

When shooting HD there are a number of tools useful for evaluating exposure.

Using your monitor to evaluate exposure is a dangerous practice and is NOT recommended. This is true for both the on board LCD viewfinder as well as your external monitor. Your monitor is designed to be a viewing system, to show the operator what is in the frame. It is **not** intended as an exposure meter. **DO NOT JUDGE EXPOSURE BY YOUR VIDEO MONITOR**

Use a light meter! The SONY F5 has a native ISO of 2000. Set your light meter and work "film style". (Remember to compensate for light absorbed by filters.) In working with an incident meter, you are most likely to work at consistent light levels. A reflected light meter can be helpful when working with translucent objects or when evaluating extreme highlights or shadows. If you have any questions about metering light, ask your instructor.

Another tool at your disposal is the built in zebra bar indicator. The F5 offers two levels of zebra bar metering. I recommend setting the first zebra patter to 70% and the second to 100%. 70% is often a good setting for reflected highlights on skin tones. When you first begin to see the first set of zebra bars, you will know that you are bright, but not yet white. When you begin to see the second set of bars you will know that the reflectance at that point as reached 100IRE. While the broadcast white limit is 100IRE, HD will still record some detail up to 109 IRE. That said,100 is the safe upper limit. Once there, you can consider all detail lost (or near lost).

**IRE – is a unit of measure named for the Institute of Radio Engineers.*

In the past you may have worked with a camera like the SONY Ex1 or Ex3 that had a built in center spot meter that read in IRE – this can be a useful tool, but it is not included in the F5.

You may have worked with a waveform monitor, which is another excellent tool because it not only allows you to evaluate overall exposure, but it shows you exactly where in the frame each exposure value exists – you can instantly see what is too bright or too dark. The monitors that come in your 546 kit do not include a waveform.

Two other metering tools with which you might be familiar are "False Color" and the histogram. Neither of these are included in the F5 or in your accompanying monitor, though you may come across them on future shoots.

In brief – False Color is a posterized color effect that you can see in your monitor to reveal the tonal range of the image. Red represents over exposed, with little to no detail. Purple represents the other extreme – black with little to no detail. Gray is middle gray, and the other colors fall in between. Both RED and Arri have false color systems, as do some monitor manufacturers - but they do not use the same colors to represent the same luminance levels, so it is best to familiarize oneself with the system at hand.

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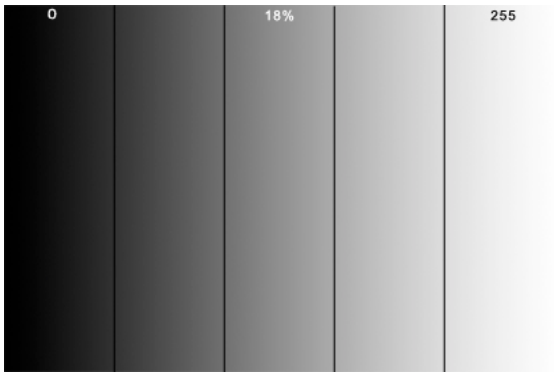
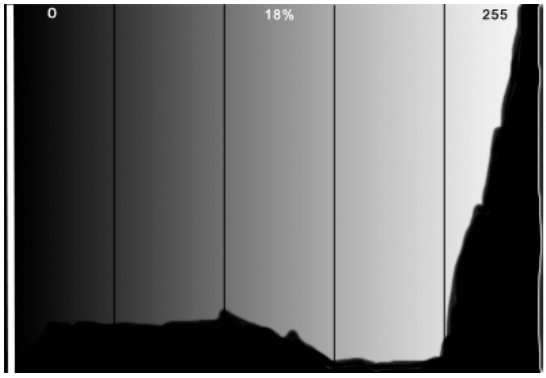
The Histogram is a graphical display of the luminance levels contained within the image. From the darkest (on the left) to the brightest (on the right) with middle gray in the middle of the scale.
The scale shows 255 steps of luminance from black to white.



The vertical (y) axis of the scale shows how much (what percentage) of the image is found at the corresponding brightness level. This histogram is an approximate representation of the luminance information recorded in the image below.



The histogram of this frame shows us that there is a small percentage of the image that is very dark to middle gray, and a bit more of the image that is very light. We can see that the majority of the image falls well within the exposure latitude of the sensor. We can also see that the subject falls safely in the middle range of exposure.

If your histogram hits either the left edge of the graphical display or the right edge, you have lost some detail to your shadows or highlights.

To simplify, the histogram is a quick graphical representation of the tonal range that you are recording and the proportion of those tones in each frame. It does not indicate exactly where in the frame your shadows and highlights fall (like a wave form monitor) but it does give a good representation of the levels that you are recording.