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## **ZyLight Calibration Notes**

ZyLight has gone to great lengths to ensure the output quality of our products. This document will help answer questions about the development, calibration and operation of our products.

### ***Notes on Color Temperature***

ZyLight's color temperature calibrations are derived from a multi-step process involving various color temperature meters, professional video cameras, chip charts, and vector scopes from manufacturers such as Minolta, Tektronix, Ikegami, Sony, Panasonic, DSC Labs, and others. In determining correct calibration, preference was given to output appearance on 1) camera, 2) vector scope, and 3) color temperature meter, in that order.

ZyLight has found that when it comes to color temperature, meters and cameras rarely agree. This is due to the fact that they see their light through built-in red, green, and blue filters while an internal microprocessor judges "white" based on these three color levels. These judgments are pre-programmed at the factory and based on continuous-spectrum filament light sources such as tungsten and HMI bulbs. Since ZyLight creates white light by combining red, green, and blue light, some equipment may give erroneous readings since their judgments are not based on RGB sources. The human eye itself can be fooled as well since our retinas are more sensitive to green than other colors.

It is important to remember that every ZyLight is calibrated to look good on camera since your footage is the final word. Individual film and video tests are encouraged.

### ***Notes on Equipment***

Video cameras can differ in the way they are set up by engineers, often being 'tweaked' slightly warmer or cooler to achieve a desired look for a single shot or series. This effects how a camera will see white light and, as a result, our Daylight and Tungsten outputs may read slightly warmer or cooler depending on camera set up. External lighting conditions must also be considered.

It should be noted that all equipment will not perform identically even within the same model line. In many cases, meters from the same manufacturer will give dissimilar results.

### ***ZyLight Compensation and Adjustment***

Every ZyLight's output is compensated for variations in temperature, operating voltage, intensity, and other factors. The on-board microprocessor constantly monitors these factors and adjusts the HD-led™ module to maintain output accuracy. Therefore, a precision color temperature meter reading may fluctuate slightly as these fine adjustments are made. These changes are minimal, however, and will not effect your footage.

**Please feel free to contact ZyLight with any questions or comments: [info@zyLight.com](mailto:info@zyLight.com)**