

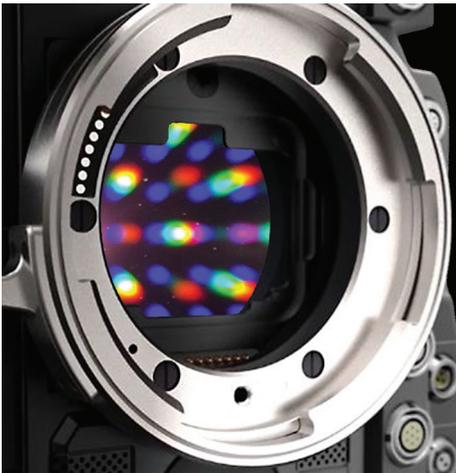
KINO FLO TURNS THE TABLES ON HD CAMERAS

BURBANK, CA - Kino Flo Lighting has released its new True Match® 4.0 beta firmware with software upgrades that include camera profiles and CIE xy modes for LED lights.

Making a leap of ingenuity, Kino Flo has turned the tables on cinema cameras with a menu of spectral profiles that are essentially lookup tables (LUTs) for HD cameras. Kino Flo's breakthrough firmware balances their LED lights to the cameras, rather than the other way around. The True Match® 4.0 beta firmware and Kino Flo-designed tungsten and daylight LED emitters harmonize with the camera sensors even as the color temperature settings are adjusted.

"Color matching the HD camera's sensor is the single greatest advance in LED lighting I've seen and a ground-breaking achievement for Kino Flo," said John Schwartzman, ASC. Schwartzman used the beta version of the new True Match firmware recently on *The Highwaymen* (Netflix) and *Last Christmas* (in post-production).

"At the end of the day, cinematographers get paid to make the subject look good; we live and die by the close ups," he said. "Once I selected the Panavision DXL setting from the Celeb and FreeStyle menus, lighting in the camera profile mode took our images to a whole new level."



New beta Firmware 4.0 now available for download.

Like other innovations over the years, Kino Flo's new camera profiles and gamma control features represent another step in pioneering a new generation of broad spectrum LED softlights and pushing the color space to new artistic levels, according to cinematographer John Daly, BSC.

"The color science is great, and Kino Flo's range of LEDs can be fine-tuned with camera profiles," Daly said. "The color can be dialed in to match the sensors of major digital cinema cameras, thus ensuring natural looking skin tones."

The Kino Flo True Match® beta firmware 4.0 comes loaded with camera profiles LUTs for the following cinema cameras:

◆Panavision DXL ◆Sony Venice ◆Alexa ◆Panasonic Varicam

More makes and models of HD cameras will be added to the camera profile LUTs in upcoming firmware releases, Hochheim said.

In addition to the camera profiles, Kino Flo's new firmware has expanded the color control for Kino Flo's growing line of LED products, including the Celeb LEDs, FreeStyle LED Fixtures & Tubes, Diva-Lite LEDs and L80 & L40 Image LEDs. Three additional software programs include:

Color Space Selection

The color space defines the RGB color space (white point and RGB primary colors) as a means of matching color points between manufacturers. Defining the color space takes the guess work out of post-production workflow and color grading. Included are: **rec 709/sRGB**, **P3 D65**, **rec 2020**, and **ESTA E1.54**.

CIE xy Mode

The CIE xy determines the color displayed by its X and Y space coordinates. For example, with a hand-held, color meter like the Sekonic C-800, users can obtain a CIE xy reading from any light source, on location or in a studio, and input the CIE xy coordinates into the Kino Flo LED fixture to match colors closely.

DMX Control of FX

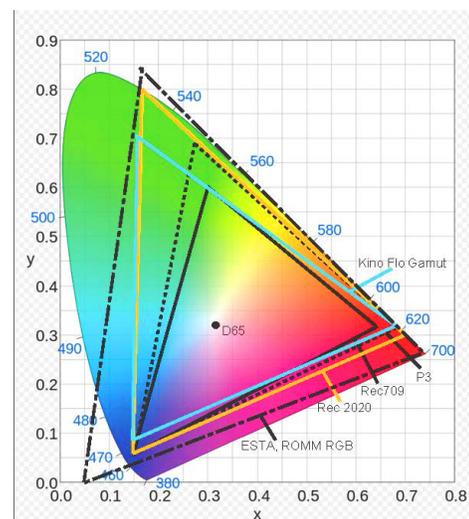
Kino Flo's DMX feature available on all its lights can now be used to operate the company's popular LED Lighting FX (effects), boasting such innovative lighting preset options as Candle, Fire, TV, Police, Lightning, Paparazzi, Pulse and Scroll. These FX pre-sets as well as control parameters can be altered remotely via DMX control, as well as manually.

Understanding Color Gamut

"The color science of LED lighting is to cinematographers what natural pigments were to the Old World masters like Rembrandt and Vermeer," according to company president, Frieder Hochheim. "With new features like camera profiles LUTs and advanced gamma controls, cinematographers can mix their own LED 'dye, color and shading' to control the look of the final image."

During a series of international cinematography workshops recently, Hochheim outlined the industry's ongoing journey toward creating artificial light sources that render color naturally on HD cinema cameras.

Points of interest along the way have included new technology for measuring color indexes and how the gamut relates to the reproduction of true white light for modern motion picture and television production. The company's comparative report on the Color Rendering Index (CRI), the Television Lighting Consistency Index (TLCI), IES TM-30-15, and the Spectral Similarity Index (SSI) has been received with enthusiasm from production lighting audiences throughout Europe, Australia, and North America.



Kino Flo's development of a high-end bias spectrometer for measuring the response of lighting sources and camera light sensors has long been the company's basis for a tight design and manufacturing control over the quality of white light.

"The first step is understanding how HD camera technologies 'see' white light and the color gamut," Hochheim said. "Achieving full color rendition requires a balancing act on the high wire that is the Planckian Locus (a.k.a. black body curve). This is what we mean when we refer to the science of color for LEDs."

Since developing a color science department for its True Match® tubes in the 1980's, Kino Flo has been at the forefront of LED design and manufacturing, creating color-correct, color stable lines of tungsten and daylight LED emitters. The company has maintained color quality for more than three decades of production lighting design, across all product models.

From film to digital cinema cameras, to other color critical industries such as smart phone calibration, art restoration studios and museum lighting, Kino Flo keeps its eye on lighting innovation and quality for all imaging systems.