Cine-tal's Cinemáge Monitor

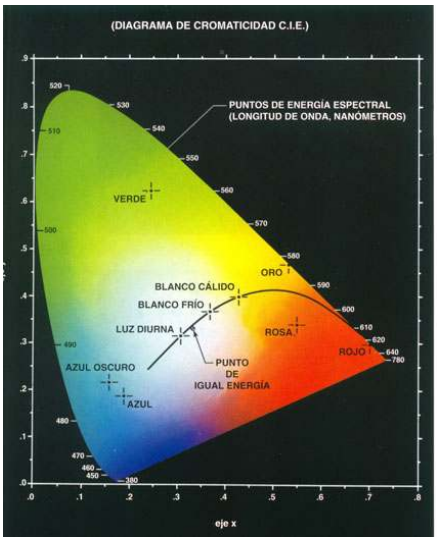
By Alfonso Parra AEC

The arrival of the new HD/2k/4k digital cameras has brought with it several tools that could help us effectively control the image we want to achieve in the shoot. Among these tools is the monitor; more than simply allowing us to view an image captured by a camera, the monitor gives us the possibility of seeing the final results of our photography, both for the director and the producers, and can help us correct and adjust the photography during a shoot to extremes previously unknown. Cine-tal's Cinemage monitor, generally referred to as just the Cine-tal, is part of this new generation of monitors, which apart from acting as a screen to view an image, also performs like a real computer that give the user precise control of images.

The following are some of the characteristics of the Cine-tal monitor from the director of photography's point of view during a shoot. We are not going into a detailed description of the monitor since that is easily available on their web page.

The first thing anyone asks of a monitor is that it has good viewing quality. To date, while shooting with HD digital cameras, I've always used a 20" CRT monitor with excellent viewing quality to analyze images, focus and color. As we all know, these types of monitors are no longer made and what we do have now are LCD, TFT, Plasma monitors, etc. We need, at least, a monitor with good resolution. The Cine-tal monitor yields a real image pixel by pixel of 1920x1080 with a contrast ratio of 1000:1 and 500CD/m2 of brightness, working in HD-SDI 4:2:2 and HD-SDI dual link 4:4:4 both at 8 and 10 bits, linear or logarithmic, and it also has a DVI-D input and output with a resolution of 1920x1200 to connect to computers. Cine-tal thus gives a real image in HD with a wide reproduction of tones from black to white. Like all LCD screens the brightness and contrast of the image varies according to the viewing angle, but this effect has been greatly minimized so the images can be seen with enough quality as long as the viewing angle is not too wide. It must be said the size and weight of the monitor is less than a 20" CRT monitor and thus more manageable.

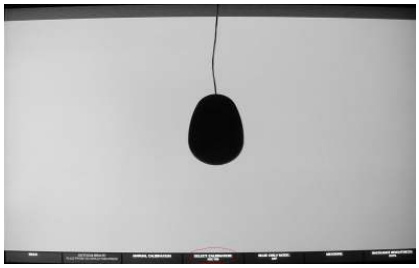
Cine-tal monitor's connector panel.



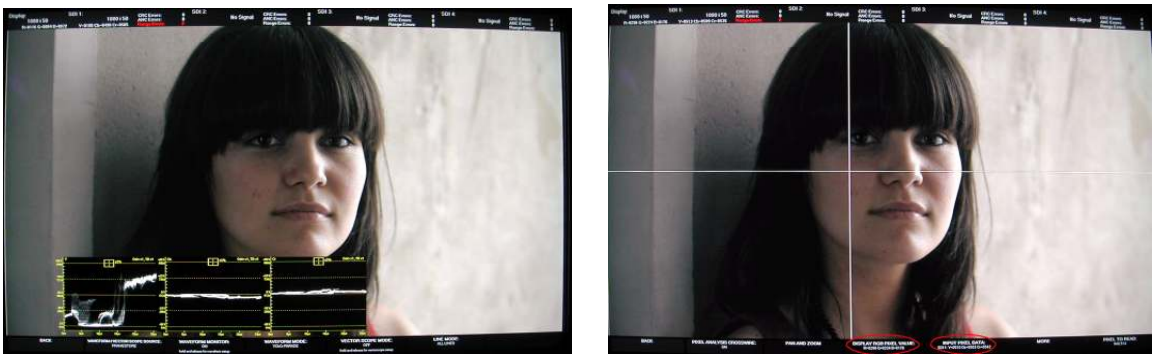
Cine-tal lets you choose the coldest or warmest white point and chromatic values XYZ or RGB

The monitor allows great control over how an image can be viewed. Firstly, and through the menus, you can access a configuration tailored to your needs. Apart from the brightness and contrast controls like the ones in a CRT, the monitor allows you to adjust the background lighting and also choose the preset with which to calibrate the monitor, for example, the standard ITU 709 or you can personalize values for white point- between 4000ºK and 9800ºK- XYZ, RGB according to your needs; That is to say, you can determine the colors and contrast in the shooting monitor before shooting and according to the post-production. You can also choose the gamma used by the monitor, something really important when it comes to simulating the final results of an image, whether it is digitally projected or transferred onto 35mm. So the first thing that needs to be done with a monitor like this is adjust it to your needs.

Keep in mind that before adjusting the monitor it first has to be calibrated. Cine-tal can be calibrated either automatically or manually by using Greta Macbeth's Eye One, which is, as we all know, a spectrometer on the screen that measures a series of grey and color patterns to calibrate the monitor according to certain standards. In short, Cine-tal allows the shot to be taken to the monitor completely calibrated and adjusted to display a totally reliable image for analyzing brightness, color and contrast.

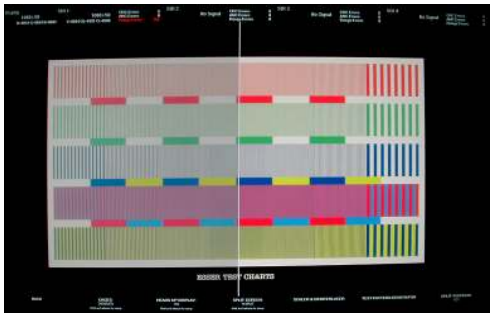


The monitor has a built-in image analysis system, which not only uses the waveform monitor and vectorscope but also offers the possibility of precisely measuring the pixel value in RGB or YCrCb. This measurement gives an objective idea of the value of each pixel and the relation between them to better evaluate an image's color and brightness. Summing up thus far, the Cine-tal monitor first lets you be sure of the calibration and adjustment and then analyzes an image taken from a camera in detail.



Viewing the onscreen waveform monitor and vectorscope in different places. On the right, moveable cross hairs to measure pixel values that appear at the bottom of the screen.

Now, while all of this is really important, what is an unbeatable aid is the monitor's ability to work with 3D LUTs. As the new generation of digital cameras abandon video, it is more and more necessary to have a representation of an image as close as possible to the final product. In the last few years, I've shot in HD with pseudo-logarithmic gamma curves that offer a better response to capturing details in medium tones and strong lights. Since it uses these curves, the image appears to be washed out, without contrast and with pale colors. To date, this was the image I could offer the director during shooting and except for a few fixes like the HDLink there was no way of seeing the image corrected on the set through an LUT. Cine-tal offers the possibility of applying a LUT that displays the image correctly relative to one that comes from a camera in the right conditions. But not just that, I can generate my own LUTs and load them onto the Cine-tal and apply them to an image, thus approximating the final result. It also allows me to capture and save frames by exporting them through a USB datakey or the ethernet output so I can later correct them on my laptop and generate LUTs from the Iridas on set, for example, that can later be applied to the image in the monitor.



Comparison between an image from a camera using a logarithmic curve on the left and its correction using an LUT created with Lutbuilder and loaded onto the monitor on the right.

Monitor connected to a laptop via DVI-D input with the Iridas on set program.

A split screen lets you compare the original image to the corrected one in different ways, either through a vertical separation or a horizontal one, changing where one or the other image is according to your needs. You can also blow the image up to see it in detail. With these features, I can view the camera's original image, the corrected one or both at the same time and take the original frames back to the hotel and verify the grading adjustments for post-production. The Cine-tal also gives you the possibility of connecting to a computer through a DVI-D so you can see color corrections from a laptop, for example, with Iridas on set.

Cine-tal lets you use split screens to see the output of several cameras or compare images with different corrections

Alfonso Parra testing the Cine-tal monitor at InfoTv

It is worth noting that the monitor has a series of menus such as the Operator menu, the System menu, the Setup menu and the Display control. The first one allows you to quickly and directly select the input video source, choose presets and the monitor's own video sources as well as choose configurations or save them as a preset. The second one allows you to navigate through the monitor's system, which includes, among other functions, the display, setup, the camera's analysis menu, etc., The Setup menu shows the monitor's information, the video and display setup, preset and USB and network menus- a good choice for sending images, LUTs, etc, via WEB and FTP services-, it also allows access to the monitor's reset. Lastly, the display lets you control the monitor's brightness, contrast and background lighting.

You can navigate the menus either by using the buttons on the monitor's front panel or the track ball located on the same front panel. Once you have learned to work the menus, navigating them is simple and fast, a plus during shooting. Added to this is the monitor's ruggedness and the possibility of operating either connected or on batteries.

In short, Cine-tal could become a great tool when shooting with digital cameras and one that will help the director of photography to have greater control over images and providing the director and the producer with the possibility of evaluating images in their final appearance.

Collaborators:

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