

# CHROMA-Q COLOR BLOCK 2

By Richard Cadena

A few years ago, I toured with a lighting system that had several Chroma-Q™ Color Block™ LED color mixing fixtures lighting a white backdrop. They worked well for washing the 40-by-20-foot surface with color and, because they are small and draw little power, they set up quickly and trouped easily. Now there is a new version of the fixture, the Color Block 2, which is supposed to be much improved in the areas of brightness and color. We didn't have a tour and we didn't have as many units this time, but we did have a couple of them to play with.

#### What's New, What's Not

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The Color Block 2 looks very familiar if you've ever used the original Color Block. It has the same low profile (2-3/8 inches high by 4-11/16 inches deep by 9-13/16 inches long) and a modular, anodized extruded aluminum housing with a latching interlock system that allows you to connect several individual heads as a single batten. It has the same four LED cells per Block, but the difference is that it uses single-color RGBA LEDs as opposed to the individual red, green, and blue LEDs in the original model. As is the trend with LED fixtures, the new version is brighter than its predecessor. Although I never had an issue with the light output of the original, more light seldom hurts. Also new in this unit is what Chroma-Q calls "theatrical grade dimming."

Like the original, the Color Block 2 heads are connected to a central power supply. One power supply can power up to five or up to 30 heads. The five-way PSU measures 11 inches by 9.8 inches by 4.9 inches and weighs 9.6 pounds. The 30-way PSU is 14.5 inches by 3.5 inches and 24.5 pounds. There are four-pin XLR connectors between the power supply and the heads. The power supplies are auto-ranging from 100V to 240V AC, 50 or 60Hz, so you can plug them into virtually any power grid in the world. As would be expected, they draw little power even fully loaded. The maximum current draw at 120V is four amps, and at 240V, the maximum current is two amps. So you can run up to four five-way PSUs and power up to 20 Color Block 2 heads on a single 20-amp, 120-volt branch cir-

cuit. (You might actually get away with five five-way PSUs on a single branch circuit, depending on the circumstances, but it's not recommended.)

The power supplies have a six-segment LED menu display that is used to set the DMX address and the operating mode. The Color Block 2 has 16 modes, seven more than the previous model. These modes give you the ability to control a single cell, to group together individual blocks, or to control the entire system as one. In addition, you can control the LEDs in four different ways: using hue, saturation and intensity (HSI); red, green, blue (RGB); red, green, blue, amber (RGBA); or red, green, blue and intensity (RGBI).

#### Color, Rendering and Dimming

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With the new single-color RGBA LED, the color palette of the Color Block 2 has been expanded to include more saturated reds, blues and greens, and more subtle shades, such as flesh tones, lavender, orange, and peach. To my eye, it's difficult to distinguish between the old saturated colors and the new saturated colors without a side-by-side comparison. But what are noticeably improved are the pastels, the color uniformity and the color rendering. In the old style blocks, the individual colored LEDs produced multi-colored shadows with the subject at close range. That has completely changed with the new single-color LEDs because the red, green, blue and amber components are much smaller and closer together. With the frosted lenses all you see is a solid color. The only exception is with very saturated colors at the tail end of the dimming curve. There, you can see slight color separation if you look directly at the source. For the vast majority of applications, it is insignificant.

The added amber makes all the difference when it comes to controlling color temperature. The fixture does a beautiful job of recreating a tungsten look in RGBA mode by making slight adjustments to each of the four channels. The literature claims a color rendering index of 90, and though I had no way of confirming that, it does appear to render skin tones very well. You can also take out some of the amber to create a very nice daylight look.



The Chroma-Q Color Block 2 updates the Color Block with extra brightness and other improvements.

The dimming is truly exceptional. LEDs are so responsive that it is difficult to dim them smoothly. You can usually see dimming steps with LED fixtures, but definitely not in this case. The dimming curve looks very much like a tungsten source, which works very nicely with the tungsten or with the daylight color temperature.

Using a Minolta T-10 illuminance meter, I measured 124.7 lux in white light at a throw distance of 12 feet with one block. The field was 13 feet wide. I then measured 70 lux in red, 100 lux in green and 10 lux in blue. The optics in the unit are asymmetrical with respect to the vertical field in order to better wash a cyc from a ground row or a truss. A single ground row can cover about 20 feet of height very well.

#### Building the Perfect Beast

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One of the better features of the original Color Block that is retained with this version is the modularity. Each block has two mushroom-head pins on one end and two keyhole slots on the other. The pins on one block can be inserted into the keyhole slots on another and fastened with the integral butterfly latch, creating a sturdy batten. You can connect up to five units together to create a four-foot batten and use the optional batten bracket kit to stand it on the floor or rig it in a truss using c-clamps or half-couplers. There is also a yoke kit for single blocks and a blinder frame that allows you to stack four blocks to emu-

late a 16-light blinder. Finally, the hinge kit can be used to connect two blocks and adjust the angle between them up to 180°. You can build creative designs using a handful of hinges and a passel of blocks. Between the various accessories there are an unlimited number of design options.

The Color Block 2 manages to overcome some of the toughest issues for LED fixtures. The color temperature adjustment, rendering and dimming in this unit are as good as it gets. I don't know what "theatre grade" is, but these LED fixtures certainly make the grade whether it's in a theatre, a rock concert or a ballet.

The new Chroma-Q Web site at [www.chroma-q.com](http://www.chroma-q.com) has more information about the Color Block 2. **PLSN**

**What It Is:** Modular LED color wash luminaire.

**What It's For:** Any lighting system that needs colored light or variable color temperature white light.

**Pros:** Modularity, versatility, high CRI, beautiful dimming, tungsten emulation, daylight emulation, separate power supply makes for smaller head.

**Cons:** Separate power supply requires extra piece to carry and rig.

**Retail Price:** \$845 MSRP.