

Chromatte™ Comparison Tests

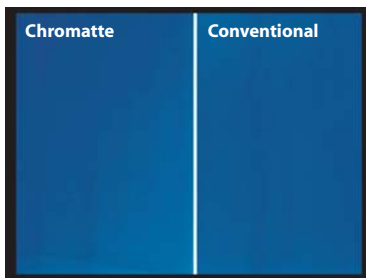
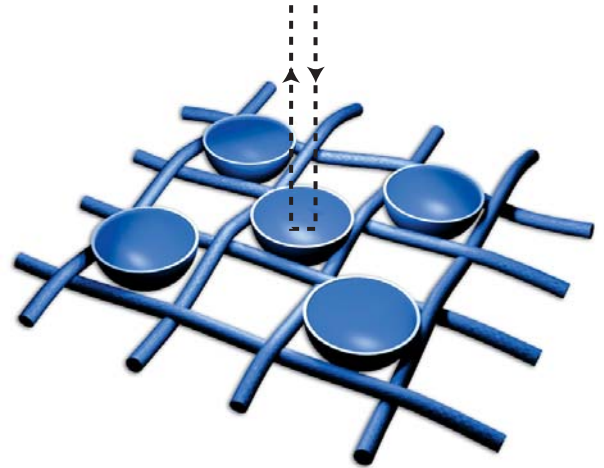
Chromatte is a reflective fabric designed to work as a background in chroma key production.

In ambient light the fabric appears grey to the eye, however when fitted with a lens-mounted LiteRing the camera sees Chromatte as an even blue (or green*) background. In a similar way that 'cats eyes' reflect light from the headlights of an approaching vehicle, the source light from the LiteRing is reflected back into the lens of the camera.

Chromatte is covered with millions of 'SateLITE Dish' reflective beads which enable the fabric to be used at acute angles from the camera lens and in low light conditions.

The low reflectivity of a conventional blue or green cloth requires large amounts of studio lighting to produce enough output to drive the key. The care and attention needed to produce an evenly exposed field requires skill and experience.

In a controlled studio environment we performed a series of tests comparing Chromatte to conventional chroma key fabric. Using two identical camera** set-ups, at a distance of 5m from the background and at a fixed aperture, we split the feed to a wave form monitor and vector scope. The images below show Chromatte (on the left), compared with conventional chroma key fabric (on the right).



Chromatte v Conventional Fabric

This image shows the split camera feeds of Chromatte and woollen chroma key fabric.

The woollen chroma key fabric has been lit to provide a comparable test to Chromatte - this required approximately 3000 watts of light to achieve an even blue field.

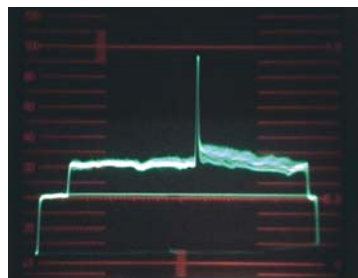
On the left is Chromatte, lit only with a blue LiteRing on a mid intensity level of 5 on the LiteRing Controller. There is no additional light being used on the Chromatte background.



Colour Phase Angle

Using a vector scope we measured the phase angle of the blue signal. The LiteRing's blue LED's show a phase angle of 206 degrees.

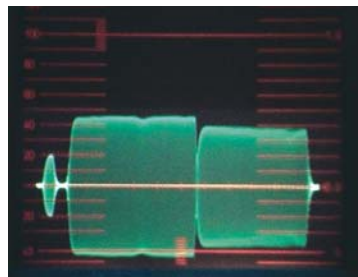
This illustrates the purity of the colour generated by Chromatte and the LiteRing, and more importantly that it has very little other residual colour in the signal.



Luminance

The left side of the image shows that Chromatte has a more even luminance level than the conventional chroma key fabric on the right.

Where the conventional fabric shows a greater light 'fall off' with an uneven and diffused line, Chromatte demonstrates a consistent luminance level with limited 'fall off' and minimal shading.



Chrominance

The level of chrominance in Chromatte is significantly better than the conventional chroma key fabric. This greater range of chrominance enables your keying device to select a wider bandwidth of blue.

Conclusion

The images to the left demonstrate Chromatte's effectiveness as a background for chroma key production.

Essential to Chromatte's performance is the LiteRing. Instead of using tungsten lighting it uses LED's as the only light source required to light the Chromatte - together they deliver the evenness and consistency of blue or green required to perform an accurate chroma key.

Perhaps the most significant advantage of Chromatte is that while it took our engineers several hours to light the conventional chroma fabric, it took just 5 minutes to set-up the scene using Chromatte.

* These tests were performed using a blue LiteRing - green LiteRings are also available where the user wishes to key using a green background.

** Tests performed using two Panasonic AWE-600 cameras with the same lens and focal settings.