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Seeing Green



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Seeing Green

A review of Reflectmedia's LiteRing, Chromaflex and Mattenee chromakey solution - by Mark Brindle

You cannot watch any movie these days without coming across the use of green or blue screen technology. You will see chromakey technology used every time you watch the TV weather forecast or most news and current affairs programmes – usually to add graphical backgrounds. But is this something you can use for your productions?

Reflectmedia make a range of chromakey solutions for studio and portable use. This review focusses on the portable Chromaflex screen - a 2.1m square collapsible screen which folds down to a 90cm disc in a similar manner to the smaller

multi-disc reflectors you may be familiar with.

Supplied in a good quality round bag, at 5kg it's pretty portable. Getting it back into the bag is another story! The screen works in conjunction with a LiteRing – LEDs arranged in a circular casing that is positioned in front of the camera lens. The LEDs provide the light (blue or green) to illuminate the Chromaflex background for chromakey production.

Show me the Light!

The LiteRing is supplied with a power supply and a dimmer control in a robust carry case and is available in green or blue; in a

range of sizes to suit different cameras and with a range of adapters to allow you to use one LiteRing on several cameras. I use a 'Medium' green LiteRing with a 37mm adapter for the Sony PDX10 and a 72mm adapter for the Sony Z1E. The adapter plate is made from machined aluminium and screws into the front of the lens – meaning you cannot use any other lenses with the camera.



The LiteRing then attaches to the adapter plate with a single hand-screw which makes it quick to set up the light source.

Fixing the Screen

The Chromaflex screen can be hung from the ceiling on its attached strap or be placed against a wall, and the built-in metal frame will support its weight.

Reflectmedia also make a chromakey curtain using the same material - called the Chromatte drape - which can be bought in a variety of fixed sizes or made to order in any custom size to fit your studio.



How it Works

The Chromaflex screen is grey in appearance and contains millions of tiny glass beads that act as reflectors, shining the light back to the source. When using the directional light from the LiteRing, the light goes back to the camera lens and the screen appears a uniform green (or blue with the blue LiteRing).

The amount of light from the LiteRing is low - approx 10W, so the chance of blue or green spill on the subject being filmed is quite low.

Why is it Different?

Unlike conventional green or blue screen technology, where you must light the screen evenly, with the Reflectmedia solution you just need to light the subject being filmed, and the LiteRing lights the screen for you.

This provides the benefit of being able to set up and use the portable screen in any controlled lighting environment and not just the studio. So it is now possible





to shoot with a chromakey in an office or a meeting room and not spend much more time setting up lighting than usual.

Keying Software

You do not need any additional software to take a key from the green or blue background – but it helps. Try using a standard built-in colour or chromakey within Final Cut Pro and the matt generated is not very good.


Using Reflecmmedia's Mattenee plug-in software which has been designed specifically for the Chromaflex screen, and the matte quality improves considerably. Mattenee is available as a plug-in for FCP, Premiere Pro, After Effects, Shake and Digital Fusion. I use Mattenee as a plug-in with FCP studio. The software is licensed against the system ID of your computer so you need to ensure the same hardware interfaces are on or off when you use the software otherwise you get a 'trial' license by default with the Pixel Farm logo on every frame and you'll have to re-render - which can be annoying! Moving the software to another machine is possible as Reflecmmedia will supply a new license key for you if necessary.

The Mattenee plug-in has controls for key strength, despill,

growing and shrinking the matte, blurring and sharpening the edge, and colour correction – you can tweak as necessary to get a better key – although the default settings are pretty close. You can also invert the alpha channel and key against the alpha to create silhouettes.

Alpha Channels

Like most people, one thing I don't like is having to render too often. The Mattenee software will not play real-time but rendering isn't too slow on a dual G5. But once the matte has been generated I want to be able to keep my subject with the matte (alpha channel) and re-use the rendered material.

One way to achieve this is to make use of the Animation codec set to Millions of Colours+ and export your rendered sequence with the alpha channel intact. 



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This saves a lot of time without re-generating the matte and re-rendering your material.

This also provides a way to use your material in Apple's Motion software. At the time of writing I am still not happy with the way HDV interlaced video exports with the Animation codec but hope to resolve this with the software manufacturers soon.

What can't you do?

With a small collapsible screen you cannot get full-length people shots, i.e. including feet, because you do not have a 'floor'. Using the Chroma curtain/drape you can extend the chromakey to the floor and so take a full-length person and move them around the frame in your edit suite.

This limitation means you are left with head and shoulders or 'weather man' shots – which in itself is not too bad.

You can, however, purchase custom-made, small bits of the chromakey material to allow you to extend your background to the floor or use to cover a chair/desk for example which will extend the usage of the portable screen.

Space and Lighting Requirements

There are still rules for using the chromakey screen. Reflecmmedia provide a reasonable amount of information in their user guide, such as minimum distance from camera to subject (3 metres) and setting up your lighting to avoid bleaching out the effects of the LiteRing or causing green/blue spill.

Is it any good with DV or HDV?

Reflecmmedia recommend you use the best possible resolution when keying. Best being component/SDI capture - to the worst being composite analogue video.

DV is low on the list. The problem with DV is partly due to the 5:1 compression used for DV video and the fact that DV artefacts can lead to more jagged/pixelated edges - and partly due to the colour space used for DV (a lot of colour information is thrown away which could have helped with the matt generation).

We tested with DV and HDV to compare the two - using a Sony PDX10 using DV PAL FireWire capture and a Sony Z1E set to HDV 1080i. Mattenee

worked fine with both sequences and generated a satisfactory matte with the default settings.

The Standard Definition (SD) material had a slight jagged edge which showed up even more on a High Definition monitor, but the HDV sequence also exhibited the same jagged edge. When played out to an SD monitor, the SD material was 'OK' but probably needed the matte to be shrunk slightly to improve the edge – although you would lose some of the detail.

We also tested using HDV material pulled in to an SD sequence - it took longer to render, but certainly looked better than the SD material and was quicker to render than the HDV material in an HDV sequence. We tested using 8-bit and 10-bit compression settings



and the 'Best' motion tab settings in FCP with all real-time options turned off to try to force the best quality output.

The resulting output was acceptable and for some of the work I want to use it for – using silhouettes - its perfect. I would ideally like to test using a component/SDI capture card to see if the resulting matte really is perfect, though. I will leave that for a future review!



Live Keying

An addition to the product range is the Ultimatte live hardware keyer for DV which combines an additional video source for pre-visualisation of a scene or for live playout of your composite video (weatherman/VJ/conference, etc). This device has not been reviewed at this time.

Pricing

Products can be purchased individually or as a bundle – typical bundle pricing for a medium green LiteRing, bag, power supply and dimmer, plus Chromatte collapsible screen 2.1mx2.1m (with bag), plus Mattenee software, is £1465 plus VAT. See the Planet DV website for all option pricing. ■

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Maniac films Ltd

Notes: Manufactured by Reflecmmedia (www.reflecmmedia.com). Supplied by PlanetDV (www.planetdv.net). Mattenee keying software for NLE systems is produced by The Pixel Farm.