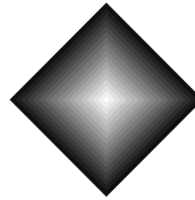


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Light Illusion
THE ART & SCIENCE OF DIGITAL IMAGING
Calibration LUTs 3D Cubes Gamma Curves

Light Illusion – **PRESS RELEASE** – March '09

Light Illusion Adds New Features to 3D LUT Builder

Specialist digital film consultancy, Light Illusion, provides a range of software tools for Digital Cinematography and Digital Intermediate operations aimed at simplifying the digital imaging workflow process.

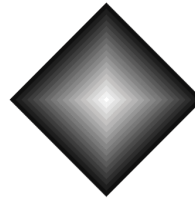
The latest addition to the tools provided by Light Illusion is an update to its already very popular 3D LUT Builder aimed at the building of 3D Cube LUTs for use in calibrated image viewing via digital monitoring, including CRT and LCD monitors, and digital projection.

The Light Illusion [3D Cube LUT Builder](#) has been updated with new options that allow for further LUT management and image calibration.

- **LUT Burn-in** (including batch processing, format conversion and image re-sizing)
- **Colour Space Conversion** (pre-set and user)
- **More LUT formats** added
- **More image formats** added

The new **LUT Burn-in** option allows any given LUT to be burnt-in to any image, generating a new set of images with the LUT applied. This can be a batch process allowing a list of images, or a folder containing a range of images, to be process automatically with the selected LUT, as well as to be converted to a new image format and re-sized.

The **Colour Space Conversion** option allows the generation of LUTs with colour space conversion properties. These can be to/from selected default colour spaces (Rec709, P3DCI D55, P3DCI D65, XYZ) as well as user definable custom colour space values.



Application Capabilities

The LUT Builder incorporates the ability to have a user-selected image inserted into the reference frame for LUT generation and, more importantly, can build 10-bit, 12-bit and 16-bit 3D LUTs, from images of any original bit depth.

The 3D LUT Builder works by generating a reference image that can be colour corrected as required to match an accurate reference image, usually a film print image, making use of a colourist's natural ability to match two images. The software then uses this modified reference image to build a 3D Cube LUT containing the changes made.

Improving Existing LUTs

One of the applications that the LUT Builder has become renowned for is improving LUTs generated with automated systems that use probes to measure screens and monitors.

The problem with these automated systems is that the probes used are not as good as the human eye at seeing small differences in colour and brightness. This is why many users have been using the Light Illusion 3D LUT Builder to improve on the automatically generated LUT - less red in the blacks, for example.

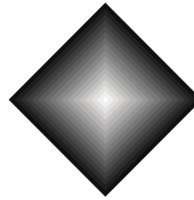
As said by one post facility using the 3D LUT Builder "Our colourist can see the difference between the final film print and the LUT generated by our automated LUT system, and the Light Illusion 3D LUT Builder allows him to fix the error to make the LUT 100% accurate".

'Ripping' LUTs

One of the major uses of the Light Illusion 3D LUT Cube Builder, apart from building LUTs from scratch, is that it can 'RIP' any LUT from any other LUT system, which means calibration LUTs built for a specific system can be cloned and used in any other system to provide environment-wide calibration for multiple systems.

LUT Burn-in Option

The LUT Burn-in option enables any LUT to be seen applied to any image, making LUT checking a lot easier. The same LUT can be seen on any number of different images, or any number of different LUTs can be seen on the same image - or any combination of the two. The option also the new image and LUT to be reviewed away from the LUT Builder software.



Resize and Format Conversion

When burning in LUTs there are two additional options that allow the image format to be changed and the size of the saved image to be different from the source. This allows, for example, lower resolution .jpg images to be made with burnt-in LUTs from 2K .dpx originals - ideal for off-line review or dailies checking.

Batch Processing

A potentially more interesting application of this LUT Burn-in capability is the ability to batch process selected frames, either added to a process list individually, or via folder selection. This means it is possible to use the 3D Cube LUT Builder software to process a 'look' (LUT) into sequences, either held locally, or over a network, saving the result as the same format, or as a different format and different size.

This application could free-up more expensive colour correction systems when generating new colour space or different look deliverables - for example, Rec709 or XYZ deliverables from 'film' graded Log images .

Colour Space Conversion

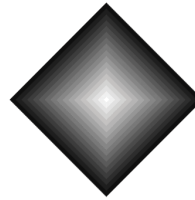
The second major addition to v3 of the 3D Cube LUT Builder is the ability to generate colour space conversion LUTs and apply them to existing LUTs, or use them as new LUTs in their own right.

There is a selection of pre-set colour spaces that can be converted between, including Rec709, P3DCI-D55, P3DCI-D65, and XYZ, as well as the ability to use custom operator input values.

This Colour Space Conversion capability has obvious uses, especially when looking to deliver finals in a different colour space to that used when the DI was performed.

Combined with the batch processing, re-sizing and format conversion capabilities of the LUT Burn-in option, the workflow possibilities are obvious and potentially very powerful.

ENDS



About Light Illusion

Light Illusion is the new name for Steve Shaw's industry-leading consultancy operation in digital cinematography and digital intermediate, with support provided globally to production and post-production operations, as well as to equipment manufacturers. Steve Shaw, CEO, has numerous credits for feature film DI and grading work, as well as acting as digital film technologist in building operational workflows.

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