

Work natively in ACES within After Effects

ACES is the industry standard for managing color throughout the life cycle of a motion picture or television production. It simplifies the complexity arising from the use of multiple image capture and presentation devices by providing standards to maintain end-to-end image fidelity.

We are proud to announce that we have integrated OpenColorIO (OCIO) within After Effects. This hugely simplifies the ACES workflow in After Effects. It enables users to work natively in ACES within After Effects.

This guide provides details about the ACES workflow in After Effects.

Quick start

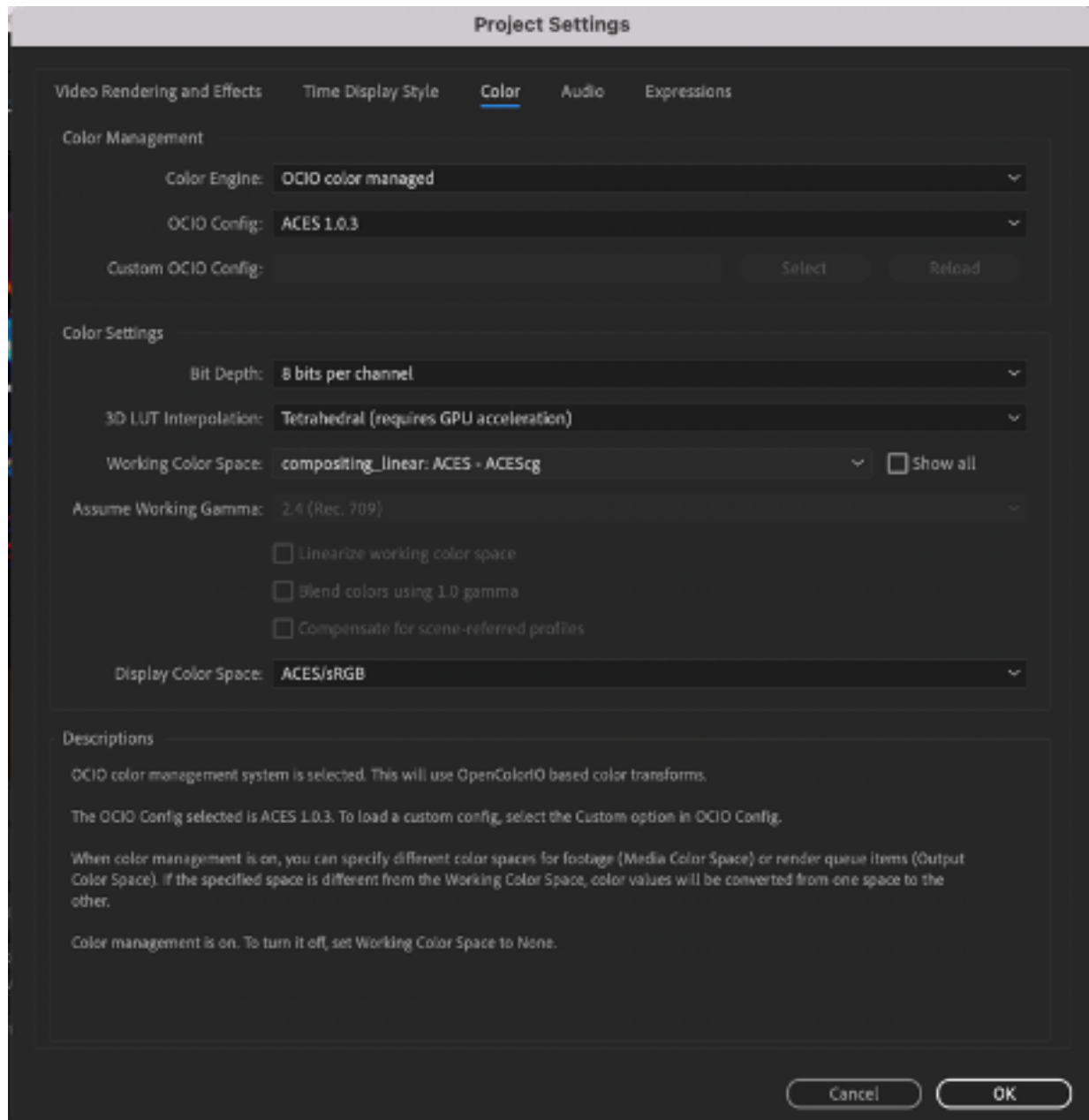
1. Go to **Project Settings > Color**
 - a. Create an After Effects project and select **Color Engine** to be *OCIO color managed*
 - b. Select the appropriate OCIO configuration file. We are shipping the ACES configurations with the application bundle
 - c. Select a **Working Color Space**
 - d. Select a **Display Color Space**
2. Add some media (EXR, etc.) to your project
 - a. Media Color Space is automatically assigned to the default color space (specified by the *default* role)
 - b. Media Color Space can be overridden using the **Interpret Footage** dialog. Right-click on footage within the Project Panel, choose **Interpret Footage > Main**, and click the **Color** tab to access the controls.
3. Create a composition. The Composition window shows color converted content:
 - a. Media Color Space converted to chosen Working Color Space
 - b. Working Color Space displayed as chosen Display Color Space
4. Export the composition.
 - a. Add the composition to **Render Queue**
 - b. Select the **Output Color Space** in the **Color** tab of **Output Module** settings

Optional Effects included with application (in the Color Correction folder)

1. Use **OCIO Color Space Transform** effect to apply any color space transform
2. Use **OCIO File Transform** effect to apply a LUT or CDL

The details

Project Settings for ACES project



Color Engine

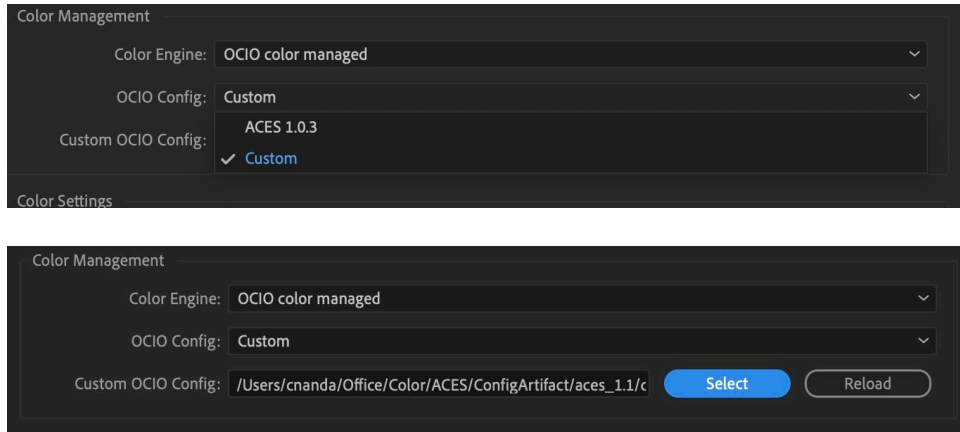
After Effects now includes two color processing pipelines.

1. *Adobe color managed* - This is the existing default Adobe color processing/management pipeline based on ICC profiles. It should be selected if users need to work with a non-ACES workflow.
2. *OCIO color managed* - This is a new color engine integrated within After Effects. In this mode, the application uses OpenColorIO (OCIO) for all its color processing. This mode is recommended if users need to work with the ACES workflow.

OCIO Config

The OCIO Config dropdown in Project Settings allows user to select the OCIO configuration file. This is valid only when *OCIO color managed* is selected in the Color Engine dropdown.

After Effects includes the ACES configurations (*ACES 1.0.3*, *ACES CG (Beta)*, *ACES Studio (Beta)*). Users can select a custom configuration as well by selecting the *Custom* option in the OCIO Config dropdown and browsing to the custom configuration file by clicking the Select button.



NOTE on ACES 1.3 Configurations

In addition to the default ACES 1.0.3 configuration, there are now two beta configurations from OCIO which are compliant with ACES 1.3 (ACES CG v0.2.0 (Beta) and ACES Studio v0.1.0 (Beta)). **These are still under development**, but they do include new features and enhancements setting the stage for ACES 2.0, such as the ability to set the Rules in the config file to an assigned color space. We will update these to the release 1.3 versions once they are available.

Environment variable *OCIO*

Custom OCIO configuration files can be selected via setting an environment variable *OCIO*. The application reads environment variable at startup, then sets the Custom config to the one specified in environment variable.

Setting environment variable on MacOS:

```
launchctl setenv OCIO <path to config.ocio>/config.ocio
```

Setting environment variable on Windows:

```
Set the environment variable 'OCIO' in system settings with path pointing to configuration file.
```

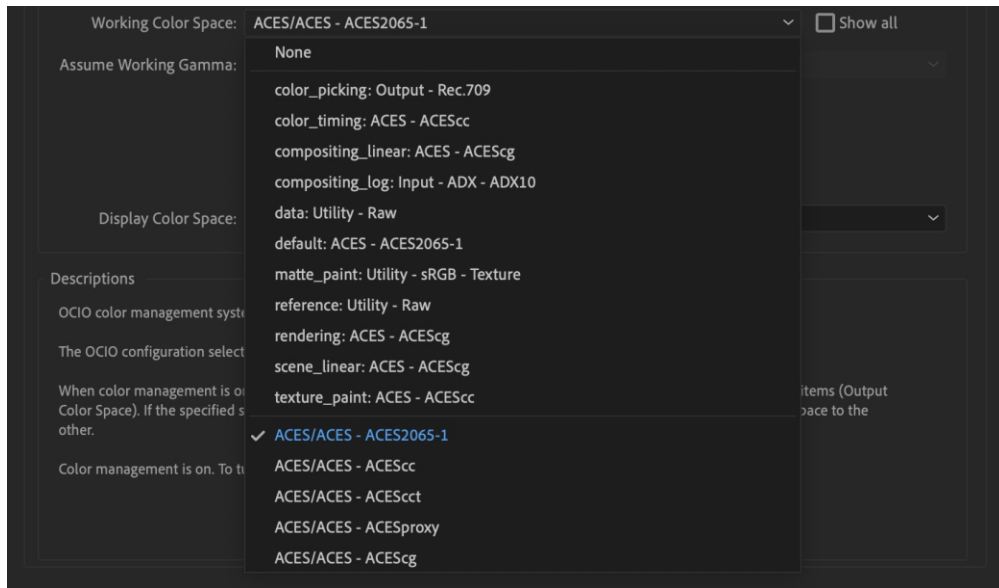
The system may need to restart after setting environment variable.

If OCIO configuration file is selected and project is saved, this information is saved along with the project file. Next time the project is opened it will use the configuration file it was using last time. Any new project will automatically use the OCIO configuration specified using OCIO environment variable.

Working Color Space

Working Color Space dropdown allows users to select the composition color space. This dropdown lists the color spaces from the selected OCIO configuration file if the Color Engine is set to *OCIO color managed*.

An OCIO configuration file allows users to name the color spaces based on their role in the color processing workflow. It is assumed that users will assign roles to the most used color spaces from the configuration file. Therefore, roles are listed first in the dropdown.

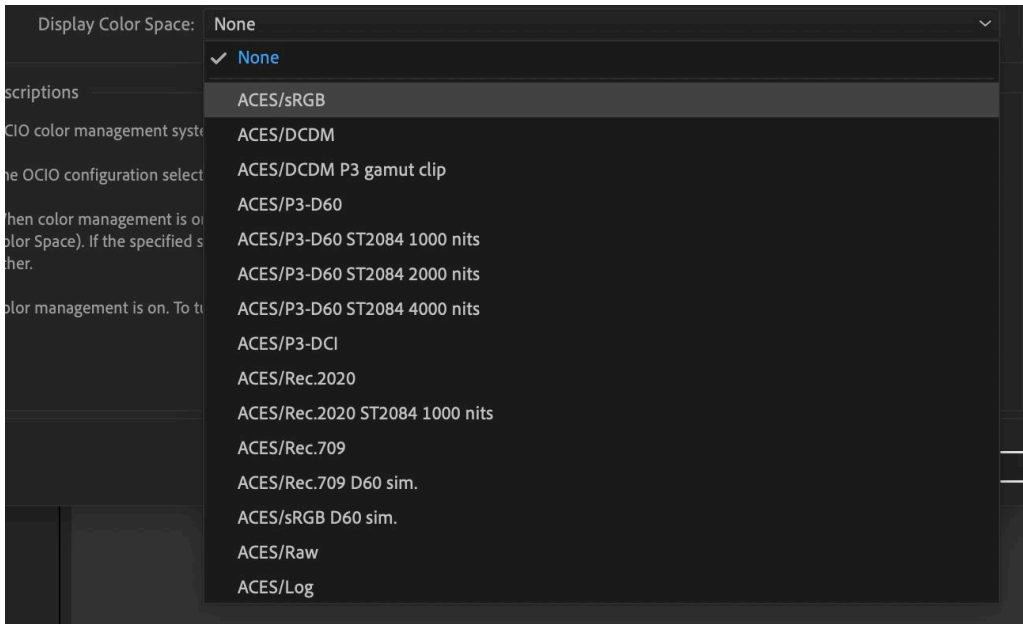


Show all

Users can enable the listing of all color spaces from the OCIO configuration file by checking *Show all* checkbox.

Display Color Space

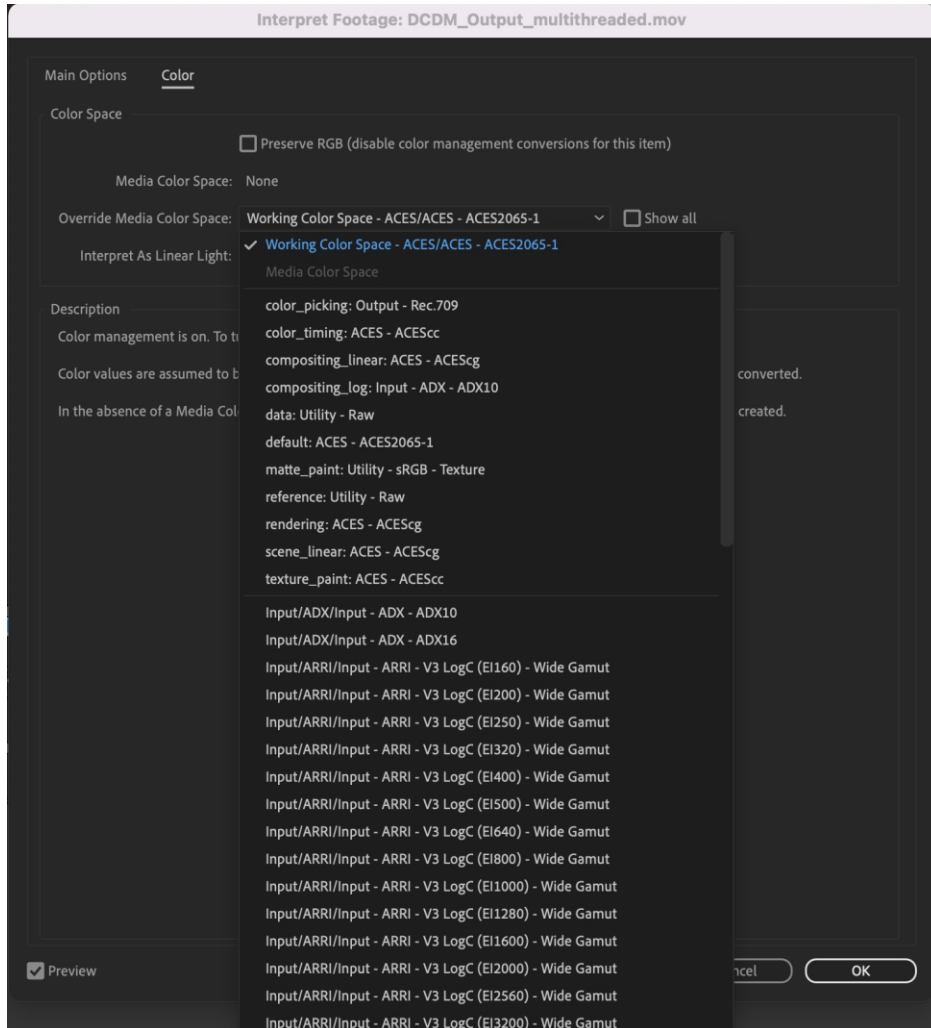
An OCIO configuration file has display and view color spaces. Each display can have multiple views. The Display Color Space dropdown combines display and view color spaces from the OCIO configuration file into a single list.



Display Color Space allows users to select the view color space for the project. This sets the default color space for views. Each view (Composition View, Layer View, Footage View) has its own dropdown and allows each view to override the default as selected in Project Settings.

Import/Interpret Footage color managed workflow

Import/Interpret Footage color management works in a similar way for both *Adobe color managed* or *OCIO color managed* color engine. Right click footage in the Project panel and select Interpret Footage > Main, then click the Color tab to access the control.



The Override Media Color Space dropdown lists color spaces from the selected OCIO configuration file when the Color Engine is set to *OCIO color managed* in Project Settings. The OCIO configuration allows users to name the color spaces based on their role in the color processing workflow. It is assumed that users will assign roles to the most used color spaces from the configuration file. Therefore, roles are listed first in the dropdown.

Show all

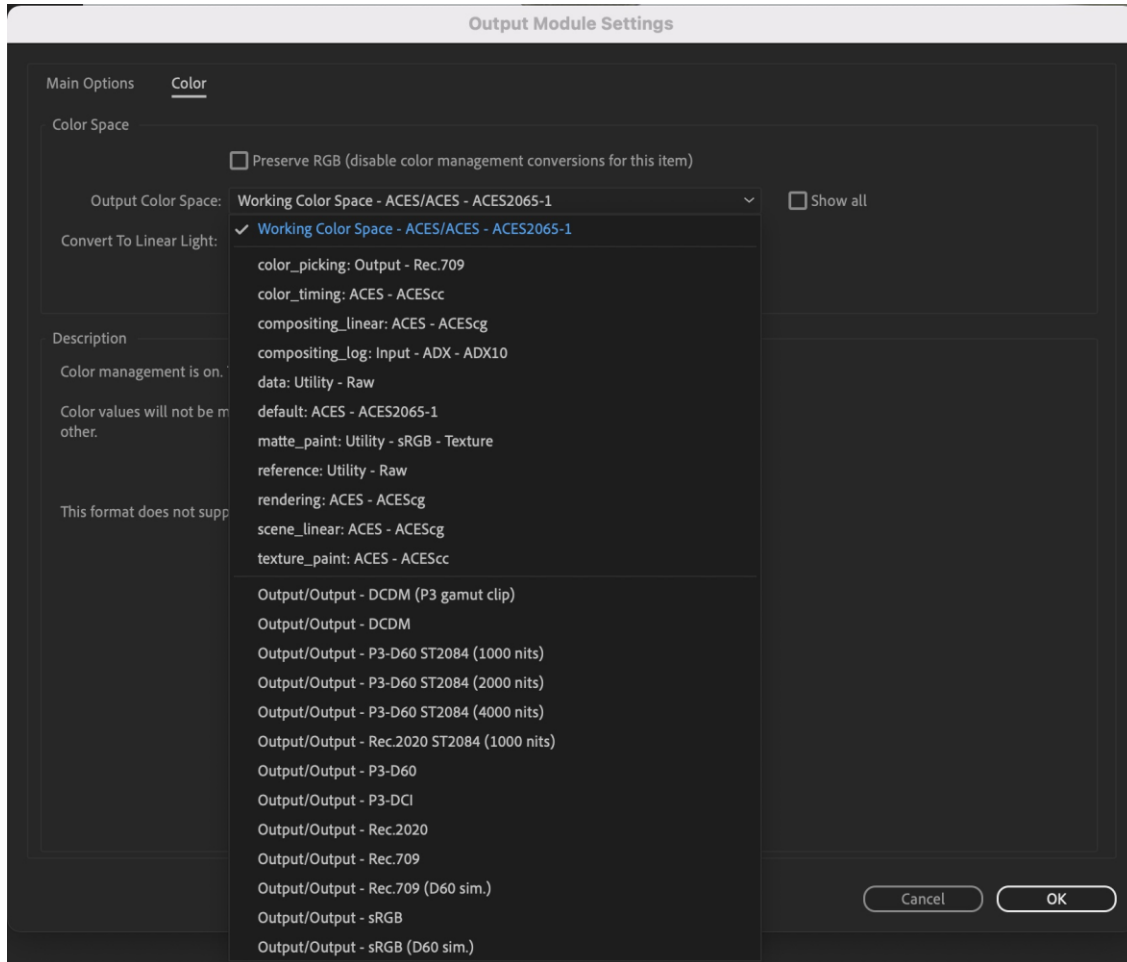
Users can enable the listing of all color spaces from the OCIO configuration file by checking *Show all* checkbox.

Auto assignment of Color space on Import

OCIO Configuration 2.x has a feature to define rules that select the default color space for media on import. The rules can be added in the configuration file to assign a default color space. Please check [HERE](#) for more information.

Export/Output Module Settings color managed workflow

Export / Output module color management works in a similar way for both *Adobe color managed* or *OCIO color managed* color engine. From the Render Queue, click the Output Module, then the Color tab to access the controls.



The Output Color Space dropdown lists color spaces from the selected OCIO configuration file when the Color Engine is set to *OCIO color managed* in Project Settings. The OCIO configuration allows users to name the color spaces based on their role in the color processing workflow. It is assumed that users will assign roles to the most used color spaces from the configuration file. Therefore, roles are listed first in the dropdown.

Show all

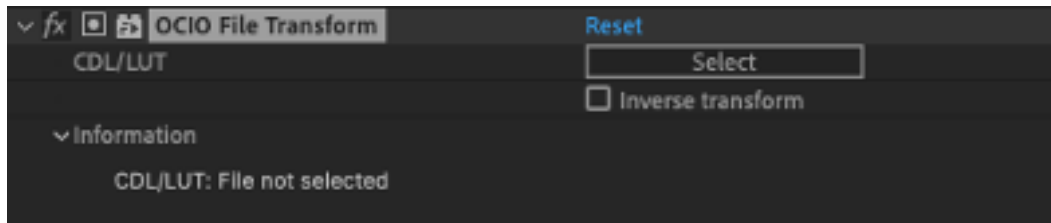
Users can enable the listing of all color spaces from the OCIO configuration file by checking *Show all* checkbox.

Effects

Two new effects are added in the application. These effects use OpenColorIO for processing.

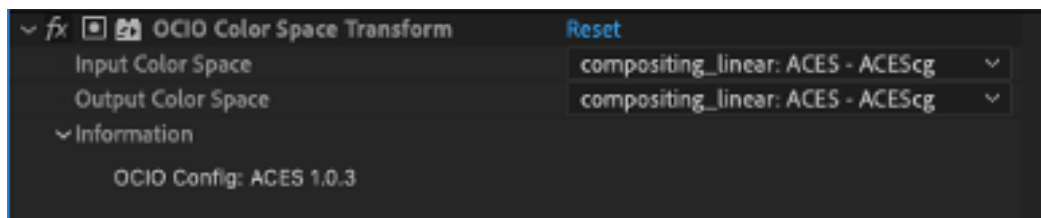
OCIO File Transform

The *OCIO File Transform* effect is used to apply a LUT or CDL when desired.



OCIO Color Space Transform

The *OCIO Color Space Transform* effect is a color space converter effect implemented using OpenColorIO library.



Input Color Space and *Output Color Space* dropdowns list color spaces from the OCIO configuration file selected in Project Settings. Users need to select input and output color spaces, and the effect will use OpenColorIO to convert from input to output.

These effects can be used together to apply a LUT or CDL created to work in a specific color space which is different from selected working color space:

1. Apply OCIO Color Space Transform effect to convert from Working color space to the color space your CDL/LUT file requires.
2. Apply LUT or CDL via OCIO File Transform effect.
3. Apply OCIO Color Space Transform effect again to convert back to the Working color space.