

DVO

FLICKER

USER GUIDE

WHAT DOES IT DO?

DVO Flicker is used for analyzing and correcting brightness and chrominance fluctuations in image sequences. These fluctuations can occur due to various factors such as varying exposure time, unsynchronized light sources, telecine transfer, aging film stock, and film chemical-related issues. Chrominance fluctuations, specifically, are often referred to as "chroma breathing."

Chroma breathing refers to the undesirable variation in color intensity or saturation that can be observed in a video or image sequence. It appears as a rhythmic or pulsating effect, where the colors appear to "breathe" or fluctuate in intensity. This effect can be distracting and can negatively impact the visual quality of the footage.

DVO Flicker utilizes advanced algorithms to analyze the image sequence and identify the brightness and chrominance fluctuations. It then applies corrective measures to remove or reduce these fluctuations, resulting in a more stable and consistent image quality. By addressing chroma breathing, **DVO Flicker** helps to improve the overall visual cohesiveness of the footage and eliminate distracting color variations.

HOW DO YOU USE IT?

DVO Flicker works on the following platforms:



It's also coming soon to:



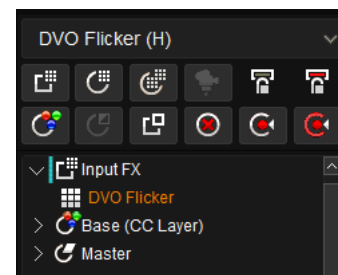
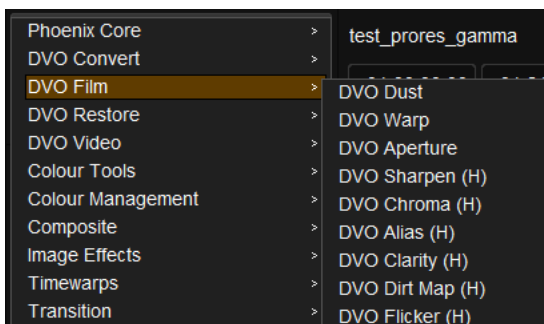
If you're already a Filmworkz veteran, you can jump right in and use **DVO Flicker**, however if you need a hand getting going, check out these QuickStart Guides:

[PHOENIX QUICKSTART GUIDE](#)

[NUCODA QUICKSTART GUIDE](#)

GETTING STARTED

1. Launch your platform on your workstation.
2. Locate the toolbar, (positioned on the left-hand side of the interface)
3. Scan the toolbar options until you find the DVO Frame Lock tool



4. Click on it and the control panel under appears



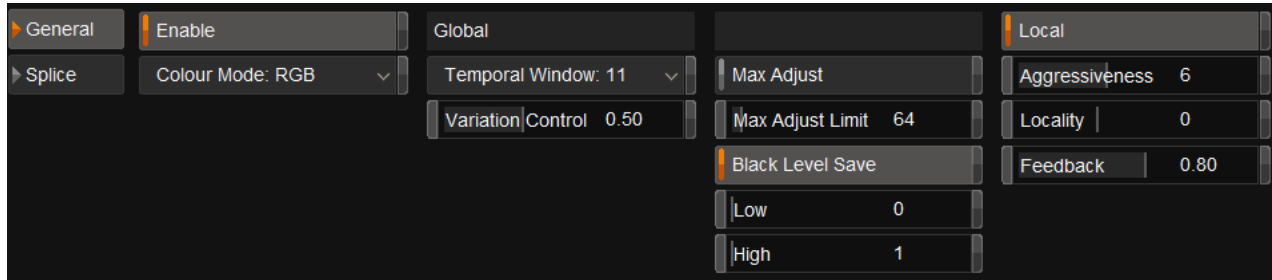
CONTROL PANEL EXPLAINED

The settings have been split into two sections:

General: common settings for overall flicker

Splice: for dedicated issues that can occur at scene cuts.

GENERAL

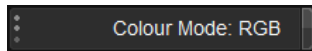


The main configuration consists of two processing options:

Global: Analyses and processes the whole image.

Local: Analyses and identifies invariants in local parts of a picture, examining consistent patterns or properties that remain unchanged across different regions within the image.

COLOR MODE



Choose the color mode to use for analysis and processing.

RGB: Will find flicker in individual RGB color channels (*chroma flicker*). This is the **default** option

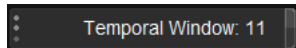
Luma: Analyse and process the *luminance* component only.

BW: Black and White. Uses the *Green* (G) channel to analyze and process. Also sets the R, B channels to G.

RGB>BW: Converts RGB to Black and White before analyzing and processing.

The BW options are faster; they use only one channel.

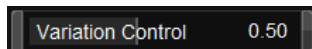
TEMPORAL WINDOW



Temporal Window defines the number of frames to use for the analysis.

Values: 1,3, 5, 7, 9, 11 (default),13,15..., 29, 31

VARIATION CONTROL



Variation Control defines how controlled (or **careful**) we are when we adjust.

Higher values are **more careful**. Lower values allow for **larger** adjustments.

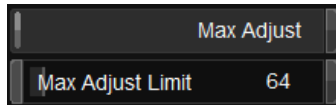


Values: 0.00 - 1.00

Default: 0.50

Lower values (allowing for larger adjustments) are best for **simple** scenes. Larger settings may be required to better account for more complex and dynamic scenes with more real-world intensity changes (e.g., high-speed pans).

MAX ADJUST

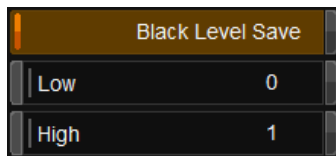


This sets an adjustment limit to the General processing mode. The setting corresponds to absolute value. It's disabled by default.

Values: 0 - 1023

Default: 64

BLACK LEVEL SAVE



Black Level Save lets us enable specific processing to preserve black levels in the sequence.

When Enabled (default), the Low and High parameters are used to assign the level of processing performed at the lower (darker) end of the input sequence. Both Low and High are **10-bit values** and **limited** to values between 0 and 100 (out of the full 10-bit range, 1024).

Default: Enabled

LOW

If the input level is less than or equal to the setting for *Low*, no flicker adjustment is performed, and the input signal is untouched.

Values: 0 - 100

Default: 0

HIGH

If the input level is greater than or equal to the setting for *High*, full flicker adjustment is performed.

Values: 0 - 100

Default: 1

Between these values, there is a soft transition between none and full processing.

LOCAL

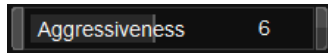


Local enables local adaptive flicker processing, analyzing the spatial characteristics of the image. This method takes into account the local contrast and spatial frequency content of each region and applies appropriate adjustments to reduce flickering.

Default: Enabled



AGGRESSIVENESS



Aggressiveness defines how much Local mode processing is done.

Values: 1 - 10

Default: 6

LOCALITY



Locality defines the size of the *spatial variation* of the intensity (i.e., area). A lower value will set a smaller region of intensity to be processed.

Values: -5 - 5

Default: 0

FEEDBACK



Feedback defines a *temporal pipeline* (i.e., frames) to enhance the process of the *Local* variation.

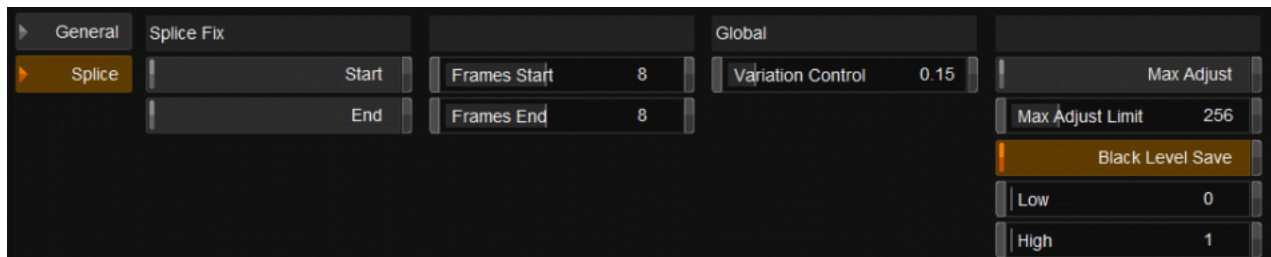
In high motion sequences, Feedback should be lowered to decrease influence of other frames in the result.

Values: 0 - 1.00

Default: 0.80

SPLICE

Splice settings manage intensity deviation that might occur at **scene changes**.



A common issue with early optical color timing was the tendency for the image to appear darker at the beginning of a scene. This was mainly due to the time it took for the optical printer to stabilize the color and exposure settings after a cut or a transition. The printer had to adjust the color timing and exposure for each individual shot, and this process took some time to settle down and produce accurate results.

As a result, the first few frames of a new shot would often appear darker or have slightly different color tones compared to the rest of the scene.

This discrepancy was more noticeable when there were rapid cuts or transitions between shots. However, as the scene progressed, the optical printer would eventually stabilize, and the image would return to its intended brightness and color balance.



SPLICE FIX



Splice Fix can be enabled for the start and end of a scene independently.

If enabled, the tool will perform a processing pass that will force the intensity in the selected range to match its corresponding reference frame.

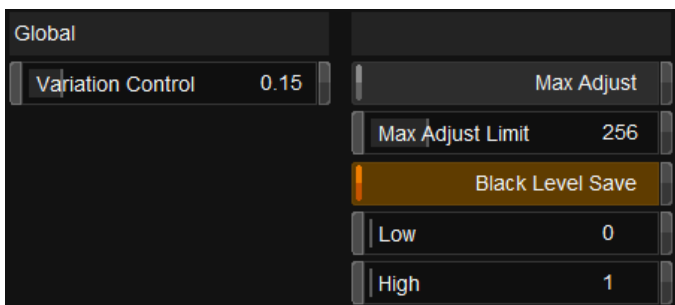
Frames Start / End set the **reference frame** and the processing range.

Values: 0 - 15

Default: 8

Default: Disabled

GLOBAL



The Global settings for the splice fix are the same as in the General but adjusted to better work with typical color timing issues.

Tip:

If you only want to fix *Splice*-type flicker issues, then:

Disable *General / Local*

Enable *General / Global / Max Adjust*

Set *General / Global / Max Adjust Limit* to 0

This will then disable all processing other than Splice processing.



WANNA KNOW

MORE?

FORUM

WEBSITE

SALES

