Filmworkz®
Create Incredible

DVO

PIXEL

OFX USER GUIDE

OFX

WHAT DOES IT DO?

DVO Pixel is used to find and conceal any stuck, dead or semi-dead pixels coming from a malfunctioning camera sensor.

If you have an "uncut" sequence consisting of several clips (with different dead pixels), you need to Scene detect your mixdown.

HOW DO YOU USE IT?

DVO Pixel is part of the Filmworkz OFX DVO Essentials plugin pack, which runs on **Resolve**, **Mistika** and **Scratch** for Windows, Mac and CentOS.

*DVO Pixel is also available in the following Filmworkz platforms:*

GETTING STARTED

Just locate & enable the DVO OFX tools in your chosen platform; for ease, we're showing the screenshots from Resolve in this User Guide so consult your manuals for any alternative system you're using.

1. Launch Resolve on your workstation.

2. Open your project; to select the DVO effect, click on the Effects tab on the upper left side of the interface. On the Open FX section, open the Filters section and click on DVO.

3. To apply the effect, you can either double click or drag and drop on the selected clip(s) when using the Timeline tab. If you're in the Color page, select the effect using the Effects tab on the top left side of the interface and drag and drop on an existing node.

4. Click on the Effects section (or click on the grading node) and the control panel overleaf appears.

CONTROL PANEL EXPLAINED
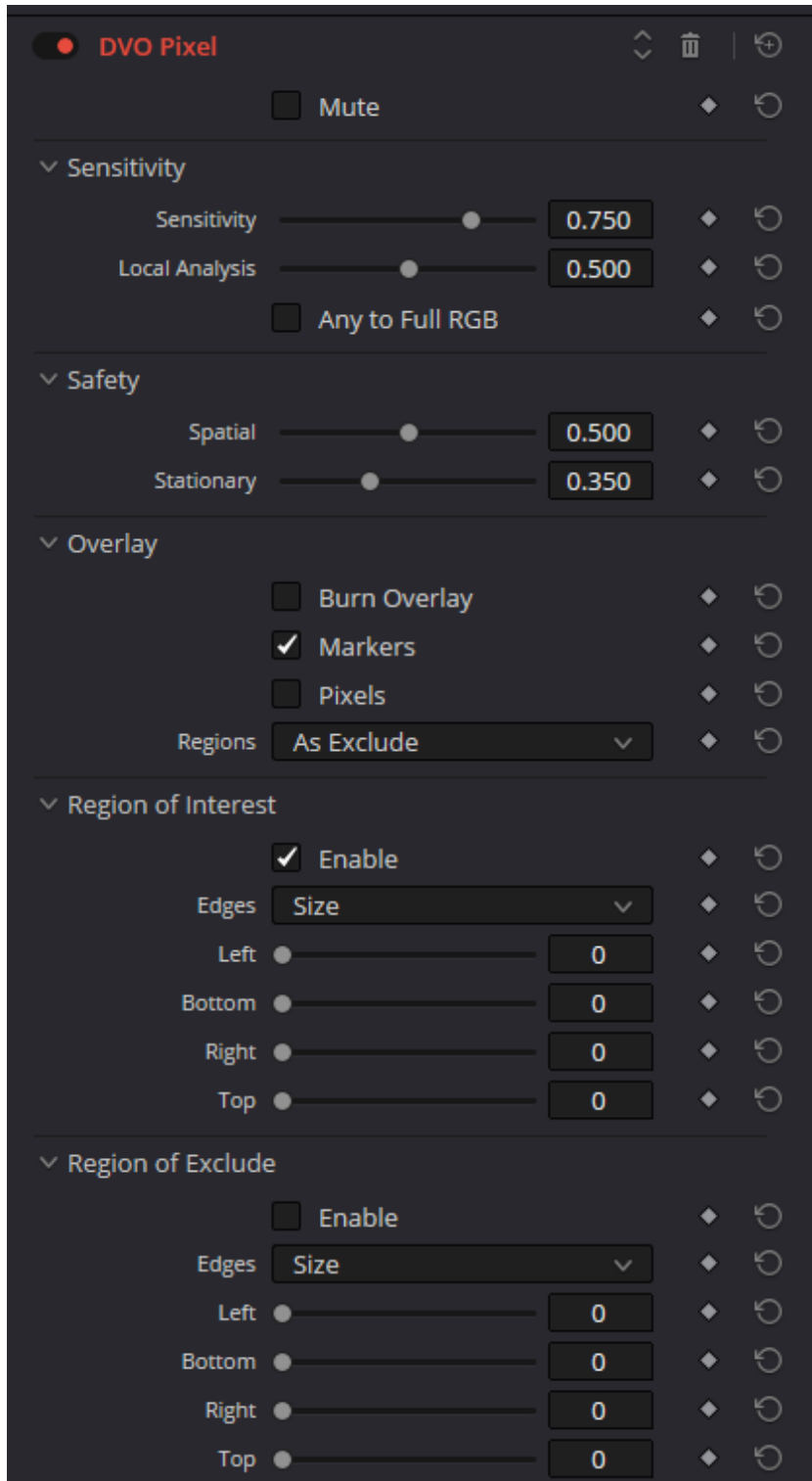
MUTE PIXELS

The tool is enabled but dead pixel processing is *muted;* detection is performed, and the overlay can be enabled. This can be used to *manually* verify detection of dead pixels.
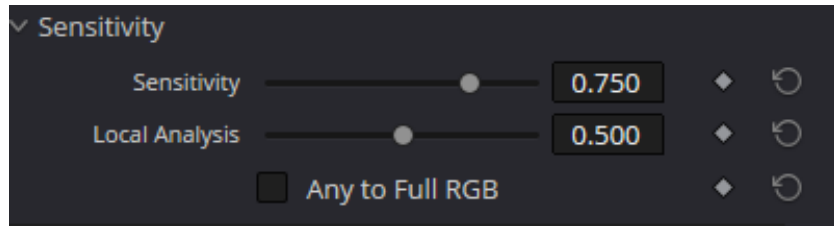
Default: Disabled

If enabled the (muted) process will burn into final output result.

ANALYSIS

SENSITIVITY

SENSITIVITY

This parameter controls how sensitive we are when searching for problem pixels. The main threshold for finding potential dead pixels (searching the RGB channels).

Range: 0.0 - 1.0

Default: 0.75

LOCAL ANALYSIS

Secondary localized detection sensitivity - expands primary detection. As a compressed or debayered pixel tends to grow to surrounding pixels, processing nearby pixels might be necessary.
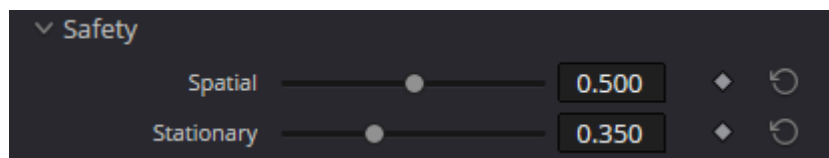
Range: 0.0 - 1.0

Default: 0.50

ANY TO FULL RGB

If enabled and a dead pixel is only detected in *one (or two) colour channels*, full RGB will be selected for detection. This will make *DVO Pixel* process **all channels**.

Default: Disabled

SAFETY

The Safety setting determines how much risk is taken with detection. The higher the value, the safer and less risk of errors but the greater the chance of less detection of actual problem pixels.

Spatial safety is for pixels that have extraordinary features but are not dead. Stationary safety is for static objects.

SPATIAL

Reduces the possibility of mistaking spatial features for dead pixels.
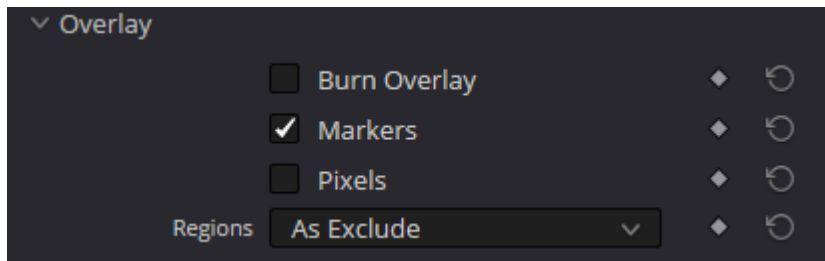
Range: 0.0 - 1.0

Default: 0.50

STATIONARY

Reduces possibility of mistaking temporally stationary features for dead pixels.

Range: 0.0 - 1.0

Default: 0.35

OVERLAY PARAMETERS

These parameters help with visualizing the effect *DVO Pixel* has and help identify the detected result (because a single pixel can be hard to find). By default, any detected pixel will be surrounded by a **green marker** which indicates that it will be processed. The pixel within will also be *color-coded* to indicate the RGB channels to be processed.

A *White* pixel overlay indicates that processing will occur on all RGB channels. A *Magenta* pixel indicates the blue and red channel will be processed.

This visualization is purely an on-screen aid and is **not burnt into the output** (exception: see *Burn in Overlay* below).

BURN IN OVERLAY

This enables burn-in visualization in the output result.

This is the most thorough analysis display method as all pixels will have their surrounding marker set in the color that processing will occur in. This option will **burn in** the overlay into the result.

Default: Disabled

MARKERS

Markers will be indicated with green rectangles around a pixel cluster or painted pixel regions. A painted region of pixels will have a dotted frame in the *Burn in Overlay* and every pixel will have its own box in the corresponding color.
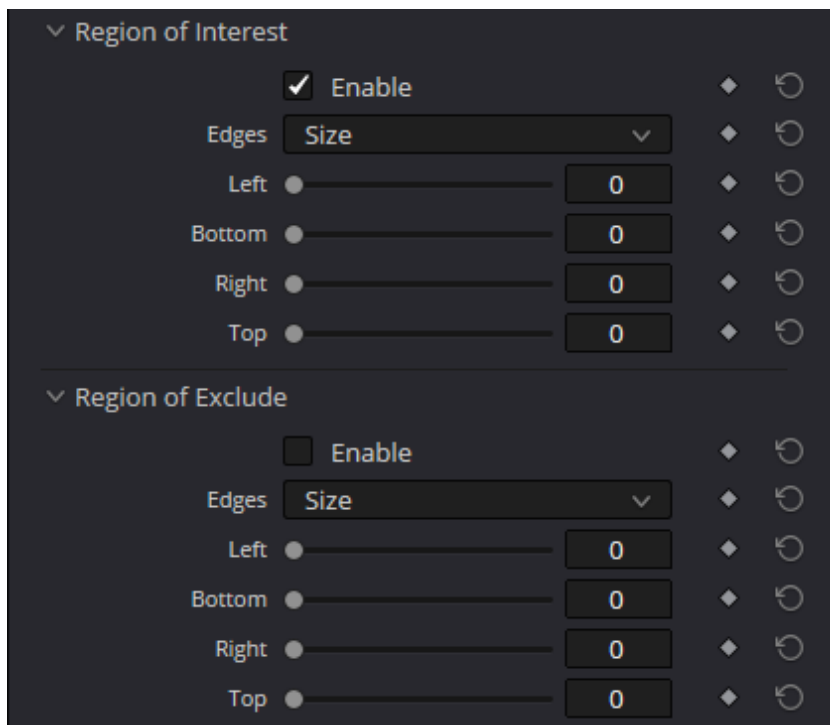
Default: Enabled

PIXELS

Pixels will be colored as in the processing/detection hit. The channels affected are indicated by the color of square:

Color Selection	Processed Channels
White	R+G+B
Red	R
Green	G
Blue	B
Yellow	RG
Cyan	GB
Magenta	RB

Default: Disabled

REGIONS

The Regions' section helps you define specific areas of the image, with Interest and Exclude areas. Both regions include Position and Size options. The Position option places the area as a fixed x.y chart to create an area, while Size is offsetting the area from the left edge of the image.

REGIONS OF INTEREST

Defines the area to be processed; if no region is selected, it will process to whole image. Use the sliders to create an area to be processed.

REGIONS OF EXCLUDE

Defines the area to be excluded from processing; if no region is selected, it will process to whole image. Use the sliders to create an area to be excluded.

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